

Power Relay RM 2/3/7

- 2/3 pole 10/16A, 2 form C (CO) or 3 form C (CO) contacts
- Switching capacity up to 6000VA
- DC or AC coil
- Mechanical indicator
- Push-to-test button
- Plug-in version, PCB terminals, chassis- or DIN-rail mount

Typical applications
 Elevator control, power supplies



F0163-B


Approvals

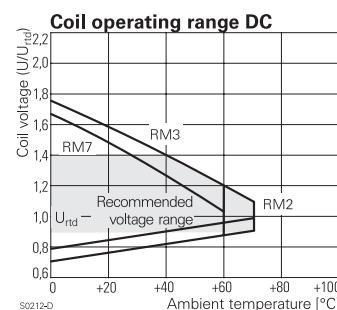
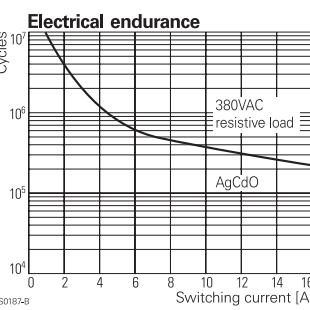
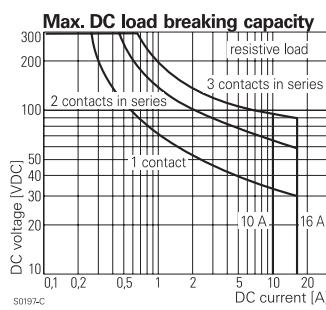
VDE Cert. No. 40003144, UL E214025

Technical data of approved types on request

| Contact Data | RM2 | RM3 | RM7 |
|---|-------------------------|--------------------------|------------------|
| Contact arrangement | 2 form C 2 CO | 3 form C 3 CO | 3 form C 3 CO |
| Rated voltage | 400VAC | | |
| Max. switching voltage | 440VAC | | |
| Rated current | 16A | 10A | 16A |
| Limiting making current, max. 20ms | 40A | 40A | 40A |
| Switching power | 6000VA | 3800VA | 6000VA |
| Contact material | ACdO, AgNi90/10 | AgCdO, in preparation | AgCdO |
| Min. recommended contact load | 24VDC/100mA | | |
| Frequency of operation, with/without load | 960/6000h ⁻¹ | | |
| Operate/release time max., DC coil | 15/10ms | | |
| Bounce time max., DC coil, form A/form B | 4/10ms | | |

Contact ratings

| Type | Contact | Load | Cycles |
|------------------|---------------|--|---------------------|
| IEC 61810 | | | |
| RM20 | C (CO) | 16A, 400VAC, cosφ=1, 35°C | 100x10 ³ |
| RM22 | C (CO) | 16A, 400VAC, cosφ=1, DC-coil, 70°C | 100x10 ³ |
| RM22 | C (CO) | 16A, 400VAC, cosφ=1, AC-coil, 60°C | 50x10 ³ |
| RM30 | C (CO) | 10A, 400VAC, cosφ=1, 35°C | 100x10 ³ |
| RM70 | C (CO) | 16A, 400VAC, cosφ=1, 35°C | 100x10 ³ |
| UL 508 | | | |
| RM2 | A (NO) | 16A, 277VAC, general purpose, 70°C | 30x10 ³ |
| RM2 | A (NO) | 16A, 415VAC, resistive, 70°C | 100x10 ³ |
| RM20 | A (NO) | 10A, 48VDC, 50°C | 30x10 ³ |
| RM3 | C (CO) | 10A, 415VAC, resistive, DC-coil, 70°C | 100x10 ³ |
| RM3 | C (CO) | 10A, 415VAC, resistive, AC-coil, 55°C | 100x10 ³ |
| RM30 | A (NO)/B (NC) | 10A, 277VAC, gen. purp., DC-coil, 70°C | 30x10 ³ |
| RM30 | A (NO)/B (NC) | 10A, 277VAC, gen. purp., AC-coil, 55°C | 30x10 ³ |
| RM7 | A (NO) | 16A, 415VAC, resistive, 50°C | 100x10 ³ |
| RM7 | A (NO)/B (NC) | 16A, 277VAC, general purpose, 50°C | 30x10 ³ |



Power Relay RM 2/3/7 (Continued)
Coil Data (continued)
Coil versions, AC coil

| Coil code | Rated voltage | Operate voltage 50/60Hz | Release voltage 50/60Hz | Coil resistance $\Omega \pm 10\%^{1,2)}$ | Rated coil power 50/60Hz |
|-----------|---------------|-------------------------|-------------------------|--|--------------------------|
| STD | LED | VAC | VAC | | VA |
| 506 | R06 | 6 | 4.8/5.1 | 1.8 | 5.3 2.29/1.98 |

