Nexus ®
1252/1262/1272
Meters

High Performance SCADA Monitors

Modbus Protocol & Register Map
for Nexus® 1252/1262/1272 Meters
Version 1.24

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"The Leader in Web Accessed Power Monitoring"

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Published by:
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NOTE: For other meters, refer to the Modbus Protocol Map for the meter in use.

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Customer Service and Support

Customer support is available 9:00 am to 4:30 pm, eastern standard time, Monday through Friday. Please have the model, serial number and a detailed problem description available. If the problem concerns a particular reading, please have all meter readings available. When returning any merchandise to EIG, a return authorization number is required. For customer or technical assistance, repair or calibration, phone 516-334-0870 or fax 516-338-4741.

Product Warranty

Electro Industries/GaugeTech warrants all products to be free from defects in material and workmanship for a period of four years from the date of shipment. During the warranty period, we will, at our option, either repair or replace any product that proves to be defective.

To exercise this warranty, fax or call our customer-service department. You will receive prompt assistance and return instructions. Send the instrument, transportation prepaid, to EIG at 1800 Shames Drive, Westbury, NY 11590. Repairs will be made and the instrument will be returned.

Limitation of Warranty

This warranty does not apply to defect resulting from unauthorized modification, misuse, or use for any reason other than electrical power monitoring.

OUR PRODUCTS ARE NOT TO BE USED FOR PRIMARY OVER-CURRENT PROTECTION. ANY PROTECTION FEATURE IN OUR PRODUCTS ARE TO BE USED FOR ALARM OR SECONDARY PROTECTION ONLY.

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Statement of Calibration

Our instruments are inspected and tested in accordance with specifications published by Electro Industries/GaugeTech. The accuracy and a calibration of our instruments are traceable to the National Bureau of Standards through equipment that is calibrated at planned intervals by comparison to certified standards.

Disclaimer

The information presented in this publication has been carefully checked for reliability; however, no responsibility is assumed for inaccuracies. The information contained in this document is subject to change without notice.

About Electro Industries/GaugeTech

Electro Industries/GaugeTech was founded in 1973 by Dr. Samuel Kagan. Dr. Kagan's first innovation, an affordable, easy-to-use AC power meter, revolutionized the power-monitoring field. In the 1980s Dr. Kagan and his team at EIG developed a digital multifunction monitor capable of measuring every aspect of power. EIG further transformed AC power metering and power distribution with the Futura+ device, which supplies all the functionality of a fault recorder, an event recorder and a data logger in one single meter. Today, with the Nexus® 1262/1272 transformer-rated, polyphase meter utilizing Accu-Measure Digital Sensing Technology, EIG is a leader in the development and production of power-monitoring products. All EIG products are designed, manufactured, tested and calibrated at our facility in Westbury, New York.

Applications:

- Web-accessed multifunction Power Monitoring and Control
- Single and multifunction Power Monitoring
- Power Quality monitoring
- Onboard Data Logging for Trending Power Usage and Quality
- Disturbance analysis

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Chapter 8: Register Block Titles (with Descriptions)

Chapter 1
Modbus Protocol Overview

1.1: Introduction

- Nexus® meters can communicate with other devices using the RTU transmission mode of the AEG Modicon Modbus protocol. Communication is available through RS-232 or RS-485 standards.

  - RS-232 communication supports a single connection between one Nexus® meter and one other device, available on the Nexus® meter's Port 1 ONLY.

  - RS-485 communication supports multiple Nexus® meters connected on a network. It is a two-wire connection operating up to 115200 baud, available on Ports 1 through 4.

  - See your Nexus® meter's *Operation and Installation Manual* for wiring details.

1.2: Communication Packets

- Communication takes place between a Modbus Master and one or more Nexus® meter Slaves. The Master initiates all communication by transmitting an information packet called the "request" to a specific Slave. The Slave replies with its own packet, called the "response". A packet is a serial string of 8-bit bytes consisting of the following:

  - Slave Address 1 byte
  - Function Code 1 byte
  - Data N bytes: high-ordered byte first, low-order byte second
  - CRC (RTU Error Checksum) 2 bytes
  - Dead Time 3.5 bytes transmission time

- A single packet can transmit a maximum of 127 registers.

1.3: Slave Address and Broadcast Request

- Each Slave device on a communication bus has its own unique address. Only the Slave addressed by a Master will respond. The response packet returned to the Master will have the same value in the Slave Address Field as the request packet. Addresses are programmable and range from 1 to 247.

- A Slave Address of 0 is a broadcast command that allows the Master to send the same packet to all devices at once. All Slaves will obey the packet's instructions, but none will respond. The broadcast request feature is available only with function codes 6 and 10, Preset Single Registers and Preset Multiple Registers, respectively. See Tables 1.3 and 1.4.

1.4: Function Codes

A packet's Function Code tells the addressed Slave what action to perform. The Nexus® meter supports the following Modbus Function Codes:

Table 1.1: Function Codes		
Function Code		**Description**
Hex	**Dec**	
03H	3	Read Holding Registers
06H	6	Preset Single Register
10H	16	Preset Multiple Registers

1.4.1: Function Code 03—Read Holding Registers

- This function allows a Master station to read one or more parameter values (data registers) from a Nexus® meter Slave. The data registers are 16-bit (two byte) values transmitted in "Big Endian" format: high-ordered byte first, low-ordered byte second.

- The Master device sends a packet defining a start register for the Slave and the number of registers to read. The Slave responds with a packet containing the requested parameter values within the range specified in the request.

- In the following example, a Master device requests a Nexus® meter Slave at address 01H to transmit two values beginning at Register 00001. The Slave replies with values 3031H and 3037H from Registers 00001 and 00002.

Table 1.2: Function Code 03 Example			
Master Packet		**Slave Packet**	
Slave Address	01H	Slave Address	01H
Function Code	03H	Function Code	03H
Data Starting Address-Hi	00H	Byte Count	04H
Data Starting Address-Lo	00H	Data 1-Hi	30H
Number of Registers-Hi	00H	Data 1-Lo	31H
Number of Registers-Lo	02H	Data 2-Hi	30H
CRC-Lo	C4H	Data 2-Lo	37H
CRC-Hi	0BH	CRC-Lo	F1H
		CRC-Hi	2AH

1.4.2: Function Code 06—Preset Single Register

- This function allows a Master station to modify a single register in a Nexus® meter Slave. The data registers are 16-bit (two byte) values transmitted high-ordered byte first, low-ordered byte second.

- In the following example, a Master device stores the value 0001H at Register 57346 in a Nexus® meter Slave at address 01H.

Table 1.3: Function Code 6 Example

Master Packet		Slave Packet	
Slave Address	01H	Slave Address	01H
Function Code	06H	Function Code	06H
Data Starting Address-Hi	E0H	Data Starting Address-Hi	E0H
Data Starting Address-Lo	01H	Data Starting Address-Lo	01H
Data-Hi	00H	Data-Hi	00H
Data-Lo	01H	Data-Lo	01H
CRC-Lo	2EH	CRC-Lo	2EH
CRC-Hi	0AH	CRC-Hi	0AH

1.4.3: Function Code 10—Preset Multiple Registers

- This function allows a Master station to modify a group of consecutive registers in a Nexus® meter Slave. Registers are 16-bit (two byte) values transmitted high-ordered byte first, low-ordered byte second.

- In the following example, a Master device stores the value 0001H at Register 57345, 0001H at Register 57346 and 0001H at Register 57347 in a Nexus® meter Slave at address 01H.

1.4.4: Data Starting Address

- Range in Hex: 0000H - FFFFH
- Range in Decimal: 00001 - 65536

The Address in Chapter 2 (Nexus® meter Modbus Register Map Excel Spreadsheet) is in Decimal.

Example: For some Scada Softwares, to read Holding Registers (1.4.1), Address Format should be: 4(XXXXX) with the XXXXX being our Decimal Address.

Table 1.4: Function Code 10 Example			
Master Packet		**Slave Packet**	
Slave Address	01H	Slave Address	01H
Function Code	10H	Function Code	10H
Data Starting Address-Hi	E0H	Data Starting Address-Hi	E0H
Data Starting Address-Lo	01H	Data Starting Address-Lo	01H
Number of Setpoints-Hi	00H	Number of Setpoints-Hi	00H
Number of Setpoints-Lo	03H	Number of Setpoints-Lo	03H
Byte Count	06H	CRC-Lo	E6H
Data #1-Hi	00H	CRC-Hi	08H
Data #1-Lo	01H		
Data #2-Lo	00H		
Data #2-Hi	01H		
Data #3-Lo	00H		
Data #3-Hi	01H		
CRC-Lo	4DH		
CRC-Hi	46H		

1.5: CRC (Error Checksum) Algorithm

- The Cyclic Redundancy Check (CRC) field is an error checksum calculation that enables a Slave device to determine if a request packet has been corrupted during transmission.

- Every request packet transmitted from Master to Slave includes a special 16-bit value derived from a CRC-16 algorithm performed on the packet's contents. When a Nexus® meter Slave receives a packet, it performs a CRC-16 calculation and compares the value with the one included in the request packet. If the two values do not match, the Slave will ignore the packet.

- The following is the pseudocode for calculating the 16-bit CRC:

  Initialize a 16-bit register to FFFFH.
  Initialize the generator polynomial to A001H.

```
FOR n=1 to # of bytes in packet
        XOR nth data byte with the 16-bit register
        FOR bits_shifted = 1 to 8
                SHIFT 1 bit to the right
                IF (bit shifted out EQUAL 1)
                        XOR generator polynomial with the 16-bit register and store result in
                                the 16-bit register
                END IF
        END FOR
END FOR
```

The resulting 16-bit register contains the CRC-16 checksum.

1.6: Dead Time

- A Nexus® meter Slave considers a transmission from a Master complete when it has received no data for a period of 3.5 byte transmission times—approximately 7 ms at 4800 baud and 300 microseconds at 115200 baud. If the Master transmits any gaps between bytes that are longer than this time period, the Slaves will perceive it as dead time.

- At the conclusion of the dead time, all unaddressed Slaves begin listening for a new packet from the Master.

1.7: Exception Response (Error Codes)

- A Nexus® meter Slave will send its Master an Exception Response packet, if it has encountered an invalid command or other problem while carrying out the Master's instructions. The function code of the response will have the most significant bit set. The Data field of the Exception Response contains an Error Code specific to the type of problem.

- Table 1.5 below lists the different Error Codes supported by the Nexus® meter.

Table 1.5: Exception Response (Error Codes)

Error Code	Name	Description
01	Illegal Function	The Slave does not support the function code of the transmitted request packet.
02	Illegal Data Address	The Slave does not recognize the address in the data field of the transmitted request packet.
03	Illegal Data Value	The value referenced in the transmitted request packet is not supported by the register on the Nexus® meter Slave.
06	Busy, Rejected Packet	The Slave is busy performing a long operation and can not receive the request packet.

■ In the following example, a Master Device requests a Nexus® meter Slave at address 01H to transmit the value at Register 00256. The Slave replies with an error, indicating that it is busy.

Table 1.6: Exception Response Example			
Master Packet		**Slave Packet**	
Meaning	**Hex**	**Meaning**	**Hex**
Address	01H	Address	01H
Function Code	03H	Function Code	83H
Data Starting Address-Hi	01H	Error Code	06H
Data Starting Address-Lo	00H	CRC-Lo	C1H
Number of Registers-Hi	00H	CRC-Hi	32H
Number of Registers-Lo	01H		
CRC-Lo	85H		
CRC-Hi	F6H		

1.8: Modbus Extensions

■ Modbus Read Requests have a maximum size when using standard Modbus function. EI developed Enhanced (Non-Standard) Modbus Read Requests to allow larger than standard responses. This requires fewer requests and, is therefore, more efficient and total download time is reduced.

This function is also more efficient with Log Retrieval. It allows the Network Card to have DNP communication with the main unit utilizing a Modbus connection.

The following are non-standard extensions to the Modbus Protocol. The Nexus® meter supports the following additional Modbus Function Codes:

Modbus Extensions		
Function Code		**Description**
Hex	Dec	
23H	35	Read Holding Registers Multiple Times
42H	66	Encapsulated DNP for LAN/WAN

1.8.1: Function Code 23H - Read Holding Registers Multiple Times

This function allows a Master station to read the binary contents of holding registers (4X references) in the slave multiple times. Broadcast is not supported.

The Master device sends a packet defining the starting register, quantity of registers to be read and the repeat count. Registers are addressed starting at zero: registers 1-16 are addressed as 0-15.

Here is an example of a request to read registers 40108-40110 twice from slave device 17:

Function Code	
Field Name	**Example (Hex)**
Slave Address	11
Function Code	23
Data Starting Address Hi	00
Data Starting Address Lo	6B
Number of Registers Hi	00
Number of Registers Lo	03
Repeat Count	02
Error Check (LRC or CRC)	--

The register data in the response message are packed as two bytes per register, with the binary contents right justified within each byte. For each register, the first byte contains the high order bits and the second contains the low order bits.

Data is scanned at the following maximum rates, depending on the repeat count:

Repeat Count	RTU Framing	ASCII Framing
1	509 Registers	253 Registers
2	254 Registers	126 Registers
3	169 Registers	84 Registers
4	127 Registers	63 Registers
5	101 Registers	50 Registers
6	84 Registers	42 Registers
7	72 Registers	36 Registers

The response is returned when the data is completely assembled.

Here is an example of a response to the query given earlier:

Function Code 23H Example (Response)	
Field Name	**Example (Hex)**
Slave Address	11
Function Code	23
Byte Count Hi	00
Byte Count Lo	0C
Data Hi (Register 40108, First Read)	02
Data Lo (Register 40108, First Read)	2B
Data Hi (Register 40109, First Read)	00
Data Lo (Register 40109, First Read)	00
Data Hi (Register 40110, First Read)	00
Data Lo (Register 40110, First Read)	64
Data Hi (Register 40108, Second Read)	02
Data Lo (Register 40108, Second Read)	2B
Data Hi (Register 40109, Second Read)	00
Data Lo (Register 40109, Second Read)	00
Data Lo (Register 40110, Second Read)	00
Data Lo (Register 40110, Second Read)	64
Error Check (LRC or CRC)	--

The contents of Register 40108 are shown as the two-byte values of 02 2B Hex or 555 Decimal. The contents of Registers 40109 - 40110 are 00 00 and 00 64 Hex or 0 and 100 Decimal.

1.8.2: Function Code 42H - Encapsulated DNP for LAN/WAN

- The existing interface between the Network Card and the Main Unit is in Modbus RTU protocol. In order to maintain all of the existing functionality, it is necessary to pass DNP over IP requests and the resultant responses inside a Modbus wrapper.

  DNP has commands of variable length, producing responses of variable lengths. A variable size Modbus request that returns a variable size Modbus response requires a new, non-standard function code 42H.

  The creation of different DNP associations over IP requires informing the Main Nexus® meter when a new association is made. Function code 42H requests include a bit to indicate **TCP (0) or UDP (1)**, the **Client IP Address**, the **UDP or TCP Client Port**, and a bit to indicate if this is a **New Association (1)** or a continuation of the **Existing Association (0)**.

While the DNP over TCP Connections may be closed at the decision of the Network Card, as would be conveyed by the New Association bit with the next received connection, the main Nexus® meter might also determine that the current DNP over TCP Connection should be closed. The request to close the current DNP over TCP Connection will have to be held in Modbus registers in the main Nexus® meter, polled by the Network Card, and cleared by the Network Card overwriting the registers. If Modbus register 0x0E040 contains the value 0x0AAAA, then the current DNP over TCP Connection (the IP address will be in Modbus registers 0x0E041-0x0E042, the client port number in 0x0E043) must be closed by the Network Card and a value of 0x05555 should be written back to register 0x0E040.

DNP requests and responses may have more than 255 bytes. Function code 42H requests and responses include a 2-byte byte count. The Modbus Function Code 42H, DNP over Modbus is only supported on the internal connection made with a Network Card. It is not available on external communication ports.

This function code is used to transport DNP protocol requests and responses between a Modbus master with a DNP over IP Connection to a Modbus slave with built in DNP functionality. The request PDU (Protocol Data Unit) specifies: New Association or Previous Association, UDP or TCP, IP Address, Client Port Number and a byte count of DNP octets in the UDP datagram or TCP stream being transmitted.

The response returns the Function Code, UDP or TCP indication, IP Address, Client Port Number and a byte count of DNP octets for a possible response.

Examples of a **Request** and **Response** PDU (*N = Byte Count):

Address	1 Byte	0x001 - 0x0F7
Function Code	1 Byte	0x042
Link Status	1 Byte	0x000 to 0x003
Client IP Address	4 Bytes	0x00000000 to 0x0FFFFFFF
Client Port	2 Bytes	0x00000 to 0x0FFFF
Byte Count	2 Bytes	0x00001 to 0x0FFFF
Data	N*	Value
Checksum	1 or 2 Bytes	1 Byte LRC (ASCII) 2 Byte CRC (RTU)

Address	1 Byte	0x001 - 0x0F7
Function Code	1 Byte	0x042
Link Status	1 Byte	0x000 to 0x001
Client IP Address	4 Bytes	0x00000000 to 0x0FFFFFFF
Client Port	2 Bytes	0x00000 to 0x0FFFF
Byte Count	2 Bytes	0x00000 to 0x0FFFF
Data	N*	Value
Checksum	1 to 2 Bytes	1 Byte LRC (ASCII) 2 Byte CRC (RTU)

Error Example:

Address	1 Byte	0x001 to 0x0F7
Error Code	1 Byte	0x0C2
Exception Code	1 Byte	01 or 03
Checksum	1 or 2 Bytes	1 Byte LRC (ASCII) or 2 Byte CRC (RTU)

In the request or response PDU, Link Status bit 0 indicates TCP (0) or UDP (1). In the request PDU, Link Status bit 1 indicates a continuation of the Current Association (0) or the start of a New Association (1).

Here is an example of a pair of requests where a DNP over TCP connection was established with a client at IP Address 1.2.3.4, port 20000. The first TCP frame transmitted 7 bytes in the stream, containing part of a DNP frame. The first request indicates the start of new association and passes the TCP connection information and passes the 7 bytes received. The first response includes no response meant for the network. The second TCP frame transmitted 5 additional bytes in the stream, containing the remainder of the first DNP frame and the start of a second. The second request indicates the continuation of the association, passes the TCP connection information and the additional 5 bytes received. The second response acknowledges the second request and contains the response for the first DNP frame, which is meant to be returned in the TCP.

Request PDU		
Field Name	**(Hex)**	**DNP Field Name**
Address	0x001	
Function	0x042	
Status	0x002	
IP Add Quad 1	0x001	
IP Add Quad 2	0x002	
IP Add Quad 3	0x003	
IP Add Quad 4	0x004	
Client Port Hi	0x04E	
Client Port Lo	0x020	
Byte Count Hi	0x000	
Byte Count Lo	0x007	
DNP octet	0x005	Start
DNP octet	0x064	Start
DNP octet	0x005	Length
DNP octet	0x0C0	Control
DNP octet	0x001	Destination Lo
DNP octet	0x000	Destination Hi
DNP octet	0x00A	Source Lo
Checksum (CRC1)	0x05A	
Checksum (CRC2)	0x045	

Response PDU		
Field Name	**(Hex)**	**DNP Field Name**
Address	0x001	
Function	0x042	
Status	0x000	
IP Add Quad 1	0x001	
IP Add Quad 2	0x002	
IP Add Quad 3	0x003	
IP Add Quad 4	0x004	
Client Port Hi	0x04E	
Client Port Lo	0x020	
Byte Count Hi	0x000	
Byte Count Lo	0x000	
Checksum (CRC1)	0x0A4	
Checksum (CRC2)	0x01B	

Request PDU		
Field Name	(Hex)	DNP Field Name
Address	0x001	
Function	0x042	
Status	0x000	
IP Add Quad 1	0x001	
IP Add Quad 3	0x002	
IP Add Quad 3	0x003	
IP Add Quad 4	0x004	
Client Port Hi	0x04E	
Client Port Lo	0x020	
Byte Count Hi	0x000	
Byte Count Lo	0x005	
DNP octet	0x000	Source Hi
DNP octet	0x0E0	CRC Lo
DNP octet	0x08C	CRC Hi
DNP octet	0x005	Start
DNP octet	0x064	Start
Checksum (CRC1)	0x083	
Checksum (CRC2)	0x0F8	

Response PDU		
Field Name	(Hex)	DNP Field Name
Address	0x001	
Function	0x042	
Status	0x000	
IP Add Quad 1	0x001	
IP Add Quad 2	0x002	
IP Add Quad 3	0x003	
IP Add Quad 4	0x004	
Client Port Hi	0x04E	
Client Port Lo	0x020	
Byte Count Hi	0x000	
Byte Count Lo	0x00A	
DNP octet	0x005	Start
DNP octet	0x064	Start
DNP octet	0x005	Length
DNP octet	0x000	Control
DNP octet	0x00A	Destination Lo
DNP octet	0x000	Destination Hi
DNP octet	0x001	Source Lo
DNP octet	0x000	Source Hi
DNP octet	0x07F	CRC Lo
DNP octet	0x0FD	CRC Hi
Checksum (CRC1)	0x072	
Checksum (CRC2)	0x075	

Chapter 2
Nexus® Meter Modbus Register Map

- The Nexus® meter Modbus Register Map begins on the following page.

  One Second Readings use the One Second Block, Registers 00176-00235, described in Section 8.5.

  Resetting Maximums, Minimums, Energy Readings and/or Logs use the Action Block, Registers 57345-57393, described in Section 8.71.

  Time may be set in the Nexus® meter using the Real Time Block, Registers 00081-00089, described in Section 8.2.

  Chapter 8 offers descriptions of all the Nexus® meter Modbus Register Map's Register Block Titles and the Registers included in each block.

  See Chapter 3 for a detailed description of Communication Formats referred to in the Register Map's "Type" column. See the Table of Contents for a list of the Register Map's "Types" and their page location in Chapter 3.

  See Chapter 4 for an explanation of the Register Map's "Notes" column.

  See Chapter 5 for an explanation of Logs, Port Control and Updating Programmable Settings.

  See Chapter 6 for an explanation of the Log Formats.

  See Chapter 7 for an explanation of the Programmable Settings Blocks.

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
Device Identification Block								
00001-00008	0	0		Device Name			F1	R
00009-00016	1	0		Firmware Variation String 1			F1	R
00017-00024	1	1		Firmware Variation String 2			F1	R
00025-00032	1	2		Firmware Variation String 3			F1	R
00033-00040	1	3		Firmware Variation String 4			F1	R
00041-00048	1	4		Firmware Variation String 5			F1	R
00049-00056	1	5		Firmware Variation String 6			F1	R
00057-00064	1	6		Firmware Variation String 7			F1	R
00065-00072	1	7		Firmware Variation String 8			F1	R
00073-00074	2	0		Nexus Comm Boot Version Number	9.9.9.9 / 0.0.0.0	0.0.0.1 version	F2	R
00075-00076	3	0		Nexus Comm Run-Time Version Number	9.9.9.9 / 0.0.0.0	0.0.0.1 version	F2	R
00077-00078	4	0		Nexus DSP Boot Version Number	9.9.9.9 / 0.0.0.0	0.0.0.1 version	F2	R
00079-00080	5	0		Nexus DSP Run-Time Version Number	9.9.9.9 / 0.0.0.0	0.0.0.1 version	F2	R
Real Time Block								
00081-00084	6	0	50	On Time	12/31/9999 23:59:59.99	10 msec	F3	R
00085-00088	7	0	50	Current Time	12/31/9999 23:59:59.99	10 msec	F3	R/W
00089	8	0	50	Current Day of the Week	Sunday - Saturday		F4	R/W
1 Cycle Block								
00090-00093	9	0	50	1 cycle Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00094-00095	10	0		1 cycle Phase A-N Voltage	+65536 V^2 / 0 V^2	1/65536 V^2 sec	F5	R
00096-00097	10	1		1 cycle Phase B-N Voltage	+65536 V^2 / 0 V^2	1/65536 V^2 sec	F5	R
00098-00099	10	2		1 cycle Phase C-N Voltage	+65536 V^2 / 0 V^2	1/65536 V^2 sec	F5	R
00100-00101	11	0		1 cycle Auxiliary Voltage	+65536 V^2 / 0 V^2	1/65536 V^2 sec	F5	R
00102-00103	12	0		1 cycle Phase A Current	+65536 A^2 / 0 A^2	1/65536 A^2 sec	F5	R
00104-00105	12	1		1 cycle Phase B Current	+65536 A^2 / 0 A^2	1/65536 A^2 sec	F5	R
00106-00107	12	2		1 cycle Phase C Current	+65536 A^2 / 0 A^2	1/65536 A^2 sec	F5	R
00108-00109	13	0		1 cycle Measured Neutral Current	+65536 A^2 / 0 A^2	1/65536 A^2 sec	F5	R
00110-00111	14	0		1 cycle Calculated Neutral Current	+65536 A^2 / 0 A^2	1/65536 A^2 sec	F5	R
00112-00113	15	0		1 cycle Phase A-B Voltage	+65536 V^2 / 0 V^2	1/65536 V^2 sec	F5	R
00114-00115	15	1		1 cycle Phase B-C Voltage	+65536 V^2 / 0 V^2	1/65536 V^2 sec	F5	R
00116-00117	15	2		1 cycle Phase C-A Voltage	+65536 V^2 / 0 V^2	1/65536 V^2 sec	F5	R
00118	16	0	1	1 cycle High Speed Input Delta and Current State			F6	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
Tenth Second Block								
00119-00122	17	0	50	Tenth second Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00123-00124	18	0	30	Tenth second Phase A-N Voltage	+32767 V / 0 V	1/ 65536 V sec	F7	R
00125-00126	18	1	30	Tenth second Phase B-N Voltage	+32767 V / 0 V	1/ 65536 V sec	F7	R
00127-00128	18	2	30	Tenth second Phase C-N Voltage	+32767 V / 0 V	1/ 65536 V sec	F7	R
00129-00130	19	0	30	Tenth second Auxiliary Voltage	+32767 V / 0 V	1/ 65536 V sec	F7	R
00131-00132	20	0	30	Tenth second Phase A Current	+32767 V / 0 V	1/ 65536 A sec	F7	R
00133-00134	20	1	30	Tenth second Phase B Current	+32767 V / 0 V	1/ 65536 A sec	F7	R
00135-00136	20	2	30	Tenth second Phase C Current	+32767 V / 0 V	1/ 65536 A sec	F7	R
00137-00138	21	0	30	Tenth second Measured Neutral Current	+32767 V / 0 V	1/ 65536 A sec	F7	R
00139-00140	22	0	30	Tenth second Phase A-B Voltage	+32767 V / 0 V	1/ 65536 V sec	F7	R
00141-00142	22	1	30	Tenth second Phase B-C Voltage	+32767 V / 0 V	1/ 65536 V sec	F7	R
00143-00144	22	2	30	Tenth second Phase A-C Voltage	+32767 V / 0 V	1/ 65536 V sec	F7	R
00145-00146	23	0	30	Tenth second Phase A VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00147-00148	23	1	30	Tenth second Phase B VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00149-00150	23	2	30	Tenth second Phase C VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00151-00152	24	0	30	Tenth second Three Phase VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00153-00154	25	0	30	Tenth second Phase A VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00155-00156	25	1	30	Tenth second Phase B VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00157-00158	25	2	30	Tenth second Phase C VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00159-00160	26	0	30	Tenth second Three Phase VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00161-00162	27	0	30	Tenth second Phase A Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00163-00164	27	1	30	Tenth second Phase B Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00165-00166	27	2	30	Tenth second Phase C Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00167-00168	28	0	30	Tenth second Three Phase Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00169-00170	29	0	30	Tenth second Frequency	+32767 Hz / 0 Hz	1/ 65536 Hz	F7	R
00171	30	0	30	Tenth second Phase A Power Factor	3.999 / 0.000	0.001 PF	F8	R
00172	30	1	30	Tenth second Phase B Power Factor	3.999 / 0.000	0.001 PF	F8	R
00173	30	2	30	Tenth second Phase C Power Factor	3.999 / 0.000	0.001 PF	F8	R
00174	31	0	30	Tenth second Three Phase Power Factor	3.999 / 0.000	0.001 PF	F8	R
00175	32	0	30	Tenth second Phase A-N Voltage to Auxiliary Voltage Phase Angle	+ 180 / - 180	0.01 degree	F9	R
One Second Block								
00176-00179	33	0	50	One second Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00180-00181	34	0	30	One second Phase A-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00182-00183	34	1	30	One second Phase B-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00184-00185	34	2	30	One second Phase C-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00186-00187	35	0	30	One second Auxiliary Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00188-00189	36	0	30	One second Phase A Current	+32767 A / 0 A	1/ 65536 A sec	F7	R
00190-00191	36	1	30	One second Phase B Current	+32767 A / 0 A	1/ 65536 A sec	F7	R
00192-00193	36	2	30	One second Phase C Current	+32767 A / 0 A	1/ 65536 A sec	F7	R
00194-00195	37	0	30	One second Measured Neutral Current	+32767 A / 0 A	1/ 65536 A sec	F7	R
00196-00197	38	0	30	One second Calculated Neutral Current	+32767 A / 0 A	1/ 65536 A sec	F7	R
00198-00199	39	0	30	One second Phase A-B Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00200-00201	39	1	30	One second Phase B-C Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00202-00203	39	2	30	One second Phase C-A Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00204-00205	40	0	30	One second Phase A VA	+ 32767 V / 0 V	1/ 65536 VA sec	F7	R
00206-00207	40	1	30	One second Phase B VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00208-00209	40	2	30	One second Phase C VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00210-00211	41	0	30	One second VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00212-00213	42	0	30	One second Phase A VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00214-00215	42	1	30	One second Phase B VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00216-00217	42	2	30	One second Phase C VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00218-00219	43	0	30	One second Three VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00220-00221	44	0	30	One second Phase A Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00222-00223	44	1	30	One second Phase B Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00224-00225	44	2	30	One second Phase C Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00226-00227	45	0	30	One second Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00228-00229	46	0	30	One second Frequency	+ 32767 Hz / 0 Hz	1/ 65536 Hz	F7	R
00230	47	0	30	One second Phase A Power Factor	3.999 / 0	0.001 PF	F8	R
00231	47	1	30	One second Phase B Power Factor	3.999 / 0	0.001 PF	F8	R
00232	47	2	30	One second Phase C Power Factor	3.999 / 0	0.001 PF	F8	R
00233	48	0	30	One second Three Phase Power Factor	3.999 / 0	0.001 PF	F8	R
00234	49	0	30	One second Voltage Imbalance	+327.67% / -327.68%	0.01%	F10	R
00235	49	1	30	One second Current Imbalance	+327.67% / -327.68%	0.01%	F10	R
Thermal Average Block								
00236-00239	50	0	50	Thermal Average Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00240-00241	51	0	30	Thermal Average Phase A-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00242-00243	51	1	30	Thermal Average Phase B-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00244-00245	51	2	30	Thermal Average Phase C-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00246-00247	52	0	30	Thermal Average Auxiliary Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00248-00249	53	0	30	Thermal Average Phase A Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00250-00251	53	1	30	Thermal Average Phase B Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00252-00253	53	2	30	Thermal Average Phase C Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00254-00255	54	0	30	Thermal Average Measured Neutral Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00256-00257	55	0	30	Thermal Average Calculated Neutral Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00258-00259	56	0	30	Thermal Average Phase A-B Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00260-00261	56	1	30	Thermal Average Phase B-C Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00262-00263	56	2	30	Thermal Average Phase C-A Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00264-00265	57	0	30	Thermal Average Phase A VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00266-00267	57	1	30	Thermal Average Phase B VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00268-00269	57	2	30	Thermal Average Phase C VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00270-00271	58	0	30	Thermal Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00272-00273	59	0	30	Thermal Average Phase A VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00274-00275	59	1	30	Thermal Average Phase B VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00276-00277	58	2	30	Thermal Average Phase C VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00278-00279	60	0	30	Thermal Average VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00280-00281	61	0	30	Thermal Average Phase A Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00282-00283	61	1	30	Thermal Average Phase B Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00284-00285	61	2	30	Thermal Average Phase C Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00286-00287	62	0	30	Thermal Average Watts	+32767 W / -32768 W	1/ 65536 W sec	F7	R
00288-00289	63	0	30	Thermal Average Frequency	+ 32767 Hz / 0 Hz	1/ 65536 Hz	F7	R
00290	64	0	30	Thermal Average Phase A Power Factor	3.999 / 0	0.001 PF	F8	R
00291	64	1	30	Thermal Average Phase B Power Factor	3.999 / 0	0.001 PF	F8	R
00292	64	2	30	Thermal Average Phase C Power Factor	3.999 / 0	0.001 PF	F8	R
00293	65	0	30	Thermal Average Power Factor	3.999 / 0	0.001 PF	F8	R
00294	66	0	30	Thermal Average Voltage Imbalance	+327.67% / -327.68%	0.01%	F10	R
00295	66	1	30	Thermal Average Current Imbalance	+327.67% / -327.68%	0.01%	F10	R
Maximum Block								
00296-00299	67	0	50	Maximum Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00300-00301	68	0	30	Maximum Thermal Average Phase A-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00302-00303	68	1	30	Maximum Thermal Average Phase B-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00304-00305	68	2	30	Maximum Thermal Average Phase C-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00306-00307	69	0	30	Maximum Thermal Average Auxiliary Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00308-00309	70	0	30	Maximum Thermal Average Phase A Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00310-00311	70	1	30	Maximum Thermal Average Phase B Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00312-00313	70	2	30	Maximum Thermal Average Phase C Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00314-00315	71	0	30	Maximum Thermal Average Measured Neutral Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00316-00317	72	0	30	Maximum Thermal Average Calculated Neutral Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00318-00319	73	0	30	Maximum Thermal Average Phase A-B Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00320-00321	73	1	30	Maximum Thermal Average Phase B-C Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00322-00323	73	2	30	Maximum Thermal Average Phase C-A Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00324-00325	74	0	30	Maximum Thermal Average Phase A VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00326-00327	74	1	30	Maximum Thermal Average Phase B VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00328-00329	74	2	30	Maximum Thermal Average Phase C VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00330-00331	75	0	30	Maximum Thermal Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00332-00333	76	0	30	Maximum Thermal Average Phase A Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
00334-00335	76	1	30	Maximum Thermal Average Phase B Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
00336-00337	76	2	30	Maximum Thermal Average Phase C Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
00338-00339	77	0	30	Maximum Thermal Average Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
00340-00341	78	0	30	Maximum Thermal Average Phase A Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00342-00343	78	1	30	Maximum Thermal Average Phase B Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00344-00345	78	2	30	Maximum Thermal Average Phase C Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00346-00347	79	0	30	Maximum Thermal Average Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00348-00349	80	0	30	Maximum Thermal Average Phase A Watts Positive	+32767 W / 0 W	1/ 65536 W sec	F7	R
00350-00351	80	1	30	Maximum Thermal Average Phase B Watts Positive	+32767 W / 0 W	1/ 65536 W sec	F7	R
00352-00353	80	2	30	Maximum Thermal Average Phase C Watts Positive	+32767 W / 0 W	1/ 65536 W sec	F7	R
00354-00355	81	0	30	Maximum Thermal Average Positive Watts	+32767 W / 0 W	1/ 65536 W sec	F7	R
00356-00357	82	0	30	Maximum Thermal Average Phase A Watts Negative	0 W / -32768 W	1/ 65536 W sec	F7	R
00358-00359	82	1	30	Maximum Thermal Average Phase B Watts Negative	0 W / -32768 W	1/ 65536 W sec	F7	R
00360-00361	82	2	30	Maximum Thermal Average Phase C Watts Negative	0 W / -32768 W	1/ 65536 W sec	F7	R
00362-00363	83	0	30	Maximum Thermal Average Negative Watts	0 W / -32768 W	1/ 65536 W sec	F7	R
00364-00365	84	0	30	Maximum Thermal Average Frequency	+ 32767 Hz / 0 Hz	1/ 65536 Hz	F7	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00366	85	0	30	Maximum Thermal Average Phase A Power Factor Quadrant 1	0.999 / 0	0.001 PF	F8	R
00367	85	1	30	Maximum Thermal Average Phase B Power Factor Quadrant 1	0.999 / 0	0.001 PF	F8	R
00368	85	2	30	Maximum Thermal Average Phase C Power Factor Quadrant 1	0.999 / 0	0.001 PF	F8	R
00369	86	0	30	Maximum Thermal Average Power Factor Quadrant 1	0.999 / 0	0.001 PF	F8	R
00370	87	0	30	Maximum Thermal Average Phase A Power Factor Quadrant 2	1.999 / /1.000	0.001 PF	F8	R
00371	87	1	30	Maximum Thermal Average Phase B Power Factor Quadrant 2	1.999 / /1.000	0.001 PF	F8	R
00372	87	2	30	Maximum Thermal Average Phase C Power Factor Quadrant 2	1.999 / /1.000	0.001 PF	F8	R
00373	88	0	30	Maximum Thermal Average Power Factor Quadrant 2	1.999 / /1.000	0.001 PF	F8	R
00374	89	0	30	Maximum Thermal Average Phase A Power Factor Quadrant 3	2.999 / 2.000	0.001 PF	F8	R
00375	89	1	30	Maximum Thermal Average Phase B Power Factor Quadrant 3	2.999 / 2.000	0.001 PF	F8	R
00376	89	2	30	Maximum Thermal Average Phase C Power Factor Quadrant 3	2.999 / 2.000	0.001 PF	F8	R
00377	90	0	30	Maximum Thermal Average Power Factor Quadrant 3	2.999 / 2.000	0.001 PF	F8	R
00378	91	0	30	Maximum Thermal Average Phase A Power Factor Quadrant 4	3.999 / 3.000	0.001 PF	F8	R
00379	91	1	30	Maximum Thermal Average Phase B Power Factor Quadrant 4	3.999 / 3.000	0.001 PF	F8	R
00380	91	2	30	Maximum Thermal Average Phase C Power Factor Quadrant 4	3.999 / 3.000	0.001 PF	F8	R
00381	92	0	30	Maximum Thermal Average Power Factor Quadrant 4	3.999 / 3.000	0.001 PF	F8	R
00382	93	0	30	Maximum Thermal Average Voltage Imbalance	+327.67% / -327.68%	0.01%	F10	R
00383	93	1	30	Maximum Thermal Average Current Imbalance	+327.67% / -327.68%	0.01%	F10	R
00384	94	0	30	Maximum THD Phase A-N / A-B Voltage	+327.67% / -327.68%	0.01%	F10	R
00385	94	1	30	Maximum THD Phase B-N / B-C Voltage	+327.67% / -327.68%	0.01%	F10	R
00386	94	2	30	Maximum THD Phase C-N / C-A Voltage	+327.67% / -327.68%	0.01%	F10	R
00387	95	0	30	Maximum THD Phase A Current	+327.67% / -327.68%	0.01%	F10	R
00388	95	1	30	Maximum THD Phase B Current	+327.67% / -327.68%	0.01%	F10	R
00389	95	2	30	Maximum THD Phase C Current	+327.67% / -327.68%	0.01%	F10	R
00390	96	0	30	Maximum K-Factor Phase A Current	+327.67% / -327.68%	0.01%	F10	R
00391	96	1	30	Maximum K-Factor Phase B Current	+327.67% / -327.68%	0.01%	F10	R
00392	96	2	30	Maximum K-Factor Phase C Current	+327.67% / -327.68%	0.01%	F10	R
00393-00394	97	0	30	Coincident Thermal Average VAR for Maximum Positive Watt	+32767 VAR / -32768 VAR	1/ 65536 W sec	F7	R
00395-00396	97	1	30	Coincident Thermal Average VAR for Maximum Negative Watt	+32767 VAR / -32768 VAR	1/ 65536 W sec	F7	R
Minimum Block								
00397-00400	98	0	50	Minimum Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00401-00402	99	0	30	Minimum Thermal Average Phase A-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00403-00404	99	1	30	Minimum Thermal Average Phase B-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00405-00406	99	2	30	Minimum Thermal Average Phase C-N Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00407-00408	100	0	30	Minimum Thermal Average Auxiliary Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00409-00410	101	0	30	Minimum Thermal Average Phase A Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00411-00412	101	1	30	Minimum Thermal Average Phase B Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00413-00414	101	2	30	Minimum Thermal Average Phase C Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00415-00416	102	0	30	Minimum Thermal Average Measured Neutral Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00417-00418	103	0	30	Minimum Thermal Average Calculated Neutral Current	+ 32767 A / 0 A	1/ 65536 A sec	F7	R
00419-00420	104	0	30	Minimum Thermal Average Phase A-B Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00421-00422	104	1	30	Minimum Thermal Average Phase B-C Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00423-00424	104	2	30	Minimum Thermal Average Phase C-A Voltage	+ 32767 V / 0 V	1/ 65536 V sec	F7	R
00425-00426	105	0	30	Minimum Thermal Average Phase A VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00427-00428	105	1	30	Minimum Thermal Average Phase B VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00429-00430	105	2	30	Minimum Thermal Average Phase C VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00431-00432	106	0	30	Minimum Thermal Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
00433-00434	107	0	30	Minimum Thermal Average Phase A Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
00435-00436	107	1	30	Minimum Thermal Average Phase B Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
00437-00438	107	2	30	Minimum Thermal Average Phase C Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
00439-00440	108	0	30	Minimum Thermal Average Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
00441-00442	109	0	30	Minimum Thermal Average Phase A Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00443-00444	109	1	30	Minimum Thermal Average Phase B Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00445-00446	109	2	30	Minimum Thermal Average Phase C Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00447-00448	110	0	30	Minimum Thermal Average Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
00449-00450	111	0	30	Minimum Thermal Average Phase A Positive Watts	+32767 W / 0 W	1/ 65536 W sec	F7	R
00451-00452	111	1	30	Minimum Thermal Average Phase B Positive Watts	+32767 W / 0 W	1/ 65536 W sec	F7	R
00453-00454	111	2	30	Minimum Thermal Average Phase C Positive Watts	+32767 W / 0 W	1/ 65536 W sec	F7	R
00455-00456	112	0	30	Minimum Thermal Average Positive Watts	+32767 W / 0 W	1/ 65536 W sec	F7	R
00457-00458	113	0	30	Minimum Thermal Average Phase A Negative Watts	0 W / -32768 W	1/ 65536 W sec	F7	R
00459-00460	113	1	30	Minimum Thermal Average Phase B Negative Watts	0 W / -32768 W	1/ 65536 W sec	F7	R
00461-00462	113	2	30	Minimum Thermal Average Phase C Negative Watts	0 W / -32768 W	1/ 65536 W sec	F7	R
00463-00464	114	0	30	Minimum Thermal Average Negative Watts	0 W / -32768 W	1/ 65536 W sec	F7	R
00465-00466	115	0	30	Minimum Thermal Average Frequency	+ 32767 Hz / 0 Hz	1/ 65536 Hz	F7	R
00467	116	0	30	Minimum Thermal Average Phase A Power Factor Quadrant 1	0.999 / 0	0.001 PF	F8	R
00468	116	1	30	Minimum Thermal Average Phase B Power Factor Quadrant 1	0.999 / 0	0.001 PF	F8	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00469	116	2	30	Minimum Thermal Average Phase C Power Factor Quadrant 1	0.999 / 0	0.001 PF	F8	R
00470	117	0	30	Minimum Thermal Average Power Factor Quadrant 1	0.999 / 0	0.001 PF	F8	R
00471	118	0	30	Minimum Thermal Average Phase A Power Factor Quadrant 2	1.999 / /1.000	0.001 PF	F8	R
00472	118	1	30	Minimum Thermal Average Phase B Power Factor Quadrant 2	1.999 / /1.000	0.001 PF	F8	R
00473	118	2	30	Minimum Thermal Average Phase C Power Factor Quadrant 2	1.999 / /1.000	0.001 PF	F8	R
00474	119	0	30	Minimum Thermal Average Power Factor Quadrant 2	1.999 / /1.000	0.001 PF	F8	R
00475	120	0	30	Minimum Thermal Average Phase A Power Factor Quadrant 3	2.999 / 2.000	0.001 PF	F8	R
00476	120	1	30	Minimum Thermal Average Phase B Power Factor Quadrant 3	2.999 / 2.000	0.001 PF	F8	R
00477	120	2	30	Minimum Thermal Average Phase C Power Factor Quadrant 3	2.999 / 2.000	0.001 PF	F8	R
00478	121	0	30	Minimum Thermal Average Power Factor Quadrant 3	2.999 / 2.000	0.001 PF	F8	R
00479	122	0	30	Minimum Thermal Average Phase A Power Factor Quadrant 4	3.999 / 3.000	0.001 PF	F8	R
00480	122	1	30	Minimum Thermal Average Phase B Power Factor Quadrant 4	3.999 / 3.000	0.001 PF	F8	R
00481	122	2	30	Minimum Thermal Average Phase C Power Factor Quadrant 4	3.999 / 3.000	0.001 PF	F8	R
00482	123	0	30	Minimum Thermal Average Power Factor Quadrant 4	3.999 / 3.000	0.001 PF	F8	R
00483	124	0	30	Minimum Thermal Average Voltage Imbalance	+327.67% / -327.68%	0.01%	F10	R
00484	124	1	30	Minimum Thermal Average Current Imbalance	+327.67% / -327.68%	0.01%	F10	R
00485	125	0	30	Minimum THD Phase A-N Voltage / Phase A-B Voltage	+327.67% / -327.68%	0.01%	F10	R
00486	125	1	30	Minimum THD Phase B-N Voltage / Phase B-C Voltage	+327.67% / -327.68%	0.01%	F10	R
00487	125	2	30	Minimum THD Phase C-N Voltage / Phase C-A Voltage	+327.67% / -327.68%	0.01%	F10	R
00488	126	0	30	Minimum THD Phase A Current	+327.67% / -327.68%	0.01%	F10	R
00489	126	1	30	Minimum THD Phase B Current	+327.67% / -327.68%	0.01%	F10	R
00490	126	2	30	Minimum THD Phase C Current	+327.67% / -327.68%	0.01%	F10	R
00491	127	0	30	Minimum K-Factor Phase A Current	+327.67% / -327.68%	0.01%	F10	R
00492	127	1	30	Minimum K-Factor Phase B Current	+327.67% / -327.68%	0.01%	F10	R
00493	127	2	30	Minimum K-Factor Phase C Current	+327.67% / -327.68%	0.01%	F10	R
00494-00495	128	0	30	Coincident Thermal Average VAR for Minimum Positive Watt	+32767 VAR / -32768 VAR	1/ 65536 W sec	F7	R
00496-00497	128	1	30	Coincident Thermal Average VAR for Minimum Negative Watt	+32767 VAR / -32768 VAR	1/ 65536 W sec	F7	R
Maximum Time Stamp Block								
00498-00501	129	0	50	Maximum Thermal Average Phase A-N Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00502-00505	129	1	50	Maximum Thermal Average Phase B-N Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00506-00509	129	2	50	Maximum Thermal Average Phase C-N Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00510-00513	129	3	50	Maximum Thermal Average Auxiliary Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00514-00517	129	4	50	Maximum Thermal Average Phase A Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00518-00521	129	5	50	Maximum Thermal Average Phase B Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00522-00525	129	6	50	Maximum Thermal Average Phase C Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00526-00529	129	7	50	Maximum Thermal Average Measured Neutral Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00530-00533	129	8	50	Maximum Thermal Average Calculated Neutral Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00534-00537	129	9	50	Maximum Thermal Average Phase A-B Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00538-00541	129	10	50	Maximum Thermal Average Phase B-C Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00542-00545	129	11	50	Maximum Thermal Average Phase C-A Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00546-00549	129	12	50	Maximum Thermal Average Phase A VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00550-00553	129	13	50	Maximum Thermal Average Phase B VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00554-00557	129	14	50	Maximum Thermal Average Phase C VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00558-00561	129	15	50	Maximum Thermal Average VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00562-00565	129	16	50	Maximum Thermal Average Phase A Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00566-00569	129	17	50	Maximum Thermal Average Phase B Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00570-00573	129	18	50	Maximum Thermal Average Phase C Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00574-00577	129	19	50	Maximum Thermal Average Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00578-00581	129	20	50	Maximum Thermal Average Phase A Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00582-00585	129	21	50	Maximum Thermal Average Phase B Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00586-00589	129	22	50	Maximum Thermal Average Phase C Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00590-00593	129	23	50	Maximum Thermal Average Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00594-00597	129	24	50	Maximum Thermal Average Phase A Watts Positive Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00598-00601	129	25	50	Maximum Thermal Average Phase B Watts Positive Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00602-00605	129	26	50	Maximum Thermal Average Phase C Watts Positive Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00606-00609	129	27	50	Maximum Thermal Average Positive Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00610-00613	129	28	50	Maximum Thermal Average Phase A Watts Negative Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00614-00617	129	29	50	Maximum Thermal Average Phase B Watts Negative Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00618-00621	129	30	50	Maximum Thermal Average Phase C Watts Negative Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00622-00625	129	31	50	Maximum Thermal Average Negative Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00626-00629	129	32	50	Maximum Thermal Average Frequency Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00630-00633	129	33	50	Maximum Thermal Average Phase A Power Factor Quadrant 1 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00634-00637	129	34	50	Maximum Thermal Average Phase B Power Factor Quadrant 1	12/31/9999 23:59:59.99	10 msec	F3	R
00638-00641	129	35	50	Maximum Thermal Average Phase C Power Factor Quadrant 1 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00642-00645	129	36	50	Maximum Thermal Average Power Factor Quadrant 1	12/31/9999 23:59:59.99	10 msec	F3	R
00646-00649	129	37	50	Maximum Thermal Average Phase A Power Factor Quadrant 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00650-00653	129	38	50	Maximum Thermal Average Phase B Power Factor Quadrant 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00654-00657	129	39	50	Maximum Thermal Average Phase C Power Factor Quadrant 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00658-00661	129	40	50	Maximum Thermal Average Power Factor Quadrant 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00662-00665	129	41	50	Maximum Thermal Average Phase A Power Factor Quadrant 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00666-00669	129	42	50	Maximum Thermal Average Phase B Power Factor Quadrant 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00670-00673	129	43	50	Maximum Thermal Average Phase C Power Factor Quadrant 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00674-00677	129	44	50	Maximum Thermal Average Power Factor Quadrant 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00678-00681	129	45	50	Maximum Thermal Average Phase A Power Factor Quadrant 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00682-00685	129	46	50	Maximum Thermal Average Phase B Power Factor Quadrant 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00686-00689	129	47	50	Maximum Thermal Average Phase C Power Factor Quadrant 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00690-00693	129	48	50	Maximum Thermal Average Power Factor Quadrant 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00694-00697	129	49	50	Maximum Thermal Average Voltage Imbalance Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00698-00701	129	50	50	Maximum Thermal Average Current Imbalance Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00702-00705	129	51	50	Maximum THD Phase A-N / A-B Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00706-00709	129	52	50	Maximum THD Phase B-N / B-C Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00710-00713	129	53	50	Maximum THD Phase C-N / C-A Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00714-00717	129	54	50	Maximum THD Phase A Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00718-00721	129	55	50	Maximum THD Phase B Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00722-00725	129	56	50	Maximum THD Phase C Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00726-00729	129	57	50	Maximum K-Factor Phase A Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00730-00733	129	58	50	Maximum K-Factor Phase B Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00734-00737	129	59	50	Maximum K-Factor Phase C Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Minimum Time Stamp Block								
00738-00741	130	0	50	Minimum Thermal Average Phase A-N Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00742-00745	130	1	50	Minimum Thermal Average Phase B-N Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00746-00749	130	2	50	Minimum Thermal Average Phase C-N Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00750-00753	130	3	50	Minimum Thermal Average Auxiliary Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00754-00757	130	4	50	Minimum Thermal Average Phase A Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00758-00761	130	5	50	Minimum Thermal Average Phase B Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00762-00765	130	6	50	Minimum Thermal Average Phase C Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00766-00769	130	7	50	Minimum Thermal Average Measured Neutral Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00770-00773	130	8	50	Minimum Thermal Average Calculated Neutral Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00774-00777	130	9	50	Minimum Thermal Average Phase A-B Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00778-00781	130	10	50	Minimum Thermal Average Phase B-C Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00782-00785	130	11	50	Minimum Thermal Average Phase C-A Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00786-00789	130	12	50	Minimum Thermal Average Phase A VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00790-00793	130	13	50	Minimum Thermal Average Phase B VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00794-00797	130	14	50	Minimum Thermal Average Phase C VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00798-00801	130	15	50	Minimum Thermal Average VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00802-00805	130	16	50	Minimum Thermal Average Phase A Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00806-00809	130	17	50	Minimum Thermal Average Phase B Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00810-00813	130	18	50	Minimum Thermal Average Phase C Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00814-00817	130	19	50	Minimum Thermal Average Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00818-00821	130	20	50	Minimum Thermal Average Phase A Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00822-00825	130	21	50	Minimum Thermal Average Phase B Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00826-00829	130	22	50	Minimum Thermal Average Phase C Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00830-00833	130	23	50	Minimum Thermal Average Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00834-00837	130	24	50	Minimum Thermal Average Phase A Positive Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00838-00841	130	25	50	Minimum Thermal Average Phase B Positive Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00842-00845	130	26	50	Minimum Thermal Average Phase C Positive Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00846-00849	130	27	50	Minimum Thermal Average Positive Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00850-00853	130	28	50	Minimum Thermal Average Phase A Negative Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00854-00857	130	29	50	Minimum Thermal Average Phase B Negative Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00858-00861	130	30	50	Minimum Thermal Average Phase C Negative Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00862-00865	130	31	50	Minimum Thermal Average Negative Watts Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00866-00869	130	32	50	Minimum Thermal Average Frequency Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00870-00873	130	33	50	Minimum Thermal Average Phase A Power Factor Quadrant 1 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00874-00877	130	34	50	Minimum Thermal Average Phase B Power Factor Quadrant 1 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00878-00881	130	35	50	Minimum Thermal Average Phase C Power Factor Quadrant 1 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00882-00885	130	36	50	Minimum Thermal Average Power Factor Quadrant 1 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00886-00889	130	37	50	Minimum Thermal Average Phase A Power Factor Quadrant 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00890-00893	130	38	50	Minimum Thermal Average Phase B Power Factor Quadrant 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00894-00897	130	39	50	Minimum Thermal Average Phase C Power Factor Quadrant 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00898-00901	130	40	50	Minimum Thermal Average Power Factor Quadrant 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00902-00905	130	41	50	Minimum Thermal Average Phase A Power Factor Quadrant 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00906-00909	130	42	50	Minimum Thermal Average Phase B Power Factor Quadrant 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
00910-00913	130	43	50	Minimum Thermal Average Phase C Power Factor Quadrant 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00914-00917	130	44	50	Minimum Thermal Average Power Factor Quadrant 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00918-00921	130	45	50	Minimum Thermal Average Phase A Power Factor Quadrant 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00922-00925	130	46	50	Minimum Thermal Average Phase B Power Factor Quadrant 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00926-00929	130	47	50	Minimum Thermal Average Phase C Power Factor Quadrant 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00930-00933	130	48	50	Minimum Thermal Average Power Factor Quadrant 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00934-00937	130	49	50	Minimum Thermal Average Voltage Imbalance Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00938-00941	130	50	50	Minimum Thermal Average Current Imbalance Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00942-00945	130	51	50	Minimum THD Phase A-N Voltage / Phase A-B Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00946-00949	130	52	50	Minimum THD Phase B-N Voltage / Phase B-C Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00950-00953	130	53	50	Minimum THD Phase C-N Voltage / Phase C-A Voltage Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00954-00957	130	54	50	Minimum THD Phase A Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00958-00961	130	55	50	Minimum THD Phase B Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00962-00965	130	56	50	Minimum THD Phase C Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00966-00969	130	57	50	Minimum K-Factor Phase A Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00970-00973	130	58	50	Minimum K-Factor Phase B Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00974-00977	130	59	50	Minimum K-Factor Phase C Current Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Energy Block (Secondary)								
00978-00981	131	0	50	Energy Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
00982-00985	132	0	20	VAhour (BCD) (Quadrants 1+2+3+4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F11	R
00986-00989	132	1	20	Positive VARhour (BCD) (Quadrants 1+2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F11	R
00990-00993	132	2	20	Negative VARhour (BCD) (Quadrants 3 +4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F11	R
00994-00997	132	3	20	Positive Watthour (BCD) (Quadrants 1+4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F11	R
00998-01001	132	4	20	Negative Watthour (BCD) (Quadrants 2+3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F11	R
01002-01005	133	0	20	VAhour (Binary) (Quadrants 1+2+3+4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F12	R
01006-01009	133	1	20	Positive VARhour (Binary) (Quadrants 1+2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F12	R
01010-01013	133	2	20	Negative VARhour (Binary) (Quadrants 3+4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F12	R
01014-01017	133	3	20	Positive Watthour (Binary) (Quadrants 1 +4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F12	R
01018-01021	133	4	20	Negative Watthour (Binary) (Quadrants 2+3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F12	R
Harmonic Magnitude Block								
01022	134	0	30	Phase A-N / Phase A-B Voltage 0^{th} Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01023	134	1	30	Phase A-N / Phase A-B Voltage 1^{st} Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01024	134	2	30	Phase A-N / Phase A-B Voltage 2^{nd} Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01025	134	3	30	Phase A-N / Phase A-B Voltage 3rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01026	134	4	30	Phase A-N / Phase A-B Voltage 4th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01027	134	5	30	Phase A-N / Phase A-B Voltage 5th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01028	134	6	30	Phase A-N / Phase A-B Voltage 6th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01029	134	7	30	Phase A-N / Phase A-B Voltage 7th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01030	135	0	30	Phase A-N / Phase A-B Voltage 8th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01031	135	1	30	Phase A-N / Phase A-B Voltage 9th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01032	135	2	30	Phase A-N / Phase A-B Voltage 10th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01033	135	3	30	Phase A-N / Phase A-B Voltage 11th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01034	135	4	30	Phase A-N / Phase A-B Voltage 12th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01035	135	5	30	Phase A-N / Phase A-B Voltage 13th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01036	135	6	30	Phase A-N / Phase A-B Voltage 14th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01037	135	7	30	Phase A-N / Phase A-B Voltage 15th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01038	136	0	30	Phase A-N / Phase A-B Voltage 16th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01039	136	1	30	Phase A-N / Phase A-B Voltage 17th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01040	136	2	30	Phase A-N / Phase A-B Voltage 18th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01041	136	3	30	Phase A-N / Phase A-B Voltage 19th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01042	136	4	30	Phase A-N / Phase A-B Voltage 20th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01043	136	5	30	Phase A-N / Phase A-B Voltage 21st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01044	136	6	30	Phase A-N / Phase A-B Voltage 22nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01045	136	7	30	Phase A-N / Phase A-B Voltage 23rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01046	136	8	30	Phase A-N / Phase A-B Voltage 24th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01047	136	9	30	Phase A-N / Phase A-B Voltage 25th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01048	136	10	30	Phase A-N / Phase A-B Voltage 26th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01049	136	11	30	Phase A-N / Phase A-B Voltage 27th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01050	136	12	30	Phase A-N / Phase A-B Voltage 28th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01051	136	13	30	Phase A-N / Phase A-B Voltage 29th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01052	136	14	30	Phase A-N / Phase A-B Voltage 30th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01053	136	15	30	Phase A-N / Phase A-B Voltage 31st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01054	137	0	30	Phase A-N / Phase A-B Voltage 32nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01055	137	1	30	Phase A-N / Phase A-B Voltage 33rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01056	137	2	30	Phase A-N / Phase A-B Voltage 34th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01057	137	3	30	Phase A-N / Phase A-B Voltage 35th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01058	137	4	30	Phase A-N / Phase A-B Voltage 36th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01059	137	5	30	Phase A-N / Phase A-B Voltage 37th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01060	137	6	30	Phase A-N / Phase A-B Voltage 38th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01061	137	7	30	Phase A-N / Phase A-B Voltage 39th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01062	137	8	30	Phase A-N / Phase A-B Voltage 40th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01063	137	9	30	Phase A-N / Phase A-B Voltage 41st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01064	137	10	30	Phase A-N / Phase A-B Voltage 42nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01065	137	11	30	Phase A-N / Phase A-B Voltage 43rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01066	137	12	30	Phase A-N / Phase A-B Voltage 44th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01067	137	13	30	Phase A-N / Phase A-B Voltage 45th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01068	137	14	30	Phase A-N / Phase A-B Voltage 46th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01069	137	15	30	Phase A-N / Phase A-B Voltage 47th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01070	137	16	30	Phase A-N / Phase A-B Voltage 48th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01071	137	17	30	Phase A-N / Phase A-B Voltage 49th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01072	137	18	30	Phase A-N / Phase A-B Voltage 50th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01073	137	19	30	Phase A-N / Phase A-B Voltage 51st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01074	137	20	30	Phase A-N / Phase A-B Voltage 52nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01075	137	21	30	Phase A-N / Phase A-B Voltage 53rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01076	137	22	30	Phase A-N / Phase A-B Voltage 54th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01077	137	23	30	Phase A-N / Phase A-B Voltage 55th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01078	137	24	30	Phase A-N / Phase A-B Voltage 56th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01079	137	25	30	Phase A-N / Phase A-B Voltage 57th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01080	137	26	30	Phase A-N / Phase A-B Voltage 58th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01081	137	27	30	Phase A-N / Phase A-B Voltage 59th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01082	137	28	30	Phase A-N / Phase A-B Voltage 60th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01083	137	29	30	Phase A-N / Phase A-B Voltage 61st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01084	137	30	30	Phase A-N / Phase A-B Voltage 62nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01085	137	31	30	Phase A-N / Phase A-B Voltage 63rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01086	138	0	30	Phase A-N / Phase A-B Voltage 64th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01087	138	1	30	Phase A-N / Phase A-B Voltage 65th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01088	138	2	30	Phase A-N / Phase A-B Voltage 66th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01089	138	3	30	Phase A-N / Phase A-B Voltage 67th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01090	138	4	30	Phase A-N / Phase A-B Voltage 68th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01091	138	5	30	Phase A-N / Phase A-B Voltage 69th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01092	138	6	30	Phase A-N / Phase A-B Voltage 70th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01093	138	7	30	Phase A-N / Phase A-B Voltage 71st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01094	138	8	30	Phase A-N / Phase A-B Voltage 72nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01095	138	9	30	Phase A-N / Phase A-B Voltage 73rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01096	138	10	30	Phase A-N / Phase A-B Voltage 74th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01097	138	11	30	Phase A-N / Phase A-B Voltage 75th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01098	138	12	30	Phase A-N / Phase A-B Voltage 76th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01099	138	13	30	Phase A-N / Phase A-B Voltage 77th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01100	138	14	30	Phase A-N / Phase A-B Voltage 78th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01101	138	15	30	Phase A-N / Phase A-B Voltage 79th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01102	138	16	30	Phase A-N / Phase A-B Voltage 80th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01103	138	17	30	Phase A-N / Phase A-B Voltage 81st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01104	138	18	30	Phase A-N / Phase A-B Voltage 82nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01105	138	19	30	Phase A-N / Phase A-B Voltage 83rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01106	138	20	30	Phase A-N / Phase A-B Voltage 84th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01107	138	21	30	Phase A-N / Phase A-B Voltage 85th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01108	138	22	30	Phase A-N / Phase A-B Voltage 86th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01109	138	23	30	Phase A-N / Phase A-B Voltage 87th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01110	138	24	30	Phase A-N / Phase A-B Voltage 88th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01111	138	25	30	Phase A-N / Phase A-B Voltage 89th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01112	138	26	30	Phase A-N / Phase A-B Voltage 90th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01113	138	27	30	Phase A-N / Phase A-B Voltage 91st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01114	138	28	30	Phase A-N / Phase A-B Voltage 92nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01115	138	29	30	Phase A-N / Phase A-B Voltage 93rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01116	138	30	30	Phase A-N / Phase A-B Voltage 94th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01117	138	31	30	Phase A-N / Phase A-B Voltage 95th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01118	138	32	30	Phase A-N / Phase A-B Voltage 96th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01119	138	33	30	Phase A-N / Phase A-B Voltage 97th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01120	138	34	30	Phase A-N / Phase A-B Voltage 98th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01121	138	35	30	Phase A-N / Phase A-B Voltage 99th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01122	138	36	30	Phase A-N / Phase A-B Voltage 100th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01123	138	37	30	Phase A-N / Phase A-B Voltage 101st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01124	138	38	30	Phase A-N / Phase A-B Voltage 102nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01125	138	39	30	Phase A-N / Phase A-B Voltage 103rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01126	138	40	30	Phase A-N / Phase A-B Voltage 104th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01127	138	41	30	Phase A-N / Phase A-B Voltage 105th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01128	138	42	30	Phase A-N / Phase A-B Voltage 106th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01129	138	43	30	Phase A-N / Phase A-B Voltage 107th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01130	138	44	30	Phase A-N / Phase A-B Voltage 108th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01131	138	45	30	Phase A-N / Phase A-B Voltage 109th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01132	138	46	30	Phase A-N / Phase A-B Voltage 110th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01133	138	47	30	Phase A-N / Phase A-B Voltage 111th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01134	138	48	30	Phase A-N / Phase A-B Voltage 112th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01135	138	49	30	Phase A-N / Phase A-B Voltage 113th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01136	138	50	30	Phase A-N / Phase A-B Voltage 114th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01137	138	51	30	Phase A-N / Phase A-B Voltage 115th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01138	138	52	30	Phase A-N / Phase A-B Voltage 116th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01139	138	53	30	Phase A-N / Phase A-B Voltage 117th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01140	138	54	30	Phase A-N / Phase A-B Voltage 118th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01141	138	55	30	Phase A-N / Phase A-B Voltage 119th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01142	138	56	30	Phase A-N / Phase A-B Voltage 120th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01143	138	57	30	Phase A-N / Phase A-B Voltage 121st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01144	138	58	30	Phase A-N / Phase A-B Voltage 122nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01145	138	59	30	Phase A-N / Phase A-B Voltage 123rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01146	138	60	30	Phase A-N / Phase A-B Voltage 124th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01147	138	61	30	Phase A-N / Phase A-B Voltage 125th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01148	138	62	30	Phase A-N / Phase A-B Voltage 126th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01149	138	63	30	Phase A-N / Phase A-B Voltage 127th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01150	139	0	30	Phase B-N / Phase B-C Voltage 0th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01151	139	1	30	Phase B-N / Phase B-C Voltage 1st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01152	139	2	30	Phase B-N / Phase B-C Voltage 2nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01153	139	3	30	Phase B-N / Phase B-C Voltage 3rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01154	139	4	30	Phase B-N / Phase B-C Voltage 4th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01155	139	5	30	Phase B-N / Phase B-C Voltage 5th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01156	139	6	30	Phase B-N / Phase B-C Voltage 6th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01157	139	7	30	Phase B-N / Phase B-C Voltage 7th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01158	140	0	30	Phase B-N / Phase B-C Voltage 8th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01159	140	1	30	Phase B-N / Phase B-C Voltage 9th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01160	140	2	30	Phase B-N / Phase B-C Voltage 10th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01161	140	3	30	Phase B-N / Phase B-C Voltage 11th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01162	140	4	30	Phase B-N / Phase B-C Voltage 12th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01163	140	5	30	Phase B-N / Phase B-C Voltage 13th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01164	140	6	30	Phase B-N / Phase B-C Voltage 14th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01165	140	7	30	Phase B-N / Phase B-C Voltage 15th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01166	141	0	30	Phase B-N / Phase B-C Voltage 16th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01167	141	1	30	Phase B-N / Phase B-C Voltage 17th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01168	141	2	30	Phase B-N / Phase B-C Voltage 18th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01169	141	3	30	Phase B-N / Phase B-C Voltage 19th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01170	141	4	30	Phase B-N / Phase B-C Voltage 20th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01171	141	5	30	Phase B-N / Phase B-C Voltage 21st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01172	141	6	30	Phase B-N / Phase B-C Voltage 22nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01173	141	7	30	Phase B-N / Phase B-C Voltage 23rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01174	141	8	30	Phase B-N / Phase B-C Voltage 24th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01175	141	9	30	Phase B-N / Phase B-C Voltage 25th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01176	141	10	30	Phase B-N / Phase B-C Voltage 26th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01177	141	11	30	Phase B-N / Phase B-C Voltage 27th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01178	141	12	30	Phase B-N / Phase B-C Voltage 28th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01179	141	13	30	Phase B-N / Phase B-C Voltage 29th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01180	141	14	30	Phase B-N / Phase B-C Voltage 30th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01181	141	15	30	Phase B-N / Phase B-C Voltage 31st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01182	142	0	30	Phase B-N / Phase B-C Voltage 32nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01183	142	1	30	Phase B-N / Phase B-C Voltage 33rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01184	142	2	30	Phase B-N / Phase B-C Voltage 34th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01185	142	3	30	Phase B-N / Phase B-C Voltage 35th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01186	142	4	30	Phase B-N / Phase B-C Voltage 36th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01187	142	5	30	Phase B-N / Phase B-C Voltage 37th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01188	142	6	30	Phase B-N / Phase B-C Voltage 38th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01189	142	7	30	Phase B-N / Phase B-C Voltage 39th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01190	142	8	30	Phase B-N / Phase B-C Voltage 40th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01191	142	9	30	Phase B-N / Phase B-C Voltage 41st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01192	142	10	30	Phase B-N / Phase B-C Voltage 42nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01193	142	11	30	Phase B-N / Phase B-C Voltage 43rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01194	142	12	30	Phase B-N / Phase B-C Voltage 44th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01195	142	13	30	Phase B-N / Phase B-C Voltage 45th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01196	142	14	30	Phase B-N / Phase B-C Voltage 46th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01197	142	15	30	Phase B-N / Phase B-C Voltage 47th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01198	142	16	30	Phase B-N / Phase B-C Voltage 48th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01199	142	17	30	Phase B-N / Phase B-C Voltage 49th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01200	142	18	30	Phase B-N / Phase B-C Voltage 50th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01201	142	19	30	Phase B-N / Phase B-C Voltage 51st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01202	142	20	30	Phase B-N / Phase B-C Voltage 52nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01203	142	21	30	Phase B-N / Phase B-C Voltage 53rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01204	142	22	30	Phase B-N / Phase B-C Voltage 54th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01205	142	23	30	Phase B-N / Phase B-C Voltage 55th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01206	142	24	30	Phase B-N / Phase B-C Voltage 56th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01207	142	25	30	Phase B-N / Phase B-C Voltage 57th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01208	142	26	30	Phase B-N / Phase B-C Voltage 58th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01209	142	27	30	Phase B-N / Phase B-C Voltage 59th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01210	142	28	30	Phase B-N / Phase B-C Voltage 60th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01211	142	29	30	Phase B-N / Phase B-C Voltage 61st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01212	142	30	30	Phase B-N / Phase B-C Voltage 62nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01213	142	31	30	Phase B-N / Phase B-C Voltage 63rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01214	143	0	30	Phase B-N / Phase B-C Voltage 64th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01215	143	1	30	Phase B-N / Phase B-C Voltage 65th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01216	143	2	30	Phase B-N / Phase B-C Voltage 66th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01217	143	3	30	Phase B-N / Phase B-C Voltage 67th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01218	143	4	30	Phase B-N / Phase B-C Voltage 68th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01219	143	5	30	Phase B-N / Phase B-C Voltage 69th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01220	143	6	30	Phase B-N / Phase B-C Voltage 70th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01221	143	7	30	Phase B-N / Phase B-C Voltage 71st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01222	143	8	30	Phase B-N / Phase B-C Voltage 72nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01223	143	9	30	Phase B-N / Phase B-C Voltage 73rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01224	143	10	30	Phase B-N / Phase B-C Voltage 74th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01225	143	11	30	Phase B-N / Phase B-C Voltage 75th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01226	143	12	30	Phase B-N / Phase B-C Voltage 76th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01227	143	13	30	Phase B-N / Phase B-C Voltage 77th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01228	143	14	30	Phase B-N / Phase B-C Voltage 78th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01229	143	15	30	Phase B-N / Phase B-C Voltage 79th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01230	143	16	30	Phase B-N / Phase B-C Voltage 80th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01231	143	17	30	Phase B-N / Phase B-C Voltage 81st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01232	143	18	30	Phase B-N / Phase B-C Voltage 82nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01233	143	19	30	Phase B-N / Phase B-C Voltage 83rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01234	143	20	30	Phase B-N / Phase B-C Voltage 84th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01235	143	21	30	Phase B-N / Phase B-C Voltage 85th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01236	143	22	30	Phase B-N / Phase B-C Voltage 86th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01237	143	23	30	Phase B-N / Phase B-C Voltage 87th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01238	143	24	30	Phase B-N / Phase B-C Voltage 88th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01239	143	25	30	Phase B-N / Phase B-C Voltage 89th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01240	143	26	30	Phase B-N / Phase B-C Voltage 90th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01241	143	27	30	Phase B-N / Phase B-C Voltage 91st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01242	143	28	30	Phase B-N / Phase B-C Voltage 92nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01243	143	29	30	Phase B-N / Phase B-C Voltage 93rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01244	143	30	30	Phase B-N / Phase B-C Voltage 94th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01245	143	31	30	Phase B-N / Phase B-C Voltage 95th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01246	143	32	30	Phase B-N / Phase B-C Voltage 96th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01247	143	33	30	Phase B-N / Phase B-C Voltage 97th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01248	143	34	30	Phase B-N / Phase B-C Voltage 98th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01249	143	35	30	Phase B-N / Phase B-C Voltage 99th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01250	143	36	30	Phase B-N / Phase B-C Voltage 100th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01251	143	37	30	Phase B-N / Phase B-C Voltage 101st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01252	143	38	30	Phase B-N / Phase B-C Voltage 102nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01253	143	39	30	Phase B-N / Phase B-C Voltage 103rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01254	143	40	30	Phase B-N / Phase B-C Voltage 104th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01255	143	41	30	Phase B-N / Phase B-C Voltage 105th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01256	143	42	30	Phase B-N / Phase B-C Voltage 106th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01257	143	43	30	Phase B-N / Phase B-C Voltage 107th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01258	143	44	30	Phase B-N / Phase B-C Voltage 108th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01259	143	45	30	Phase B-N / Phase B-C Voltage 109th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01260	143	46	30	Phase B-N / Phase B-C Voltage 110th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01261	143	47	30	Phase B-N / Phase B-C Voltage 111th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01262	143	48	30	Phase B-N / Phase B-C Voltage 112th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01263	143	49	30	Phase B-N / Phase B-C Voltage 113th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01264	143	50	30	Phase B-N / Phase B-C Voltage 114th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01265	143	51	30	Phase B-N / Phase B-C Voltage 115th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01266	143	52	30	Phase B-N / Phase B-C Voltage 116th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01267	143	53	30	Phase B-N / Phase B-C Voltage 117th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01268	143	54	30	Phase B-N / Phase B-C Voltage 118th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01269	143	55	30	Phase B-N / Phase B-C Voltage 119th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01270	143	56	30	Phase B-N / Phase B-C Voltage 120th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01271	143	57	30	Phase B-N / Phase B-C Voltage 121st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01272	143	58	30	Phase B-N / Phase B-C Voltage 122nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01273	143	59	30	Phase B-N / Phase B-C Voltage 123rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01274	143	60	30	Phase B-N / Phase B-C Voltage 124th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01275	143	61	30	Phase B-N / Phase B-C Voltage 125th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01276	143	62	30	Phase B-N / Phase B-C Voltage 126th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01277	143	63	30	Phase B-N / Phase B-C Voltage 127th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01278	144	0	30	Phase C-N / Phase C-A Voltage 0th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01279	144	1	30	Phase C-N / Phase C-A Voltage 1st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01280	144	2	30	Phase C-N / Phase C-A Voltage 2nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01281	144	3	30	Phase C-N / Phase C-A Voltage 3rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01282	144	4	30	Phase C-N / Phase C-A Voltage 4th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01283	144	5	30	Phase C-N / Phase C-A Voltage 5th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01284	144	6	30	Phase C-N / Phase C-A Voltage 6th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01285	144	7	30	Phase C-N / Phase C-A Voltage 7th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01286	145	0	30	Phase C-N / Phase C-A Voltage 8th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01287	145	1	30	Phase C-N / Phase C-A Voltage 9th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01288	145	2	30	Phase C-N / Phase C-A Voltage 10th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01289	145	3	30	Phase C-N / Phase C-A Voltage 11th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01290	145	4	30	Phase C-N / Phase C-A Voltage 12th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01291	145	5	30	Phase C-N / Phase C-A Voltage 13th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01292	145	6	30	Phase C-N / Phase C-A Voltage 14th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01293	145	7	30	Phase C-N / Phase C-A Voltage 15th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01294	146	0	30	Phase C-N / Phase C-A Voltage 16th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01295	146	1	30	Phase C-N / Phase C-A Voltage 17th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01296	146	2	30	Phase C-N / Phase C-A Voltage 18th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01297	146	3	30	Phase C-N / Phase C-A Voltage 19th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01298	146	4	30	Phase C-N / Phase C-A Voltage 20th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01299	146	5	30	Phase C-N / Phase C-A Voltage 21st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01300	146	6	30	Phase C-N / Phase C-A Voltage 22nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01301	146	7	30	Phase C-N / Phase C-A Voltage 23rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01302	146	8	30	Phase C-N / Phase C-A Voltage 24th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01303	146	9	30	Phase C-N / Phase C-A Voltage 25th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01304	146	10	30	Phase C-N / Phase C-A Voltage 26th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01305	146	11	30	Phase C-N / Phase C-A Voltage 27th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01306	146	12	30	Phase C-N / Phase C-A Voltage 28th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01307	146	13	30	Phase C-N / Phase C-A Voltage 29th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01308	146	14	30	Phase C-N / Phase C-A Voltage 30th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01309	146	15	30	Phase C-N / Phase C-A Voltage 31st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01310	147	0	30	Phase C-N / Phase C-A Voltage 32nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01311	147	1	30	Phase C-N / Phase C-A Voltage 33rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01312	147	2	30	Phase C-N / Phase C-A Voltage 34th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01313	147	3	30	Phase C-N / Phase C-A Voltage 35th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01314	147	4	30	Phase C-N / Phase C-A Voltage 36th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01315	147	5	30	Phase C-N / Phase C-A Voltage 37th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01316	147	6	30	Phase C-N / Phase C-A Voltage 38th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01317	147	7	30	Phase C-N / Phase C-A Voltage 39th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01318	147	8	30	Phase C-N / Phase C-A Voltage 40th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01319	147	9	30	Phase C-N / Phase C-A Voltage 41st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01320	147	10	30	Phase C-N / Phase C-A Voltage 42nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01321	147	11	30	Phase C-N / Phase C-A Voltage 43rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01322	147	12	30	Phase C-N / Phase C-A Voltage 44th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01323	147	13	30	Phase C-N / Phase C-A Voltage 45th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01324	147	14	30	Phase C-N / Phase C-A Voltage 46th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01325	147	15	30	Phase C-N / Phase C-A Voltage 47th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01326	147	16	30	Phase C-N / Phase C-A Voltage 48th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01327	147	17	30	Phase C-N / Phase C-A Voltage 49th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01328	147	18	30	Phase C-N / Phase C-A Voltage 50th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01329	147	19	30	Phase C-N / Phase C-A Voltage 51st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01330	147	20	30	Phase C-N / Phase C-A Voltage 52nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01331	147	21	30	Phase C-N / Phase C-A Voltage 53rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01332	147	22	30	Phase C-N / Phase C-A Voltage 54th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01333	147	23	30	Phase C-N / Phase C-A Voltage 55th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01334	147	24	30	Phase C-N / Phase C-A Voltage 56th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01335	147	25	30	Phase C-N / Phase C-A Voltage 57th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01336	147	26	30	Phase C-N / Phase C-A Voltage 58th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01337	147	27	30	Phase C-N / Phase C-A Voltage 59th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01338	147	28	30	Phase C-N / Phase C-A Voltage 60th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01339	147	29	30	Phase C-N / Phase C-A Voltage 61st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01340	147	30	30	Phase C-N / Phase C-A Voltage 62nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01341	147	31	30	Phase C-N / Phase C-A Voltage 63rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01342	148	0	30	Phase C-N / Phase C-A Voltage 64th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01343	148	1	30	Phase C-N / Phase C-A Voltage 65th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01344	148	2	30	Phase C-N / Phase C-A Voltage 66th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01345	148	3	30	Phase C-N / Phase C-A Voltage 67th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01346	148	4	30	Phase C-N / Phase C-A Voltage 68th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01347	148	5	30	Phase C-N / Phase C-A Voltage 69th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01348	148	6	30	Phase C-N / Phase C-A Voltage 70th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01349	148	7	30	Phase C-N / Phase C-A Voltage 71st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01350	148	8	30	Phase C-N / Phase C-A Voltage 72nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01351	148	9	30	Phase C-N / Phase C-A Voltage 73rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01352	148	10	30	Phase C-N / Phase C-A Voltage 74th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01353	148	11	30	Phase C-N / Phase C-A Voltage 75th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01354	148	12	30	Phase C-N / Phase C-A Voltage 76th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01355	148	13	30	Phase C-N / Phase C-A Voltage 77th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01356	148	14	30	Phase C-N / Phase C-A Voltage 78th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01357	148	15	30	Phase C-N / Phase C-A Voltage 79th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01358	148	16	30	Phase C-N / Phase C-A Voltage 80th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01359	148	17	30	Phase C-N / Phase C-A Voltage 81st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01360	148	18	30	Phase C-N / Phase C-A Voltage 82nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01361	148	19	30	Phase C-N / Phase C-A Voltage 83rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01362	148	20	30	Phase C-N / Phase C-A Voltage 84th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01363	148	21	30	Phase C-N / Phase C-A Voltage 85th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01364	148	22	30	Phase C-N / Phase C-A Voltage 86th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01365	148	23	30	Phase C-N / Phase C-A Voltage 87th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01366	148	24	30	Phase C-N / Phase C-A Voltage 88th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01367	148	25	30	Phase C-N / Phase C-A Voltage 89th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01368	148	26	30	Phase C-N / Phase C-A Voltage 90th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01369	148	27	30	Phase C-N / Phase C-A Voltage 91st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01370	148	28	30	Phase C-N / Phase C-A Voltage 92nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01371	148	29	30	Phase C-N / Phase C-A Voltage 93rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01372	148	30	30	Phase C-N / Phase C-A Voltage 94th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01373	148	31	30	Phase C-N / Phase C-A Voltage 95th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01374	148	32	30	Phase C-N / Phase C-A Voltage 96th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01375	148	33	30	Phase C-N / Phase C-A Voltage 97th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01376	148	34	30	Phase C-N / Phase C-A Voltage 98th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01377	148	35	30	Phase C-N / Phase C-A Voltage 99th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01378	148	36	30	Phase C-N / Phase C-A Voltage 100th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01379	148	37	30	Phase C-N / Phase C-A Voltage 101st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01380	148	38	30	Phase C-N / Phase C-A Voltage 102nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01381	148	39	30	Phase C-N / Phase C-A Voltage 103rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01382	148	40	30	Phase C-N / Phase C-A Voltage 104th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01383	148	41	30	Phase C-N / Phase C-A Voltage 105th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01384	148	42	30	Phase C-N / Phase C-A Voltage 106th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01385	148	43	30	Phase C-N / Phase C-A Voltage 107th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01386	148	44	30	Phase C-N / Phase C-A Voltage 108th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01387	148	45	30	Phase C-N / Phase C-A Voltage 109th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01388	148	46	30	Phase C-N / Phase C-A Voltage 110th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01389	148	47	30	Phase C-N / Phase C-A Voltage 111th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01390	148	48	30	Phase C-N / Phase C-A Voltage 112th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01391	148	49	30	Phase C-N / Phase C-A Voltage 113th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01392	148	50	30	Phase C-N / Phase C-A Voltage 114th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01393	148	51	30	Phase C-N / Phase C-A Voltage 115th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01394	148	52	30	Phase C-N / Phase C-A Voltage 116th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01395	148	53	30	Phase C-N / Phase C-A Voltage 117th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01396	148	54	30	Phase C-N / Phase C-A Voltage 118th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01397	148	55	30	Phase C-N / Phase C-A Voltage 119th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01398	148	56	30	Phase C-N / Phase C-A Voltage 120th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01399	148	57	30	Phase C-N / Phase C-A Voltage 121st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01400	148	58	30	Phase C-N / Phase C-A Voltage 122nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01401	148	59	30	Phase C-N / Phase C-A Voltage 123rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01402	148	60	30	Phase C-N / Phase C-A Voltage 124th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01403	148	61	30	Phase C-N / Phase C-A Voltage 125th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01404	148	62	30	Phase C-N / Phase C-A Voltage 126th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01405	148	63	30	Phase C-N / Phase C-A Voltage 127th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01406	149	0	30	Phase A Current 0th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01407	149	1	30	Phase A Current 1st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01408	149	2	30	Phase A Current 2nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01409	149	3	30	Phase A Current 3rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01410	149	4	30	Phase A Current 4th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01411	149	5	30	Phase A Current 5th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01412	149	6	30	Phase A Current 6th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01413	149	7	30	Phase A Current 7th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01414	150	0	30	Phase A Current 8th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01415	150	1	30	Phase A Current 9th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01416	150	2	30	Phase A Current 10th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01417	150	3	30	Phase A Current 11th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01418	150	4	30	Phase A Current 12th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01419	150	5	30	Phase A Current 13th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01420	150	6	30	Phase A Current 14th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01421	150	7	30	Phase A Current 15th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01422	151	0	30	Phase A Current 16th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01423	151	1	30	Phase A Current 17th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01424	151	2	30	Phase A Current 18th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01425	151	3	30	Phase A Current 19th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01426	151	4	30	Phase A Current 20th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01427	151	5	30	Phase A Current 21st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01428	151	6	30	Phase A Current 22nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01429	151	7	30	Phase A Current 23rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01430	151	8	30	Phase A Current 24th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01431	151	9	30	Phase A Current 25th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01432	151	10	30	Phase A Current 26th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01433	151	11	30	Phase A Current 27th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01434	151	12	30	Phase A Current 28th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01435	151	13	30	Phase A Current 29th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01436	151	14	30	Phase A Current 30th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01437	151	15	30	Phase A Current 31st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01438	152	0	30	Phase A Current 32nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01439	152	1	30	Phase A Current 33rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01440	152	2	30	Phase A Current 34th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01441	152	3	30	Phase A Current 35th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01442	152	4	30	Phase A Current 36th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01443	152	5	30	Phase A Current 37th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01444	152	6	30	Phase A Current 38th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01445	152	7	30	Phase A Current 39th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01446	152	8	30	Phase A Current 40th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01447	152	9	30	Phase A Current 41st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01448	152	10	30	Phase A Current 42nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01449	152	11	30	Phase A Current43rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01450	152	12	30	Phase A Current 44th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01451	152	13	30	Phase A Current 45th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01452	152	14	30	Phase A Current 46th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01453	152	15	30	Phase A Current 47th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01454	152	16	30	Phase A Current 48th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01455	152	17	30	Phase A Current 49th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01456	152	18	30	Phase A Current 50th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01457	152	19	30	Phase A Current 51st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01458	152	20	30	Phase A Current 52nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01459	152	21	30	Phase A Current 53rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01460	152	22	30	Phase A Current 54th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01461	152	23	30	Phase A Current 55th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01462	152	24	30	Phase A Current 56th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01463	152	25	30	Phase A Current 57th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01464	152	26	30	Phase A Current 58th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01465	152	27	30	Phase A Current 59th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01466	152	28	30	Phase A Current 60th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01467	152	29	30	Phase A Current 61st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01468	152	30	30	Phase A Current 62nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01469	152	31	30	Phase A Current 63rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01470	153	0	30	Phase A Current 64th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01471	153	1	30	Phase A Current 65th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01472	153	2	30	Phase A Current 66th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01473	153	3	30	Phase A Current 67th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01474	153	4	30	Phase A Current 68th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01475	153	5	30	Phase A Current 69th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01476	153	6	30	Phase A Current 70th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01477	153	7	30	Phase A Current 71st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01478	153	8	30	Phase A Current 72nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01479	153	9	30	Phase A Current 73rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01480	153	10	30	Phase A Current 74th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01481	153	11	30	Phase A Current 75th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01482	153	12	30	Phase A Current 76th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01483	153	13	30	Phase A Current 77th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01484	153	14	30	Phase A Current 78th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01485	153	15	30	Phase A Current 79th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01486	153	16	30	Phase A Current 80th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01487	153	17	30	Phase A Current 81st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01488	153	18	30	Phase A Current 82nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01489	153	19	30	Phase A Current 83rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01490	153	20	30	Phase A Current 84th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01491	153	21	30	Phase A Current 85th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01492	153	22	30	Phase A Current 86th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01493	153	23	30	Phase A Current 87th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01494	153	24	30	Phase A Current 88th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01495	153	25	30	Phase A Current 89th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01496	153	26	30	Phase A Current 90th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01497	153	27	30	Phase A Current 91st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01498	153	28	30	Phase A Current 92nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01499	153	29	30	Phase A Current 93rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01500	153	30	30	Phase A Current 94th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01501	153	31	30	Phase A Current 95th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01502	153	32	30	Phase A Current 96th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01503	153	33	30	Phase A Current 97th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01504	153	34	30	Phase A Current 98th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01505	153	35	30	Phase A Current 99th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01506	153	36	30	Phase A Current 100th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01507	153	37	30	Phase A Current 101st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01508	153	38	30	Phase A Current 102nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01509	153	39	30	Phase A Current 103rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01510	153	40	30	Phase A Current 104th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01511	153	41	30	Phase A Current 105th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01512	153	42	30	Phase A Current 106th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01513	153	43	30	Phase A Current 107th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01514	153	44	30	Phase A Current 108th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01515	153	45	30	Phase A Current 109th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01516	153	46	30	Phase A Current 110th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01517	153	47	30	Phase A Current 111th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01518	153	48	30	Phase A Current 112th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01519	153	49	30	Phase A Current 113th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01520	153	50	30	Phase A Current 114th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01521	153	51	30	Phase A Current 115th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01522	153	52	30	Phase A Current 116th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01523	153	53	30	Phase A Current 117th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01524	153	54	30	Phase A Current 118th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01525	153	55	30	Phase A Current 119th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01526	153	56	30	Phase A Current 120th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01527	153	57	30	Phase A Current 121st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01528	153	58	30	Phase A Current 122nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01529	153	59	30	Phase A Current 123rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01530	153	60	30	Phase A Current 124th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01531	153	61	30	Phase A Current 125th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01532	153	62	30	Phase A Current 126th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01533	153	63	30	Phase A Current 127th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01534	154	0	30	Phase B Current 0th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01535	154	1	30	Phase B Current 1st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01536	154	2	30	Phase B Current 2nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01537	154	3	30	Phase B Current 3rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01538	154	4	30	Phase B Current 4th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01539	154	5	30	Phase B Current 5th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01540	154	6	30	Phase B Current 6th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01541	154	7	30	Phase B Current 7th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01542	155	0	30	Phase B Current 8th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01543	155	1	30	Phase B Current 9th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01544	155	2	30	Phase B Current 10th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01545	155	3	30	Phase B Current 11th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01546	155	4	30	Phase B Current 12th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01547	155	5	30	Phase B Current 13th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01548	155	6	30	Phase B Current 14th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01549	155	7	30	Phase B Current 15th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01550	156	0	30	Phase B Current 16th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01551	156	1	30	Phase B Current 17th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01552	156	2	30	Phase B Current 18th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01553	156	3	30	Phase B Current 19th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01554	156	4	30	Phase B Current 20th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01555	156	5	30	Phase B Current 21st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01556	156	6	30	Phase B Current 22nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01557	156	7	30	Phase B Current 23rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01558	156	8	30	Phase B Current 24th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01559	156	9	30	Phase B Current 25th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01560	156	10	30	Phase B Current 26th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01561	156	11	30	Phase B Current 27th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01562	156	12	30	Phase B Current 28th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01563	156	13	30	Phase B Current 29th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01564	156	14	30	Phase B Current 30th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01565	156	15	30	Phase B Current 31st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01566	157	0	30	Phase B Current 32nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01567	157	1	30	Phase B Current 33rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01568	157	2	30	Phase B Current 34th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01569	157	3	30	Phase B Current 35th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01570	157	4	30	Phase B Current 36th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01571	157	5	30	Phase B Current 37th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01572	157	6	30	Phase B Current 38th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01573	157	7	30	Phase B Current 39th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01574	157	8	30	Phase B Current 40th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01575	157	9	30	Phase B Current 41st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01576	157	10	30	Phase B Current 42nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01577	157	11	30	Phase B Current43rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01578	157	12	30	Phase B Current 44th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01579	157	13	30	Phase B Current 45th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01580	157	14	30	Phase B Current 46th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01581	157	15	30	Phase B Current 47th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01582	157	16	30	Phase B Current 48th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01583	157	17	30	Phase B Current 49th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01584	157	18	30	Phase B Current 50th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01585	157	19	30	Phase B Current 51st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01586	157	20	30	Phase B Current 52nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01587	157	21	30	Phase B Current 53rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01588	157	22	30	Phase B Current 54th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01589	157	23	30	Phase B Current 55th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01590	157	24	30	Phase B Current 56th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01591	157	25	30	Phase B Current 57th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01592	157	26	30	Phase B Current 58th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01593	157	27	30	Phase B Current 59th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01594	157	28	30	Phase B Current 60th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01595	157	29	30	Phase B Current 61st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01596	157	30	30	Phase B Current 62nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01597	157	31	30	Phase B Current 63rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01598	158	0	30	Phase B Current 64th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01599	158	1	30	Phase B Current 65th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01600	158	2	30	Phase B Current 66th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01601	158	3	30	Phase B Current 67th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01602	158	4	30	Phase B Current 68th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01603	158	5	30	Phase B Current 69th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01604	158	6	30	Phase B Current 70th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01605	158	7	30	Phase B Current 71st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01606	158	8	30	Phase B Current 72nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01607	158	9	30	Phase B Current 73rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01608	158	10	30	Phase B Current 74th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01609	158	11	30	Phase B Current 75th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01610	158	12	30	Phase B Current 76th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01611	158	13	30	Phase B Current 77th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01612	158	14	30	Phase B Current 78th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01613	158	15	30	Phase B Current 79th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01614	158	16	30	Phase B Current 80th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01615	158	17	30	Phase B Current 81st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01616	158	18	30	Phase B Current 82nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01617	158	19	30	Phase B Current 83rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01618	158	20	30	Phase B Current 84th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01619	158	21	30	Phase B Current 85th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01620	158	22	30	Phase B Current 86th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01621	158	23	30	Phase B Current 87th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01622	158	24	30	Phase B Current 88th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01623	158	25	30	Phase B Current 89th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01624	158	26	30	Phase B Current 90th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01625	158	27	30	Phase B Current 91st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01626	158	28	30	Phase B Current 92nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01627	158	29	30	Phase B Current 93rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01628	158	30	30	Phase B Current 94th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01629	158	31	30	Phase B Current 95th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01630	158	32	30	Phase B Current 96th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01631	158	33	30	Phase B Current 97th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01632	158	34	30	Phase B Current 98th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01633	158	35	30	Phase B Current 99th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01634	158	36	30	Phase B Current 100th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01635	158	37	30	Phase B Current 101st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01636	158	38	30	Phase B Current 102nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01637	158	39	30	Phase B Current 103rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01638	158	40	30	Phase B Current 104th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01639	158	41	30	Phase B Current 105th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01640	158	42	30	Phase B Current 106th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01641	158	43	30	Phase B Current 107th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01642	158	44	30	Phase B Current 108th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01643	158	45	30	Phase B Current 109th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01644	158	46	30	Phase B Current 110th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01645	158	47	30	Phase B Current 111th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01646	158	48	30	Phase B Current 112th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01647	158	49	30	Phase B Current 113th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01648	158	50	30	Phase B Current 114th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01649	158	51	30	Phase B Current 115th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01650	158	52	30	Phase B Current 116th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01651	158	53	30	Phase B Current 117th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01652	158	54	30	Phase B Current 118th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01653	158	55	30	Phase B Current 119th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01654	158	56	30	Phase B Current 120th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01655	158	57	30	Phase B Current 121st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01656	158	58	30	Phase B Current 122nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01657	158	59	30	Phase B Current 123rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01658	158	60	30	Phase B Current 124th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01659	158	61	30	Phase B Current 125th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01660	158	62	30	Phase B Current 126th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01661	158	63	30	Phase B Current 127th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01662	159	0	30	Phase C Current 0th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01663	159	1	30	Phase C Current 1st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01664	159	2	30	Phase C Current 2nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01665	159	3	30	Phase C Current 3rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01666	159	4	30	Phase C Current 4th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01667	159	5	30	Phase C Current 5th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01668	159	6	30	Phase C Current 6th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01669	159	7	30	Phase C Current 7th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01670	160	0	30	Phase C Current 8th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01671	160	1	30	Phase C Current 9th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01672	160	2	30	Phase C Current 10th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01673	160	3	30	Phase C Current 11th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01674	160	4	30	Phase C Current 12th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01675	160	5	30	Phase C Current 13th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01676	160	6	30	Phase C Current 14th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01677	160	7	30	Phase C Current 15th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01678	161	0	30	Phase C Current 16th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01679		1	30	Phase C Current 17th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01680	161	2	30	Phase C Current 18th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01681	161	3	30	Phase C Current 19th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01682	161	4	30	Phase C Current 20th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01683	161	5	30	Phase C Current 21st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01684	161	6	30	Phase C Current 22nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01685	161	7	30	Phase C Current 23rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01686	161	8	30	Phase C Current 24th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01687	161	9	30	Phase C Current 25th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01688	161	10	30	Phase C Current 26th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01689	161	11	30	Phase C Current 27th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01690	161	12	30	Phase C Current 28th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01691	161	13	30	Phase C Current 29th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01692	161	14	30	Phase C Current 30th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01693	161	15	30	Phase C Current 31st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01694	162	0	30	Phase C Current 32nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01695	162	1	30	Phase C Current 33rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01696	162	2	30	Phase C Current 34th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01697	162	3	30	Phase C Current 35th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01698	162	4	30	Phase C Current 36th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01699	162	5	30	Phase C Current 37th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01700	162	6	30	Phase C Current 38th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01701	162	7	30	Phase C Current 39th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01702	162	8	30	Phase C Current 40th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01703	162	9	30	Phase C Current 41st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01704	162	10	30	Phase C Current 42nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01705	162	11	30	Phase C Current43rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01706	162	12	30	Phase C Current 44th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01707	162	13	30	Phase C Current 45th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01708	162	14	30	Phase C Current 46th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01709	162	15	30	Phase C Current 47th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01710	162	16	30	Phase C Current 48th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01711	162	17	30	Phase C Current 49th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01712	162	18	30	Phase C Current 50th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01713	162	19	30	Phase C Current 51st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01714	162	20	30	Phase C Current 52nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01715	162	21	30	Phase C Current 53rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01716	162	22	30	Phase C Current 54th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01717	162	23	30	Phase C Current 55th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01718	162	24	30	Phase C Current 56th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01719	162	25	30	Phase C Current 57th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01720	162	26	30	Phase C Current 58th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01721	162	27	30	Phase C Current 59th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01722	162	28	30	Phase C Current 60th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01723	162	29	30	Phase C Current 61st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01724	162	30	30	Phase C Current 62nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01725	162	31	30	Phase C Current 63rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01726	163	0	30	Phase C Current 64th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01727	163	1	30	Phase C Current 65th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01728	163	2	30	Phase C Current 66th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01729	163	3	30	Phase C Current 67th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01730	163	4	30	Phase C Current 68th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01731	163	5	30	Phase C Current 69th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01732	163	6	30	Phase C Current 70th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01733	163	7	30	Phase C Current 71st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01734	163	8	30	Phase C Current 72nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01735	163	9	30	Phase C Current 73rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01736	163	10	30	Phase C Current 74th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01737	163	11	30	Phase C Current 75th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01738	163	12	30	Phase C Current 76th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01739	163	13	30	Phase C Current 77th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01740	163	14	30	Phase C Current 78th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01741	163	15	30	Phase C Current 79th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01742	163	16	30	Phase C Current 80th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01743	163	17	30	Phase C Current 81st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01744	163	18	30	Phase C Current 82nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01745	163	19	30	Phase C Current 83rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01746	163	20	30	Phase C Current 84th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01747	163	21	30	Phase C Current 85th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01748	163	22	30	Phase C Current 86th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01749	163	23	30	Phase C Current 87th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01750	163	24	30	Phase C Current 88th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01751	163	25	30	Phase C Current 89th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01752	163	26	30	Phase C Current 90th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01753	163	27	30	Phase C Current 91st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01754	163	28	30	Phase C Current 92nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01755	163	29	30	Phase C Current 93rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01756	163	30	30	Phase C Current 94th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01757	163	31	30	Phase C Current 95th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01758	163	32	30	Phase C Current 96th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01759	163	33	30	Phase C Current 97th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01760	163	34	30	Phase C Current 98th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01761	163	35	30	Phase C Current 99th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01762	163	36	30	Phase C Current 100th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01763	163	37	30	Phase C Current 101st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01764	163	38	30	Phase C Current 102nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01765	163	39	30	Phase C Current 103rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01766	163	40	30	Phase C Current 104th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01767	163	41	30	Phase C Current 105th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01768	163	42	30	Phase C Current 106th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01769	163	43	30	Phase C Current 107th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01770	163	44	30	Phase C Current 108th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01771	163	45	30	Phase C Current 109th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01772	163	46	30	Phase C Current 110th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01773	163	47	30	Phase C Current 111th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01774	163	48	30	Phase C Current 112th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01775	163	49	30	Phase C Current 113th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01776	163	50	30	Phase C Current 114th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01777	163	51	30	Phase C Current 115th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01778	163	52	30	Phase C Current 116th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01779	163	53	30	Phase C Current 117th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01780	163	54	30	Phase C Current 118th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01781	163	55	30	Phase C Current 119th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01782	163	56	30	Phase C Current 120th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01783	163	57	30	Phase C Current 121st Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01784	163	58	30	Phase C Current 122nd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01785	163	59	30	Phase C Current 123rd Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01786	163	60	30	Phase C Current 124th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01787	163	61	30	Phase C Current 125th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01788	163	62	30	Phase C Current 126th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
01789	163	63	30	Phase C Current 127th Harmonic Magnitude	+327.67% / -327.68%	0.01%	F10	R
Harmonic Phase Block								
01790	164	0	30	Phase A-N / Phase A-B Voltage 0th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01791	164	1	30	Phase A-N / Phase A-B Voltage 1st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01792	164	2	30	Phase A-N / Phase A-B Voltage 2nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01793	164	3	30	Phase A-N / Phase A-B Voltage 3rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01794	164	4	30	Phase A-N / Phase A-B Voltage 4th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01795	164	5	30	Phase A-N / Phase A-B Voltage 5th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01796	164	6	30	Phase A-N / Phase A-B Voltage 6th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01797	164	7	30	Phase A-N / Phase A-B Voltage 7th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01798	165	0	30	Phase A-N / Phase A-B Voltage 8th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01799	165	1	30	Phase A-N / Phase A-B Voltage 9th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01800	165	2	30	Phase A-N / Phase A-B Voltage 10th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01801	165	3	30	Phase A-N / Phase A-B Voltage 11th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01802	165	4	30	Phase A-N / Phase A-B Voltage 12th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01803	165	5	30	Phase A-N / Phase A-B Voltage 13th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01804	165	6	30	Phase A-N / Phase A-B Voltage 14th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01805	165	7	30	Phase A-N / Phase A-B Voltage 15th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01806	166	0	30	Phase A-N / Phase A-B Voltage 16th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01807	166	1	30	Phase A-N / Phase A-B Voltage 17th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01808	166	2	30	Phase A-N / Phase A-B Voltage 18th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01809	166	3	30	Phase A-N / Phase A-B Voltage 19th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01810	166	4	30	Phase A-N / Phase A-B Voltage 20th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01811	166	5	30	Phase A-N / Phase A-B Voltage 21st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01812	166	6	30	Phase A-N / Phase A-B Voltage 22nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01813	166	7	30	Phase A-N / Phase A-B Voltage 23rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01814	166	8	30	Phase A-N / Phase A-B Voltage 24th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01815	166	9	30	Phase A-N / Phase A-B Voltage 25th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01816	166	10	30	Phase A-N / Phase A-B Voltage 26th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01817	166	11	30	Phase A-N / Phase A-B Voltage 27th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01818	166	12	30	Phase A-N / Phase A-B Voltage 28th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01819	166	13	30	Phase A-N / Phase A-B Voltage 29th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01820	166	14	30	Phase A-N / Phase A-B Voltage 30th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01821	166	15	30	Phase A-N / Phase A-B Voltage 31st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01822	167	0	30	Phase A-N / Phase A-B Voltage 32nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01823	167	1	30	Phase A-N / Phase A-B Voltage 33rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01824	167	2	30	Phase A-N / Phase A-B Voltage 34th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01825	167	3	30	Phase A-N / Phase A-B Voltage 35th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01826	167	4	30	Phase A-N / Phase A-B Voltage 36th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01827	167	5	30	Phase A-N / Phase A-B Voltage 37th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01828	167	6	30	Phase A-N / Phase A-B Voltage 38th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01829	167	7	30	Phase A-N / Phase A-B Voltage 39th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01830	167	8	30	Phase A-N / Phase A-B Voltage 40th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01831	167	9	30	Phase A-N / Phase A-B Voltage 41st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01832	167	10	30	Phase A-N / Phase A-B Voltage 42nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01833	167	11	30	Phase A-N / Phase A-B Voltage 43rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01834	167	12	30	Phase A-N / Phase A-B Voltage 44th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01835	167	13	30	Phase A-N / Phase A-B Voltage 45th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01836	167	14	30	Phase A-N / Phase A-B Voltage 46th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01837	167	15	30	Phase A-N / Phase A-B Voltage 47th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01838	167	16	30	Phase A-N / Phase A-B Voltage 48th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01839	167	17	30	Phase A-N / Phase A-B Voltage 49th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01840	167	18	30	Phase A-N / Phase A-B Voltage 50th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01841	167	19	30	Phase A-N / Phase A-B Voltage 51st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01842	167	20	30	Phase A-N / Phase A-B Voltage 52nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01843	167	21	30	Phase A-N / Phase A-B Voltage 53rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01844	167	22	30	Phase A-N / Phase A-B Voltage 54th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01845	167	23	30	Phase A-N / Phase A-B Voltage 55th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01846	167	24	30	Phase A-N / Phase A-B Voltage 56th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01847	167	25	30	Phase A-N / Phase A-B Voltage 57th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01848	167	26	30	Phase A-N / Phase A-B Voltage 58th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01849	167	27	30	Phase A-N / Phase A-B Voltage 59th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01850	167	28	30	Phase A-N / Phase A-B Voltage 60th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01851	167	29	30	Phase A-N / Phase A-B Voltage 61st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01852	167	30	30	Phase A-N / Phase A-B Voltage 62nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01853	167	31	30	Phase A-N / Phase A-B Voltage 63rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01854	168	0	30	Phase A-N / Phase A-B Voltage 64th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01855	168	1	30	Phase A-N / Phase A-B Voltage 65th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01856	168	2	30	Phase A-N / Phase A-B Voltage 66th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01857	168	3	30	Phase A-N / Phase A-B Voltage 67th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01858	168	4	30	Phase A-N / Phase A-B Voltage 68th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01859	168	5	30	Phase A-N / Phase A-B Voltage 69th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01860	168	6	30	Phase A-N / Phase A-B Voltage 70th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01861	168	7	30	Phase A-N / Phase A-B Voltage 71st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01862	168	8	30	Phase A-N / Phase A-B Voltage 72nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01863	168	9	30	Phase A-N / Phase A-B Voltage 73rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01864	168	10	30	Phase A-N / Phase A-B Voltage 74th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01865	168	11	30	Phase A-N / Phase A-B Voltage 75th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01866	168	12	30	Phase A-N / Phase A-B Voltage 76th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01867	168	13	30	Phase A-N / Phase A-B Voltage 77th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01868	168	14	30	Phase A-N / Phase A-B Voltage 78th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01869	168	15	30	Phase A-N / Phase A-B Voltage 79th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01870	168	16	30	Phase A-N / Phase A-B Voltage 80th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01871	168	17	30	Phase A-N / Phase A-B Voltage 81st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01872	168	18	30	Phase A-N / Phase A-B Voltage 82nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01873	168	19	30	Phase A-N / Phase A-B Voltage 83rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01874	168	20	30	Phase A-N / Phase A-B Voltage 84th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01875	168	21	30	Phase A-N / Phase A-B Voltage 85th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01876	168	22	30	Phase A-N / Phase A-B Voltage 86th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01877	168	23	30	Phase A-N / Phase A-B Voltage 87th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01878	168	24	30	Phase A-N / Phase A-B Voltage 88th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01879	168	25	30	Phase A-N / Phase A-B Voltage 89th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01880	168	26	30	Phase A-N / Phase A-B Voltage 90th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01881	168	27	30	Phase A-N / Phase A-B Voltage 91st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01882	168	28	30	Phase A-N / Phase A-B Voltage 92nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01883	168	29	30	Phase A-N / Phase A-B Voltage 93rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01884	168	30	30	Phase A-N / Phase A-B Voltage 94th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01885	168	31	30	Phase A-N / Phase A-B Voltage 95th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01886	168	32	30	Phase A-N / Phase A-B Voltage 96th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01887	168	33	30	Phase A-N / Phase A-B Voltage 97th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01888	168	34	30	Phase A-N / Phase A-B Voltage 98th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01889	168	35	30	Phase A-N / Phase A-B Voltage 99th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01890	168	36	30	Phase A-N / Phase A-B Voltage 100th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01891	168	37	30	Phase A-N / Phase A-B Voltage 101st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01892	168	38	30	Phase A-N / Phase A-B Voltage 102nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01893	168	39	30	Phase A-N / Phase A-B Voltage 103rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01894	168	40	30	Phase A-N / Phase A-B Voltage 104th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01895	168	41	30	Phase A-N / Phase A-B Voltage 105th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01896	168	42	30	Phase A-N / Phase A-B Voltage 106th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01897	168	43	30	Phase A-N / Phase A-B Voltage 107th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01898	168	44	30	Phase A-N / Phase A-B Voltage 108th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01899	168	45	30	Phase A-N / Phase A-B Voltage 109th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01900	168	46	30	Phase A-N / Phase A-B Voltage 110th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01901	168	47	30	Phase A-N / Phase A-B Voltage 111th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01902	168	48	30	Phase A-N / Phase A-B Voltage 112th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01903	168	49	30	Phase A-N / Phase A-B Voltage 113th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01904	168	50	30	Phase A-N / Phase A-B Voltage 114th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01905	168	51	30	Phase A-N / Phase A-B Voltage 115th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01906	168	52	30	Phase A-N / Phase A-B Voltage 116th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01907	168	53	30	Phase A-N / Phase A-B Voltage 117th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01908	168	54	30	Phase A-N / Phase A-B Voltage 118th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01909	168	55	30	Phase A-N / Phase A-B Voltage 119th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01910	168	56	30	Phase A-N / Phase A-B Voltage 120th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01911	168	57	30	Phase A-N / Phase A-B Voltage 121st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01912	168	58	30	Phase A-N / Phase A-B Voltage 122nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01913	168	59	30	Phase A-N / Phase A-B Voltage 123rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01914	168	60	30	Phase A-N / Phase A-B Voltage 124th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01915	168	61	30	Phase A-N / Phase A-B Voltage 125th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01916	168	62	30	Phase A-N / Phase A-B Voltage 126th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01917	168	63	30	Phase A-N / Phase A-B Voltage 127th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01918	169	0	30	Phase B-N / Phase B-C Voltage 0th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01919	169	1	30	Phase B-N / Phase B-C Voltage 1st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01920	169	2	30	Phase B-N / Phase B-C Voltage 2nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01921	169	3	30	Phase B-N / Phase B-C Voltage 3rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01922	169	4	30	Phase B-N / Phase B-C Voltage 4th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01923	169	5	30	Phase B-N / Phase B-C Voltage 5th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01924	169	6	30	Phase B-N / Phase B-C Voltage 6th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01925	169	7	30	Phase B-N / Phase B-C Voltage 7th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01926	170	0	30	Phase B-N / Phase B-C Voltage 8th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01927	170	1	30	Phase B-N / Phase B-C Voltage 9th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01928	170	2	30	Phase B-N / Phase B-C Voltage 10th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01929	170	3	30	Phase B-N / Phase B-C Voltage 11th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01930	170	4	30	Phase B-N / Phase B-C Voltage 12th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01931	170	5	30	Phase B-N / Phase B-C Voltage 13th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01932	170	6	30	Phase B-N / Phase B-C Voltage 14th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01933	170	7	30	Phase B-N / Phase B-C Voltage 15th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01934	171	0	30	Phase B-N / Phase B-C Voltage 16th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01935	171	1	30	Phase B-N / Phase B-C Voltage 17th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01936	171	2	30	Phase B-N / Phase B-C Voltage 18th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01937	171	3	30	Phase B-N / Phase B-C Voltage 19th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01938	171	4	30	Phase B-N / Phase B-C Voltage 20th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01939	171	5	30	Phase B-N / Phase B-C Voltage 21st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01940	171	6	30	Phase B-N / Phase B-C Voltage 22nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01941	171	7	30	Phase B-N / Phase B-C Voltage 23rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01942	171	8	30	Phase B-N / Phase B-C Voltage 24th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01943	171	9	30	Phase B-N / Phase B-C Voltage 25th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01944	171	10	30	Phase B-N / Phase B-C Voltage 26th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01945	171	11	30	Phase B-N / Phase B-C Voltage 27th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01946	171	12	30	Phase B-N / Phase B-C Voltage 28th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01947	171	13	30	Phase B-N / Phase B-C Voltage 29th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01948	171	14	30	Phase B-N / Phase B-C Voltage 30th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01949	171	15	30	Phase B-N / Phase B-C Voltage 31st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01950	172	0	30	Phase B-N / Phase B-C Voltage 32nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01951	172	1	30	Phase B-N / Phase B-C Voltage 33rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01952	172	2	30	Phase B-N / Phase B-C Voltage 34th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01953	172	3	30	Phase B-N / Phase B-C Voltage 35th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01954	172	4	30	Phase B-N / Phase B-C Voltage 36th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01955	172	5	30	Phase B-N / Phase B-C Voltage 37th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01956	172	6	30	Phase B-N / Phase B-C Voltage 38th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01957	172	7	30	Phase B-N / Phase B-C Voltage 39th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01958	172	8	30	Phase B-N / Phase B-C Voltage 40th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01959	172	9	30	Phase B-N / Phase B-C Voltage 41st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01960	172	10	30	Phase B-N / Phase B-C Voltage 42nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01961	172	11	30	Phase B-N / Phase B-C Voltage 43rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01962	172	12	30	Phase B-N / Phase B-C Voltage 44th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01963	172	13	30	Phase B-N / Phase B-C Voltage 45th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01964	172	14	30	Phase B-N / Phase B-C Voltage 46th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01965	172	15	30	Phase B-N / Phase B-C Voltage 47th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01966	172	16	30	Phase B-N / Phase B-C Voltage 48th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01967	172	17	30	Phase B-N / Phase B-C Voltage 49th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01968	172	18	30	Phase B-N / Phase B-C Voltage 50th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01969	172	19	30	Phase B-N / Phase B-C Voltage 51st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01970	172	20	30	Phase B-N / Phase B-C Voltage 52nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01971	172	21	30	Phase B-N / Phase B-C Voltage 53rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01972	172	22	30	Phase B-N / Phase B-C Voltage 54th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01973	172	23	30	Phase B-N / Phase B-C Voltage 55th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01974	172	24	30	Phase B-N / Phase B-C Voltage 56th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01975	172	25	30	Phase B-N / Phase B-C Voltage 57th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01976	172	26	30	Phase B-N / Phase B-C Voltage 58th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01977	172	27	30	Phase B-N / Phase B-C Voltage 59th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01978	172	28	30	Phase B-N / Phase B-C Voltage 60th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01979	172	29	30	Phase B-N / Phase B-C Voltage 61st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01980	172	30	30	Phase B-N / Phase B-C Voltage 62nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
01981	172	31	30	Phase B-N / Phase B-C Voltage 63rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01982	173	0	30	Phase B-N / Phase B-C Voltage 64th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01983	173	1	30	Phase B-N / Phase B-C Voltage 65th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01984	173	2	30	Phase B-N / Phase B-C Voltage 66th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01985	173	3	30	Phase B-N / Phase B-C Voltage 67th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01986	173	4	30	Phase B-N / Phase B-C Voltage 68th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01987	173	5	30	Phase B-N / Phase B-C Voltage 69th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01988	173	6	30	Phase B-N / Phase B-C Voltage 70th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01989	173	7	30	Phase B-N / Phase B-C Voltage 71st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01990	173	8	30	Phase B-N / Phase B-C Voltage 72nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01991	173	9	30	Phase B-N / Phase B-C Voltage 73rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01992	173	10	30	Phase B-N / Phase B-C Voltage 74th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01993	173	11	30	Phase B-N / Phase B-C Voltage 75th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01994	173	12	30	Phase B-N / Phase B-C Voltage 76th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01995	173	13	30	Phase B-N / Phase B-C Voltage 77th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01996	173	14	30	Phase B-N / Phase B-C Voltage 78th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01997	173	15	30	Phase B-N / Phase B-C Voltage 79th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01998	173	16	30	Phase B-N / Phase B-C Voltage 80th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
01999	173	17	30	Phase B-N / Phase B-C Voltage 81st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02000	173	18	30	Phase B-N / Phase B-C Voltage 82nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02001	173	19	30	Phase B-N / Phase B-C Voltage 83rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02002	173	20	30	Phase B-N / Phase B-C Voltage 84th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02003	173	21	30	Phase B-N / Phase B-C Voltage 85th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02004	173	22	30	Phase B-N / Phase B-C Voltage 86th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02005	173	23	30	Phase B-N / Phase B-C Voltage 87th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02006	173	24	30	Phase B-N / Phase B-C Voltage 88th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02007	173	25	30	Phase B-N / Phase B-C Voltage 89th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02008	173	26	30	Phase B-N / Phase B-C Voltage 90th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02009	173	27	30	Phase B-N / Phase B-C Voltage 91st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02010	173	28	30	Phase B-N / Phase B-C Voltage 92nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02011	173	29	30	Phase B-N / Phase B-C Voltage 93rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02012	173	30	30	Phase B-N / Phase B-C Voltage 94th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02013	173	31	30	Phase B-N / Phase B-C Voltage 95th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02014	173	32	30	Phase B-N / Phase B-C Voltage 96th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02015	173	33	30	Phase B-N / Phase B-C Voltage 97th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02016	173	34	30	Phase B-N / Phase B-C Voltage 98th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02017	173	35	30	Phase B-N / Phase B-C Voltage 99th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02018	173	36	30	Phase B-N / Phase B-C Voltage 100th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02019	173	37	30	Phase B-N / Phase B-C Voltage 101st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02020	173	38	30	Phase B-N / Phase B-C Voltage 102nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02021	173	39	30	Phase B-N / Phase B-C Voltage 103rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02022	173	40	30	Phase B-N / Phase B-C Voltage 104th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02023	173	41	30	Phase B-N / Phase B-C Voltage 105th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02024	173	42	30	Phase B-N / Phase B-C Voltage 106th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02025	173	43	30	Phase B-N / Phase B-C Voltage 107th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02026	173	44	30	Phase B-N / Phase B-C Voltage 108th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02027	173	45	30	Phase B-N / Phase B-C Voltage 109th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02028	173	46	30	Phase B-N / Phase B-C Voltage 110th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02029	173	47	30	Phase B-N / Phase B-C Voltage 111th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02030	173	48	30	Phase B-N / Phase B-C Voltage 112th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02031	173	49	30	Phase B-N / Phase B-C Voltage 113th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02032	173	50	30	Phase B-N / Phase B-C Voltage 114th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02033	173	51	30	Phase B-N / Phase B-C Voltage 115th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02034	173	52	30	Phase B-N / Phase B-C Voltage 116th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02035	173	53	30	Phase B-N / Phase B-C Voltage 117th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02036	173	54	30	Phase B-N / Phase B-C Voltage 118th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02037	173	55	30	Phase B-N / Phase B-C Voltage 119th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02038	173	56	30	Phase B-N / Phase B-C Voltage 120th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02039	173	57	30	Phase B-N / Phase B-C Voltage 121st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02040	173	58	30	Phase B-N / Phase B-C Voltage 122nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02041	173	59	30	Phase B-N / Phase B-C Voltage 123rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02042	173	60	30	Phase B-N / Phase B-C Voltage 124th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02043	173	61	30	Phase B-N / Phase B-C Voltage 125th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02044	173	62	30	Phase B-N / Phase B-C Voltage 126th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02045	173	63	30	Phase B-N / Phase B-C Voltage 127th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02046	174	0	30	Phase C-N / Phase C-A Voltage 0th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02047	174	1	30	Phase C-N / Phase C-A Voltage 1st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02048	174	2	30	Phase C-N / Phase C-A Voltage 2nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02049	174	3	30	Phase C-N / Phase C-A Voltage 3rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02050	174	4	30	Phase C-N / Phase C-A Voltage 4th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02051	174	5	30	Phase C-N / Phase C-A Voltage 5th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02052	174	6	30	Phase C-N / Phase C-A Voltage 6th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02053	174	7	30	Phase C-N / Phase C-A Voltage 7th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02054	175	0	30	Phase C-N / Phase C-A Voltage 8th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02055	175	1	30	Phase C-N / Phase C-A Voltage 9th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02056	175	2	30	Phase C-N / Phase C-A Voltage 10th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02057	175	3	30	Phase C-N / Phase C-A Voltage 11th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02058	175	4	30	Phase C-N / Phase C-A Voltage 12th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02059	175	5	30	Phase C-N / Phase C-A Voltage 13th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02060	175	6	30	Phase C-N / Phase C-A Voltage 14th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02061	175	7	30	Phase C-N / Phase C-A Voltage 15th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02062	176	0	30	Phase C-N / Phase C-A Voltage 16th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02063	176	1	30	Phase C-N / Phase C-A Voltage 17th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02064	176	2	30	Phase C-N / Phase C-A Voltage 18th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02065	176	3	30	Phase C-N / Phase C-A Voltage 19th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02066	176	4	30	Phase C-N / Phase C-A Voltage 20th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02067	176	5	30	Phase C-N / Phase C-A Voltage 21st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02068	176	6	30	Phase C-N / Phase C-A Voltage 22nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02069	176	7	30	Phase C-N / Phase C-A Voltage 23rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02070	176	8	30	Phase C-N / Phase C-A Voltage 24th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02071	176	9	30	Phase C-N / Phase C-A Voltage 25th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02072	176	10	30	Phase C-N / Phase C-A Voltage 26th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02073	176	11	30	Phase C-N / Phase C-A Voltage 27th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02074	176	12	30	Phase C-N / Phase C-A Voltage 28th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02075	176	13	30	Phase C-N / Phase C-A Voltage 29th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02076	176	14	30	Phase C-N / Phase C-A Voltage 30th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02077	176	15	30	Phase C-N / Phase C-A Voltage 31st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02078	177	0	30	Phase C-N / Phase C-A Voltage 32nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02079	177	1	30	Phase C-N / Phase C-A Voltage 33rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02080	177	2	30	Phase C-N / Phase C-A Voltage 34th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02081	177	3	30	Phase C-N / Phase C-A Voltage 35th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02082	177	4	30	Phase C-N / Phase C-A Voltage 36th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02083	177	5	30	Phase C-N / Phase C-A Voltage 37th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02084	177	6	30	Phase C-N / Phase C-A Voltage 38th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02085	177	7	30	Phase C-N / Phase C-A Voltage 39th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02086	177	8	30	Phase C-N / Phase C-A Voltage 40th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02087	177	9	30	Phase C-N / Phase C-A Voltage 41st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02088	177	10	30	Phase C-N / Phase C-A Voltage 42nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02089	177	11	30	Phase C-N / Phase C-A Voltage 43rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02090	177	12	30	Phase C-N / Phase C-A Voltage 44th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02091	177	13	30	Phase C-N / Phase C-A Voltage 45th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02092	177	14	30	Phase C-N / Phase C-A Voltage 46th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02093	177	15	30	Phase C-N / Phase C-A Voltage 47th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02094	177	16	30	Phase C-N / Phase C-A Voltage 48th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02095	177	17	30	Phase C-N / Phase C-A Voltage 49th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02096	177	18	30	Phase C-N / Phase C-A Voltage 50th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02097	177	19	30	Phase C-N / Phase C-A Voltage 51st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02098	177	20	30	Phase C-N / Phase C-A Voltage 52nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02099	177	21	30	Phase C-N / Phase C-A Voltage 53rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02100	177	22	30	Phase C-N / Phase C-A Voltage 54th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02101	177	23	30	Phase C-N / Phase C-A Voltage 55th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02102	177	24	30	Phase C-N / Phase C-A Voltage 56th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02103	177	25	30	Phase C-N / Phase C-A Voltage 57th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02104	177	26	30	Phase C-N / Phase C-A Voltage 58th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02105	177	27	30	Phase C-N / Phase C-A Voltage 59th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02106	177	28	30	Phase C-N / Phase C-A Voltage 60th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02107	177	29	30	Phase C-N / Phase C-A Voltage 61st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02108	177	30	30	Phase C-N / Phase C-A Voltage 62nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02109	177	31	30	Phase C-N / Phase C-A Voltage 63rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02110	178	0	30	Phase C-N / Phase C-A Voltage 64th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02111	178	1	30	Phase C-N / Phase C-A Voltage 65th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02112	178	2	30	Phase C-N / Phase C-A Voltage 66th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02113	178	3	30	Phase C-N / Phase C-A Voltage 67th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02114	178	4	30	Phase C-N / Phase C-A Voltage 68th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02115	178	5	30	Phase C-N / Phase C-A Voltage 69th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02116	178	6	30	Phase C-N / Phase C-A Voltage 70th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02117	178	7	30	Phase C-N / Phase C-A Voltage 71st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02118	178	8	30	Phase C-N / Phase C-A Voltage 72nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02119	178	9	30	Phase C-N / Phase C-A Voltage 73rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02120	178	10	30	Phase C-N / Phase C-A Voltage 74th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02121	178	11	30	Phase C-N / Phase C-A Voltage 75th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02122	178	12	30	Phase C-N / Phase C-A Voltage 76th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02123	178	13	30	Phase C-N / Phase C-A Voltage 77th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02124	178	14	30	Phase C-N / Phase C-A Voltage 78th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02125	178	15	30	Phase C-N / Phase C-A Voltage 79th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02126	178	16	30	Phase C-N / Phase C-A Voltage 80th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02127	178	17	30	Phase C-N / Phase C-A Voltage 81st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02128	178	18	30	Phase C-N / Phase C-A Voltage 82nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02129	178	19	30	Phase C-N / Phase C-A Voltage 83rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02130	178	20	30	Phase C-N / Phase C-A Voltage 84th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02131	178	21	30	Phase C-N / Phase C-A Voltage 85th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02132	178	22	30	Phase C-N / Phase C-A Voltage 86th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02133	178	23	30	Phase C-N / Phase C-A Voltage 87th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02134	178	24	30	Phase C-N / Phase C-A Voltage 88th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02135	178	25	30	Phase C-N / Phase C-A Voltage 89th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02136	178	26	30	Phase C-N / Phase C-A Voltage 90th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02137	178	27	30	Phase C-N / Phase C-A Voltage 91st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02138	178	28	30	Phase C-N / Phase C-A Voltage 92nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02139	178	29	30	Phase C-N / Phase C-A Voltage 93rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02140	178	30	30	Phase C-N / Phase C-A Voltage 94th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02141	178	31	30	Phase C-N / Phase C-A Voltage 95th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02142	178	32	30	Phase C-N / Phase C-A Voltage 96th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02143	178	33	30	Phase C-N / Phase C-A Voltage 97th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02144	178	34	30	Phase C-N / Phase C-A Voltage 98th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02145	178	35	30	Phase C-N / Phase C-A Voltage 99th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02146	178	36	30	Phase C-N / Phase C-A Voltage 100th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02147	178	37	30	Phase C-N / Phase C-A Voltage 101st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02148	178	38	30	Phase C-N / Phase C-A Voltage 102nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02149	178	39	30	Phase C-N / Phase C-A Voltage 103rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02150	178	40	30	Phase C-N / Phase C-A Voltage 104th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02151	178	41	30	Phase C-N / Phase C-A Voltage 105th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02152	178	42	30	Phase C-N / Phase C-A Voltage 106th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02153	178	43	30	Phase C-N / Phase C-A Voltage 107th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02154	178	44	30	Phase C-N / Phase C-A Voltage 108th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02155	178	45	30	Phase C-N / Phase C-A Voltage 109th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02156	178	46	30	Phase C-N / Phase C-A Voltage 110th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02157	178	47	30	Phase C-N / Phase C-A Voltage 111th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02158	178	48	30	Phase C-N / Phase C-A Voltage 112th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02159	178	49	30	Phase C-N / Phase C-A Voltage 113th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02160	178	50	30	Phase C-N / Phase C-A Voltage 114th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02161	178	51	30	Phase C-N / Phase C-A Voltage 115th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02162	178	52	30	Phase C-N / Phase C-A Voltage 116th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02163	178	53	30	Phase C-N / Phase C-A Voltage 117th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02164	178	54	30	Phase C-N / Phase C-A Voltage 118th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02165	178	55	30	Phase C-N / Phase C-A Voltage 119th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02166	178	56	30	Phase C-N / Phase C-A Voltage 120th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02167	178	57	30	Phase C-N / Phase C-A Voltage 121st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02168	178	58	30	Phase C-N / Phase C-A Voltage 122nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02169	178	59	30	Phase C-N / Phase C-A Voltage 123rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02170	178	60	30	Phase C-N / Phase C-A Voltage 124th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02171	178	61	30	Phase C-N / Phase C-A Voltage 125th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02172	178	62	30	Phase C-N / Phase C-A Voltage 126th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02173	178	63	30	Phase C-N / Phase C-A Voltage 127th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02174	179	0	30	Phase A Current 0th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02175	179	1	30	Phase A Current 1st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02176	179	2	30	Phase A Current 2nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02177	179	3	30	Phase A Current 3rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02178	179	4	30	Phase A Current 4th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02179	179	5	30	Phase A Current 5th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02180	179	6	30	Phase A Current 6th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02181	179	7	30	Phase A Current 7th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02182	180	0	30	Phase A Current 8th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02183	180	1	30	Phase A Current 9th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02184	180	2	30	Phase A Current 10th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02185	180	3	30	Phase A Current 11th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02186	180	4	30	Phase A Current 12th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02187	180	5	30	Phase A Current 13th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02188	180	6	30	Phase A Current 14th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02189	180	7	30	Phase A Current 15th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02190	181	0	30	Phase A Current 16th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02191	181	1	30	Phase A Current 17th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02192	181	2	30	Phase A Current 18th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02193	181	3	30	Phase A Current 19th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02194	181	4	30	Phase A Current 20th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02195	181	5	30	Phase A Current 21st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02196	181	6	30	Phase A Current 22nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02197	181	7	30	Phase A Current 23rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02198	181	8	30	Phase A Current 24th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02199	181	9	30	Phase A Current 25th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02200	181	10	30	Phase A Current 26th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02201	181	11	30	Phase A Current 27th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02202	181	12	30	Phase A Current 28th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02203	181	13	30	Phase A Current 29th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02204	181	14	30	Phase A Current 30th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02205	181	15	30	Phase A Current 31st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02206	182	0	30	Phase A Current 32nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02207	182	1	30	Phase A Current 33rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02208	182	2	30	Phase A Current 34th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02209	182	3	30	Phase A Current 35th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02210	182	4	30	Phase A Current 36th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02211	182	5	30	Phase A Current 37th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02212	182	6	30	Phase A Current 38th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02213	182	7	30	Phase A Current 39th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02214	182	8	30	Phase A Current 40th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02215	182	9	30	Phase A Current 41st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02216	182	10	30	Phase A Current 42nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02217	182	11	30	Phase A Current43rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02218	182	12	30	Phase A Current 44th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02219	182	13	30	Phase A Current 45th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02220	182	14	30	Phase A Current 46th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02221	182	15	30	Phase A Current 47th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02222	182	16	30	Phase A Current 48th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02223	182	17	30	Phase A Current 49th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02224	182	18	30	Phase A Current 50th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02225	182	19	30	Phase A Current 51st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02226	182	20	30	Phase A Current 52nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02227	182	21	30	Phase A Current 53rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02228	182	22	30	Phase A Current 54th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02229	182	23	30	Phase A Current 55th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02230	182	24	30	Phase A Current 56th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02231	182	25	30	Phase A Current 57th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02232	182	26	30	Phase A Current 58th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02233	182	27	30	Phase A Current 59th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02234	182	28	30	Phase A Current 60th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02235	182	29	30	Phase A Current 61st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02236	182	30	30	Phase A Current 62nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02237	182	31	30	Phase A Current 63rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02238	183	0	30	Phase A Current 64th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02239	183	1	30	Phase A Current 65th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02240	183	2	30	Phase A Current 66th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02241	183	3	30	Phase A Current 67th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02242	183	4	30	Phase A Current 68th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02243	183	5	30	Phase A Current 69th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02244	183	6	30	Phase A Current 70th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02245	183	7	30	Phase A Current 71st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02246	183	8	30	Phase A Current 72nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02247	183	9	30	Phase A Current 73rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02248	183	10	30	Phase A Current 74th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02249	183	11	30	Phase A Current 75th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02250	183	12	30	Phase A Current 76th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02251	183	13	30	Phase A Current 77th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02252	183	14	30	Phase A Current 78th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02253	183	15	30	Phase A Current 79th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02254	183	16	30	Phase A Current 80th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02255	183	17	30	Phase A Current 81st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02256	183	18	30	Phase A Current 82nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02257	183	19	30	Phase A Current 83rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02258	183	20	30	Phase A Current 84th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02259	183	21	30	Phase A Current 85th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02260	183	22	30	Phase A Current 86th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02261	183	23	30	Phase A Current 87th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02262	183	24	30	Phase A Current 88th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02263	183	25	30	Phase A Current 89th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02264	183	26	30	Phase A Current 90th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02265	183	27	30	Phase A Current 91st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02266	183	28	30	Phase A Current 92nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02267	183	29	30	Phase A Current 93rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02268	183	30	30	Phase A Current 94th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02269	183	31	30	Phase A Current 95th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02270	183	32	30	Phase A Current 96th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02271	183	33	30	Phase A Current 97th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02272	183	34	30	Phase A Current 98th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02273	183	35	30	Phase A Current 99th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02274	183	36	30	Phase A Current 100th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02275	183	37	30	Phase A Current 101st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02276	183	38	30	Phase A Current 102nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02277	183	39	30	Phase A Current 103rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02278	183	40	30	Phase A Current 104th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02279	183	41	30	Phase A Current 105th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02280	183	42	30	Phase A Current 106th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02281	183	43	30	Phase A Current 107th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02282	183	44	30	Phase A Current 108th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02283	183	45	30	Phase A Current 109th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02284	183	46	30	Phase A Current 110th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02285	183	47	30	Phase A Current 111th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02286	183	48	30	Phase A Current 112th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02287	183	49	30	Phase A Current 113th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02288	183	50	30	Phase A Current 114th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02289	183	51	30	Phase A Current 115th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02290	183	52	30	Phase A Current 116th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02291	183	53	30	Phase A Current 117th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02292	183	54	30	Phase A Current 118th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02293	183	55	30	Phase A Current 119th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02294	183	56	30	Phase A Current 120th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02295	183	57	30	Phase A Current 121st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02296	183	58	30	Phase A Current 122nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02297	183	59	30	Phase A Current 123rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02298	183	60	30	Phase A Current 124th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02299	183	61	30	Phase A Current 125th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02300	183	62	30	Phase A Current 126th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02301	183	63	30	Phase A Current 127th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02302	184	0	30	Phase B Current 0th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02303	184	1	30	Phase B Current 1st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02304	184	2	30	Phase B Current 2nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02305	184	3	30	Phase B Current 3rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02306	184	4	30	Phase B Current 4th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02307	184	5	30	Phase B Current 5th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02308	184	6	30	Phase B Current 6th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02309	184	7	30	Phase B Current 7th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02310	185	0	30	Phase B Current 8th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02311	185	1	30	Phase B Current 9th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02312	185	2	30	Phase B Current 10th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02313	185	3	30	Phase B Current 11th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02314	185	4	30	Phase B Current 12th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02315	185	5	30	Phase B Current 13th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02316	185	6	30	Phase B Current 14th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02317	185	7	30	Phase B Current 15th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02318	186	0	30	Phase B Current 16th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02319	186	1	30	Phase B Current 17th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02320	186	2	30	Phase B Current 18th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02321	186	3	30	Phase B Current 19th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02322	186	4	30	Phase B Current 20th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02323	186	5	30	Phase B Current 21st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02324	186	6	30	Phase B Current 22nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02325	186	7	30	Phase B Current 23rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02326	186	8	30	Phase B Current 24th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02327	186	9	30	Phase B Current 25th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02328	186	10	30	Phase B Current 26th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02329	186	11	30	Phase B Current 27th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02330	186	12	30	Phase B Current 28th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02331	186	13	30	Phase B Current 29th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02332	186	14	30	Phase B Current 30th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02333	186	15	30	Phase B Current 31st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02334	187	0	30	Phase B Current 32nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02335	187	1	30	Phase B Current 33rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02336	187	2	30	Phase B Current 34th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02337	187	3	30	Phase B Current 35th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02338	187	4	30	Phase B Current 36th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02339	187	5	30	Phase B Current 37th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02340	187	6	30	Phase B Current 38th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02341	187	7	30	Phase B Current 39th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02342	187	8	30	Phase B Current 40th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02343	187	9	30	Phase B Current 41st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02344	187	10	30	Phase B Current 42nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02345	187	11	30	Phase B Current43rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02346	187	12	30	Phase B Current 44th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02347	187	13	30	Phase B Current 45th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02348	187	14	30	Phase B Current 46th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02349	187	15	30	Phase B Current 47th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02350	187	16	30	Phase B Current 48th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02351	187	17	30	Phase B Current 49th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02352	187	18	30	Phase B Current 50th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02353	187	19	30	Phase B Current 51st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02354	187	20	30	Phase B Current 52nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02355	187	21	30	Phase B Current 53rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02356	187	22	30	Phase B Current 54th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02357	187	23	30	Phase B Current 55th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02358	187	24	30	Phase B Current 56th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02359	187	25	30	Phase B Current 57th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02360	187	26	30	Phase B Current 58th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02361	187	27	30	Phase B Current 59th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02362	187	28	30	Phase B Current 60th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02363	187	29	30	Phase B Current 61st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02364	187	30	30	Phase B Current 62nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02365	187	31	30	Phase B Current 63rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02366	188	0	30	Phase B Current 64th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02367	188	1	30	Phase B Current 65th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02368	188	2	30	Phase B Current 66th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02369	188	3	30	Phase B Current 67th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02370	188	4	30	Phase B Current 68th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02371	188	5	30	Phase B Current 69th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02372	188	6	30	Phase B Current 70th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02373	188	7	30	Phase B Current 71st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02374	188	8	30	Phase B Current 72nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02375	188	9	30	Phase B Current 73rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02376	188	10	30	Phase B Current 74th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02377	188	11	30	Phase B Current 75th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02378	188	12	30	Phase B Current 76th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02379	188	13	30	Phase B Current 77th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02380	188	14	30	Phase B Current 78th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02381	188	15	30	Phase B Current 79th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02382	188	16	30	Phase B Current 80th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02383	188	17	30	Phase B Current 81st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02384	188	18	30	Phase B Current 82nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02385	188	19	30	Phase B Current 83rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02386	188	20	30	Phase B Current 84th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02387	188	21	30	Phase B Current 85th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02388	188	22	30	Phase B Current 86th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02389	188	23	30	Phase B Current 87th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02390	188	24	30	Phase B Current 88th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02391	188	25	30	Phase B Current 89th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02392	188	26	30	Phase B Current 90th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02393	188	27	30	Phase B Current 91st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02394	188	28	30	Phase B Current 92nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02395	188	29	30	Phase B Current 93rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02396	188	30	30	Phase B Current 94th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02397	188	31	30	Phase B Current 95th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02398	188	32	30	Phase B Current 96th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02399	188	33	30	Phase B Current 97th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02400	188	34	30	Phase B Current 98th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02401	188	35	30	Phase B Current 99th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02402	188	36	30	Phase B Current 100th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02403	188	37	30	Phase B Current 101st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02404	188	38	30	Phase B Current 102nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02405	188	39	30	Phase B Current 103rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02406	188	40	30	Phase B Current 104th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02407	188	41	30	Phase B Current 105th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02408	188	42	30	Phase B Current 106th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02409	188	43	30	Phase B Current 107th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02410	188	44	30	Phase B Current 108th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02411	188	45	30	Phase B Current 109th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02412	188	46	30	Phase B Current 110th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02413	188	47	30	Phase B Current 111th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02414	188	48	30	Phase B Current 112th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02415	188	49	30	Phase B Current 113th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02416	188	50	30	Phase B Current 114th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02417	188	51	30	Phase B Current 115th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02418	188	52	30	Phase B Current 116th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02419	188	53	30	Phase B Current 117th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02420	188	54	30	Phase B Current 118th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02421	188	55	30	Phase B Current 119th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02422	188	56	30	Phase B Current 120th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02423	188	57	30	Phase B Current 121st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02424	188	58	30	Phase B Current 122nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02425	188	59	30	Phase B Current 123rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02426	188	60	30	Phase B Current 124th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02427	188	61	30	Phase B Current 125th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02428	188	62	30	Phase B Current 126th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02429	188	63	30	Phase B Current 127th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02430	189	0	30	Phase C Current 0th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02431	189	1	30	Phase C Current 1st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02432	189	2	30	Phase C Current 2nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02433	189	3	30	Phase C Current 3rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02434	189	4	30	Phase C Current 4th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02435	189	5	30	Phase C Current 5th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02436	189	6	30	Phase C Current 6th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02437	189	7	30	Phase C Current 7th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02438	190	0	30	Phase C Current 8th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02439	190	1	30	Phase C Current 9th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02440	190	2	30	Phase C Current 10th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02441	190	3	30	Phase C Current 11th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02442	190	4	30	Phase C Current 12th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02443	190	5	30	Phase C Current 13th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02444	190	6	30	Phase C Current 14th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02445	190	7	30	Phase C Current 15th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02446	191	0	30	Phase C Current 16th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02447	191	1	30	Phase C Current 17th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02448	191	2	30	Phase C Current 18th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02449	191	3	30	Phase C Current 19th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02450	191	4	30	Phase C Current 20th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02451	191	5	30	Phase C Current 21st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02452	191	6	30	Phase C Current 22nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02453	191	7	30	Phase C Current 23rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02454	191	8	30	Phase C Current 24th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02455	191	9	30	Phase C Current 25th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02456	191	10	30	Phase C Current 26th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02457	191	11	30	Phase C Current 27th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02458	191	12	30	Phase C Current 28th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02459	191	13	30	Phase C Current 29th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02460	191	14	30	Phase C Current 30th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02461	191	15	30	Phase C Current 31st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02462	192	0	30	Phase C Current 32nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02463	192	1	30	Phase C Current 33rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02464	192	2	30	Phase C Current 34th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02465	192	3	30	Phase C Current 35th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02466	192	4	30	Phase C Current 36th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02467	192	5	30	Phase C Current 37th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02468	192	6	30	Phase C Current 38th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02469	192	7	30	Phase C Current 39th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02470	192	8	30	Phase C Current 40th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02471	192	9	30	Phase C Current 41st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02472	192	10	30	Phase C Current 42nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02473	192	11	30	Phase C Current43rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02474	192	12	30	Phase C Current 44th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02475	192	13	30	Phase C Current 45th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02476	192	14	30	Phase C Current 46th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02477	192	15	30	Phase C Current 47th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02478	192	16	30	Phase C Current 48th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02479	192	17	30	Phase C Current 49th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02480	192	18	30	Phase C Current 50th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02481	192	19	30	Phase C Current 51st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02482	192	20	30	Phase C Current 52nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02483	192	21	30	Phase C Current 53rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02484	192	22	30	Phase C Current 54th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02485	192	23	30	Phase C Current 55th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02486	192	24	30	Phase C Current 56th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02487	192	25	30	Phase C Current 57th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02488	192	26	30	Phase C Current 58th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02489	192	27	30	Phase C Current 59th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02490	192	28	30	Phase C Current 60th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02491	192	29	30	Phase C Current 61st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02492	192	30	30	Phase C Current 62nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02493	192	31	30	Phase C Current 63rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02494	193	0	30	Phase C Current 64th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02495	193	1	30	Phase C Current 65th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02496	193	2	30	Phase C Current 66th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02497	193	3	30	Phase C Current 67th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02498	193	4	30	Phase C Current 68th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02499	193	5	30	Phase C Current 69th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02500	193	6	30	Phase C Current 70th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02501	193	7	30	Phase C Current 71st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02502	193	8	30	Phase C Current 72nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02503	193	9	30	Phase C Current 73rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02504	193	10	30	Phase C Current 74th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02505	193	11	30	Phase C Current 75th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02506	193	12	30	Phase C Current 76th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02507	193	13	30	Phase C Current 77th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02508	193	14	30	Phase C Current 78th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02509	193	15	30	Phase C Current 79th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02510	193	16	30	Phase C Current 80th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02511	193	17	30	Phase C Current 81st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02512	193	18	30	Phase C Current 82nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02513	193	19	30	Phase C Current 83rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02514	193	20	30	Phase C Current 84th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02515	193	21	30	Phase C Current 85th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02516	193	22	30	Phase C Current 86th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02517	193	23	30	Phase C Current 87th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02518	193	24	30	Phase C Current 88th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02519	193	25	30	Phase C Current 89th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02520	193	26	30	Phase C Current 90th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02521	193	27	30	Phase C Current 91st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02522	193	28	30	Phase C Current 92nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02523	193	29	30	Phase C Current 93rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02524	193	30	30	Phase C Current 94th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02525	193	31	30	Phase C Current 95th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02526	193	32	30	Phase C Current 96th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02527	193	33	30	Phase C Current 97th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02528	193	34	30	Phase C Current 98th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02529	193	35	30	Phase C Current 99th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02530	193	36	30	Phase C Current 100th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02531	193	37	30	Phase C Current 101st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02532	193	38	30	Phase C Current 102nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02533	193	39	30	Phase C Current 103rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02534	193	40	30	Phase C Current 104th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02535	193	41	30	Phase C Current 105th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02536	193	42	30	Phase C Current 106th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02537	193	43	30	Phase C Current 107th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02538	193	44	30	Phase C Current 108th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02539	193	45	30	Phase C Current 109th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02540	193	46	30	Phase C Current 110th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02541	193	47	30	Phase C Current 111th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02542	193	48	30	Phase C Current 112th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02543	193	49	30	Phase C Current 113th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02544	193	50	30	Phase C Current 114th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02545	193	51	30	Phase C Current 115th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02546	193	52	30	Phase C Current 116th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02547	193	53	30	Phase C Current 117th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02548	193	54	30	Phase C Current 118th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02549	193	55	30	Phase C Current 119th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02550	193	56	30	Phase C Current 120th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02551	193	57	30	Phase C Current 121st Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02552	193	58	30	Phase C Current 122nd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02553	193	59	30	Phase C Current 123rd Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02554	193	60	30	Phase C Current 124th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02555	193	61	30	Phase C Current 125th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02556	193	62	30	Phase C Current 126th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
02557	193	63	30	Phase C Current 127th Harmonic Phase	+180 degree / -180 degree	0.01 degree	F9	R
THD/K-Factor Block								
02558	194	0	30	Phase A-N / Phase A-B Voltage THD	+327.67% / -327.68%	0.01%	F10	R
02559	195	0	30	Phase B-N / Phase B-C Voltage THD	+327.67% / -327.68%	0.01%	F10	R
02560	196	0	30	Phase C-N / Phase C-A Voltage THD	+327.67% / -327.68%	0.01%	F10	R
02561	197	0	30	Phase A Current THD	+327.67% / -327.68%	0.01%	F10	R
02562	198	0	30	Phase B Current THD	+327.67% / -327.68%	0.01%	F10	R
02563	199	0	30	Phase C Current THD	+327.67% / -327.68%	0.01%	F10	R
02564	200	0	30	Phase A Current K-Factor	+327.67% / -327.68%	0.01%	F10	R
02565	201	0	30	Phase B Current K-Factor	+327.67% / -327.68%	0.01%	F10	R
02566	202	0	30	Phase C Current K-Factor	+327.67% / -327.68%	0.01%	F10	R
Harmonic Time Stamp Block								
02567-02570	203	0	50	Phase A-N / Phase A-B Voltage Harmonic Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02571-02574	204	0	50	Phase B-N / Phase B-C Voltage Harmonic Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02575-02578	205	0	50	Phase C-N / Phase C-A Voltage Harmonic Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02579-02582	206	0	50	Phase A Current Harmonic Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02583-02586	207	0	50	Phase B Current Harmonic Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02587-02590	208	0	50	Phase C Current Harmonic Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
Phase Angle Block								
02591-02594	209	0	50	Phase Angle Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02595	210	0	30	Phase Angle Phase A-N Voltage	+180 degree / -180 degree	0.01 degree	F9	R
02596	210	1	30	Phase Angle Phase B-N Voltage	+180 degree / -180 degree	0.01 degree	F9	R
02597	210	2	30	Phase Angle Phase C-N Voltage	+180 degree / -180 degree	0.01 degree	F9	R
02598	211	0	30	Phase Angle Phase A Current	+180 degree / -180 degree	0.01 degree	F9	R
02599	211	1	30	Phase Angle Phase B Current	+180 degree / -180 degree	0.01 degree	F9	R
02600	211	2	30	Phase Angle Phase C Current	+180 degree / -180 degree	0.01 degree	F9	R
02601	212	0	30	Phase Angle Phase A-B Voltage	+180 degree / -180 degree	0.01 degree	F9	R
02602	212	1	30	Phase Angle Phase B-C Voltage	+180 degree / -180 degree	0.01 degree	F9	R
02603	212	2	30	Phase Angle Phase C-A Voltage	+180 degree / -180 degree	0.01 degree	F9	R
02604	213	0	30	Voltage Phase Sequence			F13	R
Block Window Average Block								
02605-02608	214	0	50	Block Window Average Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02609	215	0	30	Block Window Average Status			F14	R
02610-02611	216	0	30	Block Window Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
02612-02613	216	1	30	Block Window Average VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02614-02615	216	2	30	Block Window Average Watt	+32767 W / -32768 W	1/ 65536 W sec	F7	R
02616-02617	217	0	30	Maximum Block Window Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
02618-02619	217	1	30	Maximum Block Window Average Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
02620-02621	217	2	30	Maximum Block Window Average Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02622-02623	217	3	30	Maximum Block Window Average Positive Watt	+32767 W /0 W	1/ 65536 W sec	F7	R
02624-02625	217	4	30	Maximum Block Window Average Negative Watt	0 W / -32768 W	1/ 65536 W sec	F7	R
02626-02627	218	0	30	Minimum Block Window Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
02628-02629	218	1	30	Minimum Block Window Average Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
02630-02631	218	2	30	Minimum Block Window Average Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02632-02633	218	3	30	Minimum Block Window Average Positive Watt	+32767 W /0 W	1/ 65536 W sec	F7	R
02634-02635	218	4	30	Minimum Block Window Average Negative Watt	0 W / -32768 W	1/ 65536 W sec	F7	R
02636-02637	219	0	30	Coincident Block Window Average VAR for Maximum Positive Watt	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02638-02639	219	1	30	Coincident Block Window Average VAR for Maximum Negative Watt	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02640-02641	219	2	30	Coincident Block Window Average VAR for Minimum Positive Watt	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02642-02643	219	3	30	Coincident Block Window Average VAR for Minimum Negative Watt	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02644-02647	220	0	50	Maximum Block Window Average VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02648-02651	220	1	50	Maximum Block Window Average Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02652-02655	220	2	50	Maximum Block Window Average Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02656-02659	220	3	50	Maximum Block Window Average Positive Watt Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02660-02663	220	4	50	Maximum Block Window Average Negative Watt Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02664-02667	221	0	50	Minimum Block Window Average VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02668-02671	221	1	50	Minimum Block Window Average Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02672-02675	221	2	50	Minimum Block Window Average Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02676-02679	221	3	50	Minimum Block Window Average Positive Watt Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02680-02683	221	4	50	Minimum Block Window Average Negative Watt Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Rolling Window/Predictive Rolling Window Block								
02684-02687	222	0	50	Rolling Window Average Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02688	223	0	30	Rolling Window Average Status			F14	R
02689-02690	224	0	30	Predictive Rolling Window Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
02691-02692	224	1	30	Predictive Rolling Window Average VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02693-02694	224	2	30	Predictive Rolling Window Average W	+32767 W / -32768 W	1/ 65536 W sec	F7	R
02695-02696	225	0	30	Rolling Window Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
02697-02698	225	1	30	Rolling Window Average VAR	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02699-02700	225	2	30	Rolling Window Average W	+32767 W / -32768 W	1/ 65536 W sec	F7	R
02701-02702	226	0	30	Maximum Rolling Window Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
02703-02704	226	1	30	Maximum Rolling Window Average Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
02705-02706	226	2	30	Maximum Rolling Window Average Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02707-02708	226	3	30	Maximum Rolling Window Average Positive Watt	+32767 W /0 W	1/ 65536 W sec	F7	R
02709-02710	226	4	30	Maximum Rolling Window Average Negative Watt	0 W / -32768 W	1/ 65536 W sec	F7	R
02711-02712	227	0	30	Minimum Rolling Window Average VA	+32767 VA / 0 VA	1/ 65536 VA sec	F7	R
02713-02714	227	1	30	Minimum Rolling Window Average Positive VAR	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
02715-02716	227	2	30	Minimum Rolling Window Average Negative VAR	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02717-02718	227	3	30	Minimum Rolling Window Average Positive Watt	+32767 W /0 W	1/ 65536 W sec	F7	R
02719-02720	227	4	30	Minimum Rolling Window Average Negative Watt	0 W / -32768 W	1/ 65536 W sec	F7	R
02721-02722	228	0	30	Coincident Rolling Window Average VAR for Maximum Positive Watt	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02723-02724	228	1	30	Coincident Rolling Window Average VAR for Maximum Negative Watt	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02725-02726	228	2	30	Coincident Rolling Window Average VAR for Minimum Positive Watt	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02727-02728	228	3	30	Coincident Rolling Window Average VAR for Minimum Negative Watt	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
02729-02732	229	0	50	Maximum Rolling Window Average VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02733-02736	229	1	50	Maximum Rolling Window Average Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02737-02740	229	2	50	Maximum Rolling Window Average Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02741-02744	229	3	50	Maximum Rolling Window Average Positive Watt Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02745-02748	229	4	50	Maximum Rolling Window Average Negative Watt Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02749-02752	230	0	50	Minimum Rolling Window Average VA Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02753-02756	230	1	50	Minimum Rolling Window Average Positive VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02757-02760	230	2	50	Minimum Rolling Window Average Negative VAR Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02761-02764	230	3	50	Minimum Rolling Window Average Positive Watt Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02765-02768	230	4	50	Minimum Rolling Window Average Negative Watt Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Limit Block								
02769	231	0-15	1	Limit States, Value 1 Comparisons, 1-16			F15	R
02770	231	16-31	1	Limit States, Value 1 Comparisons, 17-32			F15	R
02771	232	0-15	1	Limit States, Value 2 Comparisons, 1-16			F15	R
02772	232	16-31	1	Limit States, Value 2 Comparisons, 17-32			F15	R
02773	233	0-7	1	Low Speed (Internal) Inputs			F16	R
Digital Input Block								
02774	234	0-7	1	Digital Input States, Module 1			F17	R
02775-02776	235	0	20	Digital Input Accumulation 1, Module 1	4,294,967,295 / 0		F18	R
02777-02778	235	1	20	Digital Input Accumulation 2, Module 1	4,294,967,295 / 0		F18	R
02779-02780	235	2	20	Digital Input Accumulation 3, Module 1	4,294,967,295 / 0		F18	R
02781-02782	235	3	20	Digital Input Accumulation 4, Module 1	4,294,967,295 / 0		F18	R
02783-02784	235	4	20	Digital Input Accumulation 5, Module 1	4,294,967,295 / 0		F18	R
02785-02786	235	5	20	Digital Input Accumulation 6, Module 1	4,294,967,295 / 0		F18	R
02787-02788	235	6	20	Digital Input Accumulation 7, Module 1	4,294,967,295 / 0		F18	R
02789-02790	235	7	20	Digital Input Accumulation 8, Module 1	4,294,967,295 / 0		F18	R
02791	236	0-7	1	Digital Input States, Module 2			F17	R
02792-02793	237	0	20	Digital Input Accumulation 1, Module 2	4,294,967,295 / 0		F18	R
02794-02795	237	1	20	Digital Input Accumulation 2, Module 2	4,294,967,295 / 0		F18	R
02796-02797	237	2	20	Digital Input Accumulation 3, Module 2	4,294,967,295 / 0		F18	R
02798-02799	237	3	20	Digital Input Accumulation 4, Module 2	4,294,967,295 / 0		F18	R
02800-02801	237	4	20	Digital Input Accumulation 5, Module 2	4,294,967,295 / 0		F18	R
02802-02803	237	5	20	Digital Input Accumulation 6, Module 2	4,294,967,295 / 0		F18	R
02804-02805	237	6	20	Digital Input Accumulation 7, Module 2	4,294,967,295 / 0		F18	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02806-02807	237	7	20	Digital Input Accumulation 8, Module 2	4,294,967,295 / 0		F18	R
02808	238	0-7	1	Digital Input States, Module 3			F17	R
02809-02810	239	0	20	Digital Input Accumulation 1, Module 3	4,294,967,295 / 0		F18	R
02811-02812	239	1	20	Digital Input Accumulation 2, Module 3	4,294,967,295 / 0		F18	R
02813-02814	239	2	20	Digital Input Accumulation 3, Module 3	4,294,967,295 / 0		F18	R
02815-02816	239	3	20	Digital Input Accumulation 4, Module 3	4,294,967,295 / 0		F18	R
02817-02818	239	4	20	Digital Input Accumulation 5, Module 3	4,294,967,295 / 0		F18	R
02819-02820	239	5	20	Digital Input Accumulation 6, Module 3	4,294,967,295 / 0		F18	R
02821-02822	239	6	20	Digital Input Accumulation 7, Module 3	4,294,967,295 / 0		F18	R
02823-02824	239	7	20	Digital Input Accumulation 8, Module 3	4,294,967,295 / 0		F18	R
02825	240	0-7	1	Digital Input States, Module 4			F17	R
02826-02827	241	0	20	Digital Input Accumulation 1, Module 4	4,294,967,295 / 0		F18	R
02828-02829	241	1	20	Digital Input Accumulation 2, Module 4	4,294,967,295 / 0		F18	R
02830-02831	241	2	20	Digital Input Accumulation 3, Module 4	4,294,967,295 / 0		F18	R
02832-02833	241	3	20	Digital Input Accumulation 4, Module 4	4,294,967,295 / 0		F18	R
02834-02835	241	4	20	Digital Input Accumulation 5, Module 4	4,294,967,295 / 0		F18	R
02836-02837	241	5	20	Digital Input Accumulation 6, Module 4	4,294,967,295 / 0		F18	R
02838-02839	241	6	20	Digital Input Accumulation 7, Module 4	4,294,967,295 / 0		F18	R
02840-02841	241	7	20	Digital Input Accumulation 8, Module 4	4,294,967,295 / 0		F18	R
Primary Accumulation Block								
02842-02845	242	0	50	Primary Accumulation Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
02846-02849	243	0	20	Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F19	R
02850-02853	243	1	20	VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F19	R
02854-02857	243	2	20	VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F19	R
02858-02861	243	3	20	Vahour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F19	R
02862-02865	243	4	20	VARhour (Quadrant 4)	0 VARh / -9, 999,999,999,999,999 VARh	1 VAR_H	F19	R
02866-02869	243	5	20	Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F19	R
02870-02873	243	6	20	VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F19	R
02874-02877	243	7	20	VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh /0 VARh	1 VAR_H	F19	R
02878-02881	243	8	20	Vahour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F19	R
02882-02885	243	9	20	VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F19	R
02886-02889	244	0	20	Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
02890-02893	244	1	20	VAhour (Quadrant 1)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
02894-02897	244	2	20	VARhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
02898-02901	244	3	20	Vahour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
02902-02905	244	4	20	VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
02906-02909	244	5	20	Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
02910-02913	244	6	20	VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
02914-02917	244	7	20	VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
02918-02921	244	8	20	Vahour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
02922-02925	244	9	20	VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
02926-02929	245	0	20	I^2t Phase A	+9,999,999,999,999,999 I^2t / 0	1 I^2t	F19	R
02930-02933	245	1	20	I^2t Phase B	+9,999,999,999,999,999 I^2t / 0	1 I^2t	F19	R
02934-02937	245	2	20	I^2t Phase C	+9,999,999,999,999,999 I^2t / 0	1 I^2t	F19	R
02938-02941	245	3	20	V^2t Phase A	+9,999,999,999,999,999 V^2t / 0	1 V^2t	F19	R
02942-02945	245	4	20	V^2t Phase B	+9,999,999,999,999,999 V^2t / 0	1 V^2t	F19	R
02946-02949	245	5	20	V^2t Phase C	+9,999,999,999,999,999 V^2t / 0	1 V^2t	F19	R
02950-02953	246	0	20	I^2t Phase A	+9,999,999,999,999,999 I^2t / 0	1 I^2t	F20	R
02954-02957	246	1	20	I^2t Phase B	+9,999,999,999,999,999 I^2t / 0	1 I^2t	F20	R
02958-02961	246	2	20	I^2t Phase C	+9,999,999,999,999,999 I^2t / 0	1 I^2t	F20	R
02962-02965	246	3	20	V^2t Phase A	+9,999,999,999,999,999 V^2t / 0	1 V^2t	F20	R
02966-02969	246	4	20	V^2t Phase B	+9,999,999,999,999,999 V^2t / 0	1 V^2t	F20	R
02970-02973	246	5	20	V^2t Phase C	+9,999,999,999,999,999 V^2t / 0	1 V^2t	F20	R
Time of Use Period Time Stamp Block								
02974	247	0	30	Time of Use Status			F14	R
02975-02978	248	0	50	Time of Use Frozen Start Time	12/31/9999 23:59:59.99	10 msec	F3	R
02979-02982	248	1	50	Time of Use Frozen End Time	12/31/9999 23:59:59.99	10 msec	F3	R
02983-02986	248	2	50	Time of Use Prior Month Start Time	12/31/9999 23:59:59.99	10 msec	F3	R
02987-02990	248	3	50	Time of Use Prior Month End Time	12/31/9999 23:59:59.99	10 msec	F3	R
02991-02994	248	4	50	Time of Use Active Start Time	12/31/9999 23:59:59.99	10 msec	F3	R
02995-02998	248	5	50	Time of Use Active End Time	12/31/9999 23:59:59.99	10 msec	F3	R
02999-03002	248	6	50	Time of Use Current Month Start Time	12/31/9999 23:59:59.99	10 msec	F3	R
03003-03006	248	7	50	Time of Use Current Month End Time	12/31/9999 23:59:59.99	10 msec	F3	R
03007	249	0	30	Time of Use Frozen / Prior Month Average Select				
03008	249	1	30	Time of Use Active / Current Month Average Select				
03009-03010	250	0	30	Time of Use Frozen CT Ratio Numerator				

