

Slim Interface Relay SNR

- 1 pole 6 A, 1 CO contact
- Sensitive coil 170 mW
- 4 kV coil-contact, 6 / 8 mm clearance/creepage
- Reinforced insulation (protection class II, VDE 0601)
- Reduced system width for increased packing density on the DIN rail
- RoHS compliant (Directive 2002/95/EC) as per product date code 0404

Applications

Interface technology, panel boards, mechanical engineering, process control



F0270-A

Approvals

VDE REG.-Nr. 6666, **CE** us E214024
Technical data of approved types on request

Contact data

Contact configuration	1CO
Contact set	single contact
Type of interruption	micro disconnection
Rated current	6 A
Rated voltage / max.switching voltage AC	240/400 VAC
Maximum breaking capacity AC	1500 VA
Limiting making capacity, max 4 s, duty factor 10%	10 A
Contact material	AgSnO ₂ AgSnO ₂ gold plated
Minimum contact load	100mA, 12V 50mW
Mechanical endurance	10x10 ⁶ cycles
Rated frequency of operation with / without load	6 / 1200 min ⁻¹

Contact ratings

Type	Load	Cycles
V23092-****-A302	3(1.5) A, 250 VAC, 85°C, 1 mm mounting distance, 6 cycles / min, EN60730-1	100x10 ³
V23092-****-A302	5(1.5) A, 250 VAC, 85°C, 0.5 mm mounting distance, 6 cycles / min, EN60730-1	10x10 ³
V23092-****-A802		
V23092-	Pilot Duty R300 28 VDC, 85°C, 6000 cycles, UL508	
V23092-	Pilot Duty B300 240 VAC, 85°C, 6000 cycles, UL508	

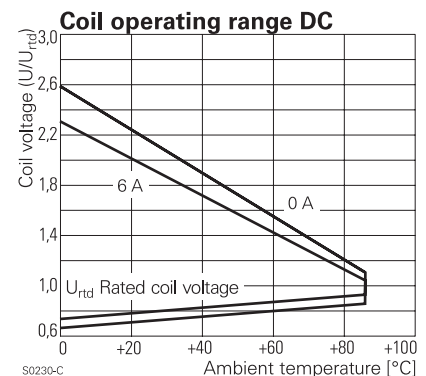
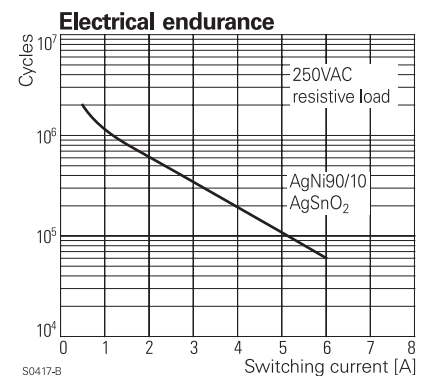
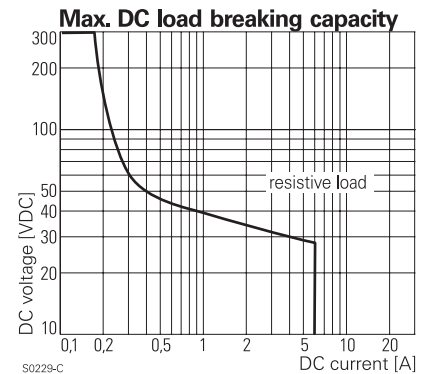
Coil data

Rated coil voltage range DC coil	5...60 VDC
Coil power DC coil	typ. 170 mW
Operative range	2

Coil versions, DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
005	5	3.5	0.25	147±10%	170
012	12	8.4	0.6	848±10%	170
024	24	16.8	1.2	3390±10%	170
048	48	33.6	2.4	10600±15%	217
060	60	42.0	3.0	20500±15%	176

All figures are given for coil without preenergization, at ambient temperature +23°C
Other coil voltages on request



Slim Interface Relay SNR (Continued)

Insulation

Dielectric strength coil-contact circuit	4000 V _{rms}
open contact circuit	1000 V _{rms}
Clearance / creepage coil-contact circuit	≥ 6 / 8 mm
Material group of insulation parts	≥ IIIa
Tracking index of relay base	PTI 250
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	reinforced
open contact circuit	functional
Rated insulation voltage	250 V
Pollution degree	3
Rated voltage system	230 V
Overvoltage category	III

Other data

RoHS - Directive 2002/95/EC	compliant as per product date code 0404
Flammability class according to UL94	V-0
Ambient temperature range	-40...+85°C
Operate- / release time	5 / 2,5 ms
Bounce time NO / NC contact	1,5 / 5 ms
Vibration resistance (function) NO / NC contact	10 / 5 g
Shock resistance (function) NO / NC contact	10 / 5 g
Shock resistance (destruction)	30 g
Category of protection	RTIII - wash tight
Mounting distance	0 mm, dense packing
Relay weight	6 g
Packaging unit	20 / 1000 pcs

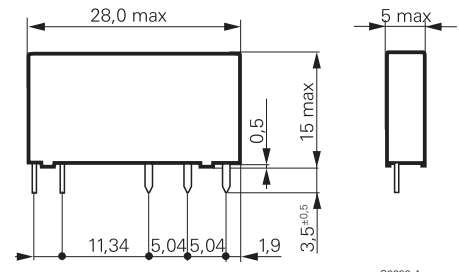
Accessories

For details see datasheet Accessories Slim Interface Relay SNR

Relay Packages

Complete packages consisting of a relay mounted on a socket see Relay Package SNR

Dimensions



Product key

V 2 3 0 9 2 - A 1 - A

Type

Version

A1 standard, wash tight

Coil

Coil code: please refer to coil versions table

Contact system

A standard

Contact material

2 AgSnO₂, gold plated 3 AgSnO₂

Contact configuration

01 1 CO contact

Other types on request

Product key	Version	Contacts	Cont. material	Coil	Part number
V23092-A1005-A201	plug-in	1 CO contact	AgSnO ₂ , gold plated	5 VDC	0-1393236-1
V23092-A1005-A301	vertical version		AgSnO ₂		0-1393236-2
V23092-A1012-A201	washable		AgSnO ₂ , gold plated	12 VDC	0-1393236-4
V23092-A1012-A301			AgSnO ₂		0-1393236-7
V23092-A1024-A201			AgSnO ₂ , gold plated	24 VDC	2-1393236-1
V23092-A1024-A301			AgSnO ₂		2-1393236-4
V23092-A1048-A201			AgSnO ₂ , gold plated	48 VDC	3-1393236-5
V23092-A1048-A301			AgSnO ₂		3-1393236-7
V23092-A1060-A201			AgSnO ₂ , gold plated	60 VDC	4-1393236-2
V23092-A1060-A301			AgSnO ₂		4-1393236-3

Interface Power Relay RT

- 1 pole 12 / 16 A, 2 pole 8 A, 1 CO contact or 2 CO contacts
- DC- or AC coil
- Sensitive coil 400 mW
- Reinforced insulation, protection class II (VDE 0700)
- 5 kV / 10 mm coil-contact
- 1pole 12 A with 3.5 or 5 mm pinning
- Recycleable packaging
- RoHS compliant (Directive 2002/95/EC)
as per product date code 0413



F0269-A

Applications

Panel boards, mechanical engineering

Approvals

VDE REG.-Nr. 6106, **CE** us E214025
Technical data of approved types on request

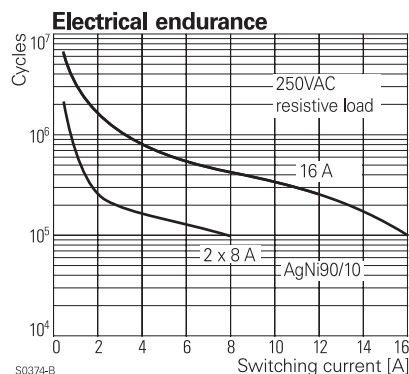
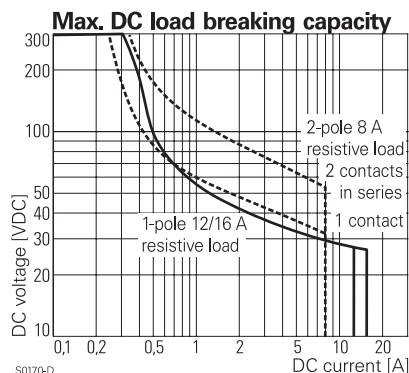
Contact data	1-pole	2-pole
Contact configuration	1 CO	2 CO
Contact set	single contact	
Type of interruption	micro disconnection	
Rated current	12 / 16 A	8 A
Rated voltage / max.switching voltage AC	240/400 VAC	
Maximum breaking capacity AC	3000 / 4000 VA	2000 VA
Limiting making capacity,max 4 s, df 10%	25 / 30 A	15 A
Contact material	AgNi 90/10	
Mechanical endurance DC coil	> 30 x 10 ⁶	>30 x 10 ⁶
AC coil	> 10 x 10 ⁶	>5 x 10 ⁶
Rated frequency of operation with / without load	6 / 1200 min ⁻¹	

Contact ratings

Type	Load	Cycles
RT314	16 A, 250 VAC, NO contact, 85°C, DF 10%, UL508	50x10 ³
RT314	16 A, 250 VAC, NC contact, 70°C, 30min ⁻¹	53x10 ³
RT314	16 A, 250 VAC, CO contact, VDE 0435	30 x 10 ³
RT314	1000 W incandescent lamp, 250 VAC	1.2x10 ³
RT314	10 A, 250 VAC, cosφ=0.6, CO contact, 70°C	200x10 ³
RT314	5 A / 2 A, 250 VAC, cosφ=1, motor, NO contact, 10min ⁻¹ , 70°C	1.1x10 ⁶
RT314	Pilot duty A300 (NO contact), B300 (CO/NC contact), UL508	
RT314	1hp @ 240 VAC, 1/2hp @ 120 VAC, NO contact, UL508	
RT314	AC15, 6 A, 250 VAC, NO and NC contact, 85°C, EN60947-5-1	
RT314	DC13, 2 A / 24 VDC, 0.2 A / 250 VDC, NO and NC contact, 85°C, EN60947-5-1	
RT424	8 A, 250 VAC, NO contact, 70°C, EN61810-1	100x10 ³
RT424	6(2) A, 250 VAC, NO/NC contact, 85°C; EN60730-1	100x10 ³
RT424	1/2hp @ 240 VAC, 1/4hp @ 120 VAC, UL508	
RT424	Pilot duty B300, UL508	
RT424	8 A, 30 VDC, General Purpose, UL508	

Coil data

Rated coil voltage range DC coil	5...110 VDC
AC coil	24...230 VAC
Coil power DC coil	typ 400 mW
AC coil	typ 0.75 VA
Operative range	2
Coil insulation system according UL1446	class F



Interface Power Relay RT (Continued)

Coil versions, DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
006	6	4.2	0.6	90 ± 10%	400
012	12	8.4	1.2	360 ± 10%	400
024	24	16.8	2.4	1440 ± 10%	400
048	48	33.6	4.8	5520 ± 10%	417
060	60	42.0	6.0	8570 ± 12%	420
110	110	77.0	11.0	28800 ± 12%	420

All figures are given for coil without preenergization, at ambient temperature +23°C
Other coil voltages on request

Coil versions, AC-coil 50Hz

Coil code	Rated voltage VAC	Operate voltage 50 Hz VAC	Release voltage VAC	Coil resistance Ohm	Rated coil power 50 Hz VA
524	24	18.0	3.6	350 ± 10%	0.76
615	115	86.3	17.3	8100 ± 15%	0.76
730	230	172.5	34.5	32500 ± 15%	0.74

All figures are given for coil without preenergization, at ambient temperature +23°C
Other coil voltages on request

Insulation

Dielectric strength coil-contact circuit	5000 V _{rms}
open contact circuit	1000 V _{rms}
adjacent contact circuits	2500 V _{rms}
Clearance / creepage coil-contact circuit	≥ 10 / 10 mm
Material group of insulation parts	≥ IIIa
Tracking index of relay base	PTI 250 V
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	reinforced
open contact circuit	functional
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	3
Rated voltage system	240/400 V
Overvoltage category	III

Other data

	1-pole	2-pole
RoHS - Directive 2002/95/EC	compliant as per product date code 0413	
Flammability class according to UL94	V-0	
Ambient temperature range DC coil	-40...+85°C	
AC coil	-40...+70°C	
Operate- / release time DC coil	typ 7 / 3 ms	typ 7 / 2 ms
Bounce time DC coil, NO / NC contact	typ 1 / 3 ms	typ 1 / 3 ms
Vibration resistance (function), NO / NC contact	20 / 5 g, 30 ... 500 Hz	
Shock resistance (destruction)	100 g	
Category of protection	RTII	
Mounting distance	0 mm, dense packing	
Relay weight	14 g	
Packaging unit	20 / 500 pcs	

