

TOP-TECHNIC



PLUGGABLE INTERFACE RELAY XT



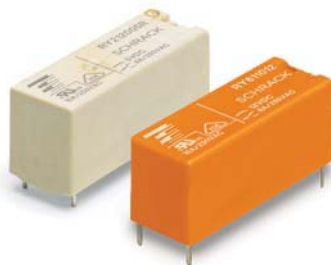
MINIATURE RELAY PT



MULTIMODE RELAY MT



POWER RELAY RM



PCB RELAY RY II



RELAY WITH FORCE GUIDED CONTACTS SR4D/M



MEASURING AND MONITORING RELAY SERIES 5



MEASURING AND MONITORING RELAY SERIES 6

“To assign each deed the proper amount of effort is the secret of vitality.”

Prentice Mulford, American journalist

RELAYS

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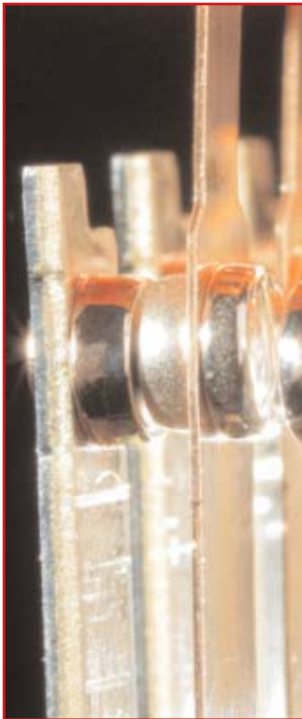
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STRUCTURE OF A RELAY

THE CONTACT MATERIALS



One of the most important criteria of a relay; it is crucial for the application.

Silver-Nickel AgNi90/10

- High resistance against electrical wear, low welding tendency, higher contact resistance than AgNi0.15
- Circuits with medium to high loads, DC and AC circuits, recommended range of application ≥ 12 V, 10 mA

Fine-Grain Silver AgNi0.15

- Relatively low contact resistance, low resistance against aggressive atmosphere
- Universally applicable in medium and low load range, especially in DC circuits, recommended range of application ≥ 12 V, 10 mA

Silver-Tin-Oxide AgSnO2

- Low welding tendency, high wear resistance with heavy loads, low material transfer
- Circuits with high requirements to make- and break-currents, DC and AC loads, recommended range of application ≥ 12 V, 100 mA

Tungsten W

- Highest melting point, for high switching rates and low ON-time
- As prerun contact in circuits with highest make loads

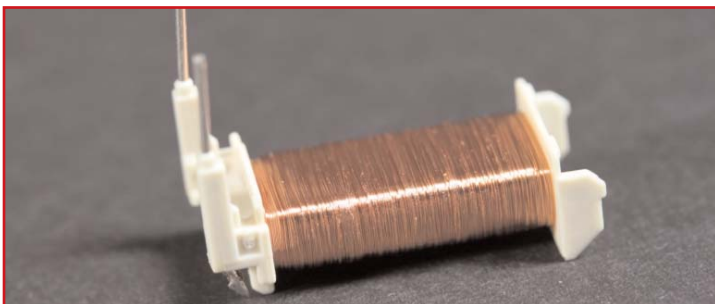
Silver-Cadmium-Oxide AgCdO

- Low welding tendency, high wear resistance
- For switching of inductive loads, AC circuits, ≥ 12 V, 100 mA

Plating materials: Hard gold plated (htv)

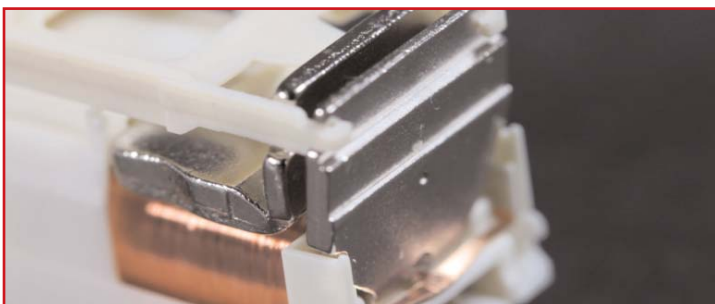
- Very good corrosion resistance, low and stable contact resistance at lowest loads, low tendency to cold welding
- Dry-circuit switching (without current/voltage), recommended range of application ≥ 1 V, 1 mA, 50 mW

THE COIL



Although sensitive power consumption is important, the attraction force is an essential criterion.

THE SPRING AND THE YOKE



The leaf spring offers the assurance of a strong spring force and a long service life of the relay.

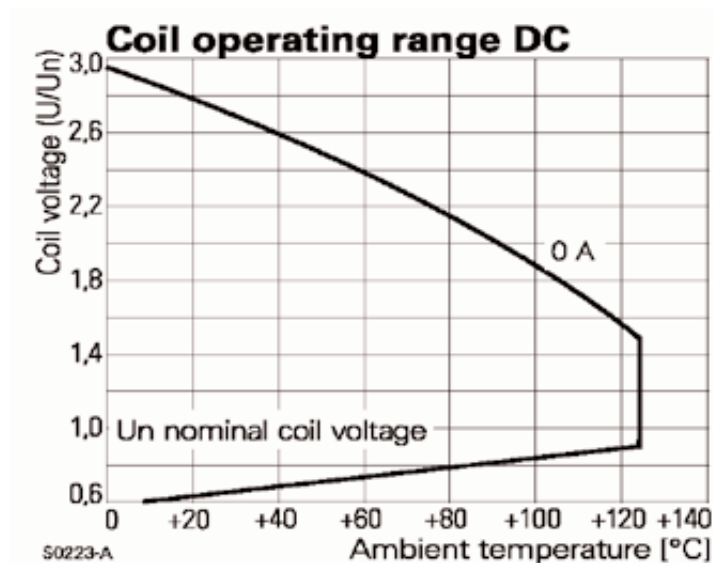
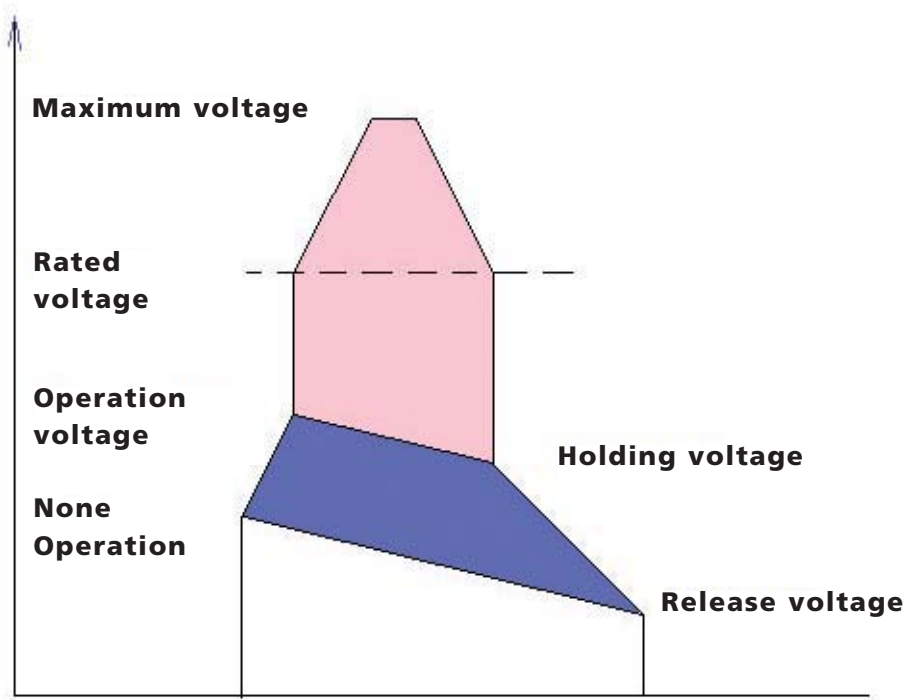
PIN – THE PLUG-IN DESIGN



The pins must be found always according to the requirements on the printed circuit board, or in accordance with the base.

WORKING PRINCIPLE OF A RELAY

WORKING PRINCIPLE OF A COIL DEPENDING ON THE VOLTAGE



Coil types, AC coil 50 Hz

| Coil-code | LED | Rated voltage | Operation voltage 50 Hz | Release voltage 50 Hz | Coil resistance Ohm | Rated power 50 Hz VA | Opt. LED power 50 Hz VA |
|------------|------------|---------------|----------------------------|--------------------------|------------------------|----------------------------|-------------------------------|
| 524 | R24 | 24 | 18.0 | 3.6 | 350±10% | 0.76 | 0.012 |
| 615 | S15 | 115 | 86.3 | 17.3 | 8100±15% | 0.76 | 0.054 |
| 730 | T30 | 230 | 172.5 | 34.5 | 32500±15% | 0.74 | 0.073 |

Data apply to coil without pre-excitation, ambient temperature + 23 °C.