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
03011-03012	250	1	30	Time of Use Frozen CT Ratio Denominator				
03013-03014	250	2	30	Time of Use Frozen PT Ratio Numerator				
03015-03016	250	3	30	Time of Use Frozen PT Ratio Denominator				
03017-03018	250	4	30	Time of Use Prior Month CT Ratio Numerator				
03019-03020	250	5	30	Time of Use Prior Month CT Ratio Denominator				
03021-03022	250	6	30	Time of Use Prior Month PT Ratio Numerator				
03023-03024	250	7	30	Time of Use Prior Month PT Ratio Denominator				
03025-03026	250	8	30	Time of Use Active CT Ratio Numerator				
03027-03028	250	9	30	Time of Use Active CT Ratio Denominator				
03029-03030	250	10	30	Time of Use Active PT Ratio Numerator				
03031-03032	250	11	30	Time of Use Active PT Ratio Denominator				
03033-03034	250	12	30	Time of Use Current Month CT Ratio Numerator				
03035-03036	250	13	30	Time of Use Current Month CT Ratio Denominator				
03037-03038	250	14	30	Time of Use Current Month PT Ratio Numerator				
03039-03040	250	15	30	Time of Use Current Month PT Ratio Denominator				
Time of Use Frozen Register 1 Block								
03041-03044	251	0	20	obsolete-TOU Frozen Reg 1 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03045-03048	251	1	20	obsolete-TOU Frozen Reg 1 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03049-03052	251	2	20	obsolete-TOU Frozen Reg 1 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03053-03056	251	3	20	obsolete-TOU Frozen Reg 1 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03057-03060	251	4	20	obsolete-TOU Frozen Reg 1 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03061-03064	251	5	20	obsolete-TOU Frozen Reg 1 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03065-03068	251	6	20	obsolete-TOU Frozen Reg 1 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03069-03072	251	7	20	obsolete-TOU Frozen Reg 1 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03073-03076	251	8	20	obsolete-TOU Frozen Reg 1 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03077-03080	251	9	20	obsolete-TOU Frozen Reg 1 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03081-03082	252	0	30	TOU Frozen Reg 1 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03083-03084	252	1	30	TOU Frozen Reg 1 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03085-03086	252	2	30	TOU Frozen Reg 1 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03087-03088	252	3	30	TOU Frozen Reg 1 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03089-03090	253	0	30	TOU Frozen Reg 1 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 +4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03091-03092	253	1	30	TOU Frozen Reg 1 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2+3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03093-03096	254	0	50	TOU Frozen Reg 1 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
03097-03100	254	1	50	TOU Frozen Reg 1 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03101-03104	254	2	50	TOU Frozen Reg 1 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03105-03108	254	3	50	TOU Frozen Reg 1 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Frozen Register 2 Block								
03109-03112	255	0	20	obsolete-TOU Frozen Reg 2 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03113-03116	255	1	20	obsolete-TOU Frozen Reg 2 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03117-03120	255	2	20	obsolete-TOU Frozen Reg 2 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03121-03124	255	3	20	obsolete-TOU Frozen Reg 2 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03125-03128	255	4	20	obsolete-TOU Frozen Reg 2 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03129-03132	255	5	20	obsolete-TOU Frozen Reg 2 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03133-03136	255	6	20	obsolete-TOU Frozen Reg 2 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03137-03140	255	7	20	obsolete-TOU Frozen Reg 2 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03141-03144	255	8	20	obsolete-TOU Frozen Reg 2 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03145-03148	255	9	20	obsolete-TOU Frozen Reg 2 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03149-03150	256	0	30	TOU Frozen Reg 2 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03151-03152	256	1	30	TOU Frozen Reg 2 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03153-03154	256	2	30	TOU Frozen Reg 2 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03155-03156	256	3	30	TOU Frozen Reg 2 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03157-03158	257	0	30	TOU Frozen Reg 2 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 +4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03159-03160	257	1	30	TOU Frozen Reg 2 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 +3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03161-03164	258	0	50	TOU Frozen Reg 2 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03165-03168	258	1	50	TOU Frozen Reg 2 Peak Demand Del. Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03169-03172	258	2	50	TOU Frozen Reg 2 Peak Demand Rec. VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03173-03176	258	3	50	TOU Frozen Reg 2 Peak Demand Del. VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Frozen Reg 3 Block								
03177-03180	259	0	20	obsolete-TOU Frozen Reg 3 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03181-03184	259	1	20	obsolete-TOU Frozen Reg 3 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03185-03188	259	2	20	obsolete-TOU Frozen Reg 3 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03189-03192	259	3	20	obsolete-TOU Frozen Reg 3 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03193-03196	259	4	20	obsolete-TOU Frozen Reg 3 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03197-03200	259	5	20	obsolete-TOU Frozen Reg 3 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03201-03204	259	6	20	obsolete-TOU Frozen Reg 3 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03205-03208	259	7	20	obsolete-TOU Frozen Reg 3 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
03209-03212	259	8	20	obsolete-TOU Frozen Reg 3 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03213-03216	259	9	20	obsolete-TOU Frozen Reg 3 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03217-03218	260	0	30	TOU Frozen Reg 3 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03219-03220	260	1	30	TOU Frozen Reg 3 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03221-03222	260	2	30	TOU Frozen Reg 3 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03223-03224	260	3	30	TOU Frozen Reg 3 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03225-03226	261	0	30	TOU Frozen Reg 3 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 +4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03227-03228	261	1	30	TOU Frozen Reg 3 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 +3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03229-03232	262	0	50	TOU Frozen Reg 3 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03233-03236	262	1	50	TOU Frozen Reg 3 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03237-03240	262	2	50	TOU Frozen Reg 3 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03241-03244	262	3	50	TOU Frozen Reg 3 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Frozen Reg 4 Block								
03245-03248	263	0	20	obsolete-TOU Frozen Reg 4 Received (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03249-03252	263	1	20	obsolete-TOU Frozen Reg 4 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03253-03256	263	2	20	obsolete-TOU Frozen Reg 4 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03257-03260	263	3	20	obsolete-TOU Frozen Reg 4 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03261-03264	263	4	20	obsolete-TOU Frozen Reg 4 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03265-03268	263	5	20	obsolete-TOU Frozen Reg 4 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03269-03272	263	6	20	obsolete-TOU Frozen Reg 4 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03273-03276	263	7	20	obsolete-TOU Frozen Reg 4 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03277-03280	263	8	20	obsolete-TOU Frozen Reg 4 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03281-03284	263	9	20	obsolete-TOU Frozen Reg 4 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03285-03286	264	0	30	TOU Frozen Reg 4 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03287-03288	264	1	30	TOU Frozen Reg 4 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03289-03290	264	2	30	TOU Frozen Reg 4 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03291-03292	264	3	30	TOU Frozen Reg 4 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03293-03294	265	0	30	TOU Frozen Reg 4 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 +4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03295-03296	265	1	30	TOU Frozen Reg 4 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 +3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03297-03300	266	0	50	TOU Frozen Reg 4 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03301-03304	266	1	50	TOU Frozen Reg 4 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03305-03308	266	2	50	TOU Frozen Reg 4 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03309-03312	266	3	50	TOU Frozen Reg 4 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
Time of Use Frozen Reg 5 Block								
03313-03316	267	0	20	obsolete-TOU Frozen Reg 5 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03317-03320	267	1	20	obsolete-TOU Frozen Reg 5 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03321-03324	267	2	20	obsolete-TOU Frozen Reg 5 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03325-03328	267	3	20	obsolete-TOU Frozen Reg 5 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03329-03332	267	4	20	obsolete-TOU Frozen Reg 5 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03333-03336	267	5	20	obsolete-TOU Frozen Reg 5 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03337-03340	267	6	20	obsolete-TOU Frozen Reg 5 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03341-03344	267	7	20	obsolete-TOU Frozen Reg 5 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03345-03348	267	8	20	obsolete-TOU Frozen Reg 5 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03349-03352	267	9	20	obsolete-TOU Frozen Reg 5 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03353-03354	268	0	30	TOU Frozen Reg 5 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03355-03356	268	1	30	TOU Frozen Reg 5 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03357-03358	268	2	30	TOU Frozen Reg 5 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03359-03360	268	3	30	TOU Frozen Reg 5 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03361-03362	269	0	30	TOU Frozen Reg 5 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03363-03364	269	1	30	TOU Frozen Reg 5 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03365-03368	270	0	50	TOU Frozen Reg 5 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03369-03372	270	1	50	TOU Frozen Reg 5 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03373-03376	270	2	50	TOU Frozen Reg 5 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03377-03380	270	3	50	TOU Frozen Reg 5 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Frozen Reg 6 Block								
03381-03384	271	0	20	obsolete-TOU Frozen Reg 6 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03385-03388	271	1	20	obsolete-TOU Frozen Reg 6 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03389-03392	271	2	20	obsolete-TOU Frozen Reg 6 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03393-03396	271	3	20	obsolete-TOU Frozen Reg 6 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03397-03400	271	4	20	obsolete-TOU Frozen Reg 6 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03401-03404	271	5	20	obsolete-TOU Frozen Reg 6 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03405-03408	271	6	20	obsolete-TOU Frozen Reg 6 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03409-03412	271	7	20	obsolete-TOU Frozen Reg 6 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03413-03416	271	8	20	obsolete-TOU Frozen Reg 6 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03417-03420	271	9	20	obsolete-TOU Frozen Reg 6 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03421-03422	272	0	30	TOU Frozen Reg 6 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
03423-03424	272	1	30	TOU Frozen Reg 6 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03425-03426	272	2	30	TOU Frozen Reg 6 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03427-03428	272	3	30	TOU Frozen Reg 6 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03429-03430	273	0	30	TOU Frozen Reg 6 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03431-03432	273	1	30	TOU Frozen Reg 6 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03433-03436	274	0	50	TOU Frozen Reg 6 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03437-03440	274	1	50	TOU Frozen Reg 6 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03441-03444	274	2	50	TOU Frozen Reg 6 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03445-03448	274	3	50	TOU Frozen Reg 6 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Frozen Reg 7 Block								
03449-03452	275	0	20	obsolete-TOU Frozen Reg 7 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03453-03456	275	1	20	obsolete-TOU Frozen Reg 7 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03457-03460	275	2	20	obsolete-TOU Frozen Reg 7 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03461-03464	275	3	20	obsolete-TOU Frozen Reg 7 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03465-03468	275	4	20	obsolete-TOU Frozen Reg 7 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03469-03472	275	5	20	obsolete-TOU Frozen Reg 7 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03473-03476	275	6	20	obsolete-TOU Frozen Reg 7 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03477-03480	275	7	20	obsolete-TOU Frozen Reg 7 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03481-03484	275	8	20	obsolete-TOU Frozen Reg 7 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03485-03488	275	9	20	obsolete-TOU Frozen Reg 7 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03489-03490	276	0	30	TOU Frozen Reg 7 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03491-03492	276	1	30	TOU Frozen Reg 7 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03493-03494	276	2	30	TOU Frozen Reg 7 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03495-03496	276	3	30	TOU Frozen Reg 7 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03497-03498	277	0	30	TOU Frozen Reg 7 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03499-03500	277	1	30	TOU Frozen Reg 7 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03501-03504	278	0	50	TOU Frozen Reg 7 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03505-03508	278	1	50	TOU Frozen Reg 7 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03509-03512	278	2	50	TOU Frozen Reg 7 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03513-03516	278	3	50	TOU Frozen Reg 7 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Frozen Reg 8 Block								
03517-03520	279	0	20	obsolete-TOU Frozen Reg 8 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03521-03524	279	1	20	obsolete-TOU Frozen Reg 8 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
03525-03528	279	2	20	obsolete-TOU Frozen Reg 8 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03529-03532	279	3	20	obsolete-TOU Frozen Reg 8 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03533-03536	279	4	20	obsolete-TOU Frozen Reg 8 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03537-03540	279	5	20	obsolete-TOU Frozen Reg 8 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03541-03544	279	6	20	obsolete-TOU Frozen Reg 8 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03545-03548	279	7	20	obsolete-TOU Frozen Reg 8 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03549-03552	279	8	20	obsolete-TOU Frozen Reg 8 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03553-03556	279	9	20	obsolete-TOU Frozen Reg 8 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03557-03558	280	0	30	TOU Frozen Reg 8 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03559-03560	280	1	30	TOU Frozen Reg 8 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03561-03562	280	2	30	TOU Frozen Reg 8 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03563-03564	280	3	30	TOU Frozen Reg 8 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03565-03566	281	0	30	TOU Frozen Reg 8 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03567-03568	281	1	30	TOU Frozen Reg 8 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03569-03572	282	0	50	TOU Frozen Reg 8 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03573-03576	282	1	50	TOU Frozen Reg 8 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03577-03580	282	2	50	TOU Frozen Reg 8 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03581-03584	282	3	50	TOU Frozen Reg 8 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Frozen Total Block								
03585-03588	283	0	20	obsolete-TOU Frozen Total Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03589-03592	283	1	20	obsolete-TOU Frozen Total VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03593-03596	283	2	20	obsolete-TOU Frozen Total VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03597-03600	283	3	20	obsolete-TOU Frozen Total VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03601-03604	283	4	20	obsolete-TOU Frozen Total VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03605-03608	283	5	20	obsolete-TOU Frozen Total Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03609-03612	283	6	20	obsolete-TOU Frozen Total VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03613-03616	283	7	20	obsolete-TOU Frozen Total VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03617-03620	283	8	20	obsolete-TOU Frozen Total VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03621-03624	283	9	20	obsolete-TOU Frozen Total VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03625-03626	284	0	30	TOU Frozen Total Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03627-03628	284	1	30	TOU Frozen Total Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03629-03630	284	2	30	TOU Frozen Total Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03631-03632	284	3	30	TOU Frozen Total Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
03633-03634	285	0	30	TOU Frozen Total Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03635-03636	285	1	30	TOU Frozen Total Coin. Dmd. VAR to Peak Dmd. Watt (Quadarnt 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03637-03640	286	0	50	TOU Frozen Total Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03641-03644	286	1	50	TOU Frozen Total Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03645-03648	286	2	50	TOU Frozen Total Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03649-03652	286	3	50	TOU Frozen Total Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Prior Month Reg 1 Block								
03653-03656	287	0	20	obsolete-TOU Prior Month Reg 1 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03657-03660	287	1	20	obsolete-TOU Prior Month Reg 1 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03661-03664	287	2	20	obsolete-TOU Prior Month Reg 1 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03665-03668	287	3	20	obsolete-TOU Prior Month Reg 1 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03669-03672	287	4	20	obsolete-TOU Prior Month Reg 1 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03673-03676	287	5	20	obsolete-TOU Prior Month Reg 1 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03677-03680	287	6	20	obsolete-TOU Prior Month Reg 1 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03681-03684	287	7	20	obsolete-TOU Prior Month Reg 1 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03685-03688	287	8	20	obsolete-TOU Prior Month Reg 1 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03689-03692	287	9	20	obsolete-TOU Prior Month Reg 1 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03693-03694	288	0	30	TOU Prior Month Reg 1 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03695-03696	288	1	30	TOU Prior Month Reg 1 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03697-03698	288	2	30	TOU Prior Month Reg 1 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03699-03700	288	3	30	TOU Prior Month Reg 1 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03701-03702	289	0	30	TOU Prior Month Reg 1 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1+4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03703-03704	289	1	30	TOU Prior Month Reg 1 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2+3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03705-03708	290	0	50	TOU Prior Month Reg 1 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03709-03712	290	1	50	TOU Prior Month Reg 1 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03713-03716	290	2	50	TOU Prior Month Reg 1 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03717-03720	290	3	50	TOU Prior Month Reg 1 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Prior Month Reg 2 Block								
03721-03724	291	0	20	obsolete-TOU Prior Month Reg 2 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03725-03728	291	1	20	obsolete-TOU Prior Month Reg 2 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03729-03732	291	2	20	obsolete-TOU Prior Month Reg 2 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03733-03736	291	3	20	obsolete-TOU Prior Month Reg 2 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03737-03740	291	4	20	obsolete-TOU Prior Month Reg 2 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
03741-03744	291	5	20	obsolete-TOU Prior Month Reg 2 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03745-03748	291	6	20	obsolete-TOU Prior Month Reg 2 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03749-03752	291	7	20	obsolete-TOU Prior Month Reg 2 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03753-03756	291	8	20	obsolete-TOU Prior Month Reg 2 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03757-03760	291	9	20	obsolete-TOU Prior Month Reg 2 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03761-03762	292	0	30	TOU Prior Month Reg 2 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03763-03764	292	1	30	TOU Prior Month Reg 2 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03765-03766	292	2	30	TOU Prior Month Reg 2 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03767-03768	292	3	30	TOU Prior Month Reg 2 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03769-03770	293	0	30	TOU Prior Month Reg 2 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03771-03772	293	1	30	TOU Prior Month Reg 2 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03773-03776	294	0	50	TOU Prior Month Reg 2 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03777-03780	294	1	50	TOU Prior Month Reg 2 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03781-03784	294	2	50	TOU Prior Month Reg 2 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03785-03788	294	3	50	TOU Prior Month Reg 2 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Prior Month Reg 3 Block								
03789-03792	295	0	20	obsolete-TOU Prior Month Reg 3 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03793-03796	295	1	20	obsolete-TOU Prior Month Reg 3 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03797-03800	295	2	20	obsolete-TOU Prior Month Reg 3 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03801-03804	295	3	20	obsolete-TOU Prior Month Reg 3 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03805-03808	295	4	20	obsolete-TOU Prior Month Reg 3 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03809-03812	295	5	20	obsolete-TOU Prior Month Reg 3 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03813-03816	295	6	20	obsolete-TOU Prior Month Reg 3 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03817-03720	295	7	20	obsolete-TOU Prior Month Reg 3 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03821-03824	295	8	20	obsolete-TOU Prior Month Reg 3 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03825-03828	295	9	20	obsolete-TOU Prior Month Reg 3 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03829-03830	296	0	30	TOU Prior Month Reg 3 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03831-03832	296	1	30	TOU Prior Month Reg 3 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03833-03834	296	2	30	TOU Prior Month Reg 3 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03835-03836	296	3	30	TOU Prior Month Reg 3 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03837-03838	297	0	30	TOU Prior Month Reg 3 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03839-03840	297	1	30	TOU Prior Month Reg 3 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03841-03844	298	0	50	TOU Prior Month Reg 3 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
03845-03848	298	1	50	TOU Prior Month Reg 3 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03849-03852	298	2	50	TOU Prior Month Reg 3 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03853-03856	298	3	50	TOU Prior Month Reg 3 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Prior Month Reg 4 Block								
03857-03860	299	0	20	obsolete-TOU Prior Month Reg 4 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03861-03864	299	1	20	obsolete-TOU Prior Month Reg 4 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03865-03868	299	2	20	obsolete-TOU Prior Month Reg 4 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03869-03872	299	3	20	obsolete-TOU Prior Month Reg 4 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03873-03876	299	4	20	obsolete-TOU Prior Month Reg 4 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03877-03880	299	5	20	obsolete-TOU Prior Month Reg 4 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03881-03884	299	6	20	obsolete-TOU Prior Month Reg 4 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03885-03888	299	7	20	obsolete-TOU Prior Month Reg 4 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03889-03892	299	8	20	obsolete-TOU Prior Month Reg 4 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03893-03896	299	9	20	obsolete-TOU Prior Month Reg 4 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03897-03898	300	0	30	TOU Prior Month Reg 4 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03899-03900	300	1	30	TOU Prior Month Reg 4 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03901-03902	300	2	30	TOU Prior Month Reg 4 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03903-03904	300	3	30	TOU Prior Month Reg 4 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03905-03906	301	0	30	TOU Prior Month Reg 4 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03907-03908	301	1	30	TOU Prior Month Reg 4 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03909-03912	302	0	50	TOU Prior Month Reg 4 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03913-03916	302	1	50	TOU Prior Month Reg 4 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03917-03920	302	2	50	TOU Prior Month Reg 4 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03921-03924	302	3	50	TOU Prior Month Reg 4 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Prior Month Reg 5 Block								
03925-03928	303	0	20	obsolete-TOU Prior Month Reg 5 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03929-03932	303	1	20	obsolete-TOU Prior Month Reg 5 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03933-03936	303	2	20	obsolete-TOU Prior Month Reg 5 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
03937-03940	303	3	20	obsolete-TOU Prior Month Reg 5 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03941-03944	303	4	20	obsolete-TOU Prior Month Reg 5 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03945-03948	303	5	20	obsolete-TOU Prior Month Reg 5 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
03949-03852	303	6	20	obsolete-TOU Prior Month Reg 5 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03953-03956	303	7	20	obsolete-TOU Prior Month Reg 5 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
03957-03960	303	8	20	obsolete-TOU Prior Month Reg 5 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
03961-03964	303	9	20	obsolete-TOU Prior Month Reg 5 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
03965-03966	304	0	30	TOU Prior Month Reg 5 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
03967-03968	304	1	30	TOU Prior Month Reg 5 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
03969-03970	304	2	30	TOU Prior Month Reg 5 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
03971-03972	304	3	30	TOU Prior Month Reg 5 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03973-03974	305	0	30	TOU Prior Month Reg 5 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
03975-03976	305	1	30	TOU Prior Month Reg 5 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
03977-03980	306	0	50	TOU Prior Month Reg 5 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03981-03984	306	1	50	TOU Prior Month Reg 5 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03985-03988	306	2	50	TOU Prior Month Reg 5 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
03989-03992	306	3	50	TOU Prior Month Reg 5 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Prior Month Reg 6 Block								
03993-03996	307	0	20	obsolete-TOU Prior Month Reg 6 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
03997-04000	307	1	20	obsolete-TOU Prior Month Reg 6 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04001-04004	307	2	20	obsolete-TOU Prior Month Reg 6 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04005-04008	307	3	20	obsolete-TOU Prior Month Reg 6 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04009-04012	307	4	20	obsolete-TOU Prior Month Reg 6 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04013-04016	307	5	20	obsolete-TOU Prior Month Reg 6 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04017-04020	307	6	20	obsolete-TOU Prior Month Reg 6 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04021-04024	307	7	20	obsolete-TOU Prior Month Reg 6 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04025-04028	307	8	20	obsolete-TOU Prior Month Reg 6 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04029-04032	307	9	20	obsolete-TOU Prior Month Reg 6 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04033-04034	308	0	30	TOU Prior Month Reg 6 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04035-04036	308	1	30	TOU Prior Month Reg 6 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04037-04038	308	2	30	TOU Prior Month Reg 6 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04039-04040	308	3	30	TOU Prior Month Reg 6 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04041-04042	309	0	30	TOU Prior Month Reg 6 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04043-04044	309	1	30	TOU Prior Month Reg 6 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04045-04048	310	0	50	TOU Prior Month Reg 6 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04049-04052	310	1	50	TOU Prior Month Reg 6 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04053-04056	310	2	50	TOU Prior Month Reg 6 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04057-04060	310	3	50	TOU Prior Month Reg 6 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
Time of Use Prior Month Reg 7 Block								
04061-04064	311	0	20	obsolete-TOU Prior Month Reg 7 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04065-04068	311	1	20	obsolete-TOU Prior Month Reg 7 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04069-04072	311	2	20	obsolete-TOU Prior Month Reg 7 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04073-04076	311	3	20	obsolete-TOU Prior Month Reg 7 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04077-04080	311	4	20	obsolete-TOU Prior Month Reg 7 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04081-04084	311	5	20	obsolete-TOU Prior Month Reg 7 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04085-04088	311	6	20	obsolete-TOU Prior Month Reg 7 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04089-04092	311	7	20	obsolete-TOU Prior Month Reg 7 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04093-04096	311	8	20	obsolete-TOU Prior Month Reg 7 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04097-04100	311	9	20	obsolete-TOU Prior Month Reg 7 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04101-04102	312	0	30	TOU Prior Month Reg 7 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04103-04104	312	1	30	TOU Prior Month Reg 7 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04105-04106	312	2	30	TOU Prior Month Reg 7 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04107-04108	312	3	30	TOU Prior Month Reg 7 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04109-04110	313	0	30	TOU Prior Month Reg 7 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04111-04112	313	1	30	TOU Prior Month Reg 7 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04113-04116	314	0	50	TOU Prior Month Reg 7 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04117-04120	314	1	50	TOU Prior Month Reg 7 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04121-04124	314	2	50	TOU Prior Month Reg 7 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04125-04128	314	3	50	TOU Prior Month Reg 7 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Prior Month Reg 8 Block								
04129-04132	315	0	20	obsolete-TOU Prior Month Reg 8 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04133-04136	315	1	20	obsolete-TOU Prior Month Reg 8 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04137-04140	315	2	20	obsolete-TOU Prior Month Reg 8 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04141-04144	315	3	20	obsolete-TOU Prior Month Reg 8 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04145-04148	315	4	20	obsolete-TOU Prior Month Reg 8 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04149-04152	315	5	20	obsolete-TOU Prior Month Reg 8 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04153-04156	315	6	20	obsolete-TOU Prior Month Reg 8 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04157-04160	315	7	20	obsolete-TOU Prior Month Reg 8 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04161-04164	315	8	20	obsolete-TOU Prior Month Reg 8 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04165-04168	315	9	20	obsolete-TOU Prior Month Reg 8 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04169-04170	316	0	30	TOU Prior Month Reg 8 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
04171-04172	316	1	30	TOU Prior Month Reg 8 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04173-04174	316	2	30	TOU Prior Month Reg 8 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04175-04176	316	3	30	TOU Prior Month Reg 8 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04177-04178	317	0	30	TOU Prior Month Reg 8 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04179-04180	317	1	30	TOU Prior Month Reg 8 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04181-04184	318	0	50	TOU Prior Month Reg 8 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04185-04188	318	1	50	TOU Prior Month Reg 8 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04189-04192	318	2	50	TOU Prior Month Reg 8 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04193-04196	318	3	50	TOU Prior Month Reg 8 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Prior Month Total Block								
04197-04200	319	0	20	obsolete-TOU Prior Month Total Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04201-04204	319	1	20	obsolete-TOU Prior Month Total VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04205-04208	319	2	20	obsolete-TOU Prior Month Total VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04209-04212	319	3	20	obsolete-TOU Prior Month Total VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04213-04216	319	4	20	obsolete-TOU Prior Month Total VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04217-04220	319	5	20	obsolete-TOU Prior Month Total Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04221-04224	319	6	20	obsolete-TOU Prior Month Total VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04225-04228	319	7	20	obsolete-TOU Prior Month Total VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04229-04232	319	8	20	obsolete-TOU Prior Month Total VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04233-04236	319	9	20	obsolete-TOU Prior Month Total VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04237-04238	320	0	30	TOU Prior Month Total Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04239-04240	320	1	30	TOU Prior Month Total Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04241-04242	320	2	30	TOU Prior Month Total Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04243-04244	320	3	30	TOU Prior Month Total Peak Demand Del. VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04245-04246	321	0	30	TOU Prior Month Total Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04247-04248	321	1	30	TOU Prior Month Total Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04249-04252	322	0	50	TOU Prior Month Total Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04253-04256	322	1	50	TOU Prior Month Total Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04257-04260	322	2	50	TOU Prior Month Total Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04261-04264	322	3	50	TOU Prior Month Total Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Active Reg 1 Block								
04265-04268	323	0	20	obsolete-TOU Active Reg 1 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04269-04272	323	1	20	obsolete-TOU Active Reg 1 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
04273-04276	323	2	20	obsolete-TOU Active Reg 1 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04277-04280	323	3	20	obsolete-TOU Active Reg 1 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04281-04284	323	4	20	obsolete-TOU Active Reg 1 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04285-04288	323	5	20	obsolete-TOU Active Reg 1 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04289-04292	323	6	20	obsolete-TOU Active Reg 1 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04293-04296	323	7	20	obsolete-TOU Active Reg 1 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04297-04300	323	8	20	obsolete-TOU Active Reg 1 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04301-04304	323	9	20	obsolete-TOU Active Reg 1 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04305-04306	324	0	30	TOU Active Reg 1 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04307-04308	324	1	30	TOU Active Reg 1 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04309-04310	324	2	30	TOU Active Reg 1 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04311-04312	324	3	30	TOU Active Reg 1 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04313-04314	325	0	30	TOU Active Reg 1 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04315-04316	325	1	30	TOU Active Reg 1 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04317-04320	326	0	50	TOU Active Reg 1 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04321-04324	326	1	50	TOU Active Reg 1 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04325-04328	326	2	50	TOU Active Reg 1 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04329-04332	326	3	50	TOU Active Reg 1 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Active Reg 2 Block								
04333-04336	327	0	20	obsolete-TOU Active Reg 2 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04337-04340	327	1	20	obsolete-TOU Active Reg 2 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04341-04344	327	2	20	obsolete-TOU Active Reg 2 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04345-04348	327	3	20	obsolete-TOU Active Reg 2 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04349-04352	327	4	20	obsolete-TOU Active Reg 2 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04353-04356	327	5	20	obsolete-TOU Active Reg 2 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04357-04360	327	6	20	obsolete-TOU Active Reg 2 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04361-04364	327	7	20	obsolete-TOU Active Reg 2 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04365-04368	327	8	20	obsolete-TOU Active Reg 2 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04369-04372	327	9	20	obsolete-TOU Active Reg 2 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04373-04374	328	0	30	TOU Active Reg 2 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04375-04376	328	1	30	TOU Active Reg 2 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04377-04378	328	2	30	TOU Active Reg 2 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04379-04380	328	3	30	TOU Active Reg 2 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
04381-04382	329	0	30	TOU Active Reg 2 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 +4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04383-04384	329	1	30	TOU Active Reg 2 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04385-04388	330	0	50	TOU Active Reg 2 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04389-04392	330	1	50	TOU Active Reg 2 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04393-04396	330	2	50	TOU Active Reg 2 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04397-04400	330	3	50	TOU Active Reg 2 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Active Reg 3 Block								
04401-04404	331	0	20	obsolete-TOU Active Reg 3 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04405-04408	331	1	20	obsolete-TOU Active Reg 3 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04409-04412	331	2	20	obsolete-TOU Active Reg 3 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04413-04416	331	3	20	obsolete-TOU Active Reg 3 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04417-04420	331	4	20	obsolete-TOU Active Reg 3 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04421-04424	331	5	20	obsolete-TOU Active Reg 3 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04425-04428	331	6	20	obsolete-TOU Active Reg 3 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04429-04432	331	7	20	obsolete-TOU Active Reg 3 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04433-04436	331	8	20	obsolete-TOU Active Reg 3 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04437-04440	331	9	20	obsolete-TOU Active Reg 3 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04441-04442	332	0	30	TOU Active Reg 3 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04443-04444	332	1	30	TOU Active Reg 3 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04445-04446	332	2	30	TOU Active Reg 3 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04447-04448	332	3	30	TOU Active Reg 3 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04449-04450	333	0	30	TOU Active Reg 3 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04451-04452	333	1	30	TOU Active Reg 3 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04453-04456	334	0	50	TOU Active Reg 3 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04457-04460	334	1	50	TOU Active Reg 3 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04461-04464	334	2	50	TOU Active Reg 3 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04465-04468	334	3	50	TOU Active Reg 3 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Active Reg 4 Block								
04469-04472	335	0	20	obsolete-TOU Active Reg 4 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04473-04476	335	1	20	obsolete-TOU Active Reg 4 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04477-04480	335	2	20	obsolete-TOU Active Reg 4 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04481-04484	335	3	20	obsolete-TOU Active Reg 4 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04485-04488	335	4	20	obsolete-TOU Active Reg 4 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
04489-04492	335	5	20	obsolete-TOU Active Reg 4 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04493-04496	335	6	20	obsolete-TOU Active Reg 4 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04497-04500	335	7	20	obsolete-TOU Active Reg 4 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04501-04504	335	8	20	obsolete-TOU Active Reg 4 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04505-04508	335	9	20	obsolete-TOU Active Reg 4 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04509-04510	336	0	30	TOU Active Reg 4 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04511-04512	336	1	30	TOU Active Reg 4 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04513-04514	336	2	30	TOU Active Reg 4 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04515-04516	336	3	30	TOU Active Reg 4 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04517-04518	337	0	30	TOU Active Reg 4 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04519-04520	337	1	30	TOU Active Reg 4 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04521-04524	338	0	50	TOU Active Reg 4 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04525-04528	338	1	50	TOU Active Reg 4 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04529-04532	338	2	50	TOU Active Reg 4 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04533-04536	338	3	50	TOU Active Reg 4 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Active Reg 5 Block								
04537-04540	339	0	20	obsolete-TOU Active Reg 5 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04541-04544	339	1	20	obsolete-TOU Active Reg 5 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04545-04548	339	2	20	obsolete-TOU Active Reg 5 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04549-04552	339	3	20	obsolete-TOU Active Reg 5 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04553-04556	339	4	20	obsolete-TOU Active Reg 5 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04557-04560	339	5	20	obsolete-TOU Active Reg 5 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04561-04564	339	6	20	obsolete-TOU Active Reg 5 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04565-04568	339	7	20	obsolete-TOU Active Reg 5 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04569-04572	339	8	20	obsolete-TOU Active Reg 5 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04573-04576	339	9	20	obsolete-TOU Active Reg 5 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04577-04578	340	0	30	TOU Active Reg 5 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04579-04580	340	1	30	TOU Active Reg 5 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04581-04582	340	2	30	TOU Active Reg 5 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04583-04584	340	3	30	TOU Active Reg 5 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04585-04586	341	0	30	TOU Active Reg 5 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04587-04588	341	1	30	TOU Active Reg 5 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04589-04592	342	0	50	TOU Active Reg 5 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
04593-04596	342	1	50	TOU Active Reg 5 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04597-04600	342	2	50	TOU Active Reg 5 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04601-04604	342	3	50	TOU Active Reg 5 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Active Reg 6 Block								
04605-04608	343	0	20	obsolete-TOU Active Reg 6 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04609-04612	343	1	20	obsolete-TOU Active Reg 6 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04613-04616	343	2	20	obsolete-TOU Active Reg 6 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04617-04620	343	3	20	obsolete-TOU Active Reg 6 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04621-04624	343	4	20	obsolete-TOU Active Reg 6 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04625-04628	343	5	20	obsolete-TOU Active Reg 6 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04629-04632	343	6	20	obsolete-TOU Active Reg 6 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04633-04636	343	7	20	obsolete-TOU Active Reg 6 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04637-04640	343	8	20	obsolete-TOU Active Reg 6 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04641-04644	343	9	20	obsolete-TOU Active Reg 6 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04645-04646	344	0	30	TOU Active Reg 6 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04647-04648	344	1	30	TOU Active Reg 6 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04649-04650	344	2	30	TOU Active Reg 6 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04651-04652	344	3	30	TOU Active Reg 6 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04653-04654	345	0	30	TOU Active Reg 6 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04655-04656	345	1	30	TOU Active Reg 6 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04657-04660	346	0	50	TOU Active Reg 6 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04661-04664	346	1	50	TOU Active Reg 6 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04665-04668	346	2	50	TOU Active Reg 6 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04669-04672	346	3	50	TOU Active Reg 6 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Active Reg 7 Block								
04673-04676	347	0	20	obsolete-TOU Active Reg 7 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04677-04680	347	1	20	obsolete-TOU Active Reg 7 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04681-04684	347	2	20	obsolete-TOU Active Reg 7 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04685-04688	347	3	20	obsolete-TOU Active Reg 7 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04689-04692	347	4	20	obsolete-TOU Active Reg 7 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04693-04696	347	5	20	obsolete-TOU Active Reg 7 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04697-04700	347	6	20	obsolete-TOU Active Reg 7 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04701-04704	347	7	20	obsolete-TOU Active Reg 7 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
04705-04708	347	8	20	obsolete-TOU Active Reg 7 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04709-04712	347	9	20	obsolete-TOU Active Reg 7 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04713-04714	348	0	30	TOU Active Reg 7 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04715-04716	348	1	30	TOU Active Reg 7 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04717-04718	348	2	30	TOU Active Reg 7 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04719-04720	348	3	30	TOU Active Reg 7 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04721-04722	349	0	30	TOU Active Reg 7 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04723-04724	349	1	30	TOU Active Reg 7 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04725-04728	350	0	50	TOU Active Reg 7 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04729-04732	350	1	50	TOU Active Reg 7 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04733-04736	350	2	50	TOU Active Reg 7 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04737-04740	350	3	50	TOU Active Reg 7 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Active Reg 8 Block								
04741-04744	351	0	20	obsolete-TOU Active Reg 8 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04745-04748	351	1	20	obsolete-TOU Active Reg 8 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04749-04752	351	2	20	obsolete-TOU Active Reg 8 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04753-04756	351	3	20	obsolete-TOU Active Reg 8 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04757-04760	351	4	20	obsolete-TOU Active Reg 8 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04761-04764	351	5	20	obsolete-TOU Active Reg 8 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04765-04768	351	6	20	obsolete-TOU Active Reg 8 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04769-04772	351	7	20	obsolete-TOU Active Reg 8 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04773-04776	351	8	20	obsolete-TOU Active Reg 8 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04777-04780	351	9	20	obsolete-TOU Active Reg 8 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04781-04782	352	0	30	TOU Active Reg 8 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04783-04784	352	1	30	TOU Active Reg 8 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04785-04786	352	2	30	TOU Active Reg 8 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04787-04788	352	3	30	TOU Active Reg 8 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04789-04790	353	0	30	TOU Active Reg 8 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04791-04792	353	1	30	TOU Active Reg 8 Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04793-04796	354	0	50	TOU Active Reg 8 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04797-04800	354	1	50	TOU Active Reg 8 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04801-04804	354	2	50	TOU Active Reg 8 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04805-04808	354	3	50	TOU Active Reg 8 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
Time of Use Active Total Block								
04809-04812	355	0	20	obsolete-TOU Active Total Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04813-04816	355	1	20	obsolete-TOU Active Total VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04817-04820	355	2	20	obsolete-TOU Active Total VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04821-04824	355	3	20	obsolete-TOU Active Total VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04825-04828	355	4	20	obsolete-TOU Active Total VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04829-04832	355	5	20	obsolete-TOU Active Total Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04833-04836	355	6	20	obsolete-TOU Active Total VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04837-04840	355	7	20	obsolete-TOU Active Total VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04841-04844	355	8	20	obsolete-TOU Active Total VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04845-04848	355	9	20	obsolete-TOU Active Total VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04849-04850	356	0	30	TOU Active Total Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04851-04852	356	1	30	TOU Active Total Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04853-04854	356	2	30	TOU Active Total Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04855-04856	356	3	30	TOU Active Total Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04857-04858	357	0	30	TOU Active Total Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04859-04860	357	1	30	TOU Active Total Coin. Dmd. VAR to Peak Dmd. Watt (Quadrant 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04861-04864	358	0	50	TOU Active Total Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04865-04868	358	1	50	TOU Active Total Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04869-04872	358	2	50	TOU Active Total Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04873-04876	358	3	50	TOU Active Total Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Current Month Reg 1 Block								
04877-04880	359	0	20	obsolete-TOU Current Month Reg 1 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04881-04884	359	1	20	obsolete-TOU Current Month Reg 1 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04885-04888	359	2	20	obsolete-TOU Current Month Reg 1 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04889-04892	359	3	20	obsolete-TOU Current Month Reg 1 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04893-04896	359	4	20	obsolete-TOU Current Month Reg 1 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04897-04900	359	5	20	obsolete-TOU Current Month Reg 1 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04901-04904	359	6	20	obsolete-TOU Current Month Reg 1 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04905-04908	359	7	20	obsolete-TOU Current Month Reg 1 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04909-04912	359	8	20	obsolete-TOU Current Month Reg 1 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04913-04916	359	9	20	obsolete-TOU Current Month Reg 1 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04917-04918	360	0	30	TOU Current Month Reg 1 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
04919-04920	360	1	30	TOU Current Month Reg 1 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04921-04922	360	2	30	TOU Current Month Reg 1 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04923-04924	360	3	30	TOU Current Month Reg 1 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04925-04926	361	0	30	TOU Current Month Reg 1 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04927-04928	361	1	30	TOU Current Month Reg 1 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04929-04932	362	0	50	TOU Current Month Reg 1 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04933-04936	362	1	50	TOU Current Month Reg 1 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04937-04940	362	2	50	TOU Current Month Reg 1 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
04941-04944	362	3	50	TOU Current Month Reg 1 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Current Month Reg 2 Block								
04945-04948	363	0	20	obsolete-TOU Current Month Reg 2 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
04949-04952	363	1	20	obsolete-TOU Current Month Reg 2 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04953-04956	363	2	20	obsolete-TOU Current Month Reg 2 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04957-04960	363	3	20	obsolete-TOU Current Month Reg 2 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04961-04964	363	4	20	obsolete-TOU Current Month Reg 2 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04965-04968	363	5	20	obsolete-TOU Current Month Reg 2 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
04969-04972	363	6	20	obsolete-TOU Current Month Reg 2 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04973-04976	363	7	20	obsolete-TOU Current Month Reg 2 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
04977-04980	363	8	20	obsolete-TOU Current Month Reg 2 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
04981-04984	363	9	20	obsolete-TOU Current Month Reg 2 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
04985-04986	364	0	30	TOU Current Month Reg 2 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
04987-04988	364	1	30	TOU Current Month Reg 2 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
04989-04990	364	2	30	TOU Current Month Reg 2 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
04991-04992	364	3	30	TOU Current Month Reg 2 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04993-04994	365	0	30	TOU Current Month Reg 2 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
04995-04996	365	1	30	TOU Current Month Reg 2 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
04997-05000	366	0	50	TOU Current Month Reg 2 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05001-05004	366	1	50	TOU Current Month Reg 2 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05005-05008	366	2	50	TOU Current Month Reg 2 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05009-05012	366	3	50	TOU Current Month Reg 2 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Current Month Reg 3 Block								
05013-05016	367	0	20	obsolete-TOU Current Month Reg 3 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
05017-05020	367	1	20	obsolete-TOU Current Month Reg 3 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
05021-05024	367	2	20	obsolete-TOU Current Month Reg 3 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05025-05028	367	3	20	obsolete-TOU Current Month Reg 3 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05029-05032	367	4	20	obsolete-TOU Current Month Reg 3 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05033-05036	367	5	20	obsolete-TOU Current Month Reg 3 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
05037-05040	367	6	20	obsolete-TOU Current Month Reg 3 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05041-05044	367	7	20	obsolete-TOU Current Month Reg 3 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05045-05048	367	8	20	obsolete-TOU Current Month Reg 3 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05049-05052	367	9	20	obsolete-TOU Current Month Reg 3 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05053-05054	368	0	30	TOU Current Month Reg 3 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
05055-05056	368	1	30	TOU Current Month Reg 3 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
05057-05058	368	2	30	TOU Current Month Reg 3 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
05059-05060	368	3	30	TOU Current Month Reg 3 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05061-05062	369	0	30	TOU Current Month Reg 3 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
05063-05064	369	1	30	TOU Current Month Reg 3 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05065-05068	370	0	50	TOU Current Month Reg 3 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05069-05072	370	1	50	TOU Current Month Reg 3 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05073-05076	370	2	50	TOU Current Month Reg 3 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05077-05080	370	3	50	TOU Current Month Reg 3 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Current Month Reg 4 Block								
05081-05084	371	0	20	obsolete-TOU Current Month Reg 4 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
05085-05088	371	1	20	obsolete-TOU Current Month Reg 4 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05059-05092	371	2	20	obsolete-TOU Current Month Reg 4 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05093-05096	371	3	20	obsolete-TOU Current Month Reg 4 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05097-05100	371	4	20	obsolete-TOU Current Month Reg 4 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05101-05104	371	5	20	obsolete-TOU Current Month Reg 4 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
05105-05108	371	6	20	obsolete-TOU Current Month Reg 4 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05109-05112	371	7	20	obsolete-TOU Current Month Reg 4 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05113-05116	371	8	20	obsolete-TOU Current Month Reg 4 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05117-05120	371	9	20	obsolete-TOU Current Month Reg 4 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05121-05122	372	0	30	TOU Current Month Reg 4 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
05123-05124	372	1	30	TOU Current Month Reg 4 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
05125-05126	372	2	30	TOU Current Month Reg 4 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
05127-05128	372	3	30	TOU Current Month Reg 4 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
05129-05130	373	0	30	TOU Current Month Reg 4 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
05131-05132	373	1	30	TOU Current Month Reg 4 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05133-05136	374	0	50	TOU Current Month Reg 4 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05137-05140	374	1	50	TOU Current Month Reg 4 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05141-05144	374	2	50	TOU Current Month Reg 4 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05145-05148	374	3	50	TOU Current Month Reg 4 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Current Month Reg 5 Block								
05149-05152	375	0	20	obsolete-TOU Current Month Reg 5 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
05153-05156	375	1	20	obsolete-TOU Current Month Reg 5 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05157-05160	375	2	20	obsolete-TOU Current Month Reg 5 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05161-05164	375	3	20	obsolete-TOU Current Month Reg 5 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05165-05168	375	4	20	obsolete-TOU Current Month Reg 5 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05169-05172	375	5	20	obsolete-TOU Current Month Reg 5 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
05173-05176	375	6	20	obsolete-TOU Current Month Reg 5 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05177-05180	375	7	20	obsolete-TOU Current Month Reg 5 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05181-05184	375	8	20	obsolete-TOU Current Month Reg 5 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05185-05188	375	9	20	obsolete-TOU Current Month Reg 5 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05189-05190	376	0	30	TOU Current Month Reg 5 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
05191-05192	376	1	30	TOU Current Month Reg 5 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
05193-05194	376	2	30	TOU Current Month Reg 5 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
05195-05196	376	3	30	TOU Current Month Reg 5 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05197-05198	377	0	30	TOU Current Month Reg 5 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
05199-05200	377	1	30	TOU Current Month Reg 5 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05201-05204	378	0	50	TOU Current Month Reg 5 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05205-05208	378	1	50	TOU Current Month Reg 5 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05209-05212	378	2	50	TOU Current Month Reg 5 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05213-05216	378	3	50	TOU Current Month Reg 5 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Current Month Reg 6 Block								
05217-05220	379	0	20	obsolete-TOU Current Month Reg 6 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
05221-05224	379	1	20	obsolete-TOU Current Month Reg 6 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05225-05228	379	2	20	obsolete-TOU Current Month Reg 6 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05229-05232	379	3	20	obsolete-TOU Current Month Reg 6 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05233-05236	379	4	20	obsolete-TOU Current Month Reg 6 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
05237-05240	379	5	20	obsolete-TOU Current Month Reg 6 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
05241-05244	379	6	20	obsolete-TOU Current Month Reg 6 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
052445-05248	379	7	20	obsolete-TOU Current Month Reg 6 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05249-05252	379	8	20	obsolete-TOU Current Month Reg 6 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05253-05256	379	9	20	obsolete-TOU Current Month Reg 6 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05257-05258	380	0	30	TOU Current Month Reg 6 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
05259-05260	380	1	30	TOU Current Month Reg 6 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
05261-05262	380	2	30	TOU Current Month Reg 6 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
05263-05264	380	3	30	TOU Current Month Reg 6 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05265-05266	381	0	30	TOU Current Month Reg 6 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
05267-05268	381	1	30	TOU Current Month Reg 6 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05269-05272	382	0	50	TOU Current Month Reg 6 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05273-05276	382	1	50	TOU Current Month Reg 6 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05277-05280	382	2	50	TOU Current Month Reg 6 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05281-05284	382	3	50	TOU Current Month Reg 6 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Current Month Reg 7 Block								
05285-05288	383	0	20	obsolete-TOU Current Month Reg 7 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
05289-05292	383	1	20	obsolete-TOU Current Month Reg 7 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05293-05296	383	2	20	obsolete-TOU Current Month Reg 7 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05297-05300	383	3	20	obsolete-TOU Current Month Reg 7 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05301-05304	383	4	20	obsolete-TOU Current Month Reg 7 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05305-05308	383	5	20	obsolete-TOU Current Month Reg 7 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
05309-05312	383	6	20	obsolete-TOU Current Month Reg 7 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05313-05316	383	7	20	obsolete-TOU Current Month Reg 7 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05317-05320	383	8	20	obsolete-TOU Current Month Reg 7 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05321-05324	383	9	20	obsolete-TOU Current Month Reg 7 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05325-05326	384	0	30	TOU Current Month Reg 7 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
05327-05328	384	1	30	TOU Current Month Reg 7 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
05329-05330	384	2	30	TOU Current Month Reg 7 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
05331-05332	384	3	30	TOU Current Month Reg 7 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05333-05334	385	0	30	TOU Current Month Reg 7 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
05335-05336	385	1	30	TOU Current Month Reg 7 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05337-05340	386	0	50	TOU Current Month Reg 7 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
05341-05344	386	1	50	TOU Current Month Reg 7 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05345-05348	386	2	50	TOU Current Month Reg 7 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05349-05352	386	3	50	TOU Current Month Reg 7 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Current Month Reg 8 Block								
05353-05356	387	0	20	obsolete-TOU Current Month Reg 8 Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
05357-05360	387	1	20	obsolete-TOU Current Month Reg 8 VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05361-05364	387	2	20	obsolete-TOU Current Month Reg 8 VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05365-05368	387	3	20	obsolete-TOU Current Month Reg 8 VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05369-05372	387	4	20	obsolete-TOU Current Month Reg 8 VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05373-05376	387	5	20	obsolete-TOU Current Month Reg 8 Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
05377-05380	387	6	20	obsolete-TOU Current Month Reg 8 VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05381-05384	387	7	20	obsolete-TOU Current Month Reg 8 VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05385-05388	387	8	20	obsolete-TOU Current Month Reg 8 VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05389-05392	387	9	20	obsolete-TOU Current Month Reg 8 VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05393-05394	388	0	30	TOU Current Month Reg 8 Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
05395-05396	388	1	30	TOU Current Month Reg 8 Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
05397-05398	388	2	30	TOU Current Month Reg 8 Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
05399-05400	388	3	30	TOU Current Month Reg 8 Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05401-05402	389	0	30	TOU Current Month Reg 8 Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
05403-05404	389	1	30	TOU Current Month Reg 8 Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05405-05408	390	0	50	TOU Current Month Reg 8 Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05409-05412	390	1	50	TOU Current Month Reg 8 Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05413-05416	390	2	50	TOU Current Month Reg 8 Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05417-05420	390	3	50	TOU Current Month Reg 8 Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Current Month Total Block								
05421-05424	391	0	20	obsolete-TOU Current Month Total Watthour (Quadrant 1 + 4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F20	R
05425-05428	391	1	20	obsolete-TOU Current Month Total VAhour (Quadrant 1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05429-05432	391	2	20	obsolete-TOU Current Month Total VARhour (Quadrant 1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
05433-05436	391	3	20	obsolete-TOU Current Month Total VAhour (Quadrant 4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05437-05440	391	4	20	obsolete-TOU Current Month Total VARhour (Quadrant 4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05441-05444	391	5	20	obsolete-TOU Current Month Total Watthour (Quadrant 2 + 3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
05445-05448	391	6	20	obsolete-TOU Current Month Total VAhour (Quadrant 2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05449-05452	391	7	20	obsolete-TOU Current Month Total VARhour (Quadrant 2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
05453-05456	391	8	20	obsolete-TOU Current Month Total VAhour (Quadrant 3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
05457-05460	391	9	20	obsolete-TOU Current Month Total VARhour (Quadrant 3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F20	R
05461-05462	392	0	30	TOU Current Month Total Peak Demand Watt (Quadrant 1 + 4)	+32767 Watt / 0 Watt	1/ 65536 W sec	F7	R
05463-05464	392	1	30	TOU Current Month Total Peak Demand Watt (Quadrant 2 + 3)	0 Watt / -32768 Watt	1/ 65536 W sec	F7	R
05465-05466	392	2	30	TOU Current Month Total Peak Demand VAR (Quadrant 1 + 2)	+32767 VAR / 0 VAR	1/ 65536 VAR sec	F7	R
05467-05468	392	3	30	TOU Current Month Total Peak Demand VAR (Quadrant 3 + 4)	0 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05469-05470	393	0	30	TOU Current Month Total Coin. Dmd. VAR to Peak Dmd. Watt (Q 1 + 4)	+32767 VAR/ -32768 VAR	1/ 65536 VAR sec	F7	R
05471-05472	393	1	30	TOU Current Month Total Coin. Dmd. VAR to Peak Dmd. Watt (Q 2 + 3)	+32767 VAR / -32768 VAR	1/ 65536 VAR sec	F7	R
05473-05476	394	0	50	TOU Current Month Total Peak Demand Watt (Q 1 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05477-05480	394	1	50	TOU Current Month Total Peak Demand Watt (Q 2 + 3) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05481-05484	394	2	50	TOU Current Month Total Peak Demand VAR (Q 1 + 2) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05485-05488	394	3	50	TOU Current Month Total Peak Demand VAR (Q 3 + 4) Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Time of Use Frozen Label Block								
05489-05496	395	0		TOU Frozen Reg 1 Label			F2	R
05497-05504	395	1		TOU Frozen Reg 2 Label			F2	R
05505-05512	395	2		TOU Frozen Reg 3 Label			F2	R
05513-05520	395	3		TOU Frozen Reg 4 Label			F2	R
05521-05528	395	4		TOU Frozen Reg 5 Label			F2	R
05529-05536	395	5		TOU Frozen Reg 6 Label			F2	R
05537-05544	395	6		TOU Frozen Reg 7 Label			F2	R
05545-05552	395	7		TOU Frozen Reg 8 Label			F2	R
Time of Use Prior Month Label Block								
05553-05560	396	0		TOU Prior Month Reg 1 Label			F2	R
05561-05568	396	1		TOU Prior Month Reg 2 Label			F2	R
05569-05576	396	2		TOU Prior Month Reg 3 Label			F2	R
05577-05584	396	3		TOU Prior Month Reg 4 Label			F2	R
05585-05592	396	4		TOU Prior Month Reg 5 Label			F2	R
05593-05600	396	5		TOU Prior Month Reg 6 Label			F2	R
05601-05608	396	6		TOU Prior Month Reg 7 Label			F2	R
05609-05616	396	7		TOU Prior Month Reg 8 Label			F2	R
Time of Use Active Label Block								
05617-05624	397	0		TOU Active Reg 1 Label			F2	R
05625-05632	397	1		TOU Active Reg 2 Label			F2	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
05633-05640	397	2		TOU Active Reg 3 Label			F2	R
05641-05648	397	3		TOU Active Reg 4 Label			F2	R
05649-05656	397	4		TOU Active Reg 5 Label			F2	R
05657-05664	397	5		TOU Active Reg 6 Label			F2	R
05665-05672	397	6		TOU Active Reg 7 Label			F2	R
05673-05680	397	7		TOU Active Reg 8 Label			F2	R
Time of Use Current Month Label Block								
05681-05688	398	0		TOU Current Month Reg 1 Label			F2	R
05689-05696	398	1		TOU Current Month Reg 2 Label			F2	R
05697-05704	398	2		TOU Current Month Reg 3 Label			F2	R
05705-05712	398	3		TOU Current Month Reg 4 Label			F2	R
05713-05720	398	4		TOU Current Month Reg 5 Label			F2	R
05721-05728	398	5		TOU Current Month Reg 6 Label			F2	R
05729-05736	398	6		TOU Current Month Reg 7 Label			F2	R
05737-05744	398	7		TOU Current Month Reg 8 Label			F2	R
Internal Input Pulse Accumulation Block								
05745-05748	399	0	50	Internal Input Pulse Accumulation Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05749-05752	400	0	20	Pulse Accumulation Internal Input 1	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05753-05756	400	1	20	Pulse Accumulation Internal Input 2	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05757-05760	400	2	20	Pulse Accumulation Internal Input 3	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05761-05764	400	3	20	Pulse Accumulation Internal Input 4	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05765-05768	400	4	20	Pulse Accumulation Internal Input 5	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05769-05772	400	5	20	Pulse Accumulation Internal Input 6	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05773-05776	400	6	20	Pulse Accumulation Internal Input 7	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05777-05780	400	7	20	Pulse Accumulation Internal Input 8	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05781-05784	401	0	20	Pulse Accumulation Aggregation 1	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05785-05788	401	1	20	Pulse Accumulation Aggregation 2	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05789-05792	401	2	20	Pulse Accumulation Aggregation 3	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05793-05796	401	3	20	Pulse Accumulation Aggregation 4	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
Pulse Accumulation Block Window Average / Maximum Block								
05797-05800	402	0	50	Pulse Accumulation Block Window Average / Maximum Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05801	403	0	30	Pulse Accumulation Block Window Average / Maximum Block Status			F14	R
05802-05805	404	0	20	Block Window Average Internal Input 1	+/- 9,223,372,036,854,776,808	1 Unit	F62	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
05806-05809	404	1	20	Block Window Average Internal Input 2	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05810-05813	404	2	20	Block Window Average Internal Input 3	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05814-05817	404	3	20	Block Window Average Internal Input 4	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05818-05821	404	4	20	Block Window Average Internal Input 5	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05822-05825	404	5	20	Block Window Average Internal Input 6	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05826-05829	404	6	20	Block Window Average Internal Input 7	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05830-05833	404	7	20	Block Window Average Internal Input 8	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05834-05837	405	0	20	Block Window Average Aggregation 1	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05838-05841	405	1	20	Block Window Average Aggregation 2	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05842-05845	405	2	20	Block Window Average Aggregation 3	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05846-05849	405	3	20	Block Window Average Aggregation 4	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05850-05853	406	0	20	Maximum Block Window Average Internal Input 1	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05854-05857	406	1	20	Maximum Block Window Average Internal Input 2	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05858-05861	406	2	20	Maximum Block Window Average Internal Input 3	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05862-05865	406	3	20	Maximum Block Window Average Internal Input 4	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05866-05869	406	4	20	Maximum Block Window Average Internal Input 5	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05870-05873	406	5	20	Maximum Block Window Average Internal Input 6	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05874-05877	406	6	20	Maximum Block Window Average Internal Input 7	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05878-05881	406	7	20	Maximum Block Window Average Internal Input 8	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05882-05885	407	0	20	Maximum Block Window Average Aggregation 1	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05886-05889	407	1	20	Maximum Block Window Average Aggregation 2	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05890-05893	407	2	20	Maximum Block Window Average Aggregation 3	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05894-05897	407	3	20	Maximum Block Window Average Aggregation 4	+/- 9,223,372,036,854,776,808	1 Unit	F62	R
05898-05901	408	0	50	Maximum Block Window Average Internal Input 1 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05902-05905	408	1	50	Maximum Block Window Average Internal Input 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05906-05909	408	2	50	Maximum Block Window Average Internal Input 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05910-05913	408	3	50	Maximum Block Window Average Internal Input 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05914-05917	408	4	50	Maximum Block Window Average Internal Input 5 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05918-05921	408	5	50	Maximum Block Window Average Internal Input 6 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05922-05925	408	6	50	Maximum Block Window Average Internal Input 7 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05926-05929	408	7	50	Maximum Block Window Average Internal Input 8 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05930-05933	409	0	50	Maximum Block Window Average Aggregation 1 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05934-05937	409	1	50	Maximum Block Window Average Aggregation 2 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
05938-05941	409	2	50	Maximum Block Window Average Aggregation 3 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05942-05945	409	3	50	Maximum Block Window Average Aggregation 4 Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
Temperature								
05946	410	0	30	Nexus® Internal Temperature	+3276.7 C / -3276.8 C	0.1 degree C	F33	
Analog Input Block								
05947	411	0	30	Analog Input 1, Module 1	+327.67% / -327.68%	0.01%	F10	R
05948	411	1	30	Analog Input 2, Module 1	+327.67% / -327.68%	0.01%	F10	R
05949	411	2	30	Analog Input 3, Module 1	+327.67% / -327.68%	0.01%	F10	R
05950	411	3	30	Analog Input 4, Module 1	+327.67% / -327.68%	0.01%	F10	R
05951	411	4	30	Analog Input 5, Module 1	+327.67% / -327.68%	0.01%	F10	R
05952	411	5	30	Analog Input 6, Module 1	+327.67% / -327.68%	0.01%	F10	R
05953	411	6	30	Analog Input 7, Module 1	+327.67% / -327.68%	0.01%	F10	R
05954	411	7	30	Analog Input 8, Module 1	+327.67% / -327.68%	0.01%	F10	R
05955	412	0	30	Analog Input 1, Module 2	+327.67% / -327.68%	0.01%	F10	R
05956	412	1	30	Analog Input 2, Module 2	+327.67% / -327.68%	0.01%	F10	R
05957	412	2	30	Analog Input 3, Module 2	+327.67% / -327.68%	0.01%	F10	R
05958	412	3	30	Analog Input 4, Module 2	+327.67% / -327.68%	0.01%	F10	R
05959	412	4	30	Analog Input 5, Module 2	+327.67% / -327.68%	0.01%	F10	R
05960	412	5	30	Analog Input 6, Module 2	+327.67% / -327.68%	0.01%	F10	R
05961	412	6	30	Analog Input 7, Module 2	+327.67% / -327.68%	0.01%	F10	R
05962	412	7	30	Analog Input 8, Module 2	+327.67% / -327.68%	0.01%	F10	R
05963	413	0	30	Analog Input 1, Module 3	+327.67% / -327.68%	0.01%	F10	R
05964	413	1	30	Analog Input 2, Module 3	+327.67% / -327.68%	0.01%	F10	R
05965	413	2	30	Analog Input 3, Module 3	+327.67% / -327.68%	0.01%	F10	R
05966	413	3	30	Analog Input 4, Module 3	+327.67% / -327.68%	0.01%	F10	R
05967	413	4	30	Analog Input 5, Module 3	+327.67% / -327.68%	0.01%	F10	R
05968	413	5	30	Analog Input 6, Module 3	+327.67% / -327.68%	0.01%	F10	R
05969	413	6	30	Analog Input 7, Module 3	+327.67% / -327.68%	0.01%	F10	R
05970	413	7	30	Analog Input 8, Module 3	+327.67% / -327.68%	0.01%	F10	R
05971	414	0	30	Analog Input 1, Module 4	+327.67% / -327.68%	0.01%	F10	R
05972	414	1	30	Analog Input 2, Module 4	+327.67% / -327.68%	0.01%	F10	R
05973	414	2	30	Analog Input 3, Module 4	+327.67% / -327.68%	0.01%	F10	R
05974	414	3	30	Analog Input 4, Module 4	+327.67% / -327.68%	0.01%	F10	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
05975	414	4	30	Analog Input 5, Module 4	+327.67% / -327.68%	0.01%	F10	R
05976	414	5	30	Analog Input 6, Module 4	+327.67% / -327.68%	0.01%	F10	R
05977	414	6	30	Analog Input 7, Module 4	+327.67% / -327.68%	0.01%	F10	R
05978	414	7	30	Analog Input 8, Module 4	+327.67% / -327.68%	0.01%	F10	R
Limit Combination Block								
05979	415	0-15	1	Limit States, Combinations, 1-16			F34	R
05980	415	16-31	1	Limit States, Combinations, 17-32			F34	R
Relay Logic Block								
05981-05984	416	0	50	Relay Logic Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
05985	417	0-15	1	Relay Logic States, Input 1, Relays 1-16			F34	R
05986	418	0-15	1	Relay Logic States, Input 2, Relays 1-16			F34	R
05987	419	0-15	1	Relay Logic States, Input 3, Relays 1-16			F34	R
05988	420	0-15	1	Relay Logic States, Input 4, Relays 1-16			F34	R
05989	421	0-15	1	Relay Logic States, Input 5, Relays 1-16			F34	R
05990	422	0-15	1	Relay Logic States, Input 6, Relays 1-16			F34	R
05991	423	0-15	1	Relay Logic States, Input 7, Relays 1-16			F34	R
05992	424	0-15	1	Relay Logic States, Input 8, Relays 1-16			F34	R
05993	425	0-15	1	Relay Logic States, Gate A, Relays 1-16			F34	R
05994	426	0-15	1	Relay Logic States, Gate B, Relays 1-16			F34	R
05995	427	0-15	1	Relay Logic States, Gate C, Relays 1-16			F34	R
05996	428	0-15	1	Relay Logic States, Gate D, Relays 1-16			F34	R
05997	429	0-15	1	Relay Logic States, Gate E, Relays 1-16			F34	R
05998	430	0-15	1	Relay Logic States, Gate F, Relays 1-16			F34	R
05999	431	0-15	1	Relay Logic States, Gate G, Relays 1-16			F34	R
06000	432	0-1	30	Delay Timer, Relay 1 / Relay 2			F35	R
06001	432	2-3	30	Delay Timer, Relay 3 / Relay 4			F35	R
06002	432	4-5	30	Delay Timer, Relay 5 / Relay 6			F35	R
06003	432	6-7	30	Delay Timer, Relay 7 / Relay 8			F35	R
06004	432	8-9	30	Delay Timer, Relay 9 / Relay 10			F35	R
06005	432	10-11	30	Delay Timer, Relay 11 / Relay 12			F35	R
06006	432	12-13	30	Delay Timer, Relay 13 / Relay 14			F35	R
06007	432	14-15	30	Delay Timer, Relay 15 / Relay 16			F35	R
06008	433	0-15	1	Desired Relay States, Relays 1-16			F36	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06009	434	0-15	1	Relays Pending Updates, Relays 1-16			F37	R
06010	435	0-15	1	Shadowed Relay States, Relays 1-16			F38	R
06011	436	0-15	10	Confirmed Polled Relay States, Relays 1-16			F39	R
06012	437	0-15	1	Valid Flags for Confirmed Relay States, Relays 1-16			F40	R
06013	438	0-15	1	Locked Relays, Relays 1-16			F41	R
06014	439	0-15	1	Locked Relay States, Relays 1-16			F42	R
Reset Time Block								
06015-06018	440	0	50	Reset Time Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
06019-06022	440	1	50	Reset Maximum Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
06023-06026	440	2	50	Reset Minimum Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
06027-06030	440	3	50	Reset Energy Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
06031-06034	440	4	50	Reset Current Month TOU Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
06035-06038	440	5	50	Reset Pulse Accumulations/Aggregations Time Stamps	12/31/9999 23:59:59.99	10 msec	F3	R
Miscellaneous Flags								
06039	441	0-15	1	Miscellaneous Flags				
Test Mode Block								
06040-06043	442	0	50	Test Mode Block Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	
06044-06047	443	0	50	Test Mode Start Time	12/31/9999 23:59:59.99	10 msec	F3	
06048-06051	443	1	50	Test Mode Current Test Start Time	12/31/9999 23:59:59.99	10 msec	F3	
06052	444	0	30	Test Mode Block Average Status / Rolling Average Status			F14	
06053-06054	445	0	30	Test Mode Block Average Total Watt	+32767 W / -32768 W	1/ 65536 W sec	F7	
06055-06056	445	1	30	Test Mode Rolling Average Total Watt	+32767 W / -32768 W	1/ 65536 W sec	F7	
06057-06060	446	0	20	Test Mode Watthour (Q1+4)	+9,999,999,999,999,999 Wh / 0 Wh	1 W_H	F12	
06061-06064	446	1	20	Test Mode VAhour (Q1)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F12	
06065-06068	446	2	20	Test Mode VARhour (Q1)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F12	
06069-06072	446	3	20	Test Mode VAhour (Q4)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F12	
06073-06076	446	4	20	Test Mode VARhour (Q4)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F12	
06077-06080	446	5	20	Test Mode Watthour (Q2+3)	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F12	
06081-06084	446	6	20	Test Mode VAhour (Q2)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F12	
06085-06088	446	7	20	Test Mode VARhour (Q2)	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F12	
06089-06092	446	8	20	Test Mode VAhour (Q3)	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F12	
06093-06096	446	9	20	Test Mode VARhour (Q3)	0 VARh / -9,999,999,999,999,999 VARh	1 VAR_H	F12	
KYZ Output Accumulation Block								