Coil versions, AC-coil, RM2, RM3

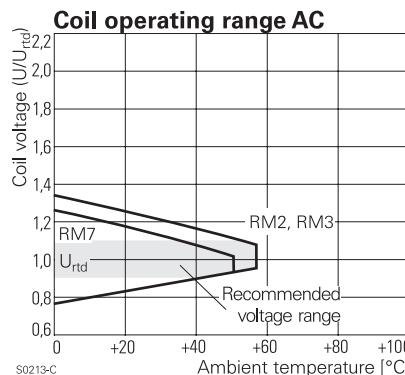
| | | | | | |
|-----|-----|-----|-------------|-------|-------------------------------|
| 506 | R06 | 6 | 4.8/5.1 | 1.8 | 5.3 2.29/1.98 |
| 512 | R12 | 12 | 9.6/10.2 | 3.6 | 24 2.19/1.86 |
| 524 | R24 | 24 | 19.2/20.4 | 7.2 | 86 2.26/1.95 |
| 548 | R48 | 48 | 38.4/40.8 | 14.4 | 345 2.28/1.97 |
| 560 | R60 | 60 | 48.0/51.0 | 18.0 | 544 2.27/1.96 |
| 615 | S15 | 115 | 92.0/97.8 | 34.5 | 2000 2.37/2.00 |
| 730 | T30 | 230 | 184.0/195.5 | 69.0 | 8300 ¹⁾ 2.32/1.96 |
| 900 | V00 | 400 | 320.0/340.0 | 120.0 | 27500 ²⁾ 2.31/1.96 |

Coil versions, AC-coil, RM7

| | | | | | |
|-----|-----|-----|-------------|-------|-------------------------------|
| 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 ²⁾ 2.61/2.20 |

¹⁾ Coil resistance $\pm 12\%$, ²⁾ Coil resistance $\pm 15\%$

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



| Insulation Data | RM2 | RM3 | RM7 |
|--|--------------------------|----------|----------|
| Initial dielectric strength between open contacts | 1500Vrms | 1500Vrms | 1500Vrms |
| between contact and coil | 2500Vrms | 2500Vrms | 2500Vrms |
| between adjacent contacts | 2500Vrms | 2500Vrms | 2500Vrms |
| Initial surge withstand voltage between contact and coil | 5000V | 4000V | 4000V |
| 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 | RM2 | RM3 | RM7 |
|---|-----|-----|-----|
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter | | | |

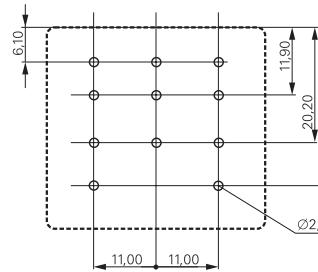
| | | | |
|---|---------------------------------|---------------------------------|---------------------------------|
| Ambient temperature for mounting/handling in operation | -20 to 40°C | | |
| DC coil | -40 to 70°C | -40 to 70°C | -40 to 60°C |
| AC coil | -40 to 60°C | -40 to 55°C | -40 to 50°C |
| Cold storage, IEC 60068-2-1 | 16h/-40°C | 16h/+85°C | 16h/+85°C |
| Dry heat, IEC 60068-2-2 | 16h/+85°C | 16h/+85°C | 16h/+85°C |
| Damp heat cyclic, IEC 60068-2-30, Db, Variant 112/12h +25/+55°C | 16h/+85°C | 16h/+85°C | 16h/+85°C |
| Category of environmental protection IEC 61810 | RTI - dust protected | RTI - dust protected | RTI - dust protected |
| Vibration resistance (functional) form A (NO)/form B (NC) | 5/2g | 5/2g | 12/4g |
| Terminal type | PCB-THT, plug-in, quick-connect | PCB-THT, plug-in, quick-connect | PCB-THT, plug-in, quick-connect |
| Cover retention, pull/push force | 100/100N | 100/100N | 100/100N |
| Weight | 81g | 81g | 81g |
| Resistance to soldering heat THT IEC 60068-2-20 | 270°C/10s | 270°C/10s | 270°C/10s |
| Packaging unit | 10/25 pcs. | 10/25 pcs. | 10/25 pcs. |

Accessories

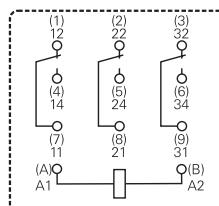
For details see datasheet [Accessories Power Relay RM](#)
Note: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