Other coil types on request.

RELAY PACKAGE SNR

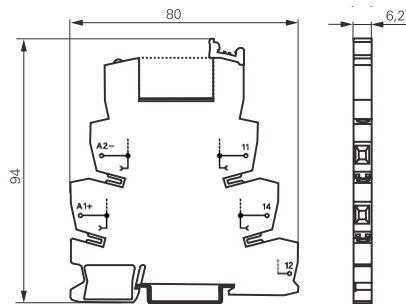


SNR

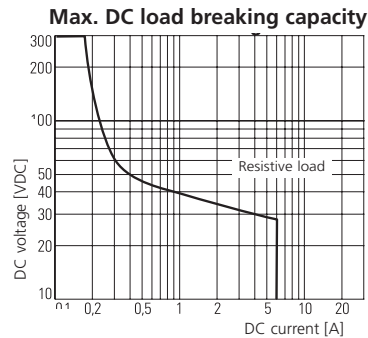
SCHRACK-INFO

- Relay package consisting of relays and DIN rail mount
- 1 CO contact with 6 A nominal current
- Reinforced insulation (protection class II, VDE 0160)
- Module width only 6.2 mm
- Reduced system width for increase packing density on the DIN rail
- Complies with the RoHS Directive 2002/95/EC
- Encoded protection diode and LED

DIMENSIONS (mm)



LOAD BREAKING CAPACITY



TYPE KEY

Type

Version

- 3P** Relay package, SNR 1-pole, CO, 6 A, screw terminals
4P Relay package, SNR 1-pole, CO, 6 A, cage-clamp terminals

Contact material

- 2** AgSnO₂, gold-plated, htv **3** AgSnO₂

Coil

- LB2** 12 VDC **LC4** 24 VDC
SM5 115 VDC/VAC **TP0** 230 VDC/VAC

| | | | | | |
|----------|----------|----------|--|--|--|
| S | T | P | | | |
| | | | | | |


TECHNICAL DATA

| CONTACT DATA | | 6 A |
|--|----------------------------|--|
| Contact configuration | | 1 CO |
| Contact set | | Single contact |
| Type of interruption | | Micro-switch |
| Rated current | | 6 A |
| Rated voltage / max. switching voltage AC | | 240 / 240 VAC |
| Max. breaking capacity AC | | 1500 VA |
| Limiting making capacity, max 4 s, duty factor 10% | | 10 A |
| Contact material | | AgSnO ₂ , AgSnO ₂ gold-plated |
| LED and PD for DC voltage | | |
| INPUT DATA | | |
| Rated input voltage DC | | 12, 24 VDC, 115, 230 VAC/VDC (type 115, 230 VAC/VDC with 60 VDC relay) |
| Rated coil power, DC coil | | 12 VDC 184 mW, 24 VDC 220 mW, 115 VAC 402 mVA, 230 VAC 736 mVA |
| Operation range to IEC 61810 | | 2 |
| GENERAL DATA | | |
| Ambient temperature range | | - 40... + 55 °C |
| Degree of protection DIN 40050 | | IP20 |
| Terminals | | Screw terminals / cage-clamp terminals |
| Terminal screw torque according to IEC 61984 | | 0.5 Nm |
| max. | | 0.6 Nm |
| Wire cross section | Solid wire | 0.14...2.5 mm ² |
| | Stranded wire | 0.14...2.5 mm ² |
| | with ferrule (DIN 46228/1) | 0.14...2.5 mm ² |



Visit www.schrack.com for further technical data

| CONTACTS | COIL | CONTACT MATERIAL | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|----------|------|------------------|------|----------|-----------|-----------|
|----------|------|------------------|------|----------|-----------|-----------|

RELAY PACKAGE, 6 A WITH SOCKET

| | | | | | | |
|--------------------------|-------------|---------------------------------------|-------------------------------|---------------|---|----------|
| 1 CO, screw terminal | 12 V DC | AgSnO ₂ | SNR PACKAGE 12VDC SK | 9004840408614 | | ST3P3LB2 |
| 1 CO, screw terminal | 24 V DC | AgSnO ₂ | SNR PACKAGE 24VDC SK | 9004840408553 | | ST3P3LC4 |
| 1 CO, screw terminal | 24 V DC | AgSnO ₂ , hard gold-plated | SNR PACKAGE 24VDC SK REL.HTV. | 9004840408546 |  | ST3P2LC4 |
| 1 CO, screw terminal | 115 V AC/DC | AgSnO ₂ | SNR PACKAGE 115VDC/AC SK | 9004840408560 | | ST3P3SM5 |
| 1 CO, screw terminal | 230 V AC/DC | AgSnO ₂ | SNR PACKAGE 230VDC/AC SK | 9004840408577 | | ST3P3TP0 |
| 1 CO, screwless terminal | 24 V DC | AgSnO ₂ | SNR PACKAGE 24VDC FK | 9004840407860 | | ST4P3LC4 |
| 1 CO, screwless terminal | 230 V AC/DC | AgSnO ₂ | SNR PACKAGE 230VDC/AC FK | 9004840407884 | | ST4P3TP0 |

ACCESSORIES

| | | | | | | |
|-----------------------------|------------|--|--|---------------|---|---------|
| SNR screw base | | | | 9004840448931 | | ST3FLC4 |
| SNR jumper bar, red 500 mm | ST3x, ST4x | | | 9004840407914 |  | ST37001 |
| SNR jumper bar, blue 500 mm | ST3x, ST4x | | | 9004840407921 | | ST37002 |
| SNR jumper bar, grey 500 mm | ST3x, ST4x | | | 9004840407938 | | ST37003 |
| Label per pc. | ST3x, ST4x | | | 9004840407891 |  | ST37040 |



Order no. blue: on stock, usually ready for delivery on the day of order!

POWER RELAY RT1

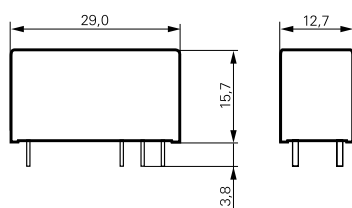


RT1

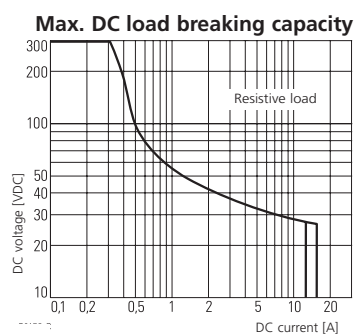
SCHRACK-INFO

- 1-pole 12 / 16 A, DC or AC coil
- 1 CO contact or 1 NO contact
- Sensitive coil 400 mW / 0.75 VA
- 5 kV / 10 mm coil contact, class II (VDE 0700)
- Safe separation according to VDE 0160 in conjunction with base YRT78626
- Ambient temperature 85 °C (DC coil)
- Low overall height 15.7 mm
- Hard gold-plated contacts available
- PCB and screw bases are available
- Typical applications: panel boards, mechanical engineering

DIMENSIONS (mm)



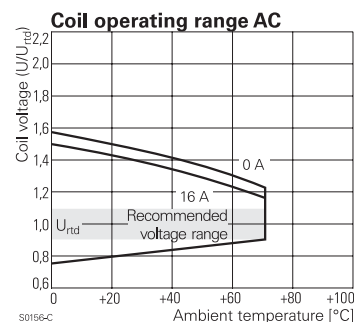
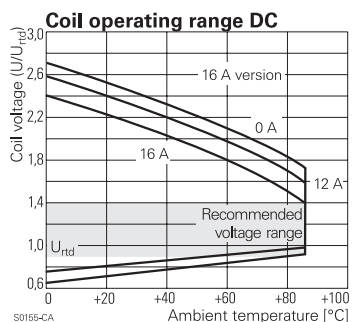
LOAD BREAKING CAPACITY



APPROVALS



COIL OPERATING VOLTAGE RANGE

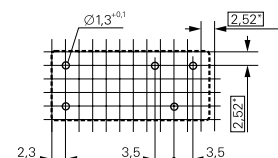


PCB DIAGRAMS/WIRING DIAGRAMS

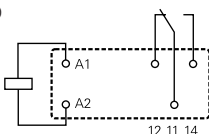
View of the terminals,
dimensions in mm

*) Equipping with indicated hole diameter
also possible in 2.5 mm or 2.54 mm
contact spacing.

