

**Power Relay RM 5/6/B 3mm**

- 2 and 3 pole 10/16A, 2 form A (2 NO) or 3 form A (3 NO) contacts
- 3mm contact gap
- DC or AC coil
- Push-to-test button
- Plug-in version, PCB terminals, chassis- or DIN-rail mount

Typical applications  
Power supplies, pump control



F0164-B

**Approvals**

RM5/6: VDE REG.-Nr. 40003144, cULus E214025; RMB in preparation  
Technical data of approved types on request

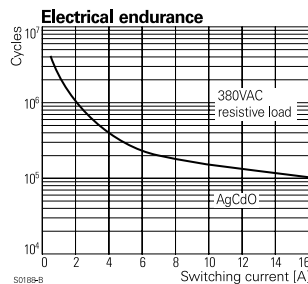
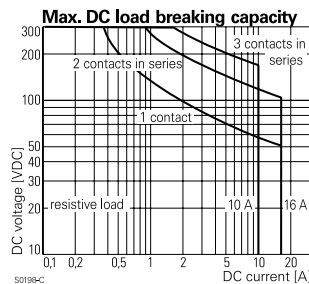
Contact Data	RM5	RM6	RMB
Contact arrangement	2 form A	3 form A	3 form A
	2 NO	3 NO	3 NO
Contact gap	3mm	3mm	3mm
Rated voltage	400VAC	230VAC	230VAC
Max. switching voltage	440VAC	400VAC	400VAC
Rated current	16A	10A	16A
Limiting making current, max 20ms	30A	25A	30A
Switching power	6000VA	3800VA	6000VA
Contact material	AgCdO,		
	AgNi90/10 in preparation		
Min. recommended contact load	24VDC/100mA		
Frequency of operation, with/without load	960/6000h <sup>-1</sup>		
Operate/release time max., DC coil	20/5ms		
Bounce time max., form A, DC coil	4ms		

**Contact ratings**

Type	Contact	Load	Cycles
<b>IEC 61810</b>			
RM50	A (NO)	16A, 230/400VAC, cosφ=1, 35°C	100x10 <sup>3</sup>
RM50	A (NO)	10A, 48VDC 70°C	30x10 <sup>3</sup>
RM60	A (NO)	10A, 230/400VAC, cosφ=1, 35°C	100x10 <sup>3</sup>
<b>UL 508</b>			
RM5	A (NO)	16A, 415VAC, resistive, 50°C	100x10 <sup>3</sup>
RM5	A (NO)	16A, 277VAC, general purpose, 50°C	30x10 <sup>3</sup>
RM6	A (NO)	10A, 415VAC, resistive, 50°C	100x10 <sup>3</sup>
RM6	A (NO)	10A, 277VAC, general purpose, 50°C	30x10 <sup>3</sup>
RMB	A (NO)	16A, 277VAC, general purpose, 25°C	30x10 <sup>3</sup>

**Mechanical endurance**

DC coil	20x10 <sup>6</sup> operations
AC coil	20x10 <sup>6</sup> operations



**Coil Data**

Coil voltage range	6 to 220 VDC 6 to 400 VAC
Operative range, IEC 61810	90 to 100% of rated coil voltage
Coil insulation system according UL	class 130 (B)

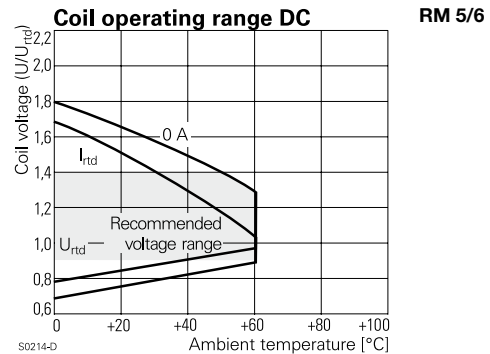
**Coil versions, DC coil**

STD	LED bipolar	Coil code	Rated voltage VDC	Coil resistance Ω±10% <sup>1)</sup>	Rated coil power W
<b>Coil versions, DC coil, RM5, RM6</b>					
006	L06	0A6	6	24	1.5
012	L12	0B2	12	86	1.7
024	L24	0C4	24	345	1.7
048	L48	0E8	48	1340	1.7
060	L60	0G0	60	2200	1.6
110	M10	1B0	110	7300	1.7
221	N21	2C1	220	30000 <sup>1)</sup>	1.6

**Coil versions, DC coil, RMB**

024	-	-	24	250	2.3
Operate voltage, DC coil			75% of rated coil voltage		
Release voltage, DC coil			10% of rated coil voltage		

- 1) Coil resistance ±15%,
  - 2) Protection diode PD; standard polarity: +A1 / -A2
- All figures are given for coil without pre-energization, at ambient temperature +23°C