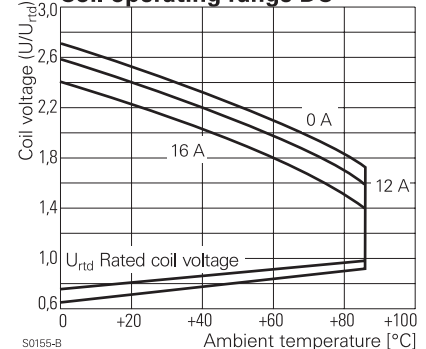
Accessories

For Details see datasheet Accessories Interface Power Relay RT

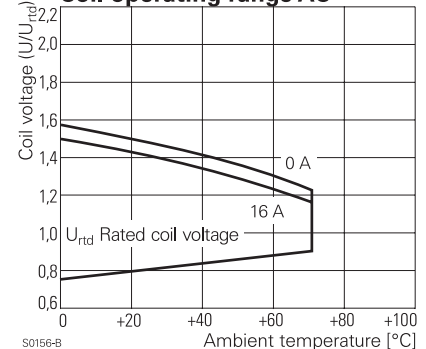
Relay Packages

Complete packages consisting of a relay mounted on a socket see Package RT

Coil operating range DC



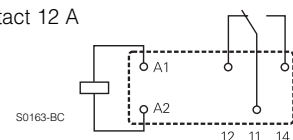
Coil operating range AC



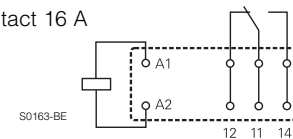
Terminal assignment

Bottom view on pins

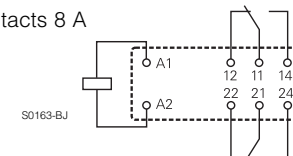
1 CO contact 12 A



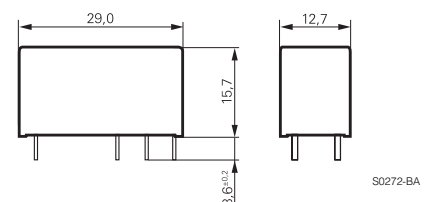
1 CO contact 16 A



2 CO contacts 8 A



Dimensions



Interface Power Relay RT (Continued)

Product key

		R	T			4			
Type									
Version									
1	1-pole, 12 A, pinning 3.5 mm			3	1-pole, 16 A, pinning 5 mm				
2	1-pole, 12 A, pinning 5 mm			4	2-pole, 8 A, pinning 5 mm				
Contact configuration									
1	1 CO contact			2	2 CO contacts				
Contact material									
4	AgNi 90/10								
Coil									
Coil code: please refer to coil versions table, preferred types in bold print									
Wash tight version on request									

Product key	Version	Contacts	Cont. material	Coil	Coil	Part number
RT114024	1-pole, 12 A	1 CO contact	AgNi 90/10	DC-coil	24 VDC	1-1393239-3
RT114524	pinning 3.5 mm			AC-coil	24 VAC	1-1393239-7
RT114615					115 VAC	1-1393239-8
RT114730					230 VAC	1-1393239-9
RT214024	1-pole, 12 A			DC-coil	24 VDC	5-1393239-5
RT214524	pinning 5 mm			AC-coil	24 VAC	5-1393239-9
RT214615					115 VAC	6-1393239-0
RT214730					230 VAC	0-1419108-6
RT314024	1-pole, 16 A			DC-coil	24 VDC	9-1393239-8
RT314524	pinning 5 mm			AC-coil	24 VAC	0-1393240-4
RT314615					115 VAC	0-1393240-6
RT314730					230 VAC	0-1393240-7
RT424024	2-pole, 8 A	2 CO contacts		DC-coil	24 VDC	6-1393243-8
RT424524	pinning 5 mm			AC-coil	24 VAC	7-1393243-6
RT424615					115 VAC	7-1393243-8
RT424730					230 VAC	7-1393243-9

Miniature Relay PT

- 2 pole 12 A, 3 pole 10 A or 4 pole 6 A, 2, 3 or 4 CO contacts
- DC- or AC-coil
- Switching performance up to 3000 VA
- Relay height 29 mm
- Mechanical and electrical indicator
- Manual test tab, optionally lockable.
- White marking tabs
- RoHS compliant (Directive 2002/95/EC)

Applications

Universal use in control and automation



F0191-A

Approvals

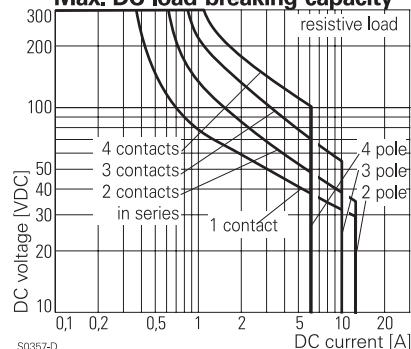
VDE REG.-Nr. 115719, **CE** us E214025, **UL** 00/20059(E2)
Technical data of approved types on request

Contact data	PT2	PT3	PT5
Contact configuration	2 CO	3 CO	4 CO
Contact set	single contact		
Type of interruption	micro disconnection		
Rated current	12 A	10 A	6 A
Rated voltage / max.switching voltage AC	240/400 VAC	240/400 VAC	240/240 VAC
Maximum breaking capacity AC	3000 VA	2500 VA	1500 VA
Limiting making capacity, max 20 ms	24 A	20 A	12 A
Contact material	AgNi90/10, AgNi90/10 gold plated		
Minimum contact load	12V/10mA, 20mV/1mA gold plated		
Mechanical endurance DC coil	30x10 ⁶ cycles		
AC coil	20x10 ⁶ cycles		
Rated frequency of operation with / without load	6/600 min ⁻¹		

Contact ratings

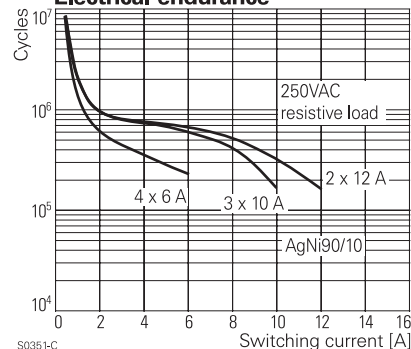
Type	Load	Cycles
PT270	12 A, 250 VAC, 3000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	168x10 ³
PT270	8 A, 250 VAC, 2000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	750x10 ³
PT270	4 A, 250 VAC, 1000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	8.3x10 ⁶
PT270	3.75 A, 400 VAC, opp. polarity, 70°C, AC3	
PT270	5 A, 250 VAC, opp. polarity, normal/abnormal, 70°C, AC15	
PT270	8 A, 24 VDC, opp. polarity, normal/abnormal, 70°C, DC13	
PT270	1.7 A, 230 VAC, 400 W, opp. polarity, 70°C, AC5b	
PT370	10 A, 250 VAC, 2500 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	159x10 ³
PT370	8 A, 250 VAC, 2000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	466x10 ³
PT370	4 A, 250 VAC, 1000 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	1.1x10 ⁶
PT370	2 A, 400 VAC, opp. polarity, 70°C, AC3	
PT370	5 A, 250 VAC, opp. polarity, normal/abnormal, 70°C, AC15	
PT370	8 A, 24 VDC, opp. polarity, normal/abnormal, 70°C, DC13	
PT370	1.7 A, 230 VAC, 400 W, opp. polarity, 70°C, AC5b	
PT570	6 A, 250 VAC, 1500 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	228x10 ³
PT570	2 A, 250 VAC, 500 VA, cosφ=1, DF 50%, 600 h ⁻¹ , NO, 70°C	782x10 ³
PT570	3 A, 400 VAC, opp. polarity, 70°C, AC3	
PT570	4 A, 250 VAC, opp. polarity, normal/abnormal, 70°C, AC15	
PT570	6 A, 24 VDC, opp. polarity, normal/abnormal, 70°C, DC13	
PT570	1.7 A, 230 VAC, 400 W, opp. polarity, 70°C, AC5b	
PT570	0.3 A, 110 VDC, 33 W, L/R=22 ms, 1440 h ⁻¹ , DF 8%, NO, prot.D.	3.6x10 ⁶
PT570	3 A on / 1 A off, 120 VAC, cosφ 0.8on/0.5off, 600h ⁻¹ , DF 15%, NO	423x10 ³

Max. DC load breaking capacity



S0357-D

Electrical endurance



S0351-C

Miniature Relay PT (Continued)

Coil data

Rated coil voltage range DC coil	6...220 VDC
AC coil	6...230 VAC
Coil power DC coil	0.75 mW
AC coil	1.0 VA
Operative range DC coil, AC-coil 50Hz	2
AC coil 60 Hz at 70°C, % of U_{rtd}	90...110%

Coil versions, DC-coil

Coil code	LED	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD	bipolar	VDC	VDC	VDC	Ohm	mW
006	L06	6	4.5	0.6	$48 \pm 10\%$	750
012	L12	12	9.0	1.2	$192 \pm 10\%$	750
024	L24	24	18.0	2.4	$777 \pm 10\%$	741
048	L48	48	36.0	4.8	$3072 \pm 10\%$	750
060	L60	60	45.0	6.0	$4845 \pm 12\%$	743
110	M10	110	82.5	11.0	$16133 \pm 15\%$	750
220	N20	220	165.0	22.0	$64533 \pm 15\%$	750

All figures are given for coil without preenergization, at ambient temperature +23°C

Coil versions, AC-coil 50/60 Hz

Coil code	LED	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD		VAC	50/60Hz VAC	50/60Hz VAC	Ohm	50/60Hz VA
506	R06	6	4.8/5.4	1.8	$11 \pm 10\%$	1.0/0.85
512	R12	12	9.6/10.8	3.6	$48 \pm 10\%$	1.0/0.85
524	R24	24	19.2/21.6	7.2	$192 \pm 10\%$	1.0/0.79
548	R48	48	38.4/43.2	14.4	$777 \pm 10\%$	1.0/0.87
560	R60	60	48.0/54.0	18.0	$1306 \pm 10\%$	1.0/0.87
615	S15	115	92.0/103.5	34.5	$4845 \pm 12\%$	1.0/0.86
730	T30	230	184.0/207.0	69.0	$19465 \pm 15\%$	1.0/0.90

All figures are given for coil without preenergization, at ambient temperature +23°C

Insulation

	PT2	PT3	PT5
Dielectric strength coil-contact circuit	2500 V _{rms}	2500 V _{rms}	2500 V _{rms}
open contact circuit	1200 V _{rms}	1200 V _{rms}	1200 V _{rms}
adjacent contact circuits	2500 V _{rms}	2500 V _{rms}	2000 V _{rms}
Clearance / creepage coil-contact circuit	$\geq 4/4$ mm	$\geq 4/4$ mm	$\geq 4/4$ mm
adjacent contact circuits	$\geq 3.5/9.5$ mm	$\geq 2.6/3.5$ mm	$\geq 1.8/3.5$ mm
Material group of insulation parts	\geq IIIa		
Insulation to IEC 60664-1			
Type of insulation coil-contact circuit	basic	basic	basic
open contact circuit	functional	functional	functional
adjacent contact circuits	basic	basic	functional
Rated insulation voltage	250 V	250 V	250 V
Pollution degree	2	2	2
Rated voltage system	240/400 V	240 V	240 V
Overvoltage category	III	III	III

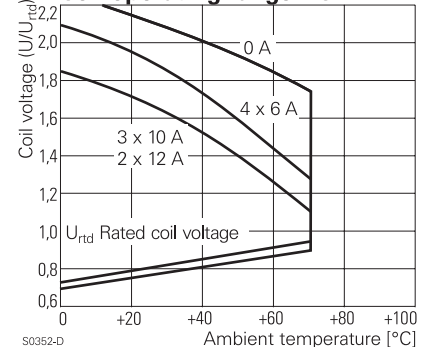
Other data

RoHS - Directive 2002/95/EC	compliant
Ambient temperature range	-40...+70°C
Operate- / release time	15/10 ms
Bounce time NO / NC contact	5 ms
Vibration resistance (function) NO / NC contact	7/4 g
Shock resistance (function) NO / NC contact	20/5 g
Category of protection	RTII- flux proof
Mounting distance	0 mm, dense packing
Resistance to soldering heat	270°C / 10s
Relay weight	30 g
Packaging unit	10/250 pcs

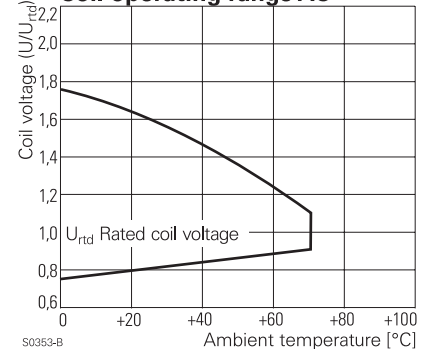
Accessories

For details see datasheet Accessories Miniature Relay PT

Coil operating range DC



Coil operating range AC



Miniature Relay PT (Continued)