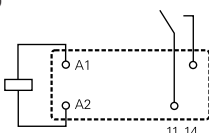
12 A, pinning 3.5 mm



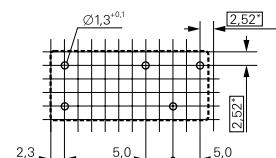
1 CO



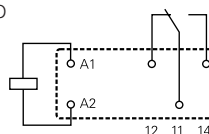
1 NO



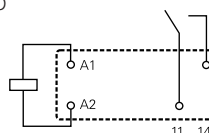
12 A, pinning 5 mm



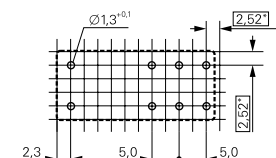
1 CO



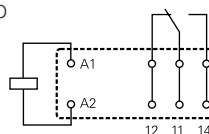
1 NO



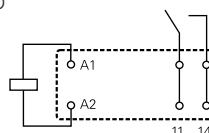
16 A, pinning 5 mm



1 CO



1 NO



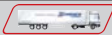













TYPE KEY

| | | | | | | | | |
|-------------------------------|---|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Type | <div><div>R</div><div>T</div></div> | | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| Version | | | | | | | | |
| | <div><div>1</div><div>12 A, pinning 3.5 mm, flux-proof</div></div> | | | | | | | |
| | <div><div>2</div><div>12 A, pinning 5 mm, flux-proof</div></div> | | | | | | | |
| | <div><div>3</div><div>16 A, pinning 5 mm, flux-proof</div></div> | | | | | | | |
| Contacts | <div><div>D</div><div>16 A, pinning 5 mm, wash-proof,</div></div> | | | | | | | |
| | <div><div>1</div><div>1 CO</div></div> | | | | | | | |
| | <div><div>3</div><div>1 NO</div></div> | | | | | | | |
| Contact material | | | | | | | | |
| | <div><div>4</div><div>AgNi 90/10</div></div> | | | | | | | |
| | <div><div>5</div><div>AgNi 90/10 gold-plated (for type RT31.)</div></div> | | | | | | | |
| Coil | | | | | | | | |
| | For coil code, see coil table | | | | | | | |
| Preferred types in bold print | | | | | | | | |

TECHNICAL DATA

| CONTACT DATA | | 12 A | 16 A |
|--|--------------|----------------------------------|---------|
| Number of contacts and type | | 1 CO or 1 NO contact | |
| Contact style | | Single contact | |
| Rated current | | 12 A | 16 A |
| Rated voltage / max. switching voltage | | AC 250 V~ / 440 V~ | |
| Max. breaking capacity AC | | 3000 VA | 4000 VA |
| Inrush current (max. 4 s at 10% DF) | | 25 A | 30 A |
| Contact material | | AgNi 90/10. AgNi 90/10 htv | |
| COIL DATA | | | |
| Nominal voltage | DC coil | 5...110 V~ | |
| | AC coil | 24...230 V~ | |
| Nominal power | DC coil | 400 mW – 420 mW | |
| | AC coil | 0.74 VA – 0.76 VA | |
| Operation release voltage/coil resistance at ambient temperature 23 °C | 24 VDC coil | 16.8 V / 2.4 V / 1440 Ω ± 10% | |
| | 230 VAC coil | 172.5 V / 34.5 V / 32500 Ω ± 10% | |

Visit www.schrack.com for further technical data

| CONTACTS | PINNING | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|-------------|---------|----------|--------------|------------------------------|---------------|---|-----------------|
| 12 A | | | | | | | |
| 1 CO | 3.5 mm | 12 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-012G-12-3.5 | 9004840160604 |  | RT114012 |
| 1 CO | 3.5 mm | 24 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-024G-12-3.5 | 9004840160611 |  | RT114024 |
| 1 CO | 3.5 mm | 24 V AC | AgNi 90/10 | PREL-SL-1-UKE-M1-024W-12-3.5 | 9004840193466 |  | RT114524 |
| 1 CO | 5 mm | 12 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-012G-12-5.0 | 9004840155846 |  | RT214012 |
| 1 CO | 5 mm | 24 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-024G-12-5.0 | 9004840155143 |  | RT214024 |
| 1 CO | 5 mm | 230 V AC | AgNi 90/10 | PREL-SL-1-UKE-M1-230W-12-5.0 | 9004840158182 |  | RT214730 |
| 16 A | | | | | | | |
| 1 CO | 5 mm | 5 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-005G-16-5.0 | 9004840167856 |  | RT314005 |
| 1 CO | 5 mm | 12 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-012G-16-5.0 | 9004840185553 |  | RT314012 |
| 1 CO | 5 mm | 24 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-024G-16-5.0 | 9004839015489 |  | RT314024 |
| 1 NO | 5 mm | 24 V DC | AgNi 90/10 | PREL-SL-1-AKE-M1-024G-16-5.0 | 9004840158151 |  | RT334024 |
| 1 CO | 5 mm | 110 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-110G-16-5.0 | 9004840196238 |  | RT314110 |
| 1 CO | 5 mm | 24 V AC | AgNi 90/10 | PREL-SL-1-UKE-M1-024W-16-5.0 | 9004840157994 |  | RT314524 |
| 1 CO | 5 mm | 230 V AC | AgNi 90/10 | PREL-SL-1-UKE-M1-230W-16-5.0 | 9004839034596 |  | RT314730 |
| 1 CO | 5 mm | 230 V AC | AgNi 90/10 | PREL-SL-1-UKE-M1-230W-16-5.0 | 9004840193503 |  | RT315730 |
| 1 CO | 5 mm | 24 V DC | AgNi 90/10 | PREL-SW-1-UKE-M1-024G-16-5.0 | 9004840193619 | | RTD14024 |



Order no. blue: on stock, usually ready for delivery on the day of order!

POWER RELAY RT1 INRUSH

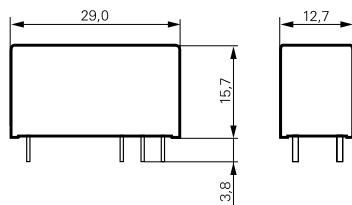


RT1 INRUSH

SCHRACK-INFO

- 1-pole, 16 A, for inrush peak currents
- 1 NO or 1 CO contact
- Sensitive coil 400 mW
- 5 kV / 10 mm coil contact
- Protection class II (VDE 0700)
- Ambient temperature 85 °C
- Low overall height 15.7 mm (only relay)
- PCB and screw bases
- For domestic appliances, heating controls, lighting controls, building automation

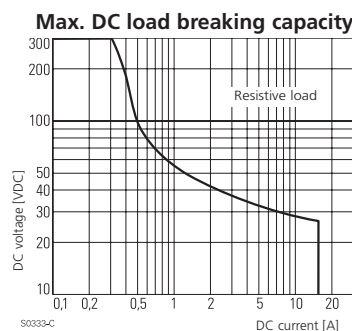
DIMENSIONS (mm)



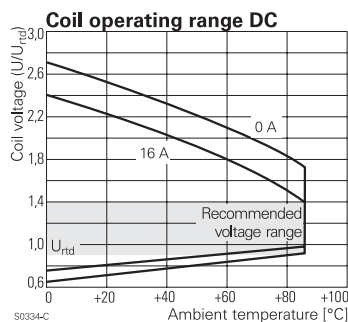
APPROVALS



LOAD BREAKING CAPACITY



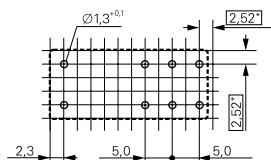
COIL OPERATING VOLTAGE RANGE



PCB DIAGRAMS/WIRING DIAGRAMS

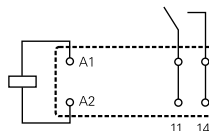
View of the terminals,
dimensions in mm

16 A, pinning 5 mm



*) Equipping with indicated hole diameter
also possible in 2.5 mm or 2.54 mm
contact spacing.

1 NO



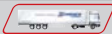
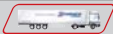
TYPE KEY

| | | | | | | | | | | | | | | |
|------------------|---|--|---|--|----------------------|--|---|--|--|--|--|--|--|--|
| Type | R | | T | | 3 | | 3 | | | | | | | |
| Version | 3 16 A, pinning 5 mm | | | | | | | | | | | | | |
| Contacts | 1 1 CO contact | | | | 3 1 NO contact | | | | | | | | | |
| Contact material | K AgNi 90/10 | | | | L AgSnO ₂ | | | | | | | | | |
| Coil | Coil code: please see coil table, preferred types in bold print | | | | | | | | | | | | | |

TECHNICAL DATA

| CONTACT DATA | | |
|--|-------------|--------------------------------|
| Number of contacts and type | | 1 NO contact |
| Contact style | | Single contact |
| Rated current | | 16 A |
| Rated voltage / max. switching voltage | | AC 250 V~ / 440 V~ |
| Max. breaking capacity AC | | 4000 VA |
| Inrush current (max. 4 s at 10% DF) | | 30 A |
| Contact material | | AgNi 90/10, AgSnO ₂ |
| COIL DATA | | |
| Rated voltage | | 5...110 V~ |
| Rated power | | 400 mW |
| Operation release voltage/coil resistance at ambient temperature 23°C | 24 VDC coil | 16.8 V / 2.4 V / 1440 Ω ± 10% |

Visit www.schrack.com for further technical data

| CONTACTS | PINNING | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|-------------|---------|---------|--------------------|------------------------------|---------------|---|-----------------|
| 16 A | | | | | | | |
| 1 NO | 5 mm | 24 V DC | AgNi 90/10 | PREL-SL-1-AKE-M1-024G-16-5.0 | 9004840158793 |  | RT33K024 |
| 1 CO | 5 mm | 24 V DC | AgSnO ₂ | PREL-SL-1-UKE-M1-024G-16-5.0 | 9004840155280 |  | RT31L024 |



I KNOW WHERE TO FIND IT!