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06097-06100	447	0	50	KYZ Output Accumulation Block Time Stamp	12/31/9999 23:59:59.99		F3	
06101-06102	448	0	20	KYZ Output Accumulation, Relay 1	4,294,967,295 / 0		F18	R
06103-06104	448	1	20	KYZ Output Accumulation, Relay 2	4,294,967,295 / 0		F18	R
06105-06106	448	2	20	KYZ Output Accumulation, Relay 3	4,294,967,295 / 0		F18	R
06107-06108	448	3	20	KYZ Output Accumulation, Relay 4	4,294,967,295 / 0		F18	R
06109-06110	448	4	20	KYZ Output Accumulation, LED	4,294,967,295 / 0		F18	R
Input Module Data Status Block								
06111	449	0-3	1	Digital Input Modules Data States			F44	R
06112-06113	450	0-31	1	Analog Input Modules Data States			F45	R
Flicker Status Block								
06114-06117	451	0	50	Flicker Status Block Time Stamp	12/31/9999 23:59:59.99		F3	
06118-06121	452	0	50	Flicker Start Time	12/31/9999 23:59:59.99		F3	
06122-06125	452	1	50	Flicker End Time	12/31/9999 23:59:59.99		F3	
06126	453	0	30	Flicker Status			F14	R
Instantaneous Flicker Block								
06127-06130	454	0	50	Instantaneous Flicker Block Time	12/31/9999 23:59:59.99		F3	
06131-06132	455	0	30	Instantaneous Flicker V_{AN}	+32767 / 0	1/ 65536	F7	R
06133-06134	455	1	30	Instantaneous Flicker V_{BN}	+32767 / 0	1/ 65536	F7	R
06135-06136	455	2	30	Instantaneous Flicker V_{CN}	+32767 / 0	1/ 65536	F7	R
Short Term Flicker Block								
06137-06140	456	0	50	Short Term Flicker Block Time	12/31/9999 23:59:59.99		F3	
06141-06142	457	0	30	Short Term Flicker V_{AN}	+32767 / 0	1/ 65536	F7	R
06143-06144	457	1	30	Short Term Flicker V_{BN}	+32767 / 0	1/ 65536	F7	R
06145-06146	457	2	30	Short Term Flicker V_{CN}	+32767 / 0	1/ 65536	F7	R
06147-06148	458	0	30	Maximum Short Term Flicker V_{AN}	+32767 / 0	1/ 65536	F7	R
06149-06150	458	1	30	Maximum Short Term Flicker V_{BN}	+32767 / 0	1/ 65536	F7	R
06151-06152	458	2	30	Maximum Short Term Flicker V_{CN}	+32767 / 0	1/ 65536	F7	R
06153-06154	459	0	30	Minimum Short Term Flicker V_{AN}	+32767 / 0	1/ 65536	F7	R
06155-06156	459	1	30	Minimum Short Term Flicker V_{BN}	+32767 / 0	1/ 65536	F7	R
06157-06158	459	2	30	Minimum Short Term Flicker V_{CN}	+32767 / 0	1/ 65536	F7	R
06159-06162	460	0	50	Short Term Flicker Interval End Time Stamp	12/31/9999 23:59:59.99		F3	
06163-06166	461	0	50	Maximum Short Term Flicker V_{AN} Time Stamp	12/31/9999 23:59:59.99		F3	
06167-06170	461	1	50	Maximum Short Term Flicker V_{BN} Time Stamp	12/31/9999 23:59:59.99		F3	

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06171-06174	461	2	50	Maximum Short Term Flicker V_{CN} Time Stamp	12/31/9999 23:59:59.99		F3	
06175-06178	462	0	50	Minimum Short Term Flicker V_{AN} Time Stamp	12/31/9999 23:59:59.99		F3	
06179-06182	462	1	50	Minimum Short Term Flicker V_{BN} Time Stamp	12/31/9999 23:59:59.99		F3	
06183-06186	462	2	50	Minimum Short Term Flicker V_{CN} Time Stamp	12/31/9999 23:59:59.99		F3	
Long Term Flicker Block								
06187-06190	463	0	50	Long Term Flicker Block Time	12/31/9999 23:59:59.99		F3	
06191-06192	464	0	30	Long Term Flicker V_{AN}	+32767 / 0	1/ 65536	F7	R
06193-06194	464	1	30	Long Term Flicker V_{BN}	+32767 / 0	1/ 65536	F7	R
06195-06196	464	2	30	Long Term Flicker V_{CN}	+32767 / 0	1/ 65536	F7	R
06197-06198	465	0	30	Maximum Long Term Flicker V_{AN}	+32767 / 0	1/ 65536	F7	R
06199-06200	465	1	30	Maximum Long Term Flicker V_{BN}	+32767 / 0	1/ 65536	F7	R
06201-06202	465	2	30	Maximum Long Term Flicker V_{CN}	+32767 / 0	1/ 65536	F7	R
06203-06204	466	0	30	Minimum Long Term Flicker V_{AN}	+32767 / 0	1/ 65536	F7	R
06205-06206	466	1	30	Minimum Long Term Flicker V_{BN}	+32767 / 0	1/ 65536	F7	R
06207-06208	466	2	30	Minimum Long Term Flicker V_{CN}	+32767 / 0	1/ 65536	F7	R
06209-06212	467	0	50	Long Term Flicker Interval End Time Stamp	12/31/9999 23:59:59.99		F3	
06213-06216	468	0	50	Maximum Long Term Flicker V_{AN} Time Stamp	12/31/9999 23:59:59.99		F3	
06217-06220	468	1	50	Maximum Long Term Flicker V_{BN} Time Stamp	12/31/9999 23:59:59.99		F3	
06221-06224	468	2	50	Maximum Long Term Flicker V_{CN} Time Stamp	12/31/9999 23:59:59.99		F3	
06225-06228	469	0	50	Minimum Long Term Flicker V_{AN} Time Stamp	12/31/9999 23:59:59.99		F3	
06229-06232	469	1	50	Minimum Long Term Flicker V_{BN} Time Stamp	12/31/9999 23:59:59.99		F3	
06233-06236	469	2	50	Minimum Long Term Flicker V_{CN} Time Stamp	12/31/9999 23:59:59.99		F3	
Additional Energy Block								
06237-06240	470	0	50	Additional Energy Block Time	12/31/9999 23:59:59.99		F3	
06241-06244	471	0		Quadrant 1 Watthour, Secondary	+9,999,999,999,999,999 WH / 0 WH	1 W_H	F19	R
06245-06248	471	1		Quadrant 4 Watthour, Secondary	+9,999,999,999,999,999 WH / 0 WH	1 W_H	F19	R
06249-06252	471	2		Quadrant 2 Watthour, Secondary	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F19	R
06253-06256	471	3		Quadrant 3 Watthour, Secondary	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F19	R
06257-06260	472	0		Quadrant 1 Vahour, Secondary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F19	R
06261-06264	472	1		Quadrant 1 VARhour, Secondary	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F19	R
06265-06268	472	2		Quadrant 4 Vahour, Secondary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F19	R
06269-06272	472	3		Quadrant 4 VARhour, Secondary	0 VARh /-9,999,999,999,999,999 VARh	1 VAR_H	F19	R
06273-06276	472	4		Quadrant 2 Vahour, Secondary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F19	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06277-06280	472	5		Quadrant 2 VARhour, Secondary	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F19	R
06281-06284	472	6		Quadrant 3 Vahour, Secondary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F19	R
06285-06288	472	7		Quadrant 3 VARhour, Secondary	0 VARh /-9,999,999,999,999,999 VARh	1 VAR_H	F19	R
06289-06292	473	0		Quadrant 1 Watthour, Primary	+9,999,999,999,999,999 WH / 0 WH	1 W_H	F19	R
06293-06296	473	1		Quadrant 4 Watthour, Primary	+9,999,999,999,999,999 WH / 0 WH	1 W_H	F19	R
06297-06300	473	2		Quadrant 2 Watthour, Primary	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F19	R
06301-06304	473	3		Quadrant 3 Watthour, Primary	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F19	R
06305-06308	474	0		Total Vahour (Quadrants 1+2+3+4), Primary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F19	R
06309-06312	474	1		Positive VARhour (Quadrants 1+2), Primary	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F19	R
06313-06316	474	2		Negative VARhour (Quadrants 3+4), Primary	0 VARh /-9,999,999,999,999,999 VARh	1 VAR_H	F19	R
06317-06320	475	0	20	Quadrant 1 Watthour, Secondary	+9,999,999,999,999,999 WH / 0 WH	1 W_H	F20	R
06321-06324	475	1	20	Quadrant 4 Watthour, Secondary	+9,999,999,999,999,999 WH / 0 WH	1 W_H	F20	R
06325-06328	475	2	20	Quadrant 2 Watthour, Secondary	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
06329-06332	475	3	20	Quadrant 3 Watthour, Secondary	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
06333-06336	476	0	20	Quadrant 1 Vahour, Secondary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
06337-06340	476	1	20	Quadrant 1 VARhour, Secondary	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
06341-06344	476	2	20	Quadrant 4 Vahour, Secondary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
06345-06348	476	3	20	Quadrant 4 VARhour, Secondary	0 VARh /-9,999,999,999,999,999 VARh	1 VAR_H	F20	R
06349-06352	476	4	20	Quadrant 2 Vahour, Secondary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
06353-06356	476	5	20	Quadrant 2 VARhour, Secondary	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
06357-06360	476	6	20	Quadrant 3 Vahour, Secondary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
06361-06364	476	7	20	Quadrant 3 VARhour, Secondary	0 VARh /-9,999,999,999,999,999 VARh	1 VAR_H	F20	R
06365-06368	477	0	20	Quadrant 1 Watthour, Primary	+9,999,999,999,999,999 WH / 0 WH	1 W_H	F20	R
06369-06372	477	1	20	Quadrant 4 Watthour, Primary	+9,999,999,999,999,999 WH / 0 WH	1 W_H	F20	R
06373-06376	477	2	20	Quadrant 2 Watthour, Primary	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
06377-06380	477	3	20	Quadrant 3 Watthour, Primary	0 Wh / -9,999,999,999,999,999 Wh	1 W_H	F20	R
06381-06384	478	0	20	Total Vahour (Quadrants 1+2+3+4), Primary	+9,999,999,999,999,999 VAh / 0 VAh	1 VA_H	F20	R
06385-06388	478	1	20	Positive VARhour (Quadrants 1+2), Primary	+9,999,999,999,999,999 VARh / 0 VARh	1 VAR_H	F20	R
06389-06392	478	2	20	Negative VARhour (Quadrants 3+4), Primary	0 VARh /-9,999,999,999,999,999 VARh	1 VAR_H	F20	R
Energy and Pulses in the Interval								
06393-06396	479	0	50	Energy and Pulses in the Interval Block Time Stamp	12/31/9999 23:59:59.99		F3	
06397	480	0	30	Total Vahour (Quadrants 1+2+3+4) in the Interval, Secondary	65,535 / 0	1 VA_H	F57	R
06398	480	1	30	Positive VARhour (Quadrants 1+2) in the Interval, Secondary	65,535 / 0	1 VAR_H	F57	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06399	480	2	30	Negative VARhour (Quadrants 3+4) in the Interval, Secondary	65,535 / 0	1 VAR_H	F57	R
06400	480	3	30	Positive Watthour (Quadrants 1+4) in the Interval, Secondary	65,535 / 0	1 W_H	F57	R
06401	480	4	30	Negative Watthour (Quadrants 2+3) in the Interval, Secondary	65,535 / 0	1 W_H	F57	R
06402-06403	481	0	30	Positive Watthour (Quadrants 1+4) in the Interval, Primary	4,294,967,295 / 0	1 W_H	F18	R
06404-06405	481	1	30	Quadrant 1 Vahour in the Interval, Primary	4,294,967,295 / 0	1 VA_H	F18	R
06406-06407	481	2	30	Quadrant 1 VARhour in the Interval, Primary	4,294,967,295 / 0	1 VAR_H	F18	R
06408-06409	481	3	30	Quadrant 4 Vahour in the Interval, Primary	4,294,967,295 / 0	1 VA_H	F18	R
06410-06411	481	4	30	Quadrant 4 VARhour in the Interval, Primary	4,294,967,295 / 0	1 VAR_H	F18	R
06412-06413	481	5	30	Negative Watthour (Quadrants 2+3) in the Interval, Primary	4,294,967,295 / 0	1 W_H	F18	R
06414-06415	481	6	30	Quadrant 2 Vahour in the Interval, Primary	4,294,967,295 / 0	1 VA_H	F18	R
06416-06417	481	7	30	Quadrant 2 VARhour in the Interval, Primary	4,294,967,295 / 0	1 VAR_H	F18	R
06418-06419	481	8	30	Quadrant 3 Vahour in the Interval, Primary	4,294,967,295 / 0	1 VA_H	F18	R
06420-06421	481	9	30	Quadrant 3 VARhour in the Interval, Primary	4,294,967,295 / 0	1 VAR_H	F18	R
06422-06423	482	0	30	I2t Phase A in the Interval, Primary	4,294,967,295 / 0	1 I^2t	F18	R
06424-06425	482	1	30	I2t Phase B in the Interval, Primary	4,294,967,295 / 0	1 I^2t	F18	R
06426-06427	482	2	30	I2t Phase C in the Interval, Primary	4,294,967,295 / 0	1 I^2t	F18	R
06428-06429	482	3	30	V2t Phase A in the interval, Primary	4,294,967,295 / 0	1 V^2t	F18	R
06430-06431	482	4	30	V2t Phase B in the Interval, Primary	4,294,967,295 / 0	1 V^2t	F18	R
06432-06433	482	5	30	V2t Phase C in the Interval, Primary	4,294,967,295 / 0	1 V^2t	F18	R
06434-06435	483	0	30	Pulse Accumulation, Internal Input 1 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
09436-06437	483	1	30	Pulse Accumulation, Internal Input 2 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06438-06439	483	2	30	Pulse Accumulation, Internal Input 3 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06440-06441	483	3	30	Pulse Accumulation, Internal Input 4 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06442-06443	483	4	30	Pulse Accumulation, Internal Input 5 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06444-06445	483	5	30	Pulse Accumulation, Internal Input 6 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06446-06447	483	6	30	Pulse Accumulation, Internal Input 7 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06448-06449	483	7	30	Pulse Accumulation, Internal Input 8 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06450-06451	484	0	30	Pulse Aggregation 1 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06452-06453	484	1	30	Pulse Aggregation 2 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06454-06455	484	2	30	Pulse Aggregation 3 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06456-06457	484	3	30	Pulse Aggregation 4 in the Interval, Scaled	4,294,967,295 / 0	1 Unit	F18	R
06458	485	0	30	Quadrant 1 Watthour in the Interval, Secondary	65,535 / 0	1 W_H	F57	R
06459	485	1	30	Quadrant 4 Watthour in the Interval, Secondary	65,535 / 0	1 W_H	F57	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06460	485	2	30	Quadrant 2 Watthour in the Interval, Secondary	65,535 / 0	1 W_H	F57	R
06461	485	3	30	Quadrant 3 Watthour in the Interval, Secondary	65,535 / 0	1 W_H	F57	R
06462	486	0	30	Quadrant 1 Vahour in the Interval, Secondary	65,535 / 0	1 VA_H	F57	R
06463	486	1	30	Quadrant 1 VARhour in the Interval, Secondary	65,535 / 0	1 VAR_H	F57	R
06464	486	2	30	Quadrant 4 Vahour in the Interval, Secondary	65,535 / 0	1 VA_H	F57	R
06465	486	3	30	Quadrant 4 VARhour in the Interval, Secondary	65,535 / 0	1 VAR_H	F57	R
06466	486	4	30	Quadrant 2 Vahour in the Interval, Secondary	65,535 / 0	1 VA_H	F57	R
06467	486	5	30	Quadrant 2 VARhour in the Interval, Secondary	65,535 / 0	1 VAR_H	F57	R
06468	486	6	30	Quadrant 3 Vahour in the Interval, Secondary	65,535 / 0	1 VA_H	F57	R
06469	486	7	30	Quadrant 3 VARhour in the Interval, Secondary	65,535 / 0	1 VAR_H	F57	R
06470-06471	487	0	30	Quadrant 1 Watthour in the Interval, Primary	4,294,967,295 / 0	1 W_H	F18	R
06472-06473	487	1	30	Quadrant 4 Watthour in the Interval, Primary	4,294,967,295 / 0	1 W_H	F18	R
06474-06475	487	2	30	Quadrant 2 Watthour in the Interval, Primary	4,294,967,295 / 0	1 W_H	F18	R
06476-06477	487	3	30	Quadrant 3 Watthour in the Interval, Primary	4,294,967,295 / 0	1 W_H	F18	R
06478-06479	488	0	30	Total Vahour (Quadrants 1+2+3+4) in the Interval, Primary	4,294,967,295 / 0	1 VA_H	F18	R
06480-06481	488	1	30	Positive VARhour (Quadrants 1+2) in the Interval, Primary	4,294,967,295 / 0	1 VAR_H	F18	R
06482-06483	488	2	30	Negative VARhour (Quadrants 3+4) in the Interval, Primary	4,294,967,295 / 0	1 VAR_H	F18	R
06484	489	0	30	KYZ Pulse Output in the Interval, Relay 1	65,535 / 0	1 pulse	F57	R
06485	489	1	30	KYZ Pulse Output in the Interval, Relay 2	65,535 / 0	1 pulse	F57	R
06486	489	2	30	KYZ Pulse Output in the Interval, Relay 3	65,535 / 0	1 pulse	F57	R
06487	489	3	30	KYZ Pulse Output in the Interval, Relay 4	65,535 / 0	1 pulse	F57	R
06488	489	4	30	KYZ Pulse Output in the Interval, IR LED	65,535 / 0	1 pulse	F57	R
Flicker Countdown Block								
06489	490	0	30	Short Term Flicker Countdown	65,535 / 0	1 second	F56	R
06490	490	1	30	Long Term Flicker Countdown	65,535 / 0	1 second	F56	R
Cumulative Demand Block								
06491-06494	491	0	50	Cumulative Demand Block Time Stamp	12/31/9999 23:59:59.99		F3	R
06495-06496	492	0	30	Positive Watt (Quadrants 1+4) Cumulative Demand	4,294,967,295 / 0		F18	R
06497-06498	492	1	30	Negative Watt (Quadrants 2+3) Cumulative Demand	4,294,967,295 / 0		F18	R
06499-06500	493	0	30	Positive Watt (Quadrants 1+4) Continuous Cumulative Demand	4,294,967,295 / 0		F18	R
06501-06502	493	1	30	Negative Watt (Quadrants 2+3) Continuous Cumulative Demand	4,294,967,295 / 0		F18	R
Time of Use Active Cumulative Demand								
06503-06504	494	0	30	TOU Active Reg1 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06505-06506	494	1	30	TOU Active Reg1 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06507-06508	494	2	30	TOU Active Reg2 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06509-06510	494	3	30	TOU Active Reg2 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06511-06512	494	4	30	TOU Active Reg3 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06513-06514	494	5	30	TOU Active Reg3 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06515-06516	494	6	30	TOU Active Reg4 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06517-06518	494	7	30	TOU Active Reg4 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06519-06520	494	8	30	TOU Active Reg5 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06521-06522	494	9	30	TOU Active Reg5 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06523-06524	494	10	30	TOU Active Reg6 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06525-06526	494	11	30	TOU Active Reg6 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06527-06528	494	12	30	TOU Active Reg7 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06529-06530	494	13	30	TOU Active Reg7 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06531-06532	494	14	30	TOU Active Reg8 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06533-06534	494	15	30	TOU Active Reg8 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06535-06536	494	16	30	TOU Active Total Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06537-06538	494	17	30	TOU Active Total Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
Time of Use Current Month Cumulative Demand								
06539-06540	495	0	30	TOU Current Month Reg1 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06541-06542	495	1	30	TOU Current Month Reg1 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06543-06544	495	2	30	TOU Current Month Reg2 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06545-06546	495	3	30	TOU Current Month Reg2 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06547-06548	495	4	30	TOU Current Month Reg3 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06549-06550	495	5	30	TOU Current Month Reg3 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06551-06552	495	6	30	TOU Current Month Reg4 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06553-06554	495	7	30	TOU Current Month Reg4 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06555-06556	495	8	30	TOU Current Month Reg5 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06557-06558	495	9	30	TOU Current Month Reg5 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06559-06560	495	10	30	TOU Current Month Reg6 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06561-06562	495	11	30	TOU Current Month Reg6 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06563-06564	495	12	30	TOU Current Month Reg7 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06565-06566	495	13	30	TOU Current Month Reg7 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06567-06568	495	14	30	TOU Current Month Reg8 Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06569-06570	495	15	30	TOU Current Month Reg8 Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06571-06572	495	16	30	TOU Current Month Total Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06573-06574	495	17	30	TOU Current Month Total Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
Time of Use Active Continuous Cumulative Demand								
06575-06576	496	0	30	TOU Active Reg1 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06577-06578	496	1	30	TOU Active Reg1 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06579-06580	496	2	30	TOU Active Reg2 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06581-06582	496	3	30	TOU Active Reg2 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06583-06584	496	4	30	TOU Active Reg3 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06585-06586	496	5	30	TOU Active Reg3 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06587-06588	496	6	30	TOU Active Reg4 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06589-06590	496	7	30	TOU Active Reg4 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06591-06592	496	8	30	TOU Active Reg5 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06593-06594	496	9	30	TOU Active Reg5 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06595-06596	496	10	30	TOU Active Reg6 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06597-06598	496	11	30	TOU Active Reg6 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06599-06600	496	12	30	TOU Active Reg7 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06601-06602	496	13	30	TOU Active Reg7 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06603-06604	496	14	30	TOU Active Reg8 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06605-06606	496	15	30	TOU Active Reg8 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06607-06608	496	16	30	TOU Active Total Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06609-06610	496	17	30	TOU Active Total Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
Time of Use Current Month Continuous Cumulative Demand								
06611-06612	497	0	30	TOU Current Month Reg1 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06613-06614	497	1	30	TOU Current Month Reg1 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06615-06616	497	2	30	TOU Current Month Reg2 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06617-06618	497	3	30	TOU Current Month Reg2 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06619-06620	497	4	30	TOU Current Month Reg3 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06621-06622	497	5	30	TOU Current Month Reg3 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06623-06624	497	6	30	TOU Current Month Reg4 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06625-06626	497	7	30	TOU Current Month Reg4 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06627-06628	497	8	30	TOU Current Month Reg5 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06629-06630	497	9	30	TOU Current Month Reg5 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06631-06632	497	10	30	TOU Current Month Reg6 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06633-06634	497	11	30	TOU Current Month Reg6 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06635-06636	497	12	30	TOU Current Month Reg7 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06637-06638	497	13	30	TOU Current Month Reg7 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06639-06640	497	14	30	TOU Current Month Reg8 Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06641-06642	497	15	30	TOU Current Month Reg8 Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
06643-06644	497	16	30	TOU Current Month Total Continuous Cumulative Demand Q1 + Q4 Watt	4,294,967,295 / 0		F18	R
06645-06646	497	17	30	TOU Current Month Total Continuous Cumulative Demand Q2 + Q3 Watt	4,294,967,295 / 0		F18	R
Log Index Block								
06647	498	0	30	First Index Reset Log	65535 / 0		F63	R
06648	498	1	30	First Index Historical Log 1	65535 / 0		F63	R
06649	498	2	30	First Index Historical Log 2	65535 / 0		F63	R
06650	498	3	30	First Index Sequence of Events Log	65535 / 0		F63	R
06651	498	4	30	First Index Digital Input Log	65535 / 0		F63	R
06652	498	5	30	First Index Digital Output Log	65535 / 0		F63	R
06653	498	6	30	First Index Flicker Log	65535 / 0		F63	R
06654	498	7	30	First Index Waveform Log	65535 / 0		F63	R
06655	498	8	30	First Index PQ Log	65535 / 0		F63	R
06656	499	0	30	Last Index Reset Log	65535 / 0		F63	R
06657	499	1	30	Last Index Historical Log 1	65535 / 0		F63	R
06658	499	2	30	Last Index Historical Log 2	65535 / 0		F63	R
06659	499	3	30	Last Index Sequence of Events Log	65535 / 0		F63	R
06660	499	4	30	Last Index Digital Input Log	65535 / 0		F63	R
06661	499	5	30	Last Index Digital Output Log	65535 / 0		F63	R
06662	499	6	30	Last Index Flicker Log	65535 / 0		F63	R
06663	499	7	30	Last Index Waveform Log	65535 / 0		F63	R
06664	499	8	30	Last Index PQ Log	65535 / 0		F63	R
Uncompensated and Q Block								
06665-06670	500	0-2	30	Uncompensated One second Phase A-C VA	+32767 VA / 0 VA	1/65536 VA sec	F7	
06671-06672	501	0	30	Uncompensated One second VA	+32767 VA / 0 VA	1/65536 VA sec	F7	
06673-06678	502	0-2	30	Uncompensated One second Phase A-C VAR	+32767 VAR / - 32768 VAR	1/65536 VAR sec	F7	
06679-06680	503	0	30	Uncompensated One second VAR	+32767 VAR / - 32768 VAR	1/65536 VAR sec	F7	
06681-06686	504	0-2	30	Uncompensated One second Phase A-C W	+32767 W / - 32768 W	1/65536 W sec	F7	

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06687-06688	505	0	30	Uncompensated One second W	+32767 W / - 32768 W	1/65536 W sec	F7	
06689-06692	506	0	20	Uncompensated VAh, secondary BCD	9,999,999,999,999,999 VAh / 0 VAh	1 VAh	F11	
06693-06700	506	1-2	20	Uncompensated +/- VARh, secondary BCD	9,999,999,999,999,999 VARh / 0 VARh	1 VARh	F11	
06701-06708	506	3-4	20	Uncompensated +/- Wh, seconary BCD	9,999,999,999,999,999 Wh / 0 Wh	1 Wh	F11	
06709-06728	507	0-4	20	Uncompensated Energy, secondary, binary	9,999,999,999,999,999 / 0	1	F12	
06729-06748	508	0-4	20	Uncompensated Energy, primary BCD	9,999,999,999,999,999 / 0	1	F19	
06749-06768	509	0-4	20	Uncompensated Energy, primary binary	9,999,999,999,999,999 / 0	1	F20	
06769-06773	510	0-4	30	Uncompensated Energy in the Interval, secondary	65,535 / 0	1	F47	
06774-06783	511	0-4	30	Uncompensated Energy in the Interval, primary	4,294,967,295 / 0	1	F18	
06784-06789	512	0-2	30	One second Phase A-C Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06790-06791	513	0	30	One second Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06792-06793	514	0	30	Thermal Average Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06794-06797	515	0-1	30	Maximum Thermal Average +/- Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06798-06801	516	0-1	30	Minimum Thermal Average +/- Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06802-06809	517	0-1	50	Maximum Thermal Average +/- Q Time Stamps	12/31/9999 23:59:59.99		F3	
06810-06817	518	0-1	50	Minimum Thermal Average +/- Q Time Stamps	12/31/9999 23:59:59.99		F3	
06818-06825	519	0-1	20	+/- Qh, secondary BCD	9,999,999,999,999,999 Qh / 0 Qh	1 Qh	F11	
06826-06833	520	0-1	20	+/- Qh, secondary binary	9,999,999,999,999,999 Qh / 0 Qh	1 Qh	F12	
06834-06841	521	0-1	20	+/- Qh, primary BCD	9,999,999,999,999,999 Qh / 0 Qh	1 Qh	F19	
06842-06849	522	0-1	20	+/- Qh, primary binary	9,999,999,999,999,999 Qh / 0 Qh	1 Qh	F20	
06850-06851	523	0-1	30	+/- Qh in the Interval, secondary	65,535 / 0	1	F47	
06852-06855	524	0-1	30	+/- Qh in the Interval, primary	4,294,967,295 / 0	1	F18	
06856-06857	525	0	30	Block Window Average Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06858-06861	526	0-1	30	Maximum Block Window Average +/- Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06862-06865	527	0-1	30	Minimum Block Window Average +/- Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06866-06873	528	0-1	50	Maximum Block Window Average +/- Q Time Stamps	12/31/9999 23:59:59.99		F3	
06874-06881	529	0-1	50	Minimum Block Window Average +/- Q Time Stamps	12/31/9999 23:59:59.99		F3	
06882-06883	530	0	30	Rolling Window Average Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06884-06887	531	0-1	30	Maximum Rolling Window Average +/- Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06888-06891	532	0-1	30	Minimum Rolling Window Average +/- Q	+32767 Q / -32768 Q	1/65536 Q sec	F7	
06892-06899	533	0-1	50	Maximum Rolling Window Average +/- Q Time Stamps	12/31/9999 23:59:59.99		F3	
06900-06907	534	0-1	50	Minimum Rolling Window Average +/- Q Time Stamps	12/31/9999 23:59:59.99		F3	
Scaled Energy Block								

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06908-06911	535	0	50	Scaled Energy Block Timestamp	12/31/9999 23:59:59.99		F3	
06912-06913	536	0	20	Total VAh (Quadrant 1+2+3+4) Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06914-06915	536	1	20	Positive VARh (Quadrant 1+2) Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06916-06917	536	2	20	Negative VARh (Quadrant 3+4) Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06918-06919	537	0	20	Positive Wh (Quadrant 1+4) Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06920-06921	537	1	20	Quadrant 1 VAh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06922-06923	537	2	20	Quadrant 1 VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06924-06925	537	3	20	Quadrant 4 VAh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06926-06927	537	4	20	Quadrant 4 VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06928-06929	537	5	20	Negative Wh (Quadrant 2+3) Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06930-06931	537	6	20	Quadrant 2 VAh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06932-06933	537	7	20	Quadrant 2 VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06934-06935	537	8	20	Quadrant 3 VAh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06936-06937	537	9	20	Quadrant 3 VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06938-06939	538	0	20	I2t Phase A Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06940-06941	538	1	20	I2t Phase B Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06942-06943	538	2	20	I2t Phase C Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06944-06945	538	3	20	V2t Phase A Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06946-06947	538	4	20	V2t Phase B Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06948-06949	538	5	20	V2t Phase C Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06950-06951	539	0	20	Quadrant 1 Wh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06952-06953	539	1	20	Quadrant 4 Wh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06954-06955	539	2	20	Quadrant 2 Wh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06956-06957	539	3	20	Quadrant 3 Wh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06958-06959	450	0	20	Uncompensated Total VAh, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06960-06963	540	1-2	20	Uncompensated +/- VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06964-06967	540	3-4	20	Uncompensated +/- Wh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06968-06971	541	0-1	20	+/- Qh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06972-06973	542	0	20	Test Mode Positive Wh (Quadrant 1+4) Scaled Secondary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06974-06975	542	1	20	Test Mode Quadrant 1 VAh Scaled Secondary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06976-06977	542	2	20	Test Mode Quadrant 1 VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06978-06979	542	3	20	Test Mode Quadrant 4 VAh Scaled Secondary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06980-06981	542	4	20	Test Mode Quadrant 4 VARh Scaled Secondary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
06982-06983	542	5	20	Test Mode Negative Wh (Quadrant 2+3) Scaled Secondary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06984-06985	542	6	20	Test Mode Quadrant 2 VAh Scaled Secondary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06986-06987	542	7	20	Test Mode Quadrant 2 VARh Scaled Secondary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06988-06989	542	8	20	Test Mode Quadrant 3 VAh Scaled Secondary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06990-06991	542	9	20	Test Mode Quadrant 3 VARh Scaled Secondary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
06992-07007	543	0-7	20	Pulse Accumulation Inputs 1-8, Scaled	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07008-07015	544	0-3	20	Pulse Aggregations 1-4, Scaled	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07016-07017	545	0	20	TOU Frozen Reg1 Positive Wh (Quadrant 1+4) Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07018-07019	545	1	20	TOU Frozen Reg1 Quadrant 1 VAh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07020-07021	545	2	20	TOU Frozen Reg1 Quadrant 1 VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07022-07023	545	3	20	TOU Frozen Reg1 Quadrant 4 VAh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07024-07025	545	4	20	TOU Frozen Reg1 Quadrant 4 VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07026-07027	545	5	20	TOU Frozen Reg1 Negative Wh (Quadrant 2+3) Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07028-07029	545	6	20	TOU Frozen Reg1 Quadrant 2 VAh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07030-07031	545	7	20	TOU Frozen Reg1 Quadrant 2 VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07032-07033	545	8	20	TOU Frozen Reg1 Quadrant 3 VAh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07034-07035	545	9	20	TOU Frozen Reg1 Quadrant 3 VARh Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07036-07055	546	0-9	20	TOU Frozen Reg2 Energy Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07056-07175	547-552	0-9	20	TOU Frozen Reg3-Reg8 Energy Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07176-07195	553	0-9	20	TOU Frozen Total Energy Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07196-07375	554-562	0-9	20	TOU Prior Month Reg1-Reg8 & Total Energy Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07376-07555	563-571	0-9	20	TOU Active Reg1-Reg8 & Total Energy Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07556-07735	572-580	0-9	20	TOU Current Month Reg1-Reg8 & Total Energy Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07736-07740	581	0-9	30	TOU Frozen Scaled Energy Settings			F65	
07741-07745	582	0-9	30	TOU Prior Month Scaled Energy Settings			F65	
07746-07747	583	0	30	Total VAh (Quadrant 1+2+3+4) in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07748-07749	583	1	30	Positive VARh (Quadrant 1+2) in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07750-07751	583	2	30	Negative VARh (Quadrant 3+4) in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	
07752-07753	584	0	30	Positive Wh (Quadrant 1+4) in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^{6} - 10^{-7}	F64	