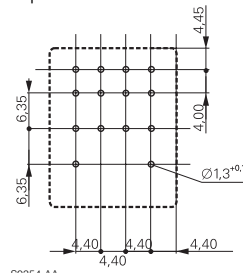
Relay Packages

Complete packages consisting of a relay mounted on a socket see Package PT

PCB layout / terminal assignment

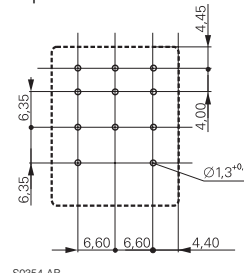
Bottom view on pins

4-pole



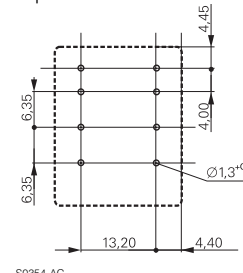
S0354-AA

3-pole

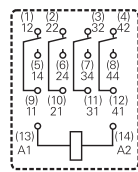


S0354-AB

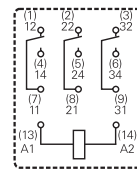
2-pole



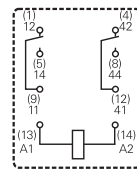
S0354-AC



S0354-AD



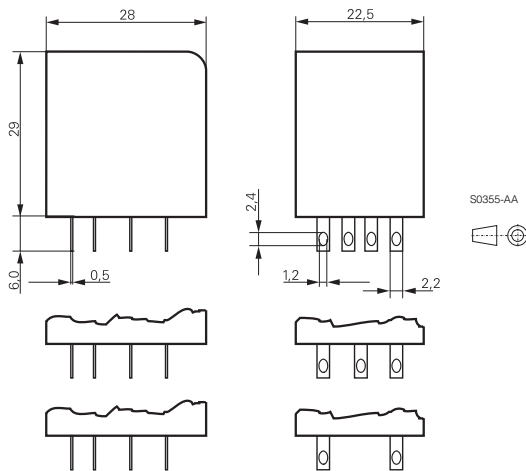
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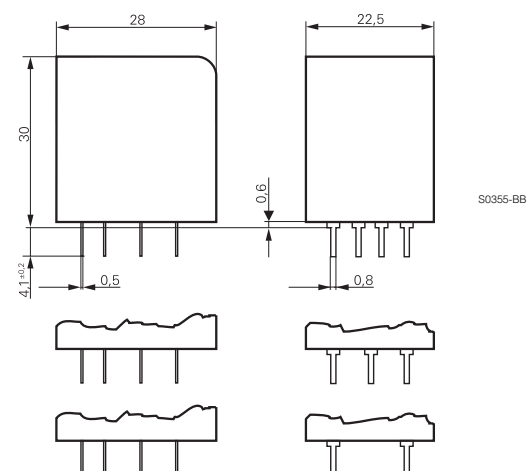
S0354-AF

Dimensions

Solder- and plug-in terminals (standard version)



PCB version



Product key

Type

Contact configuration

- 2** 2 CO contacts
- 3** 3 CO contacts
- 5** 4 CO contacts

Contact material

- 7** AgNi 90/10, with test button*)
- 8** AgNi 90/10 gold plated, with test button*)

Version

- 0** standard, 2.8 mm quick connect term.
- 1** PCB terminals

Coil

Coil code: please refer to coil versions table, preferred types in bold print

*) Version with closed cap without test button available on request

Other types on request

P	T				

Miniature Relay PT (Continued)

Product key	Cont. Config.	Cont. material	Version	Coil	Coil	Part number
PT270024	2 CO contacts	AgNi 90/10 test button	AMP 2.8 connectors	DC-coil	24 VDC	4-1419111-2
PT270524				AC-coil	24 VAC	4-1419111-8
PT270615					115 VAC	5-1419111-0
PT270730					230 VAC	5-1419111-1
PT270L24				DC-coil+LED	24 VDC	9-1415001-1
PT270R24				AC-coil+LED	24 VAC	0-1415002-1
PT270S15					115 VAC	2-1415039-1
PT270T30					230 VAC	3-1415002-1
PT271024			PCB terminals	DC-coil	24 VDC	5-1419111-3
PT271524				AC-coil	24 VAC	5-1419111-6
PT271615					115 VAC	4-1419135-0
PT271730					230 VAC	5-1419111-8
PT370024	3 CO contacts	AgNi 90/10 test button	AMP 2.8 connectors	DC-coil	24 VDC	6-1419111-1
PT370524				AC-coil	24 VAC	6-1419111-6
PT370615					115 VAC	6-1419111-8
PT370730					230 VAC	6-1419111-9
PT370L24				DC-coil+LED	24 VDC	5-1415002-1
PT370R24				AC-coil+LED	24 VAC	7-1415002-1
PT370S15					115 VAC	9-1415039-1
PT370T30					230 VAC	9-1415002-1
PT371024			PCB terminals	DC-coil	24 VDC	7-1419111-1
PT371524				AC-coil	24 VAC	7-1419111-3
PT371615					115 VAC	0-1393154-8
PT371730					230 VAC	7-1419111-5
PT570024	4 CO contacts	AgNi 90/10 test button	AMP 2.8 connectors	DC-coil	24 VDC	1-1393154-2
PT570524				AC-coil	24 VAC	8-1419111-7
PT570615					115 VAC	9-1419111-0
PT570730					230 VAC	9-1419111-1
PT570L24				DC-coil+LED	24 VDC	6-1415001-1
PT570R24				AC-coil+LED	24 VAC	7-1415001-1
PT570S15					115 VAC	7-1415003-1
PT570T30					230 VAC	8-1415001-1
PT571024			PCB terminals	DC-coil	24 VDC	9-1419111-3
PT571524				AC-coil	24 VAC	9-1419111-6
PT571615					115 VAC	1-1393154-5
PT571730					230 VAC	9-1419111-8
PT580024		AgNi 90/10 gold plated test button	AMP 2.8 connectors	DC-coil	24 VDC	1-1393154-7
PT580524				AC-coil	24 VAC	2-1393154-1
PT580730					230 VAC	2-1393154-2
PT580L24				DC-coil+LED	24 VDC	5-1415026-1
PT580R24				AC-coil+LED	24 VAC	6-1415026-1
PT580T30					230 VAC	7-1415026-1
PT581024			PCB terminals	DC-coil	24 VDC	7-1419135-2
PT581730				AC-coil	230 VAC	2-1393154-3

Miniature Power Relay PTF

- 2 pole 15 A, 2 CO contacts
- DC or AC coil
- Plug-in version, PCB or chassis mount version
- RoHS compliant (Directive 2002/95/EC)

Applications

Panel boards, domestic appliances



F0281-A

Approvals

VDE REG.-Nr. A379, cULus E58304
Technical data of approved types on request

Contact data

Contact configuration	2 CO contacts
Contact set	single contact
Type of interruption	micro disconnection
Rated current	10 A / 250 VAC 15 A / 120 VAC
Rated voltage / max.switching voltage AC	240/400 VAC
Maximum breaking capacity AC	2500 VA / 250 VAC 1800 VA / 120 VAC
Limiting making capacity, max 20 ms	20 A / 250 VAC 30 A / 120 VAC
Contact material	AgNi90/10
Minimum contact load	5V/100mA
Mechanical endurance DC coil	20x10 ⁶ cycles
AC coil	15x10 ⁶ cycles
Rated frequency of operation with / without load	6/600 min ⁻¹

Contact ratings

Type	Load	Cycles
PTF2	15 A, 120 VAC, NO, DC coil / AC coil	100x10 ³ / 50x10 ³
PTF2	10 A, 250 VAC, NO, DC coil / AC coil	200x10 ³ / 100x10 ³
PTF2	10 A, 24 VDC, NO, DC coil / AC coil	100x10 ³ / 50x10 ³

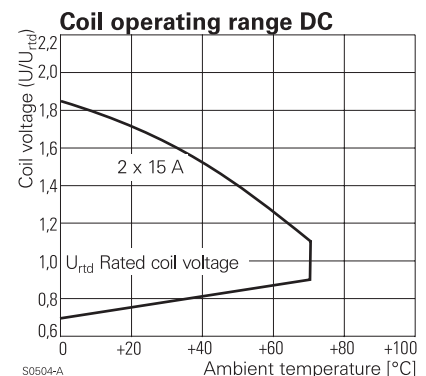
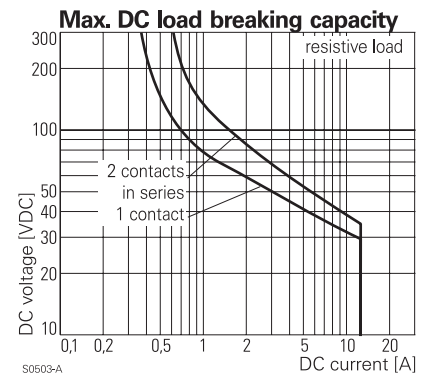
Coil data

Rated coil voltage range DC coil	6...220 VDC
AC coil	6...230 VAC
Coil power DC coil	0.75 W
AC coil	1.0 VA
Operative range DC coil, AC-coil 50Hz	2
AC coil 60 Hz at 70°C, % of U _{rtid}	90...110%

Coil versions, DC-coil

Coil code		Rated	Operate	Release	Coil	Rated coil
STD	LED	voltage	voltage	voltage	resistance	power
	bipolar	VDC	VDC	VDC	Ohm	mW
006	L06	6	4.5	0.6	48±10%	750
012	L12	12	9.0	1.2	192±10%	750
024	L24	24	18.0	2.4	777±10%	741
048	L48	48	36.0	4.8	3072±10%	750
060	L60	60	45.0	6.0	4845±12%	743
110	M10	110	82.5	11.0	16133±15%	750
220	N20	220	165.0	22.0	64533±15%	750

All figures are given for coil without preenergization, at ambient temperature +23°C



Miniature Power Relay PTF (Continued)

Coil versions, AC-coil 50/60 Hz

Coil code	LED	Rated voltage	Operate voltage 50/60Hz	Release voltage 50/60Hz	Coil resistance	Rated coil power 50/60Hz
		VAC	VAC	VAC	Ohm	VA
506	R06	6	4.8/5.4	1.8	11±10%	1.0/0.85
512	R12	12	9.6/10.8	3.6	48±10%	1.0/0.85
524	R24	24	19.2/21.6	7.2	192±10%	1.0/0.79
548	R48	48	38.4/43.2	14.4	777±10%	1.0/0.87
560	R60	60	48.0/54.0	18.0	1306±10%	1.0/0.87
615	S15	115	92.0/103.5	34.5	4845±12%	1.0/0.86
730	T30	230	184.0/207.0	69.0	19465±15%	1.0/0.90

All figures are given for coil without preenergization, at ambient temperature +23°C

Insulation

Dielectric strength coil-contact circuit	2500 V _{rms}
open contact circuit	1200 V _{rms}
adjacent contact circuits	2500 V _{rms}
Clearance / creepage coil-contact circuit	≥ 3.1/3.1 mm
adjacent contact circuits	≥ 4.4/8.8 mm
Material group of insulation parts	≥ IIIa
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	basic
open contact circuit	functional
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	2
Rated voltage system	240/400 V
Overvoltage category	III

Other data

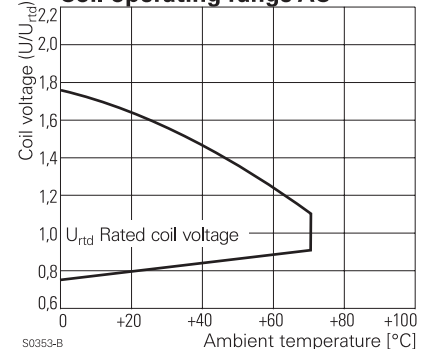
RoHS - Directive 2002/95/EC	compliant
Ambient temperature range	-40...+70°C
Operate- / release time	15/10 ms
Bounce time NO / NC contact	5 ms
Vibration resistance (function) NO / NC contact	7/4 g
Shock resistance (function) NO / NC contact	20/5 g
Category of protection	RTII - flux proof
Resistance to soldering heat	270°C / 10 s
Relay weight	30 g
Packaging unit	20 pcs

Accessories

For details see datasheet

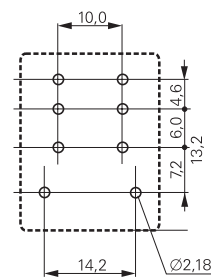
Accessories Miniature Power Relay PTF

Coil operating range AC

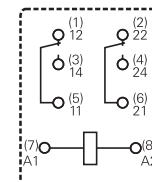


PCB layout / terminal assignment

Bottom view on pins



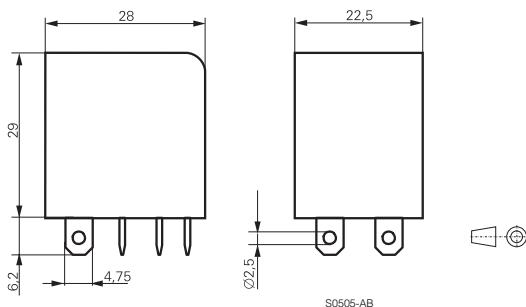
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S0507-AB

