

SIMATIC Energy Suite Readme


Readme


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Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

 DANGER
indicates that death or severe personal injury will result if proper precautions are not taken.

 WARNING
indicates that death or severe personal injury may result if proper precautions are not taken.

 CAUTION
indicates that minor personal injury can result if proper precautions are not taken.

NOTICE
indicates that property damage can result if proper precautions are not taken.


If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

 WARNING
Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions only form one element of such a concept.

Customer is responsible to prevent unauthorized access to its plants, systems, machines and networks. Systems, machines and components should only be connected to the enterprise network or the internet if and to the extent necessary and with appropriate security measures (e.g. use of firewalls and network segmentation) in place.

Additionally, Siemens' guidance on appropriate security measures should be taken into account. For more information about industrial security, please visit (<http://support.automation.siemens.com>).

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends to apply product updates as soon as available and to always use the latest product versions. Use of product versions that are no longer supported, and failure to apply latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under (<http://support.automation.siemens.com>).

See also

Data protection (Page 7)

Data protection

Siemens observes the principles of data protection, in particular the principle of data minimization (privacy by design). This means for this SIMATIC product, the product does not process / save any personal information.

What's new in SIMATIC Energy suite V19?

The SIMATIC Energy suite V19 consists of various new features, enhancements and fixes. The major changes are described below.

Support for redundancy concepts with Energy Suite

The PLC energy programs for S7-1500 R/H controllers can now be automatically generated.

Integration of Modbus TCP devices

- Extended support for Modbus TCP devices (Siemens and third-party) by automatic driver generation for communication.
- Templates for multiple use of Modbus-TCP devices of one type.
- Representation of extended energy data for Modbus-TCP devices in WinCC Unified.

Enhanced export tool

The following are the major changes made to the export tool of Energy Suite

- Export tool for exporting the energy data archived periodically in WinCC Unified in Microsoft Excel format.
- Archiving to redundant WinCC Stations is not supported.

S7 Energy Efficiency Monitor for machines

- Full integration of S7 Energy Efficiency Monitor for machines into the Energy Suite.
- Automatic program generation of the PLC program for S7-1500 controllers.
- Generation of visualization of the energy efficiency monitor for machines with SiVArc (no additional SiVArc license required).
- It is recommended to use the first six states of the machine in runtime as visualization support is extended to only the first six states of the machine.
- Energy Efficiency Monitor WinCC Unified faceplates are not compatible with WinCC unified comfort panels

Other Enhancements

- UI improvements in WinCCUnified faceplates
- The new peak load management now allows the user to define infeed configuration upto five parameters.

Note

For visualizing the advance data of an acquisition object, user should select both advanced data and additional data check boxes in engineering.

What's new in SIMATIC Energy Suite V18?

New features in Energy Suite V18

All major innovations of V18 are summarized below.

Base load management with SIMATIC Energy Suite

Base load management acts as a monitoring component which ensures that the power consumption does not exceed the user defined (upper and lower) power limit values. It is mainly used to manage the power consumption and generation to manage actuators to maintain a certain power level. Actuators are defined as participants or units of a base load management system and can be of the following types:

- Consumer: Units that consumes energy
- Producer: Units that produc energy
- Storage: Units that both produces and consumes energy

Base load management program consists of blocks such as the following:

- Average computation block
- Control block
- Actuator block
- Backup/Restore block

The base load management system has no time dependency in form of archiving periods. Based on the actual power the moving average actual power value for the last 10 seconds is calculated. This is the input value for the system which is controlled to be always between the specified levels. For example, a generator within an industrial site can be managed in this way.

There are two limits, upper limit and lower limit of the power value configured by the user for the system.

The three areas of moving average of power value are as follows.

- If the value is below the lower limit, the system will switch actuators in order to move the value above the lower limit
- If the value is above the lower limit and below the upper limit, the system will not switch any actuator
- If the value is above the upper limit, the system will switch actuators in order to move the value below the upper limit

The control block calculates the additional energy required to move the 10s average value between the limits. Then the block sends a switching request to the actuator blocks. The actuator blocks respond to the request according to their user-defined priority.