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
07754-07755	584	1	30	Quadrant 1 VAh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07756-07757	584	2	30	Quadrant 1 VARh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07758-07759	584	3	30	Quadrant 4 VAh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07760-07761	584	4	30	Quadrant 4 VARh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07762-07763	584	5	30	Negative Wh (Quadrant 2+3) in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07764-07765	584	6	30	Quadrant 2 VAh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07766-07767	584	7	30	Quadrant 2 VARh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07768-07769	584	8	30	Quadrant 3 VAh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07770-07771	584	9	30	Quadrant 3 VARh in the Interval, Sclaed Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07772-07773	585	0	30	I2t Phase A in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07774-07775	585	1	30	I2t Phase B in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07776-07777	585	2	30	I2t Phase C in the Interval, Sclaed Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07778-07779	585	3	30	V2t Phase A in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07780-07781	585	4	30	V2t Phase B in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07782-07783	585	5	30	V2t Phase C in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07784-07785	586	0	30	Quadrant 1 Wh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07786-07787	586	1	30	Quadrant 4 Wh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07788-07789	586	2	30	Quadrant 2 Wh in the Interval, Sclaed Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07790-07791	586	3	30	Quadrant 3 Wh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07792-07793	587	0	30	Uncompensated Total VAh (Q 1+2+3+4) in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07794-07797	587	1-2	30	Uncompensated +/- VARh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07798-07801	587	3-4	30	Uncompensated +/- Wh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07802-07805	588	0-1	30	+/- Qh in the Interval, Scaled Primary	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07806-07821	589	0-7	30	Pulse Accumulation Inputs 1-8 in the Interval, Scaled	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
07822-07829	590	0-3	30	Pulse Aggregations 1-4 in the Interval, Scaled	variable (9999 through 999999999 / 0)	variable 10^6 - 10^{-7}	F64	
Total Average Power Factor Block								
07830-07833	591	0	50	Total Average Power Factor Block Timestamp	12/31/9999 23:59:59.99		F3	R
07834	592	0	30	Total Average Power Factor Q14	1.000 / 0	0.001 PF	F8	R
07835	592	1	30	Total Average Power Factor Q23	1.000 / 0	0.001 PF	F8	R
07836	593	0	30	Maximum Total Average Power Factor Q14	1.000 / 0	0.001 PF	F8	R
07837	593	1	30	Maximum Total Average Power Factor Q23	1.000 / 0	0.001 PF	F8	R
07838	594	0	30	Minimum Total Average Power Factor Q14	1.000 / 0	0.001 PF	F8	R
07839	594	1	30	Minimum Total Average Power Factor Q23	1.000 / 0	0.001 PF	F8	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
07840-07843	595	0	50	Maximum Total Average Power Factor Q14 Timestamp	12/31/9999 23:59:59.99		F3	R
07844-07847	595	1	50	Maximum Total Average Power Factor Q23 Timestamp	12/31/9999 23:59:59.99		F3	R
07848-07851	596	0	50	Minimum Total Average Power Factor Q14 Timestamp	12/31/9999 23:59:59.99		F3	R
07852-07855	596	1	50	Minimum Total Average Power Factor Q23 Timestamp	12/31/9999 23:59:59.99		F3	R
07856-07859	597	0	50	Total Average Power Factor Reset Timestamp	12/31/9999 23:59:59.99		F3	R
Reset Active TOU Time Stamp								
07860-07863	598	0	50	Reset Active TOU Time Stamp	12/31/9999 23:59:59.99		F3	R
Scratchpad Block								
08193-08320				Scratchpad Registers				
Master Device Data Blocks								
08449-08512				Master Device Data, Port 4 (I/O)	12/31/9999 23:59:59.99	10 msec	F3	R
08513-08576				Master Device Data, Port 3	9999	1 year	F21	R
08577-08640				Master Device Data, Port 2	12/31/9999 23:59:59.99	10 msec	F3	R
08641-08704				Master Device Data, Port 1 (232/485)	9999	1 year	F21	R
Customized Modbus Block								
12289-14336				Customized Modbus Readings				R
Enhanced Factory Settings Block								
16385-24576				Undefined				R
Enhanced Programmable Settings Block								
24577-32768				Undefined				R
Time of Use Calendar Header Block								
34817-34820				TOU Calendar Year 1 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34821				TOU Calendar Year 1 Calendar Year	9999	1 year	F21	R
34822-34825				TOU Calendar Year 2 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34826				TOU Calendar Year 2 Calendar Year	9999	1 year	F21	R
34827-34830				TOU Calendar Year 3 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34831				TOU Calendar Year 3 Calendar Year	9999	1 year	F21	R
34832-34835				TOU Calendar Year 4 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34836				TOU Calendar Year 4 Calendar Year	9999	1 year	F21	R
34837-34840				TOU Calendar Year 5 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34841				TOU Calendar Year 5 Calendar Year	9999	1 year	F21	R
34842-34845				TOU Calendar Year 6 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34846				TOU Calendar Year 6 Calendar Year	9999	1 year	F21	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
34847-34850				TOU Calendar Year 7 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34851				TOU Calendar Year 7 Calendar Year	9999	1 year	F21	R
34852-34855				TOU Calendar Year 8 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34856				TOU Calendar Year 8 Calendar Year	9999	1 year	F21	R
34857-34860				TOU Calendar Year 9 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34861				TOU Calendar Year 9 Calendar Year	9999	1 year	F21	R
34862-34865				TOU Calendar Year 10 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34866				TOU Calendar Year 10 Calendar Year	9999	1 year	F21	R
34867-34870				TOU Calendar Year 11 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34871				TOU Calendar Year 11 Calendar Year	9999	1 year	F21	R
34872-34875				TOU Calendar Year 12 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34876				TOU Calendar Year 12 Calendar Year	9999	1 year	F21	R
34877-34880				TOU Calendar Year 13 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34881				TOU Calendar Year 13 Calendar Year	9999	1 year	F21	R
34882-34885				TOU Calendar Year 14 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34886				TOU Calendar Year 14 Calendar Year	9999	1 year	F21	R
34887-34890				TOU Calendar Year 15 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34891				TOU Calendar Year 15 Calendar Year	9999	1 year	F21	R
34892-34895				TOU Calendar Year 16 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34896				TOU Calendar Year 16 Calendar Year	9999	1 year	F21	R
34897-34900				TOU Calendar Year 17 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34901				TOU Calendar Year 17 Calendar Year	9999	1 year	F21	R
34902-34905				TOU Calendar Year 18 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34906				TOU Calendar Year 18 Calendar Year	9999	1 year	F21	R
34907-34910				TOU Calendar Year 19 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34911				TOU Calendar Year 19 Calendar Year	9999	1 year	F21	R
34912-34915				TOU Calendar Year 20 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R
34916				TOU Calendar Year 20 Calendar Year	9999	1 year	F21	R
34917				TOU Calendar Year Selection			F31	R/W
34918				TOU Calendar Header Status / Year Selection Status			F32	R
Time of Use Calendar Block								
Time of Use Calendar Window 1								
34919-34922				TOU Calendar Year 1 Modification Time Stamp	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
34923				TOU Calendar Year 1 Calendar Year	9999	1 year	F21	R
34924				TOU Calendar Year 1 Jan 1 / Jan 2 Profile	15-15 / 0-0		F22	R
34925				TOU Calendar Year 1 Jan 3 / Jan 4 Profile	15-15 / 0-0		F22	R
34926				TOU Calendar Year 1 Jan 5 / Jan 6 Profile	15-15 / 0-0		F22	R
34927				TOU Calendar Year 1 Jan 7 / Jan 8 Profile	15-15 / 0-0		F22	R
34928				TOU Calendar Year 1 Jan 9 / Jan 10 Profile	15-15 / 0-0		F22	R
34929				TOU Calendar Year 1 Jan 11 / Jan 12 Profile	15-15 / 0-0		F22	R
34930				TOU Calendar Year 1 Jan 13 / Jan 14 Profile	15-15 / 0-0		F22	R
34931				TOU Calendar Year 1 Jan 15 / Jan 16 Profile	15-15 / 0-0		F22	R
34932				TOU Calendar Year 1 Jan 17 / Jan 18 Profile	15-15 / 0-0		F22	R
34933				TOU Calendar Year 1 Jan 19 / Jan 20 Profile	15-15 / 0-0		F22	R
34934				TOU Calendar Year 1 Jan 21 / Jan 22 Profile	15-15 / 0-0		F22	R
34935				TOU Calendar Year 1 Jan 23 / Jan 24 Profile	15-15 / 0-0		F22	R
34936				TOU Calendar Year 1 Jan 25 / Jan 26 Profile	15-15 / 0-0		F22	R
34937				TOU Calendar Year 1 Jan 27 / Jan 28 Profile	15-15 / 0-0		F22	R
34938				TOU Calendar Year 1 Jan 29 / Jan 30 Profile	15-15 / 0-0		F22	R
34939				TOU Calendar Year 1 Jan 31 / Feb 1 Profile	15-15 / 0-0		F22	R
34940				TOU Calendar Year 1 Feb 2 / Feb 3 Profile	15-15 / 0-0		F22	R
34941				TOU Calendar Year 1 Feb 4 / Feb 5 Profile	15-15 / 0-0		F22	R
34942				TOU Calendar Year 1 Feb 6 / Feb 7 Profile	15-15 / 0-0		F22	R
34943				TOU Calendar Year 1 Feb 8 / Feb 9 Profile	15-15 / 0-0		F22	R
34944				TOU Calendar Year 1 Feb 10 / Feb 11 Profile	15-15 / 0-0		F22	R
34945				TOU Calendar Year 1 Feb 12 / Feb 13 Profile	15-15 / 0-0		F22	R
34946				TOU Calendar Year 1 Feb 14 / Feb 15 Profile	15-15 / 0-0		F22	R
34947				TOU Calendar Year 1 Feb 16 / Feb 17 Profile	15-15 / 0-0		F22	R
34948				TOU Calendar Year 1 Feb 18 / Feb 19 Profile	15-15 / 0-0		F22	R
34949				TOU Calendar Year 1 Feb 20 / Feb 21 Profile	15-15 / 0-0		F22	R
34950				TOU Calendar Year 1 Feb 22 / Feb 23 Profile	15-15 / 0-0		F22	R
34951				TOU Calendar Year 1 Feb 24 / Feb 25 Profile	15-15 / 0-0		F22	R
34952				TOU Calendar Year 1 Feb 26 / Feb 27 Profile	15-15 / 0-0		F22	R
34953				TOU Calendar Year 1 Feb 28 / Mar 1 (Feb 28) Profile	15-15 / 0-0		F22	R
34954				TOU Calendar Year 1 Mar 2 (Mar 1) / Mar 3 (Mar 2) Profile	15-15 / 0-0		F22	R
34955				TOU Calendar Year 1 Mar 4 (Mar 3) / Mar 5 (Mar 4) Profile	15-15 / 0-0		F22	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
34956				TOU Calendar Year 1 Mar 6 (Mar 5) / Mar 7 (Mar 6) Profile	15-15 / 0-0		F22	R
34957				TOU Calendar Year 1 Mar 8 (Mar 7) / Mar 9 (Mar 8) Profile	15-15 / 0-0		F22	R
34958				TOU Calendar Year 1 Mar 10 (Mar 9) / Mar 11 (Mar 10) Profile	15-15 / 0-0		F22	R
34959				TOU Calendar Year 1 Mar 13 (Mar 11) / Mar 13 (Mar 12) Profile	15-15 / 0-0		F22	R
34960				TOU Calendar Year 1 Mar 14 (Mar 13) / Mar 15 (Mar 14) Profile	15-15 / 0-0		F22	R
34961				TOU Calendar Year 1 Mar 16 (Mar 15) / Mar 17 (Mar 16) Profile	15-15 / 0-0		F22	R
34962				TOU Calendar Year 1 Mar 18 (Mar 17) / Mar 19 (Mar 18) Profile	15-15 / 0-0		F22	R
34963				TOU Calendar Year 1 Mar 20 (Mar 19) / Mar 21 (Mar 20) Profile	15-15 / 0-0		F22	R
34964				TOU Calendar Year 1 Mar 22 (Mar 21) / Mar 23 (Mar 22) Profile	15-15 / 0-0		F22	R
34965				TOU Calendar Year 1 Mar 24 (Mar 23) / Mar 25 (Mar 24) Profile	15-15 / 0-0		F22	R
34966				TOU Calendar Year 1 Mar 26 (Mar 25) / Mar 27 (Mar 26) Profile	15-15 / 0-0		F22	R
34967				TOU Calendar Year 1 Mar 28 (Mar 27) / Mar 29 (Mar 28) Profile	15-15 / 0-0		F22	R
34968				TOU Calendar Year 1 Mar 30 (Mar 29) / Mar 31 (Mar 30) Profile	15-15 / 0-0		F22	R
34969				TOU Calendar Year 1 Apr 1 (Mar 31) / Apr 2 (Apr 1) Profile	15-15 / 0-0		F22	R
34970				TOU Calendar Year 1 Apr 3 (Apr 2) / Apr 4 (Apr 3) Profile	15-15 / 0-0		F22	R
34971				TOU Calendar Year 1 Apr 5 (Apr 4) / Apr 6 (Apr 5) Profile	15-15 / 0-0		F22	R
34972				TOU Calendar Year 1 Apr 7 (Apr 6) / Apr 8 (Apr 7) Profile	15-15 / 0-0		F22	R
34973				TOU Calendar Year 1 Apr 9 (Apr 8) / Apr 10 (Apr 9) Profile	15-15 / 0-0		F22	R
34974				TOU Calendar Year 1 Apr 11 (Apr 10) / Apr 12 (Apr 11) Profile	15-15 / 0-0		F22	R
34975				TOU Calendar Year 1 Apr 13 (Apr 12) / Apr 14 (Apr 13) Profile	15-15 / 0-0		F22	R
34976				TOU Calendar Year 1 Apr 15 (Apr 14) / Apr 16 (Apr 15) Profile	15-15 / 0-0		F22	R
34977				TOU Calendar Year 1 Apr 17 (Apr 16) / Apr 18 (Apr 17) Profile	15-15 / 0-0		F22	R
34978				TOU Calendar Year 1 Apr 19 (Apr 18) / Apr 20 (Apr 19) Profile	15-15 / 0-0		F22	R
34979				TOU Calendar Year 1 Apr 21 (Apr 20) / Apr 22 (Apr 21) Profile	15-15 / 0-0		F22	R
34980				TOU Calendar Year 1 Apr 23 (Apr 22) / Apr 24 (Apr 23) Profile	15-15 / 0-0		F22	R
34981				TOU Calendar Year 1 Apr 25 (Apr 24) / Apr 26 (Apr 25) Profile	15-15 / 0-0		F22	R
34982				TOU Calendar Year 1 Apr 27 (Apr 26) / Apr 28 (Apr 27) Profile	15-15 / 0-0		F22	R
34983				TOU Calendar Year 1 Apr 29 (Apr 28) / Apr 30 (Apr 29) Profile	15-15 / 0-0		F22	R
34984				TOU Calendar Year 1 May 1 (Apr 30) / May 2 (May 1) Profile	15-15 / 0-0		F22	R
34985				TOU Calendar Year 1 May 3 (May 2) / May 4 (May 3) Profile	15-15 / 0-0		F22	R
34986				TOU Calendar Year 1 May 5 (May 4) / May 6 (May 5) Profile	15-15 / 0-0		F22	R
34987				TOU Calendar Year 1 May 7 (May 6) / May 8 (May 7) Profile	15-15 / 0-0		F22	R
34988				TOU Calendar Year 1 May 9 (May 8) / May 10 (May 9) Profile	15-15 / 0-0		F22	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
34989				TOU Calendar Year 1 May 11 (May 10) / May 12 (May 11) Profile	15-15 / 0-0		F22	R
34990				TOU Calendar Year 1 May 13 (May 12) / May 14 (May 13) Profile	15-15 / 0-0		F22	R
34991				TOU Calendar Year 1 May 15 (May 14) / May 16 (May 15) Profile	15-15 / 0-0		F22	R
34992				TOU Calendar Year 1 May 17 (May 16) / May 18 (May 17) Profile	15-15 / 0-0		F22	R
34993				TOU Calendar Year 1 May 19 (May 18) / May 20 (May 19) Profile	15-15 / 0-0		F22	R
34994				TOU Calendar Year 1 May 21 (May 20) / May 22 (May 21) Profile	15-15 / 0-0		F22	R
34995				TOU Calendar Year 1 May 23 (May 22) / May 24 (May 23) Profile	15-15 / 0-0		F22	R
34996				TOU Calendar Year 1 May 25 (May 24) / May 26 (May 25) Profile	15-15 / 0-0		F22	R
34997				TOU Calendar Year 1 May 27 (May 26) / May 28 (May 27) Profile	15-15 / 0-0		F22	R
34998				TOU Calendar Year 1 May 29 (May 28) / May 30 (May 29) Profile	15-15 / 0-0		F22	R
34999				TOU Calendar Year 1 May 31 (May 30) / Jun 1 (May 31) Profile	15-15 / 0-0		F22	R
35000				TOU Calendar Year 1 Jun 2 (Jun 1) / Jun 3 (Jun 2) Profile	15-15 / 0-0		F22	R
35001				TOU Calendar Year 1 Jun 4 (Jun 3) / Jun 5 (Jun 4) Profile	15-15 / 0-0		F22	R
35002				TOU Calendar Year 1 Jun 6 (Jun 5) / Jun 7 (Jun 6) Profile	15-15 / 0-0		F22	R
35003				TOU Calendar Year 1 Jun 8 (Jun 7) / Jun 9 (Jun 8) Profile	15-15 / 0-0		F22	R
35004				TOU Calendar Year 1 Jun 10 (Jun 9) / Jun 11 (Jun 10) Profile	15-15 / 0-0		F22	R
35005				TOU Calendar Year 1 Jun 13 (Jun 11) / Jun 13 (Jun 12) Profile	15-15 / 0-0		F22	R
35006				TOU Calendar Year 1 Jun 14 (Jun 13) / Jun 15 (Jun 14) Profile	15-15 / 0-0		F22	R
35007				TOU Calendar Year 1 Jun 16 (Jun 15) / Jun 17 (Jun 16) Profile	15-15 / 0-0		F22	R
35008				TOU Calendar Year 1 Jun 18 (Jun 17) / Jun 19 (Jun 18) Profile	15-15 / 0-0		F22	R
35009				TOU Calendar Year 1 Jun 20 (Jun 19) / Jun 21 (Jun 20) Profile	15-15 / 0-0		F22	R
35010				TOU Calendar Year 1 Jun 22 (Jun 21) / Jun 23 (Jun 22) Profile	15-15 / 0-0		F22	R
35011				TOU Calendar Year 1 Jun 24 (Jun 23) / Jun 25 (Jun 24) Profile	15-15 / 0-0		F22	R
35012				TOU Calendar Year 1 Jun 26 (Jun 25) / Jun 27 (Jun 26) Profile	15-15 / 0-0		F22	R
35013				TOU Calendar Year 1 Jun 28 (Jun 27) / Jun 29 (Jun 28) Profile	15-15 / 0-0		F22	R
35014				TOU Calendar Year 1 Jun 30 (Jun 29) / Jul 1 (Jun 30) Profile	15-15 / 0-0		F22	R
35015				TOU Calendar Year 1 Jul 2 (Jul 1) / Jul 3 (Jul 2) Profile	15-15 / 0-0		F22	R
35016				TOU Calendar Year 1 Jul 4 (Jul 3) / Jul 5 (Jul 4) Profile	15-15 / 0-0		F22	R
35017				TOU Calendar Year 1 Jul 6 (Jul 5) / Jul 7 (Jul 6) Profile	15-15 / 0-0		F22	R
35018				TOU Calendar Year 1 Jul 8 (Jul 7) / Jul 9 (Jul 8) Profile	15-15 / 0-0		F22	R
35019				TOU Calendar Year 1 Jul 10 (Jul 9) / Jul 11 (Jul 10) Profile	15-15 / 0-0		F22	R
35020				TOU Calendar Year 1 Jul 13 (Jul 11) / Jul 13 (Jul 12) Profile	15-15 / 0-0		F22	R
35021				TOU Calendar Year 1 Jul 14 (Jul 13) / Jul 15 (Jul 14) Profile	15-15 / 0-0		F22	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35022				TOU Calendar Year 1 Jul 16 (Jul 15) / Jul 17 (Jul 16) Profile	15-15 / 0-0		F22	R
35023				TOU Calendar Year 1 Jul 18 (Jul 17) / Jul 19 (Jul 18) Profile	15-15 / 0-0		F22	R
35024				TOU Calendar Year 1 Jul 20 (Jul 19) / Jul 21 (Jul 20) Profile	15-15 / 0-0		F22	R
35025				TOU Calendar Year 1 Jul 22 (Jul 21) / Jul 23 (Jul 22) Profile	15-15 / 0-0		F22	R
35026				TOU Calendar Year 1 Jul 24 (Jul 23) / Jul 25 (Jul 24) Profile	15-15 / 0-0		F22	R
35027				TOU Calendar Year 1 Jul 26 (Jul 25) / Jul 27 (Jul 26) Profile	15-15 / 0-0		F22	R
35028				TOU Calendar Year 1 Jul 28 (Jul 27) / Jul 29 (Jul 28) Profile	15-15 / 0-0		F22	R
35029				TOU Calendar Year 1 Jul 30 (Jul 29) / Jul 31 (Jul 30) Profile	15-15 / 0-0		F22	R
35030				TOU Calendar Year 1 Aug 1 (Jul 31) / Aug 2 (Aug 1) Profile	15-15 / 0-0		F22	R
35031				TOU Calendar Year 1 Aug 3 (Aug 2) / Aug 4 (Aug 3) Profile	15-15 / 0-0		F22	R
35032				TOU Calendar Year 1 Aug 5 (Aug 4) / Aug 6 (Aug 5) Profile	15-15 / 0-0		F22	R
35033				TOU Calendar Year 1 Aug 7 (Aug 6) / Aug 8 (Aug 7) Profile	15-15 / 0-0		F22	R
35034				TOU Calendar Year 1 Aug 9 (Aug 8) / Aug 10 (Aug 9) Profile	15-15 / 0-0		F22	R
35035				TOU Calendar Year 1 Aug 11 (Aug 10) / Aug 12 (Aug 11) Profile	15-15 / 0-0		F22	R
35036				TOU Calendar Year 1 Aug 13 (Aug 12) / Aug 14 (Aug 13) Profile	15-15 / 0-0		F22	R
35037				TOU Calendar Year 1 Aug 15 (Aug 14) / Aug 16 (Aug 15) Profile	15-15 / 0-0		F22	R
35038				TOU Calendar Year 1 Aug 17 (Aug 16) / Aug 18 (Aug 17) Profile	15-15 / 0-0		F22	R
35039				TOU Calendar Year 1 Aug 19 (Aug 18) / Aug 20 (Aug 19) Profile	15-15 / 0-0		F22	R
35040				TOU Calendar Year 1 Aug 21 (Aug 20) / Aug 22 (Aug 21) Profile	15-15 / 0-0		F22	R
35041				TOU Calendar Year 1 Aug 23 (Aug 22) / Aug 24 (Aug 23) Profile	15-15 / 0-0		F22	R
35042				TOU Calendar Year 1 Aug 25 (Aug 24) / Aug 26 (Aug 25) Profile	15-15 / 0-0		F22	R
35043				TOU Calendar Year 1 Aug 27 (Aug 26) / Aug 28 (Aug 27) Profile	15-15 / 0-0		F22	R
35044				TOU Calendar Year 1 Aug 29 (Aug 28) / Aug 30 (Aug 29) Profile	15-15 / 0-0		F22	R
Time of Use Calendar Window 2								
35045				TOU Calendar Year 1 Aug 31 (Aug 30) / Sep 1 (Aug 31) Profile	15-15 / 0-0		F22	R
35046				TOU Calendar Year 1 Sep 2 (Sep 1) / Sep 3 (Sep 2) Profile	15-15 / 0-0		F22	R
35047				TOU Calendar Year 1 Sep 4 (Sep 3) / Sep 5 (Sep 4) Profile	15-15 / 0-0		F22	R
35048				TOU Calendar Year 1 Sep 6 (Sep 5) / Sep 7 (Sep 6) Profile	15-15 / 0-0		F22	R
35049				TOU Calendar Year 1 Sep 8 (Sep 7) / Sep 9 (Sep 8) Profile	15-15 / 0-0		F22	R
35050				TOU Calendar Year 1 Sep 10 (Sep 9) / Sep 11 (Sep 10) Profile	15-15 / 0-0		F22	R
35051				TOU Calendar Year 1 Sep 13 (Sep 11) / Sep 13 (Sep 12) Profile	15-15 / 0-0		F22	R
35052				TOU Calendar Year 1 Sep 14 (Sep 13) / Sep 15 (Sep 14) Profile	15-15 / 0-0		F22	R
35053				TOU Calendar Year 1 Sep 16 (Sep 15) / Sep 17 (Sep 16) Profile	15-15 / 0-0		F22	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35054				TOU Calendar Year 1 Sep 18 (Sep 17) / Sep 19 (Sep 18) Profile	15-15 / 0-0		F22	R
35055				TOU Calendar Year 1 Sep 20 (Sep 19) / Sep 21 (Sep 20) Profile	15-15 / 0-0		F22	R
35056				TOU Calendar Year 1 Sep 22 (Sep 21) / Sep 23 (Sep 22) Profile	15-15 / 0-0		F22	R
35057				TOU Calendar Year 1 Sep 24 (Sep 23) / Sep 25 (Sep 24) Profile	15-15 / 0-0		F22	R
35058				TOU Calendar Year 1 Sep 26 (Sep 25) / Sep 27 (Sep 26) Profile	15-15 / 0-0		F22	R
35059				TOU Calendar Year 1 Sep 28 (Sep 27) / Sep 29 (Sep 28) Profile	15-15 / 0-0		F22	R
35060				TOU Calendar Year 1 Sep 30 (Sep 29) / Oct 1 (Sep 30) Profile	15-15 / 0-0		F22	R
35061				TOU Calendar Year 1 Oct 2 (Oct 1) / Oct 3 (Oct 2) Profile	15-15 / 0-0		F22	R
35062				TOU Calendar Year 1 Oct 4 (Oct 3) / Oct 5 (Oct 4) Profile	15-15 / 0-0		F22	R
35063				TOU Calendar Year 1 Oct 6 (Oct 5) / Oct 7 (Oct 6) Profile	15-15 / 0-0		F22	R
35064				TOU Calendar Year 1 Oct 8 (Oct 7) / Oct 9 (Oct 8) Profile	15-15 / 0-0		F22	R
35065				TOU Calendar Year 1 Oct 10 (Oct 9) / Oct 11 (Oct 10) Profile	15-15 / 0-0		F22	R
35066				TOU Calendar Year 1 Oct 13 (Oct 11) / Oct 13 (Oct 12) Profile	15-15 / 0-0		F22	R
35067				TOU Calendar Year 1 Oct 14 (Oct 13) / Oct 15 (Oct 14) Profile	15-15 / 0-0		F22	R
35068				TOU Calendar Year 1 Oct 16 (Oct 15) / Oct 17 (Oct 16) Profile	15-15 / 0-0		F22	R
35069				TOU Calendar Year 1 Oct 18 (Oct 17) / Oct 19 (Oct 18) Profile	15-15 / 0-0		F22	R
35070				TOU Calendar Year 1 Oct 20 (Oct 19) / Oct 21 (Oct 20) Profile	15-15 / 0-0		F22	R
35071				TOU Calendar Year 1 Oct 22 (Oct 21) / Oct 23 (Oct 22) Profile	15-15 / 0-0		F22	R
35072				TOU Calendar Year 1 Oct 24 (Oct 23) / Oct 25 (Oct 24) Profile	15-15 / 0-0		F22	R
35073				TOU Calendar Year 1 Oct 26 (Oct 25) / Oct 27 (Oct 26) Profile	15-15 / 0-0		F22	R
35074				TOU Calendar Year 1 Oct 28 (Oct 27) / Oct 29 (Oct 28) Profile	15-15 / 0-0		F22	R
35075				TOU Calendar Year 1 Oct 30 (Oct 29) / Oct 31 (Oct 30) Profile	15-15 / 0-0		F22	R
35076				TOU Calendar Year 1 Nov 1 (Oct 31) / Nov 2 (Nov 1) Profile	15-15 / 0-0		F22	R
35077				TOU Calendar Year 1 Nov 3 (Nov 2) / Nov 4 (Nov 3) Profile	15-15 / 0-0		F22	R
35078				TOU Calendar Year 1 Nov 5 (Nov 4) / Nov 6 (Nov 5) Profile	15-15 / 0-0		F22	R
35079				TOU Calendar Year 1 Nov 7 (Nov 6) / Nov 8 (Nov 7) Profile	15-15 / 0-0		F22	R
35080				TOU Calendar Year 1 Nov 9 (Nov 8) / Nov 10 (Nov 9) Profile	15-15 / 0-0		F22	R
35081				TOU Calendar Year 1 Nov 11 (Nov 10) / Nov 12 (Nov 11) Profile	15-15 / 0-0		F22	R
35082				TOU Calendar Year 1 Nov 13 (Nov 12) / Nov 14 (Nov 13) Profile	15-15 / 0-0		F22	R
35083				TOU Calendar Year 1 Nov 15 (Nov 14) / Nov 16 (Nov 15) Profile	15-15 / 0-0		F22	R
35084				TOU Calendar Year 1 Nov 17 (Nov 16) / Nov 18 (Nov 17) Profile	15-15 / 0-0		F22	R
35085				TOU Calendar Year 1 Nov 19 (Nov 18) / Nov 20 (Nov 19) Profile	15-15 / 0-0		F22	R
35086				TOU Calendar Year 1 Nov 21 (Nov 20) / Nov 22 (Nov 21) Profile	15-15 / 0-0		F22	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35087				TOU Calendar Year 1 Nov 23 (Nov 22) / Nov 24 (Nov 23) Profile	15-15 / 0-0		F22	R
35088				TOU Calendar Year 1 Nov 25 (Nov 24) / Nov 26 (Nov 25) Profile	15-15 / 0-0		F22	R
35089				TOU Calendar Year 1 Nov 27 (Nov 26) / Nov 28 (Nov 27) Profile	15-15 / 0-0		F22	R
35090				TOU Calendar Year 1 Nov 29 (Nov 28) / Nov 30 (Nov 29) Profile	15-15 / 0-0		F22	R
35091				TOU Calendar Year 1 Dec 1 (Nov 31) / Dec 2 (Dec 1) Profile	15-15 / 0-0		F22	R
35092				TOU Calendar Year 1 Dec 3 (Dec 2) / Dec 4 (Dec 3) Profile	15-15 / 0-0		F22	R
35093				TOU Calendar Year 1 Dec 5 (Dec 4) / Dec 6 (Dec 5) Profile	15-15 / 0-0		F22	R
35094				TOU Calendar Year 1 Dec 7 (Dec 6) / Dec 8 (Dec 7) Profile	15-15 / 0-0		F22	R
35095				TOU Calendar Year 1 Dec 9 (Dec 8) / Dec 10 (Dec 9) Profile	15-15 / 0-0		F22	R
35096				TOU Calendar Year 1 Dec 11 (Dec 10) / Dec 12 (Dec 11) Profile	15-15 / 0-0		F22	R
35097				TOU Calendar Year 1 Dec 13 (Dec 12) / Dec 14 (Dec 13) Profile	15-15 / 0-0		F22	R
35098				TOU Calendar Year 1 Dec 15 (Dec 14) / Dec 16 (Dec 15) Profile	15-15 / 0-0		F22	R
35099				TOU Calendar Year 1 Dec 17 (Dec 16) / Dec 18 (Dec 17) Profile	15-15 / 0-0		F22	R
35100				TOU Calendar Year 1 Dec 19 (Dec 18) / Dec 20 (Dec 19) Profile	15-15 / 0-0		F22	R
35101				TOU Calendar Year 1 Dec 21 (Dec 20) / Dec 22 (Dec 21) Profile	15-15 / 0-0		F22	R
35102				TOU Calendar Year 1 Dec 23 (Dec 22) / Dec 24 (Dec 23) Profile	15-15 / 0-0		F22	R
35103				TOU Calendar Year 1 Dec 25 (Dec 24) / Dec 26 (Dec 25) Profile	15-15 / 0-0		F22	R
35104				TOU Calendar Year 1 Dec 27 (Dec 26) / Dec 28 (Dec 27) Profile	15-15 / 0-0		F22	R
35105				TOU Calendar Year 1 Dec 29 (Dec 28) / Dec 30 (Dec 29) Profile	15-15 / 0-0		F22	R
35106				TOU Calendar Year 1 Dec 31 (Dec 30) / (Dec 31) Profile	15-15 / 0-0		F22	R
35107				TOU Calendar Year 1 Profile 1 Status			F23	R
35108				TOU Calendar Year 1 Profile 1 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35109				TOU Calendar Year 1 Profile 1 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35110				TOU Calendar Year 1 Profile 1 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35111				TOU Calendar Year 1 Profile 1 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35112				TOU Calendar Year 1 Profile 1 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35113				TOU Calendar Year 1 Profile 1 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35114				TOU Calendar Year 1 Profile 1 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35115				TOU Calendar Year 1 Profile 1 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35116				TOU Calendar Year 1 Profile 1 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35117				TOU Calendar Year 1 Profile 1 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35118				TOU Calendar Year 1 Profile 1 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35119				TOU Calendar Year 1 Profile 1 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35120				TOU Calendar Year 1 Profile 1 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35121				TOU Calendar Year 1 Profile 1 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35122				TOU Calendar Year 1 Profile 1 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35123				TOU Calendar Year 1 Profile 1 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35124				TOU Calendar Year 1 Profile 1 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35125				TOU Calendar Year 1 Profile 1 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35126				TOU Calendar Year 1 Profile 1 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35127				TOU Calendar Year 1 Profile 1 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35128				TOU Calendar Year 1 Profile 1 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35129				TOU Calendar Year 1 Profile 1 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35130				TOU Calendar Year 1 Profile 1 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35131				TOU Calendar Year 1 Profile 1 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35132				TOU Calendar Year 1 Profile 2 Status			F23	R
35133				TOU Calendar Year 1 Profile 2 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35134				TOU Calendar Year 1 Profile 2 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35135				TOU Calendar Year 1 Profile 2 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35136				TOU Calendar Year 1 Profile 2 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35137				TOU Calendar Year 1 Profile 2 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35138				TOU Calendar Year 1 Profile 2 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35139				TOU Calendar Year 1 Profile 2 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35140				TOU Calendar Year 1 Profile 2 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35141				TOU Calendar Year 1 Profile 2 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35142				TOU Calendar Year 1 Profile 2 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35143				TOU Calendar Year 1 Profile 2 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35144				TOU Calendar Year 1 Profile 2 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35145				TOU Calendar Year 1 Profile 2 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35146				TOU Calendar Year 1 Profile 2 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35147				TOU Calendar Year 1 Profile 2 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35148				TOU Calendar Year 1 Profile 2 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35149				TOU Calendar Year 1 Profile 2 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35150				TOU Calendar Year 1 Profile 2 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35151				TOU Calendar Year 1 Profile 2 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35152				TOU Calendar Year 1 Profile 2 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35153				TOU Calendar Year 1 Profile 2 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35154				TOU Calendar Year 1 Profile 2 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35155				TOU Calendar Year 1 Profile 2 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35156				TOU Calendar Year 1 Profile 2 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35157				TOU Calendar Year 1 Profile 3 Status			F23	R
35158				TOU Calendar Year 1 Profile 3 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35159				TOU Calendar Year 1 Profile 3 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35160				TOU Calendar Year 1 Profile 3 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35161				TOU Calendar Year 1 Profile 3 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35162				TOU Calendar Year 1 Profile 3 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35163				TOU Calendar Year 1 Profile 3 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35164				TOU Calendar Year 1 Profile 3 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35165				TOU Calendar Year 1 Profile 3 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35166				TOU Calendar Year 1 Profile 3 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35167				TOU Calendar Year 1 Profile 3 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35168				TOU Calendar Year 1 Profile 3 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35169				TOU Calendar Year 1 Profile 3 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35170				TOU Calendar Year 1 Profile 3 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
Time of Use Calendar Window 3								
35171				TOU Calendar Year 1 Profile 3 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35172				TOU Calendar Year 1 Profile 3 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35173				TOU Calendar Year 1 Profile 3 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35174				TOU Calendar Year 1 Profile 3 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35175				TOU Calendar Year 1 Profile 3 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35176				TOU Calendar Year 1 Profile 3 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35177				TOU Calendar Year 1 Profile 3 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35178				TOU Calendar Year 1 Profile 3 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35179				TOU Calendar Year 1 Profile 3 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35180				TOU Calendar Year 1 Profile 3 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35181				TOU Calendar Year 1 Profile 3 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35182				TOU Calendar Year 1 Profile 4 Status			F23	R
35183				TOU Calendar Year 1 Profile 4 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35184				TOU Calendar Year 1 Profile 4 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35185				TOU Calendar Year 1 Profile 4 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35186				TOU Calendar Year 1 Profile 4 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35187				TOU Calendar Year 1 Profile 4 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35188				TOU Calendar Year 1 Profile 4 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35189				TOU Calendar Year 1 Profile 4 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35190				TOU Calendar Year 1 Profile 4 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35191				TOU Calendar Year 1 Profile 4 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35192				TOU Calendar Year 1 Profile 4 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35193				TOU Calendar Year 1 Profile 4 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35194				TOU Calendar Year 1 Profile 4 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35195				TOU Calendar Year 1 Profile 4 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35196				TOU Calendar Year 1 Profile 4 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35197				TOU Calendar Year 1 Profile 4 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35198				TOU Calendar Year 1 Profile 4 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35199				TOU Calendar Year 1 Profile 4 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35200				TOU Calendar Year 1 Profile 4 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35201				TOU Calendar Year 1 Profile 4 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35202				TOU Calendar Year 1 Profile 4 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35203				TOU Calendar Year 1 Profile 4 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35204				TOU Calendar Year 1 Profile 4 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35205				TOU Calendar Year 1 Profile 4 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35206				TOU Calendar Year 1 Profile 4 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35207				TOU Calendar Year 1 Profile 5 Status			F23	R
35208				TOU Calendar Year 1 Profile 5 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35209				TOU Calendar Year 1 Profile 5 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35210				TOU Calendar Year 1 Profile 5 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35211				TOU Calendar Year 1 Profile 5 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35212				TOU Calendar Year 1 Profile 5 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35213				TOU Calendar Year 1 Profile 5 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35214				TOU Calendar Year 1 Profile 5 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35215				TOU Calendar Year 1 Profile 5 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35216				TOU Calendar Year 1 Profile 5 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35217				TOU Calendar Year 1 Profile 5 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35218				TOU Calendar Year 1 Profile 5 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35219				TOU Calendar Year 1 Profile 5 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35220				TOU Calendar Year 1 Profile 5 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35221				TOU Calendar Year 1 Profile 5 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35222				TOU Calendar Year 1 Profile 5 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35223				TOU Calendar Year 1 Profile 5 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35224				TOU Calendar Year 1 Profile 5 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35225				TOU Calendar Year 1 Profile 5 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35226				TOU Calendar Year 1 Profile 5 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35227				TOU Calendar Year 1 Profile 5 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35228				TOU Calendar Year 1 Profile 5 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35229				TOU Calendar Year 1 Profile 5 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35230				TOU Calendar Year 1 Profile 5 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35231				TOU Calendar Year 1 Profile 5 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35232				TOU Calendar Year 1 Profile 6 Status			F23	R
35233				TOU Calendar Year 1 Profile 6 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35234				TOU Calendar Year 1 Profile 6 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35235				TOU Calendar Year 1 Profile 6 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35236				TOU Calendar Year 1 Profile 6 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35237				TOU Calendar Year 1 Profile 6 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35238				TOU Calendar Year 1 Profile 6 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35239				TOU Calendar Year 1 Profile 6 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35240				TOU Calendar Year 1 Profile 6 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35241				TOU Calendar Year 1 Profile 6 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35242				TOU Calendar Year 1 Profile 6 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35243				TOU Calendar Year 1 Profile 6 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35244				TOU Calendar Year 1 Profile 6 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35245				TOU Calendar Year 1 Profile 6 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35246				TOU Calendar Year 1 Profile 6 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35247				TOU Calendar Year 1 Profile 6 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35248				TOU Calendar Year 1 Profile 6 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35249				TOU Calendar Year 1 Profile 6 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35250				TOU Calendar Year 1 Profile 6 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35251				TOU Calendar Year 1 Profile 6 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35252				TOU Calendar Year 1 Profile 6 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35253				TOU Calendar Year 1 Profile 6 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35254				TOU Calendar Year 1 Profile 6 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35255				TOU Calendar Year 1 Profile 6 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35256				TOU Calendar Year 1 Profile 6 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35257				TOU Calendar Year 1 Profile 7 Status			F23	R
35258				TOU Calendar Year 1 Profile 7 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35259				TOU Calendar Year 1 Profile 7 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35260				TOU Calendar Year 1 Profile 7 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35261				TOU Calendar Year 1 Profile 7 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35262				TOU Calendar Year 1 Profile 7 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35263				TOU Calendar Year 1 Profile 7 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35264				TOU Calendar Year 1 Profile 7 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35265				TOU Calendar Year 1 Profile 7 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35266				TOU Calendar Year 1 Profile 7 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35267				TOU Calendar Year 1 Profile 7 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35268				TOU Calendar Year 1 Profile 7 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35269				TOU Calendar Year 1 Profile 7 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35270				TOU Calendar Year 1 Profile 7 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35271				TOU Calendar Year 1 Profile 7 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35272				TOU Calendar Year 1 Profile 7 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35273				TOU Calendar Year 1 Profile 7 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35274				TOU Calendar Year 1 Profile 7 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35275				TOU Calendar Year 1 Profile 7 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35276				TOU Calendar Year 1 Profile 7 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35277				TOU Calendar Year 1 Profile 7 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35278				TOU Calendar Year 1 Profile 7 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35279				TOU Calendar Year 1 Profile 7 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35280				TOU Calendar Year 1 Profile 7 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35281				TOU Calendar Year 1 Profile 7 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35282				TOU Calendar Year 1 Profile 8 Status			F23	R
35283				TOU Calendar Year 1 Profile 8 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35284				TOU Calendar Year 1 Profile 8 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35285				TOU Calendar Year 1 Profile 8 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35286				TOU Calendar Year 1 Profile 8 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35287				TOU Calendar Year 1 Profile 8 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35288				TOU Calendar Year 1 Profile 8 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35289				TOU Calendar Year 1 Profile 8 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35290				TOU Calendar Year 1 Profile 8 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35291				TOU Calendar Year 1 Profile 8 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35292				TOU Calendar Year 1 Profile 8 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35293				TOU Calendar Year 1 Profile 8 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35294				TOU Calendar Year 1 Profile 8 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35295				TOU Calendar Year 1 Profile 8 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35296				TOU Calendar Year 1 Profile 8 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
Time of Use Calendar Window 4								
35297				TOU Calendar Year 1 Profile 8 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35298				TOU Calendar Year 1 Profile 8 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35299				TOU Calendar Year 1 Profile 8 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35300				TOU Calendar Year 1 Profile 8 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35301				TOU Calendar Year 1 Profile 8 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35302				TOU Calendar Year 1 Profile 8 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35303				TOU Calendar Year 1 Profile 8 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35304				TOU Calendar Year 1 Profile 8 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35305				TOU Calendar Year 1 Profile 8 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35306				TOU Calendar Year 1 Profile 8 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35307				TOU Calendar Year 1 Profile 9 Status			F23	R
35308				TOU Calendar Year 1 Profile 9 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35309				TOU Calendar Year 1 Profile 9 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35310				TOU Calendar Year 1 Profile 9 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35311				TOU Calendar Year 1 Profile 9 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35312				TOU Calendar Year 1 Profile 9 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35313				TOU Calendar Year 1 Profile 9 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35314				TOU Calendar Year 1 Profile 9 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35315				TOU Calendar Year 1 Profile 9 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35316				TOU Calendar Year 1 Profile 9 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35317				TOU Calendar Year 1 Profile 9 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35318				TOU Calendar Year 1 Profile 9 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35319				TOU Calendar Year 1 Profile 9 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35320				TOU Calendar Year 1 Profile 9 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35321				TOU Calendar Year 1 Profile 9 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35322				TOU Calendar Year 1 Profile 9 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35323				TOU Calendar Year 1 Profile 9 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35324				TOU Calendar Year 1 Profile 9 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35325				TOU Calendar Year 1 Profile 9 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35326				TOU Calendar Year 1 Profile 9 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35327				TOU Calendar Year 1 Profile 9 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35328				TOU Calendar Year 1 Profile 9 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35329				TOU Calendar Year 1 Profile 9 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35330				TOU Calendar Year 1 Profile 9 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35331				TOU Calendar Year 1 Profile 9 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35332				TOU Calendar Year 1 Profile 10 Status			F23	R
35333				TOU Calendar Year 1 Profile 10 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35334				TOU Calendar Year 1 Profile 10 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35335				TOU Calendar Year 1 Profile 10 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35336				TOU Calendar Year 1 Profile 10 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35337				TOU Calendar Year 1 Profile 10 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35338				TOU Calendar Year 1 Profile 10 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35339				TOU Calendar Year 1 Profile 10 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35340				TOU Calendar Year 1 Profile 10 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35341				TOU Calendar Year 1 Profile 10 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35342				TOU Calendar Year 1 Profile 10 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35343				TOU Calendar Year 1 Profile 10 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35344				TOU Calendar Year 1 Profile 10 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35345				TOU Calendar Year 1 Profile 10 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35346				TOU Calendar Year 1 Profile 10 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35347				TOU Calendar Year 1 Profile 10 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35348				TOU Calendar Year 1 Profile 10 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35349				TOU Calendar Year 1 Profile 10 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35350				TOU Calendar Year 1 Profile 10 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35351				TOU Calendar Year 1 Profile 10 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35352				TOU Calendar Year 1 Profile 10 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35353				TOU Calendar Year 1 Profile 10 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35354				TOU Calendar Year 1 Profile 10 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35355				TOU Calendar Year 1 Profile 10 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35356				TOU Calendar Year 1 Profile 10 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35357				TOU Calendar Year 1 Profile 11 Status			F23	R
35358				TOU Calendar Year 1 Profile 11 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35359				TOU Calendar Year 1 Profile 11 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35360				TOU Calendar Year 1 Profile 11 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35361				TOU Calendar Year 1 Profile 11 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35362				TOU Calendar Year 1 Profile 11 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35363				TOU Calendar Year 1 Profile 11 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35364				TOU Calendar Year 1 Profile 11 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35365				TOU Calendar Year 1 Profile 11 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35366				TOU Calendar Year 1 Profile 11 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35367				TOU Calendar Year 1 Profile 11 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35368				TOU Calendar Year 1 Profile 11 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35369				TOU Calendar Year 1 Profile 11 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35370				TOU Calendar Year 1 Profile 11 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35371				TOU Calendar Year 1 Profile 11 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35372				TOU Calendar Year 1 Profile 11 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35373				TOU Calendar Year 1 Profile 11 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35374				TOU Calendar Year 1 Profile 11 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35375				TOU Calendar Year 1 Profile 11 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35376				TOU Calendar Year 1 Profile 11 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35377				TOU Calendar Year 1 Profile 11 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35378				TOU Calendar Year 1 Profile 11 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35379				TOU Calendar Year 1 Profile 11 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35380				TOU Calendar Year 1 Profile 11 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35381				TOU Calendar Year 1 Profile 11 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35382				TOU Calendar Year 1 Profile 12 Status			F23	R
35383				TOU Calendar Year 1 Profile 12 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35384				TOU Calendar Year 1 Profile 12 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35385				TOU Calendar Year 1 Profile 12 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35386				TOU Calendar Year 1 Profile 12 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35387				TOU Calendar Year 1 Profile 12 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35388				TOU Calendar Year 1 Profile 12 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35389				TOU Calendar Year 1 Profile 12 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35390				TOU Calendar Year 1 Profile 12 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35391				TOU Calendar Year 1 Profile 12 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35392				TOU Calendar Year 1 Profile 12 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35393				TOU Calendar Year 1 Profile 12 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35394				TOU Calendar Year 1 Profile 12 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35395				TOU Calendar Year 1 Profile 12 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35396				TOU Calendar Year 1 Profile 12 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35397				TOU Calendar Year 1 Profile 12 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35398				TOU Calendar Year 1 Profile 12 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35399				TOU Calendar Year 1 Profile 12 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35400				TOU Calendar Year 1 Profile 12 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35401				TOU Calendar Year 1 Profile 12 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35402				TOU Calendar Year 1 Profile 12 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35403				TOU Calendar Year 1 Profile 12 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35404				TOU Calendar Year 1 Profile 12 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35405				TOU Calendar Year 1 Profile 12 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35406				TOU Calendar Year 1 Profile 12 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35407				TOU Calendar Year 1 Profile 13 Status			F23	R
35408				TOU Calendar Year 1 Profile 13 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35409				TOU Calendar Year 1 Profile 13 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35410				TOU Calendar Year 1 Profile 13 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35411				TOU Calendar Year 1 Profile 13 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35412				TOU Calendar Year 1 Profile 13 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35413				TOU Calendar Year 1 Profile 13 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35414				TOU Calendar Year 1 Profile 13 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35415				TOU Calendar Year 1 Profile 13 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35416				TOU Calendar Year 1 Profile 13 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35417				TOU Calendar Year 1 Profile 13 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35418				TOU Calendar Year 1 Profile 13 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35419				TOU Calendar Year 1 Profile 13 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35420				TOU Calendar Year 1 Profile 13 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35421				TOU Calendar Year 1 Profile 13 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35422				TOU Calendar Year 1 Profile 13 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
Time of Use Calendar Window 5								
35423				TOU Calendar Year 1 Profile 13 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35424				TOU Calendar Year 1 Profile 13 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35425				TOU Calendar Year 1 Profile 13 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35426				TOU Calendar Year 1 Profile 13 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35427				TOU Calendar Year 1 Profile 13 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35428				TOU Calendar Year 1 Profile 13 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35429				TOU Calendar Year 1 Profile 13 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35430				TOU Calendar Year 1 Profile 13 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35431				TOU Calendar Year 1 Profile 13 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35432				TOU Calendar Year 1 Profile14 Status			F23	R
35433				TOU Calendar Year 1 Profile 14 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35434				TOU Calendar Year 1 Profile 14 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35435				TOU Calendar Year 1 Profile 14 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35436				TOU Calendar Year 1 Profile 14 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35437				TOU Calendar Year 1 Profile 14 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35438				TOU Calendar Year 1 Profile 14 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35439				TOU Calendar Year 1 Profile 14 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35440				TOU Calendar Year 1 Profile 14 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35441				TOU Calendar Year 1 Profile 14 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35442				TOU Calendar Year 1 Profile 14 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35443				TOU Calendar Year 1 Profile 14 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35444				TOU Calendar Year 1 Profile 14 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35445				TOU Calendar Year 1 Profile 14 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35446				TOU Calendar Year 1 Profile 14 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35447				TOU Calendar Year 1 Profile 14 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35448				TOU Calendar Year 1 Profile 14 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35449				TOU Calendar Year 1 Profile 14 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35450				TOU Calendar Year 1 Profile 14 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35451				TOU Calendar Year 1 Profile 14 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35452				TOU Calendar Year 1 Profile 14 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35453				TOU Calendar Year 1 Profile 14 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35454				TOU Calendar Year 1 Profile 14 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35455				TOU Calendar Year 1 Profile 14 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35456				TOU Calendar Year 1 Profile 14 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35457				TOU Calendar Year 1 Profile 15 Status			F23	R
35458				TOU Calendar Year 1 Profile 15 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35459				TOU Calendar Year 1 Profile 15 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35460				TOU Calendar Year 1 Profile 15 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35461				TOU Calendar Year 1 Profile 15 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35462				TOU Calendar Year 1 Profile 15 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35463				TOU Calendar Year 1 Profile 15 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35464				TOU Calendar Year 1 Profile 15 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35465				TOU Calendar Year 1 Profile 15 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35466				TOU Calendar Year 1 Profile 15 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35467				TOU Calendar Year 1 Profile 15 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35468				TOU Calendar Year 1 Profile 15 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35469				TOU Calendar Year 1 Profile 15 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35470				TOU Calendar Year 1 Profile 15 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35471				TOU Calendar Year 1 Profile 15 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35472				TOU Calendar Year 1 Profile 15 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35473				TOU Calendar Year 1 Profile 15 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35474				TOU Calendar Year 1 Profile 15 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35475				TOU Calendar Year 1 Profile 15 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35476				TOU Calendar Year 1 Profile 15 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35477				TOU Calendar Year 1 Profile 15 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35478				TOU Calendar Year 1 Profile 15 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35479				TOU Calendar Year 1 Profile 15 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35480				TOU Calendar Year 1 Profile 15 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35481				TOU Calendar Year 1 Profile 15 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35482				TOU Calendar Year 1 Profile 16 Status			F23	R
35483				TOU Calendar Year 1 Profile 16 Register for 00:00, 00:15, 00:30 & 00:45	7-7-7-7 / 0-0-0-0		F24	R
35484				TOU Calendar Year 1 Profile 16 Register for 01:00, 01:15, 01:30 & 01:45	7-7-7-7 / 0-0-0-0		F24	R
35485				TOU Calendar Year 1 Profile 16 Register for 02:00, 02:15, 02:30 & 02:45	7-7-7-7 / 0-0-0-0		F24	R
35486				TOU Calendar Year 1 Profile 16 Register for 03:00, 03:15, 03:30 & 03:45	7-7-7-7 / 0-0-0-0		F24	R
35487				TOU Calendar Year 1 Profile 16 Register for 04:00, 04:15, 04:30 & 04:45	7-7-7-7 / 0-0-0-0		F24	R
35488				TOU Calendar Year 1 Profile 16 Register for 05:00, 05:15, 05:30 & 05:45	7-7-7-7 / 0-0-0-0		F24	R
35489				TOU Calendar Year 1 Profile 16 Register for 06:00, 06:15, 06:30 & 06:45	7-7-7-7 / 0-0-0-0		F24	R
35490				TOU Calendar Year 1 Profile 16 Register for 07:00, 07:15, 07:30 & 07:45	7-7-7-7 / 0-0-0-0		F24	R
35491				TOU Calendar Year 1 Profile 16 Register for 08:00, 08:15, 08:30 & 08:45	7-7-7-7 / 0-0-0-0		F24	R
35492				TOU Calendar Year 1 Profile 16 Register for 09:00, 09:15, 09:30 & 09:45	7-7-7-7 / 0-0-0-0		F24	R
35493				TOU Calendar Year 1 Profile 16 Register for 10:00, 10:15, 10:30 & 10:45	7-7-7-7 / 0-0-0-0		F24	R
35494				TOU Calendar Year 1 Profile 16 Register for 11:00, 11:15, 11:30 & 11:45	7-7-7-7 / 0-0-0-0		F24	R
35495				TOU Calendar Year 1 Profile 16 Register for 12:00, 12:15, 12:30 & 12:45	7-7-7-7 / 0-0-0-0		F24	R
35496				TOU Calendar Year 1 Profile 16 Register for 13:00, 13:15, 13:30 & 13:45	7-7-7-7 / 0-0-0-0		F24	R
35497				TOU Calendar Year 1 Profile 16 Register for 14:00, 14:15, 14:30 & 14:45	7-7-7-7 / 0-0-0-0		F24	R
35498				TOU Calendar Year 1 Profile 16 Register for 15:00, 15:15, 15:30 & 15:45	7-7-7-7 / 0-0-0-0		F24	R
35499				TOU Calendar Year 1 Profile 16 Register for 16:00, 16:15, 16:30 & 16:45	7-7-7-7 / 0-0-0-0		F24	R
35500				TOU Calendar Year 1 Profile 16 Register for 17:00, 17:15, 17:30 & 17:45	7-7-7-7 / 0-0-0-0		F24	R
35501				TOU Calendar Year 1 Profile 16 Register for 18:00, 18:15, 18:30 & 18:45	7-7-7-7 / 0-0-0-0		F24	R
35502				TOU Calendar Year 1 Profile 16 Register for 19:00, 19:15, 19:30 & 19:45	7-7-7-7 / 0-0-0-0		F24	R
35503				TOU Calendar Year 1 Profile 16 Register for 20:00, 20:15, 20:30 & 20:45	7-7-7-7 / 0-0-0-0		F24	R
35504				TOU Calendar Year 1 Profile 16 Register for 21:00, 21:15, 21:30 & 21:45	7-7-7-7 / 0-0-0-0		F24	R
35505				TOU Calendar Year 1 Profile 16 Register for 22:00, 22:15, 22:30 & 22:45	7-7-7-7 / 0-0-0-0		F24	R
35506				TOU Calendar Year 1 Profile 16 Register for 23:00, 23:15, 23:30 & 23:45	7-7-7-7 / 0-0-0-0		F24	R
35507				TOU Calendar Year 1 Monthly End Day Jan & Feb	30-28 (29) / 1-1		F25	R
35508				TOU Calendar Year 1 Monthly End Day Mar & Apr	31-30 / 1-1		F25	R
35509				TOU Calendar Year 1 Monthly End Day May & Jun	31-30 / 1-1		F25	R
35510				TOU Calendar Year 1 Monthly End Day Jul & Aug	31-31 / 1-1		F25	R
35511				TOU Calendar Year 1 Monthly End Day Sep & Oct	30-31 / 1-1		F25	R
35512				TOU Calendar Year 1 Monthly End Day Nov & Dec	30-31 / 1-1		F25	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35513-35520				TOU Calendar Year 1 Profile 1 Label			F1	R
35521-35528				TOU Calendar Year 1 Profile 2 Label			F1	R
35529-35536				TOU Calendar Year 1 Profile 3 Label			F1	R
35537-35544				TOU Calendar Year 1 Profile 4 Label			F1	R
35545-35548				TOU Calendar Year 1 Profile 5 Label (Partial)			F1	R
Time of Use Calendar Window 6								
35549-35552				TOU Calendar Year 1 Profile 5 Label (Partial)			F1	R
35553-35560				TOU Calendar Year 1 Profile 6 Label			F1	R
35561-35568				TOU Calendar Year 1 Profile 7 Label			F1	R
35569-35576				TOU Calendar Year 1 Profile 8 Label			F1	R
35577-35584				TOU Calendar Year 1 Profile 9 Label			F1	R
35585-35592				TOU Calendar Year 1 Profile 10 Label			F1	R
35593-35600				TOU Calendar Year 1 Profile 11 Label			F1	R
35601-35608				TOU Calendar Year 1 Profile 12 Label			F1	R
35609-35616				TOU Calendar Year 1 Profile 13 Label			F1	R
35617-35624				TOU Calendar Year 1 Profile 14 Label			F1	R
35625-35632				TOU Calendar Year 1 Profile 15 Label			F1	R
35633-35640				TOU Calendar Year 1 Profile 16 Label			F1	R
35641-35648				TOU Calendar Year 1 Reg 1 Label			F1	R
35649-35656				TOU Calendar Year 1 Reg 2 Label			F1	R
35657-35664				TOU Calendar Year 1 Reg 3 Label			F1	R
35665-35672				TOU Calendar Year 1 Reg 4 Label			F1	R
35673-35674				TOU Calendar Year 1 Reg 5 Label (Partial)			F1	R
Time of Use Calendar Window 7								
35675-35680				TOU Calendar Year 1 Reg 5 Label (Partial)			F1	R
35681-35688				TOU Calendar Year 1 Reg 6 Label			F1	R
35689-35696				TOU Calendar Year 1 Reg 7 Label			F1	R
35697-35704				TOU Calendar Year 1 Reg 8 Label			F1	R
35705-35708				TOU Calendar Year 1 Start Date Season 1	12/31/9999 23:59:59.99	10 msec	F3	R
35709-35712				TOU Calendar Year 1 Start Date Season 2	12/31/9999 23:59:59.99	10 msec	F3	R
35713-35716				TOU Calendar Year 1 Start Date Season 3	12/31/9999 23:59:59.99	10 msec	F3	R
35737-35720				TOU Calendar Year 1 Start Date Season 4	12/31/9999 23:59:59.99	10 msec	F3	R
35721-35724				TOU Calendar Year 1 Start Date Daylight Savings Time	12/31/9999 23:59:59.99	10 msec	F3	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
35725-35728				TOU Calendar Year 1 End Date Daylight Savings Time	12/31/9999 23:59:59.99	10 msec	F3	R
35729				TOU Calendar Year 1 DST Enable / Average Selection			F26	R
35730				Clear on New Period/ Freeze Period Selection				
35731				Weekly Freeze Day of Week/ Freeze Hour				
35732-35800				TOU Calendar Year 1 Undefined				R
Time of Use Upload Calendar Block								
36607				TOU Upload Calendar Window Locked to Port			F66	R/W
36608				TOU Upload Calendar Window Sequence/Status			F27	R
36609				TOU Upload Calendar Window ID	14 / 1		F28	R/W
36610-36735				TOU Upload Calendar Window Data			F29	R/W
36736				TOU Upload Calendar Window Checksum			F30	R/W
Historical Log 1 Snapshot Header								
36865-36866				Historical Log 1 Snapshot Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
36867				Historical Log 1 Snapshot Record Size	65535 bytes / 0 bytes	1 byte		R
36868				Historical Log 1 Snapshot First Index	record 65535 / record 0	1 record		R
36869				Historical Log 1 Snapshot Last Index	record 65535 / record 0	1 record		R
36870-36873				Historical Log 1 Snapshot First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
36874-36877				Historical Log 1 Snapshot Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
36878-36881				Historical Log 1 Snapshot Valid Bitmap				R
36882				Historical Log 1 Max Records	65535 records / 0 records	1 record		R
Historical Log 2 Snapshot Header								
36929-36930				Historical Log 2 Snapshot Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
36931				Historical Log 2 Snapshot Record Size	65535 bytes / 0 bytes	1 byte		R
36932				Historical Log 2 Snapshot First Index	record 65535 / record 0	1 record		R
36933				Historical Log 2 Snapshot Last Index	record 65535 / record 0	1 record		R
36934-36937				Historical Log 2 Snapshot First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
36938-36941				Historical Log 2 Snapshot Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
36942-36945				Historical Log 2 Snapshot Valid Bitmap				R
36946				Historical Log 2 Max Records	65535 records / 0 records	1 record		R
Limit Trigger Log Header								
36993-36994				Limit Trigger Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
36995				Limit Trigger Log Record Size	65535 bytes / 0 bytes	1 byte		R
36996				Limit Trigger Log First Index	record 65535 / record 0	1 record		R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
36997				Limit Trigger Log Last Index	record 65535 / record 0	1 record		R
36998-37001				Limit Trigger Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37002-37005				Limit Trigger Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37006-37009				Limit Trigger Log Valid Bitmap				R
37010				Limit Trigger Log Max Records	65535 records / 0 records	1 record		R
Limit Snapshot Log Header								
37057-37058				Limit Snapshot Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37059				Limit Snapshot Log Record Size	65535 bytes / 0 bytes	1 byte		R
37060				Limit Snapshot Log First Index	record 65535 / record 0	1 record		R
37061				Limit Snapshot Log Last Index	record 65535 / record 0	1 record		R
37062-37065				Limit Snapshot Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37066-37069				Limit Snapshot Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37070-37073				Limit Snapshot Log Valid Bitmap				R
37074				Limit Snapshot Log Max Records	65535 records / 0 records	1 record		R
Digital Input Log Header								
37121-37122				Digital Input Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37123				Digital Input Log Record Size	65535 bytes / 0 bytes	1 byte		R
37124				Digital Input Log First Index	record 65535 / record 0	1 record		R
37125				Digital Input Log Last Index	record 65535 / record 0	1 record		R
37126-37129				Digital Input Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37130-37133				Digital Input Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37134-37137				Digital Input Log Valid Bitmap				R
37138				Digital Input Log Max Records	65535 records / 0 records	1 record		R
Digital Input Snapshot Log Header								
37185-37186				Digital Input Snapshot Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37187				Digital Input Snapshot Log Record Size	65535 bytes / 0 bytes	1 byte		R
37188				Digital Input Snapshot Log First Index	record 65535 / record 0	1 record		R
37189				Digital Input Snapshot Log Last Index	record 65535 / record 0	1 record		R
37190-37193				Digital Input Snapshot Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37194-37197				Digital Input Snapshot Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37198-37201				Digital Input Snapshot Log Valid Bitmap				R
37202				Digital Input Snapshot Log Max Records	65535 records / 0 records	1 record		R
Digital Output Log Header								

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
37249-37250				Digital Output Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37251				Digital Output Log Record Size	65535 bytes / 0 bytes	1 byte		R
37252				Digital Output Log First Index	record 65535 / record 0	1 record		R
37253				Digital Output Log Last Index	record 65535 / record 0	1 record		R
37254-37257				Digital Output Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37258-37261				Digital Output Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37262-37265				Digital Output Log Valid Bitmap				R
37266				Digital Output Log Max Records	65535 records / 0 records	1 record		R
Digital Output Snapshot Log Header								
37313-37314				Digital Output Snapshot Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37315				Digital Output Snapshot Log Record Size	65535 bytes / 0 bytes	1 byte		R
37316				Digital Output Snapshot Log First Index	record 65535 / record 0	1 record		R
37317				Digital Output Snapshot Log Last Index	record 65535 / record 0	1 record		R
37318-37321				Digital Output Snapshot Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37322-37325				Digital Output Snapshot Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37326-37329				Digital Output Snapshot Log Valid Bitmap				R
37330				Digital Output Snapshot Log Max Records	65535 records / 0 records	1 record		R
Flicker Log Header								
37377-37378				Flicker Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37379				Flicker Log Record Size	65535 bytes / 0 bytes	1 byte		R
37380				Flicker Log First Index	record 65535 / record 0	1 record		R
37381				Flicker Log Last Index	record 65535 / record 0	1 record		R
37382-37385				Flicker Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37386-37389				Flicker Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37390-37393				Flicker Log Valid Bitmap				R
37394				Flicker Log Max Records	65535 records / 0 records	1 record		R
Waveform Trigger Log Header								
37441-37442				Waveform Trigger Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37443				Waveform Trigger Log Record Size	65535 bytes / 0 bytes	1 byte		R
37444				Waveform Trigger Log First Index	record 65535 / record 0	1 record		R
37445				Waveform Trigger Log Last Index	record 65535 / record 0	1 record		R
37446-37449				Waveform Trigger Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37450-37453				Waveform Trigger Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
37454-37457				Waveform Trigger Log Valid Bitmap				R
37458				Waveform Trigger Log Max Records	65535 records / 0 records	1 record		R
System Event Log Header								
37505-37506				System Event Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37507				System Event Log Record Size	65535 bytes / 0 bytes	1 byte		R
37508				System Event Log First Index	record 65535 / record 0	1 record		R
37509				System Event Log Last Index	record 65535 / record 0	1 record		R
37510-37513				System Event Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37514-37517				System Event Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37518-37521				System Event Log Valid Bitmap				R
37522				System Event Log Max Records	65535 records / 0 records	1 record		R
Waveform Samples Log Header								
37569-37570				Waveform Samples Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37571				Waveform Samples Log Record Size	65535 bytes / 0 bytes	1 byte		R
37572				Waveform Samples Log First Index	record 65535 / record 0	1 record		R
37573				Waveform Samples Log Last Index	record 65535 / record 0	1 record		R
37574-37577				Waveform Samples Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37578-37581				Waveform Samples Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37582-37585				Waveform Samples Log Valid Bitmap				R
37586				Waveform Samples Log Max Records	65535 records / 0 records	1 record		R
PQ (CBEMA) Log Header								
37633-37634				PQ (CBEMA) Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37635				PQ (CBEMA) Log Record Size	65535 bytes / 0 bytes	1 byte		R
37636				PQ (CBEMA) Log First Index	record 65535 / record 0	1 record		R
37637				PQ (CBEMA) Log Last Index	record 65535 / record 0	1 record		R
37638-37641				PQ (CBEMA) Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37642-37645				PQ (CBEMA) Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37646-37649				PQ (CBEMA) Log Valid Bitmap				R
37650				PQ (CBEMA) Log Max Records	65535 records / 0 records	1 record		R
Reset Log Header								
37697-37698				Reset Log Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37699				Reset Log Record Size	65535 bytes / 0 bytes	1 byte		R
37700				Reset Log First Index	record 65535 / record 0	1 record		R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
37701				Reset Log Last Index	record 65535 / record 0	1 record		R
37702-37705				Reset Log First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37706-37709				Reset Log Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37710-37713				Reset Log Valid Bitmap				R
37714				Reset Log Max Records	65535 records / 0 records	1 record		R
External Device Info Block Header								
37761-37762				External Device Info Block Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37763				External Device Info Block Record Size	65535 bytes / 0 bytes	1 byte		R
37764				External Device Info Block First Index	record 65535 / record 0	1 record		R
37765				External Device Info Block Last Index	record 65535 / record 0	1 record		R
37766-37769				External Device Info Block First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37770-37773				External Device Info Block Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37774-37777				External Device Info Block Valid Bitmap				R
37778				External Device Info Block Max Records	65535 records / 0 records	1 record		R
External Device Programming Block Header								
37825-37826				External Device Programming Block Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37827				External Device Programming Block Record Size	65535 bytes / 0 bytes	1 byte		R
37828				External Device Programming Block First Index	record 65535 / record 0	1 record		R
37829				External Device Programming Block Last Index	record 65535 / record 0	1 record		R
37830-37833				External Device Programming Block First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37834-37837				External Device Programming Block Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37838-37841				External Device Programming Block Valid Bitmap				R
37842				External Device Programming Block Max Records	65535 records / 0 records	1 record		R
Device History Block Header								
37889-37890				Device History Block Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37891				Device History Block Record Size	65535 bytes / 0 bytes	1 byte		R
37892				Device History Block First Index	record 65535 / record 0	1 record		R
37893				Device History Block Last Index	record 65535 / record 0	1 record		R
37894-37897				Device History Block First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37898-37901				Device History Block Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37902-37905				Device History Block Valid Bitmap				R
37906				Device History Block Max Records	65535 records / 0 records	1 record		R
Direct Memory Access Header								

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
37953-37954				Direct Memory Access Memory Size	4,294,967,295 bytes / 0 bytes	1 byte		R
37955				Direct Memory Access Record Size	65535 bytes / 0 bytes	1 byte		R
37956				Direct Memory Access First Index	record 65535 / record 0	1 record		R
37957				Direct Memory Access Last Index	record 65535 / record 0	1 record		R
37958-37961				Direct Memory Access First Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37962-37965				Direct Memory Access Last Time Stamp	12/31/9999 23:59:59.99	10 msec		R
37966-37969				Direct Memory Access Valid Bitmap				R
37970				Direct Memory Access Max Records	65535 records / 0 records	1 record		R
Window Index Block								
38145				Window Index for Historical Log 1	record 65535 / record 0	1 record		R/W
38146				Window Index for Historical Log 2	record 65535 / record 0	1 record		R/W
38147				Window Index for Limit Trigger Log	record 65535 / record 0	1 record		R/W
38148				Window Index for Limit Snapshot Log	record 65535 / record 0	1 record		R/W
38149				Window Index for Digital Input Log	record 65535 / record 0	1 record		R/W
38150				Window Index for Digital Input Snapshot Log	record 65535 / record 0	1 record		R/W
38151				Window Index for Digital Output Log	record 65535 / record 0	1 record		R/W
38152				Window Index for Digital Output Snapshot Log	record 65535 / record 0	1 record		R/W
38153				Window Index for Flicker Log	record 65535 / record 0	1 record		R/W
38154				Window Index for Waveform Trigger Log	record 65535 / record 0	1 record		R/W
38155				Window Index for System Event Log	record 65535 / record 0	1 record		R/W
38156				Window Index for Waveform Sample Log	record 65535 / record 0	1 record		R/W
38157				Window Index for PQ (CBEMA) Log	record 65535 / record 0	1 record		R/W
38158				Window Index for Reset Log	record 65535 / record 0	1 record		R/W
38159				Window Index for External Device Info Block	record 65535 / record 0	1 record		R/W
38160				Window Index for External Device Programming Blocks	record 65535 / record 0	1 record		R/W
38161				Window Index for Device History Block	record 65535 / record 0	1 record		R/W
38162				Window Index for Direct Memory Access	record 65535 / record 0	1 record		R/W
Window Mode Block								
38209				Window Mode for Historical Log 1				R/W
38210				Window Mode for Historical Log 2				R/W
38211				Window Mode for Limit Trigger Log				R/W
38212				Window Mode for Limit Snapshot Log				R/W
38213				Window Mode for Digital Input Log				R/W

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
38214				Window Mode for Digital Input Snapshot Log				R/W
38215				Window Mode for Digital Output Log				R/W
38216				Window Mode for Digital Output Snapshot Log				R/W
38217				Window Mode for Flicker Log				R/W
38218				Window Mode for Waveform Trigger Log				R/W
38219				Window Mode for System Event Log				R/W
38220				Window Mode for Waveform Samples Log				R/W
38221				Window Mode for PQ (CBEMA) Log				R/W
38222				Window Mode for Reset Log				R/W
38223				Window Mode for External Device Info Block				R/W
38224				Window Mode for External Device Programming Blocks				R/W
38225				Window Mode for Device History Block				R/W
38226				Window Mode for Direct Memory Access				R/W
Window Block								
38273-38336				Historical Log 1 Window				R
38337-38400				Historical Log 2 Window				R
38401-38464				Limit Trigger Log Window				R
38465-38528				Limit Snapshot Log Window				R
38529-38592				Digital Input Log Window				R
38593-38656				Digital Input Snapshot Log Window				R
38657-38720				Digital Output Log Window				R
38721-38784				Digital Output Snapshot Log Window				R
38785-38848				Flicker Log Window				R
38849-38912				Waveform Trigger Log Window				R
38913-38976				System Event Log Window				R
38977-39040				Waveform Samples Log Window				R
39041-39104				PQ (CBEMA) Log Window				R
39105-39168				Reset Log Window				R
39169-39232				External Device Info Block Window				R
39233-39296				External Device Programming Block Window				R
39297-39360				Device History Block Window				R
Auto Increment Window Block								
39423				Auto Increment Configuration				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
39424				Auto Increment Window Index				R
39425-39488				Auto Increment Log Window				R
Alarm Block								
40961				Last Alarm				R
40977-41104				Last Alarm Snapshot				R
41105				Latched Exception Flag	65535 exceptions / 0 exceptions	1 exception		R
Port Control Block								
41729				Port Control Command				W
41730-41732				Port Control Lock States				R
41733				Port Control Pointer RecIn Comm 4 (I/O)	byte 511 / byte 0	1 byte		R/W
41734				Port Control Pointer RecOut Comm 4 (I/O)	byte 511 / byte 0	1 byte		R/W
41735				Port Control Pointer TrmIn Comm 4 (I/O)	byte 511 / byte 0	1 byte		R/W
41736				Port Control Pointer TrmOut Comm 4 (I/O)	byte 511 / byte 0	1 byte		R/W
41737				Port Control Pointer RecIn Comm 3	byte 511 / byte 0	1 byte		R/W
41738				Port Control Pointer RecOut Comm 3	byte 511 / byte 0	1 byte		R/W
41739				Port Control Pointer TrmIn Comm 3	byte 511 / byte 0	1 byte		R/W
41740				Port Control Pointer TrmOut Comm 3	byte 511 / byte 0	1 byte		R/W
41741				Port Control Pointer RecIn Comm 2	byte 511 / byte 0	1 byte		R/W
41742				Port Control Pointer RecOut Comm 2	byte 511 / byte 0	1 byte		R/W
41743				Port Control Pointer TrmIn Comm 2	byte 511 / byte 0	1 byte		R/W
41744				Port Control Pointer TrmOut Comm 2	byte 511 / byte 0	1 byte		R/W
41745				Port Control Pointer RecIn Comm 1 (232/485)	byte 511 / byte 0	1 byte		R/W
41746				Port Control Pointer RecOut Comm 1 (232/485)	byte 511 / byte 0	1 byte		R/W
41747				Port Control Pointer TrmIn Comm 1 (232/485)	byte 511 / byte 0	1 byte		R/W
41748				Port Control Pointer TrmOut Comm 1 (232/485)	byte 511 / byte 0	1 byte		R/W
41749				Port Control Pointer RecIn Comm 5 (DIAG)	byte 511 / byte 0	1 byte		R/W
41750				Port Control Pointer RecOut Comm 5 (DIAG)	byte 511 / byte 0	1 byte		R/W
41751				Port Control Pointer TrmIn Comm 5 (DIAG)	byte 511 / byte 0	1 byte		R/W
41752				Port Control Pointer TrmOut Comm 5 (DIAG)	byte 511 / byte 0	1 byte		R/W
41753				Port and Buffer Selection				R/W
41985-42496				Communication Buffer				R/W
Energy Preset Block								
44545-44548				Preset Energy Value				R/W

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
44549				Preset Energy Selection / Status				R/W
Programmable Settings Block								
Communication Settings Block								
45057				Address, Port 4 (I/O)				R
45058				Protocol & Baud Rate, Port 4 (I/O)				R
45059				Parity & Stop Bits, Port 4 (I/O)				R
45060				Data Bits & Response Delay, Port 4(I/O)				R
45061				Address, Port 3				R
45062				Protocol & Baud Rate, Port 3				R
45063				Parity & Stop Bits, Port 3				R
45064				Data Bits & Response Delay, Port 3				R
45065				Address, Port 2				R
45066				Protocol & Baud Rate, Port 2				R
45067				Parity & Stop Bits, Port 2				R
45068				Data Bits & Response Delay, Port 2				R
45069				Address, Port 1 (232/485)				R
45070				Protocol & Baud Rate, Port 1 (232/485)				R
45071				Parity & Stop Bits, Port 1 (232/485)				R
45072				Data Bits & Response Delay, Port 1 (232/485)				R
45073				Port 4 (I/O) Mode / Port 3 Mode				R
45074				Port 2 Mode / Reserved				R
45075-45076				Reserved				
Limit Settings Block								
45077				Line Number, Limit 1				R
45078				Point Number and SAB, Limit 1				R
45079				Value 1, Limit 1				R
45080				Value 2, Limit 1				R
45081				Line Number, Limit 2				R
45082				Point Number and SAB, Limit 2				R
45083				Value 1, Limit 2				R
45084				Value 2, Limit 2				R
45085				Line Number, Limit 3				R
45086				Point Number and SAB, Limit 3				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45087				Value 1, Limit 3				R
45088				Value 2, Limit 3				R
45089				Line Number, Limit 4				R
45090				Point Number and SAB, Limit 4				R
45091				Value 1, Limit 4				R
45092				Value 2, Limit 4				R
45093				Line Number, Limit 5				R
45094				Point Number and SAB, Limit 5				R
45095				Value 1, Limit 5				R
45096				Value 2, Limit 5				R
45097				Line Number, Limit 6				R
45098				Point Number and SAB, Limit 6				R
45099				Value 1, Limit 6				R
45100				Value 2, Limit 6				R
45101				Line Number, Limit 7				R
45102				Point Number and SAB, Limit 7				R
45103				Value 1, Limit 7				R
45104				Value 2, Limit 7				R
45105				Line Number, Limit 8				R
45106				Point Number and SAB, Limit 8				R
45107				Value 1, Limit 8				R
45108				Value 2, Limit 8				R
45109				Line Number, Limit 9				R
45110				Point Number and SAB, Limit 9				R
45111				Value 1, Limit 9				R
45112				Value 2, Limit 9				R
45113				Line Number, Limit 10				R
45114				Point Number and SAB, Limit 10				R
45115				Value 1, Limit 10				R
45116				Value 2, Limit 10				R
45117				Line Number, Limit 11				R
45118				Point Number and SAB, Limit 11				R
45119				Value 1, Limit 11				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45120				Value 2, Limit 11				R
45121				Line Number, Limit 12				R
45122				Point Number and SAB, Limit 12				R
45123				Value 1, Limit 12				R
45124				Value 2, Limit 12				R
45125				Line Number, Limit 13				R
45126				Point Number and SAB, Limit 13				R
45127				Value 1, Limit 13				R
45128				Value 2, Limit 13				R
45129				Line Number, Limit 14				R
45130				Point Number and SAB, Limit 14				R
45131				Value 1, Limit 14				R
45132				Value 2, Limit 14				R
45133				Line Number, Limit 15				R
45134				Point Number and SAB, Limit 15				R
45135				Value 1, Limit 15				R
45136				Value 2, Limit 15				R
45137				Line Number, Limit 16				R
45138				Point Number and SAB, Limit 16				R
45139				Value 1, Limit 16				R
45140				Value 2, Limit 16				R
45141				Line Number, Limit 17				R
45142				Point Number and SAB, Limit 17				R
45143				Value 1, Limit 17				R
45144				Value 2, Limit 17				R
45145				Line Number, Limit 18				R
45146				Point Number and SAB, Limit 18				R
45147				Value 1, Limit 18				R
45148				Value 2, Limit 18				R
45149				Line Number, Limit 19				R
45150				Point Number and SAB, Limit 19				R
45151				Value 1, Limit 19				R
45152				Value 2, Limit 19				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45153				Line Number, Limit 20				R
45154				Point Number and SAB, Limit 20				R
45155				Value 1, Limit 20				R
45156				Value 2, Limit 20				R
45157				Line Number, Limit 21				R
45158				Point Number and SAB, Limit 21				R
45159				Value 1, Limit 21				R
45160				Value 2, Limit 21				R
45161				Line Number, Limit 22				R
45162				Point Number and SAB, Limit 22				R
45163				Value 1, Limit 22				R
45164				Value 2, Limit 22				R
45165				Line Number, Limit 23				R
45166				Point Number and SAB, Limit 23				R
45167				Value 1, Limit 23				R
45168				Value 2, Limit 23				R
45169				Line Number, Limit 24				R
45170				Point Number and SAB, Limit 24				R
45171				Value 1, Limit 24				R
45172				Value 2, Limit 24				R
45173				Line Number, Limit 25				R
45174				Point Number and SAB, Limit 25				R
45175				Value 1, Limit 25				R
45176				Value 2, Limit 25				R
45177				Line Number, Limit 26				R
45178				Point Number and SAB, Limit 26				R
45179				Value 1, Limit 26				R
45180				Value 2, Limit 26				R
45181				Line Number, Limit 27				R
45182				Point Number and SAB, Limit 27				R
45183				Value 1, Limit 27				R
45184				Value 2, Limit 27				R
45185				Line Number, Limit 28				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45186				Point Number and SAB, Limit 28				R
45187				Value 1, Limit 28				R
45188				Value 2, Limit 28				R
45189				Line Number, Limit 29				R
45190				Point Number and SAB, Limit 29				R
45191				Value 1, Limit 29				R
45192				Value 2, Limit 29				R
45193				Line Number, Limit 30				R
45194				Point Number and SAB, Limit 30				R
45195				Value 1, Limit 30				R
45196				Value 2, Limit 30				R
45197				Line Number, Limit 31				R
45198				Point Number and SAB, Limit 31				R
45199				Value 1, Limit 31				R
45200				Value 2, Limit 31				R
45201				Line Number, Limit 32				R
45202				Point Number and SAB, Limit 32				R
45203				Value 1, Limit 32				R
45204				Value 2, Limit 32				R
Historical Log Settings Block								
45205				Line Number, Historical Log 1, Parameter 1				R
45206				Point Number, Historical Log 1, Parameter 1				R
45207				Line Number, Historical Log 1, Parameter 2				R
45208				Point Number, Historical Log 1, Parameter 2				R
45209				Line Number, Historical Log 1, Parameter 3				R
45210				Point Number, Historical Log 1, Parameter 3				R
45211				Line Number, Historical Log 1, Parameter 4				R
45212				Point Number, Historical Log 1, Parameter 4				R
45213				Line Number, Historical Log 1, Parameter 5				R
45214				Point Number, Historical Log 1, Parameter 5				R
45215				Line Number, Historical Log 1, Parameter 6				R
45216				Point Number, Historical Log 1, Parameter 6				R
45217				Line Number, Historical Log 1, Parameter 7				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45218				Point Number, Historical Log 1, Parameter 7				R
45219				Line Number, Historical Log 1, Parameter 8				R
45220				Point Number, Historical Log 1, Parameter 8				R
45221				Line Number, Historical Log 1, Parameter 9				R
45222				Point Number, Historical Log 1, Parameter 9				R
45223				Line Number, Historical Log 1, Parameter 10				R
45224				Point Number, Historical Log 1, Parameter 10				R
45225				Line Number, Historical Log 1, Parameter 11				R
45226				Point Number, Historical Log 1, Parameter 11				R
45227				Line Number, Historical Log 1, Parameter 12				R
45228				Point Number, Historical Log 1, Parameter 12				R
45229				Line Number, Historical Log 1, Parameter 13				R
45230				Point Number, Historical Log 1, Parameter 13				R
45231				Line Number, Historical Log 1, Parameter 14				R
45232				Point Number, Historical Log 1, Parameter 14				R
45233				Line Number, Historical Log 1, Parameter 15				R
45234				Point Number, Historical Log 1, Parameter 15				R
45235				Line Number, Historical Log 1, Parameter 16				R
45236				Point Number, Historical Log 1, Parameter 16				R
45237				Line Number, Historical Log 1, Parameter 17				R
45238				Point Number, Historical Log 1, Parameter 17				R
45239				Line Number, Historical Log 1, Parameter 18				R
45240				Point Number, Historical Log 1, Parameter 18				R
45241				Line Number, Historical Log 1, Parameter 19				R
45242				Point Number, Historical Log 1, Parameter 19				R
45243				Line Number, Historical Log 1, Parameter 20				R
45244				Point Number, Historical Log 1, Parameter 20				R
45245				Line Number, Historical Log 1, Parameter 21				R
45246				Point Number, Historical Log 1, Parameter 21				R
45247				Line Number, Historical Log 1, Parameter 22				R
45248				Point Number, Historical Log 1, Parameter 22				R
45249				Line Number, Historical Log 1, Parameter 23				R
45250				Point Number, Historical Log 1, Parameter 23				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45251				Line Number, Historical Log 1, Parameter 24				R
45252				Point Number, Historical Log 1, Parameter 24				R
45253				Line Number, Historical Log 1, Parameter 25				R
45254				Point Number, Historical Log 1, Parameter 25				R
45255				Line Number, Historical Log 1, Parameter 26				R
45256				Point Number, Historical Log 1, Parameter 26				R
45257				Line Number, Historical Log 1, Parameter 27				R
45258				Point Number, Historical Log 1, Parameter 27				R
45259				Line Number, Historical Log 1, Parameter 28				R
45260				Point Number, Historical Log 1, Parameter 28				R
45261				Line Number, Historical Log 1, Parameter 29				R
45262				Point Number, Historical Log 1, Parameter 29				R
45263				Line Number, Historical Log 1, Parameter 30				R
45264				Point Number, Historical Log 1, Parameter 30				R
45265				Line Number, Historical Log 1, Parameter 31				R
45266				Point Number, Historical Log 1, Parameter 31				R
45267				Line Number, Historical Log 1, Parameter 32				R
45268				Point Number, Historical Log 1, Parameter 32				R
45269				Line Number, Historical Log 1, Parameter 33				R
45270				Point Number, Historical Log 1, Parameter 33				R
45271				Line Number, Historical Log 1, Parameter 34				R
45272				Point Number, Historical Log 1, Parameter 34				R
45273				Line Number, Historical Log 1, Parameter 35				R
45274				Point Number, Historical Log 1, Parameter 35				R
45275				Line Number, Historical Log 1, Parameter 36				R
45276				Point Number, Historical Log 1, Parameter 36				R
45277				Line Number, Historical Log 1, Parameter 37				R
45278				Point Number, Historical Log 1, Parameter 37				R
45279				Line Number, Historical Log 1, Parameter 38				R
45280				Point Number, Historical Log 1, Parameter 38				R
45281				Line Number, Historical Log 1, Parameter 39				R
45282				Point Number, Historical Log 1, Parameter 39				R
45283				Line Number, Historical Log 1, Parameter 40				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45284				Point Number, Historical Log 1, Parameter 40				R
45285				Line Number, Historical Log 1, Parameter 41				R
45286				Point Number, Historical Log 1, Parameter 41				R
45287				Line Number, Historical Log 1, Parameter 42				R
45288				Point Number, Historical Log 1, Parameter 42				R
45289				Line Number, Historical Log 1, Parameter 43				R
45290				Point Number, Historical Log 1, Parameter 43				R
45291				Line Number, Historical Log 1, Parameter 44				R
45292				Point Number, Historical Log 1, Parameter 44				R
45293				Line Number, Historical Log 1, Parameter 45				R
45294				Point Number, Historical Log 1, Parameter 45				R
45295				Line Number, Historical Log 1, Parameter 46				R
45296				Point Number, Historical Log 1, Parameter 46				R
45297				Line Number, Historical Log 1, Parameter 47				R
45298				Point Number, Historical Log 1, Parameter 47				R
45299				Line Number, Historical Log 1, Parameter 48				R
45300				Point Number, Historical Log 1, Parameter 48				R
45301				Line Number, Historical Log 1, Parameter 49				R
45302				Point Number, Historical Log 1, Parameter 49				R
45303				Line Number, Historical Log 1, Parameter 50				R
45304				Point Number, Historical Log 1, Parameter 50				R
45305				Line Number, Historical Log 1, Parameter 51				R
45306				Point Number, Historical Log 1, Parameter 51				R
45307				Line Number, Historical Log 1, Parameter 52				R
45308				Point Number, Historical Log 1, Parameter 52				R
45309				Line Number, Historical Log 1, Parameter 53				R
45310				Point Number, Historical Log 1, Parameter 53				R
45311				Line Number, Historical Log 1, Parameter 54				R
45312				Point Number, Historical Log 1, Parameter 54				R
45313				Line Number, Historical Log 1, Parameter 55				R
45314				Point Number, Historical Log 1, Parameter 55				R
45315				Line Number, Historical Log 1, Parameter 56				R
45316				Point Number, Historical Log 1, Parameter 56				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45317				Line Number, Historical Log 1, Parameter 57				R
45318				Point Number, Historical Log 1, Parameter 57				R
45319				Line Number, Historical Log 1, Parameter 58				R
45320				Point Number, Historical Log 1, Parameter 58				R
45321				Line Number, Historical Log 1, Parameter 59				R
45322				Point Number, Historical Log 1, Parameter 59				R
45323				Line Number, Historical Log 1, Parameter 60				R
45324				Point Number, Historical Log 1, Parameter 60				R
45325				Line Number, Historical Log 1, Parameter 61				R
45326				Point Number, Historical Log 1, Parameter 61				R
45327				Line Number, Historical Log 1, Parameter 62				R
45328				Point Number, Historical Log 1, Parameter 62				R
45329				Line Number, Historical Log 1, Parameter 63				R
45330				Point Number, Historical Log 1, Parameter 63				R
45331				Line Number, Historical Log 1, Parameter 64				R
45332				Point Number, Historical Log 1, Parameter 64				R
45333				Line Number, Historical Log 2, Parameter 1				R
45334				Point Number, Historical Log 2, Parameter 1				R
45335				Line Number, Historical Log 2, Parameter 2				R
45336				Point Number, Historical Log 2, Parameter 2				R
45337				Line Number, Historical Log 2, Parameter 3				R
45338				Point Number, Historical Log 2, Parameter 3				R
45339				Line Number, Historical Log 2, Parameter 4				R
45340				Point Number, Historical Log 2, Parameter 4				R
45341				Line Number, Historical Log 2, Parameter 5				R
45342				Point Number, Historical Log 2, Parameter 5				R
45343				Line Number, Historical Log 2, Parameter 6				R
45344				Point Number, Historical Log 2, Parameter 6				R
45345				Line Number, Historical Log 2, Parameter 7				R
45346				Point Number, Historical Log 2, Parameter 7				R
45347				Line Number, Historical Log 2, Parameter 8				R
45348				Point Number, Historical Log 2, Parameter 8				R
45349				Line Number, Historical Log 2, Parameter 9				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45350				Point Number, Historical Log 2, Parameter 9				R
45351				Line Number, Historical Log 2, Parameter 10				R
45352				Point Number, Historical Log 2, Parameter 10				R
45353				Line Number, Historical Log 2, Parameter 11				R
45354				Point Number, Historical Log 2, Parameter 11				R
45355				Line Number, Historical Log 2, Parameter 12				R
45356				Point Number, Historical Log 2, Parameter 12				R
45357				Line Number, Historical Log 2, Parameter 13				R
45358				Point Number, Historical Log 2, Parameter 13				R
45359				Line Number, Historical Log 2, Parameter 14				R
45360				Point Number, Historical Log 2, Parameter 14				R
45361				Line Number, Historical Log 2, Parameter 15				R
45362				Point Number, Historical Log 2, Parameter 15				R
45363				Line Number, Historical Log 2, Parameter 16				R
45364				Point Number, Historical Log 2, Parameter 16				R
45365				Line Number, Historical Log 2, Parameter 17				R
45366				Point Number, Historical Log 2, Parameter 17				R
45367				Line Number, Historical Log 2, Parameter 18				R
45368				Point Number, Historical Log 2, Parameter 18				R
45369				Line Number, Historical Log 2, Parameter 19				R
45370				Point Number, Historical Log 2, Parameter 19				R
45371				Line Number, Historical Log 2, Parameter 20				R
45372				Point Number, Historical Log 2, Parameter 20				R
45373				Line Number, Historical Log 2, Parameter 21				R
45374				Point Number, Historical Log 2, Parameter 21				R
45375				Line Number, Historical Log 2, Parameter 22				R
45376				Point Number, Historical Log 2, Parameter 22				R
45377				Line Number, Historical Log 2, Parameter 23				R
45378				Point Number, Historical Log 2, Parameter 23				R
45379				Line Number, Historical Log 2, Parameter 24				R
45380				Point Number, Historical Log 2, Parameter 24				R
45381				Line Number, Historical Log 2, Parameter 25				R
45382				Point Number, Historical Log 2, Parameter 25				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45383				Line Number, Historical Log 2, Parameter 26				R
45384				Point Number, Historical Log 2, Parameter 26				R
45385				Line Number, Historical Log 2, Parameter 27				R
45386				Point Number, Historical Log 2, Parameter 27				R
45387				Line Number, Historical Log 2, Parameter 28				R
45388				Point Number, Historical Log 2, Parameter 28				R
45389				Line Number, Historical Log 2, Parameter 29				R
45390				Point Number, Historical Log 2, Parameter 29				R
45391				Line Number, Historical Log 2, Parameter 30				R
45392				Point Number, Historical Log 2, Parameter 30				R
45393				Line Number, Historical Log 2, Parameter 31				R
45394				Point Number, Historical Log 2, Parameter 31				R
45395				Line Number, Historical Log 2, Parameter 32				R
45396				Point Number, Historical Log 2, Parameter 32				R
45397				Line Number, Historical Log 2, Parameter 33				R
45398				Point Number, Historical Log 2, Parameter 33				R
45399				Line Number, Historical Log 2, Parameter 34				R
45400				Point Number, Historical Log 2, Parameter 34				R
45401				Line Number, Historical Log 2, Parameter 35				R
45402				Point Number, Historical Log 2, Parameter 35				R
45403				Line Number, Historical Log 2, Parameter 36				R
45404				Point Number, Historical Log 2, Parameter 36				R
45405				Line Number, Historical Log 2, Parameter 37				R
45406				Point Number, Historical Log 2, Parameter 37				R
45407				Line Number, Historical Log 2, Parameter 38				R
45408				Point Number, Historical Log 2, Parameter 38				R
45409				Line Number, Historical Log 2, Parameter 39				R
45410				Point Number, Historical Log 2, Parameter 39				R
45411				Line Number, Historical Log 2, Parameter 40				R
45412				Point Number, Historical Log 2, Parameter 40				R
45413				Line Number, Historical Log 2, Parameter 41				R
45414				Point Number, Historical Log 2, Parameter 41				R
45415				Line Number, Historical Log 2, Parameter 42				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45416				Point Number, Historical Log 2, Parameter 42				R
45417				Line Number, Historical Log 2, Parameter 43				R
45418				Point Number, Historical Log 2, Parameter 43				R
45419				Line Number, Historical Log 2, Parameter 44				R
45420				Point Number, Historical Log 2, Parameter 44				R
45421				Line Number, Historical Log 2, Parameter 45				R
45422				Point Number, Historical Log 2, Parameter 45				R
45423				Line Number, Historical Log 2, Parameter 46				R
45424				Point Number, Historical Log 2, Parameter 46				R
45425				Line Number, Historical Log 2, Parameter 47				R
45426				Point Number, Historical Log 2, Parameter 47				R
45427				Line Number, Historical Log 2, Parameter 48				R
45428				Point Number, Historical Log 2, Parameter 48				R
45429				Line Number, Historical Log 2, Parameter 49				R
45430				Point Number, Historical Log 2, Parameter 49				R
45431				Line Number, Historical Log 2, Parameter 50				R
45432				Point Number, Historical Log 2, Parameter 50				R
45433				Line Number, Historical Log 2, Parameter 51				R
45434				Point Number, Historical Log 2, Parameter 51				R
45435				Line Number, Historical Log 2, Parameter 52				R
45436				Point Number, Historical Log 2, Parameter 52				R
45437				Line Number, Historical Log 2, Parameter 53				R
45438				Point Number, Historical Log 2, Parameter 53				R
45439				Line Number, Historical Log 2, Parameter 54				R
45440				Point Number, Historical Log 2, Parameter 54				R
45441				Line Number, Historical Log 2, Parameter 55				R
45442				Point Number, Historical Log 2, Parameter 55				R
45443				Line Number, Historical Log 2, Parameter 56				R
45444				Point Number, Historical Log 2, Parameter 56				R
45445				Line Number, Historical Log 2, Parameter 57				R
45446				Point Number, Historical Log 2, Parameter 57				R
45447				Line Number, Historical Log 2, Parameter 58				R
45448				Point Number, Historical Log 2, Parameter 58				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45449				Line Number, Historical Log 2, Parameter 59				R
45450				Point Number, Historical Log 2, Parameter 59				R
45451				Line Number, Historical Log 2, Parameter 60				R
45452				Point Number, Historical Log 2, Parameter 60				R
45453				Line Number, Historical Log 2, Parameter 61				R
45454				Point Number, Historical Log 2, Parameter 61				R
45455				Line Number, Historical Log 2, Parameter 62				R
45456				Point Number, Historical Log 2, Parameter 62				R
45457				Line Number, Historical Log 2, Parameter 63				R
45458				Point Number, Historical Log 2, Parameter 63				R
45459				Line Number, Historical Log 2, Parameter 64				R
45460				Point Number, Historical Log 2, Parameter 64				R
45461				Snapshot Interval, Historical Log 1	3600/0	1 second		R
45462				Snapshot Interval, Historical Log 2	3600/0	1 second		R
45463				Record Size, Historical Log 1				R
45464				Record Size, Historical Log 2				R
Waveform/CBEMA Settings Block								
45465				Phase A-N Voltage Above Setpoint	+327.67% / -327.68%	0.01%		R
45466				Phase A-N Voltage Below Setpoint	+327.67% / -327.68%	0.01%		R
45467				Phase B-N Voltage Above Setpoint	+327.67% / -327.68%	0.01%		R
45468				Phase B-N Voltage Below Setpoint	+327.67% / -327.68%	0.01%		R
45469				Phase C-N Voltage Above Setpoint	+327.67% / -327.68%	0.01%		R
45470				Phase C-N Voltage Below Setpoint	+327.67% / -327.68%	0.01%		R
45471				Auxiliary Voltage Above Setpoint	+327.67% / -327.68%	0.01%		R
45472				Auxiliary Voltage Below Setpoint	+327.67% / -327.68%	0.01%		R
45473				Phase A Current Above Setpoint	+327.67% / -327.68%	0.01%		R
45474				Phase A Current Below Setpoint	+327.67% / -327.68%	0.01%		R
45475				Phase B Current Above Setpoint	+327.67% / -327.68%	0.01%		R
45476				Phase B Current Below Setpoint	+327.67% / -327.68%	0.01%		R
45477				Phase C Current Above Setpoint	+327.67% / -327.68%	0.01%		R
45478				Phase C Current Below Setpoint	+327.67% / -327.68%	0.01%		R
45479				Measured Neutral Current Above Setpoint	+327.67% / -327.68%	0.01%		R
45480				Measured Neutral Current Below Setpoint	+327.67% / -327.68%	0.01%		R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45481				Calculated Neutral Current Above Setpoint	+327.67% / -327.68%	0.01%		R
45482				Calculated Neutral Current Below Setpoint	+327.67% / -327.68%	0.01%		R
45483				Phase A-B Voltage Above Setpoint	+327.67% / -327.68%	0.01%		R
45484				Phase A-B Voltage Below Setpoint	+327.67% / -327.68%	0.01%		R
45485				Phase B-C Voltage Above Setpoint	+327.67% / -327.68%	0.01%		R
45486				Phase B-C Voltage Below Setpoint	+327.67% / -327.68%	0.01%		R
45487				Phase C-A Voltage Above Setpoint	+327.67% / -327.68%	0.01%		R
45488				Phase C-A Voltage Below Setpoint	+327.67% / -327.68%	0.01%		R
45489-45490				Waveform Enables (Limit Above, Limit Below)				R
45491-45492				PQ Enables (Limit Above, Limit Below)				R
45493-45496				Reserved				
45497				Sample Rate and Total Captures				R
45498				Mode and CBEMA Enable				R
45499				High Speed Input Waveform and PQ Enables				R
45500				256 Samp/Cyc Channel Selection and 512 Samp/Cyc Channel Selection				R
High Speed Input Settings Block								
45501-45508				Input 1 Name				R
45509-45516				Input 1 Open Label				R
45517-45524				Input 1 Close Label				R
45525-45526				Input 1 Value				R
45527				Input 1 Mode				R
45528				Reserved				
45529-45536				Input 2 Name				R
45537-45544				Input 2 Open Label				R
45545-45552				Input 2 Close Label				R
45553-45554				Input 2 Value				R
45555				Input 2 Mode				R
45556				Reserved				
45557-45564				Input 3 Name				R
45565-45572				Input 3 Open Label				R
45573-45580				Input 3 Close Label				R
45581-45582				Input 3 Value				R
45583				Input 3 Mode				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45584				Reserved				
45585-45592				Input 4 Name				R
45593-45600				Input 4 Open Label				R
45601-45608				Input 4 Close Label				R
45609-45610				Input 4 Value				R
45611				Input 4 Mode				R
45612				Reserved				
45613-45620				Input 5 Name				R
45621-45628				Input 5 Open Label				R
45629-45636				Input 5 Close Label				R
45637-45638				Input 5 Value				R
45639				Input 5 Mode				R
45640				Reserved				
45641-45648				Input 6 Name				R
45649-45656				Input 6 Open Label				R
45657-45664				Input 6 Close Label				R
45665-45666				Input 6 Value				R
45667				Input 6 Mode				R
45668				Reserved				
45669-45676				Input 7 Name				R
45677-45684				Input 7 Open Label				R
45685-45692				Input 7 Close Label				R
45693-45694				Input 7 Value				R
45695				Input 7 Mode				R
45696				Reserved				
45697-45704				Input 8 Name				R
45705-45712				Input 8 Open Label				R
45713-45720				Input 8 Close Label				R
45721-45722				Input 8 Value				R
45723				Input 8 Mode				R
45724				Reserved				R
External Digital Input Module Settings Block								
45725				External Digital Input Module 1 Address				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45726				External Digital Input Module 2 Address				R
45727				External Digital Input Module 3 Address				R
45728				External Digital Input Module 4 Address				R
External Digital Output Module Settings Block								
45729				Address, External Digital Output Module 1				R
45730-45732				Reserved				
45733				Line Number, Relay 1, External Digital Output Module 1				R
45734				Point Number, Relay 1, External Digtial Output Module 1				R
45735				Line Number, Relay 2, External Digital Output Module 1				R
45736				Point Number, Relay 2, External Digtial Output Module 1				R
45737				Line Number, Relay 3, External Digital Output Module 1				R
45738				Point Number, Relay 3, External Digtial Output Module 1				R
45739				Line Number, Relay 4, External Digital Output Module 1				R
45740				Point Number, Relay 4, External Digtial Output Module 1				R
45741				Line Number, Relay 5, External Digital Output Module 1				R
45742				Point Number, Relay 5, External Digtial Output Module 1				R
45743				Line Number, Relay 6, External Digital Output Module 1				R
45744				Point Number, Relay 6, External Digtial Output Module 1				R
45745				Line Number, Relay 7, External Digital Output Module 1				R
45746				Point Number, Relay 7, External Digtial Output Module 1				R
45747				Line Number, Relay 8, External Digital Output Module 1				R
45748				Point Number, Relay 8, External Digtial Output Module 1				R
45749				Address, External Digital Output Module 2				R
45750-45752				Reserved				
45753				Line Number, Relay 1, External Digital Output Module 2				R
45754				Point Number, Relay 1, External Digtial Output Module 2				R
45755				Line Number, Relay 2, External Digital Output Module 2				R
45756				Point Number, Relay 2, External Digtial Output Module 2				R
45757				Line Number, Relay 3, External Digital Output Module 2				R
45758				Point Number, Relay 3, External Digtial Output Module 2				R
45759				Line Number, Relay 4, External Digital Output Module 2				R
45760				Point Number, Relay 4, External Digtial Output Module 2				R
45761				Line Number, Relay 5, External Digital Output Module 2				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45762				Point Number, Relay 5, External Digtial Output Module 2				R
45763				Line Number, Relay 6, External Digital Output Module 2				R
45764				Point Number, Relay 6, External Digtial Output Module 2				R
45765				Line Number, Relay 7, External Digital Output Module 2				R
45766				Point Number, Relay 7, External Digtial Output Module 2				R
45767				Line Number, Relay 8, External Digital Output Module 2				R
45768				Point Number, Relay 8, External Digtial Output Module 2				R
45769				Address, External Digital Output Module 3				R
45770-45772				Reserved				
45773				Line Number, Relay 1, External Digital Output Module 3				R
45774				Point Number, Relay 1, External Digtial Output Module 3				R
45775				Line Number, Relay 2, External Digital Output Module 3				R
45776				Point Number, Relay 2, External Digtial Output Module 3				R
45777				Line Number, Relay 3, External Digital Output Module 3				R
45778				Point Number, Relay 3, External Digtial Output Module 3				R
45779				Line Number, Relay 4, External Digital Output Module 3				R
45780				Point Number, Relay 4, External Digtial Output Module 3				R
45781				Line Number, Relay 5, External Digital Output Module 3				R
45782				Point Number, Relay 5, External Digtial Output Module 3				R
45783				Line Number, Relay 6, External Digital Output Module 3				R
45784				Point Number, Relay 6, External Digtial Output Module 3				R
45785				Line Number, Relay 7, External Digital Output Module 3				R
45786				Point Number, Relay 7, External Digtial Output Module 3				R
45787				Line Number, Relay 8, External Digital Output Module 3				R
45788				Point Number, Relay 8, External Digtial Output Module 3				R
45789				Address, External Digital Output Module 4				R
45790-45792				Reserved				
45793				Line Number, Relay 1, External Digital Output Module 4				R
45794				Point Number, Relay 1, External Digtial Output Module 4				R
45795				Line Number, Relay 2, External Digital Output Module 4				R
45796				Point Number, Relay 2, External Digtial Output Module 4				R
45797				Line Number, Relay 3, External Digital Output Module 4				R
45798				Point Number, Relay 3, External Digtial Output Module 4				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45799				Line Number, Relay 4, External Digital Output Module 4				R
45800				Point Number, Relay 4, External Digtial Output Module 4				R
45801				Line Number, Relay 5, External Digital Output Module 4				R
45802				Point Number, Relay 5, External Digtial Output Module 4				R
45803				Line Number, Relay 6, External Digital Output Module 4				R
45804				Point Number, Relay 6, External Digtial Output Module 4				R
45805				Line Number, Relay 7, External Digital Output Module 4				R
45806				Point Number, Relay 7, External Digtial Output Module 4				R
45807				Line Number, Relay 8, External Digital Output Module 4				R
45808				Point Number, Relay 8, External Digtial Output Module 4				R
External Analog Input Module Settings Block								
45809				Address, External Analog Input Module 1				R
45810				Address, External Analog Input Module 2				R
45811				Address, External Analog Input Module 3				R
45812				Address, External Analog Input Module 4				R
External Analog Output Module Settings Block								
45813				Address, External Analog Output Module 1				R
45814-45816				Reserved				
45817				Line Number, Relay 1, External Analog Output Module 1				R
45818				Point Number, Relay 1, External Digtial Output Module 1				R
45819				Line Number, Relay 2, External Analog Output Module 1				R
45820				Point Number, Relay 2, External Digtial Output Module 1				R
45821				Line Number, Relay 3, External Analog Output Module 1				R
45822				Point Number, Relay 3, External Digtial Output Module 1				R
45823				Line Number, Relay 4, External Analog Output Module 1				R
45824				Point Number, Relay 4, External Digtial Output Module 1				R
45825				Line Number, Relay 5, External Analog Output Module 1				R
45826				Point Number, Relay 5, External Digtial Output Module 1				R
45827				Line Number, Relay 6, External Analog Output Module 1				R
45828				Point Number, Relay 6, External Digtial Output Module 1				R
45829				Line Number, Relay 7, External Analog Output Module 1				R
45830				Point Number, Relay 7, External Digtial Output Module 1				R
45831				Line Number, Relay 8, External Analog Output Module 1				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45832				Point Number, Relay 8, External Digtial Output Module 1				R
45833				Address, External Analog Output Module 2				R
45834-45836				Reserved				
45837				Line Number, Relay 1, External Analog Output Module 2				R
45870				Point Number, Relay 1, External Digtial Output Module 2				R
45839				Line Number, Relay 2, External Analog Output Module 2				R
45840				Point Number, Relay 2, External Digtial Output Module 2				R
45841				Line Number, Relay 3, External Analog Output Module 2				R
45842				Point Number, Relay 3, External Digtial Output Module 2				R
45843				Line Number, Relay 4, External Analog Output Module 2				R
45844				Point Number, Relay 4, External Digtial Output Module 2				R
45845				Line Number, Relay 5, External Analog Output Module 2				R
45846				Point Number, Relay 5, External Digtial Output Module 2				R
45847				Line Number, Relay 6, External Analog Output Module 2				R
45848				Point Number, Relay 6, External Digtial Output Module 2				R
45849				Line Number, Relay 7, External Analog Output Module 2				R
45850				Point Number, Relay 7, External Digtial Output Module 2				R
45851				Line Number, Relay 8, External Analog Output Module 2				R
45852				Point Number, Relay 8, External Digtial Output Module 2				R
45853				Address, External Analog Output Module 3				R
45854-45856				Reserved				
45857				Line Number, Relay 1, External Analog Output Module 3				R
45858				Point Number, Relay 1, External Digtial Output Module 3				R
45859				Line Number, Relay 2, External Analog Output Module 3				R
45860				Point Number, Relay 2, External Digtial Output Module 3				R
45861				Line Number, Relay 3, External Analog Output Module 3				R
45862				Point Number, Relay 3, External Digtial Output Module 3				R
45863				Line Number, Relay 4, External Analog Output Module 3				R
45864				Point Number, Relay 4, External Digtial Output Module 3				R
45865				Line Number, Relay 5, External Analog Output Module 3				R
45866				Point Number, Relay 5, External Digtial Output Module 3				R
45867				Line Number, Relay 6, External Analog Output Module 3				R
45868				Point Number, Relay 6, External Digtial Output Module 3				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45869				Line Number, Relay 7, External Analog Output Module 3				R
45870				Point Number, Relay 7, External Digtial Output Module 3				R
45871				Line Number, Relay 8, External Analog Output Module 3				R
45872				Point Number, Relay 8, External Digtial Output Module 3				R
45873				Address, External Analog Output Module 4				R
45874-45876				Reserved				
45877				Line Number, Relay 1, External Analog Output Module 4				R
45878				Point Number, Relay 1, External Digtial Output Module 4				R
45879				Line Number, Relay 2, External Analog Output Module 4				R
45880				Point Number, Relay 2, External Digtial Output Module 4				R
45881				Line Number, Relay 3, External Analog Output Module 4				R
45882				Point Number, Relay 3, External Digtial Output Module 4				R
45883				Line Number, Relay 4, External Analog Output Module 4				R
45884				Point Number, Relay 4, External Digtial Output Module 4				R
45885				Line Number, Relay 5, External Analog Output Module 4				R
45886				Point Number, Relay 5, External Digtial Output Module 4				R
45887				Line Number, Relay 6, External Analog Output Module 4				R
45888				Point Number, Relay 6, External Digtial Output Module 4				R
45889				Line Number, Relay 7, External Analog Output Module 4				R
45890				Point Number, Relay 7, External Digtial Output Module 4				R
45891				Line Number, Relay 8, External Analog Output Module 4				R
45892				Point Number, Relay 8, External Digtial Output Module 4				R
External KYZ Output Module Settings Block								
45893				Address, External KYZ Output Module 1				R
45894				Energy Assignement, Relay 1-2, External KYZ Output Module 1				R
45895				Energy Assignement, Relay 3-4, External KYZ Output Module 1				R
45896				Reserved				
45897				Address, External KYZ Output Module 2				R
45898				Energy Assignement, Relay 1-2, External KYZ Output Module 2				R
45899				Energy Assignement, Relay 3-4, External KYZ Output Module 2				R
45900				Reserved				
45901				Address, External KYZ Output Module 3				R
45902				Energy Assignement, Relay 1-2, External KYZ Output Module 3				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45903				Energy Assignement, Relay 3-4, External KYZ Output Module 3				R
45904				Reserved				
45905				Address, External KYZ Output Module 4				R
45906				Energy Assignement, Relay 1-2, External KYZ Output Module 4				R
45907				Energy Assignement, Relay 3-4, External KYZ Output Module 4				R
45908				Reserved				
CT & PT Ratio Settings Block								
45909-45910				Phase Current CT Ratio Numerator	+999,999.99 / +0.01	1/100 A pri		R
45911-45912				Phase Current CT Ratio Denominator	+999,999.99 / +0.01	1/100 A sec		R
45913-45914				Measured Neutral Current CT Ratio Numerator	+999,999.99 / +0.01	1/100 A pri		R
45915-45916				Measured Neutral Current CT Ratio Denominator	+999,999.99 / +0.01	1/100 A sec		R
45917-45918				Phase Voltage PT Ratio Numerator	+999,999.99 / +0.01	1/100 V pri		R
45919-45920				Phase Voltage PT Ratio Denominator	+999,999.99 / +0.01	1/100 V sec		R
45921-45922				Auxiliary Voltage PT Ratio Numerator	+999,999.99 / +0.01	1/100 V pri		R
45923-45924				Auxiliary Voltage PT Ration Denominator	+999,999.99 / +0.01	1/100 V sec		R
Hookup and Time Settings Block								
45925				Hookup				R
45926				Frequency & Time Zone Hour Selection				R
45927				Time Zone Half Hour & Daylight Savings Time Enable				R
45928				Transformer Loss Compensation (TLC) & Internal KYZ Form				R
45929-45932				Daylight Savings Time Start				R
45933-45936				Daylight Savings Time End				R
45937-45938				% Loss of Watts due to Iron (TLC)				R
45939-45940				% Loss of Watts due to Copper (TLC)				R
45941-45942				% Loss of VAR due to Iron (TLC)				R
45943-45944				% Loss of VAR due to Copper (TLC)				R
45945-45948				Reserved				
Average Settings Block								
45949				Thermal and Block Averaging Time Interval	65535 / 0	1 second		R
45950				Rolling Averaging Sub-Interval	65535 / 0	1 second		R
45951				Predictive Rolling Window Average	100.00 / 0	0.01 %		R
45952				Rolling Sub-Intervals / Time of Use Log Enable	1~255/not used			R
Exception Profile Block								