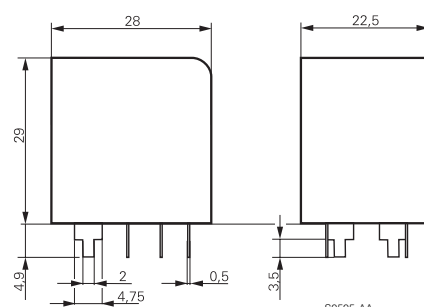
Dimensions

Solder- and plug-in terminals (standard version)



S0505-AB

PCB version

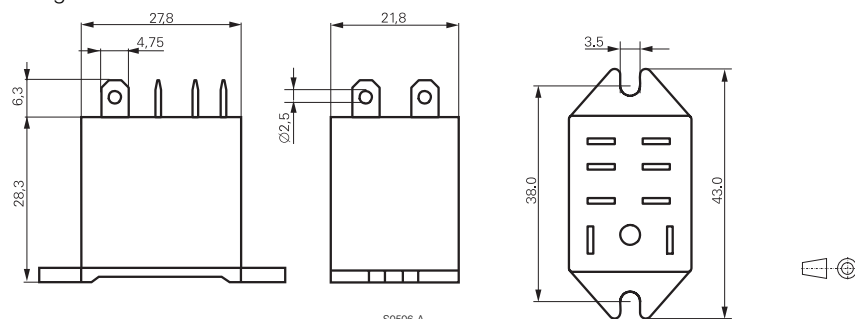


S0505-AA

Miniature Power Relay PTF (Continued)

Dimensions

Flange mount version



Product key

Type	P	T	F				
Contact material							
Version							
Coil							

Coil code: please refer to coil versions table, preferred types in bold print

Product key	Contacts	Cont. material	Terminal	Coil	Coil	Part number
PTF20024	2 CO contacts	AgNi 90/10	quick connect term.	DC-coil	24 VDC	0-1461937-3
PTF21024			PCB			1-1461937-0
PTF20524			quick connect term.	AC-coil	24 VAC	0-1461938-3
PTF20615					115 VAC	0-1461938-7
PTF20730					230 VAC	0-1461938-9
PTF21524			PCB		24 VAC	1-1461938-2
PTF21615					115 VAC	1-1461938-6
PTF21730					230 VAC	1-1461938-8
PTF20L24			quick connect term.	DC + LED	24 VDC	0-1461944-3
PTF20R24				AC + LED	24 VAC	0-1461945-3
PTF20S15					115 VAC	0-1461945-7
PTF20T30					230 VAC	0-1461945-9
PTF22024			flange mount cover	DC-coil	24 VDC	0-1721058-3
PTF22524				AC-coil	24 VAC	1-1721058-0
PTF22615					115 VAC	1-1721058-4
PTF22730					230 VAC	1-1721058-6

Multimode Relay MT

- 2 / 3 pole 10 A, 2 CO or 3 CO contacts
- DC and AC coils
- Mechanical indicator as standard
- Electrical indicator
- New test system with front operated finger protected push-to-test button and integral locking test tab
- White write on panel
- RoHS compliant (Directive 2002/95/EC) as per product date code 0415

Applications

Mechanical engineering, plant control

Approvals

VDE REG.-Nr. 6182, **CE** us E214025
Technical data of approved types on request

Contact data

Contact configuration	2 CO or 3 CO		
Contact set	single cont.	single cont.	bifurcated
Type of interruption	micro disconnection		
Rated current	10 A	10 A	4 A
Rated voltage / max.switching voltage AC	240/400 VAC		
Maximum breaking capacity AC	2500 VA	2500 VA	500 VA
Limiting making capacity, max 20 ms	20 A	20 A	8 A
Contact material	AgNi90/10	AgNi90/10 gold plated	AgNi90/10 gold plated
Minimum contact load	12V/10mA	20mV/1mA	20mV/1mA
Mechanical endurance	20x10 ⁶ cycles		
Rated frequency of operation with / without load	20/100 min ⁻¹		

Contact ratings

Type	Load	Cycles
MT321	10 A, 250 VAC, CO contact, cosφ=1, 360/h, df 50%, 35°C	2.2x10 ⁵
MT321	I _{on} 50 A, I _{off} 5 A, 3x440 VAC, NO, cosφ=0.3, AC15, normal cond.	6x10 ³
MT321	I _{on} 30 A, I _{off} 3 A, 3x440 VAC, NC, cosφ=0.3, AC15, normal cond.	6x10 ³
MT3..	2 A, 125 V, L/R 30 ms, 3 NO contacts in series, 1800/h, DF 10%	1x10 ⁵
MT2..	0.7 A, 125 V, L/R 20 ms, 2 NO contacts in series, 1800/h, DF 10%	2x10 ⁵
MT2..	1 A, 125 V, L/R 20 ms, 2 NO contacts in series, 1800/h, DF 10%	4x10 ⁴

Coil data

Rated coil voltage range DC coil	6...220 VDC
AC coil	6...230 VAC
Coil power DC coil	1.2 W
AC coil	2.3 VA
Operative range	1

Coil versions, DC-coil

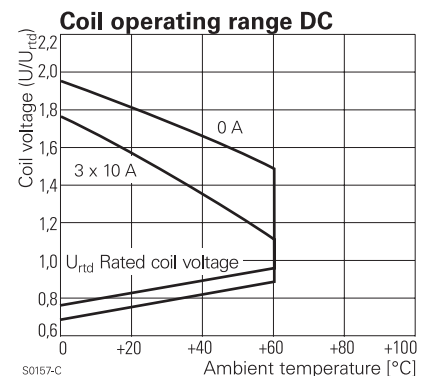
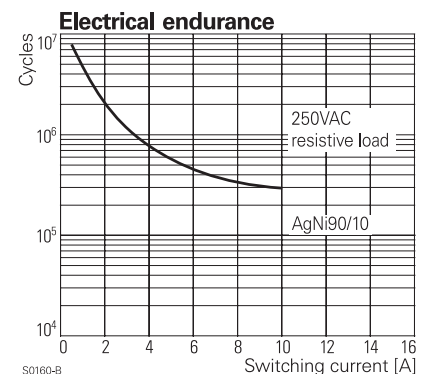
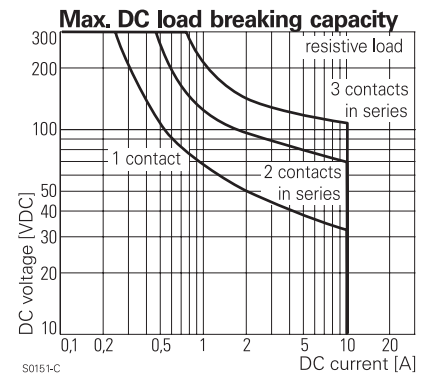
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power W
STD PD*)					
006 0A6	6	4.5	0.6	32±10%	1.1
012 0B2	12	9.0	1.2	110±10%	1.3
024 0C4	24	18.0	2.4	475±10%	1.2
048 0E8	48	36.0	4.8	2000±10%	1.2
060 0G0	60	45.0	6.0	2850±10%	1.3
110 1B0	110	82.5	11.5	10000±12%	1.2
220 2C0	220	165.0	22.0	40000±15%	1.2

All figures are given for coil without preenergization, at ambient temperature +23°C

*) Protection diode PD; standard polarity: 2-pole relays: +2 / -7, 3-pole relays: +2 / -10



F0161-A



Multimode Relay MT (Continued)

Coil versions, AC-coil 50/60 Hz

Coil code	Rated voltage	Operate voltage 50/60Hz	Release voltage 50/60Hz	Coil resistance	Rated coil power 50/60Hz
	VAC	VAC	VAC	Ohm	VA
006	6	4.8	2.4	5.3 ± 10%	2.29/1.98
012	12	9.6	4.8	24 ± 10%	2.19/1.86
024	24	19.2	9.6	86 ± 10%	2.26/1.95
048	48	38.4	19.2	345 ± 10%	2.28/1.97
060	60	48.0	24.0	544 ± 10%	2.27/1.96
115	115	92.0	46.0	2000 ± 10%	2.37/2.00
230	230	184.0	92.0	8300 ± 12%	2.32/1.96

All figures are given for coil without preenergization, at ambient temperature +23°C

Insulation

Dielectric strength coil-contact circuit	2500 V _{rms}
open contact circuit	1500 V _{rms}
adjacent contact circuits	2500 V _{rms}
Clearance / creepage coil-contact circuit	≥ 2.8/4.0 mm
adjacent contact circuits	≥ 2.8/4.0 mm
Material group of insulation parts	≥ IIIa
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	basic
open contact circuit	functional
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	2
Rated voltage system	240/400 V
Overvoltage category	III

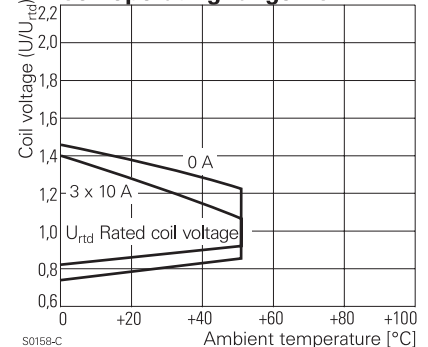
Other data

RoHS - Directive 2002/95/EC	compliant as per product date code 0415
Ambient temperature range DC coil	-40...+60°C
AC coil	-45...+50°C
Operate- / release time	12/5 ms
Bounce time NO / NC contact	4 ms
Vibration resistance (function) NO / NC contact	5/2 g
Shock resistance (function) NO / NC contact	50/10 g
Category of protection	RTI - dust protected
Relay weight	80 g
Packaging unit	25 pcs

Accessories

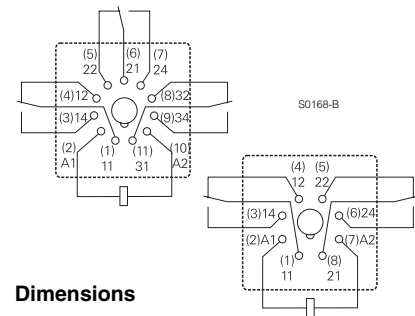
For details see datasheet Accessories Multimode Relay MT

Coil operating range AC

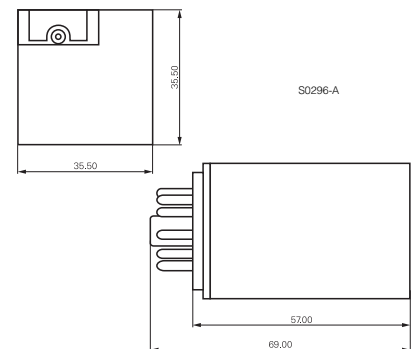


Terminal assignment

Bottom view on pins



Dimensions



Product key

Type

Contact configuration

2 2 CO contacts, 8-pin **3** 3 CO contacts, 11-pin

Contact material

2 AgNi 90/10 **B** AgNi 90/10 bifurcated contacts, gold plated
3 AgNi 90/10, gold plated

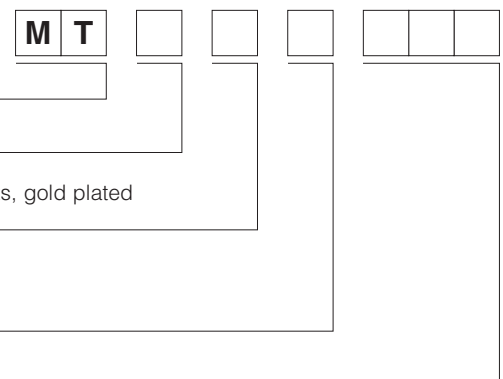
Version

1 DC with test button **6** AC with test button
3 DC with test button and bipolar LED **8** AC with test button and LED

Coil

Coil code: please refer to coil versions table, preferred types in bold print

Other types on request



Multimode Relay MT (Continued)