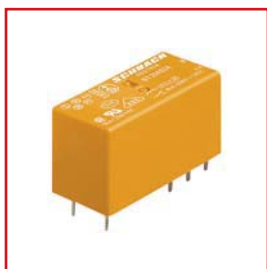
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WWW.SCHRACK.COM

- Finding product information made easy
- Buying products around the clock
- Quick access customer service



Order no. blue: on stock, usually ready for delivery on the day of order!

POWER RELAYS RTI

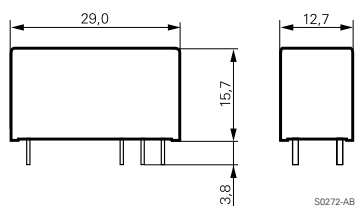


RTI

SCHRACK-INFO

- 1-pole 16 A, 1 NO contact (W pre-make contact + AgSnO₂)
- 10 A / 250 V AC making and breaking capacity according to IEC 60669-1
- 165 A / 20 ms inrush peak current
- Mono- or bistable coil
- 5 kV / 10 mm coil contact set
- Reinforced insulation
- Complies with the RoHS Directive 2002/95/EC
- For lighting systems, movement sensors, incandescent and fil lamps, motors

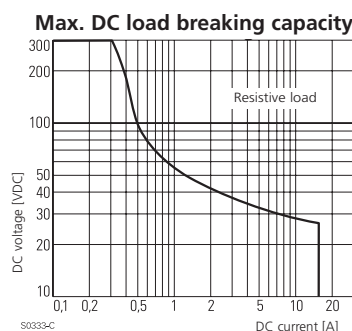
DIMENSIONS (mm)



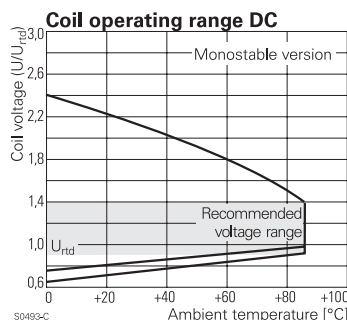
APPROVALS



LOAD BREAKING CAPACITY

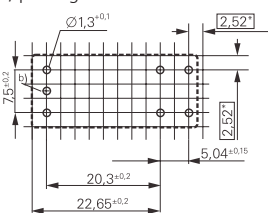


COIL OPERATING VOLTAGE RANGE

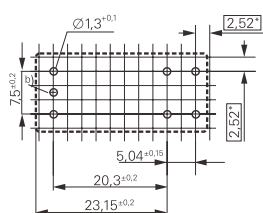


PCB DIAGRAMS/WIRING DIAGRAMS

16 A, pinning 5 mm

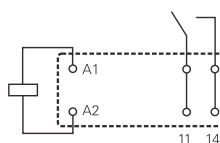


b) only for 2 windings



*) Equipping with indicated hole diameter also possible in 2.5 mm or 2.54 mm contact spacing.

Monostable version



TYPE KEY

| | | | | | | | |
|------------------|--|----------|----------|----------|--|--|--|
| Type | R | T | S | 3 | | | |
| Version | | | | | | | |
| Contact style | | | | | | | |
| | 3 1 NO | | | | | | |
| Contact material | | | | | | | |
| | L AgSnO ₂ T Tungsten pre-contact + AgSnO ₂ | | | | | | |
| Coil | | | | | | | |
| | Coil code: please refer to coil version table | | | | | | |

TECHNICAL DATA

| CONTACT DATA | | RT.3T | RTS3L |
|--|--------------------------------|-------------------------------------|--------------------|
| Contact type | | 1 NO contact | |
| Contact style | | Single contact | |
| Type of disconnection | | Micro-switch | |
| Rated current | | 16 A | |
| Rated voltage / max. switching voltage AC | | 250 / 400 VAC | |
| Limiting continuous current | | 16 A | |
| Max. breaking capacity AC | | 4000 VA | |
| Limiting making capacity | max 20 ms (incandescent lamps) | 165 A | 120 A |
| | max 200 µs (fluorescent lamps) | 800 A | - |
| Contact material | | W (lead contact)+AgSnO ₂ | AgSnO ₂ |
| COIL DATA | | | |
| Rated voltage range | | 24 VDC | |
| Rated power | | Typ. 400 mW | |
| Operation range, IEC 61810 | | 2 | |
| Coil insulation system according to UL1446 | | Class F | |
| Operation release voltage/coil resistance | 24 VDC coil | 16.8 V / 2.4 V / 1440 Ω ± 10% | |
| at ambient temperature 23 °C | 230 VAC coil | 172.5 V / 34.5 V / 32500 Ω ± 10% | |

Visit www.schrack.com for further technical data

| CONTACTS | PINNING | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|-------------|---------|---------|------------------------|----------------------------|---------------|-----------|-----------|
| 16 A | | | | | | | |
| 1 NO | 5 mm | 24 V DC | AgSnO ₂ | PREL-SL-1-AKE-M1-024G-16-5 | 9004840515855 | | RTS3L024 |
| 1 NO | 5 mm | 24 V DC | W + AgSnO ₂ | PREL-SL-1-AKE-M1-024G-16-5 | 9004840543476 | | RTS3T024 |



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POWER RELAYS RT2

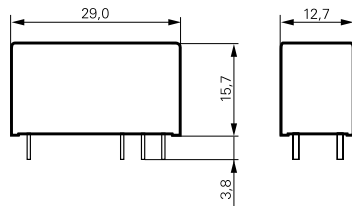


RT2

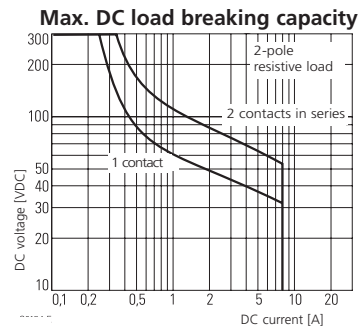
SCHRACK-INFO

- 2-pole 8 A, DC or AC coil
- 2 CO contact
- Sensitive coil 400 mW
- DC or AC coil
- 5 kV / 10 mm coil contact, class II (VDE 0700), reinforced insulation
- Safe separation according to VDE 0160 in conjunction with base YRT78626
- Low overall height 15.7 mm (only relay)
- PCB and screw bases
- For domestic appliances, heating controllers, emergency lighting, modems, panel boards, mechanical engineering

DIMENSIONS (mm)



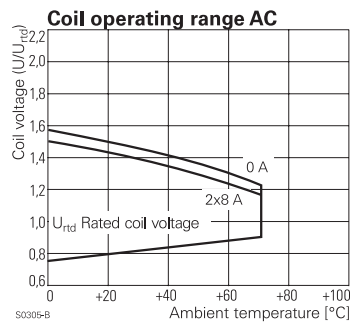
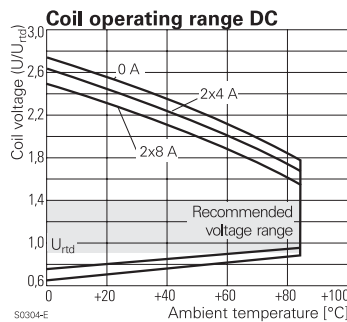
LOAD BREAKING CAPACITY



APPROVALS

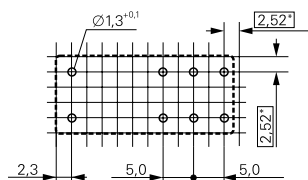


COIL OPERATING VOLTAGE RANGE



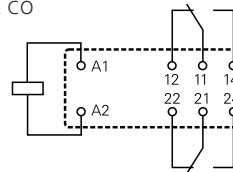
PCB DIAGRAMS/WIRING DIAGRAMS

View of the terminals,
dimensions in mm

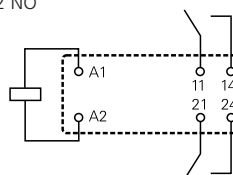


*) Equipping with indicated
hole diameter also possible in 2.5 mm
or 2.54 mm contact spacing.