PCB layout / terminal assignment

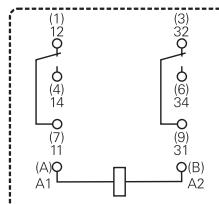
Bottom view on pins



3 form C (CO) contacts

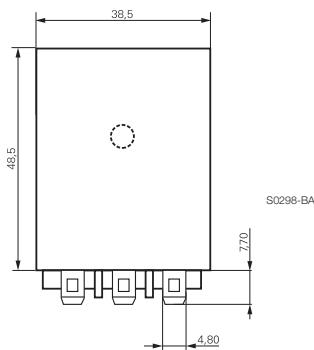


2 form C (CO) contacts

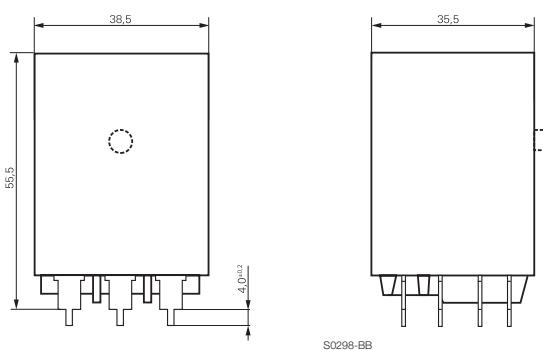


Power Relay RM 2/3/7 (Continued)
Dimensions

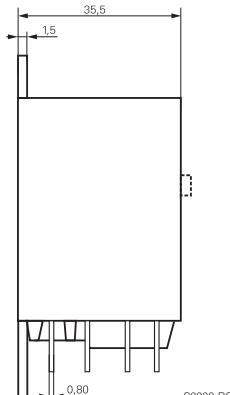
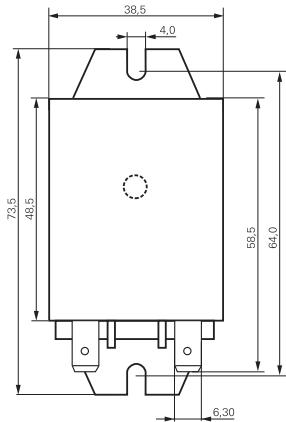
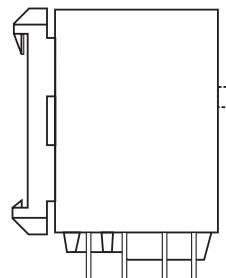
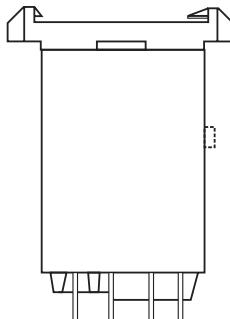
Plain cover, plug-in version



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 | 7 | 0 | 2 | 730 |
| Type | RM Power Relay RM 2/3/7 | | | | |
| Contact arrangement | | | | | |
| 2 | 2 form C contacts (2 CO contacts), 16A | 7 | 3 form C contacts (3 CO contacts), 16A | | |
| 3 | 3 form C contacts (3 CO contacts), 10A | | | | |
| Version | | | | | |
| 0 | AgCdO, without test button | 3 | AgCdO, with test button | | |
| 2 | AgNi 90/10, without test button | 7 | AgNi 90/10, with test button | | |
| 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 2/3/7 (Continued)