The power utilization is constantly monitored against these two threshold limits. If the average power value is not within the threshold values, the base load management triggers an alarm or warning and switches actuators as below shown:

- Power value < lower limit: Activate consumer, deactivate producer, charge storage
- Power value > lower limit AND power value < upper limit: No switching
- Power value > upper limit: deactivate consumer, activate producer, discharge storage

Energy Data Transfer service

With SIMATIC Energy Suite Runtime Toolbox (Unified) installed, a service "EnergyDataTransfer" is added to user machine. This service is configured to transfer data from PLC to WinCC Unified PC when the runtime starts. The logs of the service can be found in diagnose folder of Installed directory. Maximum of 5 log files, each approximately of size 2 mb is created and is re-cycled with new log files.

This service requires WinCC runtime to run with all required licenses. The service does not work if there are any license missing. To avoid conflicts, it is always recommended to stop the running WinCC Runtime project before loading new project/program to the communicating PLC.

WinCC Unified visualisation panels

In WinCC Unified, the following changes are made:

- Energy Data and load management visualisation is provided.
- Visualisation can be generated with SiVArc.
- To enhance data security, buffered communication mechanism between WinCC and PLC is introduced.
- To avoid double licensing, Energy suite tags are not counted in WinCC Unified.

Enhancements

- Energy Suite blocks are supported for Software PLC and Open Controller
- Actor name is changed to Actuator (Applicable to English version of the TIA portal)
- Introduced storage actuator in load management. Storage has its own block and visualization.
- Introducing the storage as an energy flow direction for an acquisition object
- Introducing a PLC alarm for PLC time synchronization with time server.
- Introduced a column "Enable Actuator" in the user interface which allows only bool tag as input, it is used to control the availability of the actuator via a tag.
- Introduced a new symbol in faceplates when an actuator is in manual mode and possibility to configure power for partial mode
- Simplified project migration: During the energy program generation faceplates will be automatically upgraded to the most recent version

- Energy data: New tab to display the baseload management details for creating the logging tags
- Program can be generated for acquisition object, acquisition object with peak load management and acquisition object with base load management.
- Introduced new alarm for LMGT switching with demand and responded actuator details
- Support of SENTRON PAC 3220 - V3.2
- In WinCC Unified, the size of buffer data block is limited to 142 kb
- SIMATIC S7-1500 Fail-safe CPU supports 30 acquisition objects and 15 actuators each for Peak and Base load management.

What's new in SIMATIC Energy Suite V17?

New features in Energy Suite V17

All important innovations compared to Energy Suite V17 are listed below.

Conversion tool

Conversion tool is used to convert Load management PLC binary format file into readable excel (.csv) format, and excel (.csv) into Load management binary format that can be further used for backup restore functionality.

Advanced and interface data

Advanced energy data are only read from the measurement hardware which can make this data available. Advanced energy data includes the following energy data:

- Phase-specific current, voltage, power and power factor values
- Total power, total energy and total power factor values
- Frequency values

Hardware devices and softwares that support advance/advance minimum maximum data will use interface data blocks upon program generation. The interface data block acts as a channel that allows user customized blocks to interact (create links) with Energy Suite's advance/advance min max data upon program generation.

Enhancements

- SIMOCODE Current/Voltage measuring modules V2 are integrated into Energy Suite.
- SENTRON PAC 3220 is integrated into Energy Suite.

What's new in SIMATIC Energy Suite V16?

New features in Energy Suite V16

All major innovations of Energy Suite V16 are summarized below.

Load management

- Load management acts as a monitoring and controlling feature in Energy Suite. Load management component ensures that the power and energy consumption does not exceed the user defined limit power or energy value. Load management component contains a key user defined element called as actors.

Load management program consists of blocks such as the following:

- Forecast block
- Control block
- Actor block
- Backup/Restore block

The Forecast block receives its input from the Infeed that is the acquisition object. For example, in a production plant, the infeed will be the total consumption of the plant.. The Forecast block calculates and forecasts the average power and energy value until the end of an active time period.

Consider monitoring of a manufacturing plant through load management component. The Forecast block reads the power value of the infeed, and monitors the power consumption. The energy utilization is constantly monitored against a threshold limit over a certain time period. If the Forecast is exceeding the threshold value, the load management switches off a consumer, switches on a producer.. This process is termed as escalation. Post the threshold peak, when the power consumption is minimal or within the threshold limit value, the consumers are turned on and producers off (still ensuring the consumption is within the limit). This process is termed as de-escalation.