2 CO



2 NO



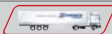













TYPE KEY

| | | | | | | | |
|-------------------------------|--|--|---|-------------|-------------|-------------|-------------|
| Type | <div><div>R</div><div>T</div></div> | | <div>4</div> | <div></div> | <div></div> | <div></div> | <div></div> |
| Version | | | | | | | |
| | 4 8 A, pinning 5 mm, flux-proof | | E 8 A, pinning 5 mm, wash-proof, | | | | |
| Contacts | | | | | | | |
| | 2 2 CO | | | | | | |
| Contact material | | | | | | | |
| | 4 AgNi 90/10 | | 5 AgNi 90/10 gold-plated, htv | | | | |
| Coil | | | | | | | |
| | For coil code, see coil table | | | | | | |
| Preferred types in bold print | | | | | | | |

TECHNICAL DATA

| CONTACT DATA | | 8 A |
|--|--------------|----------------------------------|
| Number of contacts and type | | 2 CO contact |
| Contact style | | Single contact |
| Rated current | | 8 A |
| Rated voltage / max. switching voltage | | AC 250 V~ / 440 V~ |
| Max. breaking capacity AC | | 2000 VA |
| Inrush current (max. 4 s at 10% DF) | | 15 A |
| Contact material | | AgNi 90/10. AgNi 90/10 htv |
| COIL DATA | | |
| Rated voltage | DC coil | 5...110 V~ |
| | AC coil | 24...230 V~ |
| Rated power | DC coil | 400 mW (24 VCD) |
| | AC coil | 0.74 VA (230 VAC) |
| Operation release voltage/coil resistance at ambient temperature 23 °C | 24 VDC coil | 16.8 V / 2.4 V / 1440 Ω ± 10% |
| | 230 VAC coil | 172.5 V / 34.5 V / 32500 Ω ± 10% |

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| CONTACTS | PINNING | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|---------------------|---------|----------|-----------------|------------------------------|---------------|---|-----------------|
| 8 A | | | | | | | |
| 2 CO | 5 mm | 6 V DC | AgNi 90/10 | PREL-SL-2-UKE-M1-006G-08-5.0 | 9004840158939 |  | RT424006 |
| 2 CO | 5 mm | 12 V DC | AgNi 90/10 | PREL-SL-2-UKE-M1-012G-08-5.0 | 9004839019241 |  | RT424012 |
| 2 CO | 5 mm | 24 V DC | AgNi 90/10 | PREL-SL-2-UKE-M1-024G-08-5.0 | 9004839019142 |  | RT424024 |
| 2 CO | 5 mm | 24 V DC | AgNi 90/10, htv | PREL-SL-2-UKE-M1-024G-08-5.0 | 9004840160628 |  | RT425024 |
| 2 CO, wash-tight | 5 mm | 24 V DC | AgNi 90/10 | PREL-SL-2-UKE-M1-024G-08-5.0 | 9004839029103 |  | RTE24024 |
| 2 CO | 5 mm | 48 V DC | AgNi 90/10 | PREL-SL-2-UKE-M1-048G-08-5.0 | 9004839027185 |  | RT424048 |
| 2 CO | 5 mm | 60 V DC | AgNi 90/10 | PREL-SL-2-UKE-M1-060G-08-5.0 | 9004840193558 |  | RT424060 |
| 2 CO | 5 mm | 110 V DC | AgNi 90/10 | PREL-SL-2-UKE-M1-110G-08-5.0 | 9004840191561 |  | RT424110 |
| 2 CO | 5 mm | 24 V AC | AgNi 90/10 | PREL-SL-2-UKE-M1-024W-08-5.0 | 9004839034602 |  | RT424524 |
| 2 CO | 5 mm | 48 V AC | AgNi 90/10 | PREL-SL-2-UKE-M1-048W-08-5.0 | 9004840167641 |  | RT424548 |
| 2 CO | 5 mm | 115 V AC | AgNi 90/10 | PREL-SL-2-UKE-M1-115W-08-5.0 | 9004840158021 |  | RT424615 |
| 2 CO | 5 mm | 115 V AC | AgNi 90/10, htv | PREL-SL-2-UKE-M1-115W-08-5.0 | 9004840187748 |  | RT425615 |
| 2 CO | 5 mm | 230 V AC | AgNi 90/10 | PREL-SL-2-UKE-M1-230W-08-5.0 | 9004839034282 |  | RT424730 |
| 2 CO | 5 mm | 230 V AC | AgNi 90/10, htv | PREL-SL-2-UKE-M1-230W-08-5.0 | 9004840166040 |  | RT425730 |



PLUGGABLE INTERFACE RELAY XT

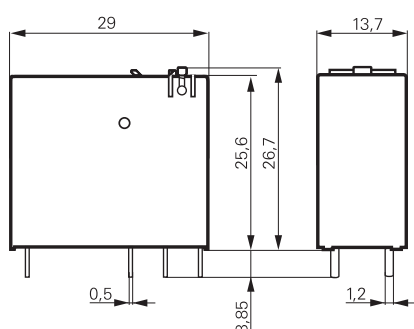


XT

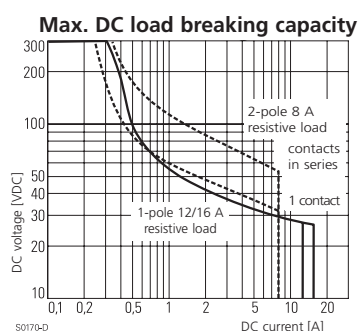
SCHRACK-INFO

- 1-pole 16 A, 2-pole 8 A, 1 or 2 CO contacts
- DC or AC coil, sensitive coil 400 mW
- Reinforced insulation, protection class II (VDE 0700)
- Safe separation according to VDE 0160 in conjunction with base YRT78626
- 4 kV / 8 mm coil contact
- Lockable manual test system¹⁾
- Optional version with mechanical and electrical indication available
- Suitable for standard RT bases
- Recyclable packaging
- Compliant with RoHS Directive 2002/95/EC
- For control panels, panel boards, mechanical engineering

DIMENSIONS (mm)



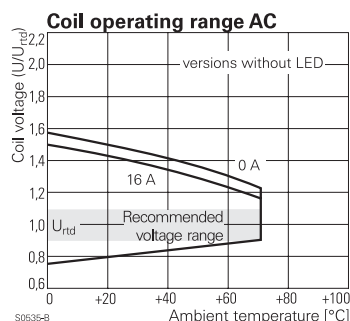
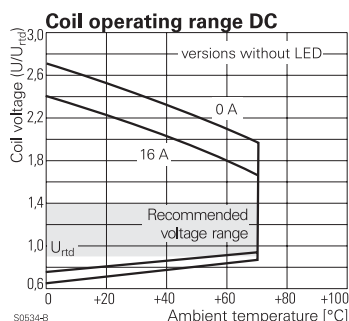
LOAD BREAKING CAPACITY



APPROVALS



COIL OPERATING VOLTAGE RANGE

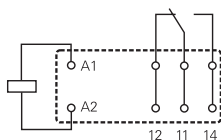


PCB DIAGRAMS/WIRING DIAGRAMS

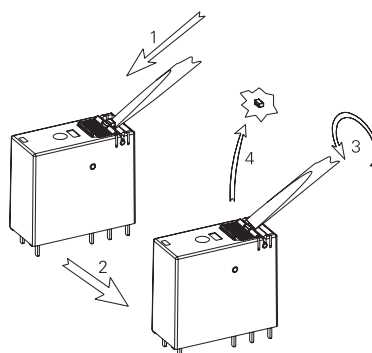
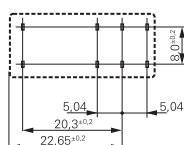
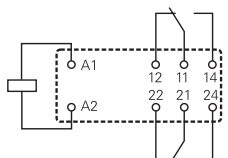
APPLICATION

View of the terminals

1 CO, 16 A



2 CO, 8 A



¹⁾ Description of the locking function: If the test button is pulled out to forcibly, it may skip the test position and move directly to the locking position.

On delivery only with test option; to go to the locking position, please remove the plastic locking cam (see drawing).