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
45953-45960				Limits				R
45961-45962				External Inputs				R
45963				Reserved				
45964				Digital Inputs				R
45965-45966				Device Internal Change				R
45967-45968				External Digital Input Mode				R
Device Label Settings Block								
45969-45976				Meter Designation				R
45977-45984				Auxiliary Voltage Label (1250 only)				R
45985-45992				Measured Neutral Current Label				R
Network Settings Block								
45993-45994				IP Address				R
45995-45996				Subnet Mask				R
45997-45998				Default Gateway				R
45999				Port 2 Baud Rate / Gateway Delay				R
46000				Mode/ Mode 2				R
46001-46008				Computer Name				R
46009-46010				DNS Server 1 IP Address				R
46011-46012				DNS Server 2 IP Address				
46013-46014				Server / Service Enable Bits				
46015				Email Port Number				
46016				FTP Port Number				
Block Window Average External Synchronization Block								
46017				BWA Synch Enable / BWA Synch Mask				R
Display Configuration Block								
46018				Display Configuration				R
Energy Direction Block								
46019				Received Energy Direction/Power Factor labeling				R
Test Mode Configuration Block								
46020				Test Mode Exit Delay Time				
Full Scale Block								
46021-46022				Full Scale Phase Current	65535 / 0	1 / 65536		R
46023-46024				Full Scale Measured Neutral Current	65535 / 0	1 / 65536		R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46025-46026				Full Scale Phase-to-Neutral Voltage	65535 / 0	1 / 65536		R
46027-46028				Full Scale Auxiliary Voltage	65535 / 0	1 / 65536		R
46029-46030				Full Scale Phase-To-Phase Voltage	65535 / 0	1 / 65536		R
46031-46032				Full Scale Phase Power	65535 / 0	1 / 65536		R
46033-46034				Full Scale Total Power	65535 / 0	1 / 65536		R
46035-46036				Full Scale Frequency	65535 / 0	1 / 65536		R
46037-46052				Reserved				
External Module Software Interface Block								
46053				External Module 1 & 2 Type				R
46054				External Module 3 & 4 Type				R
46055				External Module 5 & 6 Type				R
46056				External Module 7 & 8 Type				R
46057				External Module 9 & 10 Type				R
46058				External Module 11 & 12 Type				R
46059				External Module 13 & 14 Type				R
46060				External Module 15 & 16 Type				R
46061				External Module 1 & 2 Slot				R
46062				External Module 3 & 4 Slot				R
46063				External Module 5 & 6 Slot				R
46064				External Module 7 & 8 Slot				R
46065				External Module 9 & 10 Slot				R
46066				External Module 11 & 12 Slot				R
46067				External Module 13 & 14 Slot				R
46068				External Module 15 & 16 Slot				R
46069-46076				External Module 1 Label				R
46077-46084				External Module 2 Label				R
46085-46092				External Module 3 Label				R
46093-46100				External Module 4 Label				R
46101-46108				External Module 5 Label				R
46109-46116				External Module 6 Label				R
46117-46124				External Module 7 Label				R
46125-46132				External Module 8 Label				R
46133-46140				External Module 9 Label				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46141-46148				External Module 10 Label				R
46149-46156				External Module 11 Label				R
46157-46164				External Module 12 Label				R
46165-46172				External Module 13 Label				R
46173-46180				External Module 14 Label				R
46181-46188				External Module 15 Label				R
46189-46196				External Module 16 Label				R
External Module Port Assignment Block								
46197				Digital Input Module 1 & 2 Port Assignment				R
46198				Digital Input Module 3 & 4 Port Assignment				R
46199				Digital Output Module 1 & 2 Port Assignment				R
46200				Digital Output Module 3 & 4 Port Assignment				R
46201				Analog Input Module 1 & 2 Port Assignment				R
46202				Analog Input Module 3 & 4 Port Assignment				R
46203				Analog Output Module 1 & 2 Port Assignment				R
46204				Analog Output Module 3 & 4 Port Assignment				R
46205				KYZ Output Module 1 & 2 Port Assignment				R
46206				KYZ Output Module 3 & 4 Port Assignment				R
Manual Control Relay Block								
46207				Manual Control Relay Settings				R
46208				Flicker Log/ Reserved				R
Internal Input Pulse Accumulation Scale Factor Block								
46209-46210				Internal Input 1 Pulse Accumulation Scale Factor	4294967295 / 0			R
46211-46212				Internal Input 2 Pulse Accumulation Scale Factor	4294967295 / 0			R
46213-46214				Internal Input 3 Pulse Accumulation Scale Factor	4294967295 / 0			R
46215-46216				Internal Input 4 Pulse Accumulation Scale Factor	4294967295 / 0			R
46217-46218				Internal Input 5 Pulse Accumulation Scale Factor	4294967295 / 0			R
46219-46220				Internal Input 6 Pulse Accumulation Scale Factor	4294967295 / 0			R
46221-46222				Internal Input 7 Pulse Accumulation Scale Factor	4294967295 / 0			R
46223-46224				Internal Input 8 Pulse Accumulation Scale Factor	4294967295 / 0			R
46225				Internal Input 1 & 2 Pulse Accumulation Aggregator Assignment				R
46226				Internal Input 3 & 4 Pulse Accumulation Aggregator Assignment				R
46227				Internal Input 5 & 6 Pulse Accumulation Aggregator Assignment				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46228				Internal Input 7 & 8 Pulse Accumulation Aggregator Assignment				R
46229-46236				Internal Input 1 Pulse Accumulation Label				R
46237-46244				Internal Input 2 Pulse Accumulation Label				R
46245-46252				Internal Input 3 Pulse Accumulation Label				R
46253-46260				Internal Input 4 Pulse Accumulation Label				R
46261-46268				Internal Input 5 Pulse Accumulation Label				R
46269-46276				Internal Input 6 Pulse Accumulation Label				R
46277-46284				Internal Input 7 Pulse Accumulation Label				R
46285-46292				Internal Input 8 Pulse Accumulation Label				R
46293-46300				Internal Input Pulse Aggregation 1 Label				R
46301-46308				Internal Input Pulse Aggregation 2 Label				R
46309-46316				Internal Input Pulse Aggregation 3 Label				R
46317-46324				Internal Input Pulse Aggregation 4 Label				R
46325				Nexus Watthour Selection / Aggregation Assignment				R
				I^2t and V^2t Threshold Block				
46326-46327				I^2t Threshold				R
46328-46329				V^2t Threshold				R
				Internal KYZ Settings Block				
46330				Internal KYZ Pulse Width (Relay 1/ Relay 2)				R
46331				Internal KYZ Pulse Width (Relay 3/ Relay 4)				R
46332				Internal KYZ Pulse Width (LED)/ Internal KYZ Channel Select (Relay 1)				R
46333				Internal KYZ Channel Select (Rleay 2/ Relay 3)				R
46334				Internal KYZ Channel Select (Rleay 4/ LED)				R
46335-46336				Internal KYZ Watthour Per Pulse (Relay 1)				R
46337-46338				Internal KYZ Watthour Per Pulse (Relay 2)				R
46339-46340				Internal KYZ Watthour Per Pulse (Relay 3)				R
46341-46342				Internal KYZ Watthour Per Pulse (Relay 4)				R
46343-46344				Internal KYZ Watthour Per Pulse (LED)				R
46345				Internal KYZ enable/ End of Interval Pulse enable				R
46346				End of Interval Pulse (Relay, Width)				R
46347				Cold Load Delay / Cumulative Demand Settings				R
46348				Short Term Flicker Interval / Long Term Flicker Interval				R
46349				Flicker Voltage Adaptor Level				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46350				Flicker Base Frequency				R
46351-46372				Reserved				R
Internal Input Pulse Accumulation Unit Label Block								
46373-46376				Internal Input 1 Pulse Accumulation Unit Label				R
46377-46380				Internal Input 2 Pulse Accumulation Unit Label				R
46381-46384				Internal Input 3 Pulse Accumulation Unit Label				R
46385-46388				Internal Input 4 Pulse Accumulation Unit Label				R
46389-46392				Internal Input 5 Pulse Accumulation Unit Label				R
46393-46396				Internal Input 6 Pulse Accumulation Unit Label				R
46397-46400				Internal Input 7 Pulse Accumulation Unit Label				R
46401-46404				Internal Input 8 Pulse Accumulation Unit Label				R
46405-46408				Internal Input Pulse Aggregation 1 Unit Label				R
46409-46412				Internal Input Pulse Aggregation 2 Unit Label				R
46413-46416				Internal Input Pulse Aggregation 3 Unit Label				R
46417-46420				Internal Input Pulse Aggregation 4 Unit Label				R
ElectroLogic Block								
46421-46422				Relay 1 Combination Tree Input Line 1, Point 1				R
46423-46424				Relay 1 Combination Tree Input Line 2, Point 2				R
46425-46426				Relay 1 Combination Tree Input Line 3, Point 3				R
46427-46428				Relay 1 Combination Tree Input Line 4, Point 4				R
46429-46430				Relay 1 Combination Tree Input Line 5, Point 5				R
46431-46432				Relay 1 Combination Tree Input Line 6, Point 6				R
46433-46434				Relay 1 Combination Tree Input Line 7, Point 7				R
46435-46436				Relay 1 Combination Tree Input Line 8, Point 8				R
46437				Relay 1 Combination Logic (Combination A/ Combination B)				R
46438				Relay 1 Combination Logic (Combination C/ Combination D)				R
46439				Relay 1 Combination Logic (Combination E/ Combination F)				R
46440				Relay 1 Combination Logic (Combination G/ Reserved)				R
46441				Relay 1 Set Delay/ Reset Delay				R
46442-46444				Reserved				R
46445-46446				Relay 2 Combination Tree Input Line 1, Point 1				R
46447-46448				Relay 2 Combination Tree Input Line 2, Point 2				R
46449-46450				Relay 2 Combination Tree Input Line 3, Point 3				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46451-46452				Relay 2 Combination Tree Input Line 4, Point 4				R
46453-46454				Relay 2 Combination Tree Input Line 5, Point 5				R
46455-46456				Relay 2 Combination Tree Input Line 6, Point 6				R
46457-46458				Relay 2 Combination Tree Input Line 7, Point 7				R
46459-46460				Relay 2 Combination Tree Input Line 8, Point 8				R
46461				Relay 2 Combination Logic (Combination A/ Combination B)				R
46462				Relay 2 Combination Logic (Combination C/ Combination D)				R
46463				Relay 2 Combination Logic (Combination E/ Combination F)				R
46464				Relay 2 Combination Logic (Combination G/ Reserved)				R
46465				Relay 2 Set Delay/ Reset Delay				R
46466-46468				Reserved				R
46469-46470				Relay 3 Combination Tree Input Line 1, Point 1				R
46471-46472				Relay 3 Combination Tree Input Line 2, Point 2				R
46473-46474				Relay 3 Combination Tree Input Line 3, Point 3				R
46475-46476				Relay 3 Combination Tree Input Line 4, Point 4				R
46477-46478				Relay 3 Combination Tree Input Line 5, Point 5				R
46479-46480				Relay 3 Combination Tree Input Line 6, Point 6				R
46481-46482				Relay 3 Combination Tree Input Line 7, Point 7				R
46483-46484				Relay 3 Combination Tree Input Line 8, Point 8				R
46485				Relay 3 Combination Logic (Combination A/ Combination B)				R
46486				Relay 3 Combination Logic (Combination C/ Combination D)				R
46487				Relay 3 Combination Logic (Combination E/ Combination F)				R
46488				Relay 3 Combination Logic (Combination G/ Reserved)				R
46489				Relay 3 Set Delay/ Reset Delay				R
46490-46492				Reserved				R
46493-46494				Relay 4 Combination Tree Input Line 1, Point 1				R
46495-46496				Relay 4 Combination Tree Input Line 2, Point 2				R
46497-46498				Relay 4 Combination Tree Input Line 3, Point 3				R
46499-46500				Relay 4 Combination Tree Input Line 4, Point 4				R
46501-46502				Relay 4 Combination Tree Input Line 5, Point 5				R
46503-46504				Relay 4 Combination Tree Input Line 6, Point 6				R
46505-46506				Relay 4 Combination Tree Input Line 7, Point 7				R
46507-46508				Relay 4 Combination Tree Input Line 8, Point 8				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46509				Relay 4 Combination Logic (Combination A/ Combination B)				R
46510				Relay 4 Combination Logic (Combination C/ Combination D)				R
46511				Relay 4 Combination Logic (Combination E/ Combination F)				R
46512				Relay 4 Combination Logic (Combination G/ Reserved)				R
46513				Relay 4 Set Delay/ Reset Delay				R
46514-46516				Reserved				R
46517-46518				Relay 5 Combination Tree Input Line 1, Point 1				R
46519-46520				Relay 5 Combination Tree Input Line 2, Point 2				R
46521-46522				Relay 5 Combination Tree Input Line 3, Point 3				R
46523-46524				Relay 5 Combination Tree Input Line 4, Point 4				R
46525-46526				Relay 5 Combination Tree Input Line 5, Point 5				R
46527-46528				Relay 5 Combination Tree Input Line 6, Point 6				R
46529-46530				Relay 5 Combination Tree Input Line 7, Point 7				R
46531-46532				Relay 5 Combination Tree Input Line 8, Point 8				R
46533				Relay 5 Combination Logic (Combination A/ Combination B)				R
46534				Relay 5 Combination Logic (Combination C/ Combination D)				R
46535				Relay 5 Combination Logic (Combination E/ Combination F)				R
46536				Relay 5 Combination Logic (Combination G/ Reserved)				R
46537				Relay 5 Set Delay/ Reset Delay				R
46538-46540				Reserved				R
46541-46542				Relay 6 Combination Tree Input Line 1, Point 1				R
46543-46544				Relay 6 Combination Tree Input Line 2, Point 2				R
46545-46546				Relay 6 Combination Tree Input Line 3, Point 3				R
46547-46548				Relay 6 Combination Tree Input Line 4, Point 4				R
46549-46550				Relay 6 Combination Tree Input Line 5, Point 5				R
46551-46552				Relay 6 Combination Tree Input Line 6, Point 6				R
46553-46554				Relay 6 Combination Tree Input Line 7, Point 7				R
46555-46556				Relay 6 Combination Tree Input Line 8, Point 8				R
46557				Relay 6 Combination Logic (Combination A/ Combination B)				R
46558				Relay 6 Combination Logic (Combination C/ Combination D)				R
46559				Relay 6 Combination Logic (Combination E/ Combination F)				R
46560				Relay 6 Combination Logic (Combination G/ Reserved)				R
46561				Relay 6 Set Delay/ Reset Delay				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46562-46564				Reserved				R
46565-46566				Relay 7 Combination Tree Input Line 1, Point 1				R
46567-46568				Relay 7 Combination Tree Input Line 2, Point 2				R
46569-46570				Relay 7 Combination Tree Input Line 3, Point 3				R
46571-46572				Relay 7 Combination Tree Input Line 4, Point 4				R
46573-46574				Relay 7 Combination Tree Input Line 5, Point 5				R
46575-46576				Relay 7 Combination Tree Input Line 6, Point 6				R
46577-46578				Relay 7 Combination Tree Input Line 7, Point 7				R
46579-46580				Relay 7 Combination Tree Input Line 8, Point 8				R
46581				Relay 7 Combination Logic (Combination A/ Combination B)				R
46582				Relay 7 Combination Logic (Combination C/ Combination D)				R
46583				Relay 7 Combination Logic (Combination E/ Combination F)				R
46584				Relay 7 Combination Logic (Combination G/ Reserved)				R
46585				Relay 7 Set Delay/ Reset Delay				R
46586-46588				Reserved				R
46589-46590				Relay 8 Combination Tree Input Line 1, Point 1				R
46591-46592				Relay 8 Combination Tree Input Line 2, Point 2				R
46593-46594				Relay 8 Combination Tree Input Line 3, Point 3				R
46595-46596				Relay 8 Combination Tree Input Line 4, Point 4				R
46597-46598				Relay 8 Combination Tree Input Line 5, Point 5				R
46599-46600				Relay 8 Combination Tree Input Line 6, Point 6				R
46601-46602				Relay 8 Combination Tree Input Line 7, Point 7				R
46603-46604				Relay 8 Combination Tree Input Line 8, Point 8				R
46605				Relay 8 Combination Logic (Combination A/ Combination B)				R
46606				Relay 8 Combination Logic (Combination C/ Combination D)				R
46607				Relay 8 Combination Logic (Combination E/ Combination F)				R
46608				Relay 8 Combination Logic (Combination G/ Reserved)				R
46609				Relay 8 Set Delay/ Reset Delay				R
46610-46612				Reserved				R
46613-46614				Relay 9 Combination Tree Input Line 1, Point 1				R
46615-46616				Relay 9 Combination Tree Input Line 2, Point 2				R
46617-46618				Relay 9 Combination Tree Input Line 3, Point 3				R
46619-46620				Relay 9 Combination Tree Input Line 4, Point 4				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46621-46622				Relay 9 Combination Tree Input Line 5, Point 5				R
46623-46624				Relay 9 Combination Tree Input Line 6, Point 6				R
46625-46626				Relay 9 Combination Tree Input Line 7, Point 7				R
46627-46628				Relay 9 Combination Tree Input Line 8, Point 8				R
46629				Relay 9 Combination Logic (Combination A/ Combination B)				R
46630				Relay 9 Combination Logic (Combination C/ Combination D)				R
46631				Relay 9 Combination Logic (Combination E/ Combination F)				R
46632				Relay 9 Combination Logic (Combination G/ Reserved)				R
46633				Relay 9 Set Delay/ Reset Delay				R
46634-46636				Reserved				R
46637-46638				Relay 10 Combination Tree Input Line 1, Point 1				R
46639-46640				Relay 10 Combination Tree Input Line 2, Point 2				R
46641-46642				Relay 10 Combination Tree Input Line 3, Point 3				R
46643-46644				Relay 10 Combination Tree Input Line 4, Point 4				R
46645-46646				Relay 10 Combination Tree Input Line 5, Point 5				R
46647-46648				Relay 10 Combination Tree Input Line 6, Point 6				R
46649-46650				Relay 10 Combination Tree Input Line 7, Point 7				R
46651-46652				Relay 10 Combination Tree Input Line 8, Point 8				R
46653				Relay 10 Combination Logic (Combination A/ Combination B)				R
46654				Relay 10 Combination Logic (Combination C/ Combination D)				R
46655				Relay 10 Combination Logic (Combination E/ Combination F)				R
46656				Relay 10 Combination Logic (Combination G/ Reserved)				R
46657				Relay 10 Set Delay/ Reset Delay				R
46658-46660				Reserved				R
46661-46662				Relay 11 Combination Tree Input Line 1, Point 1				R
46663-46664				Relay 11 Combination Tree Input Line 2, Point 2				R
46665-46666				Relay 11 Combination Tree Input Line 3, Point 3				R
46667-46668				Relay 11 Combination Tree Input Line 4, Point 4				R
46669-46670				Relay 11 Combination Tree Input Line 5, Point 5				R
46671-46672				Relay 11 Combination Tree Input Line 6, Point 6				R
46673-46674				Relay 11 Combination Tree Input Line 7, Point 7				R
46675-46676				Relay 11 Combination Tree Input Line 8, Point 8				R
46677				Relay 11 Combination Logic (Combination A/ Combination B)				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46678				Relay 11 Combination Logic (Combination C/ Combination D)				R
46679				Relay 11 Combination Logic (Combination E/ Combination F)				R
46680				Relay 11 Combination Logic (Combination G/ Reserved)				R
46681				Relay 11 Set Delay/ Reset Delay				R
46682-46684				Reserved				R
46685-46686				Relay 12 Combination Tree Input Line 1, Point 1				R
46687-46688				Relay 12 Combination Tree Input Line 2, Point 2				R
46689-46690				Relay 12 Combination Tree Input Line 3, Point 3				R
46691-46692				Relay 12 Combination Tree Input Line 4, Point 4				R
46693-46694				Relay 12 Combination Tree Input Line 5, Point 5				R
46695-46696				Relay 12 Combination Tree Input Line 6, Point 6				R
46697-46698				Relay 12 Combination Tree Input Line 7, Point 7				R
46699-46700				Relay 12 Combination Tree Input Line 8, Point 8				R
46701				Relay 12 Combination Logic (Combination A/ Combination B)				R
46702				Relay 12 Combination Logic (Combination C/ Combination D)				R
46703				Relay 12 Combination Logic (Combination E/ Combination F)				R
46704				Relay 12 Combination Logic (Combination G/ Reserved)				R
46705				Relay 12 Set Delay/ Reset Delay				R
46706-46708				Reserved				R
46709-46710				Relay 13 Combination Tree Input Line 1, Point 1				R
46711-46712				Relay 13 Combination Tree Input Line 2, Point 2				R
46713-46714				Relay 13 Combination Tree Input Line 3, Point 3				R
46715-46716				Relay 13 Combination Tree Input Line 4, Point 4				R
46717-46718				Relay 13 Combination Tree Input Line 5, Point 5				R
46719-46720				Relay 13 Combination Tree Input Line 6, Point 6				R
46721-46722				Relay 13 Combination Tree Input Line 7, Point 7				R
46723-46724				Relay 13 Combination Tree Input Line 8, Point 8				R
46725				Relay 13 Combination Logic (Combination A/ Combination B)				R
46726				Relay 13 Combination Logic (Combination C/ Combination D)				R
46727				Relay 13 Combination Logic (Combination E/ Combination F)				R
46728				Relay 13 Combination Logic (Combination G/ Reserved)				R
46729				Relay 13 Set Delay/ Reset Delay				R
46730-46732				Reserved				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46733-46734				Relay 14 Combination Tree Input Line 1, Point 1				R
46735-46736				Relay 14 Combination Tree Input Line 2, Point 2				R
46737-46738				Relay 14 Combination Tree Input Line 3, Point 3				R
46739-46740				Relay 14 Combination Tree Input Line 4, Point 4				R
46741-46742				Relay 14 Combination Tree Input Line 5, Point 5				R
46743-46744				Relay 14 Combination Tree Input Line 6, Point 6				R
46745-46746				Relay 14 Combination Tree Input Line 7, Point 7				R
46747-46748				Relay 14 Combination Tree Input Line 8, Point 8				R
46749				Relay 14 Combination Logic (Combination A/ Combination B)				R
46750				Relay 14 Combination Logic (Combination C/ Combination D)				R
46751				Relay 14 Combination Logic (Combination E/ Combination F)				R
46752				Relay 14 Combination Logic (Combination G/ Reserved)				R
46753				Relay 14 Set Delay/ Reset Delay				R
46754-46756				Reserved				R
46757-46758				Relay 15 Combination Tree Input Line 1, Point 1				R
46759-46760				Relay 15 Combination Tree Input Line 2, Point 2				R
46761-46762				Relay 15 Combination Tree Input Line 3, Point 3				R
46763-46764				Relay 15 Combination Tree Input Line 4, Point 4				R
46765-46766				Relay 15 Combination Tree Input Line 5, Point 5				R
46767-46768				Relay 15 Combination Tree Input Line 6, Point 6				R
46769-46770				Relay 15 Combination Tree Input Line 7, Point 7				R
46771-46772				Relay 15 Combination Tree Input Line 8, Point 8				R
46773				Relay 15 Combination Logic (Combination A/ Combination B)				R
46774				Relay 15 Combination Logic (Combination C/ Combination D)				R
46775				Relay 15 Combination Logic (Combination E/ Combination F)				R
46776				Relay 15 Combination Logic (Combination G/ Reserved)				R
46777				Relay 15 Set Delay/ Reset Delay				R
46778-46780				Reserved				R
46781-46782				Relay 16 Combination Tree Input Line 1, Point 1				R
46783-46784				Relay 16 Combination Tree Input Line 2, Point 2				R
46785-46786				Relay 16 Combination Tree Input Line 3, Point 3				R
46787-46788				Relay 16 Combination Tree Input Line 4, Point 4				R
46789-46790				Relay 16 Combination Tree Input Line 5, Point 5				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46791-46792				Relay 16 Combination Tree Input Line 6, Point 6				R
46793-46794				Relay 16 Combination Tree Input Line 7, Point 7				R
46795-46796				Relay 16 Combination Tree Input Line 8, Point 8				R
46797				Relay 16 Combination Logic (Combination A/ Combination B)				R
46798				Relay 16 Combination Logic (Combination C/ Combination D)				R
46799				Relay 16 Combination Logic (Combination E/ Combination F)				R
46800				Relay 16 Combination Logic (Combination G/ Reserved)				R
46801				Relay 16 Set Delay/ Reset Delay				R
46802-46804				Reserved				R
Limit Profile Label Block								
46805-46812				Limit 1 Label				R
46813-46820				Limit 2 Label				R
46821-46828				Limit 3 Label				R
46829-46836				Limit 4 Label				R
46837-46844				Limit 5 Label				R
46845-46852				Limit 6 Label				R
46853-46860				Limit 7 Label				R
46861-46868				Limit 8 Label				R
46869-46876				Limit 9 Label				R
46877-46884				Limit 10 Label				R
46885-46892				Limit 11 Label				R
46893-46900				Limit 12 Label				R
46901-46908				Limit 13 Label				R
46909-46916				Limit 14 Label				R
46917-46924				Limit 15 Label				R
46925-46932				Limit 16 Label				R
46933-46940				Limit 17 Label				R
46941-46948				Limit 18 Label				R
46949-46956				Limit 19 Label				R
46957-46964				Limit 20 Label				R
46965-46972				Limit 21 Label				R
46973-46980				Limit 22 Label				R
46981-46988				Limit 23 Label				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
46989-46996				Limit 24 Label				R
46997-47004				Limit 25 Label				R
47005-47012				Limit 26 Label				R
47213-47020				Limit 27 Label				R
47021-47028				Limit 28 Label				R
47029-47036				Limit 29 Label				R
47037-47044				Limit 30 Label				R
47045-47052				Limit 31 Label				R
47053-47060				Limit 32 Label				R
External Analog Output Module Channel Update Block								
47061				Module 1/ Module 2				R
47062				Module 3/ Module 4				R
DNP Block								
Miscellaneous DNP Settings Block								
47063				Scale for Analog Output of Average Pulse Accumulation/Compressed DNP				R
47064				Energy in the Interval / DNP Time Synchronization Enable				
47065				DNP Time Synchronization Time Interval				R
47066				Bit 13(Choice of Class 0 poll between Object 20 and Object 21), Bitmap				R
47067-47070				DNP Freeze Date & Time				
47071				DNP Freeze Interval				
47072-47104				Reserved				
Custom DNP Definition Block for Analog Input (Object 30)								
47105				Point 0, Line Number				R
47106				Point 0, Point Number/ reserved				
47107				Point 0, Deadband				
47108				Point 0, Class assignments/ reserved				
47109-47360				Point 1 - Point 63				
Custom DNP Definition Block for Binary Counter (Object 20)								
47361				Point 0, Line Number				R
47362				Point 0, Point Number/ Scaling				
47363-47364				Point 0, Delta values for Event to occur				
47365				Point 0, Class assignments/ reserved				
47366-47368				Point 0, reserved				

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
47369-47424				Point 1 - Point 8				
Custom DNP Definition Block for Binary Input (Object 1)								
47425				Point 0-7, Line Number				R
47426				Point 0-7, Point Number/ Class assignments				R
47427-47428				Point 0-7, reserved				
47429-47456				Point 8-15 - Point 57-64				
Custom DNP Definition Block for Binary Output (Object 10)								
47457				Enable/Disable Relays (1 - 16)				R
47458				Enable/Disable Resets (17 - 24) / reserved				
Custom DNP Definition Block for Global Values								
47459				Choice of Variaion 0 for Object 1 & Object 2				
47460				Choice of Variaion 0 for Object 20 & Object 21				
47461				Choice of Variaion 0 for Object 22 & Object 23				
47462				Choice of Variaion 0 for Object 30 & Object 31				
47463				Choice of Variaion 0 for Object 32 & Object 33				
47464-48640				Reserved				
Analog Input Scaling Factors Block								
48641-48642				Module 1 Channel 1 High	32767 / -32768	1/65536		R
48643-48644				Module 1 Channel 2 High	32767 / -32768	1/65536		R
48645-48646				Module 1 Channel 3 High	32767 / -32768	1/65536		R
48647-48648				Module 1 Channel 4 High	32767 / -32768	1/65536		R
48649-48650				Module 1 Channel 5 High	32767 / -32768	1/65536		R
48651-48652				Module 1 Channel 6 High	32767 / -32768	1/65536		R
48653-48654				Module 1 Channel 7 High	32767 / -32768	1/65536		R
48655-48656				Module 1 Channel 8 High	32767 / -32768	1/65536		R
48657-48658				Module 1 Channel 1 Low	32767 / -32768	1/65536		R
48659-48660				Module 1 Channel 2 Low	32767 / -32768	1/65536		R
48661-48662				Module 1 Channel 3 Low	32767 / -32768	1/65536		R
48663-48664				Module 1 Channel 4 Low	32767 / -32768	1/65536		R
48665-48666				Module 1 Channel 5 Low	32767 / -32768	1/65536		R
48667-48668				Module 1 Channel 6 Low	32767 / -32768	1/65536		R
48669-48670				Module 1 Channel 7 Low	32767 / -32768	1/65536		R
48671-48672				Module 1 Channel 8 Low	32767 / -32768	1/65536		R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
48673-48674				Module 2 Channel 1 High	32767 / -32768	1/65536		R
48675-48676				Module 2 Channel 2 High	32767 / -32768	1/65536		R
48677-48678				Module 2 Channel 3 High	32767 / -32768	1/65536		R
48679-48680				Module 2 Channel 4 High	32767 / -32768	1/65536		R
48681-48682				Module 2 Channel 5 High	32767 / -32768	1/65536		R
48683-48684				Module 2 Channel 6 High	32767 / -32768	1/65536		R
48685-48686				Module 2 Channel 7 High	32767 / -32768	1/65536		R
48687-48688				Module 2 Channel 8 High	32767 / -32768	1/65536		R
48689-48690				Module 2 Channel 1 Low	32767 / -32768	1/65536		R
48691-48692				Module 2 Channel 2 Low	32767 / -32768	1/65536		R
48693-48694				Module 2 Channel 3 Low	32767 / -32768	1/65536		R
48695-48696				Module 2 Channel 4 Low	32767 / -32768	1/65536		R
48697-48698				Module 2 Channel 5 Low	32767 / -32768	1/65536		R
48699-48700				Module 2 Channel 6 Low	32767 / -32768	1/65536		R
48701-48702				Module 2 Channel 7 Low	32767 / -32768	1/65536		R
48703-48704				Module 2 Channel 8 Low	32767 / -32768	1/65536		R
48705-48706				Module 3 Channel 1 High	32767 / -32768	1/65536		R
48707-48708				Module 3 Channel 2 High	32767 / -32768	1/65536		R
48709-48710				Module 3 Channel 3 High	32767 / -32768	1/65536		R
48711-48712				Module 3 Channel 4 High	32767 / -32768	1/65536		R
48713-48714				Module 3 Channel 5 High	32767 / -32768	1/65536		R
48715-48716				Module 3 Channel 6 High	32767 / -32768	1/65536		R
48717-48718				Module 3 Channel 7 High	32767 / -32768	1/65536		R
48719-48720				Module 3 Channel 8 High	32767 / -32768	1/65536		R
48721-48722				Module 3 Channel 1 Low	32767 / -32768	1/65536		R
48723-48724				Module 3 Channel 2 Low	32767 / -32768	1/65536		R
48725-48726				Module 3 Channel 3 Low	32767 / -32768	1/65536		R
48727-48728				Module 3 Channel 4 Low	32767 / -32768	1/65536		R
48729-48730				Module 3 Channel 5 Low	32767 / -32768	1/65536		R
48731-48732				Module 3 Channel 6 Low	32767 / -32768	1/65536		R
48733-48734				Module 3 Channel 7 Low	32767 / -32768	1/65536		R
48735-48736				Module 3 Channel 8 Low	32767 / -32768	1/65536		R
48737-48738				Module 4 Channel 1 High	32767 / -32768	1/65536		R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
48739-48740				Module 4 Channel 2 High	32767 / -32768	1/65536		R
48741-48742				Module 4 Channel 3 High	32767 / -32768	1/65536		R
48743-48744				Module 4 Channel 4 High	32767 / -32768	1/65536		R
48745-48746				Module 4 Channel 5 High	32767 / -32768	1/65536		R
48747-48748				Module 4 Channel 6 High	32767 / -32768	1/65536		R
48749-48750				Module 4 Channel 7 High	32767 / -32768	1/65536		R
48751-48752				Module 4 Channel 8 High	32767 / -32768	1/65536		R
48753-48754				Module 4 Channel 1 Low	32767 / -32768	1/65536		R
48755-48756				Module 4 Channel 2 Low	32767 / -32768	1/65536		R
48757-48758				Module 4 Channel 3 Low	32767 / -32768	1/65536		R
48759-48760				Module 4 Channel 4 Low	32767 / -32768	1/65536		R
48761-48762				Module 4 Channel 5 Low	32767 / -32768	1/65536		R
48763-48764				Module 4 Channel 6 Low	32767 / -32768	1/65536		R
48765-48766				Module 4 Channel 7 Low	32767 / -32768	1/65536		R
48767-48768				Module 4 Channel 8 Low	32767 / -32768	1/65536		R
Analog Input Labels Block								
48769-48776				Module 1 Channel Label 1				R
48777-48784				Module 1 Channel Label 2				R
48785-48792				Module 1 Channel Label 3				R
48793-48800				Module 1 Channel Label 4				R
48801-48808				Module 1 Channel Label 5				R
48809-48816				Module 1 Channel Label 6				R
48817-48824				Module 1 Channel Label 7				R
48825-48832				Module 1 Channel Label 8				R
48833-48840				Module 2 Channel Label 1				R
48841-48848				Module 2 Channel Label 2				R
48849-48856				Module 2 Channel Label 3				R
48857-48864				Module 2 Channel Label 4				R
48865-48872				Module 2 Channel Label 5				R
48873-48880				Module 2 Channel Label 6				R
48881-48888				Module 2 Channel Label 7				R
48889-48896				Module 2 Channel Label 8				R
48897-48904				Module 3 Channel Label 1				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
48905-48912				Module 3 Channel Label 2				R
48913-48920				Module 3 Channel Label 3				R
48921-48928				Module 3 Channel Label 4				R
48929-48936				Module 3 Channel Label 5				R
48937-48944				Module 3 Channel Label 6				R
48945-48952				Module 3 Channel Label 7				R
48953-48960				Module 3 Channel Label 8				R
48961-48968				Module 4 Channel Label 1				R
48969-48976				Module 4 Channel Label 2				R
48977-48984				Module 4 Channel Label 3				R
48985-48992				Module 4 Channel Label 4				R
48993-49000				Module 4 Channel Label 5				R
49001-49008				Module 4 Channel Label 6				R
49009-49016				Module 4 Channel Label 7				R
49017-49024				Module 4 Channel Label 8				R
External Digital Input Module Labels Block								
49025-49032				Module 1 Channel Label 1				R
49033-49040				Module 1 Channel Label 2				R
49041-49048				Module 1 Channel Label 3				R
49049-49056				Module 1 Channel Label 4				R
49057-49064				Module 1 Channel Label 5				R
49065-49072				Module 1 Channel Label 6				R
49073-49080				Module 1 Channel Label 7				R
49081-49088				Module 1 Channel Label 8				R
49089-49096				Module 2 Channel Label 1				R
49097-49104				Module 2 Channel Label 2				R
49105-49112				Module 2 Channel Label 3				R
49113-49120				Module 2 Channel Label 4				R
49121-49128				Module 2 Channel Label 5				R
49129-49136				Module 2 Channel Label 6				R
49137-49144				Module 2 Channel Label 7				R
49145-49152				Module 2 Channel Label 8				R
49153-49160				Module 3 Channel Label 1				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
49161-49168				Module 3 Channel Label 2				R
49169-49176				Module 3 Channel Label 3				R
49177-49184				Module 3 Channel Label 4				R
49185-49192				Module 3 Channel Label 5				R
49193-49200				Module 3 Channel Label 6				R
49201-49208				Module 3 Channel Label 7				R
49209-49216				Module 3 Channel Label 8				R
49217-49224				Module 4 Channel Label 1				R
49225-49232				Module 4 Channel Label 2				R
49233-49240				Module 4 Channel Label 3				R
49241-49248				Module 4 Channel Label 4				R
49249-49256				Module 4 Channel Label 5				R
49257-49264				Module 4 Channel Label 6				R
49265-49272				Module 4 Channel Label 7				R
49273-49280				Module 4 Channel Label 8				R
49281-49288				Module 1 Open Label 1				R
49289-49296				Module 1 Open Label 2				R
49297-49304				Module 1 Open Label 3				R
49305-49312				Module 1 Open Label 4				R
49313-49320				Module 1 Open Label 5				R
49321-49328				Module 1 Open Label 6				R
49329-49336				Module 1 Open Label 7				R
49337-49344				Module 1 Open Label 8				R
49345-49352				Module 2 Open Label 1				R
49353-49360				Module 2 Open Label 2				R
49361-49368				Module 2 Open Label 3				R
49369-49376				Module 2 Open Label 4				R
49377-49384				Module 2 Open Label 5				R
49385-49392				Module 2 Open Label 6				R
49393-49400				Module 2 Open Label 7				R
49401-49408				Module 2 Open Label 8				R
49409-49416				Module 3 Open Label 1				R
49417-49424				Module 3 Open Label 2				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
49425-49432				Module 3 Open Label 3				R
49433-49440				Module 3 Open Label 4				R
49441-49448				Module 3 Open Label 5				R
49449-49456				Module 3 Open Label 6				R
49457-49464				Module 3 Open Label 7				R
49465-49472				Module 3 Open Label 8				R
49473-49480				Module 4 Open Label 1				R
49481-49488				Module 4 Open Label 2				R
49489-49496				Module 4 Open Label 3				R
49497-49504				Module 4 Open Label 4				R
49505-49512				Module 4 Open Label 5				R
49513-49520				Module 4 Open Label 6				R
49521-49528				Module 4 Open Label 7				R
49529-49536				Module 4 Open Label 8				R
49537-49544				Module 1 Closed Label 1				R
49545-49552				Module 1 Closed Label 2				R
49553-49560				Module 1 Closed Label 3				R
49561-49568				Module 1 Closed Label 4				R
49569-49576				Module 1 Closed Label 5				R
49577-49584				Module 1 Closed Label 6				R
49585-49592				Module 1 Closed Label 7				R
49593-49600				Module 1 Closed Label 8				R
49601-49608				Module 2 Closed Label 1				R
49609-49616				Module 2 Closed Label 2				R
49617-49624				Module 2 Closed Label 3				R
49625-49632				Module 2 Closed Label 4				R
49633-49640				Module 2 Closed Label 5				R
49641-49648				Module 2 Closed Label 6				R
49649-49656				Module 2 Closed Label 7				R
49657-49664				Module 2 Closed Label 8				R
49665-49672				Module 3 Closed Label 1				R
49673-49680				Module 3 Closed Label 2				R
49681-49688				Module 3 Closed Label 3				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
49689-49696				Module 3 Closed Label 4				R
49697-49704				Module 3 Closed Label 5				R
49705-49712				Module 3 Closed Label 6				R
49713-49720				Module 3 Closed Label 7				R
49721-49728				Module 3 Closed Label 8				R
49729-49736				Module 4 Closed Label 1				R
49737-49744				Module 4 Closed Label 2				R
49745-49752				Module 4 Closed Label 3				R
49753-49760				Module 4 Closed Label 4				R
49761-49768				Module 4 Closed Label 5				R
49769-49776				Module 4 Closed Label 6				R
49777-49784				Module 4 Closed Label 7				R
49785-49792				Module 4 Closed Label 8				R
External Digital Output Module Labels Block								
49793-49800				Module 1 Relay Label 1				R
49801-49808				Module 1 Relay Label 2				R
49809-49816				Module 1 Relay Label 3				R
49817-49824				Module 1 Relay Label 4				R
49825-49832				Module 2 Relay Label 1				R
49833-49840				Module 2 Relay Label 2				R
49841-49848				Module 2 Relay Label 3				R
49849-49856				Module 2 Relay Label 4				R
49857-49864				Module 3 Relay Label 1				R
49865-49872				Module 3 Relay Label 2				R
49873-49880				Module 3 Relay Label 3				R
49881-49888				Module 3 Relay Label 4				R
49889-49896				Module 4 Relay Label 1				R
49897-49904				Module 4 Relay Label 2				R
49905-49912				Module 4 Relay Label 3				R
49913-49920				Module 4 Relay Label 4				R
49921-49928				Module 1 Relay Common Shorted to Normally Closed Label 1				R
49929-49936				Module 1 Relay Common Shorted to Normally Closed Label 2				R
49937-49944				Module 1 Relay Common Shorted to Normally Closed Label 3				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
49945-49952				Module 1 Relay Common Shorted to Normally Closed Label 4				R
49953-49960				Module 2 Relay Common Shorted to Normally Closed Label 1				R
49961-49968				Module 2 Relay Common Shorted to Normally Closed Label 2				R
49969-49976				Module 2 Relay Common Shorted to Normally Closed Label 3				R
49977-49984				Module 2 Relay Common Shorted to Normally Closed Label 4				R
49985-49992				Module 3 Relay Common Shorted to Normally Closed Label 1				R
49993-50000				Module 3 Relay Common Shorted to Normally Closed Label 2				R
50001-50008				Module 3 Relay Common Shorted to Normally Closed Label 3				R
50009-50016				Module 3 Relay Common Shorted to Normally Closed Label 4				R
50017-50024				Module 4 Relay Common Shorted to Normally Closed Label 1				R
50025-50032				Module 4 Relay Common Shorted to Normally Closed Label 2				R
50033-50040				Module 4 Relay Common Shorted to Normally Closed Label 3				R
50041-50048				Module 4 Relay Common Shorted to Normally Closed Label 4				R
50049-50056				Module 1 Relay Common Shorted to Normally Opened Label 1				R
50057-50064				Module 1 Relay Common Shorted to Normally Opened Label 2				R
50065-50072				Module 1 Relay Common Shorted to Normally Opened Label 3				R
50073-50080				Module 1 Relay Common Shorted to Normally Opened Label 4				R
50081-50088				Module 2 Relay Common Shorted to Normally Opened Label 1				R
50089-50096				Module 2 Relay Common Shorted to Normally Opened Label 2				R
50097-50104				Module 2 Relay Common Shorted to Normally Opened Label 3				R
50105-50112				Module 2 Relay Common Shorted to Normally Opened Label 4				R
50113-50120				Module 3 Relay Common Shorted to Normally Opened Label 1				R
50121-50128				Module 3 Relay Common Shorted to Normally Opened Label 2				R
50129-50136				Module 3 Relay Common Shorted to Normally Opened Label 3				R
50137-50144				Module 3 Relay Common Shorted to Normally Opened Label 4				R
50145-50152				Module 4 Relay Common Shorted to Normally Opened Label 1				R
50153-50160				Module 4 Relay Common Shorted to Normally Opened Label 2				R
50161-50168				Module 4 Relay Common Shorted to Normally Opened Label 3				R
50169-50176				Module 4 Relay Common Shorted to Normally Opened Label 4				R
Internal Modem Card Settings Block								
50177				Ring Number/ Baud Rate				
50178				Port Config/ reserved				
50179-50180				Reserved				

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
50181				Call Delay Timer Limit				
50182				Activity Timeout Limit/ Call Fail Reset Limit				
50183				Violation Lockout Time/ Violation Limit				
50184				Log Full Limit Threshold				
50185-50200				Modem ID (32 bytes)				
50201-50205				Modem Password (10 bytes)				
50206-50208				Numeric Pager ID (7 bytes)				
50209				Numeric Pager ID/ Bitmap Set				
50210				Rings to Answer/ Reserved				
50211				Primary Retry Limit				
50212				Primary Retry Delay				
50213-50236				Primary Phone Number (48 Bytes)				
50237				Time Limit/ Reserved				
50238				Event Mask				
50239				Secondary Retry Limit				
50240				Secondary Retry Delay				
50241-50264				Secondary Phone Number (48 bytes)				
50265				Device Addresses at Gateway (Device 1, Device 2)				
50266				Device Addresses at Gateway (Device 3, Device 4)				
50267				Device Addresses at Gateway (Device 5, Device 6)				
50268				Device Addresses at Gateway (Device 7, Device 8)				
50269-50272				Reserved				
Customizable Modbus Map Settings Block								
50273-50274				Line 1, Point 1				R
50275-50784				Line 2, Point 2 - Line 256, Point 256				R
Network Settings 10/100 Card								
Auto TFTP Download Settings								
50785				Enable/ Disable				
50786				TFTP Port				
50787-50788				Client IP				
50789-50790				Server IP				
50791-50792				Default Gateway				
50793-50794				Subnet Mask				

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
50795				Email Mode				
50796				FTP Download				
50797-50860				Download Filename (128 Bytes)				
Email Client settings								
50861-50892				Email Server IP Addres / Name (64 bytes)				
50893-50924				Nxs Comm Email Processing Service IP Address / Name (64 bytes)				
50925-50956				Return / Reply Address (64 bytes)				
50957-50988				Email Subject Text (64 Bytes)				
50989-51004				Email Username (32 Bytes)				
51005-51020				Email Password (32 Bytes)				
FTP Client								
51021-51036				FTP Username (32 Bytes)				
51037-51052				FTP Password (32 Bytes)				
51053-51116				Startup Remote Default Directory (128 Bytes)				
51117-51148				FTP Server IP Address / Name (64 Bytes)				
GE Protocol (EGD)								
51149-51150				IP Address				
51151				Update Interval				
51152				Connection Type/ Bit Settings				
51153-51154				Producer Identifier				
51155-51156				Reserved				
DNP LAN/WAN								
51157				Mode/ Bitmap Set				
51158				UDP Addressing/ Validate Connection Count				
51159				TCP Listen Port				
51160				UDP Listen Port				
51161-51162				Valid IP Address 1				
51163-51164				Valid IP Address 2				
51165-61166				Valid IP Address 3				
51167-51168				Valid IP Address 4				
51169-51170				Valid IP Subnet Mask 1				
51171-51172				Valid IP Subnet Mask 2				
51173-51174				Valid IP Subnet Mask 3				

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
51175-51176				Valid IP Subnet Mask 4				
51177-51180				TCP Starting Valid Client Ports				
51181-51184				TCP Ending Valid Client Ports				
51185-51188				UDP Starting Valid Client Ports				
51189-51192				UDP Ending Valid Client Ports				
51193-51194				Multicast Group Address				
51195				UDP Respond Port				
51196-51200				Reserved				
Customizable Modbus Map Format Block								
51201				Custom Modbus Point 1 Style / Format				R
51202				Custom Modbus Point 1 Unit / Special				
51203-51712				Custom Modbus Points 2-256 Style / Format and Unit / Special				R
Energy Scale Settings								
51713				Q1234 VAh/ Q12 VARh			F65	
51714				Q34 VARh/ Q14 Wh			F65	
51715				Q1 VAh/ Q1 VARh			F65	
51716				Q4 VAh/ Q4 VARh			F65	
51717				Q23 Wh/ Q2 VAh			F65	
51718				Q2 VARh/ Q3 VAh			F65	
51719				Q3 VARh/ I^2t Phase A			F65	
51720				I^2t Phase B/ I^2t Phase C			F65	
51721				V^2t Phase A/ V^2t Phase B			F65	
51722				V^2t Phase C/ Q1 Wh			F65	
51723				Q4 Wh/ Q2 Wh			F65	
51724				Q3 Wh/ Q1234 VAh, Uncompensated			F65	
51725				Q12 VARh, Uncompensated/ Q34 VARh, Uncompensated			F65	
51726				Q14 Wh, Uncompensated/ Q23 Wh, Uncompensated			F65	
51727				+Oh/ -Oh			F65	
51728				Q14 Wh Test Mode/ Q1 VAh Test Mode			F65	
51729				Q1 VARh Test Mode/ Q4 VAh Test Mode			F65	
51730				Q4 VARh Test Mode/ Q23 Wh Test Mode			F65	
51731				Q2 VAh Test Mode/ Q2 VARh Test Mode			F65	
51732				Q3 VAh Test Mode/ Q3 VARh Test Mode			F65	

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
51733				Pulse Accumulation, Input 1/ Pulse Accumulation Input 2			F65	
51734				Pulse Accumulation, Input 3/ Pulse Accumulation Input 4			F65	
51735				Pulse Accumulation, Input 5/ Pulse Accumulation Input 6			F65	
51736				Pulse Accumulation, Input 7/ Pulse Accumulation Input 8			F65	
51737				Pulse Aggregation 1/ Pulse Aggregation 2			F65	
51738				Pulse Aggregation 3/ Pulse Aggregation 4			F65	
Update Settings Block								
51739-52974				Reserved				
52975-53102				User Memo Field (256 bytes)				
53103-53230				Name of User Who Last Updated the Profile (256 bytes)				
53231				Device Profile Version (Year)				
53232				Device Profile Version (Month/ Day)				
53233				Device Profile Version (Build)				
53234				Pro Software ID				
53235-53236				Electro Industries Device Type (Base Unit)				
53237				Electro Industries Device Type (Option 1/ Option 2)				
53238				Electro Industries Device Type (Option 3/ Option 4)				
53239				Update Programming Software Version Number (Major)				
53240				Update Programming Software Version Number (Minor)				
53241				Update Programming Software Version Number (Revision)				
53244-53247				Update Time				R
53248				Programmable Settings Block Checksum				R
12-bit RTU Block								
53249				Sanity Register			F58	W
53250				Phase A Current	+ 5 A / 0 A	5 / 2048 A sec	F59	W
53251				Phase B Current	+ 5 A / 0 A	5 / 2048 A sec	F59	W
53252				Phase C Current	+ 5 A / 0 A	5 / 2048 A sec	F59	R
53253				Phase A-N Voltage	+ 150 V / 0 V	150 / 2048 V sec	F59	R
53254				Phase B-N Voltage	+ 150 V / 0 V	150 / 2048 V sec	F59	R
53255				Phase C-N Voltage	+ 150 V / 0 V	150 / 2048 V sec	F59	R
53256				Total Watt	+ 1500 W / - 1500 W	1500 / 2048 W sec	F59	R
53257				Total VAR	+ 1500 VAR / - 1500 VAR	1500 / 2048	F59	R
53258				Phase A Watt	+ 1500 W / - 1500 W	1500 / 2048 W sec	F59	R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
53259				Phase B Watt	+ 1500 W / - 1500 W	1500 / 2048 W sec	F59	R
53260				Phase C Watt	+ 1500 W / - 1500 W	1500 / 2048 W sec	F59	R
53261				Phase A VAR	+ 1500 VAR / - 1500 VAR	1500 / 2048	F59	R
53262				Phase B VAR	+ 1500 VAR / - 1500 VAR	1500 / 2048	F59	R
53263				Phase C VAR	+ 1500 VAR / - 1500 VAR	1500 / 2048	F59	R
53264-53265				Reserved				
53266				Computed Neutral Current	+ 5 A / 0 A	5 / 2048 A sec	F59	R
53267-53268				Positive Watthour	+ 99,999,999 kWh / 0 kWh	1 kWh pri	F60	R
53269-53270				Negative Watthour	0 kWh / - 99,999,999 kWh	1 kWh pri	F60	R
53271-53272				Positive VARhour	+ 99,999,999 kVARh / 0 kVARh	1 kVARh pri	F60	R
53273-53274				Negative VARhour	0 kVARh / - 99,999,999 kVARh	1 kVARh pri	F60	R
53275				Frequency	45 Hz / 75 Hz	30 / 4096 Hz	F61	R
53276-53347				Reserved				
53348				Energy Reset				W
Action Block								
57345				Log Reset				W
57346				Maximum Reset				W
57347				Minimum Reset				W
57348				Energy Reset				W
57349				Calibrate 120 V				R/W
57350				Calibrate 150 mA				R/W
57351				Calibrate 250 mA				R/W
57352				Calibrate 500 mA				R/W
57353				Calibrate 1 A				R/W
57354				Calibrate 2.5 A				R/W
57355				Calibrate 5 A				R/W
57356				Calibrate Automatic				R/W
57357				Calibrate +1 A Phase				R/W
57358				Calibrate -1 A Phase				R/W
57359				Calibrate +1 B Phase				R/W
57360				Calibrate -1 B Phase				R/W
57361				Calibrate +1 C Phase				R/W
57362				Calibrate -1 C Phase				R/W

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
57363				Calibrate +1 Aux Phase				R/W
57364				Calibrate -1 Aux Phase				R/W
57365				Start Calibration Mode				R/W
57366				Calibrate Manual Gain Adjustment				R/W
57367				Activate first time CTPT Compensation				R/W
57368				Calibrate Manual Phase Adjustment				R/W
57369				Calibrate Multiplier 1x				R/W
57370				Calibrate Multiplier 10x				R/W
57371				Calibrate References				R/W
57372				Calibration Status Reset				R/W
57373				Calibrate Phase at 500 mA				R/W
57374				Calibrate Phase at 1 A				R/W
57375				Calibrate Phase at 5 A				R/W
57376				Calibrate Phase at 10 A				R/W
57377				Calibrate Phase at 2.5 A				R/W
57378				Preload CTPT compensation values				R/W
57380				Internal KYZ Enable				R/W
57381				Flicker Enable				R/W
57382				Undefined				R/W
57383				Calibrate Waveform 120 V				R/W
57384				Calibrate Waveform - 5 A				R/W
57385				Calibrate Waveform - DC Offset				R/W
57386				Reset Time Of Use Current Month				R/W
57387				Manual Waveform Capture				W
57388				Reset Internal Input Accumulations and Aggregations				R/W
57389				Override Data not yet Valid Block				W
57390				Refresh External IO Header Information				R/W
57391				Refresh External IO Programming Information				W
57392				Relay Locking Relay Selection				R/W
57393				Relay Locking Action Selection				R/W
57396				Reset KYZ Output Accumulations				W
57397				Reset Cumulative Demand				W
57398				Reset Historical Log 1				W

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
57399				Reset Historical Log 2				W
57400				Reset Sequence of Events Log				W
57401				Reset Digital Input Log				W
57402				Reset Digital Output Log				W
57403				Reset Flicker Log				W
57404				Reset Waveform Log				W
57405				Reset PQ Log				W
57406				Reset System Event Log				W
57407				Reset Total Average Power Factor				W
57408				Reset Time of Use Active Registers				W
57409				DNP over TCP Network Card connect/disconnect Status				W
57410-57411				DNP over TCP Connection IP Address				W
57412				DNP over TCP Connection Client Port Number				W
Factory Calibration Block								
60929-60932				Factory Calibration Block Timestamp				R
60933-60936				Factory Calibration Timestamp				R
60937-60938				Gain factor for Van				R
60939-60944				Gain factors for Vbn, Vcn, Vxn				R
60945-60946				Gain Factor for Ia 150 mA				R
60947-60948				Gain Factor for Ia 250 mA				R
60949-60950				Gain Factor for Ia 500 mA				R
60951-60952				Gain Factor for Ia 1 A				R
50953-60954				Gain Factor for Ia 2.5 A				R
60955-60956				Gain Factor for Ia 5 A				R
60957-60968				Gain factors for Ib				R
60969-60992				Gain factors for Ic, Ix				R
60993				Unused				R
60994				Phase Compensation for Phase A 500 mA				R
60995				Phase Compensation for Phase A 1 A				R
60996				Phase Compensation for Phase A 2.5 A				R
60997				Phase Compensation for Phase A 5 A				R
60998				Phase Compensation for Phase A 10 A				R
60999-61003				Phase Compensation for Phase B				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
61004-61008				Phase Compensation for Phase C				R
61009-61025				Unused				R
61026				Calibration Checksum				R
CTPT Compensation Calibration Block								
61027-61030				CTPT Compensation Calibration Block Timestamp				R
61031-61034				CTPT Compensation Calibration Timestamp				R
61035-61036				Gain factor for Van				R
61037-61042				Gain factors for Vbn, Vcn, Vxn				R
61043-61044				Gain Factor for Ia 150 mA				R
61045-61046				Gain Factor for Ia 250 mA				R
61047-61048				Gain Factor for Ia 500 mA				R
61049-61050				Gain Factor for Ia 1 A				R
61051-61052				Gain Factor for Ia 2.5 A				R
61053-61054				Gain Factor for Ia 5 A				R
61055-61066				Gain factors for Ib				R
61067-61090				Gain factors for Ic, Ix				R
61091				Unused				R
61092				Phase Compensation for Phase A 500 mA				R
61093				Phase Compensation for Phase A 1 A				R
61094				Phase Compensation for Phase A 2.5 A				R
61095				Phase Compensation for Phase A 5 A				R
61096				Phase Compensation for Phase A 10 A				R
61097-61101				Phase Compensation for Phase B				R
61102-61106				Phase Compensation for Phase C				R
61107-61123				Unused				R
61124				Calibration Checksum				R
Calibration Modification Block								
61185				Calibration Modification Selection				R/W
61186-61189				Calibration Timestamp				R/W
61190-61191				Gain factor for Van				R/W
61192-61197				Gain factors for Vbn, Vcn, Vxn				R/W
61198-61199				Gain Factor for Ia 150 mA				R/W
61200-61201				Gain Factor for Ia 250 mA				R/W

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
61202-61203				Gain Factor for Ia 500 mA				R/W
61204-61205				Gain Factor for Ia 1 A				R/W
61206-61207				Gain Factor for Ia 2.5 A				R/W
61208-61209				Gain Factor for Ia 5 A				R/W
61210-61221				Gain factors for Ib				R/W
61222-61245				Gain factors for Ic, Ix				R/W
61246				Unused				R/W
61247				Phase Compensation for Phase A 500 mA				R/W
61248				Phase Compensation for Phase A 1 A				R/W
61249				Phase Compensation for Phase A 2.5 A				R/W
61250				Phase Compensation for Phase A 5 A				R/W
61251				Phase Compensation for Phase A 10 A				R/W
61252-61256				Phase Compensation for Phase B				R/W
61257-61261				Phase Compensation for Phase C				R/W
61262-61278				Unused				R/W
61279				Calibration Checksum				R/W
61280				Calibration Modification Checksum				R/W
Operational Communication Settings Block								
65025				Operational Address, Port 4 (I/O)				R
65026				Operational Protocol & Baud Rate, Port 4 (I/O)				R
65027				Operational Parity & Stop Bits, Port 4 (I/O)				R
65028				Operational Data Bits & Response Delay, Port 4(I/O)				R
65029				Operational Address, Port 3				R
65030				Operational Protocol & Baud Rate, Port 3				R
65031				Operational Parity & Stop Bits, Port 3				R
65032				Operational Data Bits & Response Delay, Port 3				R
65033				Operational Address, Port 2				R
65034				Operational Protocol & Baud Rate, Port 2				R
65035				Operational Parity & Stop Bits, Port 2				R
65036				Operational Data Bits & Response Delay, Port 2				R
65037				Operational Address, Port 1 (232/485)				R
65038				Operational Protocol & Baud Rate, Port 1 (232/485)				R
65039				Operational Parity & Stop Bits, Port 1 (232/485)				R

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
65040				Operational Data Bits & Response Delay, Port 1 (232/485)				R
Diagnostic Block								
65041-65042				Data Valid Bits				R
Device Identification Block 2								
65088				196 Xilinx Version / 320 Xilinx Version				R
65089-65096				Nexus Comm Boot Firmware Variation String 1			F1	R
65097-65104				Nexus Comm Boot Firmware Variation String 2			F1	R
65105-65112				Nexus Comm Boot Firmware Variation String 3			F1	R
65113-65120				Nexus Comm Boot Firmware Variation String 4			F1	R
65121-65128				Nexus Comm Boot Firmware Variation String 5			F1	R
65129-65136				Nexus Comm Boot Firmware Variation String 6			F1	R
65137-65144				Nexus Comm Boot Firmware Variation String 7			F1	R
65145-65152				Nexus Comm Boot Firmware Variation String 8			F1	R
65153-65160				Nexus DSP Boot Firmware Variation String 1			F1	R
65161-65168				Nexus DSP Boot Firmware Variation String 2			F1	R
65168-65176				Nexus DSP Boot Firmware Variation String 3			F1	R
65177-65184				Nexus DSP Boot Firmware Variation String 4			F1	R
65185-65192				Nexus DSP Boot Firmware Variation String 5			F1	R
65193-65200				Nexus DSP Boot Firmware Variation String 6			F1	R
65201-65208				Nexus DSP Boot Firmware Variation String 7			F1	R
65209-65216				Nexus DSP Boot Firmware Variation String 8			F1	R
65217-65224				Nexus DSP Run-Time Firmware Variation String 1			F1	R
65225-65232				Nexus DSP Run-Time Firmware Variation String 2			F1	R
65233-65240				Nexus DSP Run-Time Firmware Variation String 3			F1	R
65241-65248				Nexus DSP Run-Time Firmware Variation String 4			F1	R
65249-65256				Nexus DSP Run-Time Firmware Variation String 5			F1	R
65257-65264				Nexus DSP Run-Time Firmware Variation String 6			F1	R
65265-65272				Nexus DSP Run-Time Firmware Variation String 7			F1	R
65273-65280				Nexus DSP Run-Time Firmware Variation String 8			F1	R
DSP Diagnostic Block								
65281-65312				DSP Diagnostic				R
Password Block								
65316-65320				User Password	Fixed Length String			W

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
65321				Password State	Enumeration			R
65322				Sealing Switch State	Enumeration			R
65326				Password Lock	Enumeration			R/W
65327				Password Sequence / Status	Enumeration			R
65328				Password Command	Enumeration			R/W
65332-65336				New Password A	Fixed Length String			W
65340-65344				New Password B	Fixed Length String			W
Dynamic Configuration Block								
65345				NVRAM Configuration				R
65346				IRIG-B State				R
65347				Network Card				R
65348				Modem Card				R
65349				Sealing Switch Installation				R
Hardware Options Block								
65361				Form / 4 KYZ				R
65362				Com Port 4 / Com Port 3				R
65363				Com Port 2 / Com Port 1				R
65364				1 Amp / 300 V				R
65365				Sealing Switch / Memory				R
65366								R
65367								R
65368								R
Flash Control Block								
65409				Nexus Comm Operation Indicator				R
65410				Nexus Comm FLASH Sequence & Status / FLASH Command				R
65411				FLASH Locked Port				R/W
65412				Nexus Comm FLASH Code Checksum	65535 / 0	1		R/W
65413				Nexus Comm FLASH Programmable Settings Checksum	65535 / 0	1		R/W
65414				Nexus DSP Operation Indicator				R
65415				Nexus DSP FLASH Sequence & Status / FLASH Command				R
65416				Nexus DSP FLASH Code Checksum	65535 / 0	1		R/W
65417				Port To Port Communications, Port 4 (I/O)				R/W
65418				Port To Port Communications, Port 3				R/W

Address	Line	Pt	DNP Obj	Description	Range	Units	Type	R/W
65419				Port To Port Communications Port 2				R/W
65420				Port To Port Communications Port 1 (232/485)				R/W
65421				Port To Port Communications Port 5 (DIAG)				R/W
65425-65434				Nexus Comm FLASH Code Hex Line				W
65441-65450				Nexus Comm FLASH Extended Code Hex Line				W
65457-65466				Nexus Comm FLASH Product History Hex Line				W
65473-65482				Nexus Comm FLASH Programmable Settings Hex Line				W
65489-65498				Nexus DSP FLASH Code Hex Line				W
Enhanced Serial Number								
65533-65534				Enhanced Serial Number	4,294,967,295 / 0	1		R
Serial Number								
65535-65536				Serial Number	4,294,967,295 / 0	1		R

Chapter 3
Communication Data Formats

- This chapter expands upon information listed in the Nexus® meter Modbus Register Map (Chapter 2). Section Headings (F1, F2, etc) refer to the value in the Register Map's "Type" column.

3.1: Type F1 Null Terminated ASCII String

- Length: Depends on the reading.

- Each register contains two bytes. Each byte stands for an ASCII character. The printable portion of the string is terminated with a Null character (ASCII 00H). Any characters after the terminating Null are ignored.

  Example:
  Registers 00001 – 00008, the Device Name, might contain the following data:

Address	00001		00002		00003		00004		00005		00006		00007		00008	
Value	3031H		3037H		204EH		6578H		7573H		2031H		3237H		3200H	
Bytes	30H	31H	30H	37H	20H	43H	65H	78H	75H	73H	20H	31H	32H	37H	37H	32H
ASCII	'0'	'1'	'0'	'7'	' '	'N'	'e'	'x'	'u'	's'	' '	'1'	'2'	'7'	'2'	Null
Register	"01"		"07"		" N"		"ex"		"us"		" 1"		"27"		"2"	
String	"0107 Nexus 1272"															

3.2: Type F2 Fixed Length ASCII String

- Length: Depends on the reading.

- Each register contains two bytes. Each byte stands for an ASCII character. All bytes are significant. There is no terminating character.

  Example:
  Registers 00073 – 00074, the Nexus® Comm Boot Version Number, might contain the following data:

Address	00073		00074	
Value	3030H		3134H	
Bytes	30H	30H	31H	34H
ASCII	'0'	'0'	'1'	'4'
Register	"00"		"14"	
String	"0014"			

3.3: Type F3 Time Stamp

- Length: 4 Registers (8 bytes)

- Each register contains two bytes. Each byte contains a binary number representing up to two digits in a part of date and time. The units for each byte are century, year, month, date, hour, minute, second and 10 millisecond. Hour is in 24-hour form, 00H = 0 = 12 AM, 01H = 1 = 1 AM, …, 0BH = 11 = 11 AM, 0CH = 12 = 12 PM, 0DH = 13 = 1 PM, …, 17H = 23 = 11 PM.

  Example:
  Registers 00081 – 00084, On Time, might contain the following data:

Address	00081		00082		00083		00084	
Value	1404H		0619H		0913H		3056H	
Bytes	14H	04H	06H	19H	09H	13H	30H	56H
Decimal	20	04	6	25	9	19	48	86
Unit	Century	Year	Month	Date	Hour	Minute	Second	10 Millisecond
Date	June 25, 2004 9:19:48.86 AM							

3.4: Type F4 Day of Week

- Length: 1 Register (2 bytes)
- This register contains a 16-bit number, associated with the days of the week as follows:

Value	Day of Week	Value	Day of Week
0001H	Sunday	**0005H**	Thursday
0002H	Monday	**0006H**	Friday
0003H	Tuesday	**0007H**	Saturday
0004H	Wednesday		

3.5: Type F5 Secondary 1 Cycle RMS Voltage or Current

- Length: 2 Registers (4 bytes)
- Range: +1,048,576 V^2 / 0 V^2 or +65536 I^2 / 0 I^2 (1262 or 1272)
- Unit: 1/4906 V^2 secondary or 1/65536 A^2 secondary (1262 or 1272)
- These registers together are a four-byte unsigned integer. Conversion into secondary voltage or current involves multiplying by the appropriate scale and taking the square root of that value.
- Depending on the unit and hardware, the range and unit of voltage readings differs. For a Nexus® 1262/72 meter,the range goes to +1,048,576 V^2 with a unit of 1/4096 V^2.

Example:
Registers 00094-00095, 1 cycle Phase A-N Voltage, on a Nexus® 1262/72 meter might contain the following data:

Address	00094	00095
Value	378AH	AC18H
4-byte unsigned integer (Hex)	378AAC18H	
4-byte unsigned integer (Decimal)	931834904	
V^2 secondary	227498.755859 V^2 secondary	
V secondary	476.968 V secondary	

Example:
Registers 00102-00103, 1 cycle Phase A Current, might contain the following data:

Address	00102	00103
Value	0019H	4000H
4-byte unsigned integer (Hex)	00194000H	
4-byte unsigned integer (Decimal)	1654784	
I^2 secondary	25.25 A^2 secondary	
I secondary	5.5 A secondary	

3.6: Type F6 High Speed Input Delta and Current State

- Length: 1 Register (2 bytes)
- This register has two bytes. Each byte has eight bits. The bits in each byte are associated with the 8 High Speed Inputs, the least significant bit with Input 1, through to the most significant bit with Input 8.
- The most significant byte contains Delta information about High Speed Inputs, the least significant byte contains the Current State of the High Speed Inputs. For Delta bits, a bit value of 1 means one or more were noticed on this input during the last cycle, a bit value of 0 means no changes were noticed on this input during the last cycle. For Current State bits, a bit value of 1 means the input is open, a bit value of 0 means the input is closed.

  Example:
  Register 00118, 1 cycle High Speed Input Delta and Current State, might contain the following data.

Address	00118															
Value	0461H															
Bytes	04H								61H							
	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1
	High Speed Input Delta								High Speed Input Current State							
	8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1
Meaning	_	_	_	_	_	Change	_	_	Clsd	Opn	Opn	Clsd	Clsd	Clsd	Clsd	Opn
Interpretation	Inputs 7, 6 and 1 are now open and Input 3 changed state at least once during the last cycle.															

3.7: Type F7 Secondary Voltage, Current, VA, VAR, Watts, Hz or Flicker

- Length: 2 Registers (4 bytes)
- Range: +32767 / -32768
- Unit: 1/65536 V, A, VA, VAR, W or Hz
- The registers together contain a four-byte signed (2's compliment) integer. Positive values have the most significant bit clear, and have the same magnitude as an unsigned integer. Negative values have the most significant bit set. The magnitude of a negative value is found by complimenting (inverting) all of the bits and adding 1.

  Example:
  Registers 00153 – 00154, Tenth second Phase A VAR might contain the following data:

Address	00153	00154
Value	0001H	4000H
4-byte signed integer (Hex)	00014000H	
Most significant bit	0	
4-byte integer (Decimal)	+81920	
1/65536 VAR secondary	+1.25 VAR secondary	

Register 00153 – 00154, Tenth second Phase A VAR, might contain the following data:

Address	00153	00154
Value	FFFEH	C000H
4-byte signed integer (Hex)	FFFEC000H	
Most significant bit	1	
Compliment	00013FFFH	
Increment	00014000H	
4-byte signed integer (Decimal)	-81920	
1/65536 VAR secondary	-1.25 VAR secondary	

3.8: Type F8 Power Factor

- Length: 1 Register (2 bytes)
- Range: 3.999 / 0.000
- Unit: 0.001 PF
- This register contains a 16 bit unsigned number. This number varies from 0000H – 0F9FH, or 0 to 3999 in decimal. This representation allows for expressing Power Factor from 0 to 1 in the four quadrants, as follows:

Quadrant	Value		PF	Value		PF	Value		PF
	Hex	Dec		Hex	Dec		Hex	Dec	
1	0000H	0	0.000	01F4H	500	0.500	03E7H	999	0.999
4	03E8H	1000	1.000	05DCH	1500	0.500	07CFH	1999	0.001
3	07D0H	2000	0.000	09C4H	2500	0.500	0BB7H	2999	0.999
2	0BB8H	3000	1.000	0DACH	3500	0.500	0F9FH	3999	0.001

- Application of sign and lead/lag labels (is 9CFH -0.500 Lead or +0.500 Lag) depends on the Programmable Setting called Power Factor Labeling, located in Register 46019, described in Section 7.19.

Example:
Register 00171, Tenth second Phase A Power Factor, might contain the following data:

Address	00171
Value	0390H
Decimal	912
PF	Q1, 0.912

Example:
Register 00171, Tenth second Phase A Power Factor, might contain the following data:

Address	00171
Value	0C10H
Decimal	3088
PF	Q2, 0.912

3.9: Type F9 Angle

- Length: 1 Register (2 byte)
- Range: +180 / -180
- Unit: 0.01 degree
- This register contains a 16-bit signed (2's compliment) number. Positive values have the most significant bit clear, and have the same magnitude as an unsigned integer. Negative values have the most significant bit set. The magnitude of a negative value is found by complimenting (inverting) all of the bits and adding 1.

  Example:
  Register 00175, Tenth second Phase A-N Voltage to Auxiliary Voltage Phase Angle, might contain the following data:

Address	00175
Value	08BBH
Most significant bit	0
Decimal	+2235
Angle	+22.35 Degrees

  Example:
  Register 00175, Tenth second Phase A-N Voltage to Auxiliary Voltage Phase Angle, might contain the following data.

Address	00175
Value	F745H
Most significant bit	1
Compliment	08BAH
Increment	08BBH
Decimal	-2235
Angle	-22.35 Degrees

3.10: Type F10 Percentage

- Length: 1 Register (2 bytes)
- Range: +327.67% / - 327.68%
- Unit: 0.01%
- This register contains a 16-bit signed (2's compliment) number. Positive values have the most significant bit clear, and have the same magnitude as an unsigned integer. Negative values have the most significant bit set. The magnitude of a negative value is found by complimenting (inverting) all of the bits and adding 1.

  Example:
  Register 00234, One second Voltage Imbalance, might contain the following data:

Address	00234
Value	08BBH
Most significant bit	0
Decimal	+2235
Percent	+22.35%

Example:
Register 00234, One second Voltage Imbalance, might contain the following data:

Address	00234
Value	F745H
Most significant bit	1
Compliment	08BAH
Increment	08BBH
Decimal	-2235
Percent	-22.35%

3.11: Type F11 Energy Counter (Packed BCD / Secondary)

- Length: 4 Registers (8 bytes)
- Range: 9,999,999,999,999,999 / 0 VAh, VARh or Wh secondary
- Unit: 1 VAh, VARh or Wh secondary
- These registers contain 8 bytes of Packed BCD. Each register contains 2 bytes. Each byte contains 2 nibbles. Each nibble represents a decimal digit from 0-9. All together, there are 16 nibbles, and therefore a 16-digit decimal number can be represented.

  Example:
  Registers 00982 – 00985, VAhour, might contain the following data:

Address	00982				00983				00984				00985			
Value	0000H				0001H				0534H				1284H			
Bytes	00H		00H		00H		01H		05H		34H		12H		84H	
Nibbles	0H	0H	0H	0H	0H	0H	0H	1H	0H	5H	3H	4H	1H	2H	8H	4H
Digit	0	0	0	0	0	0	0	1	0	5	3	4	1	2	8	4
Unit	P	T			G			M			k					
VAh	105,341,284 VAh secondary															

3.12: Type F12 Energy Counter (Binary / Secondary)

- Length: 4 Registers (8 bytes)
- Range: 9,999,999,999,999,999 / 0 VAh, VARh or Wh secondary
- Unit: 1 VAh, VARh or Wh secondary
- These registers contain an 8-byte unsigned integer.

  Example:
  Registers 01002-01005, VAhour, might contain the following data:

Address	01002	01003	01004	01005
Value	0000H	0000H	0647H	6164H
8-byte unsigned integer	0000000006476164H			
Decimal	105341284			
VAh	105,341,284 VAh secondary			

3.13: Type F13 Phase Sequence

- Length: 1 Register (2 bytes)
- This register contains a 16-bit unsigned integer, associated with the Phase Sequence as follows:

Value (Hex)	Phase Sequence
0000H	A-B-C
0001H	C-B-A

3.14: Type F14 Average Status

- Length: 1 Register (2 bytes)
- This register contains a 16-bit unsigned integer, associated with the Average Status as follows:

Value (Hex)	Average Status
0000H	Not yet available
0001H	Available

- This is the Status Register for **Block Window Average (02605-02683)** and **Rolling Window Average (02684-02768)**.

  If a value is not yet computed by the Nexus® device, the Status value will be zero. When the value is zero, Communicator EXT software displays asterisks for values.

In Modbus, a value will be returned based on the type of reading.

Negative Maximums and Positive Minimums return: 7FFFFFFFH or 2,147,483,647.
Positive Maximums and Negative Minimums return: 80000000H or +/- 2,147,483,647.

No Timestamp will be assigned to the reading.

3.15: Type F15 Limit States

- Length: 1 Register (2 bytes)
- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the 16 Limits, the most significant bit of the most significant byte with Limit 1 (or 17), through to the least significant bit of the least significant byte with Limit 16 (or 32).
- A bit value of 1 means that the particular limit has been passed, while a bit value of 0 means that the particular limit has not been passed.

  Example:
  Register 02769, Limit States, Value 1 Comparison, 1–16, might contain the following data:

Address	02769															
Value	0461H															
Bytes	04H								61H							
Bits	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1
Points	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Passed	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No	No	No	Yes
Interpretation	Limits 6, 10, 11 and 16 are currently passed; all others are not passed.															

3.16: Type F16 Low Speed Input States

- Length: 1 Register (2 bytes)
- This register has two bytes. Each byte has eight bits. The bits in the most significant byte are associated with the eight Status Inputs, the most significant bit with input 8, through to the least significant bit with Input 1. The least significant byte is undefined.
- A bit value of 1 means the input is open; a bit value of 0 means the input is closed.

  Example:
  Register 02773, Low Speed Input States, might contain the following data:

Address	02773															
Value	5100H															
Byte	51H								00H							
Bits	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0
									Undefined							
Input	8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1
Meaning	Closed	Open	Closed	Open	Closed	Closed	Closed	Open								
Interpretation	Inputs 7, 5 and 1 are open; all other inputs are closed.															

3.17: Type F17 External Digital Input States

- Length: 1 Register (2 bytes)
- This register has two bytes. Each byte has eight bits. The bits in the Least significant byte are associated with the eight External Digital Inputs in an External Digital Input Module, the most significant bit with input 8, through to the least significant bit with Input 1. The most significant byte is undefined.
- A bit value of 1 means the input is open; a bit value of 0 means the input is closed.

  Example:
  Register 02774, Digital Input States, Module 1, might contain the following data:

Address	02774															
Value	0051H															
Bytes	00H								51H							
Bits	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1
	Undefined								External Digital Input States							
Input	8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1
Meaning									Closed	Open	Closed	Open	Closed	Closed	Closed	Open
Interpretation	Inputs 7, 5 and 1 are open; all other inputs are closed.															

3.18: Type F18 External Input Accumulations

- Length: 2 Registers (4 bytes)
- Range: 4,294,967,295/0
- Unit: Accumulated Transitions
- These registers contain a 4-byte unsigned integer.

  Example:
  Register 02775-02776, Input Accumulations, Module 1, might contain the following data:

Address	02775	02776
Value	0647H	6164H
4-byte unsigned integer	06476164H	
Decimal	105341284	
Accumulated Transitions	105,341,284 Accumulated Transitions	

3.19: Type F19 Energy Counter (Packed BCD / Primary)

- Length: 4 Registers (8 bytes)
- Range: 9,999,999,999,999,999/0 VAh, VARh or Wh primary
- 1 VAh, VARh or Wh primary
- These registers contain 8 bytes of Packed BCD. Each register contains 2 bytes. Each byte contains 2 nibbles. Each nibble represents a decimal digit from 0-9. All together, there are 16 nibbles. Therefore, a 16-digit decimal number can be represented.

  Example:
  Register 02850-02853, VAhour, might contain the following data:

Address	02850				02851				02852				02853			
Value	0000H				0001H				0534H				1284H			
Bytes	00H		00H		00H		01H		05H		34H		12H		84H	
Nibbles	0H	0H	0H	0H	0H	0H	0H	1H	0H	5H	3H	4H	1H	2H	8H	4H
Digit	0	0	0	0	0	0	0	1	0	5	3	4	1	2	8	4
Unit	P	T			G		M				k					
VAh	105,341,284 VAh primary															

3.20: Type F20 Energy Counter (Binary / Primary)

- Length: 4 Registers (8 bytes)
- Range: 9,999,999,999,999,999/0 VAh, VARh or Wh primary
- 1 VAh, VARh or Wh primary
- These registers contain an 8-byte unsigned integer.

  Example:
  Register 02898-02901, VAhour, might contain the following data:

Address	02898	02899	02900	02901
Value	0000H	0000H	0647H	6164H
8 byte unsigned integer	0000000006476164H			
Decimal	105341284			
VAh	105,341,284 VAh primary			

3.21: Type F21 Year

- Length: 1 Register (2 bytes)
- Each byte contains a binary number representing up to two digits in a part of a year. The units for each byte are century and year.

  Example:
  Register 34821, TOU Calendar Year 1 Calendar Year, might contain the following data:

Address	34821	
Value	1363H	
Bytes	13H	63H
Decimal	19	99
Unit	Century	Year
Date	1999	

3.22: Type F22 TOU Profile per Day

- Length: 1 Register (2 bytes)
- Each byte stands for a different day of the year. Days are listed in calendar order, including the allowance for a leap year. Each byte contains an enumeration indicating which TOU Profile to use for that day. The enumerations are as follows:

Value (Hex)	Profile
00H	Profile1
01H	Profile2
02H	Profile3
03H	Profile4
04H	Profile5
05H	Profile6
06H	Profile7
07H	Profile8

Value (Hex)	Profile
08H	Profile9
09H	Profile10
0AH	Profile11
0BH	Profile12
0CH	Profile13
0DH	Profile14
0EH	Profile15
0FH	Profile16

Example:
Register 34954, TOU Calendar Year 1 Mar 2 (Mar1) / Mar 3 (Mar 2), might contain the following data:

Address	34954	
Value	0305H	
Bytes	03H	05H
Decimal	3	5
Meaning	Profile 3	Profile 5
Day	Mar 2	Mar 3
Day (Leap Year)	Mar 1	Mar 2
Meaning	Profile 3 on Mar 2	Profile 5 on Mar 3
Meaning (Leap Year)	Profile 3 on Mar 1	Profile 5 on Mar 2

3.23: Type F23 TOU Profile Status

- Length: 1 Register (2 bytes)
- This register contains an enumeration indicating the Status of the Profile. The enumeration is as follows:

Value (Hex)	Status
00H	Not Used
01H	Programmed

Example:
Register 35107, TOU Calendar Year 1 Profile 1 Status, might contain the following data:

Address	35107
Value	0001H
Decimal	1
Meaning	TOU Year 1 Profile 1 is programmed

3.24: Type F24 TOU Daily Profile Register Assignment

- Length: 1 Register (2 bytes)

- Each register contains 2 bytes. Each byte contains 2 nibbles. Each nibble contains an enumeration indicating which TOU Register is to be used during the indicated 15-minute period. The enumerations are as follows:

Value (Hex)	Register
0H	Register1
1H	Register2
2H	Register3
3H	Register4
4H	Register5
5H	Register6
6H	Register7
7H	Register8

Example:
Register 35108, TOU Calendar Year 1 Profile 1 for 00:00, 00:15, 00;30 & 00:45, might contain the following data:

Address	35108			
Value	1234H			
Bytes	12H		34H	
Nibbles	1H	2H	3H	4H
Decimal	1	2	3	4
Period	00:00-00:14	00:15-00:29	00:30-00:44	00:45-00:59
Meaning	Profile 1 from 00:00-00:14			
	Profile 2 from 00:15-00:29			
	Profile 3 from 00:30-00:44			
	Profile 4 from 00:45-00:59			

3.25: Type F25 TOU Profile Monthly End Day

- Length: 1 Register (2 bytes)
- Each byte stands for a different month of the year. Each byte contains a binary number indicating what the last day of the monthly billing cycle should be for that month. Billing periods are up to and including the end day.

  Example:
  Register 35507, TOU Calendar Year 1 Monthly End Day Jan & Feb, might contain the following data:

Address	35507	
Value	0E0FH	
Bytes	0EH	0FH
Decimal	14	15
Month	Jan	Feb
Day	Jan 14	Feb 15
Meaning	Billing Months run through Jan 14, from Jan 15 through Feb 15 and start on Feb 16	

3.26: Type F26 TOU Calendar DST Enable / Average Selection

- Length: 1 Register (2 bytes)
- The first byte contains an enumeration indicating whether Daylight Savings Time is enabled for TOU computations. The enumeration is as follows:

Value (Hex)	Selection
00H	Daylight Savings Time is disabled.
01H	Daylight Savings Time is enabled with default parameters.
02H	Daylight Savings Time is enabled with custom parameters.

- The default parameters are to start on the first Sunday in April at 01:59:59.999 and to end on the last Sunday in October at 01:59:59.999. Custom parameters means to use of the dates programmed in the Start and End Date Daylight Savings Time registers from the appropriate TOU Calendar Year.

- The second byte contains an enumeration indicating which form of average is to be used for Peak and Coincident Demand functions. The enumeration is as follows:

Value (Hex)	Average
00H	Block Window Average
01H	Rolling Window Average
02H	Cumulative Demand

Example:
Register 35729, TOU Calendar Year0 DST Enable / Average Selection, might contain the following data:

Address	35729	
Value	0001H	
Bytes	00H	01H
Decimal	0	1
Purpose	DST Enabled	Average Selection
Meaning	DST Disabled for TOU	Rolling Window Averages for TOU Peak & Coincident Demand

3.27: Type F27 TOU Upload Calendar Window Sequence / Status

- Length: 1 Register (2 bytes)

- The first byte contains an unsigned integer acting as a sequence number for actions involving the Time of Use Upload Calendar Block. The sequence number increments with action performed.

- The second byte contains an enumeration indicating the status of the last action involving the Time of Use Upload Calendar Block. The enumeration is as follows:

Value (Hex)	Status
00H	Action Failed.
01H	Action Passed.
02H	Action is not yet Finished.

