

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

VDE REG.-Nr. 40003144, UL E214025
Technical data of approved types on request

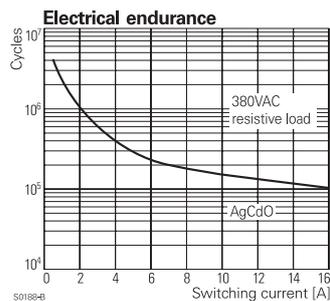
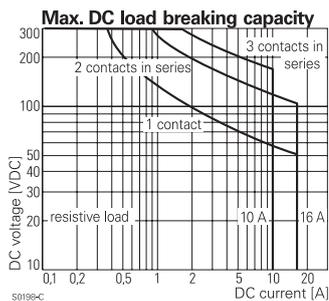
| Contact Data | RM5 | RM6 | RMB |
|---|--------------------------|------------------|------------------|
| Contact arrangement | 2 form A 2 NO | 3 form A 3 NO | 3 form A 3 NO |
| Contact gap | 3mm | 3mm | 3mm |
| Rated voltage | 400VAC | 230VAC | 230VAC |
| Max. switching voltage | 440VAC | 400VAC | 400VAC |
| Rated current | 16A | 10A | 16A |
| Limiting making current, max 20ms | 30A | 25A | 30A |
| Switching power | 6000VA | 3800VA | 6000VA |
| Contact material | AgCdO, | | |
| | 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 |
| RMB0 | 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, 50°C | 100x10 ³ |
| RM6 | A (NO) | 10A, 277VAC, general purpose, 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 | LED+ PD ²⁾ | Rated voltage VDC | Coil resistance Ω±10% ¹⁾ | Rated coil power W |
|---|-------------|-----------|-----------------------|-------------------|-------------------------------------|--------------------|
| Coil versions, DC coil, RM5, RM6 | | | | | | |
| 006 | L06 | 0A6 | LA6 | 6 | 24 | 1.5 |
| 012 | L12 | 0B2 | LB2 | 12 | 86 | 1.7 |
| 024 | L24 | 0C4 | LC4 | 24 | 345 | 1.7 |
| 048 | L48 | 0E8 | LE8 | 48 | 1340 | 1.7 |
| 060 | L60 | 0G0 | LG0 | 60 | 2200 | 1.6 |
| 110 | M10 | 1B0 | MB0 | 110 | 7300 | 1.7 |
| 221 | N21 | 2C1 | NC1 | 220 | 30000 ¹⁾ | 1.6 |

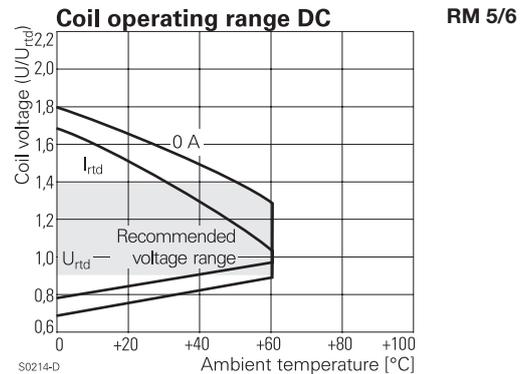
Coil versions, DC coil, RMB

| | | | | | | |
|--------------------------|---|---|---|---------------------------|-----|-----|
| 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



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

Coil Data (continued)