- Delta generation for load management and acquisition objects is supported, where any newly added or modified acquisition object/ load management actor blocks will be appended to the existing blocks after generation. In case of deletion, only the selected blocks will be deleted after generation without altering the existing blocks.
- Supports automatic creation of screen rules for Energy Suite blocks.
- Screen generation
 - Supports automatic screen generation for Energy acquisition program for WinCC Professional, WinCC Runtime Advanced and Comfort devices.
 - Supports automatic screen generation for load management program using WinCC Professional devices.

Enhancements

- Runtime performance optimizations to improve PLC cycle time usage in long runs of acquisition.
- RT neutral delta energy program generation for energy acquisition and load management is supported when there are delta changes like addition, modification of acquisition objects or actors of load management.
- During Energy Suite project configuration, when you add a new Acquisition object table, it is mandatory to download WinCC.
- While adding acquisition objects into the Acquisition object table, it is mandatory to download WinCC.
- At Runtime, Load management functionality can be achieved with the PLC version greater or equal to v2.5.

What's new in SIMATIC Energy Suite V15.1?

New features in Energy Suite V15.1

All important innovations compared to Energy Suite V15 are summarized here.

Optimization of the connection of measurement hardware as a source of energy data

- Energy Suite recognizes the following measurement hardware with the integrated interface in STEP 7 (TIA Portal) or with the device master data file configured as an energy data source:
 - ET 200SP AI Energy Meter 480VAC HF
 - Soft starter 3RW55
- Energy Suite recognizes the configuration of the above-mentioned measurement hardware and automatically creates corresponding blocks during the generation of the energy program.
- The Energy Suite library contains automatically installed faceplates for visualizing the energy program.
- An Energy Suite project created in V15.0 with PLC archiving generates a data log file. The same project when opened in V 15.1, TIA portal prompts you to upgrade the project to V15.1. Post upgradation of the project to V15.1, a new data log file is created after regeneration and download.

What's new in SIMATIC Energy Suite V14 SP1?

News for Energy Suite V14 SP1

All important innovations compared to Energy Suite V14 are listed below.

Generation of the energy program for advanced energy data

- The following new commands for generating the energy program for advanced energy data (e.g. currents, voltages, frequency, etc.) are available in the shortcut menu of the "Energy objects" object in the project tree:
 - Basic energy data
 - Basic and advanced energy data
 - Basic and advanced energy data (with minimum/maximum values)
- Energy Suite recognizes which energy data the respective measuring hardware can provide and automatically creates the corresponding blocks while generating the energy program.

Additional information is available in the SIMATIC Energy Suite Operating Manual in the section "Generating energy program".

Automatic creation of reports with the Energy Suite Export Tool

- New automatic generation of reports based on configurable report templates.
- The following automatic report cycles are available:
 - Daily
 - Weekly
 - Monthly
 - Yearly
- For fast error analysis, the error messages output in case of unexpected behavior are saved locally under "C:\Program Files (x86)\Siemens\Automation\SCADA-RT_V11\WinCC\bin\config".

Additional information is available in the SIMATIC Energy Suite Operating Manual in the section "Evaluate energy data with Energy Suite Export Tool".

Detailed information and feedback on the generation progress

- The information and events for generating the energy program are displayed for better transparency of the generation process.
- You can use the "Go to" function to jump to the position in the configuration that is relevant for the respective event.

Additional information is available in the SIMATIC Energy Suite Operating Manual in the section "Generating energy program".

Expanding the meta data structure

The meta data structure of the energy objects has been expanded for reasons of compatibility and analysis.

Additional information is available in the SIMATIC Energy Suite Operating Manual in the section "Energy Suite blocks".

Migration of a project from Energy Suite V14 SP1 or later

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Migration of a project from Energy Suite V14 SP1

To migrate Energy Suite projects of version V14 SP1 to V19, you must manually set the STEP 7 instruction "Get_IM_Data" to the current version. Otherwise you will encounter compilation errors during the compilation process.

Requirements

- An Energy Suite project of version V14 SP1 is available.
- TIA Portal V19 with Energy Suite V19 is installed.

Procedure

To avoid a compilation error during migration of an Energy Suite project from V14 SP1 to V19, follow these steps.

1. Open the project created in Energy Suite V14 SP1 in V19.
The "Open project" dialog opens.
2. Click the "Upgrade" button in the "Open project" dialog.
3. After the project has been migrated successfully, open the configured SIMATIC S7-1500 CPU in the project tree.
4. Open any block (OB, FB or FC) below the "Program blocks" folder.
5. In the "Instructions" task card, open the folder "Extended instructions > Diagnostics".
The "Get_IM_Data" instruction is preset with version "V1.2".
6. Select the version "V1.3" from the drop-down list.
7. Then continue generating your energy program.
8. Below the configured S7-1500 CPU, click on the "Program blocks" object.
9. Select the "Compile > Software (complete compile)" command in the shortcut menu.
The energy program is compiled. You can check to see if the compiling has been successfully completed in the Inspector window under "Info > Compile".

Migration of a project from Energy Suite V16 and below to V19

To avoid Library version conflict error during migration of Energy Suite projects from previous versions to V19 you can use the following instruction sets to upgraded to the specified versions.

	Instruction	Version
1.	WriteToArrayDB ReadFromArrayDB	V1.2 V1.2
2.	DataLogCreate DataLogOpen DataLogWrite DataLogClose DataLogDelete	V1.0 V1.1 V1.0 V1.0 V1.1
3.	RD_SINFO QRY_CINT	V1.2 V1.1
4.	Upper_Bound Lower_Bound	- -
5.	Serialize Deserialize	V2.2 V2.2
6.	FileWriteC FileReadC	V1.0 V1.0
7.	GetSMInfo GetSymbolName Program_Alarm Get_AlarmState	V1.2 V1.1 V1.0 V1.1

Update types and set latest versions as default in upgraded projects

During the first energy program generation in an upgraded project, the library types are automatically updated. The update process will take a few minutes to complete (depending on the number of types already in project).

Upgrade of projects with EnS_EEm_Calc

In order to avoid internal consistency errors when upgrading Energy Suite projects from V16 Update 1 (and lower) to V19 user must manually update the instruction "EnS_EEm_Calc" to V3.2.

Post upgrade procedure for Sivarc generation

After an upgrade of project with Energy Suite Sivarc generated screens, a Clear Visualization must be performed before regeneration of screens. Clear visualization option is found by right clicking on the HMI and this option will clear the Sivarc generated objects in screens.

Notes on use

Contents

The information in this readme has priority over statements made in other documents.

Please read the following notes carefully, as they contain important information on installation and use. Read these notes before you start the installation.

You can also find updated information on Energy Suite in the Siemens Industry Online Support Portal.

Information on operating instructions of the SIMATIC Energy Support Library can be found in the readme "ReadMeEnSLenUS.chm" on the installation medium.

Energy Suite in multiuser project

Open a multiuser project only in the server project view, not in the local session.

Energy data from measurement hardware

When configuring the measurement hardware as an energy data source, different data type settings are evaluated depending on the measurement hardware used.

The following table shows the required settings for the supported measurement hardware:

Measurement hardware	Energy data type	Unit	Normalization factor	Overflow value
AI EnergyMeter 480VAC ST	Energy counter value	Wh	1	1.000.000.000.000 .000 = $1 * 10^{15}$ (*)
AI EnergyMeter 480VAC HF	Energy counter value	Wh	1	1.000.000.000.000 .000 = $1 * 10^{15}$ (*)
SENTRON PAC3200/PAC4200	Energy counter value	Wh	1	$1 * 10^{12}$
SENTRON 3VA (8er ETU)	Energy counter value	Wh	1	$4 * 10^{12}$
SINAMICS AC/AC	Power value	W	1	-
SIMOCODE pro V PN	Energy counter value	Wh	1	2.147.483.648.000
Motor starter ET 200SP/ M200D	Power value	W	1	-
Soft starter 3RW44	Power value	W	1	-
Soft starter 3RW55	Power value	W	1	-

(*) Make sure that the energy counter value shows the overflow value both in the Energy Suite settings and in the hardware configuration of the AI EnergyMeter 480VAC ST/HF. You can find the hardware configuration in the Inspector window "Properties" under "Module parameters > AI configuration > Measurement > End value energy meter".