| Product code | Contacts | Version | Enclosure | Coil | Coil | Part number |
|--------------|---------------|-------------|-------------------|---------|--------|-------------|
| RM202024 | 2 form C | Without | Plain cover | DC coil | 24VDC | 8-1393149-2 |
| RM202524 | 2 CO contacts | test button | quick c. 4.8mm | AC coil | 24VAC | 1-1393146-9 |
| RM202615 | 16 A | | | | 115VAC | 2-1393146-0 |
| RM202730 | | | | | 230VAC | 1-1393148-4 |
| RM203024 | | | Mounting brackets | DC coil | 24VDC | 1-1393148-6 |
| RM203524 | | | quick c. 4.8mm | AC coil | 24VAC | 2-1393146-5 |
| RM203615 | | | | | 115VAC | 2-1393146-6 |
| RM203730 | | | | | 230VAC | 2-1393146-8 |
| RM205024 | | | Mounting brackets | DC coil | 24VDC | 2-1393146-9 |
| RM205524 | | | quick c. 6.3mm | AC coil | 24VAC | 3-1393146-0 |
| RM205615 | | | | | 115VAC | 3-1393146-1 |
| RM205730 | | | | | 230VAC | 3-1393146-2 |
| RM207024 | | | PCB version | DC coil | 24VDC | 3-1393146-3 |
| RM207615 | | | | AC coil | 115VAC | 8-1393149-5 |
| RM207730 | | | | | 230VAC | 3-1393146-4 |
| RM208024 | | | DIN-snap-on | DC coil | 24VDC | 3-1393146-5 |
| RM208730 | | | horizontal | AC coil | 230VAC | 8-1393149-6 |
| RM209730 | | | DIN vertical | | 230VAC | 3-1393146-6 |
| RM232024 | | With | Plain cover | DC coil | 24VDC | 3-1393146-8 |
| RM232524 | | test button | quick c. 4.8mm | AC coil | 24VAC | 3-1393146-9 |
| RM232615 | | | | | 115VAC | 4-1393146-0 |
| RM232730 | | | | | 230VAC | 3-1393107-4 |
| RM233024 | | | Mounting brackets | DC coil | 24VDC | 3-1393107-5 |
| RM233615 | | | quick c. 4.8mm | AC coil | 115VAC | 4-1393146-2 |
| RM235024 | | | Mounting brackets | DC coil | 24VDC | 8-1393149-8 |
| RM235730 | | | quick c. 6.3mm | AC coil | 230VAC | 4-1393146-5 |
| RM239730 | | | DIN vertical | | 230VAC | 4-1393148-7 |
| RM302024 | 3 form C | Without | Plain cover | DC coil | 24VDC | 8-1393149-9 |
| RM302524 | 3 CO contacts | test button | quick c. 4.8mm | AC coil | 24VAC | 5-1393146-3 |
| RM302615 | 10 A | | | | 115VAC | 5-1393146-4 |
| RM302730 | | | | | 230VAC | 5-1419150-3 |
| RM303024 | | | Mounting brackets | DC coil | 24VDC | 6-1393148-4 |
| RM303615 | | | quick c. 4.8mm | AC coil | 115VAC | 5-1393146-5 |
| RM303730 | | | | | 230VAC | 5-1393146-7 |
| RM307024 | | | PCB version | DC coil | 24VDC | 7-1393148-2 |
| RM307730 | | | | AC coil | 230VAC | 5-1393146-9 |
| RM332024 | | With | Plain cover | DC coil | 24VDC | 9-1393149-2 |
| RM332524 | | test button | quick c. 4.8mm | AC coil | 24VAC | 9-1393149-3 |
| RM332730 | | | | | 230VAC | 9-1393149-4 |
| RM333024 | | | Mount. br. QC4.8 | DC coil | 24VDC | 9-1393149-6 |
| RM335730 | | | Mount. br. QC6.3 | AC coil | 230VAC | 6-1393107-1 |
| RM338730 | | | DIN horizontal | | 230VAC | 7-1393148-7 |
| RM339730 | | | DIN vertical | | 230VAC | 6-1393107-2 |
| RM702024 | 3 form C | Without | Plain cover | DC coil | 24VDC | 8-1393146-5 |
| RM702524 | 3 CO contacts | test button | quick c. 4.8mm | AC coil | 24VAC | 1393844-9 |
| RM702615 | 16 A | | | | 115VAC | 1-1393844-0 |
| RM702730 | | | | | 230VAC | 1-1393844-1 |
| RM703024 | | | Mounting brackets | DC coil | 24VDC | 1-1393844-2 |
| RM703524 | | | quick c. 4.8mm | AC coil | 24VAC | 9-1393146-1 |
| RM703615 | | | | | 115VAC | 9-1393146-2 |
| RM703730 | | | | | 230VAC | 9-1393146-4 |
| RM705024 | | | Mounting brackets | DC coil | 24VDC | 9-1393146-6 |
| RM705524 | | | quick c. 6.3mm | AC coil | 24VAC | 9-1393146-7 |
| RM705615 | | | | | 115VAC | 1-1393844-4 |
| RM705730 | | | | | 230VAC | 1-1393844-5 |
| RM707024 | | | PCB version | DC coil | 24VDC | 9-1393146-8 |
| RM707524 | | | | AC coil | 24VAC | 1393147-1 |
| RM707730 | | | | | 230VAC | 1393147-2 |
| RM708024 | | | DIN horizontal | DC coil | 24VDC | 1393147-4 |
| RM708730 | | | quick c. 6.3mm | AC coil | 230VAC | 1-1419136-0 |
| RM709024 | | | DIN vertical | DC coil | 24VDC | 2-1393149-2 |
| RM709730 | | | | AC coil | 230VAC | 1393147-5 |
| RM732024 | | With | Plain cover | DC coil | 24VDC | 1-1393844-7 |
| RM732524 | | test button | quick c. 4.8mm | AC coil | 24VAC | 1-1393147-0 |
| RM732615 | | | | | 115VAC | 1-1393147-1 |
| RM732730 | | | | | 230VAC | 1-1393844-8 |
| RM733730 | | | Mount.br. QC 4.8 | | 230VAC | 1-1393147-5 |
| RM735024 | | | Mounting brackets | DC coil | 24VDC | 3-1393149-6 |
| RM735524 | | | quick c. 6.3mm | AC coil | 24VAC | 3-1393149-7 |
| RM735730 | | | | | 230VAC | 4-1393149-1 |
| RM737730 | | | PCB version | | 230VAC | 2-1393147-0 |
| RM738024 | | | DIN-snap-on | DC coil | 24VDC | 2-1393844-0 |
| RM738730 | | | horizontal | AC coil | 230VAC | 2-1393147-2 |
| RM739024 | | | DIN-snap-on | DC coil | 24VDC | 4-1393149-5 |
| RM739730 | | | vertical | AC coil | 230VAC | 2-1393844-2 |