Product key	Contact configuration	Contact material	Version	Coil	Part number
MT221012	2 CO contacts 8-pin	AgNi 90/10	DC with test button	12 VDC	4-1393090-9
MT221024				24 VDC	5-1393090-0
MT221048				48 VDC	5-1393090-1
MT221060				60 VDC	5-1393090-2
MT221110				110 VDC	5-1393090-3
MT221220				220 VDC	5-1393090-4
MT223024			DC+LED+test button AC	24 VDC	5-1393090-7
MT226012				12 VAC	6-1393090-3
MT226024			test button	24 VAC	6-1393090-4
MT226048				48 VAC	6-1393090-5
MT226115				115 VAC	6-1393090-7
MT226230				230 VAC	6-1393090-8
MT228024				24 VAC	6-1393090-9
MT228115			AC+LED test button	115 VAC	7-1393090-0
MT228230				230 VAC	7-1393090-1
MT321012	3 CO contacts 11-pin	AgNi 90/10	DC with test button	12 VDC	6-1393091-8
MT321024				24 VDC	7-1393091-0
MT321048				48 VDC	7-1393091-1
MT321060				60 VDC	7-1393091-2
MT321110				110 VDC	7-1393091-4
MT321220				220 VDC	7-1393091-7
MT323024			DC+LED+test button	24 VDC	8-1393091-4
MT3230C4				24 VDC	7-1393091-9
MT326012			AC test button	12 VAC	9-1393091-6
MT326024				24 VAC	9-1393091-7
MT326048				48 VAC	9-1393091-8
MT326115				115 VAC	0-1393092-1
MT326230				230 VAC	0-1393092-2
MT328024			AC+LED test button	24 VAC	0-1393092-4
MT328115				115 VAC	0-1393092-7
MT328230			AgNi 90/10 gold plated	230 VAC	0-1393092-8
MT331024				24 VDC	1-1393092-1
MT331110				110 VDC	1-1393092-3
MT331220				220 VDC	1-1393092-5
MT333024				24 VDC	1-1393092-8
MT3330C4				24 VDC	1-1393092-6
MT333110				110 VDC	2-1393092-0
MT333220				220 VDC	2-1393092-2
MT336115				115 VAC	2-1393092-5
MT336230				230 VAC	2-1393092-6
MT338024			AC+LED test button	24 VAC	2-1393092-7
MT338115				115 VAC	8-1415025-1
MT338230				230 VAC	2-1393092-8

Power Relay RM 2/3/7

- 2 / 3 pole 10 / 16 A, 2 CO or 3 CO contacts
- Switching capacity up to 6000 VA
- DC- or AC-coil
- Mechanical indicator
- Push-to-test-button
- Plug-in version, PCB terminals, chassis- or DIN-rail mount
- RoHS compliant (Directive 2002/95/EC)
as per product date code 0415

Applications

Elevator control, power supplies



F0163-A

Approvals

VDE REG.-Nr. 40003144, **CE** us E214025
Technical data of approved types on request

Contact data	RM2	RM3	RM7
Contact configuration	2 CO	3 CO	3 CO
Contact set	single contact		
Type of interruption	micro disconnection		
Rated current	16 A	10 A	16 A
Rated voltage / max.switching voltage AC	400/440 VAC		
Maximum breaking capacity AC	6000 VA	3800 VA	6000 VA
Limiting making capacity, max 20 ms	40 A	40 A	40 A
Contact material	AgNi90/10, AgCdO		
Mechanical endurance	20x10 ⁶ cycles		
Rated frequency of operation with / without load	16/100 min ⁻¹		

Contact ratings

Type	Load	Cycles
RM2	16 A, 415 VAC, UL	100x10 ³
RM20	16 A, 400 VAC, cosφ=1, 35°C, VDE	100x10 ³
RM2	16 A, 250 VAC, general purpose, UL	30x10 ³
RM20	10 A, 48 VDC, UL	30x10 ³
RM30	10 A, 400 VAC, cosφ=1, 35°C, VDE	100x10 ³
RM3	10 A, 300 VAC, resistive, UL	100x10 ³
RM3	10 A, 250 VAC, general purpose, UL	30x10 ³
RM7	5 A, 400 VAC, resistive, UL	100x10 ³
RM70	16 A, 400 VAC, cosφ=1, 35°C, VDE	100x10 ³
RM7	10 A, 300 VAC, resistive, UL	100x10 ³

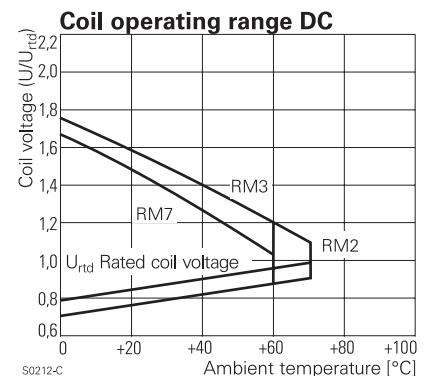
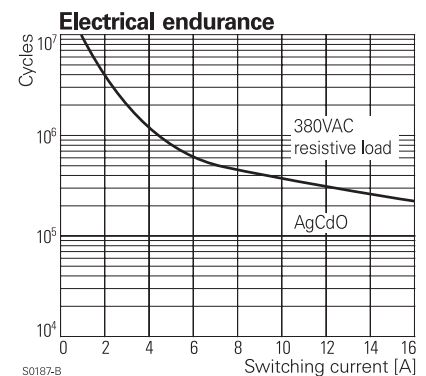
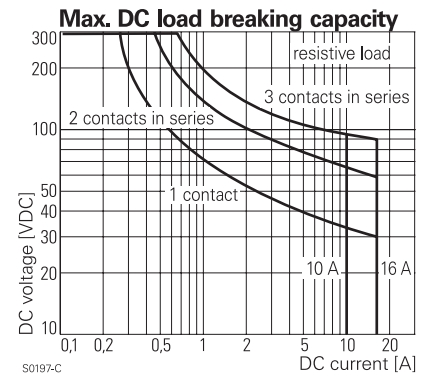
Coil data	RM2	RM3	RM7
Rated coil voltage range DC coil	6...220 VDC		
AC coil	6...400 VAC		
Coil power DC coil	1.2 W	1.2 W	1.6 W
AC coil	2.3 VA	2.3 VA	2.8 VA
Operative range	1		

Coil versions, DC-coil

Coil code	STD	LED	PD*	LED+	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power W
bipolar				PD*					

Coil versions, DC-coil, RM2, RM3

006	L06	0A6	LA6	6	4.5	0.6	32±10%	1.1
012	L12	0B2	LB2	12	9.0	1.2	110±10%	1.3
024	L24	0C4	LC4	24	18.0	2.4	475±10%	1.2
048	L48	0E8	LE8	48	36.0	4.8	2000±10%	1.2
060	L60	0G0	LG0	60	45.0	6.0	2850±10%	1.3
110	M10	1B0	MB0	110	82.5	11.0	10000±12%	1.2
221	N21	2C1	NC1	220	165.0	22.0	40000±15%	1.2



Power Relay RM 2/3/7 (Continued)

Coil versions, DC-coil, RM7

Coil code	STD	LED	PD*	LED+ bipolar	LED+ PD*	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power W
006	L06	0A6		LA6		6	4.5	0.6	24±10%	1.5
012	L12	0B2		LB2		12	9.0	1.2	86±10%	1.7
024	L24	0C4		LC4		24	18.0	2.4	345±10%	1.7
048	L48	0E8		LE8		48	36.0	4.8	1340±10%	1.7
060	L60	0G0		LG0		60	45.0	6.0	2200±10%	1.6
110	M10	1B0		MB0		110	82.5	11.0	7300±10%	1.7
221	N21	2C1		NC1		220	165.0	22.0	30000±15%	1.6

All figures are given for coil without preenergization, at ambient temperature +23°C

*) Protection diode PD; standard polarity: +A1 / -A2

Coil versions, AC-coil 50/60 Hz

Coil code	STD	LED	Rated voltage VAC	Operate voltage 50/60Hz VAC	Release voltage 50/60Hz VAC	Coil resistance Ohm	Rated coil power 50/60Hz VA
-----------	-----	-----	-------------------------	--------------------------------------	--------------------------------------	---------------------------	--------------------------------------

Coil versions, AC-coil, RM2, RM3

506	R06		6	4.8	2.4	5.3±10%	2.29/1.98
512	R12		12	9.6	4.8	24±10%	2.19/1.86
524	R24		24	19.2	9.6	86±10%	2.26/1.95
548	R48		48	38.4	19.2	345±10%	2.28/1.97
560	R60		60	48.0	24.0	544±10%	2.27/1.96
615	S15		115	92.0	46.0	2000±10%	2.37/2.00
730	T30		230	184.0	92.0	8300±12%	2.32/1.96
900	V00		400	320.0	160.0	27500±15%	2.31/1.96

Coil versions, AC-coil, RM7

506	R06		6	4.8	2.4	4.7±10%	2.86/2.36
512	R12		12	9.6	4.8	19.5±10%	2.71/2.27
524	R24		24	19.2	9.6	80±10%	2.62/2.00
548	R48		48	38.4	19.2	320±10%	2.60/2.17
560	R60		60	48.0	24.0	500±10%	2.62/2.20
615	S15		115	92.0	46.0	1850±10%	2.65/2.22
730	T30		230	184.0	92.0	7500±10%	2.69/2.26
900	V00		400	320.0	160.0	23500±15%	2.61/2.20

All figures are given for coil without preenergization, at ambient temperature +23°C

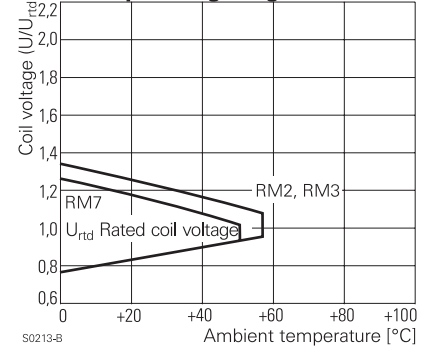
Insulation

Dielectric strength coil-contact circuit	2500 V _{rms}
open contact circuit	1500 V _{rms}
adjacent contact circuits	2500 V _{rms}
Clearance / creepage coil-contact circuit	≥ 4.0/14.9 mm
adjacent contact circuits	≥ 6.1/7.3 mm
Material group of insulation parts	≥ IIIa
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	basic
open contact circuit	functional
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	3
Rated voltage system	240/400 V
Overvoltage category	III

Other data

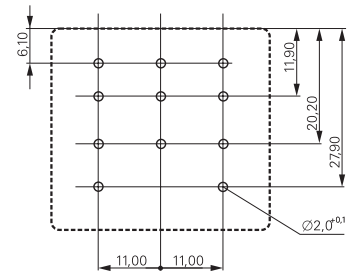
	RM2	RM3	RM7
RoHS - Directive 2002/95/EC	compliant as per product date code 0415		
Ambient temperature range DC coil	-45...+70°C	-45...+60°C	-45...+60°C
AC coil	-45...+55°C	-45...+55°C	-45...+50°C
Operate- / release time	15/10 ms		
Bounce time NO / NC contact	3 ms		
Vibration resistance (function) NO / NC contact	5/2 g	5/2 g	12/4 g
Category of protection	RTI - dust protected		
Resistance to soldering heat	270°C / 10 s		
Relay weight	81 g		
Packaging unit	10/25 pcs		

Coil operating range AC



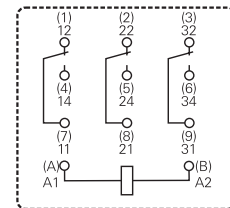
PCB layout / terminal assignment

Bottom view on pins



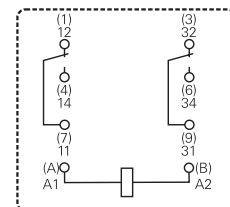
S0269-AA

3 CO contacts



S0269-AB

2 CO contacts



S0269-AD

Power Relay RM 2/3/7 (Continued)

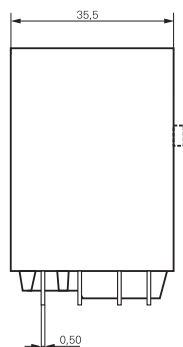
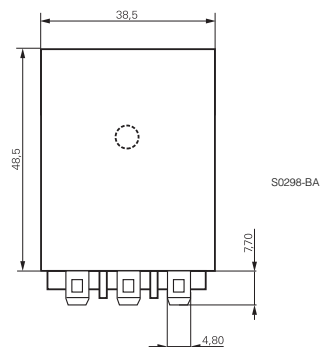
Accessories

For details see datasheet

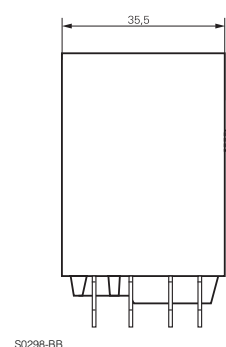
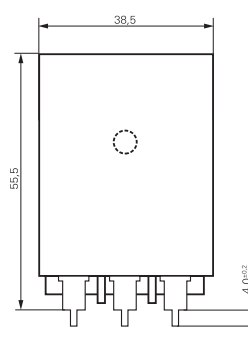
Accessories Power Relay RM

Dimensions

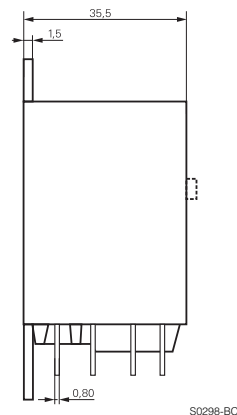
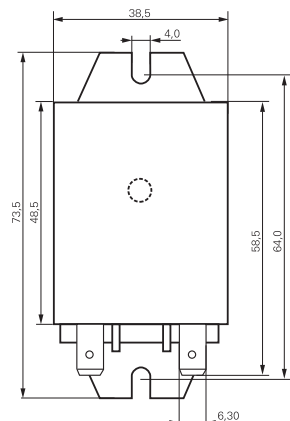
Plain cover, plug-in version



