

**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 (for RMB in preparation)  
Technical data of approved types on request.

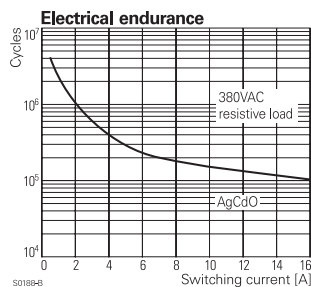
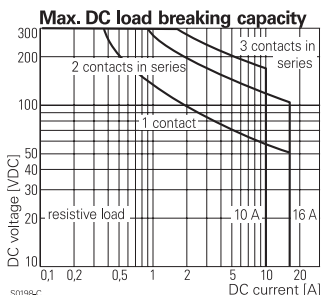
| Contact Data                              | RM5  | RM6              | RMB              |
|---|--|------------------|------------------|
| Contact arrangement                       | 2 form A<br>2 NO   | 3 form A<br>3 NO | 3 form A<br>3 NO |
| Contact gap                               | 3mm  | 3mm              | 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,<br>AgNi90/10 for RM5 (VDE for RM6 and RMB 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> |         |   |                     |
| RM5              | A (NO)  | 16A, 230/400VAC, cosφ=1, 35°C           | 100x10 <sup>3</sup> |
| RM5              | A (NO)  | 10A, 48VDC, 70°C                        | 30x10 <sup>3</sup>  |
| RM5              | A (NO)  | 10A, 400VAC, 70°C                       | 30x10 <sup>3</sup>  |
| RM60             | A (NO)  | 10A, 230/400VAC, cosφ=1, 35°C           | 100x10 <sup>3</sup> |
| RMB0             | A (NO)  | 16A, 400VAC same polarity, cosφ=1, 50°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, DC-coil, 70°C   | 100x10 <sup>3</sup> |
| RM6              | A (NO)  | 10A, 415VAC, resistive, AC-coil, 50°C   | 100x10 <sup>3</sup> |
| RM6              | A (NO)  | 10A, 277VAC, gen. purp., DC-coil, 70°C  | 30x10 <sup>3</sup>  |
| RM6              | A (NO)  | 10A, 277VAC, gen. purp., AC-coil, 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<br>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 power W |
|---|-------------|------------------|-------------------|-------------------------------------|---------------|
|   |             | PD <sup>2)</sup> |                   |                                     |               |
|   |             | LED+             |                   |                                     |               |
|   |             | PD <sup>2)</sup> |                   |                                     |               |
| <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**

|     |   |   |    |      |     |
|-----|---|---|----|------|-----|
| 012 | - | - | 12 | 62.6 | 2.3 |
| 024 | - | - | 24 | 250  | 2.3 |

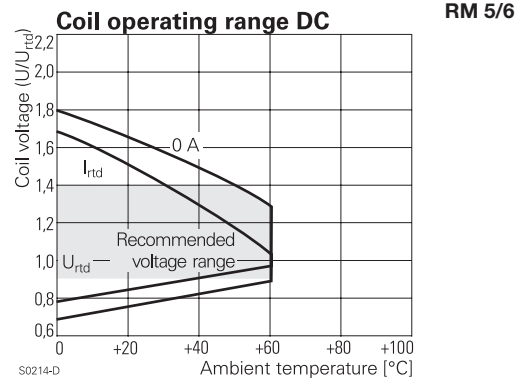
Operate voltage, DC coil 75% of rated coil voltage

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**

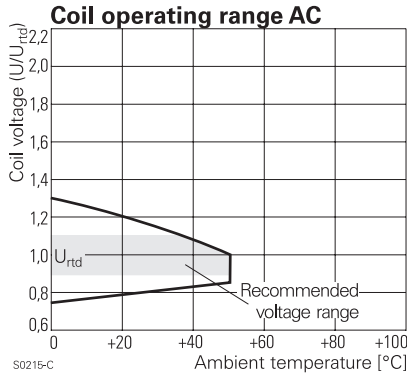
| Coil code | Rated voltage | Operate voltage | Release voltage | Coil resistance        | Rated coil power |
|-----------|---------------|-----------------|-----------------|------------------------|------------------|
| STD       | LED           | VAC             | VAC             | VAC                    | 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 <sup>1)</sup> | 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**

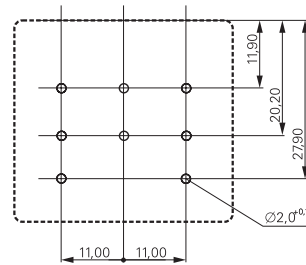
For details see datasheet

[Accessories Power Relay RM](#)

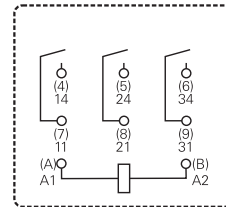
Note: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

**PCB layout / terminal assignment**

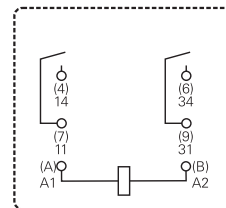
Bottom view on pins



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                     |          |

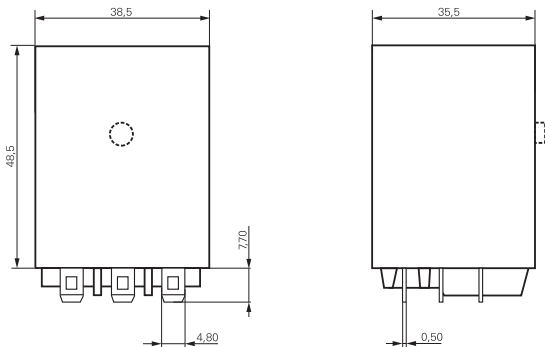
**Other Data**

|   | 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.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a> |                           |  |                           |
| Ambient temperature for mounting/handling in operation  |                           | -20 to $40^\circ\text{C}$                                      |                           |
| DC coil   | -40 to $50^\circ\text{C}$ | -40 to $60^\circ\text{C}$                                      | -40 to $50^\circ\text{C}$ |
| AC coil   | -40 to $50^\circ\text{C}$ | -40 to $50^\circ\text{C}$                                      | -                         |
| 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.   |                           |

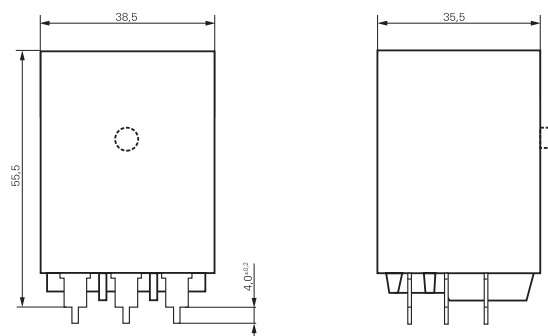
**Power Relay RM 5/6/B 3mm** (Continued)

**Dimensions**

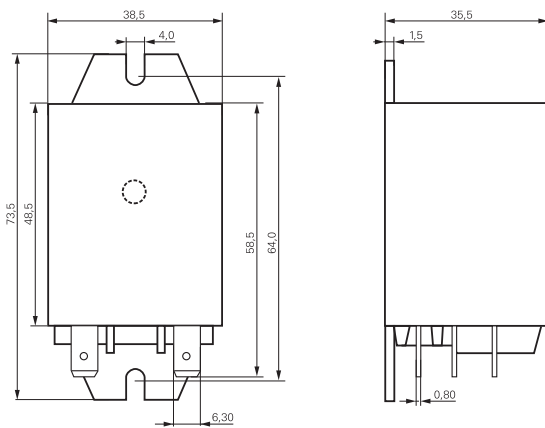
Plain cover, plug-in version



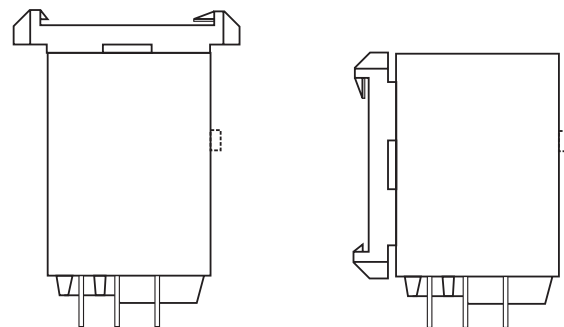
PCB version



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**

|                            |   |                                 |                                 |  |
|----------------------------|---|---------------------------------|---------------------------------|--|
| <b>Type</b>                | RM Power relay RM5/6/B 3mm  |                                 |                                 |  |
| <b>Contact arrangement</b> | 5 2 form A contacts (2 NO), 16A   | 6 3 form A contacts (3 NO), 10A | B 3 form A contacts (3 NO), 16A |  |
| <b>Version</b>             | 0 AgCdO, without test button, without mechanical indicator<br>2 AgNi90/10, without test button, without mechanical indicator<br>3 AgCdO, with test button, without mechanical indicator<br>7 AgNi90/10, with test button, without mechanical indicator  |                                 |                                 |  |
| <b>Enclosure</b>           | 2 Plain cover, 4.8mm quick connect terminals<br>3 Cover with mounting brackets, 4.8mm quick connect terminals<br>5 Cover with mounting brackets, 6.3mm quick connect terminals<br>7 PCB version<br>8 Cover with DIN-snap-on attachment, horizontal, 6.3mm quick connect terminals<br>9 Cover with DIN-snap-on attachment, vertical, 6.3mm quick connect terminals |                                 |                                 |  |
| <b>Coil</b>                | Coil code: please refer to coil versions table  |                                 |                                 |  |