TYPE KEY

| | | | | | | | | |
|---|---|---|--|--|---|--|--|--|
| Type | X | T | | | 4 | | | |
| Version | | | | | | | | |
| 3 | 1-pole, 16 A, pinning 5 mm | | | | | | | |
| 4 | 2-pole, 8 A, pinning 5 mm | | | | | | | |
| Contacts | | | | | | | | |
| 7 | 1 CO contact with test button and mechanical indicator | | | | | | | |
| 8 | 2 CO contacts with test button and mechanical indicator | | | | | | | |
| Contact material | | | | | | | | |
| 4 | AgNi 90/10 | | | | | | | |
| Coil code | | | | | | | | |
| Coil code: please see coil table, preferred types in bold print | | | | | | | | |

TECHNICAL DATA

| CONTACT DATA | | 1-POLE | 2-POLE |
|--|--------------|----------------------------------|---------|
| Number of contacts and type | | 1 CO | 2 CO |
| Contact style | | Single contact | |
| Type of disconnection | | Micro-switch | |
| Rated current | | 16 A | 8 A |
| Rated voltage / max. switching voltage AC | | 240/400 V AC | |
| Max. breaking switching capacity AC | | 4000 VA | 2000 VA |
| Inrush current (max 4 s at 10% DF) | | 30 A | 15 A |
| Contact material | | AgNi 90/10 | |
| COIL DATA | | | |
| Rated voltage | DC coil | 24 V~ | |
| | AC coil | 24 V~ | |
| Rated power | DC coil | typ. 400 mW | |
| | AC coil | typ. 0.75 VA | |
| Operation range, IEC 61810 | | 2 | |
| Coil insulation system according to UL1446 | | Class F | |
| Operation release voltage/coil resistance at ambient temperature 23 °C | 24 VDC coil | 16.8 V / 2.4 V / 1440 Ω ± 10% | |
| | 24 VAC coil | 18 V / 3.6 V / 350 Ω ± 10% | |
| | 230 VAC coil | 172.5 V / 34.5 V / 32500 Ω ± 10% | |

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| CONTACTS | PINNING | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|-------------|---------|----------|--------------|------------------------------|---------------|---|-----------------|
| 16 A | | | | | | | |
| 1 CO | 5 mm | 24 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-024G-16-5.0 | 9004840616989 |  | XT374LC4 |
| 8 A | | | | | | | |
| 2 CO | 5 mm | 24 V DC | AgNi 90/10 | PREL-SL-2-UKE-M1-024G-08-5.0 | 9004840529999 |  | XT484LC4 |
| 2 CO | 5 mm | 24 V AC | AgNi 90/10 | PREL-SL-2-UKE-M1-024W-08-5.0 | 9004840530001 |  | XT484R24 |
| 2 CO | 5 mm | 230 V AC | AgNi 90/10 | PREL-SL-2-UKE-M1-230W-08-5.0 | 9004840530018 |  | XT484T30 |



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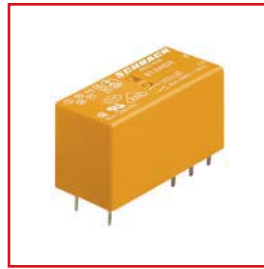
ACCESSORIES FOR POWER AND INTERFACE RELAYS RT AND XT – GENERAL INFORMATION



RT78725



RT17017



RT424730



YMLRW230



XT484LC4



XT17017



YRT78626

SCHRACK-INFO

- For industrial power relays RT and XT, pinning 3.5 mm or 5 mm
- Plug-in base with separate terminal positions (input/output)
- New holding clip with ejection function
- Easy change of the relays even with dense packing
- High-quality, contact-reliable terminal screws
- Captive terminal screws
- Indicator and function modules reverse polarity-protected and easy to plug in
- Snap-on labels
- Complies with the RoHS Directive 2002/95/EC



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SCREWLESS CLAMP SOCKET WITH SCREWLESS TERMINALS FOR DIN RAIL MOUNTING

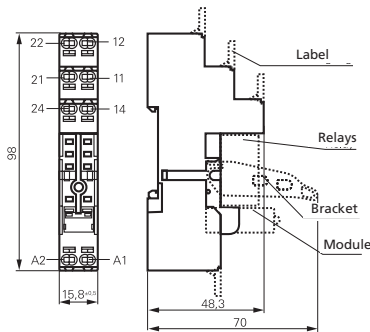


RT7872P

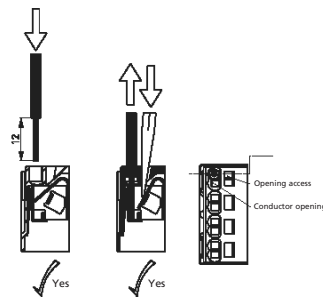
SCHRACK-INFO

- Screwless terminals
- Solid wire can be connected without tools
- Double clamps per terminal
- Jumper bars for connection
- Open coil circuit for active modules
- Inputs and outputs arranged separately

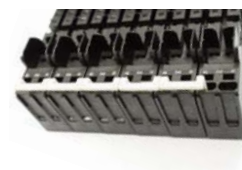
DIMENSIONS (mm)



APPLICATION / CAUTIONS



Jumper bar



TECHNICAL DATA

| | | |
|--|--|---|
| Rated current | | 2 x 8 A, 16 A*) |
| Rated voltage / max. switching voltage | | 240/400 V AC |
| Terminal capacity | Solid wire | 1 x 0.75 / 1 / 1.5 mm ² , 2 x 0.75 / 1 mm ² |
| | Stranded wire without ferrule | 1 x 0.75 / 1 / 1.5 mm ² , 2 x 0.75 / 1 mm ² |
| | without ferrule, with standard insulation | 2 x 1.5 mm ² |
| | with ferrule | 1 x 0.75 / 1 mm ² , 2 x 0.75 mm ² |
| | with ferrule, without insulation or insulation at least 18 mm long | 1 x 1.5 mm ² |

For stranded conductors with single wires of 0.05 mm or less, the used of ferrules is recommended. When using stranded conductors without ferrules, the terminal must be opened to insert the conductor.
 * Supply contacts of the 1-pole relays must be doubled on 1x + 2x!

| DESCRIPTION | FOR RELAY TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|--|----------------------------|---------------|-----------|----------------|
| Screwless clamp socket, pinning 5 mm for DIN rail mounting | RT2x, RT3x, RT4x, XT, RP4x | 9004840535204 | | RT7872P |
| Retaining clip for RT relay (overall height 15.7 mm) | RT2x, RT3x, RT4x | 9004839096242 | | RT17017 |
| Retaining clip for XT relay (overall height 25.5 mm) | XT, RP4 | 9004839096143 | | XT17017 |
| Jumper bar | - | 9004840539264 | | RT170P1 |



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SOCKET WITH SCREW TERMINALS FOR DIN RAIL



YRT78726/RT78725

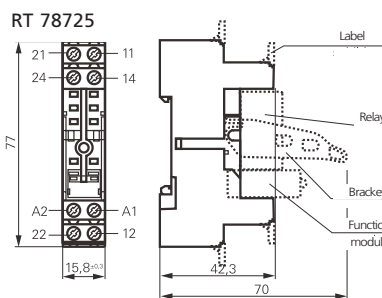
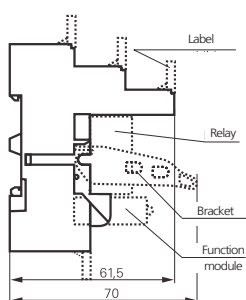
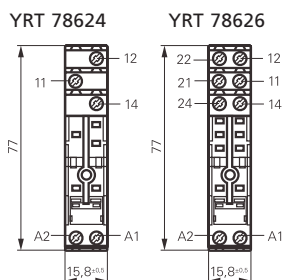
SCHRACK-INFO

- Easy change of the relay even with dense packing
- High-quality, contact-reliable terminals
- Captive terminal screws

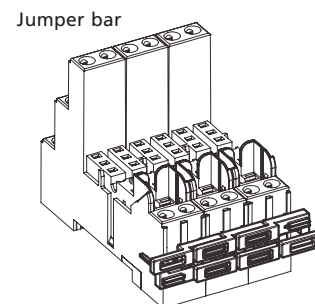
APPROVALS



DIMENSIONS (mm)



APPLICATION



TECHNICAL DATA

| | YRT 78624 | YRT 78626 | RT 78725 |
|---|--|---|-----------------|
| Rated current | 12 A | 2 x 8 A, 16 A*) | 2 x 8 A, 16 A*) |
| Rated voltage | AC 240 V~ | | |
| Terminals | Screw terminals | | |
| Terminal torque according to IEC 61984 max. | 0.5 Nm 0.7 Nm | | |
| Terminal capacity | copper wire Stranded wire with ferrule (DIN 46228/1) | 2 x 2.5 mm ² 2 x 2.5 mm ² 2 x 1.5 mm ² | |

* Supply contacts of the 1-pole relays (RT1) must be doubled on 1x + 2x!

| DESCRIPTION | FOR RELAY TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|---|------------------------|---------------|-----------|-----------------|
| Socket with screw terminals, logic version pinning 3.5 mm for DIN rail mounting | RT1x | 9004840184921 | | YRT78624 |
| Socket with screw terminals, logic version pinning 5 mm for DIN rail mounting | XT, RT2x, RT3x, RT4x | 9004839900419 | | YRT78626 |
| Socket with screw terminals, conventional version pinning 5 mm for DIN rail mounting | XT, RT2x, RT3x, RT4x | 9004840546378 | | RT78725 |
| Retaining clip f. RT relay w. eject function (overall height 15.7 mm) | RT1x, RT2x, RT3x, RT4x | 9004839096242 | | RT17017 |
| Retaining clip f. XT relay w. eject function (overall height 25.5 mm) | XT, RP4 | 9004839096143 | | XT17017 |
| Jumper bar 8-fold | - | 9004840617030 | | RT170R8 |
| Marking tag | - | 9004840184907 | | YRT16040 |