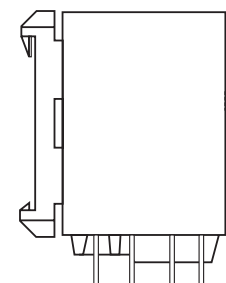
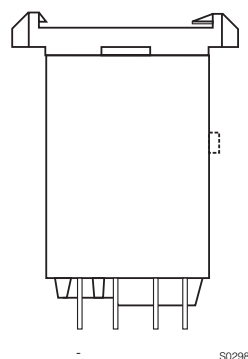
PCB version



Cover with mounting brackets, 6.3 mm quick connect (4.8 mm available)



Cover with DIN-snap-on attachment (6.3 mm quick connect only)
horizontal vertical



Product key

Type

Contact configuration

- | | | | |
|----------|---------------------|----------|---------------------|
| 2 | 2 CO contacts, 16 A | 7 | 3 CO contacts, 16 A |
| 3 | 3 CO contacts, 10 A | | |

Version

- | | | | |
|----------|---------------------------------|----------|------------------------------|
| 0 | AgCdO, without test button | 3 | AgCdO, with test button |
| 2 | AgNi 90/10, without test button | 7 | AgNi 90/10, with test button |

Enclosure

- | | |
|----------|-------------------------------------------------------------------------------|
| 2 | plain cover, 4.8 mm quick connect terminals |
| 3 | cover with mounting brackets, 4.8 mm quick connect terminals |
| 5 | cover with mounting brackets, 6.3 mm quick connect terminals |
| 7 | PCB version |
| 8 | cover with DIN-snap-on attachment, horizontal, 6.3 mm quick connect terminals |
| 9 | cover with DIN-snap-on attachment, vertical, 6.3 mm quick connect terminals |

Coil

Coil code: please refer to coil versions table, preferred types in bold print



Power Relay RM 2/3/7 (Continued)

Product key	Contacts	Version	Enclosure	Coil	Coil	Part number
RM202024	2 CO contacts 16 A	without test button	plain cover quick c. 4.8 mm	DC-coil	24 VDC	8-1393149-2
RM202524				AC-coil	24 VAC	1-1393146-9
RM202615					115 VAC	2-1393146-0
RM202730					230 VAC	1-1393148-4
RM203024			mounting brackets quick c. 4.8 mm	DC-coil	24 VDC	1-1393148-6
RM203524				AC-coil	24 VAC	2-1393146-5
RM203615					115 VAC	2-1393146-6
RM203730					230 VAC	2-1393146-8
RM205024			mounting brackets quick c. 6.3 mm	DC-coil	24 VDC	2-1393146-9
RM205524				AC-coil	24 VAC	3-1393146-0
RM205615					115 VAC	3-1393146-1
RM205730					230 VAC	3-1393146-2
RM207024			PCB version	DC-coil	24 VDC	3-1393146-3
RM207615				AC-coil	115 VAC	8-1393149-5
RM207730					230 VAC	3-1393146-4
RM208024			DIN-snap-on horizontal	DC-coil	24 VDC	3-1393146-5
RM208730				AC-coil	230 VAC	8-1393149-6
RM209730			DIN vertical		230 VAC	3-1393146-6
RM232024	with test button		plain cover quick c. 4.8 mm	DC-coil	24 VDC	3-1393146-8
RM232524				AC-coil	24 VAC	3-1393146-9
RM232615					115 VAC	4-1393146-0
RM232730					230 VAC	3-1393107-4
RM233024			mounting brackets quick c. 4.8 mm	DC-coil	24 VDC	3-1393107-5
RM233615				AC-coil	115 VAC	4-1393146-2
RM235024			mounting brackets quick c. 6.3 mm	DC-coil	24 VDC	8-1393149-8
RM235730				AC-coil	230 VAC	4-1393146-5
RM239730			DIN vertical		230 VAC	4-1393148-7
RM302024	3 CO contacts 10 A	without test button	plain cover quick c. 4.8 mm	DC-coil	24 VDC	8-1393149-9
RM302524				AC-coil	24 VAC	5-1393146-3
RM302615					115 VAC	5-1393146-4
RM302730					230 VAC	5-1419150-3
RM303024			mounting brackets quick c. 4.8 mm	DC-coil	24 VDC	6-1393148-4
RM303615				AC-coil	115 VAC	5-1393146-5
RM303730					230 VAC	5-1393146-7
RM307024			PCB version	DC-coil	24 VDC	7-1393148-2
RM307730				AC-coil	230 VAC	5-1393146-9
RM332024	with test button		plain cover quick c. 4.8 mm	DC-coil	24 VDC	9-1393149-2
RM332524				AC-coil	24 VAC	9-1393149-3
RM332730					230 VAC	9-1393149-4
RM333024			mount. br. q.c.4.8	DC-coil	24 VDC	9-1393149-6
RM335730			mount. br. q.c.6.3	AC-coil	230 VAC	6-1393107-1
RM338730			DIN horizontal		230 VAC	7-1393148-7
RM339730			DIN vertical		230 VAC	6-1393107-2
RM702024	3 CO contacts 16 A	without test button	plain cover quick c. 4.8 mm	DC-coil	24 VDC	8-1393146-5
RM702524				AC-coil	24 VAC	0-1393844-9
RM702615					115 VAC	1-1393844-0
RM702730					230 VAC	1-1393844-1
RM703024			mounting brackets quick c. 4.8 mm	DC-coil	24 VDC	1-1393844-2
RM703524				AC-coil	24 VAC	9-1393146-1
RM703615					115 VAC	9-1393146-2
RM703730					230 VAC	9-1393146-4
RM705024			mounting brackets quick c. 6.3 mm	DC-coil	24 VDC	9-1393146-6
RM705524				AC-coil	24 VAC	9-1393146-7
RM705615					115 VAC	1-1393844-4
RM705730					230 VAC	1-1393844-5
RM707024			PCB version	DC-coil	24 VDC	9-1393146-8
RM707524				AC-coil	24 VAC	0-1393147-1
RM707730					230 VAC	0-1393147-2
RM708024			DIN horizontal quick c. 6.3 mm	DC-coil	24 VDC	0-1393147-4
RM708730				AC-coil	230 VAC	1-1419136-0
RM709024			DIN vertical	DC-coil	24 VDC	2-1393149-2
RM709730				AC-coil	230 VAC	0-1393147-5
RM732024	with test button		plain cover quick c. 4.8 mm	DC-coil	24 VDC	1-1393844-7
RM732524				AC-coil	24 VAC	1-1393147-0
RM732615					115 VAC	1-1393147-1
RM732730					230 VAC	1-1393844-8
RM733730			mount.br. q.c. 4.8		230 VAC	1-1393147-5
RM735024			mounting brackets quick c. 6.3 mm	DC-coil	24 VDC	3-1393149-6
RM735524				AC-coil	24 VAC	3-1393149-7
RM735730					230 VAC	4-1393149-1
RM737730			PCB version		230 VAC	2-1393147-0
RM738024				DC-coil	24 VDC	2-1393844-0
RM738730			horizontal	AC-coil	230 VAC	2-1393147-2
RM739024			DIN-snap-on vertical	DC-coil	24 VDC	4-1393149-5
RM739730				AC-coil	230 VAC	2-1393844-2

Power Relay RM 5/6 3 mm

- 2 / 3 pole 10 / 16 A, 2 NO or 3 NO contacts
- 3 mm contact gap
- DC- or AC coil
- Push-to-test-button
- Plug-in version, PCB terminals, chassis- or DIN-rail mount
- RoHS compliant (Directive 2002/95/EC)
as per product date code 0415

Applications

Power supplies, pump control



F0164-A

Approvals

VDE REG.-Nr. 40003144, c **UL** E214025
Technical data of approved types on request

Contact data	RM5	RM6
Contact configuration	2 NO	3 NO
Contact set	single contact	
Type of interruption	full disconnection	
Rated current	16 A	10 A
Rated voltage / max.switching voltage AC	400/440 VAC	230/400 VAC
Maximum breaking capacity AC	6000 VA	3800 VA
Limiting making capacity, max 20 ms	25 A	25 A
Contact material	AgNi90/10, AgCdO	
Contact gap	3 mm	
Mechanical endurance	20x10 ⁶ cycles	
Rated frequency of operation with / without load	16/100 min ⁻¹	

Contact ratings

Type	Load	Cycles
RM5.	16 A, 415 VAC, UL	100x10 ³
RM50	16 A, 230/400 VAC, cosφ=1, 35°C, VDE	100x10 ³
RM5.	16 A, 250 VAC, general purpose, UL	30x10 ³
RM50	10 A, 48 VDC, 70°C, VDE, UL	30x10 ³
RM6.	5 A, 400 VAC, resistive, UL	100x10 ³
RM60	10 A, 230/400 VAC, cosφ=1, 35°C, VDE	100x10 ³
RM6.	10 A, 300 VAC, resistive, UL	100x10 ³
RM6.	10 A, 250 VAC, general purpose, UL	30x10 ³

Coil data

Rated coil voltage range DC coil	6...220 VDC
AC coil	6...400 VAC
Coil power DC coil	1.6 W
AC coil	2.8 VA
Operative range	1

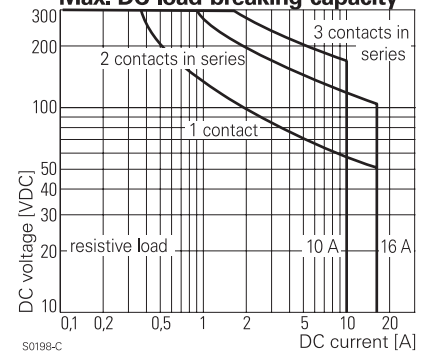
Coil versions, DC-coil

Coil code	STD	LED	PD*	LED+	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power W
	bipolar			PD*					
006	L06	0A6	LA6		6	4.5	0.6	24±10%	1.5
012	L12	0B2	LB2		12	9.0	1.2	86±10%	1.7
024	L24	0C4	LC4		24	18.0	2.4	345±10%	1.7
048	L48	0E8	LE8		48	36.0	4.8	1340±10%	1.7
060	L60	0G0	LG0		60	45.0	6.0	2200±10%	1.6
110	M10	1B0	MB0		110	82.5	11.0	7300±10%	1.7
221	N21	2C1	NC1		220	165.0	22.0	30000±15%	1.6

All figures are given for coil without preenergization, at ambient temperature +23°C

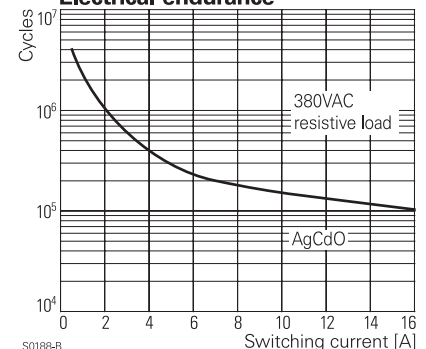
*) Protection diode PD; standard polarity: +A1 / -A2

Max. DC load breaking capacity



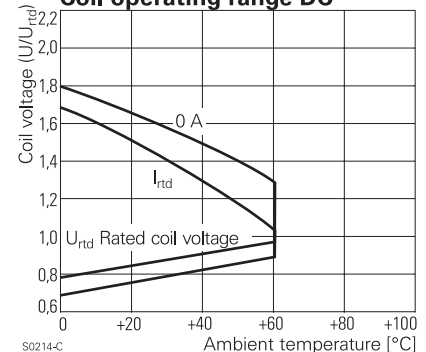
S0198-C

Electrical endurance



S0188-B

Coil operating range DC



S0214-C

Power Relay RM 5/6 3 mm (Continued)

Coil versions, AC-coil 50/60 Hz

Coil code	LED	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD		VAC	50/60Hz	50/60Hz	Ohm	50/60Hz VA
506	R06	6	4.8	2.4	$4.7 \pm 10\%$	2.86/2.36
512	R12	12	9.6	4.8	$19.5 \pm 10\%$	2.71/2.27
524	R24	24	19.2	9.6	$80 \pm 10\%$	2.62/2.00
548	R48	48	38.4	19.2	$320 \pm 10\%$	2.60/2.17
560	R60	60	48.0	24.0	$500 \pm 10\%$	2.62/2.20
615	S15	115	92.0	46.0	$1850 \pm 10\%$	2.65/2.22
730	T30	230	184.0	92.0	$7500 \pm 10\%$	2.69/2.26
900	V00	400	320.0	160.0	$23500 \pm 15\%$	2.61/2.20

All figures are given for coil without preenergization, at ambient temperature +23°C

Insulation

Dielectric strength coil-contact circuit	2500 V _{rms}
open contact circuit	2500 V _{rms}
adjacent contact circuits	2500 V _{rms}
Clearance / creepage coil-contact circuit	$\geq 4/14.9$ mm
adjacent contact circuits	$\geq 6.1/7.3$ mm
Material group of insulation parts	\geq IIIa
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	basic
open contact circuit	basic
adjacent contact circuits	basic
Rated insulation voltage	250 / 400 V ¹⁾
Pollution degree	3
Rated voltage system	240/400 V
Overvoltage category	III