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

| Product key | Contacts           | Cont. material | Version             | Enclosure              | Coil    | Coil   | Part number |
|-------------|--------------------|----------------|---------------------|------------------------|---------|--------|-------------|
| RM502024    | 2 form A,          | AgCdO          | Without             | Plain cover            | DC coil | 24VDC  | 6-1393146-1 |
| RM522012    | 2 NO contacts      | AgNi           | test button         | QC 4.8mm               |         | 12VDC  | 2-1415546-4 |
| RM502524    | 16A                | AgCdO          | without             |                        | AC coil | 24VAC  | 6-1393146-2 |
| RM502615    |                    | AgCdO          | mech. indicator     |                        |         | 115VAC | 6-1393146-3 |
| RM502730    |                    | AgCdO          |                     |                        |         | 230VAC | 6-1393146-4 |
| RM503024    |                    | AgCdO          |                     | Mounting brackets      | DC coil | 24VDC  | 8-1393148-0 |
| RM503615    |                    | AgCdO          |                     | quick c. 4.8mm         | AC coil | 115VAC | 6-1393146-5 |
| RM505024    |                    | AgCdO          |                     | Mounting brackets      | DC coil | 24VDC  | 8-1393148-3 |
| RM525012    |                    | AgNi           |                     | QC 6.3mm               | DC coil | 12VDC  | 5-1415544-6 |
| RM505615    |                    | AgCdO          |                     |                        | AC coil | 115VAC | 6-1393146-6 |
| RM505730    |                    | AgCdO          |                     |                        |         | 230VAC | 9-1393149-9 |
| RM525730    |                    | AgNi           |                     |                        |         | 230VAC | 2-1415546-5 |
| RM507024    |                    | AgCdO          |                     | PCB version            | DC coil | 24VDC  | 1393844-1   |
| RM527024    |                    | AgNi           |                     |                        |         | 24VDC  | 2-1415546-6 |
| RM507524    |                    | AgCdO          |                     |                        | AC coil | 24VAC  | 5-1415008-1 |
| RM507615    |                    | AgCdO          |                     |                        |         | 115VAC | 6-1415015-1 |
| RM507730    |                    | AgCdO          |                     |                        |         | 230VAC | 1415008-1   |
| RM528730    |                    | AgNi           |                     | DIN-snap-on horizontal |         | 230VAC | 2-1415546-7 |
| RM535024    |                    | AgCdO          | With test button    | Mounting brackets      | DC coil | 24VDC  | 7-1393146-2 |
| RM535524    |                    | AgCdO          | w/o mech.indicator  | QC 6.3mm               | AC coil | 24VAC  | 9-1393148-0 |
| RM602024    | 3 form A,          | AgCdO          | Without             | Plain cover            | DC coil | 24VDC  | 1393844-4   |
| RM622024    | 3 NO contacts      | AgNi           | test button         | QC 4.8mm               |         | 24VDC  | 2-1415546-8 |
| RM602615    | 10A                | AgCdO          | without             |                        | AC coil | 115VAC | 9-1393148-7 |
| RM605730    |                    | AgCdO          | mech. indicator     | Mount.br. q.c.6.3      |         | 230VAC | 7-1393146-6 |
| RM607024    |                    | AgCdO          |                     | PCB version            | DC coil | 24VDC  | 1393844-6   |
| RM627012    |                    | AgNi           |                     |                        |         | 12VDC  | 2-1415546-9 |
| RM627730    |                    | AgNi           |                     |                        |         | 230VAC | 3-1415546-0 |
| RM607524    |                    | AgCdO          |                     |                        | AC coil | 24VAC  | 7-1393146-8 |
| RM607615    |                    | AgCdO          |                     |                        |         | 115VAC | 8-1415015-1 |
| RM607730    |                    | AgCdO          |                     |                        |         | 230VAC | 7-1393146-9 |
| RM632024    |                    | AgCdO          | With                | Plain cover            | DC coil | 24VDC  | 8-1393146-0 |
| RM632730    |                    | AgCdO          | test button         | QC 4.8mm               | AC coil | 230VAC | 1393149-7   |
| RM635024    |                    | AgCdO          | without             | Mount.br.QC 6.3        | DC coil | 24VDC  | 7-1393107-7 |
| RM637024    |                    | AgCdO          | mech. indicator     | PCB version            |         | 24VDC  | 1393149-9   |
| RMB07012    | 3 A (NO) cont. 16A | AgCdO          | W/o test, indicator |                        |         | 12VDC  | 1-1415545-6 |
| RMB07024    |                    | AgCdO          |                     |                        |         | 24VDC  | 2-1415543-7 |

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