**Power Relay RM 5/6/B 3mm (Continued)**

**Coil Data (continued)**

**Coil versions, AC coil**

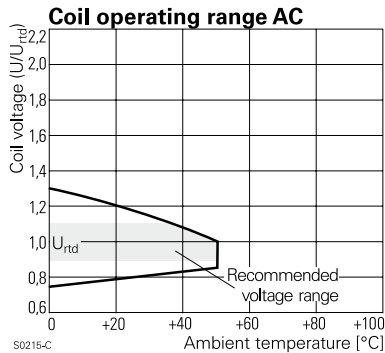
Coil code	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD	LED	VAC	50/60Hz	50/60Hz	50/60Hz
		VAC	VAC	$\Omega \pm 10\%^{1)}$	VA

**Coil versions, AC-coil, RM5, RM6**

Coil code	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
506	R06	6	4.8/5.1	2.4	4.7
512	R12	12	9.6/10.2	4.8	19.5
524	R24	24	19.2/20.4	9.6	80
548	R48	48	38.4/40.8	19.2	320
560	R60	60	48.0/51.0	24.0	500
615	S15	115	92.0/97.8	46.0	1850
730	T30	230	184.0/195.5	92.0	7500
900	V00	400	320.0/340.0	160.0	23500 <sup>1)</sup>

<sup>1)</sup> Coil resistance  $\pm 15\%$

All figures are given for coil without pre-energization, at ambient temperature +23°C



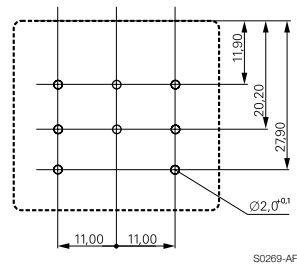
Packaging unit 10/25 pcs.

**Accessories**

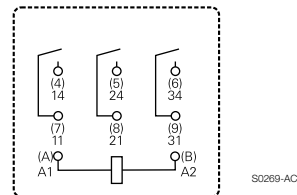
For details see datasheet [Accessories Power Relay RM](#)  
Note: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

**PCB layout / terminal assignment**

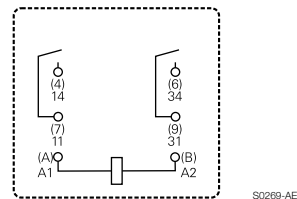
Bottom view on pins



3 form A (3 NO) contacts



2 form A (2 NO) contacts



**Insulation Data**

	RM5	RM6	RMB
Initial dielectric strength			
between open contacts	2500Vrms	2500Vrms	2500Vrms
between contact and coil	2500Vrms	2500Vrms	2500Vrms
between adjacent contacts	2500Vrms	2500Vrms	2500Vrms
Initial surge withstand voltage			
between contact and coil	5000V	4000V	4000V
between adjacent contacts, RM5	6000V	-	-
Clearance/creepage			
between contact and coil		$\geq 4.0/14.9\text{mm}$	
between adjacent contacts		$\geq 6.1/7.3\text{mm}$	
Material group of insulation parts		IIIa	

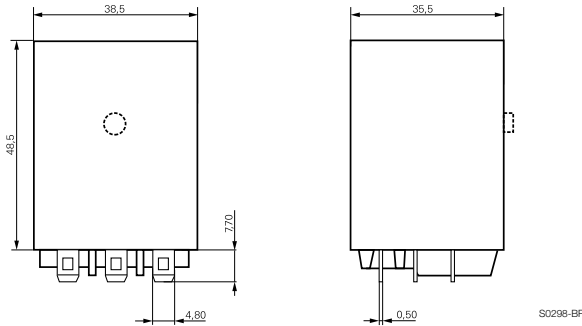
**Other Data**

	RM5	RM6	RMB
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.tycoelectronics.com/customersupport/rohssupportcenter">www.tycoelectronics.com/customersupport/rohssupportcenter</a>			
Ambient temperature			
DC coil	-45 to 60°C	-45 to 60°C	-45 to 50°C
AC coil	-45 to 50°C	-45 to 50°C	-
Category of environmental protection			
IEC 61810		RT1 - dust protected	
Vibration resistance (functional)		12 g, 30 to 150 Hz	
Terminal type		PCB-THT, plug-in, quick-connect (QC)	
Cover retention, pull/push force		100/100N	
Mounting position		versions with test button not to be mounted with button on top	
Weight		81g	
Resistance to soldering heat THT IEC 60068-2-20		270°C/10s	