Example:
Register 36608, TOU Upload Calendar Window Sequence / Status, might contain the following data:

Address	36608	
Value	4202H	
Bytes	42H	02H
Decimal	66	2
Purpose	Sequence	Status
Meaning	Sequence #66	Unfinished
Meaning	Sequence #66 is Unfinished	

3.28: Type F28 TOU Upload Calendar Window ID

- Length: 1 Register (2 bytes)
- Range: 1 - 14
- This register contains an enumeration indicating which TOU Calendar Window is being uploaded through the Upload Window. The values 1 - 14 indicate Windows 1 - 14.

  Example:
  Register 36609, TOU Upload Calendar Window ID, might contain the following data:

Address	36609
Value	0DH
Decimal	13
Meaning	Window 13

3.29: Type F29 TOU Upload Calendar Window Data

- Length: 1 Register (2 bytes)
- This register contains data intended to update a portion of the TOU Calendar.

3.30: Type F30 TOU Upload Calendar Window Checksum

- Length: 1 Register (2 bytes)
- This register contains an unsigned integer which is the checksum for the rest of the TOU Upload Calendar Window.

  Example:
  Register 36736, TOU Upload Calendar Window Checksum, might contain the following data:

Address	36736
Value	3245H
Decimal	12869
Meaning	Checksum is 12869

3.31: Type F31 TOU Calendar Selection

- Length: 1 Register (2 bytes)
- This register is used to indicate the TOU Calendar Year desired to be loaded into the TOU Calendar Window. The enumeration is as follows:

Value (Hex)	Year
0000H	Year 1
0001H	Year 2
0002H - 0013H	Year 3 - Year 20
0014H - FFFFH	Undefined

3.32: Type F32 TOU Calendar Header Status / Year Status

- Length: 1 Register (2 bytes)
- The first byte indicates the status of the TOU Calendar Header Block. The second byte indicates the status of the requested TOU Calendar Year. The enumeration for each byte is as follows:

Value (Hex)	Status
00H	Action Failed.
01H	Action Passed.
02H	Action is not yet Finished.

3.33: Type F33 Temperature

- Length: 1 Register (2 bytes)
- Range: +327.67 C / - 327.68 C
- Unit: 0.01 degree C
- This register contains a 16-bit signed (2's compliment) number. Positive values have the most significant bit clear and have the same magnitude as an unsigned integer. Negative values have the most significant bit set. The magnitude of a negative value is found by complimenting (inverting) all of the bits and adding 1.

  Example:
  Register 05946, Nexus® meter's Internal Temperature, might contain the following data:

Address	05946
Value	08BBH
Most significant bit	0
Decimal	+2235
Celsius	+22.35 degree C

Register 05946, Nexus® meter's Internal Temperature, might contain the following data:

Address	05946
Value	F745H
Most significant bit	1
Compliment	08BAH
Increment	08BBH
Decimal	-2235
Celsius	-22.35 degree C

3.34: Type F34 Limit and Relay Logic States

- Length: 1 Register (2 bytes)
- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the 16 Limits or Relays, the most significant bit of the most significant byte with Limit 1 (or 17, or Relay 1), through to the least significant bit of the least significant byte with Limit 16 (or 32, or Relay 16).
- A bit value of 1 means TRUE, while a bit value of 0 means FALSE. TRUE and FALSE result from the AND, OR, XOR, Hysteresis and NOT of two input values of 1 or 0.

  Example:
  Register 05979, Limit States, Combinations, 1 - 16, might contain the following data:

Address	05979															
Value	0461H															
Bytes	04H								61H							
Bits	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1
Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Logic (T/F)	F	F	F	F	F	T	F	F	F	T	T	F	F	F	F	T
Interpretation	Limit Combinations, 6, 10, 11 and 16 are currently TRUE; all others are FALSE.															

3.35: Type F35 Relay Delays

- Length: 1/2 Register (1 byte) (2 per Register)
- This register has two bytes. Each byte contains an unsigned integer which is a count-down delay. A relay logic tree must be stable for the duration of the delay before triggering a relay. Delays are preloaded when the Gate G value changes. They are decremented every pass thereafter, until they reach zero.

  Example:
  Register 06000, Delay Timer, Relay 1 / Relay 2, might contain the following data:

Address	06000	
Value	0400H	
Bytes	04H	00H
Interpretation	Relay 1 has 4 seconds of delay remaining, Relay 2 has no delay remaining.	

3.36: Type F36 Desired Relay States

- Length: 1 Register (1 bytes)
- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the 16 Relays, the most significant bit of the most significant byte with Relay 1, through the least significant bit of the least significant byte with Relay 16.
- A bit value of 1 means the relay should be energized (connected to Normal Open); a bit value of 0 means the relay should be de-energized (connected to Normal Close). These are states pending transmission to the relays.

  Example:
  Register 06008, Desired Relay States, Relays 1-16, might contain the following data:

Address	06008															
Value	0461H															
Bytes	04H								61H							
Bits	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1
Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
State (NO/NC)	NC	NC	NC	NC	NC	NO	NC	NC	NC	NO	NO	NC	NC	NC	NC	NO
Interpretation	Relays 6, 10, 11 and 16 should be energized; all others de-energized.															

3.37: Type F37 Relays Pending Update

- Length: 1 Register (2 bytes)
- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the 16 Relays, the most significant byte with Relay 1 through to the least significant bit of the least significant byte with Relay 16.

A bit value of 1 means the physical relay needs to be updated, a bit value of 0 means the physical relay does not need to be updated.

Example:
Register 06009, Relays Pending Updates 1-16, might contain the following data:

Address	06009															
Value	0461H															
Bytes	04H								61H							
Bits	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1
Point	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Relay	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Update?						Yes				Yes	Yes					Yes
Interpretation	Relays 6, 10, 11 and 16 need to be updated, all others are in their correct states.															

3.38: Type F38 Shadowed Relay States

- Length: 1 Register (2 bytes)

- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the 16 Relays, the most significant byte with Relay 1 through to the least significant bit of the least significant byte with Relay 16.

  A bit value of 1 means the relay is supposed to be energized (connected to Normal Open), a bit value of 0 means the relay is supposed to be de-energized (connected to Normal Close). These states have not necessarily been confirmed by polling the relay device.

  Example:
  Register 06010, Shadowed Relay States 1-16, might contain the following data:

Address	06010															
Value	0440H															
Bytes	04H								40H							
Bits	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
Point	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Relay	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
State (NO/NC)	NC	NC	NC	NC	NC	NO	NC	NC	NC	NO	NC	NC	NC	NC	NC	NC
Interpretation	Relays 6 and 10 are supposed to be energized, all other de-energized, not necessarily confirmed.															

3.39: Type F39 Confirmed Polled Relay States

- Length: 1 Register (2 bytes)

- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the 16 Relays, the most significant byte with Relay 1 through to the least significant bit of the least significant byte with Relay 16.

  A bit value of 1 means the relay was energized (connected to Normal Open) when last polled, a bit value of 0 means the relay was de-energized (connected to Normal Close) when last polled. These states may not be current on the relays, since operations may have occurred since the last poll.

  Example:
  Register 06011, Confirmed Polled Relay States 1-16, might contain the following data:

Address	06011															
Value	0461H															
Bytes	04H								61H							
Bits	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1
Point	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Relay	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
State (NO/NC)	NC	NC	NC	NC	NC	NO	NC	NC	NC	NO	NO	NC	NC	NC	NC	NO
Interpretation	Relays 6, 10, 11 and 16 were energized when last polled; all others were de-energized.															

3.40: Type F40 Valid Flags for Confirmed Relay States

- Length: 1 Register (2 bytes)

- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the 16 Relays, the most significant byte with Relay 1 through to the least significant bit of the least significant byte with Relay 16.

  A bit value of 1 means the confirmed states in Confirmed Polled Relay States register (06011) are valid, a bit value of 0 means the confirmed states have not yet been polled.

  Example:
  Register 06012, Valid Flags for Confirmed Relay States, might contain the following data:

Address	06012															
Value	FFFOH															
Bytes	FFH								FOH							
Bits	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
Point	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Relay	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Valid?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interpretation	Confirmed states for Relays 13-16 have not yet been polled and are not yet valid.															

3.41: Type F41 Locked Relays, Relays 1-16

- Length: 1 Register (2 bytes)

- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the 16 Relays, the most significant byte with Relay 1 through to the least significant bit of the least significant byte with Relay 16.

  A bit value of 1 means the relay has been locked, overriding the Relay Logic Tree for this relay. A bit value of 0 means the relay is operating normally according to the Relay Logic Tree.

  Example:
  Register 06013, Locked Relays, Relays 1-16, might contain the following data:

Address	06013															
Value	0461H															
Bytes	04H								61H							
Bits	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1
Point	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Relay	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Locked?						Lock				Lock	Lock					Lock
Interpretation	Relays 6, 10, 11 and 16 are locked; all other relays are under control of the Relay Logic Tree.															

3.42: Type F42 Locked Relay States

- Length: 1 Register (2 bytes)

- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the 16 Relays, the most significant byte with Relay 1 through to the least significant bit of the least significant byte with Relay 16.

  These bits are valid only if the relays have been selected for locking, as reported in the Locked Relays register, 06013.

  A bit value of 1 means the relay is locked energized (connected to Normal Open). A bit value of 0 means the relay is locked de-energized (connected to Normal Close).

  Example:
  Register 06014, Locked Relay States, Relays 1-16, might contain the following data:

Address	06014															
Value	0461H															
Bytes	04H								61H							
Bits	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1
Point	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Relay	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NO/NC	NC	NC	NC	NC	NC	NO	NC	NC	NC	NO	NO	NC	NC	NC	NC	NO
Interpretation	Relays 6, 10, 11 and 16 are energized; all others are de-energized, if they are locked.															

3.43: Type F43 Miscellaneous Flags

- Length: 1 Register (2 bytes)

- This register has 2 bytes. Each byte has eight bits. The bits in these bytes are associated with various miscellaneous functions as follows:

Bit	Point	Meaning
15 (MSB)	0	NVRAM Battery Status
14-1	1-14	Undefined
0 (LSB)	15	Undefined

- NVRAM Battery Status:

  For a Nexus® 1262/1272 meter using Mark II hardware and firmware and with the optional memory installed, this bit reports the status of the battery.

  For a Nexus® 1252 meter, this bit is undefined.

  A value of “0” indicates the battery is OK.
  A value of “1” indicates that the battery is not OK.
  Battery status is reevaluated on power-up and approximately every 24 hours thereafter.

  Example:
  Register 06039, Miscellaneous Flags, might contain the following data:

Addr	06039															
Value	8000H															
Bytes	80H								00H							
Bits	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Point	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Interpretation	NVRAM Battery is Low.															

3.44: Type F44 Digital Input Module Data Status

- Length: 1 Register (2 bytes)

- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the status of the data received from the Digital Input Modules as follows:

Bit	Point	Meaning
15 (MSB)	0	Status of Data from Digital Input Module 1 (Modbus Register 0AD5H)
14	1	Status of Data from Digital Input Module 2 (Modbus Register 0AE6H)
13	2	Status of Data from Digital Input Module 3 (Modbus Register 0AF7H)
12	3	Status of Data from Digital Input Module 4 (Modbus Register 0B08H)
11-0 (LSB)		Undefined

Digital Input Module Data Status:

A bit value of 0 means that the data from this Digital Input Module is not yet valid. Either the module is not present or has not yet been polled.

A bit value of 1 means that the data from this Digital Input Module has been polled at least once and is valid.

Example:
Register 06111, Digital Input Module Data Status, might contain the following data:

Addr	06111															
Value	8000H															
Bytes	80H								00H							
Bits	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Point		1	2	3												
Digital Input Module	1	2	3	4												
Status	OK	-	-	-												
Interpretation	Data from Digital Input Module 1 (Register 0AD5H) is valid, data from Digital Input Modules 2-4 are not valid.															

3.45: Type F45 Analog Input Modules Data Status

- Length: 2 Registers (4 bytes)

- This register has two bytes. Each byte has eight bits. The bits in these bytes are associated with the status of the data received from the Analog Input Modules as follows:

Reg	Bit	Point	Meaning
0	15 (MSB)	0	Status of Analog Input 1, Module 1 (Modbus Register 173AH)
0	14-8	1-7	Status of Analog Input 2-8, Module 1 (Modbus Register 173BH-174IH)
0	7-0	8-15	Status of Analog Input 1-8, Module 2 (Modbus Register 1742H-1749H)
1	15-8	16-23	Status of Analog Input 1-8, Module 3 (Modbus Register 174AH-175IH)
1	7-0	24-31	Status of Analog Input 1-8, Module 4 (Modbus Register 1752H-1759H)

- Analog Input Module Data Status:

  A bit value of 0 means that the data from this Analog Input Module is not yet valid. Either the module is not present or has not yet been polled.

  A bit value of 1 means that the data from this Analog Input Module has been polled at least once and is valid.

  Example:
  Register 06112, Analog Input Modules Data Status, might contain the following data:

Addr	06112															
Value	8000H															
Bytes	80H								00H							
Bits	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Point	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Analog Input Module	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2
Input	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Status	OK	OK	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interpretation	Inputs 1-2 of Analog Input Module 1 are valid (Registers 173AH-173BH), Inputs 3-8 of Analog Input Module 1 are not valid, Inputs 1-8 of Analog Input Module 2-4 are not valid.															

3.46: Type F46 High Byte of Modbus Register (Signed)

- Length: 1 byte
- High Byte of Modbus Register, Signed
- Range: +127 / -128
- Unit: 1

3.47: Type F47 High Byte of Modbus Register (Unsigned)

- Length: 1 byte
- High Byte of Modbus Register, Unsigned
- Range: 255 / 0
- Unit: 1

3.48: Type F4 Low Byte of Modbus Register (Signed)

- Length: 1 byte
- Low Byte of Modbus Register, Signed
- Range: +127 / -128
- Unit: 1

3.49: Type F49 Low Byte of Modbus Register (Unsigned)

- Length: 1 byte
- Low Byte of Modbus Register, Unsigned
- Range: 255 / 0
- Unit: 1

3.50: Type F50 Two-Byte (Signed)

- Length: 2 bytes
- Two-Byte, Signed
- Range: +32,767 / -32,768
- Unit: 1

3.51: Type F51 Two-Byte (Unsigned)

- Length: 2 bytes
- Two-Byte, Unsigned
- Range: 65,535 / 0
- Unit: 1

3.52: Type F52 Four-Byte (Signed)

- Length: 4 bytes
- Four-Byte, Signed
- Range: +2,147,483,647 / -2,147,483,648
- Unit: 1

3.53: Type F53 Four-Byte (Unsigned)

- Length: 4 bytes
- Four-Byte, Unsigned
- Range: 4,294,967,295 / 0
- Unit: 1

3.54: Type F54 Eight-Byte (Signed)

- Length: 8 bytes
- Eight-Byte, Signed
- Range: +9,223,372,036,854,775,807 / -9,223,372,036,854,775,808
- Unit: 1

3.55: Type F55 Eight-Byte (Unsigned)

- Length: 8 bytes
- Eight-Byte, Unsigned
- Range: 18,446,744,073,709,551,615 / 0
- Unit: 1

3.56: Type F56 Flicker Countdowns

- Length: 1 Register (2 bytes)
- Range: 65,535 / 0 seconds
- Unit: 1 second
- This register contains an unsigned integer which is count-down in seconds until the end of a Flicker interval, Short Term or Long Term.

  Example:
  Register 06489, Short Term Flicker Countdown, might contain the following data:

Addr	06489
Value	0400H
Decimal	1024
Interpretation	1024 seconds remain until the next Short Term Flicker is computed.

3.57: Type F57 Accumulation in the Interval

- Length: 1 Register (2 bytes)
- Range: 465,535 / 0
- Unit: VAh, VARh, Wh secondary or pulses
- These registers contain a 2-byte unsigned integer.

  Example:
  Register 06397, Total VA hour (Quadrants 1+2+3+4) in the Interval, Secondary, might contain the following data:

Addr	06397
Value	0647H
Decimal	1607
VAh Secondary	1607 VAh Secondary

3.58: Type F58 12-bit RTU Sanity Register

- Length: 1 Register
- This register indicates the status of the meter. A normally functioning meter reports a value of 0x00000 or 0. Any non-zero value indicates that the unit is operating improperly.

3.59: Type F59 12-bit RTU Current, Voltage, W, VAR

- Length: 1 Register (2 bytes)
- Range: +5A / 0 A, + 150V / 0 V, +1500 W, VAR / -1500 W, VAR
- Unit: 5 / 2048 A, 150 / 2048 V, 1500 / 2048 W, VAR
- Each register contains a 16-bit integer. The integer is a 12-bit unsigned representation of an offset-encoded signed value. The 12-bit value, with an unsigned range of 0 to +4095, is actually a signed number that has been offset by 2048, with a range of -2048 to +2047.

  Example:

  Register D001H, Phase A Current, might contain the following data:

Addr (Hex)	D001H
Value	0C00H
12-bit unsigned integer (Hex)	C00H
12-bit unsigned integer (Decimal)	3072
Offset	2048
12-bit signed integer (Decimal)	+1024
5 / 2048 A sec	2.500 A sec

  Register D007H, Total Watt, might contain the following data:

Addr (Hex)	D007H
Value	0400H
12-bit unsigned integer (Hex)	400H
12-bit unsigned integer (Decimal)	1024
Offset	2048
12-bit signed integer (Decimal)	-1024
1500 / 2048 W sec	-750 W sec

3.60: Type F60 Energy Counter

- Length: 2 Registers (4 bytes)
- Range: +99,999,999 / 0 or 0 / -99,999,999 kWh, kVARh
- Unit: 1 kWh, kVARh
- Each pair of registers represents an Energy Counter in primary. Each register contains a value from 0 to 9,999 (0x00000 - 0x0270F), representing 4 digits of an Energy Counter. The first register is in units of 10's of MegaWatthour or Mega VARhour. The second register is in units of kilo Watthour or kilo VARhour. Combined, the pair of registers report up to 100 GWh primary of energy.

  Example:
  Registers 53267-53268, Positive Watthour, might contain the following data:

Addr	53267				53268			
Value (Hex)	04D2H				162EH			
Value (Decimal)	1234				5678			
Digit	1	2	3	4	5	6	7	8
Unit	G		M		k			
kWh primary	12,345,678 kWh primary							

3.61: Type F61 12-bit RTU Frequency

- Length: 1 Register (2 bytes)
- Range: 75 Hz / 45 Hz
- Unit: 30 / 4096 Hz
- This register contains a 16-bit unsigned integer. The 16-bit integer has been constrained to the bounds of an unsigned 12-bit integer, 4095 to 0. The Frequency represented by this register is offset by 45 Hz.

  Example:
  Register 53250, Phase A Current, might contain the following data:

Addr	53250
Value	0810H
12-bit Unsigned Integer (Hex)	810H
12-bit Unsigned Integer (Decimal)	+2058
30 /4096 A sec	15.073 Hz
+45 Hz Offset	60.073 Hz

3.62: Type F62 Scaled Pulse Accumulation, Aggregation or Average

- Length: 4 Registers (8 bytes)
- Range: +9,223,372,036,854,776,807 / -9,223,372,036,854,776,808
- Unit: 1 Unit
- This register contains an 8-byte signed (2's complement) number. Positive values have the most significant bit clear and have the same magnitude as an unsigned integer. Negative values have the most significant bit set. The magnitude of a negative value is found by complementing (inverting) all of the bits and adding 1.
- Type F62 does not use the multiplier from the Energy Scale Settings from the meter's Device Profile. It uses the multiplier from the Nexus® Internal Input Pulse Accumutions Setup screen (Device Profile > Revenue & Energy Settings > Pulse Accumulations).

  Example:
  Registers 05834 - 05837, Block Window Average Aggregation 1, might contain the following data:

Addr	05834	05835	05836	05837
Value	0000H	0000H	0001H	2345H
8 byte Signed Integer	00000000000012345H			
Most Significan Bit	0			
Decimal	+74565			
Accumulated Transitions	+74,565 Units			

  Registers 05834- 05837, Block Window Average Aggregation 1, might contain the following data:

Addr (Hex)	05834	05835	05836	05837
Value	FFFFH	FFFFH	FFFEH	DCBBH
8 byte Signed Integer	FFFFFFFFFFFEDCBBH			
Most Significan Bit	1			
Complement	0000000000012344H			
Increment	0000000000012345H			
Decimal	-74565			
Accumulated Transitions	-74,565 Units			

3.63: Type F63 Log Index

- Length: 1 Register (2 bytes)
- Range: 65,535 / 0
- Unit: 1 Unit
- This register contains a 2-byte MSB unsigned integer, which represents the First or Last Index for a given Log. First Indexes represent the Index of the First (Oldest) record in a log. Last Indexes represent the Index of the Last (Newest) record in a log. The value of 0x0FFFF for the Last Index indicates that the log is empty.

3.64: Type F64 Scaled Energy

- Length: 2 Registers (4 bytes)
- Range: 99 / 0 through 999,999,999 / 0 (variable, 2-9 digits)
- Unit: 10^{-7} through 10^{6} units (variable)
- This register contains an 4-byte signed integer. The range and resolution of a given reading is controlled by programmable Energy Scale Settings, which govern both the range of the reading (from 2 to 9 digits) and the units of the reading (from 7 decimal places of Wh (10^{-7}) to no decimal places of MWh (10^{6}). Refer to Type F65 for a description of the Scaled Energy Programmable Setting (Device Profile > Revenue & Energy Settings > Energy Scaling).

  Example:
  Registers 06912-06913, Total VAh (Quadrant 1+2+3+4) Scaled Primary, might contain the following data:

Address	06912	06913
Value	075BH	CD15H
4-byte Hex	075HCD15H	
Decimal	123,456,789	

  If the Programmable Settings indicated 5 decimal places of WH, then the interpreted value would be 1,234.56789 Wh.
  If the Programmable Settings indicated 0 decimal places of MWh, then the interpreted value would be 123,456,789 MWh.

3.65: Type F65 Scaled Energy Setting

- Length: 1/2 a Register (1 byte)

- Each register contains 2 bytes. Each byte contains settings for a base quantity. The format of a byte is as follows:

Bit	7	6	5	4	3	2	1	0
Meaning	Digits			Unit		Decimal Places		

Digits is a 3-bit field, which is offset by 2 to represent from 2 to 9 displayable digits.
Unit is a 2-bit field, where the values from 0 to 2 represent units of Wh (10^0), k (10^3) and M (10^6).
The value 3 is undefined and is treated the same as 2, signifying M (10^6).
Decimal Places is a 3-bit field, where the bits represent from 0 to 7 decimal places.

Examples:
For the following, the Q1234 VAh has a current value internally of 123,456,789.0123 VAh.

Register CA00H		**Digits**	**Unit**	**D.P.**	**Pattern**	**Reading in Register 1AFFH-1B00H**		**Display**
Hex	Binary					Hex	Decimal	
20xxH	001 00 000	3 digits	VAh, 10^0	0	xxx VAh	00000315H	789	789 VAh
8BxxH	100 01 011	6 digits	kVAh, 10^3	3	xxx.xxx kVAh	0006F855H	456789	456.789 kvAh
88xxH	100 01 000	6 digits	kVAh, 10^3	0	xxxxxx kVAh	0001E240H	123456	123,456 kVAh
93xxH	100 10 011	6 digits	MVAh, 10^6	3	xxx.xxx MVAh	0001E240H	123456	123.456 MVAh
72xxH	011 10 010	5 digits	MVAh, 10^6	2	xxx.xx MVAh	00003039H	12345	123.45 MVAh
C2xxH	110 00 010	8 digits	VAh, 10^0	2	xxxxxx.xx VAh	02B90135H	45678901	456,789.01 VAh

- The Scaled Energy Programmable Setting can be accessed by clicking:
  Device Profile > Revenue & Energy Settings > Energy Scaling.

3.66: Type 66 TOU Upload Calendar Window Locked to Port

- Length: 1 Register (2 bytes)
- When read, this register contains an enumeration indicating to which port the TOU Upload Calendar Window is locked. The enumeration is as follows:

0x00000	Port 4 (I/O)
0x00001	Port 3
0x00002	Port 2
0x00003	Port 1 (RS232/RS485)
0x00004	Diagnostic Port
0x000FF	Not locked to any port

- Writing the value 0x00000 to this register requests the TOU Upload Calendar Window to be locked to that port.

  Example:
  Register 36607, TOU Upload Calendar Window Locked to Port, might contain the following data:

Address	36607
Value	0002H
Decimal	2
Meaning	TOU Calendar Upload Window is Locked to Port 2.

3.67: Type 67 K-Factor

- Length: 1 Register (2 bytes)
- Range: +327.67 / - 327.68
- Unit: 0.01

  This register contains a 16-bit signed (2's complement) number. Positive values have the most significant bit clear and have the same magnitude as an unsigned integer. Negative values have the most significant bit set. The magnitude of a negative value is found by complementing (inverting) all of the bits and adding 1.

  Example:

  Register 00390, Maximum K-Factor Phase A Current, might contain the following data:

Example:

Register 00390, Maximum K-Factor Phase A Current, might contain the following data:

Address	00390
Value	08BBH
Most significant bit	0
Decimal	+2235
K-Factor	+22.35

Register 0185H, Maximum K-Factor Phase A Current, might contain the following data:

Address	00390
Value	F745H
Most significan bit	1
Complement	08BAH
Increment	08BBH
Decimal	-2235
K-Factor	-22.35

Chapter 4
Modbus Register Map Notes

4.1: Modbus Register Map Notes

■ The information in this chapter refers to the Register Map's "Notes" column.

1) Time information can be supplied from one of two different sources, an internal Real Time Clock or an external GPS Clock. The internal Real Time Clock is a chip containing its own battery, which is used to maintain the passage of time when the Nexus® unit is without operational power. It is similar to those used in PCs and it reports time accurate to the second. The external GPS clock is supported through an IRIG-B connection, allowing synchronization and accuracy to the hundredth of a second (10 milliseconds).

2) These registers, when read, always report the time as reported by the Nexus® unit, either from the internal Real Time Clock or the external GPS Clock. Values written here for the purpose of updating the internal Real Time Clock are not read back.

3) These values are calculated by the Nexus® Comm Processor, as part of the Waveform Capture function. These values are only calculated if the Nexus® meter has Waveform Logging Capability.

4) Phase Voltages are in secondary Volts. To convert this value into primary Volts, multiply by the Phase Voltage PT Ratio, composed of the Phase Voltage PT Ratio Numerator and Denominator (Registers 45917 - 45918 and 45919 - 45920).

5) Auxiliary Voltage is in secondary Volts. To convert this value into primary Volts, multiply by the Auxiliary Voltage PT Ratio, composed of the Auxiliary Voltage PT Ratio Numerator and Denominator (Registers 45921 - 45922 and 45923 - 45924).

6) Phase and Calculated Neutral Currents are in secondary Amps. To convert this value into primary Amps, multiply by the Phase Current CT Ratio, composed of the Phase Current CT Ratio Numerator and Denominator (Registers 45909 - 45910 and 45911 - 45912).

7) Measured Neutral Current is in secondary Amps. To convert this value into primary Amps, multiply by the Measured Neutral Current CT Ratio, composed of the Measured Neutral Current CT Ratio Numerator and Denominator (Registers 45913 - 45914 and 45915 - 45916).

8) Measured Neutral is the RMS produced by samples from a CT around the Neutral Line and connected to the Neutral current terminals of the Nexus® 1252 meter. Calculated Neutral is the RMS produced by adding the three Phase Current samples together and treating the result as a sample of the neutral line.

9) VA, VAR and Watts are in secondary. To convert this value into primary VA, VAR or Watts, multiply by the Phase Voltage PT Ratio, composed of the Phase Voltage PT Ratio Numerator and Denominator (Registers 45917 - 45918 and 45919 - 45920) and by the Phase Current CT Ratio, composed of the Phase Current CT Ratio Numerator and Denominator (Registers 45909 - 45910 and 45911 - 45912).

10) VAhour, VARhour and Watthour are in secondary. To convert this value into primary VAhour, VARhour or Watthour, multiply by the Phase Voltage PT Ratio, composed of the Phase Voltage PT Ratio Numerator and Denominator (Registers 45917 - 45918 and 45919 - 45920) and by the Phase Current CT Ratio, composed of the Phase Current CT Ratio Numerator and Denominator (Registers 45909 - 45910 and 45911 - 45912).

Chapter 5
Logs, Port Control and Updating Programmable Settings

5.1: Downloading Logs - Overview

- A Modbus Master uses a Log Window consisting of 64 Registers to retrieve logs from a Nexus® meter Slave. A log is divided into numbered sections called Indexes, which are transferred through the Log Window in sequence. Each of the Nexus® meter's four ports act independently, allowing multiple Modbus Masters access to all the retrievable data in a Nexus® meter Slave.

- Downloading any log involves the following types of Registers:

- **Log Snapshot Header:** Header blocks for the different logs begin at Register 36865: This block of Registers holds the following information about the log:

  —**Memory Size:** 4-byte unsigned integers representing the amount of memory, in bytes, allocated to the log.

  —**Record Size:** an unsigned integer representing the size, in bytes, of a record in the log.

  —**First Index:** an unsigned integer representing the index of the first (oldest) record in the log.

  —**Last Index:** an unsigned integer representing the index of the last (newest) record in the log. The value FFFFH indicates that the log is empty.

  —**First Time Stamp:** These Registers hold the time stamp from the first (oldest) record in

Byte	Range	Description
0	0 – 255	century
1	0 – 99	year
2	1 – 12	month
3	1 – 31	day
4	0 – 23	hour
5	0 – 59	minute
6	0 – 59	second
7	0 – 99	centisecond

  —**Last Time Stamp:** These Registers hold the time stamp from the last (newest) record in the Log. The byte order and description are the same for the first time stamp.

  —**Valid Bitmap:** These Registers hold the bit flags indicating whether the Nexus® meter Slave recognizes the lines in the Historical Log Settings block (the block beginning at Register 45204). The first bit represents the validity of the last Data Pointer in the Historical Log Settings. A value of 1 means the Data Pointer is acceptable and can be stored. A value of 0 means that the Data Pointer is invalid or unrecognized and can not be stored.

—**Max Records:** an unsigned integer representing the total number of records the log is capable of holding. In order to maintain a one-for-one relationship in parallel logs (Sequence of Events State and Sequence of Events Snapshot logs, for example), the maximum number of records that a log can store is defined by the log that holds the fewest records. Logs capable of holding more records are restricted.

- **Window Index** tells the Modbus Master which 128-byte section of the log the Window is using to retrieve the log. The block of Window Index Registers for the different logs begin at 38145. When the Modbus Master writes a new value to the Window Index, a new section of the log will fill the Window. For example, when the Index is 0000H, the first 128 bytes of the log are available in the Window; when the Index is 0001H, the second 128 bytes of the log are available in the Window, and so on. The designation "first 128 bytes of the log" is a physical description based on the absolute addresses of the memory allocated to the log. The first (oldest) record in the log may not be located at the beginning of the log.

  —When a value other than FFFFH is written to the Window Index, the Index is updated and the log is paused, preventing the addition of new records while the log is accessed. A 30-second timer is initiated on these writes. Should the timer expire (a new index is not written within 30 seconds), the log will continue logging.

  —Should multiple ports access the same log simultaneously, the log will pause while any 30-second timer is running. The log will continue logging only when all ports time-out or write FFFFH to their Index Register.

  —When read, the Window Index returns the number of the Index currently in use by the Window. When written, the Window Index sets a new Index for the Window to retrieve the log.

- **Window Mode** defines the two available modes the Window may use to retrieve a log; **Download Mode** and **Time Stamp Mode**. The Window Mode block begins at Register 38209.

  —**Download Mode:** In Download Mode, the Log Window accesses consecutive 128-byte blocks of the log. For example, when the Window Index is 0000H, the first 128 bytes of the log are available in the Window; when the Index is 0001H, the second 128 bytes of the log are available in the Window. The designation "first 128 bytes of the log" is a physical description based on the absolute addresses of the memory allocated to the log. The first (oldest) record in the log may not be located at the beginning of the log.

  —**Time Stamp Mode:**. In Time Stamp Mode, the Log Window access the time stamps of the records in blocks of 16 time stamps at a time. When the Window Index is 0000H, the time stamps of the first 16 records (records 0–15) in the log are available in the Window; when the Window Index is 0001H, the time stamps of the second 16 records (records 16–31) in the log are available in the Window, and so on. The designation "first 128 bytes of the log" is a physical description based on the absolute addresses of the memory allocated to the log. The first (oldest) record in the log may not be located at the beginning of the log.

- **Log Window:** The Log Window is a 64-register, 128-byte view of a log. The Window Index defines which part of a log is currently available in the Window. Log Windows begin at Register 38273.

- **Log Reset:** This Register (located at 57345), when written to, causes all logs to be cleared. This

action should be performed only under the following two circumstances:

—When the programmable settings are modified, such that data already in the logs is invalidated. For example, any modifications involving the record size or organization of the contents of a snapshot would require the logs to be cleared of any previous data.

—When the Run-Time code is upgraded, resulting in one of the following: a redefinition of the layout or meaning of the programmable settings or in altered behavior or capabilities of the logs.

—**Note:** This action should be performed automatically by software in either of these cases, and should not be an action directly available to the user.

5.1.1: Steps for Downloading a Log

- The steps below outline the process for downloading a log. Details and examples for downloading time stamps and records follow in Sections 5.1.2 and 5.1.3.

1. Read the Nexus® meter's Programmable Settings Block (Registers 45057–53248). This information will be used to interpret the data retrieved from the log.
2. Pause the log by writing an initial, non-FFFFH value to the Log Window Index Register.
3. Read and store the Log Header information.
4. Determine the starting Window Index and Window offset.
5. Determine the largest Window Index and Window offset.
6. Determine the ending Window Index and Window offset.
7. Set the Window Mode to Download Mode.
8. Set the Log Window Index to the starting Window Index.
9. Read the Window from starting offset to the end of the Window.
10. Increment the Window Index.
11. Read the Window from beginning to end.
12. Repeat steps 10 and 11 until the largest or ending Window Index is reached.

    —If the largest is reached, go to step 13.
    —If the ending is reached, go to step 15.

13. Read window from beginning up to (but not including) the largest offset.
14. Set Window Index to 0. Go to step 12.

15. Read Window from the beginning up to (but not including) the ending offset.

16. Un-pause the log by writing FFFFH to the Log Window Index Register.

5.1.2: Downloading Time Stamps with Examples

■ The following steps detail the process for downloading time stamps from a log, using values from Historical Log 1 as an example.

1. Read the Nexus® meter's Programmable Settings Block (Registers 45057–53248).

2. Pause the log by writing an initial, non-FFFFH value to the Log Window Index Register.

   Example: Write 0000H to the Window Index for Historical Log 1, Register 38145.

3. Read and store the Log Header information.

   Example: Historical Log 1 Snapshot Header

Address	Description	Example Value
36865–36866	Historical Log 1 Snapshot Memory Size	1851392
36867	Historical Log 1 Snapshot Record Size	64
36868	Historical Log 1 Snapshot First Index	501
36869	Historical Log 1 Snapshot Last Index	500
36870–36873	Historical Log 1 Snapshot First Time Stamp	7/10/99 12:32:00.000
36874–36877	Historical Log 1 Snapshot Last Time Stamp	7/30/99 14:40:00.000
35878–36881	Historical Log 1 Snapshot Valid Bitmap	FFFC 0000
36882	Historical Log 1 Snapshot Max Records	28928

4. Determine the starting Window Index and starting Window Offset using these formulas:
   Starting Window Index = Int([8 x First Index]/128).
   Starting Window Offset = (8 x First Index) % 128.

   Example:
   Starting Window Index: Int (8 x 501/128) = Int (31.3125) = 31.
   Starting Window Offset: (8 x 501) % 128 = 40.

5. Determine the largest Window Index and the largest Window Offset using these formulas:
   Largest Window Index = Int ([8 x Max Records]/128).
   Largest Window Offset = (8 x Max Records) % 128.

   Example:
   Largest Window Index = Int([8 x 28928]/128) = Int(1808) = 1808
   Largest Window Offset = (8 x 28928) % 128 = 0

6. Determine the ending Window Index and the ending Window Offset using these formulas:
   Ending Window Index = Int([8 x {Last Index + 1}]/128)
   Ending Window Offset = (8 x [Last Index +1]) % 128

Example:
Ending Window Index = Int([8 x {500 + 1}]/128 = Int(31.3125) = 31
Ending Window Offset = (8 x [500 + 1]) % 128 = 40

7. Set the Window Mode to Download Mode by writing the Download Mode code (0000H) to the Log Window Mode Register.

   Example:
   Write the value 0000H to the Window Mode for Historical Log 1, Register 38209.

8. Set the Window Index to the Starting Window Index.

   Example:
   Write the value 31 (001FH) to the Historical Log 1 Window Index, Register 38145.

9. Read Window from starting offset to end of Window:
   Starting offset = First Register of Window + (starting Window offset/2).

   Example:
   38273 + (40/2) = 38293
   Read from 38293 – 38336.

10. Increment the Window Index.

    Example:
    Write the value 32 (0020H) to the Historical Log 1 Window Index, Register 38145.

11. Read the Window from beginning to end.

    Example:
    Read the Historical Log 1 Window from Register 38273 to 38336.

12. Repeat steps 10 and 11 until the Largest or Ending Window Index is reached.

    —If the Largest Window Index is reached, go to step 13.
    —If the Ending Window Index is reached, go to step 15.

    Example:
    If Window Index = 1808, go to step 13. If Window Index = 31, go to step 15.

13. Read Window from beginning up to (but not including) the Largest Offset.
    Largest Offset = First Register of Window + (largest Window offset/2).

    Example: (Index = 1808).
    38273 + (0/2) = 38273.
    Read from 38273 up to 38273; therefore, read nothing.

14. Set Window Index to 0. Go to step 12.

Example:
Write the value 0 (0000H) to the Window Index Historical Log 1, Register 38145.

15. Read Window from the beginning up to (but not including) the Ending Offset.
    Ending Offset = First Register of Window + (Ending Window Offset/2).

    Example: (Index = 31).
    38273 +40/2 = 38293.
    Read from 38273 up to (but not including) 38293; therefore, read 38273 – 38292.

16. Un-pause the log by writing FFFFH to the Window Index.

    Example:
    Write the value FFFFH to the Window Index for Historical Log 1, Register 38145.

5.1.3: Downloading Records with Examples

- The following steps detail the process for downloading records from a log, using values from an Historical Log 1 as an example.

1. Read the Nexus® meter's Programmable Settings Block (Registers 45057–53248).

2. Pause the log by writing an initial, non-FFFFH value to the Log Window Index Register.

   Example: Write 0000H to the Window Index for Historical Log 1, Register 38145.

3. Read and store the Log Header information.

   Example: Historical Log 1 Snapshot Header

Address	Description	Example Value
36865–36866	Historical Log 1 Snapshot Memory Size	1851392
36867	Historical Log 1 Snapshot Record Size	64
36868	Historical Log 1 Snapshot First Index	501
36869	Historical Log 1 Snapshot Last Index	500
36870–36873	Historical Log 1 Snapshot First Timestamp	7/10/99 12:32:00.000
36874–36877	Historical Log 1 Snapshot Last Timestamp	7/30/99 14:40:00.000
36878–36881	Historical Log 1 Snapshot Valid Bitmap	FFFC 0000
36882	Historical Log 1 Snapshot Max Records	28928

4. Determine the starting Window Index and starting Window Offset using these formulas:
   Starting Window Index = Int([Record Size x First Index]/128).
   Starting Window Offset = (Record Size x First Index) % 128.

   Example:
   Starting Window Index: Int(64 x 501/128) = Int (250.5) = 250.
   Starting Window offset: (64 x 501) % 128 = 64.

5. Determine the largest Window Index and the largest Window Offset using these formulas:
   Largest Window Index = Int([Record Size x Max Records]/128).

Largest Window Offset = (Record Size x Max Records) % 128.

Example:
Largest Window Index = Int([64 x 28928]/128) = Int(14464) = 14464.
Largest Window Offset = (64 x 28928) % 128 = 0.

6. Determine the ending Window Index and the ending Window offset using these formulas:
   Ending Window Index = Int([Record Size x {Last Index + 1}]/128).
   Ending Window Offset = (Record Size x [Last Index +1]) % 128.

   Example:
   Ending Window Index = Int([64 x {500 + 1}]/128 = Int(250.5) = 250.
   Ending Window Offset = (64 x [500 + 1]) % 128 = 64.

7. Set the Window Mode to Download Mode by writing the Download Mode code (0000H) to the Log Window Mode Register.

   Example:
   Write the value 0000H to the Window Mode for Historical Log 1, Register 38209.

8. Set the Window Index to the Starting Window Index.

   Example:
   Write the value 250 (00FAH) to the Historical Log 1 Window Index, Register 38145.

9. Read Window from starting offset to end of Window:
   Starting offset = First Register of Window + (starting Window offset/2).

   Example:
   38273 + (64/2) = 38305.
   Read from 38305 – 38356.

10. Increment the Window Index.

    Example:
    Write the value 251 (00FBH) to the Historical Log 1 Window Index, Register 38145.

11. Read the Window from beginning to end.

    Example:
    Read the Historical Log 1 Window from Register 38273 to 38336.

12. Repeat steps 10 and 11 until the largest or ending Window Index is reached.
    —If the largest Window Index is reached, go to step 13.
    —If the ending Window Index is reached, go to step 15.

    Example:
    If Window Index = 14464, go to step 13.
    If Window Index = 250, go to step 15.

13. Read Window from beginning up to (but not including) the Largest Offset.
    Largest Offset = First Register of Window + (Largest Window Offset/2).

    Example: (Index = 14464).
    38273 + (0/2) = 38273.
    Read from 38273 up to 38273; therefore, read nothing.

14. Set Window Index to 0. Go to step 12.

    Example:
    Write the value 0 (0000H) to the Window Index Historical Log 1, Register 38145.

15. Read Window from the beginning up to (but not including) the ending offset.
    Ending offset = First Register of Window + (ending Window offset/2).

    Example: (Index = 250).
    38273 + 64/2 = 38305.
    Read from 38272 up to (but not including) 38304; therefore, read 38273 – 38304.

16. Un-pause the log by writing FFFFH to the Window Index.

    Example:
    Write the value FFFFH to the Window Index for Historical Log 1, Register 38145.

5.1.4: Downloading Logs with Auto Index and Modbus Extensions

- **Auto Incrementing Interface**

- **Auto Increment Configuration (Register 39423, 0x099FE)**

  When read, this register returns the configuration in use by the Auto Increment Log Window, below, to access logs on this port. When written, this register sets the configuration used by the Auto Increment Log Window, below, to access logs on this port. Each port accesses a separate, independent configuration through this register allowing all four ports to access logs with different configurations.

  The least significant byte indicates which log is being accessed. The appropriate values are:

0x000	Historical Log 1
0x001	Historical Log 2
0x002	Sequence of Events State Log
0x003	Sequence of Events Snapshot Log
0x004	Digital Input State Log
0x005	Digital Input Snapshot Log
0x006	Digital Output State Log
0x007	Digital Output Snapshot Log
0x008	Flicker Log
0x009	Waveform Trigger Log
0x00A	System Event Log

0x00B	Waveform Sample Log
0x00C	PQ Log
0x00D	Reset Log
0x00E-0x0FF	Undefined

The most significant byte defines the following modes, Paused Download Mode (0x000), and Running Download Mode (0x001).

In Paused Download mode (0x000), the log being accessed is paused - new records are not added to the log while it is paused.

In Running Download mode (0x001), the log being accessed is not paused - new records may be added to the log. When downloading in this mode, it is possible that records may be overwritten before, or even during, access to that record.

- **Auto Increment Window Index (0x099FF)**

When read, this register returns the index used by the Auto Increment Log Window, below, to access logs on this port. When written, this register sets the index used by the Auto Increment Log Window, below, to access logs on this port. Each port accesses a separate, independent index through this register, allowing all four ports to access different areas of logs at the same time.

When read, the index is incremented before being returned in the Modbus response. If the Auto Increment Mode is Paused Download Mode (0x001xx in register 0x099FE), the appropriate log is paused, preventing the addition of new records while the log is being accessed. A 30-second timer is initiated on these reads. Should the timer run out (the index is not incremented/read in 30 seconds), the appropriate log will be allowed to continue logging.

When a value of 0x0FFFF is written to this register, this signifies that the port is finished accessing the appropriate log, and the 30-second timer is canceled and the appropriate log will be allowed to continue logging.

Should multiple ports access the same log simultaneously, the log will be paused while either 30-second timer is running; the log will be allowed to continue logging only when both ports time-out or write 0x0FFFF to their index register.

- **Auto Increment Log Window (0x09A3F)**

These registers are a 128-byte window into a log, as specified in the Auto Increment Configuration (register 0x099FE). Depending on the Auto Increment Window Index, a different 128-byte area of a log can be accessed.

- **Download using Auto Increment Window Sequence**

1. Software should select the appropriate Download mode and log through the Auto Increment Configuration register (0x000xx or 0x001xx to register 0x099FE).
2. Software should read the appropriate Header Information.
3. Software should initialize the window index by writing a value 1 less than the desired starting index to the Auto Increment Window Index register (Example: To start at window 0, write

0x0FFFF to Register 0x099FF).
4. Software should store the Historical Log 1 Header Information.
5. Software should read the Auto Increment Window Index and Auto Increment Log Window (Registers 0x099FF-0x09A3F)
6. Software should verify the expected value for the Auto Increment Window Index.
7. Software should store the first 128 bytes of the log from the Auto Increment Log Window.

Repeat steps 5-7 until the desired amount of the log has been read and stored. The Number of Reads of the Window can be determined by dividing the Total Memory in the Log (registers 0x09000 -0x09001) by the Window Size (128 bytes).

8. Software should release the pause on the log (0x0FFFF to 0x099FF).

■ **Download using Auto Increment Window Sequence and Function Code 35**

1. Software should select the appropriate Download mode and log through the Auto Increment Configuration register (0x000xx or 0x001xx to register 0x099FE).
2. Software should read the appropriate Header Information.
3. Software should initialize the window index by writing a value 1 less then the desired starting index to the Auto Increment Window Index register (to start at window 0, write 0x0FFFF to register 0x099FF).
4. Software should store the Historical Log 1 Header Information.
5. Software should read the Auto Increment Window Index and Auto Increment Log Window (registers 0x099FF-0x09A3F) n times using the non-standard Modbus Function Code 35 (0x023) Read Holding Registers Multiple Times.
6. Software should verify the expected values for the Auto Increment Window Index.
7. Software should store the each 128 bytes of the log from the Auto Increment Log Window.

Repeat steps 5-7 until the desired amount of the log has been read and stored. The number of Reads of the Window can be determined by dividing the Total Memory in the Log (registers 0x09000 - 0x09001) by the Window Size (128 bytes), and again by dividing by the Number of Repeats being used with Function Code 35.

8. Software should release the pause on the log (0x0FFFF to 0x099FF).

5.2: Port Locking - Overview

■ At times it may be necessary for a Master connected to one port of a Nexus® meter to communicate directly to a Slave device connected to a different port of the same Nexus® meter. For example, software on a computer connected to port 1 of the meter might need to change settings on an external device connected to Port 4 of the meter. To accomodate this need, the following steps allow a Master to control the Transmit and Receive buffers of another port.

■ To prevent contention, one Master at a time may control a given port. This is referred to as **"Locking a Port."** If Port 1 is controlling Port 4, no other ports may control Port 4 until Port 1 is finished.

5.2.1: Sequence for Port Locking

■ To lock a port, follow the steps below:

1. Determine the port to which the Modbus Master is currently attached: Register 65411.
2. Determine that the desired port is currently unlocked: Registers 41730 – 41732.
3. Write to lock the desired port: write 0100H – 0104H to Register 41729.
4. Verify that the port is successfully locked: Registers 41730 – 41732.
5. Read the current states of the pointers: 41733 – 41752.

5.2.2: Transmission

1. Decide which transmit buffer to use: Registers 43265, 43521, 43777, 44033, 44289.
2. Find the current position of the TrmIn pointer: Registers 41735, 41739, 41743, 41747, 41751.
3. Add bytes to the transmit buffer starting at the position indexed by the TrmIn pointer up to the position before that indexed by the TrmOut pointer.
4. Write the new value for the TrmIn pointer (the position after the last byte added) to the TrmIn pointer.

5.2.3: Reception

1. Decide which receive buffer to use: 41985, 42241, 42497, 42753, 43009.
2. Find the current position of the RecOut pointer: 41734, 41738, 41742, 41746, 41750.
3. Read bytes starting at the position after that indexed by the RecOut pointer, up to the position before the position indexed by the RecIn pointer.
4. Write the new value for the RecOut pointer (the position of the last byte read) to the RecOut pointer.

5.2.4: Port Unlocking Sequence

■ To unlock a port, follow the steps below:

1. Empty the receive buffer (RecOut written so it is the position before RecIn).
2. Write to unlock the desired port: write 0200H – 0204H to Register 41729.
3. Verify that the port is successfully unlocked: Registers 41730 – 41732.

5.3: Updating Programmable Settings - Overview

- Programmable settings in the Nexus® meter are stored in FLASH. With FLASH, bytes are not rewritable; the entire sector must be erased and rewritten.

5.3.1: Sequence for Updating Programmable Settings

- Device Address and Communication Settings should be as programmed for the port in use.
  1. Verify a Nexus® meter is connected at the appropriate address, protocol and communications settings.
  2. Check the Nexus® Comm Operation Indicator (Register 65409), verifying that it is in Normal Operation.
  3. Transmit the Reset to FLASH Operation, Programmed Communications Settings command: write 0101H to Register 65410.
  4. Poll the Nexus® Comm Operation Indicator and FLASH sequence number (Registers 65409 and 65410) until it returns that the unit is in FLASH Operation and notes the initial FLASH sequence number.
  5. Transmit the Lock Port command: write 0000H to Register 65410.
  6. Poll for the next FLASH sequence and an Action Passed status: Register 65410.
  7. Verify that it is the port that is locked into FLASH operation: Register 65411.
  8. Transmit the “Erase the Programmable Settings Block” command: write 0003H to Register 65410.
  9. Poll the next FLASH sequence and an Action Passed status: Register 65410.
  10. Write a line from the Programmable Settings HEX file (FFH padded) to the Nexus® Comm FLASH Programmable Settings Hex Line Registers: 65473 – 65482.
  11. Poll the next FLASH sequence and an Action Passed status: Register 65410.
  12. Repeat steps 10 and 11 until whole HEX file processed.
  13. Transmit the “Calculate the Programmable Settings Checksum” command: write 0004H to Register 65410.
  14. Upgrade software polls for the next FLASH sequence and an Action Passed status (Register 65410).
  15. Upgrade software reads the Nexus® Comm FLASH Programmable Settings Checksum (Register 65413).
  16. If the checksum is correct, upgrade software writes the Correct Checksum to the Nexus® Comm

FLASH Programmable Settings Checksum (Register 65413).

17. Upgrade software transmits the Reset to Normal Operation Command (writes 0100H to Register 65410).

18. Upgrade software polls Nexus® Comm Operation Indicator (Register 65409) until it returns that the unit is in Normal Operation.

Note: Register 00001 in our mapping is equivalent to 40001 in most third party polling packages and RTUs.

5.4: Modifications to Time of Use

Time of Use had provided delta values computed at two time rates - Monthly and Seasonally. The following modifications will be provided in the 1252/1262/1272.

The functionality of what had been the Current Season/Prior Season registers are being altered to provide options of Seasonal, Monthly, Weekly, Daily or Hourly behavior. As such, they will no longer be properly called Current Season or Prior Season. Depending on the storage rate chosen, the "Current Season" will be referred to as the "Active Season", "Active Week", etc, while the "Prior Season" will be referred to as the "Frozen Season", "Frozen Week", etc. This will not change the operation of the "Current Month" or "Prior Month" registers, which will continue to operate according to the Monthly Billing Dates entered in the Time of Use calendar.

Additionally, a new capability is being added to the behavior of both the Current Month and Active registers when a new period starts. In the previous implementation, the Current Month or Current Season registers are cleared at the start of a new month or season. This is being altered to allow the option of not clearing at the start of a new period.

The following settings are being added to the Time of Use Calendars:

Register	Meaning
35730 (0x08B91)	Clear on new period / Freeze Period Selection
35731 (0x08B92)	Weekly Freeze day of week / Freeze Hour

- **Clear on New Period / Freeze Period Selection**

The most significant byte indicates whether the Current Monthly and Active registers should clear when a new period starts. The value 0x000 indicates that they should clear, compatible with the previous implementation, while the values 0x001 - 0x0FF indicate that they should continue the Current Month or Active registers where the Prior Month or Frozen registers left off.

The least significant byte indicates the period to use for the Active and Frozen registers (what had been the Current and Previous Season registers).

Value	Meaning
0x000	Seasonal
0x001	Weekly

0x002	Daily
0x003	Hourly
0x004-0x0FF	Undefined, behaves as Seasonal

Seasonal operation freezes the Active registers at the selected hour of the day four times a year. The hour to freeze at is entered as the Freeze Hour, described below, while the four days to freeze at are the previously defined Season Start Times.

Weekly operation freezes the Active registers at the selected hour of the day once a week. The hour to freeze at is entered as the Freeze Hour, described below, while the day of the week (Sunday, Tuesday, etc.) is entered as the Weekly Freeze day of week, also described below.

Daily operation freezes the Active registers at the selected hour of the day once a day. The hour to freeze at is entered as the Freeze Hour, described below.

Hourly Operation freezes the Active registers once an hour at the top of the hour.

- **Weekly Freeze Day of Week / Freeze Hour**

The most significant byte indicates the day of the week to freeze the Active registers if configured for Weekly freezes. Legal values are from 1-7 (0x001 - 0x007), indicating operation on Sunday through Saturday. All other values will cause operation on Sunday.

The least significant byte indicates the hour of the day at which to freeze the Active registers if configured for Seasonal, Monthly, Weekly or Daily freezes. Valid values are from 0-23 (0x000 - 0x017), indicating from midnight through 11 PM. All other values cause operation at midnight. All freezes take place at the top of the selected hour.

5.5: Calibration Interface

■ Manual Adjustment Interface

Modbus Register Address		Dual Port Address	Name
Decimal	Hex		
57349	0x0E004	0x00083	Select Voltage 120V Gain (240V if 300V Option)
57350	0x0E005	0x00084	Select Current 150mA Gain (30mA if Class 2 Option)
57351	0x0E006	0x00085	Select Current 250mA Gain (50mA if Class 2 Option)
57352	0x0E007	0x00086	Select Current 500mA Gain (100mA if Class 2 Option)
57353	0x0E008	0x00087	Select Current 1A Gain (200mA if Class 2 Option)
57354	0x0E009	0x00088	Select Current 2.5A Gain (200mA if Class 2 Option)
57355	0x0E00A	0x00089	Select Current 5A Gain (1A if Class 2 Option)
57356	0x0E00B	0x0008A	Autocalibrate the above gain point on all phases
57357	0x0E00C	0x0008B	Increment selected calibration value for A Phase
57358	0x0E00D	0x0008C	Decrement selected calibration value for A Phase
57359	0x0E00E	0x0008D	Increment selected caliabration value for B Phase
57360	0x0E00F	0x0008E	Decrement selected calibration value for B Phase
57361	0x0E010	0x0008F	Increment selected calibration value for C Phase
57362	0x0E011	0x00090	Decrement selected calibration value for C Phase
57363	0x0E012	0x00091	Increment selected calibration value for X Phase
57364	0x0E013	0x00092	Decrement selected calibration value for X Phase
57365	0x0E014	0x00093	Enter Calibration Mode
57366	0x0E015	0x00094	Manual Calibration of Gains
57367	0x0E016	0x00095	First Time CTPT Compensation selection
57368	0x0E017	0x00096	Manual Calibration of Phase Compensation
57369	0x0E018	0x00097	Increment/Decrement by 1 count
57370	0x0E019	0x00098	Increment/Decrement by 10 counts
57371	0x0E01A	0x00099	Manual Reference Calibration
57372	0x0E01B	0x0009A	Calibration Status Reset
57373	0x0E01C	0x0009B	Select Current 500mA Phase Compensation (100mA if Class 2)
57374	0x0E01D	0x0009C	Select Current 1A Phase Compensation (200mA if Class 2)
57375	0x0E01E	0x0009D	Select Current 5A Phase Compensation (1A if Class 2)
57376	0x0E01F	0x0009E	Select Current 10A Phase Compensation (2A if Class 2)
57377	0x0E020	0x0009F	Select Current 2.5A Phase Compensation (500mA if Class 2)
57378	0x0E021	0x000A0	Preload CTPT Compensation with Initial Calibration Values

In the dual port, activation of a function is performed by the communication processor writing the value 0x0AA to a given location. When acknowledged, the location is cleared to the value 0x055.

By communication, activation of a function is performed by issuing a write (the value is unimportant) to a given Modbus register. When acknowledged, the register will read 0x00055.

In order to modify any calibration information, it is necessary to enter Calibration Mode. Calibration Mode is entered by writing to Modbus Address 57365 (0x0E014), which starts a 30 second timer. While in Calibration Mode, bit 3 of the 196 Health Status register is set. It is only while in Calibration Mode that all of the other above features will operate. This register can either be written to prior to each and every above listed action, or continuously at a rate more frequent than every 30 seconds.

The Manual Reference Calibration instructs the meter to test the voltage levels provided by the reference chip. This is used to adjust for gradual changes in offset and gain as a function of time or temperature. Reference Calibrations are automatically performed every 12 hours, or when the internal temperature changes by more than 1.5 degrees C after at least 15 minutes from the previous reference calibration.

The meter contains two sets of calibration tables - a Factory Table, and a Customer Configurable Table for CTPT Compensation. Operation with CTPT Compensation can only take place if CTPT Compensation is enabled in the Programmable Settings and if a valid CTPT Compensation Calibration has been performed; otherwise, the factory calibration is used. If the CTPT Compensation factors are being used, then bit 4 of the 196 Health Status register is set.

In order to perform the first CTPT Compensation Calibration procedure, the Programmable Setting must be enabled and Modbus Register 57365 (0x0E014) must be written. This activates CTPT Compensation Calibration, even though a valid calibration has not yet been performed. Next, Initial Values must be provided by writing to Modbus Register 57367 (0x0E016).

The Autocalibration of Gains is performed by **selecting a Range** and **initiating Autocalibration**. First, the appropriate inputs should be applied to the meter. Then the appropriate Range should be selected by writing to Modbus Register 57349-57355 (0x0E004-0x0E00A). Finally, Autocalibration should be initiated by writing to Modbus Register 57356 (0x0E00B).

Manual Adjustment of Calibration Values is performed by selecting Gain vs. Phase Compensation, indicating whether Adjustment should be 1 count or 10, selecting a Range and then by indicating which Phase should be incremented or decremented. First, either Gain or Phase Compensation Adjustment should be selected by writing to Register 57366 (0x0E015) or 57368 (0x0E017). Next, 1 or 10 count Adjustments should be selected by writing to Register 57369 (0x0E018) or 57370 (0x0E019). Then the appropriate Range should be selected by writing to Modbus Register 57349-57355 (0x0E004-0x0E00A) or 57373-57377 (0x0E01C-0x0E020). Finally, indicate which Phase is being adjusted and in which direction by writing to Modbus register 57357-57364 (0x0E00C-0x0E013).

■ **Direct Adjustment Interface**

	Factory Read	CTPT Read	Modification
Block Timestamp	60929-60932	61027-61030	
Calibration Modification Selection			61185
Calibration Timestamp	60933-60936	61030-61034	61186-61189
Gain Factors V_{AN}, V_{BN}, V_{CN}, V_{XN}	60937-60944	61035-61042	61190-61197
Gain Factor I_A, 150mA, 250mA, 500mA, 1A, 2.5A, 5A	60945-60956	61043-61054	61198-61209
Gain Factors I_B, I_C, I_{NM}	60957-60992	61055-61090	61210-61245
Unused	60993	61091	61246
Phase Comp I_A, 500mA, 1A, 2.5A, 5A, 10A	60994-60998	61092-61096	61247-61251
Phase Comp I_B, I_C	60999-61025	61097-61106	61252-61278
Unused	61009-61025	61107-61123	61262-61278
Calibration Checksum	61026	61124	61279
Block Checksum			61280

Calibration data can be read and modified using the above registers.
Factory Calibration and CT/PT Compensation Calibration are available in the above blocks.
The Block Timestamp indicates when the data you are reading was last refreshed for viewing.

The Calibration Timestamp indicates when calibration information was last modified. This is either updated automatically when manual adjustments are performed, or is provided as part of the block when direct adjustments are performed.

The Calibration Checksum is a CRC16 checksum computed over all calibration information from the Calibration Timestamp through to the last unused byte before the Calibration Checksum. It is either automatically computed when manual adjustments are performed, or is provided as part of the block when direct adjustments are performed.

When performing a direct adjustment, in addition to providing a properly checksummed table of calibration data, a selection indicating whether the table should update the Factory calibration or the CT/PT calibration needs to be provided. This selection should be 0x00000 for Factory Calibration and 0x00100 for CT/PT Compensation. To verify the selection, a Block Checksum must be computed from the Calibration Modification Selection through to the Calibration Checksum.

■ **Voltage Gain Factor:** 4 byte signed LSB values with 15 bits of fraction that are used as a multiplicative factor.

As Stored (LSB)	MSB	Decimal	Scaled	Meaning
0x000800000	0x000008000	32768	1.00000	x*1.00 (unity)
0x0CC8C0000	0x000008CCC	36044	1.09998	x*1.10 (magnification 10%)
0x033730000	0x000007333	29491	0.89999	x*0.90 (diminution 10%)

- To increase/decrease a voltage reading by y percent, **multiply the gain factor by (100 + y)/100**.

Change by	y	Multiply by
Increase 2%	+2	102/100 = 1.02
Decrease 5%	-5	95/100 = 0.95

- **Current Gain Factors:** 4-byte signed LSB values with 16 bits of fraction that are used as a divisive factor.

As Stored (LSB)	MSB	Decimal	Scaled	Meaning
0x000000100	0x000010000	65536	1.00000	x/1.00 (unity)
0x0711C0100	0x00000E8BA	59578	0.90909	x/0.90909 (magnification 10%)
0x0711C0100	0x000011C71	72817	1.11110	x/1.11110 (diminution 10%)

- To increase/decrease a current reading by y percent, **multiply the gain factor by 100 (100 + y)**.

Change by	y	Multiply by
Increase 2%	+2	100/102 = 0.98039
Decrease 5%	-5	100/95 = 1.05263

- **Phase Compensation Factors**: 2 -byte signed LSB values in units of 0.01" of additive Power Factor shift.

As Stored (LSB)	MSB	Decimal	Scaled	Meaning
0x00000	0x00000	0	0.00	No Phase Shift
0x00200	0x00002	2	0.02	$+0.02^0$ PF Shift
0x0FEFF	0x0FFFE	-2	-0.02	-0.02^0 PF Shift

- To increase/decrease power at 600 in Quadrant 1 by y percent, **modify the Phse Compensation by**

$$60^0 - \cos^{-1}\left[\frac{50}{100+y}\right]$$

Change by	y	Modified by
Increase 2%	+2	60^0-$\cos^{-1}$ (50/102) = 60^0-$\cos^{-1}$ (0.49020) = 600-60.65^0 = -0.65^0
Decrease 5%	-2	60^0-$\cos^{-1}$ (50/95) = 60^0-$\cos^{-1}$ (0.52632) =600-58.24^0 = $+1.76^0$

Chapter 6
Nexus® Meter Log Formats

6.1: Log Formats Overview

- **Historical Log 1**: Historical Log 1 will fill to the total allocated memory. The number of records possible in Historical Log 1 is the total memory allocated divided by the record size (size of a Historical Log 1 snapshot).

- **Historical Log 2**: Historical Log 2 will fill to the total allocated memory. The number of records possible in Historical Log 2 is the total memory allocated divided by the record size (size of a Historical Log 2 snapshot).

- **Limit Trigger Log**: The Limit Tirgger Log is designed to hold as many records as will fill either the Limit Snapshot or Limit Trigger Logs, whichever fills first. A one-for-one relationship is maintained between two logs. If the Limit Snapshot Log can only hold 256 snapshots, then only the first 256 Limit Trigger records will be used, even if the allocated memory for the Limit Trigger Log could hold 1024 records.

- **Limit Snapshot Log**: The Limit Snapshot Log will hold as many records as will fill either the Limit Snapshot or Limit Trigger Logs, whichever fills first. A one-for-one relationship is maintained between the two logs. The maximum number of records possible in the Limit Snapshot Log is the total memory allocated divided by the record size (size of a Historical Log 1 snapshot). If the Limit Trigger Log can only hold 1024 records, and the Limit Snapshot Log can hold up to 2048 snapshots, only the first 1024 snapshots will be used. If the Limit Snapshot Log can only hold 256 snapshots, then the only the first 256 records in the Limit Trigger Log will be used.

- **Waveform Trigger Log**: The Waveform Trigger Log is designed to hold as many records as will fit in the Waveform Samples Log. A one-for-one relationship is maintained between the three waveform logs. If the Samples Log can only hold 96 captures, then only the first 96 triggers will be used, even if the allocated memory for the Triggers Log could hold 128 records.

- **Waveform Samples Log**: The Waveform Samples Log will fill to the total allocated memory. The number of records possible in the Waveform Samples Log is the total memory allocated divided by the record size. Records in the Waveform Samples Log do not contain timestamps. Time Stamp Mode will not work on accesses to this log. Instead, use Time Stamp Mode to access the Waveform Triggers Log.

- **Power Quality (CBEMA) Log**: The PQ Log records in response to surges and sags of programmed High Speed Limit Triggers on enabled High Speed channels. The information it provides allows the calculation of duration and magnitude of the surges and sags as well as information for locating the start and end of the surge and sag in the Waveform Captures.

- **Digital Input Log**: The Digital Input Snapshot Log stores records in order to document the transitions of Internal and External Digital Inputs.

- **Digital Input Snapshot Log**: The Digital Input Log will fill to the total allocated memory. The number of records possible in the Digital Input Log is the total memory allocated divided by the record size (size of a Digital Input Snapshot).

- **Digital Output Log**: The Digital Output Snapshot Log stores records in order to document the stages used when changing states of Digital Outputs.

- **Digital Output Snapshot Log**: The Digital Output Log will fill to the total allocated memory. The number of records possible in the Digital Output Log is the total memory allocated divided by the record size (size of a Digital Output Snapshot).

- **Flicker Log**: The Flicker Log stores records to document Short Term and Long Term Flicker.

- **System Event Log**: The Systerm Event Log will record the system changes made into the meter. Password changes, Power Reset and Programmable Setting changes are recorded in this log.

6.2: Historical Log 1 Format

Profile Information is in the Programmable Settings Block

- **Historical Log 1**: Historical Log 1 will fill to the total allocated memory. The number of records possible in Historical Log 1 is the total memory allocated divided by the record size (size of a Historical Log 1 snapshot).

- **Historical Log 1 Record Size: (45463)**
  This Register is an enumeration for the size of a record in the Historical Log. The valid values are:
  0x00000 = 32 byte records
  0x00001 = 64 byte records
  0x00002 = 128 byte records
  0x00003 = 256 byte records
  0x00004 = 16 byte records

- **Historical Log 1 Data Pointers: (45205-45332)**
  These Registers indicate which information to include in a record in the Historical Log. Each Data Pointer has the following 4 (four) byte structure:

Size	Format	Description
2 byte	unsigned int	Line Number
1 byte	unsigned char	Point number
1 byte	unsigned char	Reserved

A Line Number is an index into the Communication Table. Example - Line Number 11 is for the 12th line in the Communication Table, 0.1 second Phase-to-Neutral Voltages. Data Pointers with Line Numbers greater than the number of lines in the table are ignored.

A Point Number is an index into the Communication Table.

Example: Point Number 1 is for the second entry in a Line. Line Number 11, Point Number 1 is the second in the twelfth line, 0.1 second V_{BN}. Data Pointers with Point Numbers greater than the number of

points for the line are ignored.

- **Record Format:** A Record contains as many bytes as specified by the Historical Log 1 Record Size Field in the Programmable Settings Block (45463). The first eight bytes in each record is the Time Stamp. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 – 99	century
1	binary	0 – 99	year
2	binary	1 – 12	month
3	binary	1 – 31	day
4	binary	0 – 23	hour
5	binary	0 – 59	minute
6	binary	0 – 59	second
7	binary	0 – 100	centisecond

  If this historical record was recorded while the meter was in test mode, then only energy readings will be recorded. All other values requested will be stored with the byte values of 0x055. The most significant bit of the centisecond byte indicates whether this record was recorded while the meter was in test mode.

  If the historical record was recorded after powering up or the log was reset, the record does not contain information covering a full interval and the most significant bit of the second's byte will be set.

  If the historical record was recorded after time was adjusted, the record might contain more or less than a full interval's worth of data. If time is advanced within the current interval, or advanced or rolled back to outside the current interval, the record contains leass than a full interval's worth of data and the most significant bit of the minute byte will be set. If time is rolled back within the same interval, the record contains more than a full interval's worth of data and the bit before the most significant bit (bit 6) of the minute byte will be set.

- The remaining bytes are the values requested by the Historical Log 1 Data Pointers (45205-45332). If the first Data Pointer is requesting V_{BN} a 4 byte value, then the next 4 bytes in the Record are V_{BN}. This continues, Data Pointer for Data Pointer, until all Data Pointers have been satisfied, or the number of bytes is equal to the Historical Log 1 Record Size.

6.3: Historical Log 2 Format

Profile Information is in the Programming Settings Block.

- **Historical Log 2**: Historical Log 2 will fill to the total allocated memory. The number of records possible in Historical Log 2 is the total memory allocated divided by the record size (size of a Historical Log 2 snapshot).

- **Historical Log 2 Record Size: (45464)**
  This Register is an enumeration for the size of a record in the Historical Log. The valid values are:

  0x00000 = 32 byte records
  0x00001 = 64 byte records
  0x00002 = 128 byte records
  0x00003 = 256 byte records
  0x00004 = 16 byte records

- **Historical Log 2 Data Pointers: (45333-45460)**
  These Registers indicate which information to include in a record in the Historical Log. Each Data Pointer has the following 4 (four) byte structure:

Size	Format	Description
2 byte	unsigned int	Line Number
1 byte	unsigned char	Point number
1 byte	unsigned char	Reserved

A Line Number is an index into the Communication Table. Example - Line Number 11 is for the 12th line in the Communication Table, 0.1 second Phase-to-Neutral Voltages. Data Pointers with Line Numbers greater than the number of lines in the table are ignored.

A Point Number is an index into the Communication Table.
Example: Point Number 1 is for the second entry in a Line. Line Number 11, Point Number 1 is the second in the twelfth line, 0.1 second V_{BN}. Data Pointers with Point Numbers greater than the number of points for the line are ignored.

- **Record Format:** A Record contains as many bytes as specified by the Historical Log 2 Record Size Field in the Programmable Settings Block (45464). The first eight bytes in each record is the Time Stamp. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 – 99	century
1	binary	0 – 99	year
2	binary	1 – 12	month
3	binary	1 – 31	day
4	binary	0 – 23	hour
5	binary	0 – 59	minute
6	binary	0 – 59	second
7	binary	0 – 100	centisecond

If this historical record was recorded while the meter was in test mode, then only energy readings will be recorded. All other values requested will be stored with the byte values of 0x055. The most significant bit of the centisecond byte indicates whether this record was recorded while the meter was in test mode.

If the historical record was recorded after powering up or the log was reset, the record does not contain information covering a full interval and the most significant bit of the second's byte will be set. If the historical record was recorded after time was adjusted, the record might contain more or less than a full interval's worth of data. If time is advanced within the current interval, or advanced or rolled back to outside the current interval, the record contains less than a full interval's worth of data and the most significant bit of the minute byte will be set. If time is rolled back within the same interval, the record contains more than a full interval's worth of data and the bit before the most significant bit (bit 6) of the minute byte will be set.

- If the Historical Log 2 Time of Use Enable byte (45952) is disabled, the remaining bytes are the values requested by the Historical Log 2 Data Pointers (45333-45460). If the first Data Pointer is requesting V_{BN} a 4 byte value, then the next 4 bytes in the Record are V_{BN}. This continues, Data Pointer for Data Pointer, until all Data Pointers have been satisfied, or the number of bytes is equal to the Historical Log 2 Record Size.

6.4: Limit Trigger Log Format

Profile Information is in the Programmable Settings Block.

- The Limit Trigger Log records an entry every time limit values monitored by the Nexus® meter change their state. The log records information about the limits—for example, which limits are currently exceeded, which limits have just changed—and records a snapshot of values as specified by the Historical Profile for Log 1.

- Record Format: A Record contains 32 bytes.

  - The first eight bytes in each record is the Time Stamp. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 – 99	century
1	binary	0 – 99	year
2	binary	1 – 12	month
3	binary	1 – 31	day
4	binary	0 – 23	hour
5	binary	0 – 59	minute
6	binary	0 – 59	second
7	binary	0 – 99 + MSB	centisecond

Note: This log does not record records during Test Mode.

An additional piece of information is contained in the centisecond byte. The most significant bit indicates whether this SOE record is contiguous in monitoring with the previous record. If the bit is 1, then this is the first record recorded after a power-down, reset or download and all unfinished durations prior to this record are lost. If the bit is zero, then monitoring was continuous between the last record and this one.

- The next four bytes are a bitmap for the current state of the Value 1 Comparisons of the Limits. The first bit (the most significant bit of the first byte) is the current state of the 1st Limit's Value 1 Comparison. The last bit (the least significant bit of the fourth byte) is the current state of the

32nd Limit's Value 1 Comparison. A bit value of 1 means that the Comparison is exceeded: less than or equal to Value 1 for a below limit, greater than Value 1 for an above limit. A bit value of 0 means that the Comparison is not exceeded: greater than Value 1 for a below limit, less than or equal to Value 1 for an above limit.

- The next four bytes are the same bitmap as above, but for the current state of the Value 2 Comparisons of the Limits.

- The next four bytes are a bitmap for the delta of the Value 1 Comparisons of the Limits. The order of the bits is the same as above. A bit value of 1 means that the state of the Value 1 Comparison changed since the last Alarm occurred; a bit value of 0 means that the state of the Value 1 Comparison did not change since the last Alarm.

- The next four bytes are the same bitmap as above, but for the delta of the Value 2 Comparisons of the limits.

- The next four bytes are a bitmap for the current state of the Combination of the Limits. The first bit(the most significant bit of the first byte) is the current state of the 1st Limit's Combination of the Value 1 Comparison and the Value 2 Comparison. The last bit (the least significant bit of the fourth byte) is the current state of the 32nd Limit's Combination of the Value 1 Comparison and the Value 2 comparison. A bit value of 1 means that the Combination is true, a bit value of 0 means that the Combination is false.

- The last 4 bytes are the same bitmap as above, but for the delta of the Combination of the Limits.

6.5: Limit Snapshot Log Format

Profile Information is in Programmable Settings Block/Limit Settings (Comm version 102 or above).

■ **Limit Data Pointers: (45077-45204)**
These Registers indicate which values are being monitored by limits. Each Data Pointer has the following 8 (eight) byte structure:

Size	Format	Description
2 byte	unsigned int	Line Number
1 byte	unsigned char	Point number
1 byte	unsigned char	Limit Mode
2 byte	unsigned int	Comparison 1 Value
2 byte	unsigned int	Comparison 2 Value

A Line Number is an index into the Communication Table.

Example: Line Number 11 is for the 12th line in the Communication Table, 0.1 second Phase-to-Neutral Voltages. Data Pointers with Line Numbers greater than the number of lines in the table are ignored.

A Point Number is an index into the Communication Table.

Example: Point Number 1 is for the second entry in a Line. Line Number 11, Point Number 1 is the second in the twelfth line, 0.1 second V_{BN}. Data Pointers with Point Numbers greater than the number of points for the line are ignored.

- **Record Format:** A Record contains 16, 32, 64, 128 or 256 bytes, depending on how many channels have limits assigned to them.

  - The first eight bytes in each record is the Time Stamp. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 – 99	century
1	binary	0 – 99	year
2	binary	1 – 12	month
3	binary	1 – 31	day
4	binary	0 – 23	hour
5	binary	0 – 59	minute
6	binary	0 – 59	second
7	binary	0 – 100	centisecond

Note: This log does not record records during Test Mode.

  - The remaining bytes are the values monitored by Limits (45077-45204). If the first Data Pointer is requesting V_{BN}, a 4 byte value, then the next 4 bytes in the record is V_{BN}. This continues, Data Pointer for Data Pointer, until all Data Pointers have been satisfied, or the number of bytes is equal to the Historical Log 1 Record Size.

6.6: Waveform Trigger Log Format

- The Waveform Trigger Log stores records in response to High Speed Limit Triggers. It records descriptive information about records in the Waveform Samples Log.

- **Record Format:** A Record contains 256 Bytes.

  - The first eight bytes in each record is the Trigger Time Stamp, representing the time of the last sample of the triggering cycle. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 – 99	century
1	binary	0 – 99	year
2	binary	1 – 12	month
3	binary	1 – 31	day
4	binary	0 – 23	hour
5	binary	0 – 59	minute
6	binary	0 – 59	second
7	binary	0 – 100	centisecond

Note: This log does not record records during Test Mode.

  - The next 48 bytes are 12 4-byte MSB signed integers representing the RMS values recorded in the triggering cycle. The order of these readings is:

    V_{AN}
    V_{BN}
    V_{CN}
    V_{AUX}
    I_A
    I_B
    I_C
    I_{AUX}
    I_N
    V_{AB}
    V_{BC}
    V_{CA}

There are currently five hookups available, where the following RMS values are computable in each:

3 Element Wye	V_{AN}, V_{BN}, V_{CN}, I_A, I_B, I_C, I_{AUX}
3 CT Delta	I_A, I_B, I_C, I_{AUX}, V_{AB}, V_{BC}, V_{CA}
2 CT Delta	I_A, I_C, I_{AUX}, V_{AB}, V_{BC}, V_{CA}
2-1/2 Element Wye	V_{AN}, V_{CN}, I_A, I_B, I_C, I_{AUX}
Broken Delta	V_{AN}, V_{BN}, V_{CN}, I_A, I_B, I_C, I_{AUX}, V_{AB}, V_{BC}, V_{CA}

If the unit is a Nexus® 1252 meter with regular hardware, RMS values are in units of squared secondary, with two bytes of fraction. That is, each count is 1/65536 of a squared volt.

If the unit is a Nexus® 1252 meter with 300 V hardware, RMS values are in units of squared secondary, with 14 bits of fraction. That is, each count is 1/16384 of a squared volt. Units that are 300 V hardware can be identified by the appropriate setting in the programmable settings or Hardware Option for 300V, Modbus Register 0x0FF53.

If the unit is a Nexus® 1262/1272 meter, RMS values are in units of squared secondary, with 12 bits of fraction. That is, each count is 1/4096 of a squared volt.

Example:

Nexus® 1252 meter with regular hardware:
VAN = 0x038B84000 = 14,520.25 v2 secondary, or 120.5 v secondary

Nexus® 1252 meter with 300 V hardware:
VAN = 0x038B84000 = 58,081 v2 secondary, or 241 v secondary

Nexus® 1262/1272 meter:
VAN = 0x038B84000 = 232,324 v2 secondary, or 482 v secondary

- The next byte holds eight bits representing the Delta of the High Speed Input States. High Speed Digital Input States are in the following format:

Table 6.1 High Speed Digital Input States

Bits							
7	6	5	4	3	2	1	0
HSI 8	HSI 7	HSI 6	HSI 5	HSI 4	HSI 3	HSI 2	HSI 1

A bit value of 1 means the input changed in the last cycle. A bit value of 0 means the input is closed.

- The next byte holds eight bits representing the current states of the High Speed Inputs. High Speed Digital Inputs are in the following format:

Table 6.2: Current States of the High Speed Inputs

Bits							
7	6	5	4	3	2	1	0
HSI 8	HSI 7	HSI 6	HSI 5	HSI 4	HSI 3	HSI 2	HSI 1

A bit value of 1 means the input is open. A bit value of 0 means the input is closed.

- The next byte is a supplement to the Trigger Time Stamp. It is in milliseconds for the Trigger Time Stamp and a binary value in the range 0–9.

- The next byte tells which capture contains the trigger. For example, a device records a surge lasting for two cycles. The surge triggers the first capture and the first capture contains the triggering cycle for that first capture. However, the cycle that is the subsequent return to normal is also contained in the first capture. It triggers the second capture. In the first Trigger Record, this byte would contain the value 0x000, identifying the triggering sample to be in the first capture at the index given by the above index value. In the second Trigger Record, this byte would also contain the value 0x000, identifying the triggering sample also contained in the first capture at the index and time given by its index value.

- The next two bytes are a signed integer with the index of the sample that was at the end of the triggering cycle.

- The next two bytes are a signed integer with a count of the number of samples used in the triggering cycle.

- The next two bytes are a signed integer with the index of the sample that was the first sample of the capture.

- The next four bytes are a bitmap of the States of the High Speed Limits after a triggering cycle. These bits represent the true states of all the limits, regardless of trigger enable settings.

  The first two bytes are for the Above Limits, in the following order:

Table 6.3: Above Limits

Above Limit															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
V_{AN}	V_{BN}	V_{CN}	V_{AUX}	I_A	I_B	I_C	I_{AUX}	I_N	V_{AB}	V_{BC}	V_{CA}	—	—	—	—

  The other two bytes are for the below limits, and are in the same order as above.

- The next four bytes are a bitmap of the Latched Delta states of the High Speed Limits. For the first cycle in which a limit changes state, the change of state is recognized as a Delta. If waveform capture parameters require multiple captures for a given change, subsequent captures would be recognized as having no new Deltas. Therefore, every time a Delta occurs, the new Delta is latched, so that consecutive captures for the original Delta contain information on the Delta that triggered the first capture. The order of the bits is the same as for the states of the High Speed Limits, as above. These bits will only report changes in limits that are enabled for Waveform Triggering.

- The next byte indicates whether this capture is contiguous with the previous capture. A value of 0x001 indicates that the first sample of this capture immediately follows the last sample of the previous capture, with no gap. Contiguous does not imply that they were both captured for the same cause, only that they follow one after the other. A value of 0x000 means that a gap in time

occurred between the two captures.

- The next byte is a counter for Consecutive Captures. If programmed to record 4 captures per event, the four captures will have values of 0x000, 0x001, 0x002 and 0x003, respectively, for this byte.

- The next 8 bytes are a Time Stamp of the format above. It is the Timing Point Time Stamp. Since captures may be triggered by events in previous captures, every capture designates a point within itself upon which to base the time for samples within that capture.

- The next byte is the Timing Point millisecond. It is a binary value in the range 0x000 – 0x009, and represents the millisecond of the Timing Point Time Stamp.

- The next byte is unused.

- The next 2 bytes are a signed integer with an index of the point used as the Timing Point. This index always refers to a sample in this capture, regardless of the location of the triggering cycle for this capture.

- The next 32 bytes represent eight, 4-byte Sample Gain Factors. The order of these readings is:

  V_{AN}

  V_{BN}

  V_{CN}

  V_{AUX}

  I_A

  I_B

  I_C

  I_{AUX}

  For Nexus® 1252 meters with regular hardware or Nexus® 1262/1272 meters, Sample Gain Factors are a four-byte unsigned value with two bytes of fraction, covering a range of 0 – 65535.999985, where each count represents 1/65536 gain.

  For Nexus® 1252 meters with 300 V hardware, sample Gain Factors are a four byte unsigned value with 15 bits of fraction, covering a range of 0-131071.999969, where each count represents 1/32768 gain.

  These gain factors are a multiplicative factor to scale samples, represented in percent of A/D full scale, into secondary units.

The formula to use for Nexus® 1252 meters with regular hardware or Nexus® 1262/72 meters is:

$$\frac{Ungained\_Sample}{16384} x \frac{Gain\_Factor}{65536} = Gained\_Sample$$

The formula to use for Nexus® 1252 meters with 300V hardware is:

$$\frac{Ungained\_Sample}{16384} x \frac{Gain\_Factor}{32768} = Gained\_Sample$$

Example for Nexus® 1252 meter with regular hardware or Nexus® 1262/72 meters:
Ungained Voltage Sample = 0x01234 = 4660
Gain Factor = 421.905579 = 0x001A5E7D4 = 27650004

$$\frac{4660}{16384} x \frac{27650004}{65536} = 120.000000$$

The resulting answer is 120.000000 Volts secondary (240.000000 for the example below).

Example for Nexus® 1252 meter with 300V hardware:
Ungained Voltage Sample 0x01234 = 4660
Gain Factor = 834.81116 = 0x01A5E7D4 = 27650004

$$\frac{4660}{16384} x \frac{27650004}{32768} = 240.000000$$

- The next 22 bytes are the RMS Gain Factors. The order of these factors is:

  V_{CA}
  V_{BC}
  V_{AB}
  V_{AUX}
  V_{CN}
  V_{BN}
  V_{AN}
  I_{AUX}
  I_C
  I_B
  I_A

- The remaining 114 bytes are unused.

6.7: Waveform Samples Log Format

- The Waveform Samples Log responds to High Speed Limit Triggers. It records samples from the requested channels at the requested sample rate.

- A Record contains 16,384 bytes. Depending on the number of requested channels, a record is segmented in the following ways:

7 Analog & 8 Digital Channels for Sampling Rate 16, 32, 64, 128	1024 sets of 16 bytes, containing 15-bit samples for I_A, I_B, I_C, I_{AUX}, V_{AN}, V_{BN} and V_{CN}, an 8-bit sample for High Speed Digital Inputs States and an unused byte.
3 Analog & 8 Digital Channels for Sampling Rate 256	2048 sets of 8 bytes, containing 15-bit samples for V_{AN}, V_{BN} and V_{CN} or I_A, I_B and I_C, an 8-bit sample for High Speed Digital Input States and an unused byte.
1 Analog & 8 Digital Channels for Sampling Rate 512	4096 sets of 4 bytes, containing a 15-bit sample for a single analog channel (only one of V_{AN}, V_{BN}, V_{CN}, I_A, I_B, I_C and I_{AUX}), an 8-bit sample for High Speed Digital States and an unused byte.

- Graphically, the three segmentations could be represented as the following:

Table 6.4: 7 Analog & 8 Digital Channels

I_A		I_B		I_C		I_{AUX}		V_{AN}		V_{BN}		V_{CN}			
Low	Hi	Low	Hi	Low	Hi	Low	Hi	Low	Hi	Low	Hi	Low	Hi	HSI	—
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Table 6.5: 3 Analog & 8 Digital Channels

V_{AN}		V_{BN}		V_{CN}				V_{AN}		V_{BN}		V_{CN}			
Low	Hi	Low	Hi	Low	Hi	HSI	—	Low	Hi	Low	Hi	Low	Hi	HSI	—
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Table 6.6: 1 Analog & 8 Digital Channels

Analog				Analog				Analog				Analog			
Low	Hi	HSI	—	Low	Hi	HSI	—	Low	Hi	HSI	—	Low	Hi	HSI	–
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

- Each analog sample uses 2 bytes to represent a 15-bit sample. There are three different forms that the two bytes might occupy, one form for voltage samples and two forms for current samples.

  - For all three forms, the first byte is the least significnt byte and contains the lower order bits, 7-0.

  - For voltage samples, the second byte contains the high order bits, 14 – 7, in a modified two's complement format. It is modified in that while a standard two's complement would represent values between +127 and -128, these values have been rounded up based on the value of bit 6, stored in the lower byte and represent values from +128 to –128. This byte is used by the meter to calculate the High Speed RMS value used for waveform capture. This rounding centers the scale around the true zero of the full range of the A/D.

    The full 15-bit voltage value can be recovered from these two bytes using the following steps:

    1. If bit 6, stored in the first byte, is 0, skip to step 3.

    2. Decrement the 8-bit two's complement value of bits 14 – 7, stored in the second byte.

    3. Combine bits 14 – 7 of the second byte with bits 6-0 of the first byte.

    4. The resulting 15-bit value is the two's complement value of the sample.

    5. Sign extend the 15-bit value by one bit (copy bit 14 to bit 15) to produce a standard 16-bit integer.

    Since the range of the A/D is +2.5 – -2.5, one bit of the high byte represents 0.019531V, while one bit of the 15-bit value represents 0.000153V.

Note: This log does not record records during Test Mode.

Table 6.7 on the following page gives several examples.

Table 6.7 Voltage Sample Examples						
Actual Voltage	**A/D15-A/D0**	**1st Byte**	**2nd Byte**		**HS RMS Voltage**	**Stored Voltage**
		A/D8-A/D1	**Straight A/D15-A/D8**	**Adjusted A/D15-A/D8**		
+2.500000	0x07FFF	0x0FF	0x07F	0x080	+2.500000	+2.499847
+2.499924	0x07FFF	0x0FF	0x07F	0x080	+2.500000	+2.499847
+2.499847	0x07FFE	0x0FF	0x07F	0x080	+2.500000	+2.499847
+2.499771	0x07FFD	0x0FE	0x07F	0x080	+2.500000	+2.499696
+2.499696	0x07FFC	0x0FE	0x07F	0x080	+2.500000	+2.499696
+2.499619	0x07FFB	0x0FD	0x07F	0x080	+2.500000	+2.499542
+2.490234	0x07F80	0x080	0x07F	0x080	+2.500000	+2.490234
+2.480392	0x07F7F	0x07F	0x07F	0x07F	+2.480469	+2.490082
+2.480469	0x07F00	0x000	0x07F	0x07F	+2.480469	+2.480469
+2.480392	0x07EFF	0x0FF	0x07E	0x07F	+2.480469	+2.480316
+2.470703	0x07E80	0x080	0x07E	0x07F	+2.480469	+2.470703
+2.470627	0x07E7F	0x07F	0x07E	0x07E	+2.460938	+2.470551
+0.009766	0x00080	0x080	0x000	0x001	+0.019531	+0.009766
+0.009689	0x0007F	0x07F	0x000	0x000	+0.000000	+0.009613
+0.000000	0x00000	0x000	0x000	0x000	+0.000000	+0.000000
-0.000076	0x0FFFF	0x0FF	0x0FF	0x000	+0.000000	-0.000153
-0.009766	0x0FF80	0x0C0	0x0FF	0x000	+0.000000	-0.009766
-0.009842	0x0FF7F	0x0BF	0x0FF	0x0FF	-0.019531	-0.009918
-2.490234	0x08080	0x040	0x080	0x081	-2.480469	-2.490234
-2.490310	0x0807F	0x03F	0x080	0x080	-2.500000	-2.490387
-2.499847	0x08001	0x000	0x080	0x080	-2.500000	-2.500000
-2.500000	0x08000	0x000	0x080	0x080	-2.500000	-2.500000

- For current samples, there are two forms for the second byte. The two forms are signaled by the most significan bit of the second byte. If the byte is clear, the second byte represents a course representation and contains information on bits 14 – 8 in modified two's complement format. If the bit is set, the second byte represents a fine representation and contains information on bits 14 – 5 in a modified two's complement format. Values in the fine representation carry three more bits of information. Values in the coarse representation are weighted by a factor of 8.

  Values in the coarse representation are modified in that they have been rounded up based on the value of bit 7, stored in the lower byte and represent values from +64*8 to –64*8.

  Values in the fine representation are modified in that they have been rounded up based on the value of bit 4, stored in the lower byte and represent values from +64 to –64.

  The second byte is used by the meter to calculate the High Speed RMS value used for waveform capture. The two ranges allow the samples to cover a wide range, with greater precision on smaller signals than larger ones, while the rounding centers the scales around the true zero of the full range of the A/D. The full 15 - bit current value can be recovered from these two bytes using the following steps:

  1. If the most significant bit of the second byte is set, skip to step 6.

  2. If bit 7, stored in the first byte, is 0, skip to step 4.

  3. Decrement the 7 - bit two's complement value of bits 14 - 8, stored in the second byte.

  4. Combine bits 14- 8 of the second byte with bits 7 - 0 of the first byte.

  5. Skip to step 10.

  6. If bit 4, stored in the first byte, is 0, skip to step 8.

  7. Decrement the 7 - bit two's complement value of bits 11 - 5, stored in the second byte.

  8. Combine bits 11 - 5 of the second byte with bits 4 - 0 of the first byte.

  9. Sign extend the 12 - bit value by three bits (copy bit 11 to bits 14 - 12) to produce a 15 - bit two's complement value.

  10. The resulting 15 - bit value is the two's complement value of the sample.

  11. Sign extend the 15 - bit value by one bit (copy bit 14 to bit 15) to produce a standard 16 - bit integer.

Since the range of the A/D is +2.5 – -2.5, one bit of the coarse representation represents 0.039063V, one bit of the fine representation represents 0.004883V and one bit of the 15 - bit value represents 0.000153V.

Table 6.8 on the following pages gives several examples.

Table 6.8 Current Sample Examples							
Actual Voltage	**A/D15-A/D0**	**1st Byte A/D8-A/D1**	**2nd Byte Straight A/D15-A/D9**	**Straight A/D15-A/D6**	**2nd Byte Adjusted A/D15-A/D(9/6)**	**HS RMS Voltage**	**Stored Voltage**
+2.500000	0x07FFF	0x0FF	0x03F	0x01FF	0x040	+2.500000	+2.499847
+2.499924	0x07FFF	0x0FF	0x03F	0x01FF	0x040	+2.500000	+2.499847
+2.499847	0x07FFE	0x0FF	0x03F	0x01FF	0x040	+2.500000	+2.499847
+2.499771	0x07FFD	0x0FE	0x03F	0x01FF	0x040	+2.500000	+2.499695
+2.480621	0x07F02	0x081	0x03F	0x01FC	0x040	+2.500000	+2.480621
+2.480545	0x07F01	0x080	0x03F	0x01FC	0x040	+2.500000	+2.480469
+2.480469	0x07F00	0x080	0x03F	0x01FC	0x040	+2.500000	+2.480469
+2.480392	0x07EFF	0x07F	0x03F	0x01FB	0x03F	+2.460938	+2.480316
+2.480316	0x07EFE	0x07F	0x03F	0x01FB	0x03F	+2.460938	+2.480316
+2.480240	0x07EFD	0x07E	0x03F	0x01FB	0x03F	+2.460938	+2.480164
+2.461090	0x07E02	0x001	0x03F	0x01F8	0x03F	+2.460938	+2.461090
+2.461014	0x07E01	0x000	0x03F	0x01F8	0x03F	+2.460938	+2.460938
+2.460938	0x07E00	0x000	0x03F	0x01F8	0x03F	+2.460938	+2.460938
+2.460861	0x07DFF	0x0FF	0x03E	0x01F7	0x03F	+2.460938	+2.460785
+2.460785	0x07DFE	0x0FF	0x03E	0x01F7	0x03F	+2.460938	+2.460785
+2.460709	0x07DFD	0x0FE	0x03E	0x01F7	0x03F	+2.460938	+2.460632
+2.441559	0x07D02	0x081	0x03E	0x01F4	0x03F	+2.460938	+2.441559
+2.441483	0x07D01	0x080	0x03E	0x01F4	0x03F	+2.460938	+2.441406
+2.441406	0x07D00	0x080	0x03E	0x01F4	0x03F	+2.460938	+2.441406
+2.441330	0x07CFF	0x07F	0x03E	0x01F3	0x03E	+2.421875	+2.441254
+2.441254	0x07CFE	0x07F	0x03E	0x01F3	0x03E	+2.421875	+2.441254
+2.441177	0x07CFD	0x07E	0x03E	0x01F3	0x03E	+2.421875	+2.441101
+2.422028	0x07C02	0x001	0x03E	0x01F0	0x03E	+2.421875	+2.422028
+2.421951	0x07C01	0x000	0x03E	0x01F0	0x03E	+2.421875	+2.421875
+2.421875	0x07C00	0x000	0x03E	0x01F0	0x03E	+2.421875	+2.421875

Table 6.8 Current Sample Examples, Continued							
Actual Voltage	**A/D15-A/D9**	**1st Byte A/D8-A/D1**	**Straight A/D15-A/D9**	**Straight A/D15-A/D6**	**2nd Byte Adjusted A/D15-A/D(9-6)**	**HS RMS Voltage**	**Stored Voltage**
+2.421799	0x07BFF	0x0FF	0x03D	0x01EF	0x03E	+2.421875	+2.421722
+2.421722	0x07BFE	0x0FF	0x03D	0x01EF	0x03E	+2.421875	+2.421772
+2.421646	0x07BFD	0x0FE	0x03D	0x01EF	0x03E	+2.421875	+2.421570
+0.312653	0x01002	0x001	0x008	0x0040	0x008	+0.312500	+0.312653
+0.312576	0x01001	0x000	0x008	0x0040	0x008	+0.312500	+0.312500
+0.312500	0x01000	0x000	0x008	0x0040	0x008	+0.312500	+0.312500
+0.312424	0x00FFF	0x0FF	0x007	0x003F	0x0C0	+0.312500	+0.312347
+0.312347	0x00FFE	0x0FF	0x007	0x003F	0x0C0	+0.312500	+0.312347
+0.312271	0x00FFD	0x0FE	0x007	0x003F	0x0C0	+0.312500	+0.312195
+0.312653	0x00FE2	0x0F1	0x007	0x003F	0x0C0	+0.312500	+0.310211
+0.312576	0x00FE1	0x0F0	0x007	0x003F	0x0C0	+0.312500	+0.310059
+0.312500	0x00FE0	0x0F0	0x007	0x003F	0x0C0	+0.312500	+0.310059
+0.312424	0x00FDF	0x0EF	0x007	0x003F	0x0BF	+0.307617	+0.309906
+0.312347	0x00FDE	0x0EF	0x007	0x003F	0x0BF	+0.307617	+0.309906
+0.312271	0x00FDD	0x0EE	0x007	0x003F	0x0BF	+0.307617	+0.309753
+0.307770	0x00FC2	0x0E1	0x007	0x003F	0x0BF	+0.307617	+0.307770
+0.307693	0x00FC1	0x0E0	0x007	0x003F	0x0BF	+0.307617	+0.307617
+0.307617	0x00FC0	0x0E0	0x007	0x003F	0x0BF	+0.307617	+0.307617
+0.307541	0x00FBF	0x0DF	0x007	0x003E	0x0BF	+0.307617	+0.307465
+0.307465	0x00FBE	0x0DF	0x007	0x003E	0x0BF	+0.307617	+0.307465
+0.307388	0x00FBD	0x0DE	0x007	0x003E	0x0BF	+0.307617	+0.307312
+0.305328	0x00FA2	0x0D1	0x007	0x003E	0x0BF	+0.307617	+0.305328
+0.305252	0x00FA1	0x0D0	0x007	0x003E	0x0BF	+0.307617	+0.305176
+0.305176	0x00FA0	0x0D0	0x007	0x003E	0x0BF	+0.307617	+0.305176
+0.305099	0x00F9F	0x0CF	0x007	0x003E	0x0BE	+0.302734	+0.305023
+0.305023	0x00F9E	0x0CF	0x007	0x003E	0x0BE	+0.302734	+0.305023
+0.304947	0x00F9D	0x0CE	0x007	0x003E	0x0BE	+0.302734	+0.304871

Table 6.8 Current Sample Examples, Continued							
Actual Voltage	**A/D15-A/D0**	**Ist Byte A/D8-A/D9**	**Straight A/D15-A/D9**	**Straight A/D15-A/D6**	**2nd Byte Adjusted A/D15-A/D(9/6)**	**HS RMS Voltage**	**Stored Voltage**
+0.302887	0x00F82	0x0C1	0x007	0x003E	0x0BE	+0.302734	+0.302887
+0.302810	0x00F81	0x0C0	0x007	0x003E	0x0BE	+0.302734	+0.302734
+0.302734	0x00F80	0x0C0	0x007	0x003E	0x0BE	+0.302734	+0.302734
+0.302658	0x00F7F	0x0BF	0x007	0x003D	0x0BE	+0.302734	+0.302582
+0.302582	0x00F7E	0x0BF	0x007	0x003D	0x0BE	+0.302734	+0.302582
+0.302505	0x00F7D	0x0BE	0x007	0x003D	0x0BE	+0.302734	+0.302429
+0.002441	0x00020	0x010	0x000	0x0000	0x081	+0.004883	+0.002441
+0.002365	0x0001F	0x00F	0x000	0x0000	0x080	+0.000000	+0.002289
+0.000076	0x00001	0x000	0x000	0x0000	0x080	+0.000000	+0.000000
+0.000000	0x00000	0x000	0x000	0x0000	0x080	+0.000000	+0.000000
-0.000076	0x0FFFF	0x0FF	0x07F	0x03FF	0x080	+0.000000	-0.000153
-0.000153	0x0FFFE	0x0FF	0x07F	0x03FF	0x080	+0.000000	-0.000153
-0.002441	0x0FFE0	0x0F0	0x07F	0x03FF	0x080	+0.000000	-0.002441
-0.002518	0x0FFDF	0x0EF	0x07F	0x03FF	0x0FF	-0.004883	-0.002594
-0.312347	0x0F002	0x001	0x078	0x03C0	0x0C0	-0.312500	-0.312347
-0.312424	0x0F001	0x000	0x078	0x03C0	0x0C0	-0.312500	-0.312500
-0.312500	0x0F000	0x000	0x078	0x03C0	0x0C0	-0.312500	-0.312500
-0.312576	0x0EFFF	0x0FF	0x077	0x03BF	0x077	-0.312500	-0.312653
-0.312653	0x0EFFE	0x0FF	0x077	0x03BF	0x077	-0.312500	-0.312653
-0.312729	0x0EFFD	0x0FE	0x077	0x03BF	0x077	-0.312500	-0.312805
-2.480469	0x08100	0x080	0x081	0x081	0x081	-2.480469	-2.480469
-2.480545	0x080FF	0x07F	0x080	0x080	0x081	-2.480469	-2.480621
-2.499771	0x08002	0x001	0x080	0x080	0x080	-2.500000	-2.499847
-2.499847	0x08001	0x000	0x080	0x080	0x080	-2.500000	-2.500000
-2.500000	0x08000	0x000	0x080	0x080	0x080	-2.500000	-2.500000

- High Speed Digital Input States contain the states of the 8 High Speed Digital Inputs in the following format:

Table 6.9 High Speed Digital Input States							
7	6	5	4	3	2	1	0
HSI 8	HSI 7	HSI 6	HSI 5	HSI 4	HSI 3	HSI 2	HSI 1

  A bit value of 1 means the input is open. A bit value of 0 means the input in closed.

- When sampling at 15,360 samples/second, RMS is calculated within the meter on every other sample, always starting with the first sample of a cycle. At all other sampling rates, RMS is calculated using every sample in the cycle.

6.8: Power Quality (CBEMA) Log Format

- **PQ (CBEMA) Log Format:** The PQ (CBEMA) Log records in response to surges and sags of programmed High Speed Limit Triggers on enabled High Speed channels. The information it provides allows the calculation of duration and magnitude of the surges and sags, as well as information for locating the start and end of the surge or sag in the Waveform Captures.

- **Record Format:** A Record contains 128 Bytes.

  - The first eight bytes in each record is the Starting Time Stamp, representing the time of the last sample of first cycle of the surge or sag. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 – 99	century
1	binary	0 – 99	year
2	binary	1 – 12	month
3	binary	1 – 31	day
4	binary	0 – 23	hour
5	binary	0 – 59	minute
6	binary	0 – 59	second
7	binary	0 – 100	centisecond

Note: This log does not record records during Test Mode.

  - The next byte is the millisecond value for the Starting Time Stamp, a binary value in the range of 0 – 9.

  - The next four bytes are a bitmap of the States of the High Speed Limits after the triggering cycle. These bits report the true state of all the limits, regardless of PQ Enable settings.

Table 6.10: Above Limits

Above Limit															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
V_{AN}	V_{BN}	V_{CN}	V_{AUX}	I_A	I_B	I_C	I_{AUX}	I_N	V_{AB}	V_{BC}	V_{CA}	_	_	_	_

The first two bytes are for the above limits, shown in the following order:
The other two bytes are for the below limits, and are in the same order as shown in Table 6.10 above.

There are currently five hookups available where the following high speed limits are computable in each:

3 Element Wye	V_{AN}, V_{BN}, V_{CN}, I_A, I_B, I_C, I_{AUX}
3 CT Delta	I_A, I_B, I_C, I_{AUX}, V_{AB}, V_{BC}, V_{CA}
2 CT Delta	I_A, I_C, I_{AUX}, V_{AB}, V_{BC}, V_{CA}
2-1/2 Element Wye	V_{AN}, V_{CN}, I_A, I_B, I_C, I_{AUX}
Broken Delta	V_{AN}, V_{BN}, V_{CN}, I_A, I_B, I_C, I_{AUX}, V_{AB}, V_{BC}, V_{CA}

- The next four bytes are a bitmap of the Latched Delta states of the High Speed Limits. For the first cycle that a limit changes state, the change of state is recognized as a Delta. If waveform capture parameters require multiple captures for a given change, subsequent captures would be recognized as having no new Deltas. Therefore, every time a Delta occurs, the new Delta is latched, so that consecutive captures for the original Delta can still indicate what Delta triggered the first capture. The order of the bits is the same as for the states of the High Speed Limits, as above. These bits will only report the changes in limits that are Enabled for PQ Triggering.

- The next byte tells you in which capture to find the trigger. For example, a device records a surge lasting for two cycles. The surge triggers the first capture and the triggering cycle for the first capture is in the first capture. However, the cycle which is the subsequent return to normal is also in the first capture. It triggers the second capture. In the first Trigger Record, this byte would contain the value 0x000, identifying the triggering sample to be in the first capture, at the index as given by the above index value. In the second Trigger Record, this byte would also contain the value 0x000, identifying the triggering sample to also be in the first capture, at the index and time given by its index value.

- The next two bytes are a signed integer with the index of the sample that was at the end of the triggering cycle.

- The next 48 bytes are 12 4-byte MSB signed integers representing the RMS values recorded in the triggering cycle. Following is the order of these readings:

  V_{AN}

  V_{BN}

  V_{CN}

  V_{AUX}

  I_A

  I_B

  I_C

  I_{AUX}

  I_N

  V_{AB}

  V_{BC}

  V_{CA}

  For a capture in WYE configuration, V_{AB}, V_{BC} and V_{CA} are not computed.

  For a capture in DELTA configuration, V_{AN}, V_{BN} and V_{CN} are not computed.

  Currently, I_N and I_{AUX} are not computed.

If the unit has regular hardware, RMS values are in units of squared secondary, with two bytes of fraction. That is, each count is 1/65536 of a squared volt. If the unit is supplied with 300V hardware, RMS values are in units of squared secondary, with 14 bits of fraction. That is, each count is 1/16384 of a squared volt. Units that have 300V hardware can be identified by the appropriate setting in the programmable settings.

For example:

Regular Hardware

V_{AN} = 0x038B84000 = 14520.25 v^2 secondary, or 120.5 v secondary

300V Hardware

V_{AN} = 0x038B84000 = 58081 v^2 secondary, or 241 v secondary

- The next byte holds eight bits representing the Delta of the High Speed Input States.

  These RMS values report the maximum or minimum value during a surge or sag. A given reading is only valid in the record recorded when a surge or sag ends and only for the channel or channels on which surges or sags ended.

High Speed Digital Input States are in the following format:

Table 6.11: High Speed Digital Input States

Bits							
7	6	5	4	3	2	1	0
HSI 8	HSI 7	HSI 6	HSI 5	HSI 4	HSI 3	HSI 2	HSI 1

A bit value of 1 means the input changed in the last cycle. A bit value of 0 means the input did not change.

- The next byte holds eight bits representing the Current States of the High Speed Inputs.

  The Current States of the High Speed Digital Inputs are in the following format:

Table 6.12: Current States of the High Speed Digital Inputs

Bits							
7	6	5	4	3	2	1	0
HSI 8	HSI 7	HSI 6	HSI 5	HSI 4	HSI 3	HSI 2	HSI 1

A bit value of 1 means the input is open. A bit value of 0 means the input is closed.

- The next byte indicates whether this PQ record is continuous in monitoring with the previous record. If the byte is non-zero, then this is the first record recorded after a power-down, reset or download, and all unfinished durations prior to this record are lost. If the byte is zero, then monitoring was continuous between the last record and this one.

- The next 22 bytes are the RMS Gain Factors. Following is the order of these factors:

V_{CA}

V_{BC}

V_{AB}

V_{AUX}

I_{CN}

I_{BN}

I_{AN}

I_{AUX}

I_{C}

I_{B}

I_{A}

- The remaining 35 bytes are unused.

6.9: Digital Input Log Format

■ **Digital Input Log Format:** The Digital Input Log stores records in order to document the transitions of Internal and External Digital Inputs.

■ **Record Format:** A Record contains 16 Bytes.

- The first eight bytes in each record is the Time Stamp, representing the time of the event the record is recording. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 - 99	century
1	binary	0 - 99	year
2	binary	1 - 12	month
3	binary	1 - 31	day
4	binary	0 - 23	hour
5	binary	0 - 59	minute
6	binary	0 - 59	second
7	binary	0 - 100	centisecond

Note: This log does not record records during Test Mode.

An additional piece of information is contained in the centisecond byte.The most significant bit indicates whether this Digital Input record is contiguous in monitoring with the previous record. If the bit is 1,

then this is the first record recorded after a power-down, reset or download, and it is possible that some transitions were not recorded. If the bit is zero, then monitoring was continuous between the last record and this one.

- The next byte contains the States of the Internal Digital Inputs in the following format:

Table 6.13: States of the Internal Digital Inputs							
Bits							
7	6	5	4	3	2	1	0
Input 8	Input 7	Input 6	Input 5	Input 4	Input 3	Input 2	Input 1

A bit value of 1 means the input is open. A bit value of 0 means the input is closed.

- The next 4 bytes contain the States of the Enternal Digital Inputs in the following format:

Table 6.14: States of the External Digital Inputs							
Bits							
7	6	5	4	3	2	1	0
Input 8	Input 7	Input 6	Input 5	Input 4	Input 3	Input 2	Input 1
Module 1 External Digital Input States							
Module 2 External Digital Input States							
Module 3 External Digital Input States							
Module 4 External Digital Input States							

A bit value of 1 means the input is open. A bit value of 0 means the input is closed.

- The next byte indicates whether information presented from the External Modules is valid. If the main unit has not yet established contact with an External Module, the information recorded as being from that module is not valid.

Table 6.15: Valid Information from a Module							
Bits							
7	6	5	4	3	2	1	0
Module 1	Module 2	Module 3	Module 4				

A bit value of 1 indicates the information from that module is valid. A bit value of 0 indicates the information from that module is not valid.

- The last 2 bytes are unused.

6.10: Digital Input Snapshot Log Format

- **Digital Input Snapshot Log**: The Digital Input Snapshot Log will fill to the total allocated memory. The number of records possible in the Digital Input Log is the total memory allocated divided by the record size (size of a Digital Input Snapshot).

- **Profile Information is in the Programmable Settings Block.**

- **Digital Input Snapshot Record Size: (45463)**
  This Register is an enumeration for the size of a record in the Digital Input Snapshot Log. The valid values are:

  0x00000 = 32 byte records
  0x00001 = 64 byte records
  0x00002 = 128 byte records
  0x00003 = 256 byte records
  0x00004 = 16 byte records

- **Digital Input Snapshot Data Pointers: (45205-45332)**
  These Registers indicate which information to include in a record in the Digital Input Snapshot Log. Each Data Pointer has the following 4 (four) byte structure:

Size	Format	Description
2 byte	unsigned int	Line Number
1 byte	unsigned char	Point number
1 byte	unsigned char	Reserved

A Line Number is an index into the Communication Table. Example - Line Number 11 is for the 12th line in the Communicatin Table, 0.1 second Phase-to-Neutral Voltages. Data Pointers with Line Numbers greater than the number of lines in the table are ignored.

A Point Number is an index into the Communication Table.

Example: Point Number 1 is for the second entry in a Line. Line Number 11, Point Number 1 is the second in the twelfth line, 0.1 second V_{BN}. Data Pointers with Point Numbers greater than the number of points for the line are ignored.

- **Record Format:** A Record contains as many bytes as specified by the Digital Input Snapshot Record Size Field in the Programmable Settings Block (45463). The first eight bytes in each record is the Time Stamp. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 – 99	century
1	binary	0 – 99	year
2	binary	1 – 12	month
3	binary	1 – 31	day
4	binary	0 – 23	hour

5	binary	0 – 59	minute
6	binary	0 – 59	second
7	binary	0 – 100	centisecond

Note: This log does not record records during Test Mode.

- The remaining bytes are the values requested by the Digital Input Snapshot Data Pointers (45205-45332). If the first Data Pointer is requesting V_{BN} a 4 byte value, then the next 4 bytes in the Record are V_{BN}. This continues, Data Pointer for Data Pointer, until all Data Pointers have been satisfied, or the number of bytes is equal to the Digital Input Snapshot Record Size.

6.11: Digital Output Log Format

- **Digital Output Log Format:** The Digital Output Log stores records in order to document the stages used when changing states of Digital Outputs. Records are stored for four reasons - When the delay at the end of a Relay Logic Tree is finished, indicating that a relay needs to change state, when a communication port requests to lock or unlock a relay, when the command is transmitted to the external device and when the response is returned from the external device.

- **Record Format:** A Record contains 64 Bytes.

  - The first eight bytes in each record is the Time Stamp, representing the time of the event the record is recording. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 - 99	century
1	binary	0 - 99	year
2	binary	1 - 12	month
3	binary	1 - 31	day
4	binary	0 - 23	hour
5	binary	0 - 59	minute
6	binary	0 - 59	second
7	binary	0 - 100	centisecond

Note: This log does not record records during Test Mode.

An additional piece of information is contained in the centisecond byte. The most significant bit indicates whether this DO record is contiguous in monitoring with the previous record. If the bit is 1, then this is the first record recorded after a power-down, reset or download, and all unfinished relay interactions prior to this record are lost. If the bit is zero, then monitoring was continuous between the last record and this one.

- The next byte indicates the stage, or reason, for the record. The stages are as follows:

  0x001 Stage 1 ElectroLogic or communication command now desires to change the state of one or more relays.
  0x002 Stage 2 Command is being transmitted to an (one) external relay.
  0x003 Stage 3 Confirmation has been received from a command that was sent.

- The next 2 bytes indicate whether information about a relay is valid or not. Modules which are unused, or which are not responding to communication, are not valid. The bytes are formatted as follows:

Table 6.16: Relay Valid Bits															
Bits															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Module 1				Module 2				Module 3				Module 4			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

A bit value of 0 indicates that information for this relay is not yet valid; a bit value of 1 indicates that information for this relay is valid.

- The next 16 bytes represent the inputs to the Relay Logic Trees arranged as follows:

Table 6.17: Relay Logic Tree Inputs															
Bits															
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Input 1															
Input 2															
Input 3															
Input 4															
Input 5															
Input 6															
Input 7															
Input 8															

- Each bit represents the state of an input into a Relay Logic Tree. A bit value of 0 indicates a false input value; a bit value of 1 indicates a true input value. These are the values for an input before a possible NOT setting. If NOT is not set, the value remains the same. If NOT is set, the value becomes the opposite.

- The next 14 bytes represent the gate outputs of the Relay Logic Trees arranged as follows:

Table 6.18: Relay Logic Gate Ouputs															
Bits															
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Gate A															
Gate B															
Gate C															
Gate D															
Gate E															
Gate F															
Gate G															
Gate H															

Each bit represents the state of a gate output in a Relay Logic Tree.

A bit value of 0 indicates a false output value; a bit value of 1 indicates a true output value.

- The next 2 bytes indicate whether a relay is locked or unlocked. The bits are in the following order:

Table 6.19: Relay Locked Bits															
Bits															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Module 1				Module 2				Module 3				Module 4			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

A bit value of 0 indicates the relay is not locked; a bit value of 1 indicates the relay is locked.

- The next 2 bytes indicate whether a relay was previously locked or unlocked. The bits are in the following order:

Table 6.20: Previously Locked Bits															
Bits															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Module 1				Module 2				Module 3				Module 4			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

A bit value of 0 indicates the relay was not locked; a bit value of 1 indicates the relay was locked.

- The next 2 bytes indicate the desired state of the relay, in the same order as above. If the relay is locked, as indicated in the previous 2 bytes, then the relay should be locked to this relay. If the relay is unlocked, then this is the state in which the relay should be as indicated by the Relay Logic Tree for this relay. A bit value of 0 indicates de-energized, or connected to Normal Close; a bit value of 1 indicates energized, or connected to Normal Open.

- The next 2 bytes indicate that a command has begun to be sent to an external module to change the state of a relay, in the same order as above.

  The first byte indicates to which relay the command is being sent:

0x000-0x003	Module 1, Relay 1-4
0x004-0x007	Module 2, Relay 1-4
0x008-0x00B	Module 3, Relay 1-4
0x00C-0x00F	Module 4, Relay 1-4
other	No command sent

  The second byte indicates whether the command being sent was to energize or de-energize the relay. A value of 0x000 indicates the relay command was to de-energize the relay; any other value indicates the command was to energize the relay.

- The last 2 bytes indicate successfully changed relay states, as recorded by the reception of the response from the relay module, in the same order as above. A bit value of 0 indicates the relay is de-energized, or connected to Normal Close; a bit value of 1 indicates the relay is energized, or connect to Normal Open.

- The remaining 13 bytes are unused.

■ The normal sequence for a relay change would involve three records.

The first record would be a Stage 1 record. Stage 1 records are when the Relay Tree for an unlocked relay has changed state for longer than the delay time for that Relay Tree, or when a command is received over communication that locks or unlocks a relay.

The second record would be a Stage 2 record. Stage 2 records are recorded approximately with the beginning of the transmission of the first byte of the command. Records of this type will report one and only one relay command being issued at a time.

The third record would be a Stage 3 record. Stage 3 records are recorded when an acknowledgement for a transmitted command to an external relay is received.

Should a problem occur with a response, multiple Stage 2 records can occur before a concluding Stage 3 record.

Should a Relay Logic Tree reverse itself, it might be possible to have two opposing Stage 1 records without intervening or subsequent Stage 2 or 3 records, or to have a sequence of 1-2-1-3-2-3.

6.12: Digital Output Snapshot Log Format

- **Digital Output Snapshot Log:** The Digital Output Snapshot Log will fill to the total allocated memory. The number of records possible in the Digital Output Log is the total memory allocated divided by the record size (size of a Digital Output Snapshot).

Profile Information is in the Programmable Settings Block.

- **Digital Output Snapshot Record Size: (45463)**
  This Register is an enumeration for the size of a record in the Digital Output Snapshot Log. The valid values are:

  0x00000 = 32 byte records
  0x00001 = 64 byte records
  0x00002 = 128 byte records
  0x00003 = 256 byte records
  0x00004 = 16 byte records

- **Digital Output Snapshot Data Pointers: (45205-45332)**
  These Registers indicate which information to include in a record in the Digital Output Snapshot Log. Each Data Pointer has the following 4 (four) byte structure:

Size	Format	Description
2 byte	unsigned int	Line Number
1 byte	unsigned char	Point number
1 byte	unsigned char	Reserved

  A Line Number is an index into the Communication Table. Example - Line Number 11 is for the 12th line in the Communication Table, 0.1 second Phase-to-Neutral Voltages. Data Pointers with Line Numbers greater than the number of lines in the table are ignored.

  A Point Number is an index into the Communication Table.

  Example: Point Number 1 is for the second entry in a Line. Line Number 11, Point Number 1 is the second in the twelfth line, 0.1 second V_{BN}. Data Pointers with Point Numbers greater than the number of points for the line are ignored.

- **Record Format:** A Record contains as many bytes as specified by the Digital Output Snapshot Record Size Field in the Programmable Settings Block (45463).

- The first eight bytes in each record is the Time Stamp. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0 – 99	century
1	binary	0 – 99	year
2	binary	1 – 12	month
3	binary	1 – 31	day
4	binary	0 – 23	hour
5	binary	0 – 59	minute
6	binary	0 – 59	second
7	binary	0 – 100	centisecond

Note: This log does not record records during Test Mode.

- The remaining bytes are the values requested by the Digital Output Snapshot Data Pointers (45205-45332). If the first Data Pointer is requesting V_{BN} a 4 byte value, then the next 4 bytes in the Record are V_{BN}. This continues, Data Pointer for Data Pointer, until all Data Pointers have been satisfied, or the number of bytes is equal to the Digital Output Snapshot Record Size.

6.13: Flicker Log Format

- Flicker Log Format: The Flicker Log stores records in order to document Short Term and Long Term Flicker.

- Record Format: A Record contains 32 Bytes.
  The first eight bytes in each record is the Time Stamp, representing the time when the record was recorded. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0-99	century
1	binary	0-99	year
2	binary	1-12	month
3	binary	1-31	day
4	binary	0-23	hour
5	binary	0-59	minute
6	binary	0-59	second
7	binary	0-100	centisecond

  The next eight bytes is a time stamp (in the same format as above), representing the time at the end of the interval for the included Short Term or Long Term Flicker values.

  The next twelve bytes are three, four byte signed (2's compliment) integers, which are the Short Term or Long Term Flicker values, in the order:
  Phase A
  Phase B
  Phase C

  The next byte is indicates whether this record contains information on Short Term or Long Term Flicker.

0x000	Short Term Flicker
0x001	Long Term Flicker
0x002-0x0FF	Undefined

  The last three bytes are unused.

6.14: System Event Log Format

- **Record Format:** A Record contains 16 Bytes.
  The first eight bytes in each record is the Time Stamp. The format of the Time Stamp is:

Byte	Format	Range	Description
0	binary	0-99	century
1	binary	0-99	year
2	binary	1-12	month
3	binary	1-31	day
4	binary	0-23	hour
5	binary	0-59	minute

6	binary	0-59	second
7	binary	0-100	centisecond

The source or meaning of the timestamp depends on the type of record being recorded.

If this record was recorded while the meter was in Test Mode, then the most significant bit of the centisecond byte will be set.

The next byte is a code to indicate the type of record:

0x000	Power
0x001	Password
0x002	Change Programmable Settings
0x003	Change Firmware
0x004	Change Time
0x005	Test Mode
0x006	Log Download
0x007	Feature Reset
0x008-0x0FF	Undefined

The meaning of the remaining 7 bytes (from now on referred to as sub-fields) depends on the type of record.

- **Power Record**

The first byte of the sub-fields indicates whether power was lost or regained at the recorded time:

0x000	Power was lost
0x001	Normal operation was restored
0x002-0x0FF	Undefined

The remaining 6 bytes of the sub-fields are undefined.

- **Password Record**

The first byte of the sub-fields indicates what action occurred at the recorded time:

0x000	Password Protection was Enabled.
0x001	Password Protection was Disabled.
0x002	The Level 1 Password was changed.
0x003	The Level 2 Password was changed.
0x004	Level 1 access was granted.
0x005	Level 2 access was granted.
0x006	An invalid password was supplied.
0x007-0x0FF	Undefined

The second byte of the sub-fields indicates what port was used for the action:

0x000	Port 4
0x001	Port 3
0x002	Port 2
0x003	Port 1
0x004-0x0FF	Undefined

The remaining 5 bytes of the sub-fields are undefined.

- **Change Programmable Settings**

The 7 bytes of the sub-fields are undefined.

- **Change Firmware**

The first byte of the sub-fields indicates which firmware has been changed:

0x000	Comm Run Time
0x001	DSP Run Time
0x002-0x0FF	Undefined

The next 4 bytes of the sub-fields indicates the old version number of the changed firmware.

The next 2 bytes of the sub-fields are undefined.

- **Change Time**

This record is used to indicate manual changes of the time of the meter, as performed via communication commands. Automatic functions, such as IRIG-B or Daylight Savings, are not indicated by this record.

The first byte of the sub-fields indicates which part of the time change this record shows:

0x000	Old Time - The time stamp is the old time of the meter.
0x001	New Time - The time stamp is the new time of the meter.
0x002-0x0FF	Undefined

The second byte of the sub-fields indicates what port was used to change the time:

0x000	Port 4
0x001	Port 3
0x002	Port 2
0x003	Port 1
0x004-0x0FF	Undefined

The remaining 5 bytes of the sub-fields are undefined.

■ **Test Mode**

The first byte of the sub-fields indicates which Test Mode action occurred.

	TLC	TLC & CTPT	Uncompensated	CTPT
Test Mode Ended	0x000	0x000	0x000	0x000
Wh Test (Del & Rcv)	0x001	0x009	0x011	0x019
VARh Test (Q1 & Q2)	0x002	0x00A	0x012	0x01A
VARh Test (Q3 & Q4)	0x003	0x00B	0x013	0x01B
VAh Test (Q1 & Q4)	0x004	0x00C	0x014	0x01C
VAh Test (Q2 & Q3)	0x005	0x00D	0x015	0x01D
Block Average Test	0x006	0x00E	0x016	0x01E
Rolling Average Test	0x007	0x00F	0x017	0x01F
Wh Test (Del & Rcv)	0x008	0x010	0x018	0x020

0x021-0x0FF Undefined

■ **Log Download**

The first byte indicates the log download action:

0x000	Download Started, Log records while downloading
0x001	Download Started, Log Paused while downloading
0x002	Download Ended.

The second byte of the sub-fields indicates which Log was being downloaded:

0x000	Historical Log 1
0x001	Historical Log 2
0x002	Sequence of Events State Log
0x003	Sequence of Events Snapshot Log
0x004	Digital Input State Log
0x005	Digital Input Snapshot Log
0x006	Digital Output State Log
0x007	Digital Output Snapshot Log
0x008	Flicker Log
0x009	Waveform Trigger Log
0x00A	System Event Log
0x00B	Waveform Sample Log
0x00C	PQ Log
0x00D	Reset Log
0x00E-0x0FF	Undefined

The third byte of the sub-fields indicates what port was used to download the log:

0x000	Port 4
0x001	Port 3
0x002	Port 2
0x003	Port 1
0x004-0x0FF	Undefined

The remaining 4 bytes of the sub-fields are undefined.

- **Feature Reset**

The first byte indicates what feature was being reset:

0x000	All Logs Reset
0x001	Maximum Reset
0x002	Minimum Reset
0x003	Energy Reset
0x004	Time of Use Current Month
0x005	Internal Input Accumulations and Aggregations
0x006	KYZ Output Accumulations
0x007	Cumulative Demand
0x008	Historical Log 1 Reset
0x009	Historical Log 2 Reset
0x00A	Sequence of Events Log Reset
0x00B	Digital Input Log Reset
0x00C	Digital Output Log Reset
0x00D	Flicker Log Reset
0x00E	Waveform Log Reset
0x00F	PQ Log Reset
0x010	System Event Log Reset
0x011	Total Average Power Factor Reset
0x012	Time of Use Active Registers

The second byte of the sub-fields indicates what port was used to request the reset.

0x000	Port 4
0x001	Port 3
0x002	Port 2
0x003	Port 1
0x004-0x0FF	Undefined

The remaining 5 bytes of the sub-fields are undefined.

Chapter 7
Nexus® Meter Programmable Settings Blocks

■ The Nexus® Meter Modbus Register Map can be found in Chapter 2. This chapter gives a detailed description of each of the Programmable Settings Blocks.

7.1: Communication Settings Block (45057-45074)

- Device Address - 2 bytes, unsigned integer, ranging from 0000H to FFFFH
- Protocol - 1 byte, unsigned integer.
- Baud Rate - 1 byte, unsigned integer.
- Parity - 1 byte, unsigned integer.
- Stop Bits - 1 byte, unsigned integer.
- Data Bits - 1 byte, unsigned integer.
- Response Delay - 1 byte, unsigned integer.
- Port Mode - 1 byte, unsigned integer. The value 1 means Master; value 0 means Slave. Port 1 is always a Slave.

Communication Settings Block Specifications						
Value	**Protocol**	**Baud Rate**	**Parity**	**Stop Bits**	**Data Bits**	**Response Delay (ms)**
0	Modbus ASCII	4800	None		5	0.00
1	Modbus RTU	9600	Even		6	0.25
2	DNP 3.0	19200	Odd		7	0.50
3		38400	Mark		8	0.75
4		57600	Space			1.00
5		115200				1.25
6						1.50
7				1 stop		1.75
8				1.5 stop		2.00
9-14						2.25-3.50
15				2 stop		3.75
16-255						4.00-63.75

7.2: Limit Settings Block (45077-45204)

Limit Comparisons - Internal Representations

A Nexus® meter has 32 Limits Objects.

■ Each Limit Object performs two independent comparisons with a selected computed value and combines them into a combined output. Information needed to perform these actions: channel identification, comparison values, comparison directions and combination type.

- Channel identification is performed by referencing the internal data table of the Nexus® meter, by specifying the Line Number and Point Number for a particular value. For example: to monitor 1 second V_{AN} values, use Line 34, Point 0; 1 second V_{BN}, use Line 34, Point 1; 1 second I_A, use Line 36, Point 0; Thermal Average V_{AN}, use Line 51, Point 0. To leave a Limit unassigned, use Line 65535, any point.

- Comparison values are entered using percentages relative to the programmed full scales of the system. For V_{AN}, the phase-to-neutral Voltage Full Scale would be referenced. If it is programmed to 120.0 V secondary with a phase voltage PT of 120:1, then a comparison of 13.2 kV primary would be a limit of 108 V secondary or 90.00% of the Full Scale. A 90.00% comparison for I_A with a phase Current Full Scale of 5.0 A secondary and a phase current CT of 2000:5 would be a comparison of 4.5 A secondary or 1800 A primary. Negative percentages would be used where appropriate (Watts, VAR, etc.). Special cases like PF and KF would depend on fixed internal Full Scales. Human interfaces could represent this in terms of quadrature and angle, instead of the internal percentage representation.

- Each comparison has a direction associated with it - Above or Below. A 90.00% comparison could be for above 90.00% or below 90.00%.

- Finally, each limit object is able to produce a third output which is a combination of the two comparisons. This combination could be an AND, OR, NAND, NOR, XOR or Hysteresis. So, a user can produce a band of between 40.00% and 80.00% by combining above 40.00% AND below 80.00%; over 110.00%/under 90.00% alarms by combining above 110.00% OR below 90.00%, on after over 110.00%, off after below 90.00% by combining above 110.00% and below 90.00% with Hysteresis.

  The structure for a combination is :

2 byte	Line Number
1 byte	Point Number
1 byte	Direction and Combination (SAB)
2 byte	Comparison 1 Percentage (Value 1)
2 byte	Comparison 2 Percentage (Value 2)

  Total of 8 bytes per Limit Object, total of 256 bytes for 32 Limit Objects.

  The structure for the Direction and Combination byte is:

Bits 7-5	Unused, set to 0
Bit 4	Negate combination (AND -> NAND, etc.)
Bits 3-2	00 = AND combination
	01 = OR combination
	10 = XOR combination
	11 = Hysteresis combination
Bit 1	0 = Comparison 2 is below
	1 = Comparison 2 is above
Bit 0	0 = Comparison 1 is below
	1 = Comparison 1 is above

- Hysteresis combination uses comparison 1 to set the combination, and comparison 2 to clear the combination. If both inputs are asserted, comparison 1 has priority. The usual arrangement would be to program comparison 1 to above a large value and comparison 2 to below a small value. When the monitored value goes above comparison 1, the combination will be set to a 1, until the monitored value goes below comparison 2, when the combination will be cleared to a 0.

  Pollable information would consist of:

32 bits	Comparison 1 states for 32 limits
32 bits	Comparison 2 states for 32 limits
32 bits	Combination states for 32 limits

  Total of 96 bits (12 bytes)

7.3 Historical Log Settings Block (45205-45464)

Historical Log 1 Data Pointers (45205 - 45332), Historical Log 2 Data Pointers (45333 - 45460).

- These registers indicate which information to include in a record in the Historical Log. Each Data Pointer has the following 4 (four) byte structure:

Data Pointer 4-Byte Structure		
Size	**Format**	**Description**
2 byte	Unsigned Integer	Line Number
1 byte	Unsigned Character	Point Number
1 byte	Unsigned Character	Reserved

- A Line Number is an index into the Communication Table. Example: Line Number 11 is for the 12th line in the Communication Table, 0.1 second Phase-to-Neutral Voltages. Data Pointers with Line Numbers greater than the number of lines in the table are ignored.

- A Point Number is an index into a Line in the Communication Table. Example: Point Number 1 is for the second entry in a Line. Line Number 11, Point Number 1 is the 2nd in the 12th line, 0.1 second V_{BN}. Data Pointers with Point Numbers greater than the number of points for the line are ignored.

Snapshot Interval for Historical Log 1 (45361), for Historical Log 2 (45462).

One register, 2 byte unsigned integers ranged from 0 to 3600.
The unit is 1 Second.

Historical Log 1 Record Size (45463), Historical Log 2 Record Size (45464).

This register is an enumeration for the size of a record in the Historical Log. The valid values are:
0x00000 = 32 byte records 0x00002 = 128 byte records 0x00004 = 16 byte records
0x00001 = 64 byte records 0x00003 = 256 byte records

7.4: Waveform/CBEMA Settings Block (45465-45500).

Set Points
1 register, 2 bytes signed integers. The value is ranged from +327.67 to -327.68. The unit is 0.01%. These are the percentage of the Full Scale values.

Waveform & PQ enable
1 register, 2 bytes bitmaps. Each Set Point can be enabled or disabled by these bit settings.
Waveform Limit Above Enable, register 45489.
Waveform Limit Below Enable, register 45490.
PQ Limit Above Enable, register 45491.
PQ Limit Below Enable, register 45492.

Bit	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Value	V_{AN}	V_{BN}	V_{CN}	V_{AUX}	I_A	I_B	I_C	I_{AUX}	I_N	V_{AB}	V_{BC}	V_{CA}	-	-	-	-

A bit value of 1 means Enabled.
A bit value of 0 means Disabled.

Sample Rate
1 byte, unsigned integers. This is the number of samples per one waveform.

Total Captures

Value	0	1	2	3	4	5	6	7-96
Sample Rate	16	32	64	128	256	512	-	-
Total Captures	0	1	2	3	4	5	6	7-96

1 byte unsigned integers. This is the number of waveforms that the unit will capture.

Mode and CBEMA Enable - currently not used.

High Speed Input Waveform and PQ Enables
1 byte bit map. Waveform and PQ data will be collected when the transition occurs at the high speed input when they are enabled.

	Waveform Trigger Enable								Power Quality Trigger Enable							
Bit	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
Input	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8

A bit value of 1 means Enabled.
A bit value of 0 means Disabled.

256 Samples/Cycle Channel Selection and 512 Samples/Cycle Channel Selection (45500)
When the Sample Rate is 256 or 512, not all voltage and currents can be sampled. There will be choices which can be sampled under 256 or 512 sample rate.

Value	0	1	2	3	4	5	6	7-96
256 Sample Rate (High Byte)	Volts	Currents						
512 Sample Rate (Low Byte)	V_{AN}	V_{BN}	V_{CN}	None	I_A	I_B	I_C	I_{NM}

7.5: High Speed Inputs Settings Block (45501-45723).

- Input Name - 8 registers, 16 bytes, 16 characters for the name.
- Input Open Label - 8 registers, 16 bytes, 16 characters for label, Not Shorted, State 1.
- Input Closed Label - 8 registers, 16 bytes, 16 characters for label, Shorted, State 0.
- Input Value - 2 registers, currently not used.
- Input Mode - Bit 0 will define the normal condition of the input.

High Speed Input Settings		
Bit 0	**Normal Condition**	**Binary State**
0	Open	State 1 (Not Shorted)
1	Closed	State 0 (Shorted)

7.6: External Digital Input Module Settings Block (45725-45728).

- Up to 4 External Digital Input Modules can be addressed in this block.
- Address - 1 Register, 2 bytes, unsigned integers.
- A value of 0x0FFFF for an address indicates that this device is unused.

7.7: External Digital Output Module Settings Block (45729-45808).

- Up to 4 External Digital Output Modules can be addressed in this block.
- Address - 2 bytes, unsigned integers.
- A value of 0x0FFFF for an address indicates that this device is unused.
- Line Number - 2 bytes, unsigned integers.
- Point Number - 1 byte, unsigned integers.
- Line Number and Point Number will point which limit is going to be used for the relay of the External Digital Output Module.

7.8: External Analog Input Module Settings Block (45809-45812).

- Up to 4 External Analog Input Modules can be addressed in this block.
- Address - 2 bytes, unsigned integers.
- A value of 0x0FFFF for an address indicates that this device is unused.

7.9: External Analog Output Module Settings Block (45813-45892).

- Up to 4 External Analog Output Modules can be addressed in this block.
- Address - 2 bytes, unsigned integers.
- A value of 0x0FFFF for an address indicates that this device is unused.
- Line Number - 2 bytes, unsigned integers.
- Point Number - 1 byte, unsigned integers.
- Line Number and Point Number will point which limit is going to be used for each output of the External Analog Output Module.

7.10: External KYZ Output Module Settings Block (45893-45907).

- Up to 4 External KYZ Output Modules can be addressed in this block.
- Address - 2 bytes, unsigned integers.
- A value of 0x0FFFF for an address indicates that this device is unused.
- The energy assignments are as follows:

KYZ Output Relay Byte Energy Assignments	
Value	**Energy Assignment**
0	Disabled
1	Q (1+4) WH
2	Q1 VAH
3	Q1 VARH
4	Q4 VAH
5	Q4 VARH
6	Q (2+3) WH
7	Q2 VAH
8	Q2 VARH
9	Q3 VAH
10	Q3 VARH
11-18	Internal Inputs Accumulations 1-8
19-22	Internal Input Aggregator 1-4
23-30	External Digital Input Module 1 in Accumulator 1-8
31-38	External Digital Input Module 2 in Accumulator 1-8
39-46	External Digital Input Module 3 in Accumulator 1-8
47-54	External Digital Input Module 4 in Accumulator 1-8

7.11: CT & PT Ratio Settings Block (45909-45924).

- Address - 2 registers, 4 bytes, unsigned integers.
- Primary numbers and secondary numbers are in these blocks for the proper ratios.

7.12: Hookup and Time Settings Block (45925-45944).

- Hookup - 1 register, 2 bytes.
  High byte - Configuration Bits. Voltage selection.
  When bit 0 is cleared, 150V.
  When bit 0 is set, 300V.
  Low byte - Wye/Delta selection.

Wye/Delta Byte Energy Assignments	
Value	**Assignment**
0	Wye
1	Delta 3 CTs
2	Delta 2 CTs
3	2.5 Element
4	4 Wire Delta

- Frequency - currently not used.
- Time Zone - 1 register, 2 bytes. Signed integer. The zone descriptor value varies from -13 to +13. The zone descriptor value 0 represents Greenwich Mean Time.

Time Zone Descriptor	
Value	**Zone Descriptor**
0	ZD 0
50	ZD + 0.5
100	ZD + 1
150	ZD + 1.5
-100	ZD - 1
-150	ZD - 1.5

- Daylight Savings Time Enable - 1 byte, unsigned integer.

Daylight Savings Time Enable	
Value	**Zone Descriptor**
0	Disabled
1	Use Clock Chip
2	Use Programming Block

- Transformer Loss Compensation (TLC) Enable - 1 byte, unsigned integer.

Transformer Loss Compensation (TLC) Enable		
Value	**Bit 0 & 1**	**Bit 2**
0	Disabled	Add
1	Iron Only	Subtract
2	Copper Only	
3	Both	

- Internal KYZ Form - 1 byte bit map.
  Refer to the Internal KYZ Settings Block (46330) for more detail.

  A bit value of 0 = Form C = Pulse of the relay.
  A bit value of 1 = Form A = Transition of the relay.

Internal KYZ Form Relay Assignments								
Bit Number	7	6	5	4	3	2	1	0
Relay Assignments	1	2	3	4	LED			

- Daylight Savings Time Start/End.
  Address - 4 registers, 8 bytes. Each byte has unsigned integer values (example below).

Daylight Savings Time Start/End Byte Assignments								
Register	45929		45930		45931		45932	
Byte	High	Low	High	Low	High	Low	High	Low
Assignments	Reserved	Reserved	Month	Day	Hour	Minute	Second	Reserved

- % Loss of Watt or VAR
  Address - 2 registers, 4 bytes, 2 bytes for integers and 2 bytes for fractions.

7.13: Average Settings Block (45949-45952).

- Thermal and Block Averaging Time Interval: 1 register, 2 bytes unsigned integer. The unit is in 1 second.
- Rolling Average Sub-Interval: 1 register, 2 bytes unsigned integer.
- Predictive Rolling Window Average: 1 register, 2 bytes unsigned integer.
- Number of Sliding Windows - 1 byte, unsigned integer.
- Time of Use Log Enable - currently not used.

7.14: Exception Profile Block (45953-45968).

- This block is not yet defined.

7.15: Device Label Settings Block (45969-45992).

- Meter Designation - 8 registers, 16 bytes Hex ASCII.
- Auxiliary Voltage Label - 8 registers, 16 bytes Hex ASCII.
- Measured Neutral Current Label - 8 registers, 16 bytes Hex ASCII.

7.16: Network Settings Block (45993-46016).

- IP Address - 2 registers, 4 bytes. Each byte has unsigned integer value.
- Subnet Mask - 2 registers, 4 bytes. Each byte has unsigned integer value.
- Default Gateway - 2 registers, 4 bytes. Each byte has unsigned integer value.
- Port 2 Baud Rate - 1 byte, unsigned integer.

Port 2 Baud Rate Values	
Value	**Baud Rate**
0	4800
1	9600
2	19200
3	38400
4	57600
5	115200

- Gateway Delay - 1 byte, unsigned integers.

Gateway Delay in Milliseconds	
Value	**Delays in milliseconds (ms)**
0	0
1	15
2-255	30-3825

Mode 1 - Network Mode 1. 1 register, only High Byte is used.

Bit 7: IP Address Resolution
A bit value of 1 means use DHCP server.
A bit value of 0 means use IP address of NEXUS/EEPROM.
Bits 0-6: Reserved

- Computer Name - 8 registers, 16 bytes Hex ASCII.
- Server IP Address - 2 registers, 4 bytes. Each byte has unsigned integer values.

Mode 2 - Network Mode 2. 1 byte.

Bit 7: IP Address Resolution
A bit value of 1 means use DHCP server.
A bit value of 0 means use IP address of NEXUS/EEPROM.
Bits 0-6: Reserved

- DNS Server 1 IP Address - 2 registers, 4 bytes. Each byte has unsigned integer values.
- DNS Server 2 IP Address - 2 registers, 4 bytes. Each byte has unsigned integer values.
- Server / Service Enable Bits - 32 Bits.

Server / Service Enable															
31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Server / Service Enable															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Bit 31: Undefined
Bit 30: Modbus TCP Client
Bit 29: GE EGD Data Port Server
Bit 28: Web Server
Bit 27: SMPT Client (Email)
Bit 26: FTP Server
Bit 25: FTP Client
Bit 24: HTTP / Modbus RTU Server
Bit 0 to 23: Reserved

A bit value of 1 means Enable the feature.
A bit value of 0 means Disable the feature.

- Email Port Number: 1 register, 2 bytes. This is a 2-byte unsigned integer.
  Range: 65535 to 0.

- FTP Port Number: 1 register, 2 bytes. This is a 2-byte unsigned integer.
  Range: 65535 to 0.

7.17: Block Window Average External Synchronization Block (46017).

- BWA Synch Enable - 1 byte.
  Instead of using the time interval, the meter can calculate the Thermal and Block average when the pulse is detected on one of the High Speed Inputs.

Block Window Average Synchronization Assignments	
Value	**Assignments**
0	Disabled
1-255	Enabled

- BWA Synch Mask - 1 byte. Only one input can be selected at a time. That means only one of the 8 bits can be set at a time.

Block Window Average Synchronization Mask Input Assignments								
Bit	0	1	2	3	4	5	6	7
Input Number	1	2	3	4	5	6	7	8

Proper Value for each Assigned Input:

Proper Values for BWA Synch Mask Assigned Inputs								
Assigned Input	1	2	3	4	5	6	7	8
Proper Value	1	2	4	8	16	32	64	128

7.18: Display Configuration Block (46018).

- 1 register, 2 bytes.
  Bit 15: Only applies to the voltage reading.
  A bit value of 1 = Primary voltage displayed.
  A bit value of 0 = Secondary voltage displayed.
  Bit 0-14: Reserved.

7.19: Energy Direction Block (46019).

- Received Energy Direction - 1 register, High byte only.

Energy Direction Block Values	
Value	**Description**
0	(Q1+4) Watt = Received & (Q2+3) Watt = Delivered
1	(Q1+4) Watt = Delivered & (Q2+3) Watt = Received

- Power Factor Labeling - 1 register, Low Byte only.

Power Factor Label Values	
Value	**Description**
0	Method 1: Q1+ Lag, Q2 - Lag, Q3 - Lead, Q4 + Lead
1	Method 2: Q1+ Lag, Q2 - Lead, Q3 + Lag, Q4 - Lead
2-255	Method 1: Q1 + Lag, Q2 - Lag, Q3 - Lead, Q4 + Lead

7.20: Test Mode Configuration Block (46020).

- Test Mode Exit Delay Time - 1 registers, 2 bytes - 2-byte unsigned integer.
- Range: 5 minutes to 60 minutes.

  This is the time in which Communicator Ext will exit Test Mode, if there is no activity.

7.21: Full Scale Block (46021-46036).

- 2 registers, 4 bytes - 2 bytes integers and 2 bytes fraction values.

7.22: External Module Software Interface Block (46053-46196).

- External Module Types - 1 byte value, unsigned integer.
- External Module Slots - 1 byte value, unsigned integer.
- External Module Label - 8 registers, 16 bytes. Hex ASCII.

External Module Types & Slots		
Value	**Types**	**Slots**
0	Not Assigned	1
1	KYZ	2
2	Digital Input	3
3	Analog Output 4-20mA 4 Channel	4
4	Analog Output 4-20mA 8 Channel	
5	Analog Output 0-1mA 4 Channel	
6	Analog Output 0-1mA 8 Channel	
7	Digital Output	
8	Analog Input 0-1mA 8 Channel	
9	Analog Input 0-20mA 8 Channel	
10	Analog Input 0-5V 8 Channel	
11	Analog Input 0-10V 8 Channel	

7.23: External Module Port Assignment Block (46197-46206).

- Port Assignment bytes are enumerated as in the following table:

External Module Port Assignments	
Value	**Assignments**
0x000	Port 4
0x001	Port 3
0x002	Port 2
0x003	Port 1 (232/485)
0x004	Diagnostic Port (currently not in use)

7.24: Manual Control Relay Block (46207-46208).

- Manual Control Relay Settings: 1 register, 2 bytes.

  Up to four Relay Output Modules can be attached to a Nexus® meter. A Total of 16 Relays can be controlled. The table below indicates which bit controls which relay.

Relay Control																
Modules	Module 1				Module 2				Module 3				Module 4			
Bits	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Relays	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

  A bit value of 1 means Manual Relay Control Only.
  A bit value of 0 means ElectroLogic and Manual Relay Control.

- Flicker Log - Reserved for future use.

7.25: Internal Input Pulse Accumulation Scale Factor Block (46209-46325).

- Scale Factors - 2 registers, 4 bytes unsigned integers.
- Aggregator Assignments - 1 byte unsigned integerss.
- Pulse Accumulation Labels - 8 registers, 16 bytes. Hex ASCII.
- Nexus® Meter Watt hour Selection - 1 byte unsigned integer.
- Aggregation Assignment - 1 byte unsigned integer.

Internal Input Pulse Accumulator Assignments		
Value	**Energy**	**Assigned Aggregator**
0	Q1+ 4 Watt Hour	None
1	Q2+ 3 Watt Hour	Add to Aggregator 1
2		Add to Aggregator 2
3		Add to Aggregator 3
4		Add to Aggregator 4
5		Subtract from Aggregator 1
6		Subtract from Aggregator 2
7		Subtract from Aggregator 3
8		Subtract from Aggregator 4

7.26: I^2t and V^2t Threshold Block (46326-46329).

- I squared T - 2 registers, 4 bytes. 2-byte integers, 2-byte fractions. Secondary Current Value.
- V squared T - 2 registers, 4 bytes. 2-byte integers, 2-byte fractions. Secondary Volt Value.

7.27: Internal KYZ Settings Block (46330-46372)

- Internal KYZ Pulse Width - 1 byte, unsigned integer.

Internal KYZ Pulse Width						
Value	0	1	2	3	4	5-127
Pulse Width in Milliseconds (ms)	Disable	5	10	15	20	25-635

- Internal KYZ Channel Assignment - 1 byte, unsigned integer.

- Internal KYZ Watt Hour per pulse - 2 registers, 4 bytes, 2 byte integer, 2 byte fraction.

Internal KYZ Channel Assignment	
Value	**Channel Assignment**
0	Quad (1+4) Watt Hour
1	Quad 1 VA Hour
2	Quad 1 VAR Hour
3	Quad 4 VA Hour
4	Quad 4 VAR Hour
5	Quad (2+3) Watt Hour
6	Quad 2 VA Hour
7	Quad 2 VAR Hour
8	Quad 3 VA Hour
9	Quad 3 VAR Hour

- Internal KYZ Enable - 1 byte.

Internal KYZ Enable Assignment	
Bit	**Assignment**
Bit 7	Relay 1
Bit 6	Relay 2
Bit 5	Relay 3
Bit 4	Relay 4
Bit 3	Test LED

A bit value of 1 = KYZ is enabled.
A bit value of 0 = KYZ is disabled.

- End of Interval Pulse - The Nexus® 1272 meter can generate a pulse upon completion of a block window interva1. This pulse is generated on one of the relays and the pulse width is selectable.

7.28: Internal Input Pulse Accumulation Unit Label Block (46373-46420).

- 4 registers, 8 bytes. These labels are used to describe the units a pulse represents. Units are usually one word and are 8 characters or less.

End of Interval Pulse			
	Byte		
Value	**Enable**	**Relay**	**Width (milliseconds)**
0	Disable Pulse	Internal Relay 1	5ms
1	Enable Pulse	Internal Relay 2	10 ms
2		Internal Relay 3	15 ms
3		Internal Relay 4	20 ms
4-126			25ms - 635ms

Examples of Units: Gallons, BTUs, Liters, Wh, kWh, VAh, etc.

7.29: ElectroLogic Block (46421-46804)

A Nexus® meter will support 16 Relay structures.

- Each Relay Structure will combine up to 8 Limit Comparisons or Combinations using a three-level binary tree of AND, OR, NAND, NOR, XOR or Hysteresis combinations. All trees will be reevaluated once per second. The final result of the tree, subject to delays, would then be queued for immediate transmission to External Relay Output devices.

  Information needed to perform these actions:
  - Input Limit Comparison and Combination Identification
  - Input Senses for Each Input
  - Combination Assignments for Each of 7 Gates in the Tree for Each Relay Structure
  - Delay Times

- Input Sense would apply to each input, negating an input state; in effect this would be the above/below equivalent for non-limit inputs like low speed inputs.

- Comparison and combination identification would be performed by referencing the internal data table of the Nexus® meter, by specifying the Line number and Point number for a particular bit. For example, to refer to the first comparison of Limit 1, use Line 231, Point 0; first comparison of Limit 2, use Line 231, Point 1; first comparison of Limit 20, use Line 231, Point 19; second comparison of Limit 1, use Line 232, Point 0. To leave a line unassigned with a value of 0, use Line 65535, Point 255.

  Binary Tree combinations: AND, OR, NAND, NOR, XOR and Hysteresis.

  Delays are in seconds, and with a separate delay for activation (0-to-1 transitions) and deactivation (1-to-0 transitions).

- **The format of a Relay Structure:**

2 byte	Line Number, First Tree Input
1 byte	Point Number, First Tree Input
1 byte	Unused

This 4 byte structure is repeated 7 more times for a total of eight inputs, 32 bytes.

1 byte	Input sense & combination A, combining inputs 1 & 2
1 byte	Input sense & combination B, combining inputs 3 & 4
1 byte	Input sense & combination C, combining inputs 5 & 6
1 byte	Input sense & combination D, combining inputs 7 & 8
1 byte	Input sense & combination E, combining A & B
1 byte	Input sense & combination F, combining C & D
1 byte	Input sense & combination G, combining E & F
1 byte	Unused
1 byte	Delay in seconds from 0-to-1 transition before reporting 1
1 byte	Delay in seconds from 1-to-0 transition before reporting 0
6 bytes	Unused

Total of 48 bytes per Relay Structure, total of 768 bytes for 16 Relay Objects.

■ **The structure for the Direction and Combination byte:**

Bits 7-5 Unused, set to 0
Bit 4 Negate combination (AND -> NAND, etc.)
Bits 3-2 00 = AND combination
01 = OR combination
10 = XOR combination
11 = Hysteresis combination
Bit 1 0 = second input is not inverted
1 = second input is inverted
Bit 0 0 = first input is not inverted
1 = first input is inverted

Hysteresis combination uses the first input to set the combination, and the second input to clear the combination. If both inputs are asserted, the first input has priority.

Bits 0 and 1, negating inputs, only apply to gates A, B, C and D.

7.30: Limit Profile Label Block (46805-47060)

- Currently, this block is not used.
- 8 registers, 16 bytes. 16 characters

7.31: External Analog Output Module Channel Update Block (47061-47062)

■ This block is added to improve the update speed of what is sent to the External Analog Output Modules from the Nexus® meter. Not all channels of the External Analog Output Module might be in use. The value indicates the number of External Analog Output Module channels that are refreshed per Modbus message. In the older versions of External Analog Output Modules, only one channel update was possible at a time.

External Analog Output Module Update Speed	
Value	**Update**
0	1 channel at a time
1	2 channels at a time
2	4 channels at a time
3	8 channels at a time
4-255	8 channels at a time

7.32: Miscellaneous DNP Settings Block (47063-47104)

Scale for Analog Output of Average Pulse Accumulation - 1 byte unsigned integer.
Pulse accumulation values are 8-byte. But the Analog Output Module can accept 4-byte quantity. Therefore, only 4 bytes out of 8 bytes will be sent to Analog Output Module. This register decides which 4 bytes will be sent out.

Values	Bytes to be Sent Out
0	Bytes 7,6,5,4
1	Bytes 6,5,4,3
2	Bytes 5,4,3,2
3	Bytes 4,3,2,1
4	Bytes 3,2,1,0

- Compressed DNP - 1 byte. Unused in the Nexus® 1252/1262/1272 meters.

- Energy in the Interval - 1 byte unsigned Integer. This is the Interval Time for Energy in the Interval. Unit is in minutes. Range is from 60 to 0.

- DNP Time Synchronization Enable - 1 byte. Register Address 47064 (Lower Byte).
  A value of 1 means that DNP Time Synchronization is enabled
  A value of 0 means that DNP Time Synchronization is disabled

- DNP Time Synchronization Time Interval - 1 register, 2 bytes. Register Address 47065.

Value	Time (1 Minute Interval)
0	No Time Synchronization
1	1 minute
2	2 minutes
...	...
60	1 hour
61	1 hour, 1 minute
...	
1439	23 hours, 59 minutes
1440	1 day
1440-65535	1 day (default)

- Bitmap

  Bit 13: Choice of Class 0 poll between Object 20 and Object 21

Register	Value	Description
40766 (Bit 13)	1	Object 21
	0	Object 20

  Bit 12: Enable DNP Freeze Schedule

Register	Value	Description
40766 (Bit 12)	1	Enabled
	0	Disabled

- DNP Freeze Date & Time - 4 registers, 8 bytes.

Registers	Byte	Name	Range
47067 - HIGH	7	Century	0-99
47067 - LOW	6	Year	0-99
47068 - HIGH	5	Month	1-12
47068 - LOW	4	Day	1-31
47069 - HIGH	3	Hour	0-23
47069 - LOW	2	Minute	0-59
47070 - HIGH	1	Second	0-59
47070 - LOW	0	Centi-Second	0 (Always 0)

- DNP Freeze Interval - 1 register, 2 bytes.

Registers	Byte	Name	Range
47071 - HIGH	1	Hour	Minute
47071 - LOW	0	0-48	0-59

7.33: Custom DNP Definition Block for Analog Input (Object 30) (47105-47360)

- Line number: 2-byte unsigned integer
  Line number and Point number will indicate the Analog Input value to be used for one of the point in Object 30.

- Point number: 1-byte unsigned integer

- Reserved: 1 byte. Reserved for future use.

- DeadBand: 2-byte signed number (Percentage)
  Range: +327.67% / - 327.68%
  Unit: 0.01%
  If the Current Analog Value is different from the Previous value by more than Deadband percentage, the meter will generate Analog Change Event value if it is assigned to any Class.

- Class assignments (Currently only bits 5,4 and 3 are used): 8-bit bitmap

  When bit 5 is set, the Analog Change Event value will not be generated.
  When bit 5 is clear, bit 4 and bit 3 will assign the Analog Change Event value to a Class.

Class Assignments for Analog Change Event			
Bit 5	**Bit 4**	**Bit 3**	**Class Assigned**
0	0	0	No Class
0	0	1	Class 1
0	1	0	Class 2
0	1	1	Class 3
1	X	X	No Class
1	X	X	No Class
1	X	X	No Class
1	X	X	No Class

- Reserved: 1 byte. Reserved for future use.

7.34: Custom DNP Definition Block for Binary Counter (Object 20) (47361-47424)

- Line number: 2-byte unsigned integer
  Line number and Point number will indicate the Binary Counter value to be used for one of the point in Object 20.

- Point number: 1-byte unsigned integer

- Scaling: 1-byte unsigned integer
  Range: 0-15

The meter has an 8-byte Binary Counter Value while DNP can only give a 4-byte value. By using this scaling, the user can get the proper range of data. The scaling value represents the power of 10.

- Delta Values: 4-byte unsigned integer
  If the Current Binary Counter value is different from the Previous value more than Delta values, the Counter Change Event value will be generated if it is assigned to a Class.

- Class assignments (Currently bits 5,4,3,2,1 and 0 are used): 8-bit bitmap

  When bit 5 is set, the Counter Change Event value will not be generated.
  When bit 5 is clear, bit 4 and bit 3 will assign the Counter Change Event value to a Class.

Class Assignments for Counter Change Event			
Bit 5	**Bit 4**	**Bit 3**	**Class Assignment**
0	0	0	No Class
0	0	1	Class 1
0	1	0	Class 2
0	1	1	Class 3
1	X	X	No Class
1	X	X	No Class
1	X	X	No Class
1	X	X	No Class

When bit 2 is set, the Frozen Counter Event value will not be generated.
When bit 2 is clear, bit 1 and bit 0 will assign the Frozen Counter Event value to a Class.

Class Assignments for Frozen Counter Events			
Bit 2	**Bit 1**	**Bit 0**	**Class Assigned**
0	0	0	No Class
0	0	1	Class 1
0	1	0	Class 2
0	1	1	Class 3
1	X	X	No Class
1	X	X	No Class
1	X	X	No Class
1	X	X	No Class

- Reserved: 7 bytes. Reserved for future use.

7.35: Custom DNP Definition Block for Binary Input (Object 1) (47425-47456)

- Line number: 2-byte unsigned integer
  Line number and Point number indicate the Binary Input value used for 8 points in Object 1.

- Point number: 1-byte unsigned integer

- Class Assignments: 8-bit bitmap (1 byte). Bit 7, 6 and 5 will assign the Binary Input Change value to a Class. Bit 4 to bit 0 are not used.

Class Assignments for Binary Input Change			
Bit 7	**Bit 6**	**Bit 5**	**Class Assigned**
0	0	0	No Class
0	0	1	Class 1
0	1	0	Class 2
0	1	1	Class 3
1	X	X	No Class
1	X	X	No Class
1	X	X	No Class
1	X	X	No Class

- Reserved: 4 bytes. Reserved for future use.

7.36: Custom DNP Definition Block for Binary Output (Object 10) (47457-47458)

- Enable / Disable Relays (1-16) (2 bytes): 0: Relay disabled 1: Relay enabled

Bits	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Relays	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

- Enable / Disable Resets (17-24) (1 byte): 0: Reset disabled 1: Reset enabled

Bit	Resets
15	Log Reset
14	Maximum Reset
13	Minimum Reset
12	Energy Reset
11	Reset Time of Use Current Season and Current Month
10	Manual Waveform Capture
9	Reset KYZ Output Accumulations
8	Reset Unit to Boot Mode - Default Communications Settings
7-0	Reserved

7.37: Custom DNP Definition Block for Global Values (47459-47463)

When the master requests data by the object, it can specify the variation in the request so the master can get the data formatted for its use. When the master asks for Variation 0, the slave meter can respond with any variation(s). This Programmable Setting holds the variations available for a Variation 0 request.

Address	Object	Object Number	Variations Available for a Variation 0 Request
47459, High	Binary Input	1	1,2
47459, Low	Binary Input Change	2	1,2
47460, High	Binary Counter	20	1,2,5,6
47460, Low	Frozen Counter	21	1,2,5,6,9,10
47461, High	Counter Change Event	22	1,2,5,6
47461, Low	Frozen Counter Event	23	1,2,5,6
47462, High	Analog Input	30	1,2,3,4
47463, High	Analog Change Event	32	1,2,3,4

7.38: Analog Input Scaling Factors Block (48641-48768)

- 2 registers, 4 bytes. These are signed 2 byte integer values and 2 byte fractions.
- The integer values are ranged from -32768 to +32767.
- The fraction has the unit of 1/65536.
- They are 8 channels for High and 8 channels for Low up to 4 modules.

7.39: Analog Input Labels Block (48769-49024)

- 8 registers, 16 bytes. Each channel can be named with 16 characters.
- They are 8 channels up to 4 modules.

7.40: External Digital Input Module Labels Block (49025-49792)

- 8 registers, 16 bytes.
- Each channel, open condition and closed condition can be named with 16 characters.
- They are 8 of each and up to 4 modules.

7.41: External Digital Output Module Labels Block (49793-50176)

- 8 registers, 16 bytes.
- Each relay, normally open, and normally closed can be named with 16 characters.
- They are 4 of each and up to 4 modules.

7.42: Internal Modem Card Settings Block (50177-50268)

- Ring number - 1 byte. The Nexus® meter will answer after this number of rings (1 to 9).
- Baud Rate - 1 byte. This will program the baud rate of the gateway.

Nexus® Meter's Internal Modem Card Baud Rate Settings		
Index	**Baud Rate (INP 1)**	**Baud Rate (INP 2)**
0	57600	115200
1	57600	57600
2	38400	38400
3	19200	19200
4	9400	9600
5	4800	4800
6	57600	2400
7	57600	1200
8	57600	9600
9	57600	9600
10-255	57600	9600

- Port Configuration - 1 byte. Pass Through Port Configuration.

Bit 2 - Bit 0	Parity
000	None
001	Even
010	Odd
011	Mark
100	Space
101	Space
110	Space
111	Space

Bit 3:

A value of 0 means 8-data bits.
A value of 1 means 7-data bits.

- **Call Delay Timer Limit** - 1 register, 2 bytes. User-set variable that defines the number of seconds the modem will wait before processing a callback event (0-240 seconds). Applies to calls caused by Limit or Input Status conditions.

- **Activity Timeout Limit** - 1 byte. User-set value that is the number of minutes of inactivity (no communication activity) that is allowed on an open modem connection before the modem will terminate the connection (1-30 minutes)

- **Call Fail Reset Limit** - 1 byte. User-set value for the number of hours the modem will lock out incoming calls if the Incoming Connection Failure Limit is reached (1-50 hours).

- **Violation Lockout Time** - 1 byte. Use-set time limit for the number of hours (1-32) modem will be inaccessible. The Violation Lockout provides a level of security against bad passwords.

- **Violation Limit** - 1 byte. User-set value for number of times the modem will allow unsuccessful connection attempts (unable to supply correct password in three attempts) before locking up to incoming calls (1-10). Modem will disconnect from the incoming call and will not accept incoming calls for a period of time equal to the Violation Lockout Time.

- **Log Full Limit Threshold (Covers All Logs)** - 1 register, 2 bytes. Percent that a log is full before a call is triggered.

- **Modem ID (32 bytes)** - 16 registers, 32 bytes. Up to 32 Western Alphabet Characters (16 Asian Characters) can be written.

- **Modem Password (10 bytes)** - 5 registers, 10 bytes. Up to 10 alphanumeric characters (user-set) in addition to passwords that affect access to certain levels of the Nexus® meter. If the password is not entered correctly, the modem asks the user to enter the password again up to three times and disconnects after the third incorrect attempt.

- **Numeric Pager ID (7 bytes)** - Reserved for future use.

- **Bitmap Set** - 1 byte, 8 bits.

Internal Modem Card Bitmap Settings		
Bit 7	Call Back Type	0: Standard Mode
		1: Playback Mode
Bit 6	Modem Password Flag	0: Password Not Active
		1: Password Active
Bit 5	Primary Line Type	0: Computer
		1: Pager
Bit 4	Primary Pager Type	0: Numeric
		1: Alpha-numeric
Bit 3	Shared Phone Line	0: False
		1: True
Bit 2 - Bit 0	Not Used	

- **Rings to Answer** - 1 byte. User-set value for the number of Rings (1-9) before the modem will go off-hook and attempt to answer an incoming call.

- **Primary Retry Limit** - 1 register, 2 bytes. The user-set limit for retry attempts (0-1000).

- **Primary Retry Delay** - 1 register, 2 bytes. The number of minutes (0-1000) between retries.

- **Primary Phone Number (48 bytes)** - 24 registers, 48 bytes. The first phone number (up to 48 characters) called for automated callout.

- **Time Limit** - Reserved for future use.

- **Event Mask** - 1 register, 2 bytes. These are the conditions that Nexus® meter dial out when the event occurs.

Modem Feature Dial-Out Mask (Event Mask)															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

A bit value of 1 means the feature is disabled for reporting.
A bit value of 0 means the feature is enabled for reporting.

Bit	Event Description
0	Limits Status Change
1	High Speed Input Change
2	Waveform Record Captured
3	CBEMA Power Quality Event
4	Control Output Change
5	Filling of Meter Memory
6	Cycling of Control Power
7	Modem Password Failure
8	Failure of Communication with the Meter
9-15	Reserved

- **Secondary Retry Limit** - 1 register, 2 bytes. The user-set limit for retry attempts (0-1000).

- **Secondary Retry Delay** - 1 register, 2 bytes. The number of minutes (0-1000) between retries.

- **Secondary Phone Number (48 bytes)** - 24 registers, 48 bytes. The second phone number (up to 48 characters) called for automated callout.

- **Device Addresses at Gateway (Device 1, Device 2)** - The address has one byte unsigned integer. The device address can be any number except 1. The number 1 is always reserved for the Primary Device.

- **Device Addresses at Gateway (Device 3, Device 4)** - The address has one byte unsigned integer. The device address can be any number except 1. The number 1 is always reserved for the Primary Device.

- **Device Addresses at Gateway (Device 5, Device 6)** - The address has one byte unsigned integer. The device address can be any number except 1. The number 1 is always reserved for the Primary Device.

- **Device Addresses at Gateway (Device 7, Device 8)** - The address has one byte unsigned integer. The device address can be any number except 1. The number 1 is always reserved for the Primary Device.

7.43: Customizable Modbus Map Settings Block (50273-50784)

■ Using this block, you can customize up to 256 readings. All the readings that are customized in this block can be seen in the Customized Modbus Map Window Block (12289).

- Line Number - 2 bytes.
- Point Number - 1 byte.
- Reserved - 1 byte. Currently not used.

You can select any Register or Group of Registers that has a Line Number and a Point Number from the Nexus® meter Modbus Register Map. Those selections are used to create a customized grid of up to 256 readings in the Communicator EXT Device Profile.

Example: In order to read 1 Cycle Phase A-N Voltage as Item Number 1 on your Customized Modbus Map, you would enter for Item 1: Line Number 10 and Point Number 0.

Refer to the *Communicator Ext User Manual* for details on the creation of your Customized Modbus Map.

7.44: Auto TFTP Download Settings Block (Network Settings 10/100 Card) (50785-50860)

- **Enable / Disable** - 1 Register.

Network Settings 10/100 Card															
Auto TFTP Download Settings															
Enable / Disable															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Bit 15:
1 = Enable Auto TFTP Download
0 = Disable Auto TFTP Download

- **TFTP Port** - 1 register, 2 bytes. Two byte unsigned integer.
- **Client IP** - 2 registers, 4 bytes. Each byte is unsigned integer.
- **Server IP** - 2 registers, 4 bytes. Each byte is unsigned integer.
- **Default Gateway** - 2 registers, 4 bytes. Each byte is unsigned integer.
- **Subnet Mask** - 2 registers, 4 bytes. Each byte is unsigned integer.
- **Email Mode** - Bitmap.
  Bit 15: Require Authentication.
  A bit value of 1 means No authentication is required.
  A bit value of 0 means authentication is required.
  Bit 14 to 0: Not used. Reserved.
- **FTP Download** - Reserved for future use.
- **Download Filename (128 Bytes)** - 64 registers, 128 bytes. Each byte is Hex ASCII.

7.45: Email Client Settings (Network Settings 10/100 Card) (50861-51020)

- Email Server IP Address/ Name (64 bytes) - 32 registers. 64 bytes. Each byte is Hex ASCII.
- *Communicator Ext* Email Processing Service IP Address/ Name (64 bytes) - 32 registers, 64 bytes. Each byte is Hex ASCII.
  - **Return/ Reply Address (64 bytes)** - 32 registers, 64 bytes. Each byte is Hex ASCII.
  - **Email Subject Text (64 bytes)** - 32 registers, 64 bytes. Each byte is Hex ASCII.
  - **Email Username (32 bytes)** - 16 registers, 32 bytes. Each byte is Hex ASCII.
  - **Email Password (32 bytes)** - 16 registers, 32 bytes. Each byte is Hex ASCII.

7.46: FTP Client (Network Settings 10/100 Card) (51021-51148)

- **FTP Username (32 bytes)** - 16 registers, 32 bytes. Each byte is Hex ASCII.
- **FTP Password (32 bytes)** - 16 registers, 32 bytes. Each byte is Hex ASCII.
- **Startup Remote Default Dictionary (128 bytes)** - 64 registers, 128 bytes. Each byte is Hex ASCII.
- **FTP Server IP Address/ Name (64 bytes)** - 32 registers, 64 bytes. Each byte is Hex ASCII.

7.47: GE Protocol (EGD) (Network Settings 10/100 Card) (51149-51154)

- **IP Address** - 2 registers, 4 bytes. Each byte is Hex ASCII.
- **Update Interval** - 1 register, 2 bytes. Two byte unsigned integer. The unit is 0.1 second.
- **Connection Type/ Bit Settings**

Connection Type	
Index	**Description**
0	Broadcast
1	Multicast
2	Unicast

INP 100 Card EGD Bitmap Settings							
7	6	5	4	3	2	1	0

Bit 0: Producer Identifier

A value of 1 means Use Assigned Static IP Address.
A value of 0 means Use Custom Number.

- **Producer Identifier** - 2 registers, 4 bytes. Four byte unsigned long. Only available when the Customer Number is used.

7.48: DNP LAN/WAN (51157-51195)

- **Mode** - 1 byte unsigned integer.

Index	Description	
Index 0, 3-255	Disabled	No DNP over IP functionality
1	Standard	Most settings overridden by default values
2	Manual	All settings are used

- **Bitmap Set** - 8-bit bitmap.

DNP LAN/WAN Bitmap							
7	6	5	4	3	2	1	0

Bit 7: TCP Enable
A value of 0 means DNP over TCP listening point disabled.
A value of 1 means DNP over TCP listening point enabled.
Bit 6: UDP Enable
A value of 0 means DNP over UDP end point disabled.
A value of 1 means DNP over UDP end point enabled.
Bit 5: Validate Client Point
A value of 0 means No validation and any port is accepted.
A value of 1 means Validate connections against the first 1-4 entries.
Bit 4: UDP Response Behavior
A value of 0 means Respond to Client Port.
A value of 1 means Respond to programmed UDP respond port.
Bit 3 to Bit 0: Reserved

- **UDP Addressing** - 1 byte unsigned integer.

Index	Description
1	Unicast Addressing Only
2	Broadcast Only
3 (0, 4-255)	Unicast and Broadcast

- **Validate Connection Count** - 1 byte unsigned integer.

Index	Description
0, (5-255)	No validation, any connection is accepted
1-4	Validate connections against the first 1-4 entries

- **TCP Listen Port** - Two byte unsigned integer. TCP listening port.

- **UDP Listen Port** - Two byte unsigned integer. UDP listening port.

- **Valid IP Address 1,2,3,4** - Four 4 byte IP address. Each byte is 1 unsigned integer. These are IP addresses for validating TCP connections and UDP datagrams.

- **Valid IP Subnet Mask 1,2,3,4** - Four 4 byte IP address. Each byte is unsigned integer. These are IP subnet masks for validating TCP connections and UDP datagrams.

- **TCP Starting Valid Client Ports** - Four 2 byte unsigned integers. These are Starting Client ports for validating TCP connections.

- **TCP Ending Valid Client Ports** - Four 2 byte unsigned integers. These are Ending Client port for validating TCP connections.

- **UDP Starting Valid Client Ports** - Four 2 byte unsigned integers. These are Starting Client ports for validating UDP datagrams.

- **UDP Ending Valid Client Ports** - Four 2 byte unsigned integers. These are Ending Client ports for validating UDP datagrams

- **Multicast Group Address** - Reserved for future use.

- **UDP Respond Port** - 2 byte unsigned integer. This is UDP port to respond to if UDP response behavior is

7.49: Customizable Modbus Map Format Block (51201-51712)

■ Using this block, you can customize up to 256 readings. All the readings that are customized in this block can be seen in the Customized Modbus Map Window Block (12289).

- **Line Number** - 2 bytes.
- **Point Number** - 1 byte.
- **Reserved** - 1 byte. Currently not used.

You can select any Register or Group of Registers that has a Line Number and a Point Number from the Nexus® meter Modbus Register Map. Those selections are used to create a customized grid of up to 256 readings in the Communicator EXT Device Profile.

Example: In order to read 1 Cycle Phase A-N Voltage as Item Number 1 on your Customized Modbus Map, you would enter for Item 1: Line Number 10 and Point Number 0.

Refer to the *Communicator EXT User Manual* for details on the creation of your Customized Modbus Map.

7.50: Energy Scale Settings (51713-51738)

■ Each register contains 2 bytes. Each byte contains settings for a base quantity. The format of a byte is as follows:

Bit	7	6	5	4	3	2	1	0
Meaning	Digits			Unit		Decimal Places		

Digits is a 3 bit field, which is offset by 2 to represent from 2 to 9 displayable digits.
Unit is a 2-bit field, where the values from 0 to 2 represent units of Wh (100), k (103) and M (106). The value 3 is undefined and is treated the same as 2, signifying M (106).
Decimal Places is a 3-bit field, which represent from 0 to 7 decimal places.

Examples: For the following, the Q1234 VAh has a current value of 123,456,789.0123 VAh.

Register CA00H		Digits	Unit	D.P.	Pattern	Reading		Display
Hex	Binary					Hex	Decimal	
20xxH	001 00 000	3 Digits	VAh, 10^0	0	xxx VAh	00000315H	789	789 VAh
8BxxH	100 01 011	6 Digits	kVAh, 10^3	3	xxx.xxx kVAh	0006F855H	456789	456.789 kVAh
88xxH	100 01 000	6 Digits	kVAh, 10^3	0	xxxxxx kVAh	0001E240H	123456	123,456 kVAh
93xxH	100 10 011	6 Digits	MVAh, 10^6	3	xxx.xxx MVAh	0001E240H	123456	123.456 MVAh
72xxH	011 10 010	5 Digits	MVAh, 10^6	2	xxx.xx MVAh	00003039H	12345	123.45 MVAh
C2xxH	110 00 010	8 Digits	VAh, 10^0	2	xxxxxx.xx VAh	02B90135H	45678901	456,789.01 VAh

7.51: Update Settings Block (52975-53248)

- User Memo Field (256 bytes)- 128 registers, 256 bytes. User can write any notes up to 255 characters in this memo field.

  - **Name of User Who Last Updated the Profile (256 bytes)** - These registers are used internally with the software. No interactions are required by the user.
  - **Device Profile Version (Year, Month/Day, Build)** - These registers have the updated date for Device Profile. These registers are used internally with the software. No interactions are required by the user.

  - **Program Software ID** - These registers have software ID. These registers are used internally with the software. No interactions are required by the user.

  - **Electro Industries Device Type (Base Unit, Option 1/Option 2, Option 3/Option 4)** - These registers have information on what type of EI meters that the software is communicating to. These registers are used internally with the software. No interactions are required by the user.

  - **Update Programming Software Version Number (Major, Minor, Revision)** - These registers have software version number. These registers are used internally with the software. No interactions are required by the user.

Chapter 8
Register Block Titles

- This chapter expands upon information listed in the Nexus® meter Modbus Register Map (Chapter 2). Register Block Titles refer to a Register or Group of Registers in the Register Map that serve a particular purpose or function. Refer to the Table of Contents to find additional details and descriptions of the Nexus® meter Modbus Register Map.

8.1: Device Indentification Block (00001-00080)

- Description: Registers included in this block: Device Name, Firmware Variation Strings 0-7, Nexus Communicator Boot Version Number, Nexus Communicator Run-Time Version Number, Nexus DSP Boot Version Number, Nexus DSP Run-Time Version Number. (See 3.1, 3.2.)

8.2: Real Time Block (00081-00089)

- Description: Registers included in this block: On Time, Current Time, Current Day of the Week. (See 3.3, 3.4.)

On Time (00081-00084)
These Registers keep the Time of the meter when it is turned on. The format of the Registers follows the table below. Byte 0 indicates the high byte of the Register 00081 and the byte 7 indicates the low byte of Register 00084. These Registers are for Read Only.

Byte	Range	Description
0	0-255	Century
1	0-99	Year
2	1-12	Month
3	1-31	Day
4	0-23	Hour
5	0-59	Minute
6	0-59	Second
7	0-99	Centisecond

Current Time (00085-00088)
These Registers keep the Current Time of the meter. These values are kept by an internal battery even when the meter is off. The format of the Registers follows the table above.

Current Day of the Week (00089)
This Register keeps the Current Day of the Week. The format follows the table below.

Value	Day of Week
0001H	Sunday
0002H	Monday
0003H	Tuesday
0004H	Wednesday
0005H	Thursday
0006H	Friday
0007H	Saturday

- Example: Resetting the Time on a meter.

  For May 20, Century is 20 (14H). Year is 02. Month is 05. Day is 20 (14H). Hour is 15 (0FH). Minute is 45 (2DH). Second is 00. Centisecond is 00. Day is 0002H.

  The following data is sent to the Nexus® meter address 1. Registers 00085 through 00089 are written sequentially in one request. Register 00089, Current Day of the Week, must be included in the request. (Refer to Chapter 1 for Function Code 1.)

  0110005400050A140205140F2D00000002B44A

  01 - Meter Address
  10 - Function Code
  0054 - Starting Address
  0005 - Number of Registers
  0A - Number of Bytes
  140205140F2D00000002 - Actual data for Time and Date
  B44A - Two-byte CRC Checksum

8.3: 1 Cycle Block (00090-00118)

- Description: 1 Cycle Registers included in this block: Block Time Stamp, Phase A-N, B-N, C-N, Aux Voltage, Phase A, B, C Current, Measured Neutral Current, Calculated Neutral Current, Phase A-B, B-C, C-A Voltage, High Speed Input Delta and Current State. (See 3.3, 3.5, 3.6.)

8.4: Tenth Second Block (00119-00175)

- Description: Tenth Second Registers included in this block: Block Time Stamp, Phase A-N, B-N, C-N, Aux Voltage, Phase A, B, C Current, Measured Neutral Current, Phase A-B, B-C, C-A Voltage, Phase A, B, C VA, Three Phase VA, Phase A, B, C VAR, Three Phase VAR, Phase A, B, C Watts, Three Phase Watts, Frequency, Phase A, B, C Power Factor, Three Phase Power Factor, Phase A-N Voltage to Aux Voltage Phase Angle. (See 3.3, 3.7, 3.8, 3.9.)

8.5: One Second Block (00176-00235)

- Description: One Second Registers included in this block: Block Time Stamp, Phase A-N, B-N, C-N, Aux Voltage, Phase A, B, C Current, Measured Neutral Current, Calculated Neutral Current,

Phase A-B, B-C, C-A Voltage, Phase A, B, C VA, VA, Phase A, B, C VAR, Three Phase VAR, Phase A, B, C Watts, Three Phase Watts, Frequency, Phase A, B, C Power Factor, Three Phase Power Factor, Voltage Imbalance, Current Imbalance. (See 3.3, 3.7, 3.8, 3.10.)

8.6: Thermal Average Block (00236-00295)

- Description: Thermal Average Registers included in this block: Block Time Stamp, Phase A-N, B-N, C-N, Aux Voltage, Phase A, B, C Current, Measured Neutral Current, Calculated Neutral Current, Phase A-B, B-C, C-A Voltage, Phase A, B, C VA, VA, Phase A, B, C VAR, VAR, Phase A, B, C Watts, Watts, Freq, Phase A, B, C PF, PF, Voltage, Current Imbalance. (See 3.3, 3.7, 3.8, 3.10.)

8.7: Maximum Block (00296-00396)

- Description: Maximum (Thermal Average) Registers included in this block: Block Time Stamp, Phase A-N, B-N, C-N, Aux Voltage, Phase A, B, C Current, Measured Neutral Current, Calculated Neutral Current, Phase A-B, B-C, C-A Voltage, Phase A, B, C VA, VA, Phase A, B, C Positive VAR, Positive VAR, Phase A, B, C Negative VAR, Negative VAR, Phase A, B, C Positive Watts, Positive Watts, Phase A, B, C Negative Watts, Negative Watts, Freq, Phase A, B, C PF Quadrants 1, 2, 3, 4, PF Quadrants 1, 2, 3, 4, Voltage Imbalance, Current Imbalance, THD Phase A-N /A-B, B-N /B-C, C-N/C-A Voltage, THD Phase A, B, C Current, K-Factor Phase A, B, C Current, Coincident Thermal Average VAR for Max Pos Watt, Max Neg Watt. (See 3.3, 3.7, 3.8, 3.10.)

8.8: Minimum Block (00397-00497)

- Description: Minimum (Thermal Average) Registers included in this block: All of the Registers for Maximum Block but for Minimum Block. (See 3.3, 3.7, 3.8, 3.10.)

8.9: Maximum Time Stamp Block (00498-00737)

- Description: Maximum (Thermal Average) Time Stamp Registers included in this block: Phase A-N, B-N, C-N, Aux Voltage, Phase A, B, C Current, Measured Neutral Current, Calculated Neutral Current, Phase A-B, B-C, C-A Voltage, Phase A, B, C VA, VA, Phase A, B, C Positive VAR, Positive VAR, Phase A, B, C Negative VAR, Negative VAR, Phase A, B, C Positive Watts, Positive Watts, Phase A, B, C Negative Watts, Negative Watts, Freq, Phase A, B, C PF Quadrants 1, 2, 3, 4, PF Quadrants 1, 2, 3, 4, Voltage Imbalance, Current Imbalance, THD Phase A-N/A-B, B-N/B-C, C-N/C-A Voltage, THD Phase A, B, C Current, K-Factor Phase A, B, C Current. (See 3.3.)

8.10: Minimum Time Stamp Block (00738-00977)

- Description: Minimum (Thermal Average) Time Stamp Registers included in this block: All of the Registers for Maximum Time Stamp Block but for Minimum Block. (See 3.3.)

8.11: Energy Block (Secondary) (00978-01021)

- Description: Energy Registers included in this block: Time Stamp, VAhour, Positive, Negative VARhour, Positive , Negative Watthour. (See 3.3, 3.11, 3.12.)

8.12: Harmonic Magnitude Block (01022-01789)

- Description: Harmonic Magnitude Registers included in this block: Phase A-N/A-B, B-N/B-C, C-N/C-A Voltage for 0th through 127th Harmonic Magnitude, Phase A, B, C Current for 0th through 127th Harmonic Magnitude. (See 3.10.)

8.13: Harmonic Phase Block (01790-02557)

- Description: Harmonic Phase Registers included in this block: Phase A-N/A-B, B-N/B-C, C-N/C-A Voltage for 0th through 127th Harmonic Phase, Phase A, B, C Current for 0th through 127th Harmonic Phase. (See 3.9.)

8.14: THD/K-Factor Block (02558-02566)

- Description: THD/K-Factor Registers included in this block: Phase A-N/A-B, B-N/B-C, C-N/C-A Voltage THD, Phase A, B, C Current THD, Phase A, B, C Current K-Factor. (See 3.10.)

8.15: Harmonic Time Stamp Block (02567-02590)

- Description: Harmonic Time Stamp Registers included in this block: Phase A-N/A-B, B-N/B-C, C-N/C-A Voltage, Phase A, B, C Current. (See 3.3.)

8.16: Phase Angle Block (02591-02604)

- Description: Phase Angle Registers included in this block: Time Stamp, Phase A-N, B-N, C-N Voltage, Phase A, B, C Current, Phase A-B, B-C, C-A Voltage, Volt Phase Seq. (See 3.3, 3.9, 3.13.)

8.17: Block Window Average Block (02605-02683)

- Description: Block Window Average Registers included in this block: Time Stamp, Status, VA, VAR, Watt, Maximum VA, Positive VAR, Negative VAR, Positive Watt, Negative Watt, Minimum VA, Positive VAR, Negative VAR, Positive Watt, Negative Watt, Coincident VAR for Max Positive Watt, Neg Watt, Coincident VAR for Min Positive Watt, Neg Watt, VA Time Stamp, Time Stamp for Pos VAR, Neg VAR, Pos Watt, Neg Watt, Minimum VA Time Stamp, Time Stamp for Minimum Pos VAR, Neg VAR, Pos Watt, Neg Watt. (See 3.3, 3.7, 3.14.)

8.18: Rolling Window/Predictive Rolling Window Block (02684-02768)

- Description: Rolling Window/Predictive Rolling Average Registers included in this block: Time Stamp, Status, Predictive VA, VAR, Watt, VA, VAR, Watt, Maximum VA, Positive VAR, Negative VAR, Positive Watt, Negative Watt, Min VA, Positive VAR, Negative VAR, Positive Watt, Negative Watt, Coincident VAR for Max Positive Watt, Neg Watt, Coincident VAR for Min Positive Watt, Neg Watt, VA Time Stamp, Time Stamp for Pos VAR, Neg VAR, Pos Watt, Neg Watt, Min VA Time Stamp, Time Stamp for Min Pos VAR, Neg VAR, Pos Watt, Neg Watt. (See 3.3, 3.7, 3.14.)

8.19: Limit Block (02769-02773)

- Description: Limit Registers included in this block: Limit States, Value 1 Comparisons, 1-16, 17-32, Limits States, Value 2 Comparisons, 1-16, 17-32, Low Speed Inputs. (See 3.15, 3.16.)

8.20: Digital Input Block (02774-02841)

- Description: Digital Input Registers included in this block: Input States, Module 1, Accum 1-8 (Module 1), Input States, Module 2, Accum 1-8 (Module 2), Input States, Module 3, Accum 1-8 (Module 3), Input States, Module 4, Accum 1-8 (Module 4). (See 3.17, 3.18.)

8.21: Primary Accumulation Block (02842-02973)

- Description: Primary Accumulation Registers included in this block: Time Stamp, Rec Watthour (Q1+4), VAhour while Rec Watthour and Neg VARhour (Q1), Negative VARhour while Rec Watthour (Q1), VAhour while Rec Watthour and Pos VARhour (Q4), Pos VARhour while Rec Watthour (Q4), Delivered Watthour (Q2+3), VAhour while Del Watthour (Q2), VAhour while Del Watthour and Pos VARhour (Q3), Positive VARhour while Del Watthour (Q3), Received Watthour (Q1+4), VAhour while Rec Watthour and Neg VARhour (Q1), Neg VARhour while Rec Watthour (Q1), VAhour while Rec Watthour and Pos VARhour (Q4), Pos VARhour while Rec Watthour (Q4), Delivered Watthour (Q2+3), VAhour while Del Watthour and Neg VARhour (Q2), Neg VARhour while Del Watthour (Q2), VAhour while Del Watthour and Pos VARhour (Q3), Pos VARhour while Del Watthour (Q3), I^2t Phase A, B, C, V^2t Phase A, B, C. (See 3.3, 3.19. 3.20.)

8.22: Time of Use Period Time Stamp Block (02974-03040)

- Description: Time of Use Period Time Stamp Registers included in this block: Status, Prior Season Start Time, End Time, Prior Month Start Time, End Time, Current Season Start Time, End Time, Current Month Start Time, End Time, CT and PT Ratio Numerator for Prior Season, Prior Month, Current Season, Current Month, CT and PT Ratio Denominator for Prior Season, Prior Month, Current Season, Current Month. (See 3.3, 3.14.)

8.23: Time of Use Frozen Block (03041-03584)

- Description: Time of Use Frozen Registers included in all blocks: Received Watthour (Q1+4), VAhour (Q1), VARhour (Q1), VAhour (Q4), VARhour (Q4), Delivered Watthour (Q2+3), VAhour (Q2), VARhour (Q2), VAhour (Q3), VARhour (Q3), Peak Demand Rec Watt (Q1+4), Del Watt (Q2+3), Rec VAR (Q1+2), Del VAR (Q3+4), Coin. Demand VAR to Peak Demand Rec Watt, Del Watt, Peak Demand Rec Watt (Q1+4) Time Stamp, Del Watt (Q2+3) Time Stamp, Peak Demand Rec VAR (Q1+2) Time Stamp, Del VAR (Q3+4) Time Stamp. (See 3.3, 3.7, 3.20.)
  - Register 1 Block (03041)
  - Register 2 Block (03109)
  - Register 3 Block (03177)
  - Register 4 Block (03245)
  - Register 5 Block (03313)
  - Register 6 Block (03381)
  - Register 7 Block (03449)
  - Register 8 Block (03517)

8.24: Time of Use Frozen Total Block (03585-03652)

- Description: Time of Use Frozen Total Registers included in this block: Totals for all Registers above.

8.25: Time of Use Prior Month Register Block (03653-04196)

- Description: Time of Use Prior Month Registers included in all blocks: Received Watthour (Q1+4), VAhour (Q1), VARhour (Q1), VAhour (Q4), VARhour (Q4), Delivered Watthour (Q2+3), VAhour (Q2), VARhour (Q2), VAhour (Q3), VARhour (Q3), Peak Demand Rec Watt (Q1+4), Del Watt (Q2+3), Rec VAR (Q1+2), Del VAR (Q3+4), Coin. Demand VAR to Peak Demand Rec Watt, Del Watt, Peak Demand Rec Watt (Q1+4) Time Stamp, Del Watt (Q2+3) Time Stamp, Peak Demand Rec VAR (Q1+2) Time Stamp, Del VAR (Q3+4) Time Stamp. (See 3.3, 3.7, 3.20.)
  Register 1 Block (03653)
  Register 2 Block (03721)
  Register 3 Block (03789)
  Register 4 Block (03857)
  Register 5 Block (03925)
  Register 6 Block (03993)
  Register 7 Block (04061)
  Register 8 Block (04129)

8.26: Time of Use Prior Month Total Block (04197-04264)

- Description: Time of Use Prior Month Total Registers included in this block: Totals for all Registers above.

8.27: Time of Use Active Register Block (04265-04808-)

- Description: Time of Use Active Registers included in all blocks: Received Watthour (Q1+4), VAhour (Q1), VARhour (Q1), VAhour (Q4), VARhour (Q4), Delivered Watthour (Q2+3), VAhour (Q2), VARhour (Q2), VAhour (Q3), VARhour (Q3), Peak Demand Rec Watt (Q1+4), Del Watt (Q2+3), Rec VAR (Q1+2), Del VAR (Q3+4), Coin. Demand VAR to Peak Demand Rec Watt, Del Watt, Peak Demand Rec Watt (Q1+4) Time Stamp, Del Watt (Q2+3) Time Stamp, Peak Demand Rec VAR (Q1+2) Time Stamp, Del VAR (Q3+4) Time Stamp. (See 3.3, 3.7, 3.20.)
  Register 1 Block (04265)
  Register 2 Block (04333)
  Register 3 Block (04401)
  Register 4 Block (04469)
  Register 5 Block (04537)
  Register 6 Block (04605)
  Register 7 Block (04673)
  Register 8 Block (04741)

8.28: Time of Use Active Total Block (04809-04876)

- Description: Time of Use Active Total Registers included in this block: Totals for all Registers above.

8.29: Time of Use Current Month Register Block (04877-05420)

- Description: Time of Use Current Month Registers included in all blocks: Received Watthour (Q1+4), VAhour (Q1), VARhour (Q1), VAhour (Q4), VARhour (Q4), Delivered Watthour (Q2+3),

VAhour (Q2), VARhour (Q2), VAhour (Q3), VARhour (Q3), Peak Demand Rec Watt (Q1+4), Del Watt (Q2+3), Rec VAR (Q1+2), Del VAR (Q3+4), Coin. Demand VAR to Peak Demand Rec Watt, Del Watt, Peak Demand Rec Watt (Q1+4) Time Stamp, Del Watt (Q2+3) Time Stamp, Peak Demand Rec VAR (Q1+2) Time Stamp, Del VAR (Q3+4) Time Stamp. (See 3.3, 3.7, 3.20.)

Register 1 Block (04877)
Register 2 Block (04945)
Register 3 Block (05013)
Register 4 Block (05081)
Register 5 Block (05149)
Register 6 Block (05217)
Register 7 Block (05285)
Register 8 Block (05353)

8.30: Time of Use Current Month Total Block (05421-05488)

- Description: Time of Use Current Month Total Registers included in this block: Totals for all Registers above.

8.31: Time of Use Frozen Label Block (05489-05552)

- Description: Time of Use Frozen Label Registers included in this block: Reg. Labels 1-8.

8.32: Time of Use Prior Month Label Block (05553-05616)

- Description: TOU Prior Month Label Registers in this block: Register Labels 1-8. (See 3.2.)

8.33: Time of Use Active Label Block (05617-05680)

- Description: TOU Active Label Registers in this block: Register Labels 1-8. (See 3.2.)

8.34: Time of Use Current Month Label Block (05681-05744)

- Description: TOU Current Month Label Registers in this block: Register Labels 1-8. (See 3.2.)

8.35: Internal Input Pulse Accumulation Block (05745-05796)

- Description: Internal Input Pulse Accumulation Registers included in this block: Time Stamp, Scaled Pulse Accumulations Internal Inputs 1-8, Scaled Pulse Accumulations 1-4. (See 3.3, 3.40.)

8.36: Pulse Accumulation Block Window Average / Maximum Block (05797-05945)

- Description: Pulse Accumulation Block Window Average / Maximum Registers included in this block: Time Stamp, Status, Average Internal Inputs 1-8, Average Aggregation 1-4, Maximum Average Internal Inputs 1-8, Maximum Average Aggregation 1-4, Maximum Internal Input Time Stamp 1-8, Maximum Average Aggregation Time Stamp 1-4. (See 3.3, 3.14, 3.40.)

8.37: Temperature (05946)

- Description: Nexus® meter Internal Temperature Register is in this block. (See 3.33.)

8.38: Analog Input Block (05947-05978)

- Description: Analog Input Registers in this block: Analog Inputs 1-8, Modules 1-4. (See 3.10.)

8.39: Limit Combination Block (05979-05980)

- Description: Limit Combination Registers included in this block: Limit States, Combinations 1-16, 17-32. (See 3.34.)

8.40: Relay Logic Block (05981-06014)

- Description: Relay Logic Registers included in this block: Time Stamp, States, Inputs 1-8, Relays 1-16, States, Gates A-G, Relays 1-16, Delay Timer, Relay 1/2 - 15/16, Relays 1-16 for Desired Relay States, Shadowed Relay States, Confirmed Relay States, Valid Flags for Confirmed Relay States, Locked Relays, Locked Relay States. (See 3.3, 3.34 - 3.42.)

8.41: Reset Time Block (06015-06038)

- Description: Reset Time Registers included in this block: Time Stamp, Max Time Stamp, Min Time Stamp, Energy Time Stamp, Current Season / Month TOU Time Stamp. (See 3.3.)

8.42: Miscellaneous Flags Block (06039)

- Description: The Miscellaneous Flags Register has 2 bytes. Each byte has eight bits. The bits in these bytes are associated with various miscellaneous functions as follows:

Bit	Point	Meaning
15 (MSB)	0	NVRAM Battery Status
14-1	1-14	Undefined
0 (LSB)	15	Undefined

NVRAM Battery Status

Address	06039															
Value	8000H															
Bytes	80H								00H							
Bits	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Point	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Interpretation	NVRAM Battery is Low.															

A value of '0' indicates that the battery is OK; a value of '1' indicates that the battery is not OK. Battery Status is reevaluated on power up and approximately every 24 hours after power up.

Example: Register 06039, Miscellaneous Flags, might contain the data in the table above.

8.43: Test Mode Block (06040-06096)

- Description: These Registers are not for the normal mode of the unit. When in Test Mode, these Registers have the proper values for the intended tests. (See 3.3, 3.7, 3.12. 3.14.)

8.44: KYZ Output Accumulation Block (06097-06110)

- Description: KYZ Output Accumulation Registers included in this block: KYZ Output Accumulation Block Time Stamp, KYZ Output Accumulation Relays 1 - 4, KYZ Output Accumulation, LED. (See 3.3, 3.18.)

8.45: Input Module Data Status Block (06111-06113)

- Description: Input Module Data Data Status Registers included in this block: Digital Input Modules Data States, Analog Input Modules Data States. (See 3.44, 3.45.)

8.46: Flicker Status Block (06114-06126)

- Description: Flicker Status Registers included in this block: Flicker Status Block Time Stamp, Flicker Start Time, Flicker End Time, Flicker Status. (See 3.3, 3.14.)

8.47: Instantaneous Flicker Block (06127-06136)

- Description: Instantaneous Flicker Registers included in this block: Instantaneous Flicker Block Time, Instantaneous Flicker V_{AN}, V_{BN}, V_{CN}. (See 3.3, 3.7.)

8.48: Short Term Flicker Block (06137-06186)

- Description: Short Term Flicker Registers included in this block: Short Term Flicker Block Time, Short Term Flicker V_{AN}, V_{BN}, V_{CN}, Maximum Short Term Flicker V_{AN}, V_{BN}, V_{CN}, Minimum Short Term Flicker V_{AN}, V_{BN}, V_{CN}, Short Term Interval End Time Stamp, Max Short Term Flicker V_{AN}, V_{BN}, V_{CN} Time Stamps, Min Short Term Flicker V_{AN}, V_{BN}, V_{CN} Time Stamps. (See 3.3, 3.7.)

8.49: Long Term Flicker Block (06187-06236)

- Description: Long Term Flicker Registers included in this block: Long Term Flicker Block Time, Long Term Flicker V_{AN}, V_{BN}, V_{CN}, Maximum Long Term Flicker V_{AN}, V_{BN}, V_{CN}, Minimum Long Term Flicker V_{AN}, V_{BN}, V_{CN}, Long Term Interval End Time Stamp, Maximum Long Term Flicker V_{AN}, V_{BN}, V_{CN} Time Stamps, Minimum Long Term Flicker V_{AN}, V_{BN}, V_{CN} Time Stamps. (See 3.3, 3.7.)

8.50: Additional Energy Block (06237-06392)

- Description: Additional Energy Registers included in this block: Additional Energy Block Time, Quadrants 1, 4, 2, 3 Watthour Secondary, Quadrant 1 Vahour, VARhour Secondary, Quadrant 4 Vahour, VARhour Secondary, Quadrant 2 Vahour, VARhour Secondary, Quadrant 3 Vahour, VARhour Secondary, Quadrants 1, 4, 2, 3 Watthour Primary, Total Vahour Primary (Quadrants 1+2+

3+4), Positive VARhour (Quadrants 1+2) Primary, Negative VARhour (Quadrants 3+4) Primary, Negative VARhour Primary, Quadrant 1, 4, 2, 3 Watthour Secondary, Quadrant 1 Vahour, VARhour Secondary, Quadrant 4 Vahour, VARhour Secondary, Quadrant 2 Vahour, VARhour Secondary, Quadrant 3 Vahour, VARhour Secondary, Quadrants 1, 4, 2, 3 Watthour Primary, Total Vahour (Quadrants 1+2+3+4) Primary, Positive VARhour (Quadrants 1+2) Primary, Negative VARhour (Quadrants 3+4) Primary. (See 3.3, 3.19, 3.20.)

8.51: Energy and Pulses in the Interval Block (06393-06488)

- Description: Energy and Pulses in the Interval Registers included in this block: Energy and Pulses in the Interval Block Time Stamp, Total Vahour (Quadrants 1+2+3+4) in the Interval Secondary, Positive VARhour (Quadrants 1+2) in the Interval Secondary, Negative VARhour (Quadrants 3+4) in the Interval Secondary, Positive Watthour (Quadrants 1+4) in the Interval Secondary, Negative Watthour (Quadrants 2+3) in the Interval Secondary, Positive Watthour (Quadrants 1+4) in the Interval Secondary, Negative Watthour (Quadrants 2+3) in the Interval Secondary, Positive Watthour (Quadrants 1+4) in the Interval Primary, Quadrant 1 Vahour, VARhour in the Interval Primary, Quadrant 4 Vahour, VARhour in the Interval Primary, Negative Watthour (Quadrants 2+3) in the Interval Primary, Quadrant 2 Vahour, VARhour in the Interval Primary, Quadrant 3 Vahour, VARhour in the Interval Primary, I2t Phasea A, B, C in the Interval Primary, V2t Phases A, B, C in the Interval Primary, Pulses Accumulation Internal Inputs 1-8 in the Interval Scaled, Pulse Accumulations 1-4 in the Interval Scaled, Quadrants 1, 4, 2, 3 Watthour in the Interval Secondary, Quadrant 1 Vahour, VARhour in the Interval Secondary, Quadrant 4 Vahour, VARhour in the Interval Secondary, Quadrant 2 Vahour, VARhour in the Interval Secondary, Quadrant 3 Vahour, VARhour in the Interval Secondary, Quadrants 1, 4, 2, 3 Watthour in the Interval Primary, Total Vahour (Quadrants 1+2+3+4) in the Interval Primary, Positive VARhour (Quadrants 1+2) in the Interval Primary, Negative VARhour (Quadrants 3+4) in the Interval Primary, KYZ Pulse Output in the Interval Relays 1-4. KYZ Pulse Output in the Interval IR LED. (See 3.3, 3.18, 3.57.)

8.52: Flicker Countdown Block (06489-06490)

- Description: Flicker Countdown Registers included in this block: Short Term Flicker Countdown, Long Term Flicker Countdown. (See 3.56.)

8.53: Cumulative Demand Block (06491-06502)

- Description: Cumulative Demand Registers included in this block: Cumulative Demand Block Time Stamp, Positive Watt (Quadrants 1+4) Cumulative Demand, Negative Watt (Quadrants 2+3) Cumulative Demand, Positive Watt (Quadrants 1+4) Continuous Cumultive Demand, Negative Watt (Quadrants 2+3) Continuous Cumulative Demand. (See 3.3, 3.18.)

8.54: Time of Use Active Cumulative Demand Block (06503-06538)

- Description: Time of Use Active Cumulative Demand Registers included in this block: TOU Active Register 0-7 Cumulative Demand Q1 + Q4 Watt and Q2 + Q3 Watt, TOU Active Totals Cumulative Demand Q1 + Q4 and Q2 + Q3 Watt. (See 3.18.)

8.55: Time of Use Current Month Cumulative Demand Block (06539-06574)

- Description: Time of Use Current Month Cumulative Demand Registers included in this block:

TOU Current Month Register 0-7 Cumulative Demand Q1 + Q4 Watt and Q2 + Q3 Watt, TOU Current Month Totals Cumulative Demand Q1 + Q4 and Q2 + Q3 Watt. (See 3.18.)

8.56: TOU Active Continuous Cumulative Demand Block (06575-06610)

- Description: Time of Use Active Continuous Cumulative Demand Registers included in this block: TOU Active Register 0-7 Continuous Cumulative Demand Q1 + Q4 Watt and Q2 + Q3 Watt, TOU Active Totals Continuous Cumulative Demand Q1 + Q4 and Q2 + Q3 Watt. (See 3.18.)

8.57: TOU Current Month Continuous Cumulative Demand Block (06611-06646)

- Description: Time of Use Current Month Continuous Cumulative Demand Registers included in this block: TOU Current Month Register 0-7 Continuous Cumulative Demand Q1 + Q4 Watt and Q2 + Q3 Watt, TOU Current Month Totals Continuous Cumulative Demand Q1 + Q4 and Q2 + Q3 Watt. (See 3.18.)

8.58: Log Index Block (06647-06664)

- Description: This register contains a 2-byte MSB unsigned integer, which represents the First of Last Index for a given Log. First Indexes represent the Index of the First (Oldest) record in a log. Last Indexes represent the Index of the Last (Newest) record in a log. The value of 0x0FFFF for the Last Index indicates that the log is empty.

8.59: Uncompensated and Q Block (06665-06670)

- Description: Uncompensated register readings are the readings to which Transformer Loss Compensation is not applied. Q Hour readigns are 60 degree-shifted hour readings from Watt hour readings. VAR hour readings are 90 degree-shifted hour readings from Watt hour readings.

8.60: Scaled Energy Block (06908-07829)

- Description: Energy readings in Nexus® meters have Watt-hour, VAR-hour and VA-hour as base units. In the real world, kilo-, mega- and giga- units are used more frequently. Therefore, Nexus® 1252/1262/1272 meters have scaled energy readings. This scale can be modified using Communicator EXTsoftware.

Length	2 Registers (4 bytes)
Range	99 / 0 through 999,999,999 / 0 (variable, 2-9 digits)
Unit	10^{-7} through 10^{6} units (variable)

This register contains a 4-byte MSB signed integer. The range and resolution of a given reading is controlled by programmable Scaled Energy Settings, which govern both the Range of the reading (from 2 to 9 digits) and the Units of the reading (from 7 decimal places of Wh (10^{-7}) to no decimal places of MWh (10^{6}). NOTE: See section 3.64 and 3.65 for details.

8.61: Total Average Power Factor Block (07830-07859)

- Description: This block keeps the Total Average Power Factor Values. Power Factor Values can be

calculated using Watt, VAR and VA. Total Average Power Factor values will be calculated by Wh, VARh and VAh.

8.62: Reset Active Time of Use Time Stamp (07860-07863)

- Description: This register holds the Time Stamp when Active TOU Time is reset. The format follows the Time Stamp F3, section 3.3.

8.63: Negative Maximum Pulse Aggregation Average Block (07864-07895)

- Description: Negative Maximum Average Aggregation 1-4 and Negative Maximum Average Aggregation Time Stamp 1-4 registers are included in this block. Maximum Average Aggregation 1-4 registers in Pulse Accumulation Block Window Average/Maximum Block (05797-05945) will hold only positive values.

8.64: Scratchpad Block (08193 - 08320)

- Description: Scratchpad Registers 08193 - 08320 included in this block. The 128 Registers in the Scratchpad Block are for temporary storage of information. At the user's discretion, data may be written to Registers and then read back.

  Example: Using one port, write energy readings from other devices. Those energy readings can be read through another port.

8.65: Master Device Data Block (08449-08704)

- Description: These registers are used as a Scratch Pad between the Software and the Network Card or Modem Card. These registers are not for polling by the users.

8.66: Customized Modbus Block (12289-14336)

- Description: All the readings in the Customizable Modbus Map Settings Block (50273) can be read in this block. The format of the readings follows each individually assigned reading.

8.67: Enhanced Factory Settings Block (16385-24576)

- Description: These registers are reserved for future additional factory settings information. Currently, nothing is defined in these registers.

8.68: Enhanced Programmable Settings Block (24577-32768)

- Description: These registers are reserved for future additional Programmable Settings information. Currently, nothing is defined in these registers.

8.69: Time of Use Calendar Header Block (34817-34918)

- Description: TOU Calendar Registers included in this block: Modification Time Stamp & Cal Year for Years 1-20, Header Status, Year Selection Status. (See 3.3, 3.21, 3.31, 3.32.)

8.70: Time of Use Calendar Block (34919-35800)

- Description: Time of Use Calendar Registers included in all blocks: Modification Time Stamp, Calendar Year, Profile for 2-Day Segments for the Whole Calendar Year (Jan1/Jan2 Profile), Profile Status, Profile Register for

8.71: Time of Use Upload Calendar Block (36607-36736)

- Description: Time of Use Upload Calendar Window Registers included in this block: Locked to Port, Sequence Status, ID, Data, Checksum. (See 3.27 - 3.30, 3.43.)

8.72: Historical Log 1 Snapshot Header (36865-36882)

- Description: Historical Log 1 Snapshot Registers included in this block:
  Memory Size
  4-byte unsigned integers representing the amount of memory, in bytes, allocated to the log.

  Record Size
  2-byte integers representing the size, in bytes, of a record in the log.

  First Index
  2-byte unsigned integers representing the index of the first (oldest) record in the log.

  Last Index
  2-byte unsigned integers representing the index of the last (newest) record in the log. The value 0x0FFFF indicates that the log is empty.

  First Time Stamp
  These Registers (8 bytes) hold the time stamp from the first (oldest) record in the log.

Time Stamp Bytes		
Byte	**Range**	**Description**
0	0-255	Century
1	0-99	Year
2	1-12	Month
3	1-31	Day
4	0-23	Hour
5	0-59	Minute
6	0-59	Second
7	0-99	Centisecond

  Last Time Stamp
  These Registers hold the Time Stamp from the last (newest) record in the log. The byte order and description are the same as for the First Time Stamp.

Valid Bitmap
These Registers hold the bit flags indicating whether the Nexus® meter recognizes the lines in the Historical Log Settings Block (the block at Register 45205). The first bit represents the validity of the Data Pointer in the Historical Log Settings. A value of 1 means the Data Pointer is acceptable and can be stored. A value of 0 means that the Data Pointer is invalid or unrecognized and not able to be stored.

Max Records
2-byte unsigned integer representing the total number of records the log is capable of holding. In order to maintain a one-for-one relationship in parallel logs, the maximum number of records that a log can store is defined by the log that holds the fewest records. Logs capable of holding more records are restricted.

8.73: Historical Log 2 Snapshot Header (36929-36946)

- Description: Historical Log 2 Snapshot Registers included in this block: The same as Log 1 above.

8.74: Limit Trigger Log Header (36993-37010)

- Description: Limit Trigger Log Registers included in this block:
  Valid Bitmap
  These Registers hold the bit flags indicating whether the Nexus® meter recognizes the lines in the Limit Settings Block (the block at Register 45077). The first bit represents the validity of the Data Pointer in the Limit Settings. A value of 1 means the Data Pointer is acceptable and can be stored. A value of 0 means that the Data Pointer is invalid or unrecognized and not able to be stored. Only 32 bits are used. See Registers 36865 to 36882 for other registers.

8.75: Limit Snapshot Log Header (37057-37074)

- Description: Limit Snapshot Log Registers included in this block: See Registers 36865-36882 and 36993-37010.

8.76: Digital Input Log Header (37121-37138)

- Description: Digital Input Log Registers included in this block: See Registers 36865-36882.

8.77: Digital Input Snapshot Log Header (37185-37202)

- Description: Digital Input Snapshot Log Registers included in this block: See Regs. 36865-36882.

8.78: Digital Output Log Header (37249-37266)

- Description: Digital Output Log Registers included in this block: See Registers 36865-36882.

8.79: Digital Output Snapshot Log Header (37313-37330)

- Description: Digital Output Snapshot Log Registers included in this block: See Registers 36865-36882.

8.80: Flicker Log Header (37377-37394)

- Description: Currently not used.

8.81: Waveform Trigger Log Header (37441-37458)

- Description: Waveform Trigger Log Registers included in this block: See Registers 36865-36882.

8.82: System Event Log Header (37505-37522)

Memory Size: 4-byte unsigned integers representing the amount of memory, in bytes, allocated to the log.

Record Size: 2-byte unsigned integers representing the size, in bytes, of a record in the log.

First Index: 2-byte unsigned integers representing the Index of the First (Oldest) record in the log.

Last Index: 2-byte unsigned integers representing the Index of the Last (Newest) record in the log. The value 0x0FFFF indicates that the log is empty.

First Time Stamp: Thses registers (8 bytes) hold the Time Stamp from the First (Oldest) record in the log.

Time Stamp Bytes		
Byte	**Range**	**Description**
0	0-255	Century
1	0-99	Year
2	1-12	Month
3	1-31	Day
4	0-23	Hour
5	0-59	Minute
6	0-59	Second
7	0-99	Centisecond

Last Time Stamp: These registers hold the Time Stamp from the Last (Newest) Record in the log. The byte order and description are the same as for the First Time Stamp.

Valid Bitmap: Undefined.

Max Records: A 2-byte unsigned integer represents the total number of records the log is capable of holding. In order to maintain a one-for-one relationship in parallel logs, the maximum number of records that a log can hold is defined by the log that holds the fewest records. Logs capable of holding more records are restricted.

8.83: Waveform Samples Log Header (37569-37586)

- Description: Waveform Samples Log Registers included in this block: See Registers 36865-36882.

8.84: PQ (CBEMA) Log Header (37633-37650)

- Description: PQ (CBEMA) Log Registers included in this block: See Registers 36865-36882.

8.85: Reset Log Header (37697-37714)

- Description: Reset Log Registers included in this block: See Registers 36865-36882.
  Description: Reset Log Registers included in this block: See Registers 36865-36882.

8.86: External Device Information Block Header (37761-37778)

- Description: External Device Information Registers included in this block:

  Memory Size: A 4-byte unsigned integer representing the amount of memory, in bytes, allocated to External Device Information Blocks. This memory is allocated from RAM, not NVRAM.

  Record Size: An unsigned integer representing the size, in bytes, of an External Device Info Block.

  First Index: An unsigned integer representing the Index of the First External Device Info Block.

  Last Index: An unsigned integer representing the Index of the Last External Device Info Block.

  First Time Stamp: Since External Device Info Blocks are not recorded sequentially, these Registers have no meaning.

  Last Time Stamp: Since External Device Info Blocks are not recorded sequentially, these Registers have no meaning.

  Valid Bitmap: These Registers hold the bit flags to indicate the validity of individual External Device Info Blocks. The first bit (high order bit in Register 37774) represents the validity of the First External Device Info Block. The last bit (lowest order bit in Register 37777) represents the validity of the Last External Device Info Block. A value of 1 means that the External Device was found and the Nexus® meter successfully received all of the Info Block for the External Device. A value of 0 means that the External Device was not found, or errors have occurred while trying to retrieve the Info Block or that no device is programmed for this slot.

  Max Records: This Register holds an unsigned integer representing the total number of records the log can hold.

8.87: External Device Programming Block Header (37825-37842)

- Description: External Device Programming Registers included in this block:

  Memory Size: These Registers are a 4-byte unsigned integer representing the amount of memory,

in bytes, allocated to External Device Programming Blocks. This memory is allocated from RAM, not NVRAM.

Record Size: This Register is an unsigned integer representing the size, in bytes, of an External Device Programming Block.

First Index: An unsigned integer representing the Index of the First External Device Programming Block.

Last Index: An unsigned integer representing the Index of the Last External Device Programming Block.

First Time Stamp: Since External Device Programming Blocks are not recorded sequentially, these Registers have no meaning.

Last Time Stamp: Since External Device Programming Blocks are not recorded sequentially, these Registers have no meaning.

Valid Bitmap: These Registers hold the bit flags to indicate the validity of individual External Device Programming Blocks. The first bit (high order bit in Register 37838) represents the validity of the First External Device Programming Block. The last bit (lowest order bit in Register 37841) represents the validity of the Last External Device Programming Block. A value of 1 means that the External Device was found and the Nexus® meter successfully received all of the Programming Block for the External Device. A value of 0 means that the External Device was not found, or errors have occurred while trying to retrieve the Programming Block or that no device is programmed for this slot.

Max Records: This Register holds an unsigned integer representing the total number of records the log is capable of holding.

8.88: Device History Block Header (37889-37906)

- Description: Device History Block currently not used.This Register holds an unsigned integer representing the total number of records the log is capable of holding.

8.89: Direct Memory Access Header (37953-37970)

- Description: Direct Memory Access currently not used.

8.90: Window Index Block (38145-38162)

- Description: Window Index Registers included in this block:

  Historical Log 1 (38145): When read, this Register returns the Window Index for Historical Log 1 to access Historical Log 1 on this port. When written, this Register sets the Index used by the Historical Log 1 Window to access Historical Log 1 on this port. Each port accesses a separate, independent index through this Register, allowing all four ports to access different areas of Historical Log 1 at the same time.

When a value other than 0x0FFFF is written to this Register, the index is updated. If the Window Mode for this log indicates a Paused Mode (0x00000 or 0x00001 in Register 38209), Historical Log 1 is paused, preventing the addition of new records while the log is being accessed. A 30-second timer is initiated on these writes. Should the timer run out (a new index is not written within 30 seconds), Historical Log 1 will be allowed to continue logging.

When a value of 0x0FFFF is written to this Register, it signifies that the port is finished accessing Historical Log 1, the 30-second timer is canceled and Historical Log 1 will be allowed to continue logging.

Should multiple ports access the same log simultaneously, the log will be paused while either 30-second timer is running. The log will be allowed to continue logging only when both ports time-out or write 0x0FFFF to their Index Register.

Historical Log 2 (38146): When read, this Register returns the Window Index for Historical Log 2 to access Historical Log 2 on this port. Functionality follows the Historical Log 1 Window Index (38145).

Limit Trigger Log (38147): When read, this Register returns the Index used by the Limit Trigger Log Window to access Limit Trigger Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

Limit Snapshot Log (38148): When read, this Register returns the Index used by the Limit Snapshot Log Window to access Limit Snapshot Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

Digital Input Log (38149): When read, this Register returns the Index used by the Digital Input Log Window to access Digital Input Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

Digital Input Snapshot Log (38150): When read, this Register returns the Index used by the Digital Input Snapshot Log Window to access Digital Input Snapshot Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

Digital Output Log (38151): When read, this Register returns the Index used by the Digital Output Log Window to access Digital Output Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

Digital Output Snapshot Log (38152): When read, this Register returns the Index used by the Digital Output Snapshot Log Window to access Digital Output Snapshot Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

Flicker Log (38153): When read, this Register returns the Index used by the Flicker Log Window to access Flicker Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

Waveform Trigger Log (38154): When read, this Register returns the Index used by the Waveform Trigger Log Window to access Waveform Trigger Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

Register 38155 is not currently used.

Waveform Samples Log (38156): When read, this Register returns the Index used by the Waveform Samples Log Window to access Waveform Samples Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

PQ Log (38157): When read, this Register returns the Index used by the PQ Log Window to access PQ Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

Reset Log (38158): When read, this Register returns the Index used by the Reset Log Window to access Reset Log on this port. Functionality follows the Historical Log 1 Window Index (38145).

External Device Info Block (38159): When read, this Register returns the Index used by the External Device Info Block Window to access External Device Info Blocks on this port. When written, this Register sets the Index used by the External Device Info Block Window to access External Device Info Blocks on this port. Each port accesses a separate, independent index through this Register, allowing all four ports to access different External Device Info Blocks at the same time.

External Device Programming Block (38160): When read, this Register returns the Index used by the External Device Programming Block Window to access External Device Programming Blocks on this port. When written, this Register sets the Index used by the External Device Programming Block Window to access External Device Programming Blocks on this port. Each port accesses a separate, independent index through this Register, allowing all four ports to access different External Device Programming Blocks at the same time.

Device History Block (38160) - Currently not used.
Direct Memory Access (38161) - Currently not used.

8.91: Window Mode Block (38209-38226)

- Description: Window Mode Registers included in this block:

Historical Log 1 (38209): When read, this Register returns the Mode used by the Historical Log 1 Window to access Historical Log 1 on this port. When written, this Register sets the Mode used by the Historical Log 1 Window to access Historical Log 1 on this port. Each port accesses a separate, independent Mode through this Register, allowing all four ports to access Historical Log 1 in different modes.

Currently, the Mode Register defines the following Modes: Paused Download Mode (0x00000), Paused Time Stamp Mode (0x00001), Running Download Mode (0x00002) and Running Time Stamp Mode (0x00003).

In Download Modes (0x00000 and 0x00002), the Historical Log 1 Window accesses consecutive 128-byte blocks of the Historical Log 1. When the Index = 0x00000, the first 128 bytes of the log are readable in the window; when the Index = 0x00001, the second 128 bytes of the log are readable in the window, and so on.

The designation “first 128 bytes of the log” is a physical description based on the absolute addresses of the memory allocated to the log. The first (oldest) record in the log may not be located at the beginning of the log.

In Time Stamp Modes (0x00001 and 0x00003), the Historical Log 1 Window accesses the Time Stamps of the records in the Historical Log 1 in blocks of 16 Time Stamps at a time. When the Index = 0x00000, the Time Stamps of the first 16 records (records 0-15) in the log are readable in the window; when the Index = 0x00001, the Time Stamps of the second 16 records (records 16-31) in the log are readable in the window, and so on.

The designation “first 16 records of the log” is a physical description based on the absolute addresses of the memory allocated to the log. The first (oldest) record in the log may not be located at the beginning of the log.

In Paused Modes (0x00000 and 0x00001), the log being accessed is paused and new records are not added to the log while it is paused.

In Running Modes (0x00002 and 0x00003), the log being accessed is not paused and new records may be added to the log. When downloading in these modes, it is possible the records may be overwritten before or during the downloading of records.

Historical Log 2 (38210): When read, this Register returns the Mode in use by the Historical Log 2 Window to access Historical Log 2 on this port. Functionality follows the Historical Log 1 Window Mode (38209).

Limit Trigger Log (38211): When read, this Register returns the Mode in use by the Limit Trigger Log Window to access Limit Trigger Log on this port. Functionality follows the Historical Log 1 Window Mode (38209).

Limit Snapshot Log (38212): When read, this Register returns the Mode in use by the Limit Snapshot Log Window to access Limit Snapshot Log on this port. Functionality follows the Historical Log 1 Window Mode (38209).

Digital Input Log (38213): When read, this Register returns the Mode in use by the Digital Input Log Window to access Digital Input Log on this port. Functionality follows the Historical Log 1 Window Mode (38209).

Digital Input Snapshot Log (38214): When read, this Register returns the Mode in use by the Digital Input Snapshot Log Window to access Digital Input Snapshot Log on this port. Functionality follows the Historical Log 1 Window Mode (38209).

Digital Output Log (38215): When read, this Register returns the Mode in use by the Digital Output Log Window to access Digital Output Log on this port. Functionality follows the Historical Log 1 Window Mode (38209).

Digital Output Snapshot Log (38216): When read, this Register returns the Mode used by the Digital Output Snapshot Log Window to access Digital Output Snapshot Log on this port.

Functionality follows Historical Log 1 Window Mode (38209).

Flicker Log (38217): When read, this Register returns the Mode in use by the Flicker Log Window to access Flicker Log on this port. Functionality follows the Historical Log 1 Window Mode (38209).

Waveform Trigger Log (38218): When read, this Register returns the Mode in use by the Waveform Trigger Log Window to access Waveform Trigger Log on this port. Functionality follows Historical Log 1 Window Mode (38209).

Register 38219 is currently not used.

Waveform Samples Log (38220): When read, this Register returns the Mode in use by the Waveform Samples Log Window to access Waveform Samples Log on this port. Functionality follows Historical Log 1 Window Mode (38209).

PQ Log (38221): When read, this Register returns the Mode in use by the PQ Log Window to access PQ Log on this port. Functionality follows the Historical Log 1 Window Mode (38209).

Reset Log (38222): When read, this Register returns the Mode in use by the Reset Log Window to access Reset Log on this port. Functionality follows the Historical Log 1 Window Mode (38209).

External Device Info Block (38223) - Currently now used.
External Device Programming Block (38224) - Currently not used.
Device History Block (38225) - Currently not in use.
Direct Memory Access (38226) - Currently not in use.

8.92: Window Block (38273-39424)

- Description: Window Registers included in this block:

Historical Log 1 (38273-38336): These Registers are a 128-byte window into the Historical Log 1. Depending on the Historical Log 1 Window Index, a different 128-byte area of Historical Log 1 can be accessed.

Historical Log 2 (38337-38400): These Registers are a 128-byte window into the Historical Log 2. Depending on the Historical Log 2 Window Index, a different 128-byte area of Historical Log 2 can be accessed.

Limit Trigger Log (38401-38464): These Registers are a 128-byte window into the Limit Trigger Log. Depending on the Limit Trigger Log Window Index, a different 128-byte area of Limit Trigger Log can be accessed.

Limit Snapshot Log (38465-38528): These Registers are a 128-byte window into the Limit Snapshot Log. Depending on the Limit Snapshot Log Window Index, a different 128-byte area of Limit Snapshot Log can be accessed.

Digital Input Log (38529-38592): These Registers are a 128-byte window into the Digital Input Log. Depending on the Digital Input Log Window Index, a different 128-byte area of Digital Input Log can be accessed.

Digital Input Snapshot Log (38593-38656): These Registers are a 128-byte window into the Digital Input Snapshot Log. Depending on the Digital Input Snapshot Log Window Index, a different 128-byte area of Digital Input Snapshot Log can be accessed.

Digital Output Log (38657-38720): These Registers are a 128-byte window into the Digital Output Log. Depending on the Digital Output Log Window Index, a different 128-byte area of Digital Output Log can be accessed.

Digital Output Snapshot Log (38721-38784): These Registers are a 128-byte window into the Digital Output Snapshot Log. Depending on the Digital Output Snapshot Log Window Index, a different 128-byte area of Digital Output Snapshot Log can be accessed.

Flicker Log (38785-38848): These Registers are a 128-byte window into the Flicker Log. Depending on the Flicker Log Window Index, a different 128-byte area of Flicker Log can be accessed.

Waveform Trigger Log (38849-38912): These Registers are a 128-byte window into the Waveform Trigger Log. Depending on the Waveform Trigger Log Window Index, a different 128-byte area of Waveform Trigger Log can be accessed.

Registers 38913-38976 are currently not in use.

Waveform Samples Log (38977-39040): These Registers are a 128-byte window into the Waveform Samples Log. Depending on the Waveform Samples Log Window Index, a different 128-byte area of Waveform Samples Log can be accessed.

PQ Log (39041-39104): These Registers are a 128-byte window into the PQ Log. Depending on the PQ Log Window Index, a different 128-byte area of PQ Log can be accessed.

Reset Log (39105-39168): These Registers are a 128-byte window into the Reset Log. Depending on the Reset Log Window Index, a different 128-byte area of Reset Log can be accessed.

External Device Info Block Window (39169-39232): These Registers are a 128-byte window into the External Device Info Blocks. Depending on the External Device Info Block Window Index, a different 128-byte area of the External Device Info Blocks can be accessed. (See Chapter 5.)

External Device Info Block Window (39233-39296): These Registers are a 128-byte window into the External Device Programming Blocks. Depending on the External Device Programming Block Window Index, a different 128-byte area of the External Device Programming Blocks can be accessed. (See Chapter 5.)

Device History Block (39297-39360) - Currently not in use.
Direct Memory Access (39361-39424) - Currently not in use.

8.93: Auto Increment Window Block (39423-39488)

- **Auto Increment Configuration** - 1 Register, 2 bytes.

  When read, this register returns the configuration in use by the Auto Increment Log Window, below, to access logs on this port. When written, this register sets the configuration used by the Auto Increment Log Window, below, to access logs on this port. Each port accesses a separate, independent configuration through this register allowing all four ports to access logs with different configurations.

  The least significant byte indicates which log is being accessed. The appropriate values are:

0x000	Historical Log 1
0x001	Historical Log 2
0x002	Sequence of Events State Log
0x003	Sequence of Events Snapshot Log
0x004	Digital Input State Log
0x005	Digital Input Snapshot Log
0x006	Digital Output State Log
0x007	Digital Output Snapshot Log
0x008	Flicker Log
0x009	Waveform Trigger Log
0x00A	System Event Log
0x00B	Waveform Sample Log
0x00C	PQ Log
0x00D	Reset Log
0x00E-0x0FF	Undefined

  The most significant byte defines the following modes: Paused Download Mode (0x000) and Running Download Mode (0x001).

  In Paused Download mode (0x000), the log being accessed is paused - new records are not added to the log while it is paused.

  In Running Download mode (0x001), the log being accessed is not paused - new records may be added to the log. When downloading in this mode, it is possible that records may be overwritten before, or even during, access to that record.

- **Auto Increment Window Index** - 1 register, 2 bytes.

  When read, this register returns the index used by the Auto Increment Log Window, below, to access logs on this port. When written, this register sets the index used by the Auto Increment Log Window, below, to access logs on this port. Each port accesses a separate, independent index through this register, allowing all four ports to access different areas of logs at the same time.

  When read, the index is incremented before being returned in the Modbus response. If the Auto Increment Mode is Paused Download mode (0x001xx in register 39423, 0x099FE), the appropriate log is paused, preventing the addition of new records while the log is being accessed. A 30-second

timer is initiated on these reads. Should the timer run out (the index is not incremented/read in 30 seconds), the appropriate log will be allowed to continue logging.

When a value of 0x0FFFF is written to this register, this signifies that the port is finished accessing the appropriate log, and the 30-second timer is canceled and the appropriate log will be allowed to continue logging.

Should multiple ports access the same log simultaneously, the log will be paused while either 30-second timer is running; the log will be allowed to continue logging only when both ports time-out or write 0x0FFFF to their index register.

- **Auto Increment Log Window** - 64 registers, 128 bytes.

  These registers are a 128-byte window into a log, as specified in the Auto Increment Configuration (register 39423, 0x099FE). Depending on the Auto Increment Window Index, a different 128-byte area of a log can be accessed.

  See section **5.1.4: Downloading Logs with Auto Index and Modbus Extensions** for the usage of these registers.

8.94: Alarm Block (40961-41105)

- Description: Window Registers included in this block:

  Last Alarm (40961-40976): These Registers keep the latest Limit Trigger Log, which records information about the limits. The log records which limits are currently exceeded and which limits have just changed. The 16 Registers contain 32 bytes. The record format is the same as the Limit Trigger Log Format.

  The first eight bytes are the Time Stamp. The format of the Time Stamp is:

Byte	Format	Range	Description
0	Binary	0-99	Century
1	Binary	0-99	Year
2	Binary	1-12	Month
3	Binary	1-31	Day
4	Binary	0-23	Hour
5	Binary	0-59	Minute
6	Binary	0-59	Second
7	Binary	0-99+MSB	Centisecond

An additional piece of information is contained in the centisecond byte. The most significant bit indicates whether Limit Trigger monitoring was continuous between the last record and this record. If the bit is 1, then this is the first record recorded after a power-down, reset or download and all unfinished durations prior to this record are lost. If the bit is 0, then recording was continuous between the last record and this one.

The next four bytes are a bitmap for the Current State of the Value 1 Comparisons of the Limits. The first bit (the most significant bit of the first byte) is the Current State of the 1st Limit's Value 1 Comparison. The last bit (the least significant bit of the fourth byte) is the Current State of the 32nd Limit's Value 1 Comparison. A bit value of 1 means that the Comparison is exceeded (less than or equal to Value 1 for a below limit; greater than Value 1 for an above limit), a bit value of 0 means the Comparison is not exceeded (greater than Value 1 for a below limit; less than or equal to Value 1 for an above limit).

The next four bytes are the same bitmap as above, but for the Current State of the Value 2 Comparisons of the Limits.

The next four bytes are a bitmap for the Delta of the Value 1 Comparisons of the Limits. The order of the bits is the same as above. A bit value of 1 means that the State of the Value 1 Comparison changed since the last alarm occurred; a bit value of 0 means that the State of the Value 1 Comparison did not change since the last alarm.

The next four bytes are the same bitmap as above, but for the Delta of the Value 2 Comparisons of the Limits.

The next four bytes are a bitmap for the Current State of the Combinations of the Limits. The first bit (the most significant bit of the first byte) is the Current State of the 1st Limit's Combination of the Value 1 Comparison and the Value 2 Comparison. The last bit (the least significant bit of the fourth byte) is the Current State of the 32nd Limit's Combination of the Value 1 Comparison and the Value 2 Comparison. A bit value of 1 means that the Combination is true; a bit value of 0 means that the Combination is false.

The last four bytes are the same bitmap as above, but for the Delta of the Combination of the Limits.

Last Alarm Snapshot (40977-41104)
The Registers store the latest Limit Snapshot Log.
The record formats are also explained in Chapter 6.

Record Format: A Record contains 32, 64, 128 or 256 bytes, depending on how many channels have limits assigned to them. The first eight bytes in each Record are the Time Stamp. The format of the Time Stamp is shown below.

The remaining bytes are the values monitored by Limits (45077-45204). If the first Data Pointer is requesting VBN, a 4-byte value, then the next 4 bytes in the Record is VBN. This continues, Data Pointer for Data Pointer, until all Data Pointers have been satisfied, or the number of bytes is equal to the Historical Log 1 Record Size.

Byte	Format	Range	Description
0	Binary	0-99	Century
1	Binary	0-99	Year
2	Binary	1-12	Month
3	Binary	1-31	Day
4	Binary	0-23	Hour
5	Binary	0-59	Minute
6	Binary	0-59	Second
7	Binary	0-99+MSB	Centisecond

Limit Data Pointers (45077-45204): These Registers indicate which values are being monitored by Limits. Each Data Pointer has the following 8-byte structure:

Size	Format	Description
2-byte	Unsigned Integer	Line Number
1-byte	Unsigned Char	Point Number
1-byte	Unsigned Char	Limit Mode
2-byte	Unsigned Integer	Comparison 1 Value
2-byte	Unsigned Integer	Comparison 2 Value

A Line Number is an index into the Communication Table. Example: Line Number 11 is for the 12th Line in the Communication Table, 0.1 Second Phase-to-Neutral Voltages. Data Pointers with Line Numbers greater than the number of lines in the table are ignored.

A Point Number is an index into a Line in the Communication Table. Example: Point Number 1 is for the second entry in a Line. Line Number 11, Point Number 1 is the 2nd in the 12th line, 0.1 Second VBN. Data Pointers with Point Numbers greater than the number of points for the line are ignored.

Latched Exception Flag (41105): This Register tells you how many Limit Triggers have occurred since the last time the Registers were checked. This Register is Read Only.

Example: Two Limit Exceptions occurred. Read the Register from Port 1; you will notice 2 Limit Exceptions returned. Later, two more Limit Exceptions occurred. Read the Register again. From Port 1, you will notice 2 Limit Exceptions returned. From Port 2, you will notice 4 Limit Exceptions returned. Limit Exceptions are incremented so that you have a history of Limit Exceptions in the Ports.

8.95: Port Control Block (41729-44544)

■ Description: Port Control Registers included in this block (see Chapter 5):

Port Control Command (41729): When written, this Register receives commands meant to control the ports. Valid commands are:

0x00100 = Lock Port 4 (I/O) for my use
0x00101 = Lock Port 3 for my use
0x00102 = Lock Port 2 for my use
0x00103 = Lock Port 1 (232/485) for my use
0x00104 = Lock the Diagnostic Port for my use (currently not use)
0x00200 = Unlock Port 4
0x00201 = Unlock Port 3
0x00202 = Unlock Port 2
0x00203 = Unlock Port 1
0x00204 = Unlock the Diagnostic Port (currently not used)

You cannot lock your own port. You cannot lock a port that is already locked. A port can only be unlocked by the port that locked it originally.

Lock States (41730-41732): These Registers contain 6 bytes. The first five bytes contain codes indicating whether a port is locked by another port or not.

Port Control Lock States		
Register	**High Byte**	**Low Byte**
41731	Port 4 (I/O)	Port 3
41732	Port 2	Port 1 (232/485)
41733	Diagnostic Port	Unused

Initially, these bytes read as 0x0FF. When a port requests that another port be locked to its use (0x00100 - 0x00104 to Register 41731), these bytes will read with one of the following codes, indicating which port is the locked owner of which port:

0x000 = Locked by Port 4 (I/O)
0x001 = Locked by Port 3
0x002 = Locked by Port 2
0x003 = Locked by Port 1 (232/485)
0x004 = Locked by the Diagnostic Port (currently not used)
0x0FF = Unlocked

Pointers (41733-41752): These Registers, when read, return the values of the pointers controlling the Communication Buffers in the Nexus® device. They are unsigned integers and represent the indexes of the series of bytes that are the Receive and Transmit Circular Buffers. Since the buffers are 512 bytes long, valid values should range from 0x00000 to 0x001FF.
The order of the Registers is:

Port Control Pointers				
Port	**ReceiveIn**	**ReceiveOut**	**TransmitIn**	**TransmitOut**
Port 4 (I/O)	41733	41734	41735	41736
Port 3	41737	41738	41739	41740
Port 2	41741	41742	41743	41744
Port 1 (232/485)	41745	41746	41747	41748
Diagnostic Port	41749	41750	41751	41752

ReceiveIn indexes the location where the next received character will be placed in the Receive Buffer by the interrupt routine. ReceiveOut indexes the location where the next character should be removed from the Receive Buffer by the parsing routine. TransmitIn indexes the location where the next character to be transmitted should be placed by the communication generation routine. TransmitOut indexes the location of the next character to be transmitted by the interrupt routine.

The Receive Buffer is empty if RecIn = (RecOut+1) Mod 512. The Receive Buffer is full if RecIn = RecOut. The Transmit Buffer is empty if TrmIn = TrmOut. The Transmit Buffer is full if TrmOut = TrmIn+1) Mod 512.

When a port is locked, its pointers may be modified by the locking port.

When a TransmitIn Register is written, that causes the interrupt routines to transmit characters in the Transmit Buffer from TransmitIn to TransmitOut.

Receive and Transmit Buffers (41985-44544): These Registers, when read, return the contents of the appropriate Receive and Transmit Buffers. Each buffer is 256 Registers (512 bytes) long. The order of the buffers is:

Receive and Transmit Buffers		
Port	**Receive**	**Transmit**
Port 4 (I/O)	41985-42240	43265-43520
Port 3	42241-42496	43521-43776
Port 2	42497-42752	43777-44032
Port 1 (232/485)	42753-43008	44033-44288
Diagnostic Port	43009-43264	44289-44544

8.96: Energy Preset Block (44545-44549)

■ Description: Energy readings can be preset by Communicator EXT software.

Preset Energy Value: 4 Registers, 8 bytes. These registers hold the energy readings that will be used by the software for certain Energy Applications.

Preset Energy Selection / Status: 1 Register, 2 bytes. This register indicates which energy is to be preset by the software.

8.97: 12-bit RTU Block (53249-53348)

■ Description: Some older versions of RTU can only read 12-bit data. The Nexus® meter prepares some readings in 12-bit format in this block so that the reading can be processed.

Sanity Register - 1 register. This register indicates that status of the meter. A normally functioning meter reports that value 0x00000, or 0. Any non-zero value indicates that the unit is operating improperly.

Current, Voltage, W, VAR - 1 register, 2 bytes.

Range	+ 5 A / 0 A, + 150 V / 0 V, + 1500 W, VAR / - 1500 W, VAR
Unit	5/2048 A, 150/2048 V, 1500/2048 W, VAR

Each register contains a 16-bit integer. Positive values have the most significant bit clear, and have the same magnitude as an unsigned integer. Negative values have the most significant bit set. The magnitude of a negative value is found by complimenting (inverting) all of the bits and adding 1. The 16-bit integers have been constrained to the bounds of a signed 12-bit integer, +2047 through -2048.

Energy - 2 registers, 4 bytes.

Range	+99,999,999 / 0 or 0 / -99,999,999 kWh, kVARh
Unit	1 kWh, kVARh

Each pair of registers represents an Energy counter in primary. Each register contains a value from 0 to 9,999 (0x00000 - 0x0270F), representing 4 digits of an Energy counter. The first register is in units of 10's of MegaWatthour or MegaVARhour. The second register is in units of kiloWatthour or kiloVARhour. Combined, the pair of registers report up to 100 GWh primary of energy.

Frequency - 1 register, 2 bytes.

Range	75 Hz / 45 Hz
Unit	30 / 4096 Hz

This register contains a 16-bit unsigned integer. The 16-bit integer has been constrained to the bounds of an unsigned 12-bit integer, 4095 to 0. The Frequency represented by this register is offset by 45 Hz

Energy Reset - This register, when written with any value, causes all Energy Values to be cleared.

8.98: Action Block - Resetting Nexus® Meter Registers (57345-57393)

Most of the Registers in the Action Block are used to perform an action, reset a Nexus® meter Register. Unless otherwise stated, the action is performed when a value, any value, is written to that Register.

Example: In order to Reset Maximum Value in Meter Address 1, any value, such as '1' (0x00001) should be written to Register 57346 (0x0E001). The appropriate Modbus RTU command for this example would be: 01 06 E001 0001 2E0A (See Chapter 1 for Modbus protocol overview.)

■ Description: Action Registers included in this block:

Log Reset (57345): This Register, when written with any value, causes all logs to be cleared. This action should be performed only under the following two circumstances:

1. When the Programmable Settings are modified, such that data already in the logs is invalidated.
   For Example, any modifications involving the record size or organization of the contents of a snapshot would require the logs to be cleared of any previous data.

2. When the Run-Time Code is upgraded, resulting in one of the following:
   Redefinition of the layout or meaning of the Programmable Settings.
   Altered behavior or capabilities of the logs.

NOTE: Log Reset should be performed automatically by the software in either case and should not be an action directly available to the user. (See Chapter 5.)

Maximum Reset (57346): This Register, when written with any value, causes all Maximum Values to be cleared.

Minimum Reset (57347): This Register, when written with any value, causes all Minimum Values to be cleared.

Energy Reset (57348): This Register, when written with any value, causes all Energy Values to be cleared.

Registers for the Meter Calibration (57349-57377): These Registers are for factory use only. Meter's Calibrations are done through these Registers.

Registers 57380-57382: These Registers are no longer used. Internal KYZ Enable, Internal KYZ Minimum Pulse Width, Internal KYZ Pulses/Whr sec are obsolete.

Waveform Calibration (57383-57384): Waveform Calibration should be performed when waveform sampling is running at rates of 16, 32, 64 or 128 samples per cycle. Waveform Calibration should not be performed when waveform sampling is running at 256 or 512 samples per cycle. If the unit needs waveform recalibration and is running at 256 or 512 samples per cycle, reprogram the meter to one of the other sampling rates, recalibrate, then return the unit to its original sampling rate.

Voltage Calibration (57383): When written, the Register initiates a calibration of the Voltage Channels of the Waveform Capture section of the Nexus® meter's Main Unit. An accurate and stable 60Hz sinusoial voltage input should be applied to all voltage channels of the unit prior to the writing of this Register. Phase relationships between the voltage channels are immaterial. The magnitude of

the signal should be as follows:

Voltage Calibration Inputs		
Nexus® Model	**Input**	**RMS**
1252	Standard (120 V) Voltage Input	120 V RMS
1252 G	G (300 V) Voltage Input	240 V RMS
1262/1272	Standard (120 V) Voltage Input	120 V RMS

When read, this Register returns the state of the Voltage Calibration. A value of 0x00000 means that Voltage Calibration is not taking place. Any other value indicates that Voltage Calibration is taking place. The 120 V Input should be maintained until this Register reads 0x00000, which should take up to 20 seconds, depending on the Programmable Settings.

Current Calibration (57384): When written, this Register initiates a calibration of the Current Channels of the Waveform Capture section of the Nexus® meter's Main Unit. An accurate and stable 60Hz sinusoial voltage input should be applied to all current channels of the unit prior to the writing of this register. Phase relationships between the current channels are immaterial. The magnitude of the signal should be as follows:

Current Calibration Inputs		
Nexus® Model	**Input**	**RMS**
1252	Standard (5 A) Current Input	5 A RMS
1252	1 A Current Input	1 A RMS
1262/1272	Standard (5 A) Current Input	5 A RMS
1262/1272	1 A Current Input	1 A RMS

When read, this Register returns the State of the Current Calibration. A value of 0x00000 means that Current Calibration is not taking place. Any other value indicates that Voltage Calibration is taking place. The 120 V Input should be maintained until this Register reads 0x00000, which should take up to 20 seconds, depending on the Programmable Settings.

Calibration Waveform - DC Offset (57385): This Register is currently not used.

Reset Time of Use Current Season and Current Month (57386): When written, Time of Use Current Season and Current Month will reset.

Manual Waveform Capture (57387): When written, the unit captures a waveform.

Reset Internal Input Accumulations and Aggregations (57388): When written, Internal Input Accumulations and Aggregations will reset.

Override Data not yet Valid Block (57389): This Register is for diagnostics of communication between two microprocessors in the meter.

Refresh External I/O Header Information (57390): This Register, when written, causes all External Devices to be polled for their Information Blocks.

Refresh External I/O Programming Information (57391): This Register, when written, causes all External Devices to be polled for their Programming Blocks.

Relay Locking Relay Selection (57392): This Register and Register 57392 will manually change the External Digital Output Modules' Relays. Using Register 57392, the user can select relays to be locked by Register 57393. A bit value of 1 means that the relay will be affected by the value on the Action Selection Register **(57393)**.A bit value of 0 means that the relay will not be affected by the value on the Action Selection Register **(57393).**

Relay Locking Relay Selection Register (57392)																
Byte	**High Byte**								**Low Byte**							
Module	Module 1				Module 2				Module 3				Module 4			
Relay	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Bit	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Relay Locking Action Selection (57393): This Register will lock or unlock the relays of the External Digital Output Modules in Relay Selection Register 57392. Relays in the Selection Register **(57392)** with a bit value of 1 can be locked or unlocked by this Register. The Register is a 2-byte unsigned integer.

Relay Locking Action Selection Values	
Value	**Description**
0	Lock common to N.C. (Normally Closed)
1	Lock common to N.O. (Normally Open)
2	Unlock
3-65535	Not used

8.99: Factory Calibration Block (60929-61026)

- Description: Refer to section 5.5 for details.

8.100: CTPT Compensation Calibration Block (61027-61124)

- Description: Refer to section 5.5 for details.

8.101: Calibration Modification Block (61185-61280)

- Description: Refer to section 5.5 for details.

8.102: Operational Communication Settings Block (65025-65040)

These Registers keep the valid Communication Settings for all four ports. The Communication Settings Block (45057) in the Programmable Settings Block might have the wrong values if they were interrupted while the meter was being updated.

Operational Communication Settings						
Value	**Protocol**	**Baud Rate**	**Parity**	**Stop Bits**	**Data Bits**	**Response Delay (ms)**
0	Modbus ASCII	4800	None		5	0.00
1	Modbus RTU	9600	Even		6	0.25
2	DNP 3.0	19200	Odd		7	0.50
3		38400	Mark		8	0.75
4		57600	Space			1.00
5		115200				1.25
6						1.50
7				1 stop		1.75
8				1.5 stop		2.00
9-14						2.25-3.50
15				2 stop		3.75
16-255						4.00-63.75

- Description: Operational Communication Settings Registers included in this block:
  Device Address - 2 bytes, unsigned integer, ranging from 0 to 0xFFFF.
  Protocol - 1 byte, unsigned integer.
  Baud Rate - 1 byte, unsigned integer.
  Parity - 1 byte, unsigned integer.
  Stop Bits - 1 byte, unsigned integer.
  Data Bits - 1 byte, unsigned integer.
  Response Delay - 1 byte, unsigned integer.

8.103: Diagnostic Block (65041-65042)

- Description: These registers consist of 32 bits of Data Valid Bits. These registers are created for debugging purposes for EI engineers. When a problem is noticed, EI engineers can use these registers to find the cause of the problem. Customers should NOT use these registers for polling.

8.104: Device Identification Block 2 (65088-65280)

- Description: Device Identification Registers included in this block:

  196 Xilinx Version / 320 Xilinx Version (65088)
  Each number is represented by a 1-byte integer.

Firmware Variation Strings (65089-65280)
Eight Registers each and Null Terminated ASCII Strings (Terminating Null (ASCII 00H) at the end of the string). (See 3.1.)

8.105: DSP Diagnostic Block (65281-65312)

- Description: DSP Diagnostic Registers are for internal use only. These Registers are not for customer use. These Registers are READ ONLY and cannot be written.

8.106: Password Block (65316-65344)

- Description: Password Registers included in this block:

User Password (65316-65320): When Passwords are Enabled, a user must write the appropriate Password to these Registers. After the Password is written, the Password State is updated to reflect whether the entered Password matches either of the programmed Passwords. Correct entry of a Password is valid for 2 minutes. Correct entry of a Password is valid only for the port that received the Password.

Password State (65321): This Register contains an enumeration that reports the state of Password Protection on the device. The enumeration is as follows:

0x000	Internal Error
0x001	Obsolete Designation, should not occur
0x002	Password Protection Enabled (None/Wrong Password)
0x003	Level 1 Password
0x004	Level 2 Password
0x005	Password Protection Disabled
0x006	Hardware Defeat

Password State must be combined with Sealing Switch State to determine if a feature is available or not.

Sealing Switch State (65322)
This Register contains an enumeration that reports the State of Sealing Switch Protection on the device. The enumeration is as follows:

0x000	Internal Error
0x001	Sealing Switch Enabled - Not Pressed
0x002	Sealing Switch Enabled - Pressed
0x003	Sealing Switch Disabled
0x004	Sealing Switch Not Installed
0x005	Hardware Defeat

Sealing Switch State must be combined with Password State to determine if a feature is available or not.

Password Lock (65326): This Register is used to report the Locked Port and change the Locked Port for Password Modification.

Writing a value of 0x00000 to this Register requests locking Password Updates to this port and locking out Password Updates to other ports. Writing a value other than 0x00000 rescinds the Lock on this port. Reading this Register returns the following enumeration:

0x00000 = Port A, I/O
0x00001 = Port B
0x00002 = Port C
0x00003 = Port D, 232 or 485
0x00004 = Diagnostic Port
Anything else indicates that no port has locked Password Updates yet.

Password Sequence / Status (65327): The High Order Byte of this Register contains a Sequence Number which increments with every password command received.

The Low Order Byte of this Register contains an enumeration that reports the status of the last password command received. The enumeration is as follows:

0x000	Fail
0x001	Pass
0x002	Unfinished

Password Command (65328): This Register contains and enumeration that tells the device what action to take. The enumeration is as follows:

0x00000	Set Level 1 Password
0x00001	Set Level 2 Password
0x00002	Enable Password Protection
0x00003	Disable Password Protection
0x00004	Enable Sealing Switch Protection
0x00005	Disable Sealing Switch Protection
0x00006- 0x0FFFF	Revoke the 2-minute timer of an active password.

All successful commands set access back to Level 0, revoking the 2-minute timer of any active password.

New Password A (65332-65336)
New Password B (65340-65344)
The user writes to these Registers in order to set the Level 1 or Level 2 Password. For security purposes, these Registers are READ ONLY. The same password should be written to both sets of Registers; a new password will be accepted only if the values written to both sets of Registers agree. After writing to both sets of Registers, the Password Command Register should be written with the command indicating which Password is being updated.

Acceptable Passwords should consist of the ASCII characters ‘ ‘ (0x020), ‘0’-’9’ (0x030-0x039) and ‘A’-’Z’ (0x041-0x05A). Attempts to set a password with illegal characters will fail.

8.107: Dynamic Configuration Block (65345-65349)

NVRAM Configuration Values	
Value	**Memory Option**
0	No Memory
1	512K
2	2 M
3	4 M

- Description: Dynamic Configuration Registers included in this block:

  NVRAM Configuration (65345): 2bytes, unsigned integer. This Register (see above) indicates the memory option of the Nexus® unit.

  IRIG-B State (65346): This Register indicates whether the IRIG-B signal is received at the unit or not. A value of 0x00001 indicates the signal is being received; any other value indicates that the signal is not being received.

  Network Card (65347): This Register indicates whether the Network Card is installed or not. A value of 0x00001 indicates that the Network Card is installed; any other value indicates that the Network Card is not installed.

  Modem Card (65348): This Register indicates whether the Modem Card is installed or not. A value of 0x00001 indicates that the Modem Card is installed; any other value indicates that the Modem Card is not installed.

  Sealing Switch Installation (65349): This Register indicates whether the Sealing Switch is installed or not. A value of 0x00001 indicates that the Sealing Switch is installed; any other value indicates that the switch is not installed.

8.108: Hardware Options Block (65361-65368)

Hardware Option Settings
The following information pertains to settings burned into the boot sector of Banked Executable units, whether Nexus® 1252 meter or Nexus® 1262/1272 meter.

Non-banked Executable Nexus® 1252 units duplicate most of these features using jumpers physically located on the board. Even if these features were added to the boot of a Non-banked Executable unit, the runtime does not have sufficient code space left to utilize these settings.

- Description: Hardware Options Registers included in this block:

  Form (65361 High): The Form indicates what back module is installed in a Glass Socket (1262/1272) Nexus® meter. The Form indicates the type of Hookup in use. In a standard Nexus® 1252 meter, there is one physical Form which can be connected into the system in several ways and the meter is informed of the particular Hookup through a Programmable Setting. In the Glass Socket

Nexus® meter (1262/1272), each Form will be used with a single Hookup and the continued use of a Programmable Setting would allow a user to select a Hookup that the meter is not capable of monitoring. The following codes are used to indicate the Form in use:

Nexus® Meter Forms				
Code	**Form**	**Wye/Delta**	**CT's**	**PTs**
0x000	5S	Delta	2 (recreate Ib)	2
0x001	8S	Delta	3	2
0x002	9S	Wye	3	3
0x003	35S	Delta	2 (recreate Ib)	2
0x004	36S	Wye, $2^{1/2}$ Element	3	2 (recreate Vbn)
0x005	39S	Wye	4 (In meas)	3
0x006	76S	Wye, $2^{1/2}$ Element	4 (In meas)	2 (recreate Vbn)
0x007-0x0FF	Undefined, treated as 5S			

Banked Executable Option Settings			
Modbus Register	**Setting**	**1252**	**1262/1272**
65361 High	Form	No	Yes
65361 Low	4 KYZ	No	Yes
65362 High	Com Port 4	No	Yes
65362 Low	Com Port 3	No	Yes
65363 High	Com Port 2	Yes	Yes
65363 Low	Com Port 1	No	Yes
65364 High	1 Amp	Yes	Yes
65364 Low	300 Volt	Yes	Yes
65365 High	Sealing Switch	Yes	Yes
65365 Low	Memory	Yes	Yes
65366 High	Undefined		
65366 Low	Undefined		
65367 High	Undefined		
65367 Low	Undefined		
65368 High	Undefined		
65368 Low	Undefined		

4 KYZ (65361 Low): An option of the Glass Socket (1262/1272) Nexus® meter is 4 Internal Dry-contact Relays for Pulse Output, either as KYZ or as End of Interval Pulse. The following codes are used to indicate this option:

0x000	Not Present
0x001	Present
0x002-0x0FF	Undefined, treated as Not Present

Com Port (65362-65363): In both the 1252 and the 1262/1272, there are options which attach devices to the Communication Ports, internal to the case. Externally Connected devices use communication settings that need to be user programmable. Internally connected options require Fixed Communication Settings to insure that they always function. These bytes are used to indicate that a given communication device is attached to a particular port. The following codes are used to indicate these options:

0x000	232/485
0x001	Display
0x002	INPI (Modem)
0x003	INP10 (Network)
0x004-0x0FF	Undefined, treated as 232/485

232/485 indicates that the communication settings for this port should be user programmable.
Display indicates that the port should be Address 1, Modbus RTU, 9600 Baud, 8n1, with no delay.
INP1 for the Nexus® 1252 meter indicates that the port should be Address 1, Modbus ASCII, 57.6k Baud, 8n1, with no delay.
INP1 for the Nexus® 1262/1272 meter indicates that the port should be Address 1, Modbus ASCII, 38.4k Baud, 8n1, with no delay.
INP10 indicates that the port should be Address 1, Modbus RTU, 115.2 k Baud, 8n1, with no delay.

For a Nexus® 1252 meter, all ports should be set to 0x000, indicating a 232 or 485 port, except for Port 2, which can be set for either 232/485, INP1 or INP10. Displays are not integrated into the unit and no port should be set to indicate a display.

For a Nexus® 1262/1272 meter, Port 2 should be set to Display. This not only sets the Communication Settings for the proper operation of the display, but it enables several special features for the display that should not be available on other com ports. Depending on the internal connection, INP1 and/or INP10 could be set for other ports.

1 Amp (65364 High)
Some Nexus® units are produced with five windings around the Toroidal CT within the device, multiplying the current pickup from a nominal 5 Amp to 1 Amp. Without identifying this modification, it is necesssary to introduce a compensating factor into the CT Ratio to produce correct Primary Values for Current and Power. With this setting, it is possible to have the adjustment automatically take place in the firmware. The following codes are used to indicate this option:

0x000	Standard 5 Amp Range
0x001	Special 1 Amp Range
0x002-0x0FF	Undefined, treated as 5 Amp Range

300 V (65364 Low)
Similarly, some Nexus® units are produced with a different Voltage Divider, changing the voltage

range from nominally 150V to 300V. Without identifiying this modification, it is necessary to add a compensating Programmable Setting in to produce correct Secondary Voltage and Power. As a Programmable Setting, however, end users could incorrectly enable or disable this feature. With this setting, it is possible to have the adjustment automatically take place in the firmware. The following codes are used to indicate this option:

0x000	Standard 150V Phase-to-Neutral Voltage
0x001	Special 300V Phase-to-Neutral Voltage
0x002-0x0FF	Undefined, treated as 150 Phase-to-Neutral Voltage

Sealing Switch (65365 High): Not all Nexus® units have the Sealing Switch security feature installed. If installed, the end user can enable the security use of this switch and prevent changes to the device's Programmable Settings without physical, tamper-evident access to the unit. This feature cannot be enabled if the switch is not installed; access is permanently denied. The following codes are used to indicate this option:

0x000	No Sealing Switch
0x001	Sealing Switch Installed
0x002-0x0FF	Undefined, treated as No Sealing Switch

Memory (65365 Low): For the Nexus® 1262/1272 meter, the distinction between a model 1262 and a model 1272 is the amount of NVRAM memory installed in the unit. The Boot firmware does not access the NVRAM; the firmware does not know whether the unit is a Nexus® 1262 meter (0 or 512k) or a 1272 meter (1024k or 2048k). The following codes are used to indicate this option:

0x000	0k NVRAM	Nexus® 1262S meter
0x001	512k NVRAM	Nexus® 1262A meter
0x002	2048k NVRAM	Nexus® 1272S meter
0x003	4096k NVRAM	Nexus® 1272A meter
0x004-0x0FF	Undefined, treated as 0k NVRAM	

8.109: Flash Control Block (65409-65498)

■ Description: Flash Control Registers included in this block:

Communicator EXT Operation Indicator (65409): When read, this byte reports which Operation Mode is in use and why. If the value is 0x00000, then the Communication Microcontroller is running in Normal Operation. Any non-zero value indicates that the Communication Microcontroller is running in FLASH Operation. Each bit in the Register signals the reason for being in FLASH Operation. The bits are:

Bit 0:	Checksum Failure in Code
Bit 1:	Checksum Failure in Programmable Settings
Bit 2:	Illegal Communication Settings in Programmable Settings
Bit 3:	Forced FLASH Operation by Jumper
Bit 4:	Requested FLASH Operation by Communication
Bit 5:	Requested Default Communication Settings
Bit 6-15:	Reserved, should be 0

Bits 1, 4 and 5 indicate that all ports are set to the Default Communication Settings of Address 1, Modbus RTU, 9600 Baud, 8 Data Bits, No Parity, 1 Stop Bit and No Delay.

Bit 2 indicates that one or more ports are set to an Illegal setting or combination of settings. In all protocols, Baud Rate, Stop Bits and Parity must be in the allowed range of settings. In Modbus, Addresses must be in the range of 1-247. In Modbus RTU, the Data Bits must be 8; in Modbus ASCII, the Data Bits must be 7 or 8. In DNP, the Address must not be 0x0FFFF and the Data Bits must be 8. If any of the above conditions are false, that port uses the Default Settings of Address 1, Modbus RTU, 9600 Baud, 8 Data Bits, No Parity, 1 Stop Bit and No Delay. For forward compatability, future protocols make no special demands on Address or Data Bits.

If a Modem (INP1) or Network (INP10) Option is installed, appropriate settings will be used for the port for the use of the card, overriding any default that might occur due to other errors. Invalid settings for the port would still cause Bit 2 to indicate a bad Programmable Setting.

Communicator EXT FLASH Sequence & Status / FLASH Command (65410): When read, the High byte is a sequence number and the Low byte is the status of the last FLASH action. After a FLASH action is performed, the sequence number is incremented and the status of that action is placed in the Status byte. If the sequence number did not increment, retry the action. Status values are:

0x000 = Action Failed
0x001 = Action Passed
0x002 = Action Unfinished

Resets to FLASH Operation initialize a 30-second Timeout. This Timeout is reset by a read by the Locked Port of this Register (65410) or that of the DSP Microcontroller FLASH Sequence and Status Register (65415). If this Timeout runs out, the Communication Microcontroller will reset.

When written, the Register initiates FLASH commands for the Communication Microcontroller FLASH. Valid commands are:

0x00000 = Lock the FLASH Routines to this Com Port.
0x00001 = Erase the Code Blocks (0,1,2,3 and 5 (and 6 if Variation 0001)).
0x00002 = Calculate the Code Checksum (0,1,2,3 and 5 (and 6 if Variation 0001)).
0x00003 = Erase the Programmable Settings Block (7).
0x00004 = Calculate the Programmable Settings Checksum (7).
0x00100 = Reset to Normal Operation.
0x00101 = Reset to FLASH Operation, Programmed Communication Settings.
0x00102 = Reset to FLASH Operation, Default Communication Settings.

Locking the FLASH sets the Locked Port Register (65410) to the value for the port that sent the Lock Command. Only the Locked Port can then reset the timer by reading the Status Registers (65411 and 65415) or by writing to other Registers in the FLASH Blocks. Only the Locked Port may send any of the other commands.

Checksum Calculations will update the appropriate Checksum Register for subsequent reads.

FLASH Locked Port (65411)
This port contains two bytes. The first byte contains a code indicating which port is in use:

0x00000 = Port A,I/O
0x00100 = Port B
0x00200 = Port C
0x00300 = Port D, 232 or 485
0x00400 = Diagnostic Port

The second byte contains a code indicating which port is locked for FLASH Routines. Initially, this byte reads as 0x0FF. When a port sends the Lock Port command (0x00000 to Register 65410), this Register will then read with one of the following codes, indicating which port is locked in the FLASH Routines:

0x00000 = Port A, I/O
0x00001 = Port B
0x00002 = Port C
0x00003 = Port D, 232 or 485
0x00004 = Diagnostic Port
0x00005 = Not Yet Locked

Only the Locked Port can reset the Timeouts by reading the Status Registers (65411 and 65414) or by writing to the other Registers in the FLASH Blocks.

Communicator EXT FLASH Code Checksum - Range 65535/0 (65412): When read, this Register returns the Code LRC16 calculated after the last Code Checksum Action.

When written by the Locked Port, the value written is programmed into the FLASH, Addresses 0x17FFE - 0x17FFF as the Code Checksum.

Communicator EXT FLASH Programmable Settings Checksum - Range 65535/0 (65413)
When read, this Register returns the Programmable Settings CRC16 as calculated after the last Programmable Settings Checksum Action.

When written by the Locked Port, the value written is programmed into the FLASH, Addresses 0x1FFFE - 0x1FFFF as the Programmable Settings Checksum.

Nexus® DSP Operation Indicator (65414): When read, this Register reports which Operation Mode is in use and why. If the value is 0x00000, then the DSP Microcontroller is running in Normal Operation. Any non-zero value indicates that the DSP Microcontroller is running in FLASH Operation. Each bit in the Register signals the reason for being in FLASH Operation. The bits are:

Bit 0:	Micro in FLASH Operation
Bit 1:	Checksum Failure in Code
Bit 2:	Unit is in Table Mode
Bit 3-15:	Reserved, should be 0

Nexus® DSP FLASH Sequence & Status / FLASH Command (65415): This Register is similar to Register 65409, except that it effects the DSP Microcontroller Normal FLASH. Valid commands are:

0x00001 = Erase the Code Blocks (Normal FLASH, Blocks 4-7)
0x00002 = Calculate the Code Checksum (Normal FLASH, Blocks 4-7)
0x00100 = Reset to Normal Operation
0x00101 = Reset to FLASH Operation

Reads of this Register by the Locked Port when in FLASH Operation initializes a 30-second Timeout. This Timeout is reset by a read by the Locked Port of this Register (65415) or that of the Communication Microcontroller FLASH Sequence & Status Register (65410). If this Timeout runs out, the Communication Microcontroller will reset.

Nexus® DSP FLASH Code Checksum - Range 65535/0 (65416): When read, this Register returns the Code LRC16 as calculated after the last Code Checksum Action.

When written by the Locked Port, the value written is programmed into the Normal FLASH at Addresses 0x1FFFE - 0x1FFFF as the Code Checksum.

Port to Port Communications (65417-65421): These Registers are readable and writable from any port. They are meant to convey commands from a Master Device connected on one port to a Master Device connected on a different port. (Example: A PC wishes to upgrade the FLASH on a Display.) Each Register is meant to be monitored by a different port, as follows:

65417	Commands to Port A, I/O
65418	Commands to Port B
65419	Commands to Port C
65420	Commands to Port D, 232/485
65421	Commands to the Diagnostic Port - currently not used

Commands are sent in the form of codes written to these Registers. The following are Valid Commands to be recognized appropriately by Master Devices (like Displays):

0x00000	No Command
0x00100	Reset to Normal Mode
0x00101	Reset to FLASH Mode
0x00102	Reset to FLASH Mode, Default Settings

Communicator EXT FLASH Code Hex Line (65425-65434)
These 10 Registers are used as an interface for the 20 useful bytes from a line of a HEX file. The 20 bytes holding binary data are:

Length:	1 byte
Offset:	2 bytes
Type:	1 byte
Content:	16 bytes

Writes to the Registers can only be performed by the Locked Port.

Writing the 10th Register (65434) initiates the writing of the line to the FLASH. (It is recommended that the full ten registers, padded by 0x0FF's be written to write a HEX line.) Offset Values of 0x00000 - 0x0FFFF write to the FLASH, Addresses 0x00000 - 0x0FFFF (Blocks 0, 1, 2 and 3).

Reading these Registers returns the values last written to these Registers.

Communicator EXT FLASH Extended Code Hex Line (65441-65450)
These 10 Registers are similar to Registers 65425-65434, except that Offset Values of 0x00000 - 0x03FFF write to the FLASH Addresses 0x14000 - 0x17FFF (Block 5).
If Variation 0001, Offset Values of 0x00000 - 0x07FFF write to the FLASH, Addresses 0x14000 - 0x1BFFF (Block 5).

Communicator EXT FLASH Product History Hex Line (65457-65466)
These 10 Registers are similar to Registers 65425-65434, except that Offset Values of 0x00000 - 0x03FFD write to the FLASH, Addresses 0x18000 - 0x01BFFD (Block 6).

Communicator EXT FLASH Programmable Settings Hex Line (65473-65482)
These 10 Registers are similar to Registers 65425-65434, except that Offset Values of 0x00000 - 0x03FFD write to the FLASH, Addresses 0x1C000 - 0x1FFFD (Block 7).

Nexus® DSP FLASH Code Hex Line (65489-65498)
These 10 Registers are similar to 65425-65434, except that Extended Addressing Offset Values of 0x0F0000 - 0x0FFFFF write to the Normal FLASH, Addresses 0x10000 - 0x1FFFF (Blocks 4-7).

8.110: Enhanced Serial Number (65533-65534)

- Description: This is an 8-digit Packed BCD. The format is the same at the Serial Number (Registers 65535-65536).

8.111: Serial Number (65535-65536)

- Description: This is an 8-digit Packed BCD.

Example:
Registers 65535-65536, Serial Numbers might contain the following data:

Address	65535	65536
Value	0007H	3394H
Description	00073304	

The Serial Number is 00073304.

Appendix A
Glossary

0.1 Second Values:	These values are the RMS values of the indicated quantity as calculated after approximately 50 milliseconds (3 cycles) of sampling.
1 Second Values:	These values are the RMS values of the indicated quantity as calculated after one second (60 cycles) of sampling.
Alarm:	An event or condition in a meter that can cause a trigger or call-back to occur.
Annunciator:	A short label that identifies particular quantities or values displayed, for example kWh.
Average (Current):	When applied to current values (amps) the average is a calculated value that corresponds to the thermal average over a specified time interval. The interval is specified by the user in the meter profile. The interval is typically 15 minutes. So, Average Amps is the thermal average of amps over the previous 15-minute interval. The thermal average rises to 90% of the actual value in each time interval. For example, if a constant 100amp load is applied, the thermal average will indicate 90 amps after one time interval, 99 amps after two time intervals and 99.9 amps after three time intervals.
Average (Input Pulse Accumulations):	When applied to Input Pulse Accumulations, the "Average" refers to the block (fixed) window average value of the input pulses.
Average (Power):	When applied to power values (watts, VARs, VA), the average is a calculated value that corresponds to the thermal average over a specified time interval. The interval is specified by the user in the meter profile. The interval is typically 15 minutes. So, the Average Watts is the thermal average of watts over the previous 15-minute interval. The thermal average rises to 90% of the actual value in each time interval. For example, if a constant 100kW load is applied, the thermal average will indicate 90kW after one time interval, 99kW after two time intervals and 99.9kW after three time intervals.
Bit:	A unit of computer information equivalent to the result of a choice between two alternatives (Yes/No, On/Off, for example). Or, the physical representation of a bit by an electrical pulse whose presence or absence indicates data.
Binary:	Relating to a system of numbers having 2 as its base (digits 0 and 1).
Block Window Avg: (Power)	The Block (Fixed) Window Average is the average power calculated over a user-set time interval, typically 15 minutes. This calculated average corresponds to the demand calculations performed by most electric utilities in monitoring user power demand. (See Rolling Window Average.)

Byte:	A group of 8 binary digits processed as a unit by a computer (or device) and used especially to represent an alphanumeric character.
CBEMA Curve:	A voltage quality curve established originally by the Computer Business Equipment Manufacturers Association. The CBEMA Curve defines voltage disturbances that could cause malfunction or damage in microprocessor devices. The curve is characterized by voltage magnitude and the duration which the voltage is outside of tolerance. (See ITIC Curve.)
Channel:	The storage of a single value in each interval in a load profile.
CRC Field:	Cyclic Redundancy Check Field (Modbus communication) is an error checksum calculation that enables a Slave device to determine if a request packet from a Master device has been corrupted during transmission. If the calculated value does not match the value in the request packet, the Slave ignores the request.
CT (Current) Ratio:	A Current Transformer Ratio is used to scale the value of the current from a secondary value up to the primary side of an instrument tranformer.
Demand:	The average value of power or a similar quantity over a specified period of time.
Demand Interval:	A specified time over which demand is calculated.
Display:	User-configurable visual indication of data in a meter.
DNP 3.0:	A robust, non-proprietary protocol based on existing open standards. DNP 3.0 is used to operate between various systems in electric and other utility industries and SCADA networks.
EEPROM:	Nonvolatile memory. Electrically Erasable Programmable Read Only Memory that retains its data during a power outage without need for a battery. Also refers to meter's FLASH memory.
Energy Register:	Programmable record that monitors any energy quantity. Example: Watthours, VARhours, VAhours.
Ethernet:	A type of LAN network connection that connects two or more devices on a common communications backbone. An Ethernet LAN consists of at least one hub device (the network backbone) with multiple devices connected to it in a star configuration. The most common versions of Ethernet in use are 10BaseT or 100BaseT as defined in IEE standards. However, several other versions of Ethernet are also available.
Exception Response:	Error Code (Modbus communication) transmitted in a packet from the Slave to the Master if the Slave has encountered an invalid command or other problem.
Form:	Wiring and Hookup configuration for the Nexus® 1262/1272 meter.

Harmonics:	Measuring values of the fundamental current and voltage and percent of the fundamental.
Heartbeat Pulse:	Energy indicator on the face of the Nexus® 1252 meter; pulses are generated per the programmed K_e value.
Infrared Test Pulse:	Energy indicator located on the upper left side of the face of the Nexus® 1262 /1272 meter; pulses are generated per the programmed K_e value.
Integer:	Any of the natural numbers, the negatives of those numbers or zero.
Internal Modem:	An optional modem within the meter's enclosure that connects to the RJ-11 telephone connector.
Invalid Register:	In the Nexus® meter Modbus Map there are gaps between Registers. For example, the next Register after 08320 is 34817. Any unmapped Register stores no information and is said to be invalid.
ITIC Curve:	An updated version of the CBEMA Curve that reflects further study into the performance of microprocessor devices. The curve consists of a series of steps but still defines combinations of voltage magnitude and duration that will cause malfunction or damage.
K_e:	kWh per pulse; i.e. the energy.
kWh:	kilowatt hours; kW x demand interval in hours.
KYZ Output:	Output where the rate of changes between 1 and 0 reflects the magnitude of a metered quantity.
LCD:	Liquid Crystal Display.
LED:	Light Emitting Diode.
Master Device:	In Modbus communication, a Master Device initiates and controls all information transfer in the form of a Request Packet to a Slave Device. The Slave reponds to each request.
Maximum Demand:	The largest demand calculated during any interval over a billing period.
Modbus ASCII:	Alternate version of the Modbus protocol that utilizes a different data transfer format. This version is not dependent upon strict timing, as is the RTU version. This is the best choice for telecommunications applications (via modems).
Modbus RTU:	The most common form of Modbus protocol. Modbus RTU is an open protocol spoken by many field devices to enable devices from multiple vendors to communicate in a common language. Data is transmitted in a timed binary format, providing increased throughput and therefore, increased performance.

Network:	A communications connection between two or more devices to enable those devices to send and receive data to one another. In most applications, the network will be either a serial type or a LAN type.
NVRAM:	Non-volatile Random Access Memory is able to keep the stored values in memory even during the loss of circuit or control power. High speed NVRAM is used in the Nexus® meter to gather measured information and to insure that no information is lost.
Optical Port:	A port that facilitates infrared communication with a (1262/1272) meter. Using an ANSI C12.13 Type II magnetic optical communications coupler and an RS-232 cable from the coupler to a PC, the meter can be programmed with Communicator EXT software.
Packet:	A short fixed-length section of data that is transmitted as a unit. Example: a serial string of 8-bit bytes.
Percent (%) THD:	Percent Total Harmonic Distortion.
Protocol:	A language that will be spoken between two or more devices connected on a network.
PT Ratio:	Potential Transformer Ratio used to scale the value of the voltage to the primary side of an instrument transformer. Also referred to as VT Ratio.
Pulse:	The closing and opening of the circuit of a two-wire pulse system or the alternate closing and opening of one side and then the other of a three-wire system (which is equal to two pulses).
Quadrant: (Programmable Values and Factors on the Nexus® Meter)	Watt and VAR flow is typically represented usng an X-Y coordinate system. The four corners of the X-Y plane are referred to as quadrants. Most power applications label the right hand corner as the first quadrant and number the remaining quadrants in a counter-clockwise rotation. Following are the positions of the quadrants: 1st - upper right, 2nd - upper left, 3rd - lower left and 4th - lower right. Power flow is generally positive in quadrants 1 and 4. VAR flow is positive in quadrants 1 and 2. The most common load conditions are: Quadrant 1 - power flow positive, VAR flow positive, inductive load, lagging or positive power factor; Quadrant 2 - power flow negative, VAR flow positive, capacitive load, leading or negative power factor.
Register:	An entry or record that stores a small amount of data.
Register Rollover:	A point at which a Register reaches its maximum value and rolls over to zero.
Reset:	Logs are cleared or new (or default) values are sent to counters or timers.
Rolling Window Average (Power):	The Rolling (Sliding) Window Average is the average power calculated over a user-set time interval that is derived from a specified number of sub-intervals,

	each of a specified time. For example, the average is calculated over a 15-minute interval by calculating the sum of the average of three consecutive 5-minute intervals. This demand calculation methodology has been adopted by several utilities to prevent customer manipulation of kW demand by simply spreading peak demand across two intervals.
RS-232:	A type of serial network connection that connects two devices to enable communication between devices. An RS-232 connection connects only two points. Distance between devices is typically limited to fairly short runs. Current standards recommend a maximum of 50 feet but some users have had success with runs up to 100 feet. Communications speed is typically in the range of 1200 bits per second to 57,600 bits per second. RS-232 communication can be accomplished using the Optical Port on the face of the 1262/1272 Nexus® meter.
RS-485:	A type of serial network connection that connects two or more devices to enable communication between the devices. An RS-485 connection will allow multi-drop communication from one to many points. Distance between devices is typically limited to around 2,000 to 3,000 wire feet. Communications speed is typically in the range of 120 bits per second to 115,000 bits per second.
Sag:	A voltage quality event during which the RMS voltage is lower than normal for a period of time, typically from 1/2 cycle to 1 minute.
Secondary Rated:	Any Register or pulse output that does not use any CT or VT Ratio.
Serial Port:	The type of port used to directly interface with a PC.
Slave Device:	In Modbus communication, a Slave Device only receives a Request Packet from a Master Device and responds to the request. A Slave Device cannot initiate communication.
Swell:	A voltage quality event during which the RMS voltage is higher than normal for a period of time, typically from 1/2 cycle to 1 minute.
THD:	Total Harmonic Distortion is the combined effect of all harmonics measured in a voltage or current. The THD number is expressed as a percent of the fundamental. For example, a 3% THD indicates that the magnitude of all harmonic distortion measured equals 3% of the magnitude of the fundamental 60Hz quantity.
Time Stamp:	A stored representation of the time of an event. Time Stamp can include year, month, day, hour, minute and second and Daylight Savings Time indication.
TOU:	Time of Use.
Voltage Imbalance:	The ratio of the voltage on a phase to the average voltage on all phases.

Voltage Quality Event: An instance of abnormal voltage on a phase. The events the meter will track include sags, swells, interruptions and imbalances.

VT Ratio: The Voltage Transformer Ratio is used to scale the value of the voltage to the primary side of an instrument transformer. Also referred to as PT Ratio.

Voltage, Vab: Vab, Vbc, Vca are all Phase-to-Phase voltage measurements. These voltages are measured between the three phase voltage inputs to the meter.

Voltage, Van: Van, Vbn, Vcn are all Phase-to-Neutral voltages applied to the monitor. These voltages are measured between the phase voltage inputs and Vn input to the meter. Technologically, these voltages can be “measured” even when the meter is in a Delta configuration and there is no connection to the Vn input. However, in this configuration, these voltages have limited meaning and are typically not reported.