Make sure that the parameter assignment corresponds to the above table

Transfer of data to the SCADA system

If you make changes to the energy program, generate the energy program again and load it to the CPU.

Load the changes to the CPU only if the buffer blocks are empty. When loading to the CPU (complete), the CPU must be restarted afterward. When loading to the CPU (only changes), a reinitialization of the "EnS_BufferWorkDB" data block must be performed. You can find additional information on this in the online help of the TIA Portal information system.

Generating the energy program

Check the following settings if generation of the energy program fails:

- Energy data source: The following aspects should be configured according to the manual:
 - Hardware configuration of the measurement hardware (see documentation "Measurement Hardware for SIMATIC Energy Suite in the TIA Portal")
 - Data type (see section "Energy data from data blocks")
 - Naming conventions (see section "Performance features and conventions")
- Archiving period: An archiving period is assigned to each acquisition object.
- Acquisition object name: Acquisition object cannot have the same name as the following objects
 - Program block
 - Technology object
 - External source
 - PLC tag
 - PLC data type
- General: The prefixes "EnS_" (except "EnS_EEm_" for S7 Energy Efficiency Monitor), "EnSL_", and "LAcycCom_" are reserved system prefixes and are not used in the names of the objects specified above.

Before regenerating the energy program, make sure that the settings specified above apply.

- The value range for load management system name supports 1-26 characters.
- The value range for priority actor supports 0-1999.

For successful compilation of Comfort panel and WinCC Runtime Advanced devices containing energy acquisition data with SiVArC generation:

- You must link the appropriate tags for the pop-up screen objects.

For successful compilation of WinCC Runtime Professional devices:

- With only energy acquisition program generated in PLC and screens are generated through the option "Start SiVArC generation with station selection dialog", you must manually delete the tag table "LMGT - Internal tags".

While configuring Energy Suite project:

- Adding acquisition object table for the first and consecutive times, it is mandatory to download the WinCC.
- Adding acquisition objects to the Acquisition object table, it is mandatory to download the WinCC.

Note

The Energy Suite program uses LacycCom_HandleResource_Variant and LacycCom_ResourceManager_Variant blocks for advance data acquisition from devices. To avoid conflicts with any other LacycCom logic that user may have added, Energy Suite aborts the generation of program if "LacycCom_" prefix is found before generation. Hence while using Energy Suite program, no other library with LacycCom functionalities can be used within one PLC.

Energy Suite blocks

EnS_CalcEnergyData: Calculating energy values

Resetting the energy counter value during an active archiving period results in the calculation of negative energy values for this archiving period.

EnSL_DrvBasic_Sina_vx: Acquire basic energy data

Contrary to the information in the documentation "Measurement hardware for SIMATIC Energy Suite in TIA Portal", the error code "W#16#8011" does not exist at the output parameter "status".

HMI Tags limit

In the HMI runtime settings, PLC name is appended with Tag name if "PLC name as prefix in the HMI tag name" checkbox is enabled. After SiVArc screen generation, followed by HMI compilation, an error is displayed if the HMI tag name exceeds 128 characters.

Screens >EnS_WinCCProf_Screen

Hardware Requirements for Energy Support Library

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General hardware requirements

The requirements of STEP 7 Professional apply for the installation. Energy Support Library requires a SIMATIC S7-1500 controller with Firmware V2.0. SIMATIC S7-1500 Software Controller and SIMATIC S7-1200 are not supported.

In the following the supported devices are listed:

SETRON

- PAC3200, V2.4
- PAC3220, V3.1; V3.2
- PAC4200, V1.6; V2.0; V2.1; V2.2; V2.3
- 3VA2:
 - COM100 / COM800, V3.1; V4.0; V4.1; V4.2; V4.3; V4.4
 - ETU850, V3.1; V4.1; V4.2; V4.3; V4.4
 - ETU860 / ETU860M, V3.1; V4.1; V4.2; V4.3; V4.4
- 3VA6:
 - COM100 / COM800, V4.0; V4.1; V4.2; V4.3; V4.4
 - ETU820 / ETU856 / ETU860, V4.0; V4.2; V4.3; V4.4
 - ETU830 / ETU850, V4.0; V4.2; V4.3; V4.4
- 7KM PAC SWITCHED ETHERNET, V2.1; V3.0