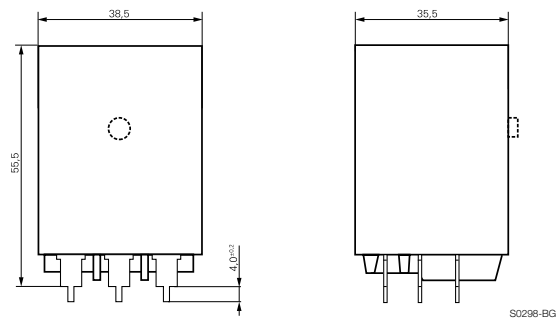
**Power Relay RM 5/6/B 3mm** (Continued)

**Dimensions**

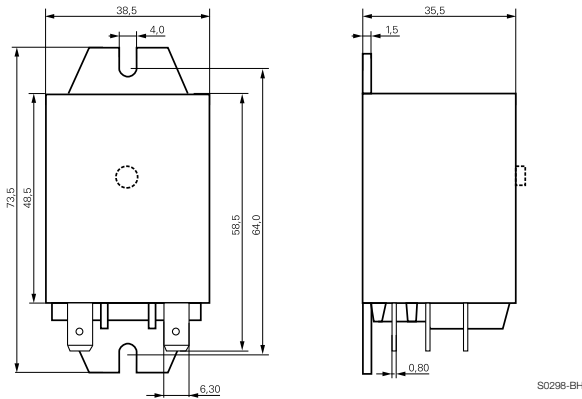
Plain cover, plug-in version



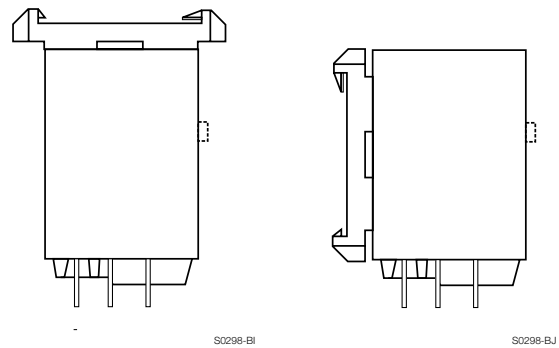
PCB version



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



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



**Product code structure**

Typical product code **RM 5 0 2 524**

**Type**

**RM** Power relay RM5/6/B 3mm

**Contact arrangement**

**5** 2 form A contacts (2 NO), 16A      **6** 3 form A contacts (3 NO), 10A  
**B** 3 form A contacts (3 NO), 16A

**Version**

**0** AgCdO, without test button, without mechanical indicator  
**2** AgNi90/10, without test button, without mechanical indicator  
**3** AgCdO, with test button, without mechanical indicator  
**7** AgNi90/10, with test button, without mechanical indicator

**Enclosure**

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

**Coil**

Coil code: please refer to coil versions table

**Power Relay RM 5/6/B 3mm** (Continued)

Product key	Contacts	Version	Enclosure	Coil	Coil	Part number
RM502024	2 form A,	Without	Plain cover	DC coil	24VDC	6-1393146-1
RM502524	2 NO contacts	test button	quick c. 4.8mm	AC coil	24VAC	6-1393146-2
RM502615	16A	without			115VAC	6-1393146-3
RM502730		mech.indicator			230VAC	6-1393146-4
RM503024			Mounting brackets	DC coil	24VDC	8-1393148-0
RM503615			quick c. 4.8mm	AC coil	115VAC	6-1393146-5
RM505024			Mounting brackets	DC coil	24VDC	8-1393148-3
RM505615			quick c. 6.3mm	AC coil	115VAC	6-1393146-6
RM505730					230VAC	9-1393149-9
RM507024			PCB version	DC coil	24VDC	1393844-1
RM507524				AC coil	24VAC	5-1415008-1
RM507615					115VAC	6-1415015-1
RM507730					230VAC	1415008-1
RM535024		With test button	Mounting brackets	DC coil	24VDC	7-1393146-2
RM535524		w/o mech.indicator	quick c. 6.3mm	AC coil	24VAC	9-1393148-0
RM602024	3 form A,	Without	Plain cover	DC coil	24VDC	1393844-4
RM602615	3 NO contacts	test button	quick c. 4.8mm	AC coil	115VAC	9-1393148-7
RM605730	10A	without	Mount.br. q.c.6.3		230VAC	7-1393146-6
RM607024		mechanical ind.	PCB version	DC coil	24VDC	1393844-6
RM607524				AC coil	24VAC	7-1393146-8
RM607615					115VAC	8-1415015-1
RM607730					230VAC	7-1393146-9
RM632024		With	Plain cover	DC coil	24VDC	8-1393146-0
RM632730		test button	quick c. 4.8mm	AC coil	230VAC	1393149-7
RM635024		without	Mount.br. q.c.6.3	DC coil	24VDC	7-1393107-7
RM637024		mech.indicator	PCB version		24VDC	1393149-9
RMB07024	3 A (NO) cont. 16A	W/o test, indicator				2-1415543-7