

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

Applications

Power supplies, pump control



F0164-B

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 voltage / max. switching voltage AC	400 / 440 VAC	230 / 400 VAC
Rated current	16 A	10 A
Maximum breaking capacity AC	6000 VA	3800 VA
Limiting making capacity, max 20 ms	25 A	25 A
Contact material	AgCdO	
Contact gap	3 mm	
Rated frequency of operation with / without load	16/100 min ⁻¹	
Operate- / release time DC coil	max 15 / 10 ms	
Bounce time DC coil NO / NC contact	max 4 / 6 ms	

Contact ratings

Type	Contact	Load	Ambient temp. [°C]	Cycles
IEC 61810				
RM50	NO	16 A, 230 / 400 VAC, cosφ=1	35°C	100x10 ³
RM50	NO	10 A, 48 VDC	70°C	30x10 ³
RM60	NO	10 A, 230 / 400 VAC, cosφ=1	35°C	100x10 ³
UL 508				
RM5	NO	16 A, 415 VAC, resistive	50°C	100x10 ³
RM5	NO	16 A, 277 VAC, general purpose	50°C	30x10 ³
RM6	NO	10 A, 415 VAC, resistive	50°C	100x10 ³
RM6	NO	10 A, 277 VAC, general purpose	50°C	30x10 ³

Coil data

Rated coil voltage range DC coil	6...220 VDC
AC coil	6...400 VAC
Operative range to IEC 61810	90...100% U _{rd}

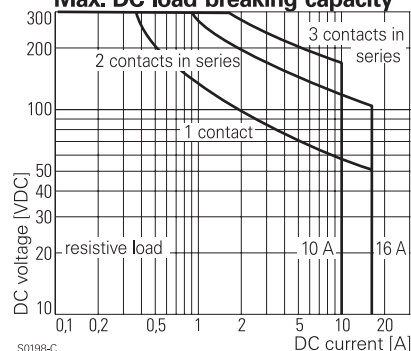
Coil versions, DC-coil

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

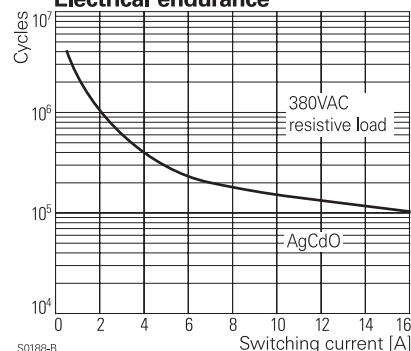
*) Protection diode PD; standard polarity: +A1 / -A2

Max. DC load breaking capacity



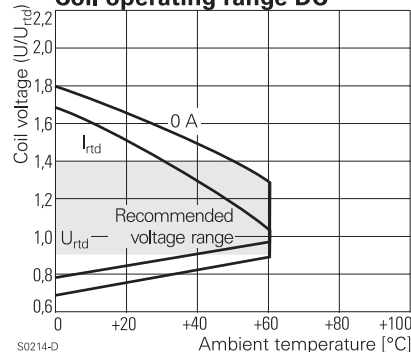
S0198-C

Electrical endurance



S0188-B

Coil operating range DC



S0214-D

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 / 60 Hz	50 / 60 Hz	Ohm	50 / 60 Hz
506	R06	6	4.8 / 5.1	2.4	4.7 ± 10%	2.86 / 2.36
512	R12	12	9.6 / 10.2	4.8	19.5 ± 10%	2.71 / 2.27
524	R24	24	19.2 / 20.4	9.6	80 ± 10%	2.62 / 2.00
548	R48	48	38.4 / 40.8	19.2	320 ± 10%	2.60 / 2.17
560	R60	60	48.0 / 51.0	24.0	500 ± 10%	2.62 / 2.20
615	S15	115	92.0 / 97.8	46.0	1850 ± 10%	2.65 / 2.22
730	T30	230	184.0 / 195.5	92.0	7500 ± 10%	2.69 / 2.26
900	V00	400	320.0 / 340.0	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	2500 V _{rms}
adjacent contact circuits	2500 V _{rms}
Clearance / creepage coil-contact circuit	≥ 4/14.9 mm
adjacent contact circuits	≥ 6.1/7.3 mm
Material group of insulation parts	IIIa
Insulation to IEC 61810-1	
Type of insulation coil-contact circuit	basic
open contact circuit	full disconnection ≥ 3 mm
adjacent contact circuits	basic
Rated insulation voltage	250 / 400 V ¹⁾
Pollution degree	3
Rated voltage system	230 / 400 V
Overvoltage category	III

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

Other data

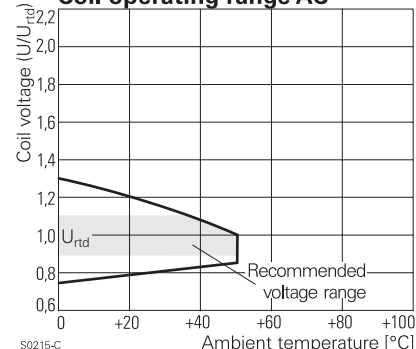
Mechanical endurance	20x10 ⁶ cycles
Material	
RoHS - Directive 2002/95/EC	compliant as per product date code 0415
Environment	
Ambient temperature range DC coil	-45...+60°C
AC coil	-45...+50°C
Vibration resistance (function) NO / NC contact	12 g, 30...150 Hz
Category of protection	RT1 - dust protected
Processing	
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

NOTE: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1, table 12); for relays mounted on sockets deratings may apply.