Coil versions, AC coil

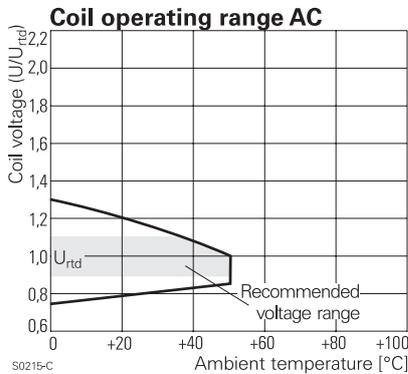
| Coil code | Rated voltage | Operate voltage | Release voltage | Coil resistance | Rated coil power |
|-----------|---------------|-----------------|-----------------|------------------------|------------------|
| STD | LED | 50/60Hz | 50/60Hz | $\Omega \pm 10\%^{1)}$ | 50/60Hz |
| | VAC | VAC | VAC | | 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 | 1.8 | 4.7 |
| 512 | R12 | 12 | 9.6/10.2 | 3.6 | 19.5 |
| 524 | R24 | 24 | 19.2/20.4 | 7.2 | 80 |
| 548 | R48 | 48 | 38.4/40.8 | 14.4 | 320 |
| 560 | R60 | 60 | 48.0/51.0 | 18.0 | 500 |
| 615 | S15 | 115 | 92.0/97.8 | 34.5 | 1850 |
| 730 | T30 | 230 | 184.0/195.5 | 69.0 | 7500 |
| 900 | V00 | 400 | 320.0/340.0 | 120.0 | 23500 ¹⁾ |

1) Coil resistance $\pm 15\%$

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



Packaging unit

10/25 pcs.

Accessories

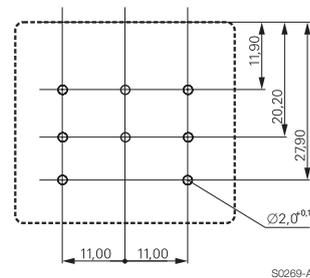
For details see datasheet

[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.

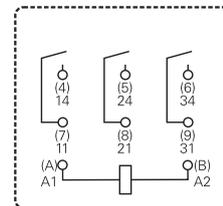
PCB layout / terminal assignment

Bottom view on pins



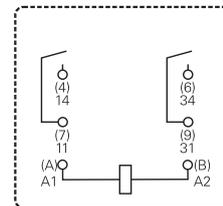
S0269-AF

3 form A (3 NO) contacts



S0269-AC

2 form A (2 NO) contacts



S0269-AE

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 | |

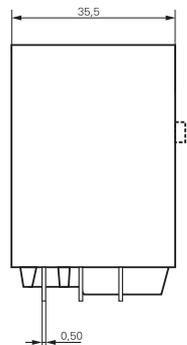
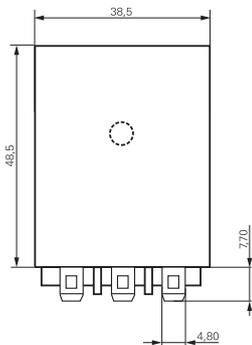
Other Data

| | RM5 | RM6 | RMB |
|---|-------------|--|-------------|
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter | | | |
| Ambient temperature | | | |
| DC coil | -45 to 50°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)

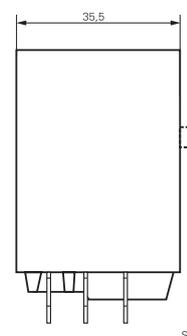
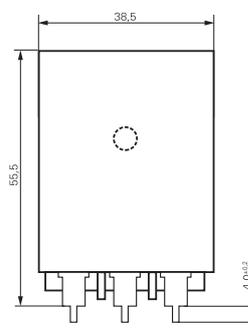
Dimensions

Plain cover, plug-in version



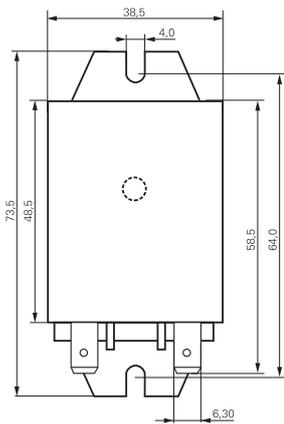
S0298-BF

PCB version



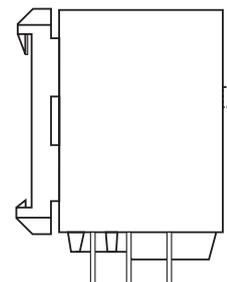
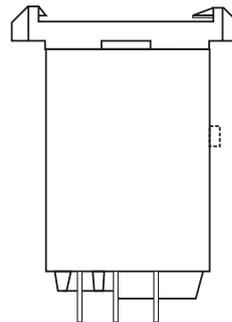
S0298-BG

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



S0298-BH

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



S0298-BI

S0298-BJ

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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |