

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.



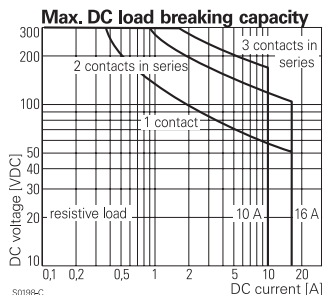
Approvals

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 | | |
| 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 | | | |
| RM5 | A (NO) | 16A, 230/400VAC, cosφ=1, 35°C | 100x10 ³ |
| RM5 (DC) | A (NO) | 12A, 400VAC, cosφ=1, same. pol., 70°C | 100x10 ³ |
| RM5 | A (NO) | 10A, 48VDC, 70°C | 30x10 ³ |
| RM5 | A (NO) | 10A, 400VAC, 70°C | 30x10 ³ |
| RM6 | A (NO) | 10A, 230/400VAC, cosφ=1, 35°C to 50°C | 100x10 ³ |
| RM6 (DC) | A (NO) | 12A, 400VAC, cosφ=1, same. pol., 50°C | 100x10 ³ |
| RMB | A (NO) | 16A, 400VAC same polarity, cosφ=1, 40°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 | | | 15x10 ⁶ operations |
| AC coil | | | 10x10 ⁶ operations |



Coil Data

| | |
|-------------------------------------|----------------------------------|
| Coil voltage range | 6 to 220 VDC 12 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 |

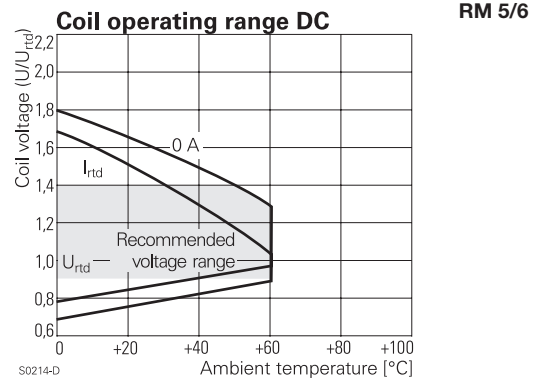
Coil versions, DC coil, RMB

| | | | | | |
|-----|---|---|----|------|-----|
| 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.



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Coil Data (continued)

Coil versions, AC coil

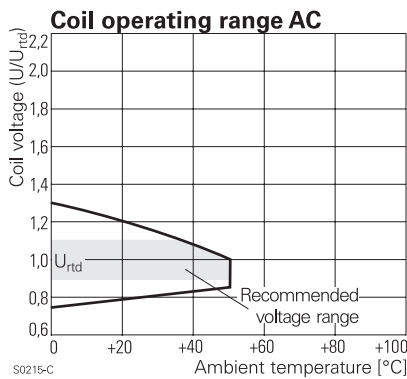
| Coil code | Rated voltage | Operate voltage | Release voltage | Coil resistance | Rated coil power |
|-----------|---------------|-----------------|-----------------|------------------------|------------------|
| STD | LED | VAC | VAC | VAC | 50/60Hz |
| | | | | $\Omega \pm 10\%^{1)}$ | VA |

Coil versions, AC-coil, RM5, RM6

| | | | | | | |
|-----|-----|-----|-------------|-------|---------------------|-----------|
| 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°C.



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 www.te.com/customer-support/rohssupportcenter | | | |
| Ambient temperature for mounting/handling | | -20 to 40°C | |
| in operation | | | |
| DC coil | -40 to 50°C | -40 to 60°C | -40 to 40°C |
| AC coil | -40 to 50°C | -40 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 | |
| Packaging unit | | 10/25 pcs. | |

Accessories

Sockets for Plug-in version RM**2:

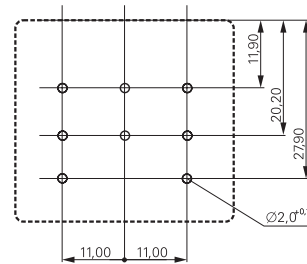
For details see datasheet

[Accessories Power Relay RM](#)

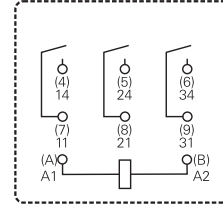
Note: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

PCB layout / terminal assignment

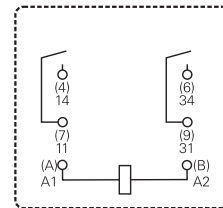
Bottom view on pins



3 form A (3 NO) contacts



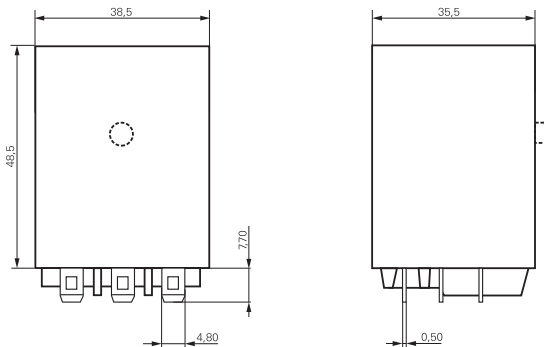
2 form A (2 NO) contacts



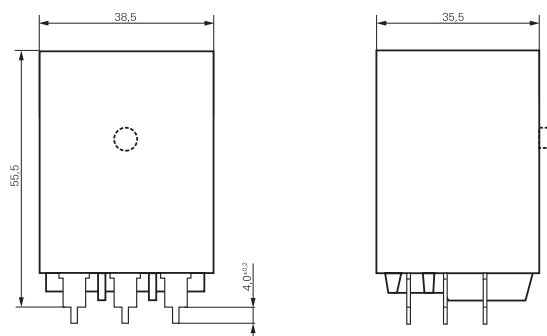
Power Relay RM 5/6/B 3mm (Continued)

Dimensions

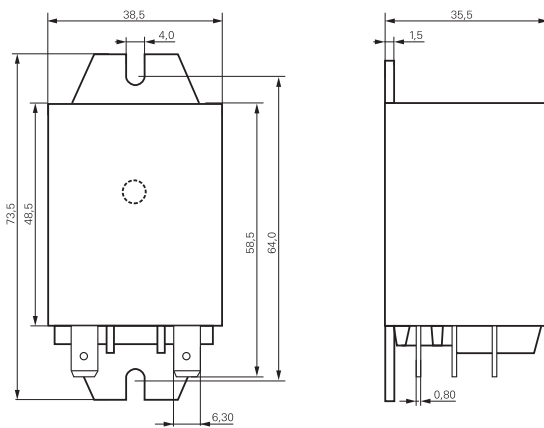
Plain cover, plug-in version



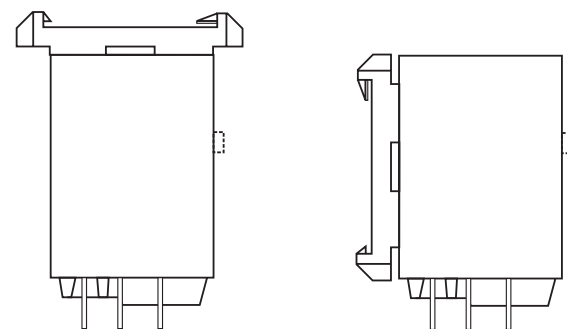
PCB version



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 2 2 524**

| | | | | | |
|----------------------------|---|--|----------|----------|------------|
| Type | RM Power relay RM5/6/B 3mm | | | | 524 |
| Contact arrangement | 5 2 form A contacts (2 NO), 16A | 6 3 form A contacts (3 NO), 10A | 2 | 2 | |
| | | B 3 form A contacts (3 NO), 16A | | | |
| Version | 0 Discontinued: AgCdO, without test button, without mechanical indicator ¹⁾ 2 AgNi90/10, without test button, without mechanical indicator 3 Discontinued: AgCdO, with test button, without mechanical indicator ¹⁾ 7 AgNi90/10, with test button, without mechanical indicator | | | | |
| Enclosure | 2 Plain cover, 4.8mm quick connect terminals, Plug-in version (see Accessories Power Relay RM) 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 | | | | |

1) AgCdO contacts are discontinued and replaced with AgNi contacts (see PCN E-18-003016)

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

| Product code | Contacts | Cont. material | Version | Enclosure | Coil | Coil voltage | Part number |
|--------------|---------------|----------------|---------------------|---------------------------|---------|--------------|-------------|
| RM522012 | 2 form A | AgNi | Without | Plain cover | DC-coil | 12VDC | 2-1415546-4 |
| RM522024 | 2 NO contacts | AgNi | test button | 4.8 mm terminal | DC-coil | 24VDC | 2-1415547-2 |
| RM525012 | | AgNi | | Mounting brackets | DC-coil | 12VDC | 5-1415544-6 |
| RM525024 | | AgNi | | quick con. 6.3 mm | DC-coil | 24VDC | 8-1415545-7 |
| RM525730 | | AgNi | | | AC-coil | 24VAC | 2-1415546-5 |
| RM527024 | | AgNi | | PCB version | DC-coil | 24VDC | 2-1415546-6 |
| RM528730 | | AgNi | | DIN-snap-on horizontal | AC-coil | 230VAC | 2-1415546-7 |
| RM622024 | 3 form A | AgNi | Without | Plain cover | DC-coil | 24VDC | 2-1415546-8 |
| | 3 NO contacts | | test button | 4.8 mm terminal | | | |
| RM627012 | | AgNi | | PCB version | DC-coil | 12VDC | 2-1415546-9 |
| RM627024 | | AgNi | | | DC-coil | 24VDC | 5-1415538-2 |
| RM627730 | | AgNi | | | AC-coil | 230VAC | 3-1415546-0 |
| RMB27012 | 3 form A | AgNi | W/o test button | PCB version | DC-coil | 12VDC | 2-1415547-7 |
| RMB27024 | 3 NO contacts | AgNi | W/o mech. Indicator | 16A | DC-coil | 24VDC | 5-1415546-5 |

This list represents the most common types and does not show all variants covered by this datasheet.

Other types on request