Power Relay RM 2/3/7 (Continued)

| Product code | Contacts | Cont. material | Version | Enclosure | Coil | Coil | Part number |
|--------------|---------------|----------------|-------------|-------------------|---------|--------|-------------|
| RM222012 | 2 form C | AgNi | Without | Plain cover | DC-coil | 12VDC | 1-1415546-7 |
| RM222024 | 2 CO contacts | AgNi | test button | 4.8 mm terminal | DC-coil | 24VDC | 1-1415546-8 |
| RM225012 | 16A | AgNi | | Mounting brackets | DC-coil | 12VDC | 1415542-7 |
| RM225024 | | AgNi | | quick c. 6.3 mm | DC-coil | 24VDC | 1415542-8 |
| RM225524 | | AgNi | | | AC-coil | 24VAC | 1-1415546-9 |
| RM225615 | | AgNi | | | AC-coil | 115VAC | 2-1415546-0 |
| RM225730 | | AgNi | | | AC-coil | 230VAC | 1415542-9 |
| RM227024 | | AgNi | | PCB version | DC-coil | 24VDC | 2-1415546-1 |
| RM227730 | | AgNi | | | AC-coil | 230VAC | 2-1415546-2 |
| RM322024 | 3 form C | AgNi | | Plain cover | DC-coil | 24VDC | 2-1415546-3 |
| RM327024 | 3 CO contacts | AgNi | | 4.8 mm terminal | DC-coil | 24VDC | 5-1415538-3 |
| | 10A | AgNi | | | | | |
| RM722012 | 3 form C | AgNi | | Plain cover | DC-coil | 12VDC | 3-1415546-1 |
| RM722024 | 3 CO contacts | AgNi | | 4.8 mm terminal | DC-coil | 24VDC | 3-1415546-2 |
| RM723024 | 16A | AgNi | | Mounting brackets | DC-coil | 24VDC | 3-1415546-3 |
| | | AgNi | | quick c. 6.3 mm | | | |
| RM725024 | | AgNi | | Mounting brackets | DC-coil | 24VDC | 3-1415546-4 |
| RM725615 | | AgNi | | quick c. 6.3 mm | AC-coil | 115VAC | 3-1415546-5 |
| RM725730 | | AgNi | | | AC-coil | 230VAC | 3-1415546-6 |
| RM727024 | | AgNi | | PCB version | DC-coil | 24VDC | 3-1415546-7 |
| RM727730 | | AgNi | | | AC-coil | 230VAC | 3-1415546-8 |
| RM772012 | | AgNi | With | Plain cover | DC-coil | 12VDC | 3-1415546-9 |
| RM772024 | | AgNi | test button | 4.8 mm terminal | DC-coil | 24VDC | 5-1415544-7 |
| RM772060 | | AgNi | | | DC-coil | 60VDC | 2-1415545-1 |
| RM772730 | | AgNi | | | AC-coil | 230VAC | 4-1415546-0 |
| RM772900 | | AgNi | | | AC-coil | 400VAC | 4-1415546-1 |
| RM778024 | | AgNi | | DIN-snap-on | DC-coil | 24VDC | 4-1415546-2 |
| | | | | horizontal | | | |
| RM779730 | | AgNi | | DIN-snap-on | AC-coil | 230VAC | 4-1415546-3 |
| | | | | vertical | | | |

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