The PAC3200/PAC4200 and the 3VA (with an 8-series ETU) can also be integrated via the GSDML files GSDML-V2.3-Siemens-SETRON-20150421.xml / GSDML-V2.34-Siemens-PAC_V30-20191014.xml and GSDML-V2.3-Siemens-3VA-20150421.xml / GSDML-V2.34-Siemens-3VA_V30-20190704.xml. The PAC3220 can be integrated via the GSDML file GSDML-V2.34-Siemens-PAC_V30-20191014.xml. If GSDML files are used, the following firmware versions are required at the least:

- PAC3200, V2.3.5
- PAC3220, V3.1
- PAC4200, V1.5.4
- COM100 / COM800, V3.1
- 7KM PAC SWITCHED ETHERNET, V2.1

SIMATIC

- Energy Meter 480VAC ST, V4.0
- Energy Meter 480VAC/CT HF, V6.0
- Energy Meter 480VAC/RC HF, V6.0

- Energy Meter 500VAC/CT HF, V8.0
- Energy Meter 500VAC/RC HF, V8.0

SINAMICS

The following GSDML files are supported by the SINAMICS blocks:

- GSDML-V*.**-SIEMENS-SINAMICS_G130G150-*****.XML
- GSDML-V*.**-SIEMENS-SINAMICS_MV-*****.XML
- GSDML-V*.**-SIEMENS-SINAMICS_G120P-*****.XML
- GSDML-V*.**-SIEMENS-SINAMICS_G120C-*****.XML
- GSDML-V*.**-SIEMENS-SINAMICS_G120-*****.XML
- GSDML-V*.**-SIEMENS-SINAMICS_G120D-*****.XML
- GSDML-V*.**-SIEMENS-SINAMICS_G110M-*****.XML
- GSDML-V*.**-SIEMENS-SINAMICS_S_CU3X0-*****.XML

For the GSDML files the following firmware versions are supported:

- SINAMICS G130, V4.7; V4.8; V5.1; V5.2
- SINAMICS G150, V4.7; V4.8; V5.1; V5.2
- SINAMICS MV, V4.7; V4.8; V5.1; V5.2
- SINAMICS G120P, V4.7
- SINAMICS G120C, V4.7
- SINAMICS G120, V4.7
- SINAMICS G120D, V4.7
- SINAMICS G110M, V4.7
- SINAMICS S150, V4.7; V4.8; V5.1; V5.2

The following SINAMICS devices integrated via Startdrive are supported:

- SINAMICS G110M CU240M PN, V4.7 to 4.7.10
- SINAMICS G120 CU240E-2 PN, V4.7 to 4.7.10
- SINAMICS G120 CU240E-2 PN-F, V4.7 to 4.7.10
- SINAMICS G120 CU250S-2 PN Vector, V4.7 to 4.7.10
- SINAMICS G120C, V4.7 to 4.7.10
- SINAMICS G120D CU240D-2 PN, V4.7 to 4.7.10
- SINAMICS G120D CU240D-2 PN-F FO, V4.7 to 4.7.10
- SINAMICS G120D CU240D-2 PN-F, V4.7 to 4.7.10
- SINAMICS G120D CU250D-2 PN-F FO, V4.7 to 4.7.10
- SINAMICS G120D CU250D-2 PN-F, V4.7 to 4.7.10
- SINAMICS G120P CU230P-2 PN, V4.7 to 4.7.10
- SINAMICS G130 CU320-2 PN, V4.8, 5.1, 5.

- SINAMICS G150 CU320-2 PN, V4.8, 5.1, 5.2
- SINAMICS MV CU320-2 PN, V4.8.2, 5.1, 5.2
- SINAMICS S120 CU320-2 PN, V4.8, 5.1, 5.2
- SINAMICS S150 CU320-2 PN, V4.8, 5.1, 5.2

SIRIUS

- SIMOCODE pro V PN V1.2, V2.0, V2.1
- Soft Starter 3RW44 V1.11
- Soft Starter 3RW55 V1.0, V2.0
- Motor Starter M200D V1.0
- ET 200SP Motor Starter V1.0, V1.1, V1.2
- ET 200SP Motor Starter Fail-Safe V1.0, V1.2

SIMOCODE pro V PN requires a current/voltage measuring module.