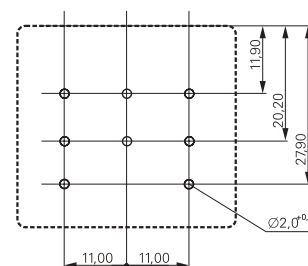
Coil operating range AC



S0215-C

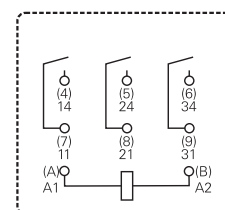
PCB layout / terminal assignment

Bottom view on pins



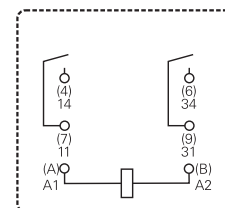
S0269-AF

3 NO contacts



S0269-AC

2 NO contacts

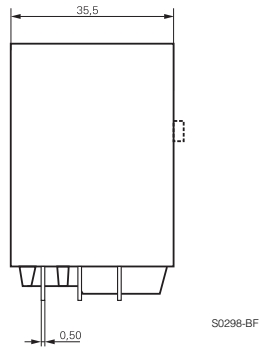
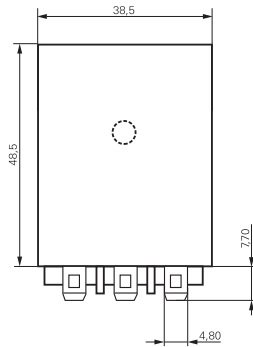


S0269-AE

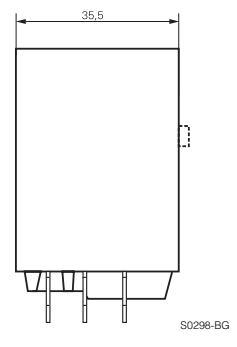
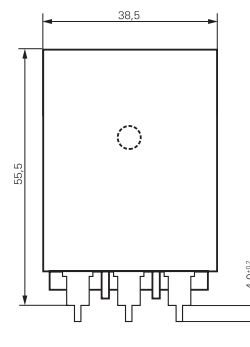
Power Relay RM 5/6 3 mm (Continued)

Dimensions

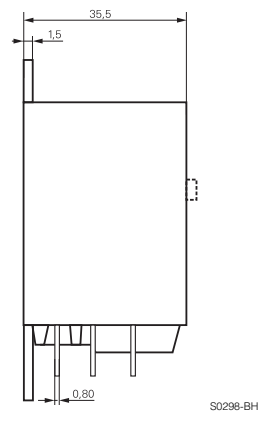
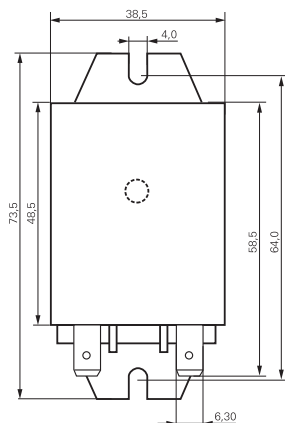
Plain cover, plug-in version



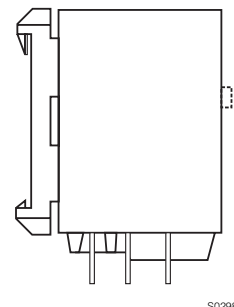
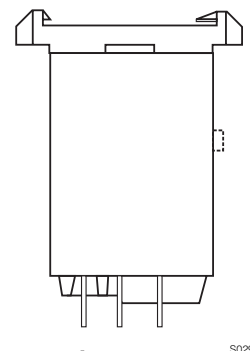
PCB version



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

Typical product key

RM

5

0

2

524

Type

RM Power relay RM 5/6 3 mm

Contact configuration

5 2 NO contacts (2 form A), 16 A

6 3 NO contacts (3 form A), 10 A

Version

0 AgCdO, without test button, without mechanical indicator

3 AgCdO, 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	1393844-1
RM507524			PCB version	AC-coil	24 VAC	5-1415008-1
RM507615					115 VAC	6-1415015-1
RM507730					230 VAC	1415008-1
RM535024				DC-coil	24 VDC	7-1393146-2
RM535524	3 NO contacts 10 A	with test button w/o mech.indicator	mounting brackets quick c. 6.3 mm	AC-coil	24 VAC	9-1393148-0
RM602024		without	plain cover	DC-coil	24 VDC	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	1393844-6
RM607524				AC-coil	24 VAC	7-1393146-8
RM607615					115 VAC	8-1415015-1
RM607730					230 VAC	7-1393146-9
RM632024		with	plain cover	DC-coil	24 VDC	8-1393146-0
RM632730		test button	quick c. 4.8 mm	AC-coil	230 VAC	1393149-7
RM635024		without	mount.br. q.c.6.3	DC-coil	24 VDC	7-1393107-7
RM637024		mech.indicator	PCB version		24 VDC	1393149-9