¹⁾ in combination with socket RM 78704 or isolated quick connects

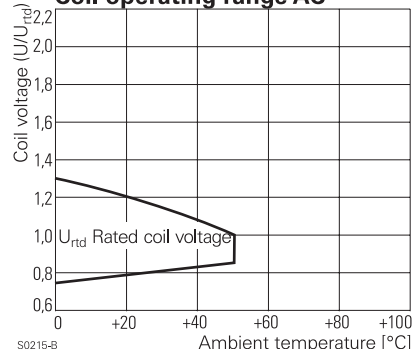
Other data

RoHS - Directive 2002/95/EC	compliant as per product date code 0415
Ambient temperature range DC coil	-45...+60°C
AC coil	-45...+50°C
Operate- / release time	15/10 ms
Bounce time NO / NC contact	4 ms
Vibration resistance (function) NO / NC contact	12 g, 30...150 Hz
Category of protection	RTI - dust protected
Mounting position	versions with test button not to be mounted with button on top
Resistance to soldering heat	270°C / 10 s
Relay weight	81 g
Packaging unit	10/25 pcs

Accessories

For details see datasheet Accessories Power Relay RM

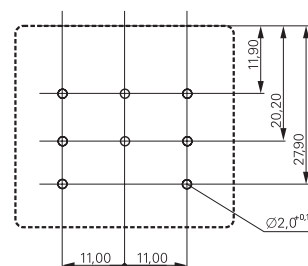
Coil operating range AC



S0215-B

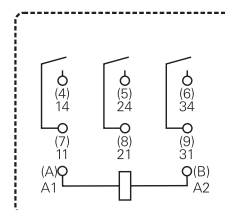
PCB layout / terminal assignment

Bottom view on pins



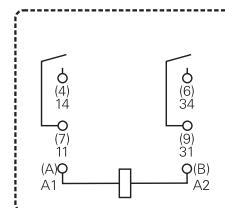
S0269-AF

3 NO contacts



S0269-AC

2 NO contacts

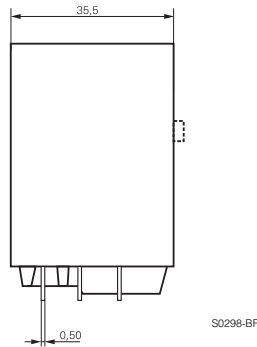
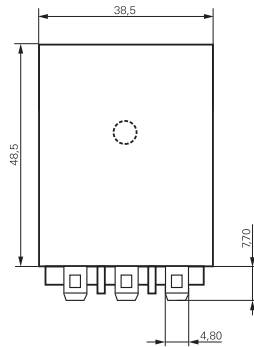


S0269-AE

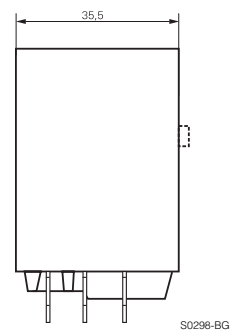
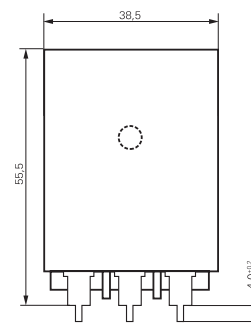
Power Relay RM 5/6 3 mm (Continued)

Dimensions

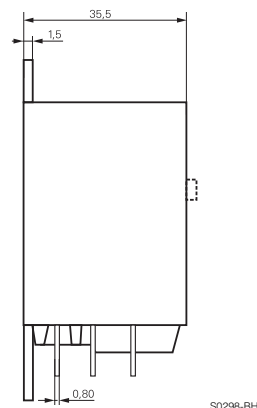
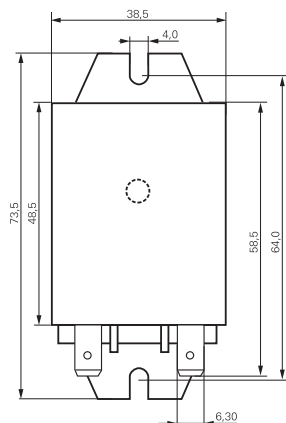
Plain cover, plug-in version



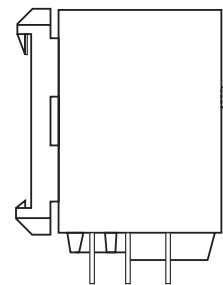
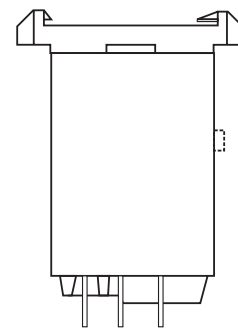
PCB version



Cover with mounting brackets, 6.3 mm quick connect (4.8 mm available)



Cover with DIN-snap-on attachment (6.3 mm quick connect only)
horizontal vertical



Product key

Type

Contact configuration

5 2 NO contacts, 16 A **6** 3 NO contacts, 10 A

Version

0 AgCdO, without test button, without mechanical indicator
2 AgNi 90/10, without test button, without mechanical indicator
3 AgCdO, with test button, without mechanical indicator
7 AgNi 90/10, with test button, without mechanical indicator

Enclosure

2 plain cover, 4.8 mm quick connect terminals
3 cover with mounting brackets, 4.8 mm quick connect terminals
5 cover with mounting brackets, 6.3 mm quick connect terminals
7 PCB version
8 cover with DIN-snap-on attachment, horizontal, 6.3 mm quick connect terminals
9 cover with DIN-snap-on attachment, vertical, 6.3 mm quick connect terminals

Coil

Coil code: please refer to coil versions table, preferred types in bold print



Power Relay RM 5/6 3 mm (Continued)

Product key	Contacts	Version	Enclosure	Coil	Coil	Part number
RM502024	2 NO contacts 16 A	without	plain cover	DC-coil	24 VDC	6-1393146-1
RM502524		test button	quick c. 4.8 mm	AC-coil	24 VAC	6-1393146-2
RM502615		without			115 VAC	6-1393146-3
RM502730		mech.indicator			230 VAC	6-1393146-4
RM503024			mounting brackets	DC-coil	24 VDC	8-1393148-0
RM503615			quick c. 4.8 mm	AC-coil	115 VAC	6-1393146-5
RM505024			mounting brackets	DC-coil	24 VDC	8-1393148-3
RM505615			quick c. 6.3 mm	AC-coil	115 VAC	6-1393146-6
RM505730					230 VAC	9-1393149-9
RM507024				DC-coil	24 VDC	0-1393844-1
RM507524				AC-coil	24 VAC	5-1415008-1
RM507615					115 VAC	6-1415015-1
RM507730					230 VAC	0-1415008-1
RM535024				DC-coil	24 VDC	7-1393146-2
RM535524		with test button	mounting brackets	AC-coil	24 VAC	9-1393148-0
		w/o mech.indicator	quick c. 6.3 mm			
RM602024	3 NO contacts 10 A	without	plain cover	DC-coil	24 VDC	0-1393844-4
RM602615		test button	quick c. 4.8 mm	AC-coil	115 VAC	9-1393148-7
RM605730		without	mount.br. q.c.6.3		230 VAC	7-1393146-6
RM607024		mechanical ind.	PCB version	DC-coil	24 VDC	0-1393844-6
RM607524				AC-coil	24 VAC	7-1393146-8
RM607615					115 VAC	8-1415015-1
RM607730					230 VAC	7-1393146-9
RM632024				DC-coil	24 VDC	8-1393146-0
RM632730		with	plain cover	AC-coil	230 VAC	0-1393149-7
RM635024		test button	quick c. 4.8 mm			
RM635024		without	mount.br. q.c.6.3	DC-coil	24 VDC	7-1393107-7
RM637024		mech.indicator	PCB version		24 VDC	0-1393149-9

Power Relay RM 8

- 2 pole 25 A, 2 CO contacts
- DC- or AC-coil
- Mechanical indicator
- Push-to-test-button
- Chassis- or DIN-rail mount
- RoHS compliant (Directive 2002/95/EC)
as per product date code 0415

Applications

Cleaning equipment, heating and cooling equipment



F0165-A

Approvals

VDE REG.-Nr. 40003144, **CE** us E214025
Technical data of approved types on request

Contact data	RM8
Contact configuration	2 CO contacts
Contact set	single contact
Type of interruption	micro disconnection
Rated current	25 A
Rated voltage / max.switching voltage AC	400 VAC
Maximum breaking capacity AC	6000 VA
Limiting making capacity, max 20 ms	60 A
Contact material	AgNi90/10, AgCdO
Mechanical endurance	10x10 ⁶ cycles
Rated frequency of operation with / without load	16/100 min ⁻¹

Contact ratings

Type	Load	Cycles
RM80	25 A, 415 VAC, UL	10x10 ³
RM80	25 A, 250 VAC, cosφ=1, 35°C, VDE	10x10 ³
RM80	25 A, 240 VAC, 1-phase, per pole, general purpose, UL	6x10 ³

Coil data

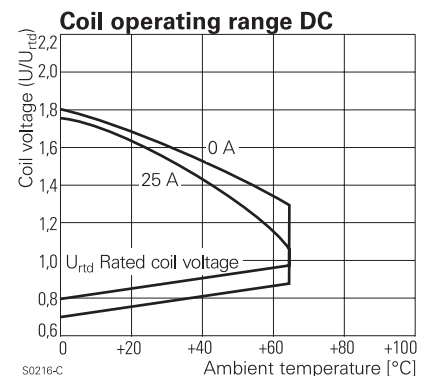
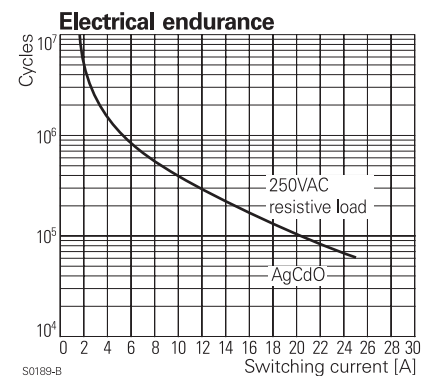
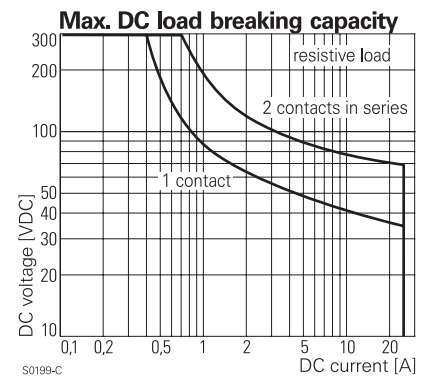
Rated coil voltage range	DC coil	6...220 VDC
	AC coil	6...400 VAC
Coil power	DC coil	1.2 W
	AC coil	2.8 VA

Coil versions, DC-coil

Coil code	STD	LED	PD*	LED+	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
				PD*	VDC	VDC	VDC	Ohm	W
006	L06	0A6	LA6		6	4.5	0.6	32±10%	1.1
012	L12	0B2	LB2		12	9.0	1.2	110±10%	1.3
024	L24	0C4	LC4		24	18.0	2.4	475±10%	1.2
048	L48	0E8	LE8		48	36.0	4.8	2000±10%	1.2
060	L60	0G0	LG0		60	45.0	6.0	2850±10%	1.3
110	M10	1B0	MB0		110	82.5	11.0	10000±12%	1.2
221	N21	2C1	NC1		220	165.0	22.0	40000±15%	1.2

All figures are given for coil without preenergization, at ambient temperature +23°C

*) Protection diode PD; standard polarity: +A1 / -A2



Power Relay RM 8 (Continued)

Coil versions, AC-coil 50/60 Hz

Coil code	LED	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD		VAC	50/60Hz	50/60Hz	Ohm	50/60Hz
506	R06	6	4.8	2.4	$4.7 \pm 10\%$	2.86/2.36
512	R12	12	9.6	4.8	$19.5 \pm 10\%$	2.71/2.27
524	R24	24	19.2	9.6	$80 \pm 10\%$	2.62/2.00
548	R48	48	38.4	19.2	$320 \pm 10\%$	2.60/2.17
560	R60	60	48.0	24.0	$500 \pm 10\%$	2.62/2.20
615	S15	115	92.0	46.0	$1850 \pm 10\%$	2.65/2.22
730	T30	230	184.0	92.0	$7500 \pm 10\%$	2.69/2.26
900	V00	400	320.0	160.0	$23500 \pm 15\%$	2.61/2.20

All figures are given for coil without preenergization, at ambient temperature +23°C