LED AND PROTECTION MODULES



YMLRW230

SCHRACK-INFO

- Compatible with screwless and screw terminal sockets

| DESCRIPTION | FOR SOCKET | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|---|----------------------|------|---------------|-----------|-------------------|
| LED red 6...24 V DCV AC | YPTx, PTx, YRTx, RTx | EM07 | 9004839069253 | | YMLRA024 |
| LED red 6...24 V DC with prot. diode (A1+, A2-) | YPTx, PTx, YRTx, RTx | EM18 | 9004839069192 | | YMLRD024-A |
| LED red 6...24 V DC with prot. diode (A1-, A2+) | YPTx, PTx, YRTx, RTx | EM08 | 9004840152203 | | YMLRD024 |
| LED red 110...230 V AC | YPTx, PTx, YRTx, RTx | EM06 | 9004839069246 | | YMLRW230 |
| LED green 6...24 V DCV AC | YPTx, PTx, YRTx, RTx | EM11 | 9004839069222 | | YMLGA024 |
| LED green 6...24 V DC with prot. diode (A1+, A2-) | YPTx, PTx, YRTx, RTx | EM12 | 9004839069239 | | YMLGD024 |
| LED green 110...230 V AC | YPTx, PTx, YRTx, RTx | EM10 | 9004839034879 | | YMLGW230 |
| Protection diode (A1+, A2-), 6/230 V DC | YPTx, PTx, YRTx, RTx | EM09 | 9004839069208 | | YMF DG230 |
| RC network 6...60 V AC | YPTx, PTx, YRTx, RTx | EM02 | 9004840152272 | | YMRCW024 |
| RC network 110...230 V AC | YPTx, PTx, YRTx, RTx | EM03 | 9004840152289 | | YMRCW230 |
| Varistor 24 V AC | YPTx, PTx, YRTx, RTx | EM04 | 9004840194081 | | YMLVAW024 |
| Varistor 230 V AC | YPTx, PTx, YRTx, RTx | EM05 | 9004840194098 | | YMLVAW230 |



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MINIATURE RELAY PT



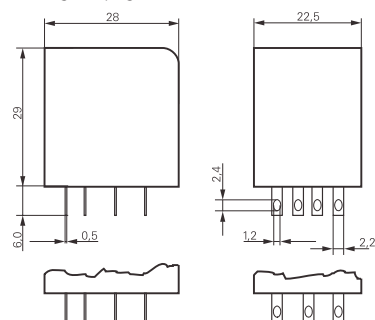
PT

SCHRACK-INFO

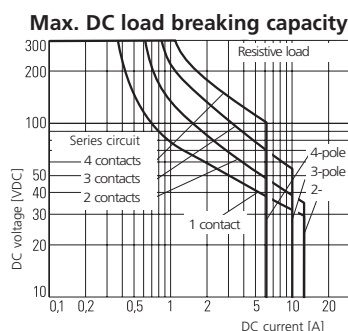
- 2-pole 12 A, 3-pole 10 A or 4-pole 6 A
- AC or DC coil
- Up to 3000 VA switching performance
- Overall height 29 mm
- Cadmium-free contact material
- Mechanical and optional electrical function indicator
- Touch-proof test button, selectable lock
- White label
- Universal use in control, automation and mechanical engineering

DIMENSIONS (mm)

Soldering and plug-in terminals (standard version)



LOAD BREAKING CAPACITY



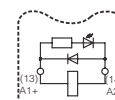
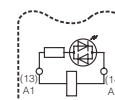
APPROVALS



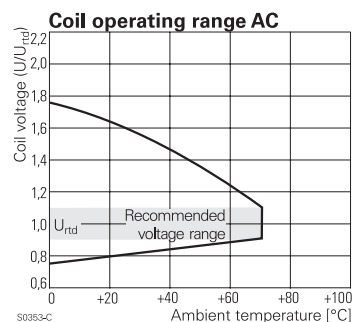
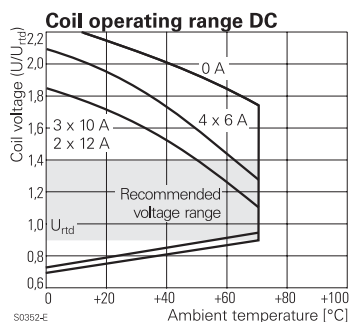
WIRING DIAGRAMS

LED

Protection diode + LED



COIL OPERATING VOLTAGE RANGE



TYPE KEY

Type

Contact style

- 2** 2 CO
- 3** 3 CO
- 5** 4 CO

Contact material

- 7** AgNi 90/10, with test button
- 8** AgNi 90/10 gold-plated, with test button

Version

- 0** Standard, 2.8 mm flat connector
- 1** Print terminals

Coil

Coil code: please refer to coil version table, preferred types in bold print

*) Version with a closed cap without test button available on request.
Other types available on request



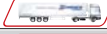
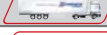



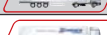

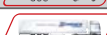
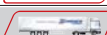





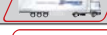

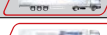
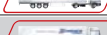



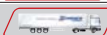


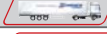





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|----------|----------|--|--|--|--|--|
| P | T | | | | | |
|----------|----------|--|--|--|--|--|

PANEL RELAYS AND ACCESSORIES

TECHNICAL DATA

| CONTACT DATA | | PT2 | PT3 | PT5 |
|--|--------------|--|-------------|-------------|
| Contact version | | 2 CO | 3 CO | 4 CO |
| Contact style | | Single contact | | |
| Type of disconnection | | Micro-switch | | |
| Rated current | | 12 A | 10 A | 6 A |
| Rated voltage / max. switching voltage AC | | 240/400 VAC | 240/400 VAC | 240/240 VAC |
| Max. breaking capacity AC | | 3000 VA | 2500 VA | 1500 VA |
| Making capacity, max 20 ms | | 24 A | 20 A | 12 A |
| Contact material | | AgNi90/10. AgNi90/10 hard gold-plated | | |
| Minimum contact load | | 12V/10 mA, 20 mV/1 mA hard gold-plated | | |
| COIL DATA | | | | |
| Rated voltage range | DC coil | 6...220 VDC | | |
| | AC coil | 6...230 VAC | | |
| Rated output | DC coil | 0.75 mW | | |
| | AC coil | 1.0 VA | | |
| Operation release voltage/coil resistance at ambient temperature 23 °C | 24 VDC coil | 18 V / 2.4 V / 777 Ω ± 10% | | |
| | 24 VAC coil | 19.2 V / 7.2 V / 192 Ω ± 10% | | |
| | 230 VAC coil | 184 V / 69 V / 19465 Ω ± 10% | | |

