

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.



Approvals

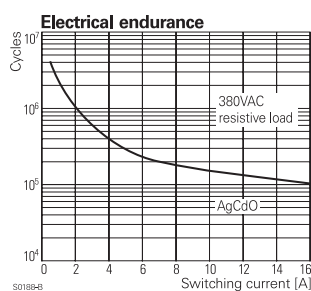
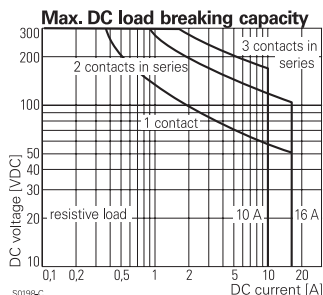
VDE Cert. No. 40003144, UL E214025
Technical data of approved types on request.

Contact Data	RM5	RM6	RMB
Contact arrangement	2 form A 2 NO	3 form A 3 NO	3 form A 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	AgNi90/10 in preparation		
Min. recommended contact load	24VDC/100mA		
Frequency of operation, with/without load	960/6000h ⁻¹		
Operate/release time max., DC coil	20/5ms		
Bounce time max., form A, DC coil	4ms		

Contact ratings

Type	Contact	Load	Cycles
IEC 61810			
RM50	A (NO)	16A, 230/400VAC, cosφ=1, 35°C	100x10 ³
RM50	A (NO)	10A, 48VDC, 70°C	30x10 ³
RM50	A (NO)	10A, 400VAC, 70°C	30x10 ³
RM60	A (NO)	10A, 230/400VAC, cosφ=1, 35°C	100x10 ³
RM60	A (NO)	16A, 400VAC same polarity, cosφ=1, 50°C	100x10 ³
UL 508			
RM5	A (NO)	16A, 415VAC, resistive, 50°C	100x10 ³
RM5	A (NO)	16A, 277VAC, general purpose, 50°C	30x10 ³
RM6	A (NO)	10A, 415VAC, resistive, DC-coil, 70°C	100x10 ³
RM6	A (NO)	10A, 415VAC, resistive, AC-coil, 50°C	100x10 ³
RM6	A (NO)	10A, 277VAC, gen. purp., DC-coil, 70°C	30x10 ³
RM6	A (NO)	10A, 277VAC, gen. purp., AC-coil, 50°C	30x10 ³
RMB	A (NO)	16A, 277VAC, general purpose, 25°C	30x10 ³

Mechanical endurance
DC coil 20x10⁶ operations
AC coil 20x10⁶ 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)

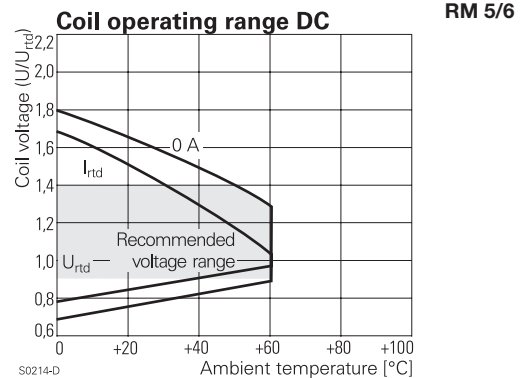
Coil versions, DC coil

STD	LED bipolar	Coil code	Rated voltage VDC	Coil resistance Ω±10% ¹⁾	Rated power W
		PD ²⁾			
		LED+			
		PD ²⁾			
Coil versions, DC coil, RM5, RM6					
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 ¹⁾	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.



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Coil Data (continued)

Coil versions, AC coil

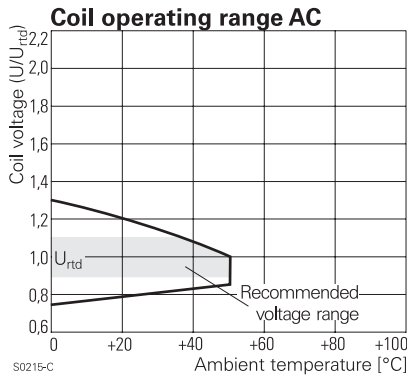
Coil code	Rated voltage	Operate voltage	Release voltage	Coil resistance	Rated coil power
STD	LED	VAC	VAC	VAC	50/60Hz
				$\Omega \pm 10\%^{1)}$	VA

Coil versions, AC-coil, RM5, RM6

506	R06	6	4.8/5.1	1.8	4.7	2.86/2.36
512	R12	12	9.6/10.2	3.6	19.5	2.71/2.27
524	R24	24	19.2/20.4	7.2	80	2.62/2.00
548	R48	48	38.4/40.8	14.4	320	2.60/2.17
560	R60	60	48.0/51.0	18.0	500	2.62/2.20
615	S15	115	92.0/97.8	34.5	1850	2.65/2.22
730	T30	230	184.0/195.5	69.0	7500	2.69/ 2.26
900	V00	400	320.0/340.0	120.0	23500 ¹⁾	2.61/2.20

1) Coil resistance $\pm 15\%$.

All figures are given for coil without pre-energization, at ambient temperature $+23^\circ\text{C}$.



Accessories

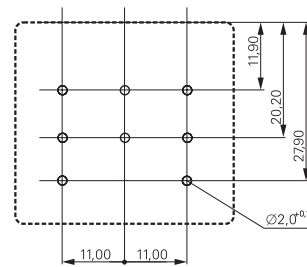
For details see datasheet

[Accessories Power Relay RM](#)

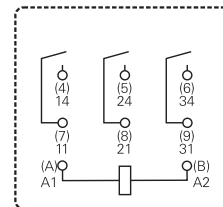
Note: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

PCB layout / terminal assignment

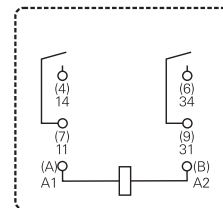
Bottom view on pins



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	4000V	4000V	4000V
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

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

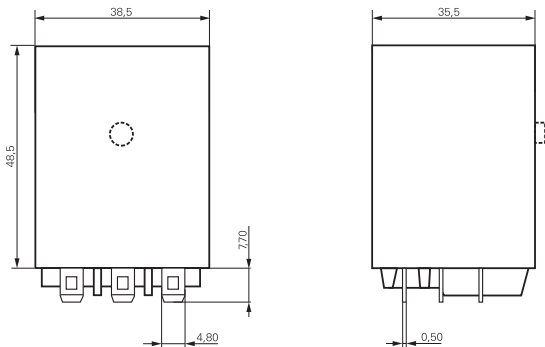
Ambient temperature for mounting/handling in operation	-20 to 40°C
DC coil	-40 to 50°C
AC coil	-40 to 50°C

Category of environmental protection IEC 61810	RTI - 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	$270^\circ\text{C}/10\text{s}$
Packaging unit	10/25 pcs.

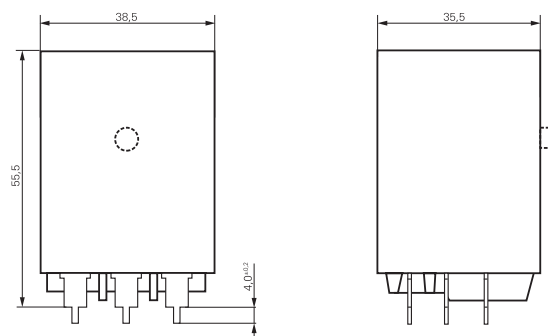
Power Relay RM 5/6/B 3mm (Continued)

Dimensions

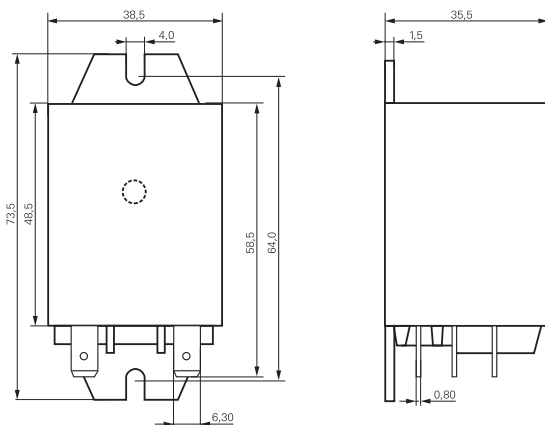
Plain cover, plug-in version



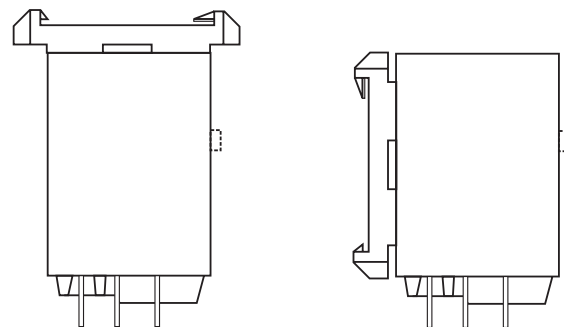
PCB version



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				5	0	2	524
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	QC 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			QC 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	QC 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	QC 4.8mm	AC coil	115VAC	9-1393148-7
RM605730	10A	without	Mount.br. q.c.6.3		230VAC	7-1393146-6
RM607024		mech. indicator	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	QC 4.8mm	AC coil	230VAC	1393149-7
RM635024		without	Mount.br.QC 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