Insulation

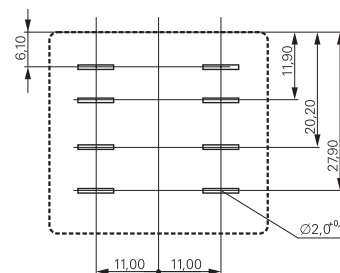
Dielectric strength coil-contact circuit	2500 V _{rms}
open contact circuit	1500 V _{rms}
adjacent contact circuits	4000 V _{rms}
Clearance / creepage coil-contact circuit	$\geq 4/14.9$ mm
adjacent contact circuits	$\geq 15.3/15.3$ mm
Material group of insulation parts	\geq IIIa
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	basic
open contact circuit	functional
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	3
Rated voltage system	240/400 V
Overvoltage category	III

Other data

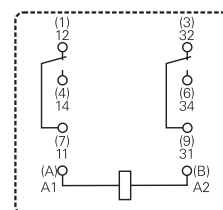
RoHS - Directive 2002/95/EC	compliant as per product date code 0415
Ambient temperature range DC coil	-45...+65°C
AC coil	-45...+40°C
Operate- / release time	15/15 ms
Bounce time NO / NC contact	3 ms
Vibration resistance (function) NO / NC contact	10/5 g, 30...150 Hz
Category of protection	RTI - dust protected
Relay weight	81 g
Packaging unit	10/25 pcs

Terminal assignment

Bottom view on pins



S0269-AG

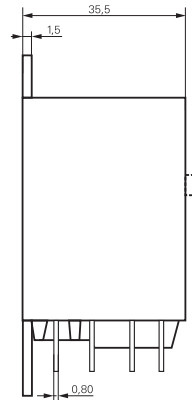
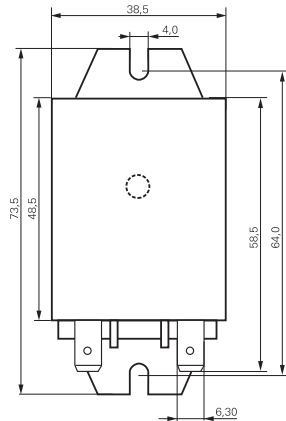


S0269-AD

Power Relay RM 8 (Continued)

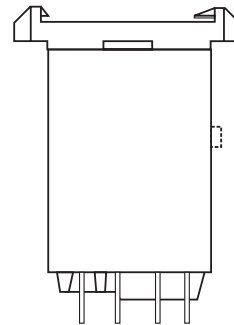
Dimensions

Cover with mounting brackets, 6.3 mm quick connect terminals



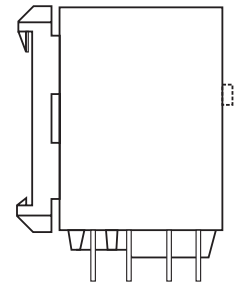
S0298-BC

Cover with DIN-snap-on attachment
horizontal



S0298-BD

vertical



S0298-BE

Product key

Type

Contact configuration

8 2 CO contacts, 25 A

Version

0 AgCdO, without test button

3 AgCdO, with test button

2 AgNi 90/10, without test button

7 AgNi 90/10, with test button

Enclosure

5 cover with mounting brackets, 6.3 mm quick connect terminals

8 cover with DIN-snap-on attachment, horizontal, 6.3 mm quick connect terminals

9 cover with DIN-snap-on attachment, vertical, 6.3 mm quick connect terminals

Coil

Coil code: please refer to coil versions table, preferred types in bold print

R	M	8					
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Product key	Contacts	Version	Enclosure	Coil	Coil	Part number
RM805024	2 CO contacts 25 A	without test button	mounting brackets quick c. 6.3 mm	DC-coil	24 VDC	2-1393844-7
RM805524				AC-coil	24 VAC	2-1393147-9
RM805615					115 VAC	3-1393147-1
RM805730					230 VAC	3-1393147-3
RM808024				DC-coil	24 VDC	2-1393844-9
RM808524				AC-coil	24 VAC	3-1393147-7
RM808730					230 VAC	5-1393149-7
RM809024					24 VDC	5-1393149-8
RM809615			DIN-snap-on vertical	AC-coil	115 VAC	3-1393147-8
RM809730					230 VAC	3-1393147-9
RM835024		with test button	mounting brackets quick c. 6.3 mm	DC-coil	24 VDC	4-1393147-1
RM835524				AC-coil	24 VAC	4-1393147-3
RM835615					115 VAC	4-1393147-4
RM835730					230 VAC	4-1393147-6
RM838024				DC-coil	24 VDC	4-1393147-8
RM838524				AC-coil	24 VAC	5-1393147-0
RM838730					230 VAC	5-1393147-1
RM839024			DIN-snap-on vertical	DC-coil	24 VDC	5-1393147-4
RM839524				AC-coil	24 VAC	5-1393147-5
RM839730					230 VAC	5-1393147-6

Power Relay RM C/D

- 1 pole 30 A, 1 NO or 1 NO + 1 NC contact
- Switching capacity up to 7500 VA
- DC- or AC-coil
- Push-to-test-button
- Chassis mount
- RoHS compliant (Directive 2002/95/EC)
as per product date code 0415

Applications

Battery chargers, heating control



F0166-A

Approvals

CE us E214025

Technical data of approved types on request

Contact data	RMC	RMD
Contact configuration	1 NO and 1 NC	1 NO
Contact set	single bridging contact	
Type of interruption	micro disconnection	
Rated current	30 A	
Rated voltage / max.switching voltage AC	400/440 VAC	
Maximum breaking capacity AC	7500 VA	
Limiting making capacity, max 20 ms	60 A	
Contact material	AgNi90/10, AgCdO	
Mechanical endurance	10x10 ⁶ cycles	
Rated frequency of operation with / without load	16/100 min ⁻¹	

Contact ratings

Type	Load	Cycles
RMC/D	30 A, 415 VAC, UL	10x10 ³
RMC/D	30 A, 250 VAC, general purpose, UL	6x10 ³

Coil data

Rated coil voltage range DC coil	6...220 VDC
AC coil	6...400 VAC
Coil power DC coil	1.2 W
AC coil	2.8 VA
Operative range	1

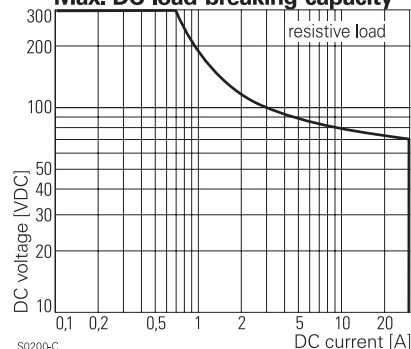
Coil versions, DC-coil

Coil code	STD	LED	PD*	LED+	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power W
006	L06	0A6	LA6		6	4.5	0.6	32±10%	1.1
012	L12	0B2	LB2		12	9.0	1.2	110±10%	1.3
024	L24	0C4	LC4		24	18.0	2.4	475±10%	1.2
048	L48	0E8	LE8		48	36.0	4.8	2000±10%	1.2
060	L60	0G0	LG0		60	45.0	6.0	2850±10%	1.3
110	M10	1B0	MB0		110	82.5	11.0	10000±12%	1.2
221	N21	2C1	NC1		220	165.0	22.0	40000±15%	1.2

All figures are given for coil without preenergization, at ambient temperature +23°C

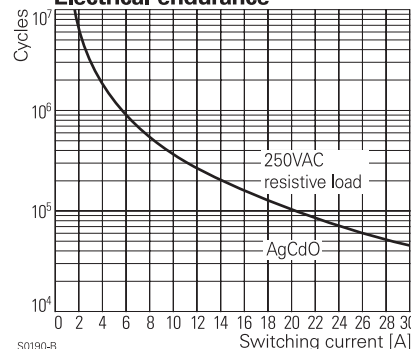
*) Protection diode PD; standard polarity: +A1 / -A2

Max. DC load breaking capacity



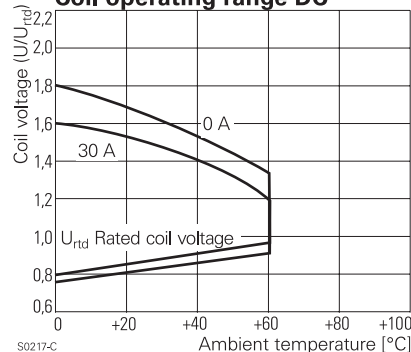
S0200-C

Electrical endurance



S0190-B

Coil operating range DC



S0217-C

Power Relay RM C/D (Continued)

Coil versions, AC-coil 50/60 Hz

Coil code	LED	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD		VAC	50/60Hz VAC	50/60Hz VAC	Ohm	50/60Hz VA
524	R24	24	19.2	9.6	80±10%	2.62/2.00
548	R48	48	38.4	19.2	320±10%	2.60/2.17
560	R60	60	48.0	24.0	500±10%	2.62/2.20
615	S15	115	92.0	46.0	1850±10%	2.65/2.22
730	T30	230	184.0	92.0	7500±10%	2.69/2.26
900	V00	400	320.0	160.0	23500±15%	2.61/2.20

All figures are given for coil without preenergization, at ambient temperature +23°C

Insulation

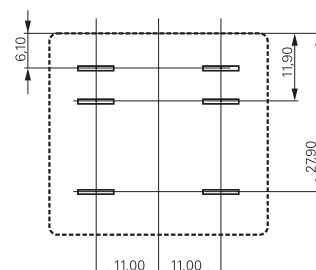
Dielectric strength coil-contact circuit	2500 V _{rms}
open contact circuit	1500 V _{rms}
Clearance / creepage coil-contact circuit	≥ 4/14.9 mm
Material group of insulation parts	≥ IIIa
Insulation to IEC 60664-1	
Type of insulation coil-contact circuit	basic
open contact circuit	functional
Rated insulation voltage	250 V
Pollution degree	3
Rated voltage system	240/400 V
Overvoltage category	III

Other data

RoHS - Directive 2002/95/EC	compliant as per product date code 0415
Ambient temperature range DC coil	-45...+60°C
AC coil	-45...+40°C
Operate- / release time	17/18 ms
Bounce time NO / NC contact	4
Vibration resistance (function) NO / NC contact	10/5 g, 30...150 Hz
Category of protection	RTI - dust protected
Relay weight	81 g
Packaging unit	10 pcs

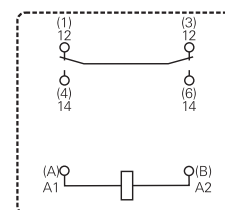
Terminal assignment

Bottom view on pins



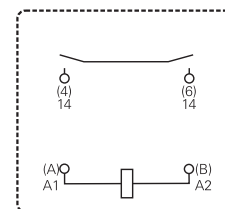
S0269-AK

1 NO and 1 NC contact, RMC



S0269-AH

1 NO contact, RMD

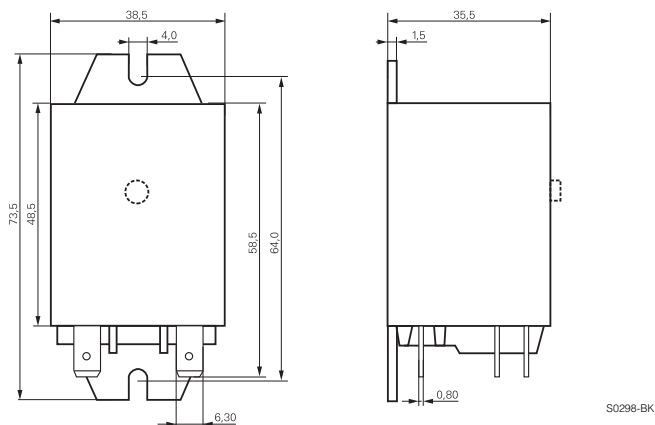


S0269-AI

Power Relay RM C/D (Continued)

Dimensions

Cover with mounting brackets, 6.3 mm quick connect terminals



Product key

Type	R	M			5			
Contact configuration								
C 1 NO contact and 1 NC contact, 30 A								
D 1 NO contact, 30 A								
Version								
0 AgCdO, without test button	3 AgCdO, with test button							
2 AgNi 90/10, without test button	7 AgNi 90/10, with test button							
Enclosure								
5 cover with mounting brackets, 6.3 mm quick connect terminals								
Coil								
Coil code: please refer to coil versions table, preferred types in bold print								

Product key	Contacts	Version	Enclosure	Coil	Coil	Part number
RMC05024	1 NO + 1 NC contact 30 A	without	mounting brackets quick c. 6.3 mm	DC-coil	24 VDC	4-1393844-5
RMC05524		test button		AC-coil	24 VAC	0-1393146-5
RMC05615					115 VAC	8-1393147-7
RMC05730					230 VAC	0-1393146-6
RMC35024		with test button		DC-coil	24 VDC	0-1393146-7
RMD05024	1 NO contact 30 A	without			24 VDC	0-1393146-9
RMD05524		test button		AC-coil	24 VAC	1-1393146-1
RMD05615					115 VAC	0-1415009-1
RMD05730					230 VAC	4-1393844-7
RMD35024		with		DC-coil	24 VDC	2-1419136-2
RMD35730		test button		AC-coil	230 VAC	0-1393097-5