Visit www.schrack.com for further technical data

| CONTACTS | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|---|----------------|--------------------------|--------------------------|---|---|-----------------|
| 2 CO, 12 A | 24 V DC | AgNi 90/10 | SREL-SL-2-UKE-M1-024G-12 | 9004839055232 |  | PT270024 |
| 2 CO, 12 A | 48 V DC | AgNi 90/10 | SREL-SL-2-UKE-M1-048G-12 | 9004840376517 |  | PT270048 |
| 2 CO, 12 A | 24 V AC | AgNi 90/10 | SREL-SL-2-UKE-M1-024W-12 | 9004840149456 |  | PT270524 |
| 2 CO, 12 A | 230 V AC | AgNi 90/10 | SREL-SL-2-UKE-M1-230W-12 | 9004839055201 |  | PT270730 |
| 3 CO, 10 A | 24 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-024G-10 | 9004840149487 |  | PT370024 |
| 3 CO, 10 A | 110 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-110W-10 | 9004840537116 |  | PT370110 |
| 3 CO, 10 A | 24 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-024W-10 | 9004840149470 |  | PT370524 |
| 3 CO, 10 A | 230 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-230W-10 | 9004840149494 |  | PT370730 |
| 4 CO, 6 A | 6 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-006G-06 | 9004840199307 |  | PT570006 |
| 4 CO, 6 A | 12 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-012G-06 | 9004839057151 |  | PT570012 |
| 4 CO, 6 A | 24 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-024G-06 | 9004839055249 |  | PT570024 |
| 4 CO, 6 A | 48 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-048G-06 | 9004839056901 |  | PT570048 |
| 4 CO, 6 A | 60 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-060G-06 | 9004840155297 |  | PT570060 |
| 4 CO, 6 A | 110 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-110G-06 | 9004840155303 |  | PT570110 |
| 4 CO, 6 A | 125 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-125G-06 | 9004840176995 |  | PT570125 |
| 4 CO, 6 A | 220 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-220G-06 | 9004839058202 |  | PT570220 |
| 4 CO, 6 A | 6 V AC | AgNi 90/10 | SREL-SL-4-UKE-M1-006W-06 | 9004839056154 |  | PT570506 |
| 4 CO, 6 A | 12 V AC | AgNi 90/10 | SREL-SL-4-UKE-M1-012W-06 | 9004839057557 |  | PT570512 |
| 4 CO, 6 A | 24 V AC | AgNi 90/10 | SREL-SL-4-UKE-M1-024W-06 | 9004839055331 |  | PT570524 |
| 4 CO, 6 A | 48 V AC | AgNi 90/10 | SREL-SL-4-UKE-M1-048W-06 | 9004840155334 |  | PT570548 |
| 4 CO, 6 A | 115 V AC | AgNi 90/10 | SREL-SL-4-UKE-M1-115W-06 | 9004840155341 |  | PT570615 |
| 4 CO, 6 A | 230 V AC | AgNi 90/10 | SREL-SL-4-UKE-M1-230W-06 | 9004839055256 |  | PT570730 |
| 4 CO, 6 A, with LED | 24 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-024G-06 | 9004840191691 |  | PT570L24 |
| 4 CO, 6 A, with LED and PD | 24 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-024G-06 | 9004840652239 |  | PT570LC4 |
| 4 CO, 6 A, with LED | 220 V DC | AgNi 90/10 | SREL-SL-4-UKE-M1-220G-06 | 9004840188394 |  | PT570N20 |
| 4 CO, 6 A, with LED | 24 V AC | AgNi 90/10 | SREL-SL-4-UKE-M1-024W-06 | 9004839062452 |  | PT570R24 |
| 4 CO, 6 A, with LED | 230 V AC | AgNi 90/10 | SREL-SL-4-UKE-M1-230W-06 | 9004839062469 |  | PT570T30 |
| 4 CO, 6 A, hard gold-plated | 24 V DC | AgNi 90/10 htv | SREL-SL-4-UKE-M1-024G-05 | 9004840156089 |  | PT580024 |
| 4 CO, 6 A, hard gold-plated | 110 V DC | AgNi 90/10 htv | SREL-SL-4-UKE-M1-110G-05 | 9004840155358 |  | PT580110 |
| 4 CO, 6 A, hard gold-plated | 220 V DC | AgNi 90/10 htv | SREL-SL-4-UKE-M1-220G-05 | 9004840169751 |  | PT580220 |
| 4 CO, 6 A, hard gold-plated | 24 V AC | AgNi 90/10 htv | SREL-SL-4-UKE-M1-024W-05 | 9004840158816 |  | PT580524 |
| 4 CO, 6 A, hard gold-plated | 115 V AC | AgNi 90/10 htv | SREL-SL-4-UKE-M1-115W-05 | 9004840175196 |  | PT580615 |
| 4 CO, 6 A, hard gold-plated | 230 V AC | AgNi 90/10 htv | SREL-SL-4-UKE-M1-230W-05 | 9004840158823 |  | PT580730 |
| 4 W, 6 A, hard gold-plated, with LED 24 V DC | AgNi 90/10 htv | SREL-SL-4-UKE-M1-024G-05 | 9004840220155 | | PT580L24 | |
| 4 W, 6 A, hard gold-plated, with LED 230 V AC | AgNi 90/10 htv | SREL-SL-4-UKE-M1-230W-06 | 9004840268072 | | PT580T30 | |



Order no. blue: on stock, usually ready for delivery on the day of order!

SCHRACK
TECHNIK

SCREWLESS CLAMP SOCKET WITH SCREWLESS TERMINALS

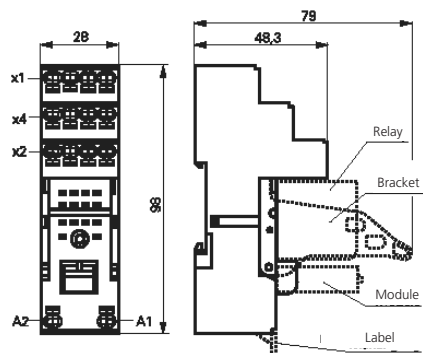


PT7874P

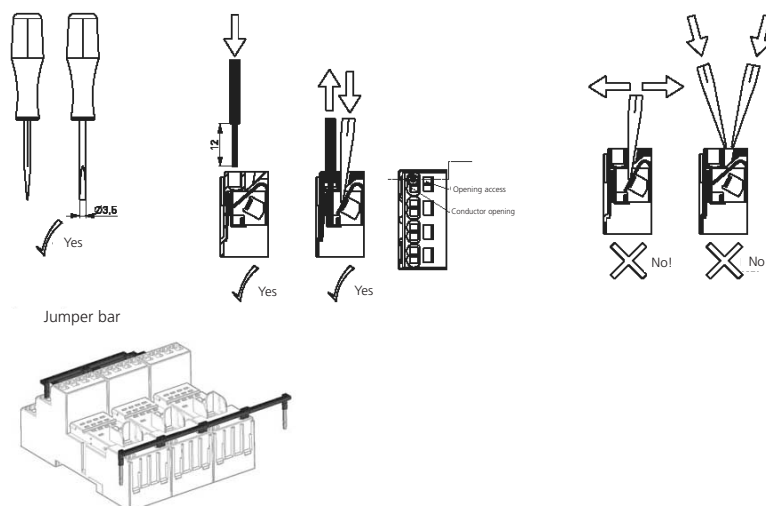
SCHRACK-INFO

- PT 4-pole 6 A
- Screwless terminals
- Solid wire can be connected without tools
- Double clamps per terminal
- Jumper bars for connection
- Open coil circuit for active modules
- Inputs and outputs arranged separately

DIMENSIONS (mm)



APPLICATION / CAUTIONS



TECHNICAL DATA

| | | 4-POLE |
|--|---|---|
| Rated current | | 6 A |
| Rated voltage / max. switching voltage | | 240 V~ |
| Dielectric strength | Coil/contact set | 2500 V _{eff} |
| | Open contact | 1200 V _{eff} |
| | adjacent contacts | 2000 V _{eff} |
| Contacts | | Screwless terminal |
| Wire stripping length | | 12 mm |
| Terminal capacity | Solid wire | 1 x 0.75 / 1 / 1.5 mm ² , 2 x 0.75 / 1 mm ² |
| | with standard insulation (no reinforced insulation) | 2 x 1.5 mm ² |
| | Stranded wire without ferrule | 1 x 0.75 / 1 / 1.5 mm ² , 2 x 0.75 / 1 mm ² |
| | without ferrule, with standard insulation | 2 x 1.5 mm ² |
| | with ferrule | 1 x 0.75 / 1 mm ² , 2 x 0.75 mm ² |
| with ferrule, without insulation or insulation at least 18 mm long | | 1 x 1.5 mm ² |

| DESCRIPTION | FOR RELAY TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|---|----------------|---------------|-----------|-----------------|
| Socket, inputs and outputs positioned separately, | | | | |
| socket with screwless terminals, 4-pole | PT5x | 9004840537987 | | PT7874P |
| Retaining clip | PT5x | 9004840417258 | | PT17021 |
| Jumper bar | - | 9004840539301 | | PT170P1 |
| Marking tag | - | 9004839902512 | | YPT16040 |

PT DIN RAIL MOUNT WITH SCREW TERMINALS LOGIC VERSION



PT78742

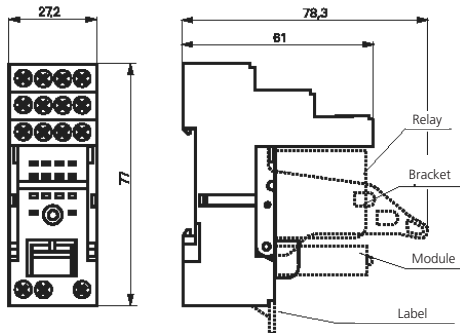
SCHRACK-INFO

- Base with separate arrangement of the control and load terminals
- High-quality, contact-reliable terminals
- Captive terminal screws
- Double A2 terminals for simpler loopthrough

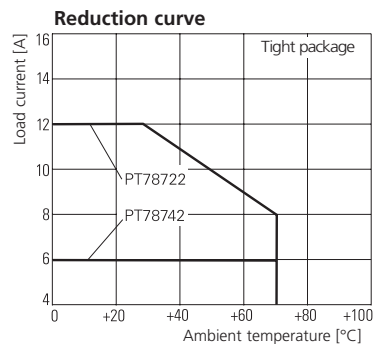
APPROVALS



DIMENSIONS (mm)



REDUCTION CURVE



TECHNICAL DATA

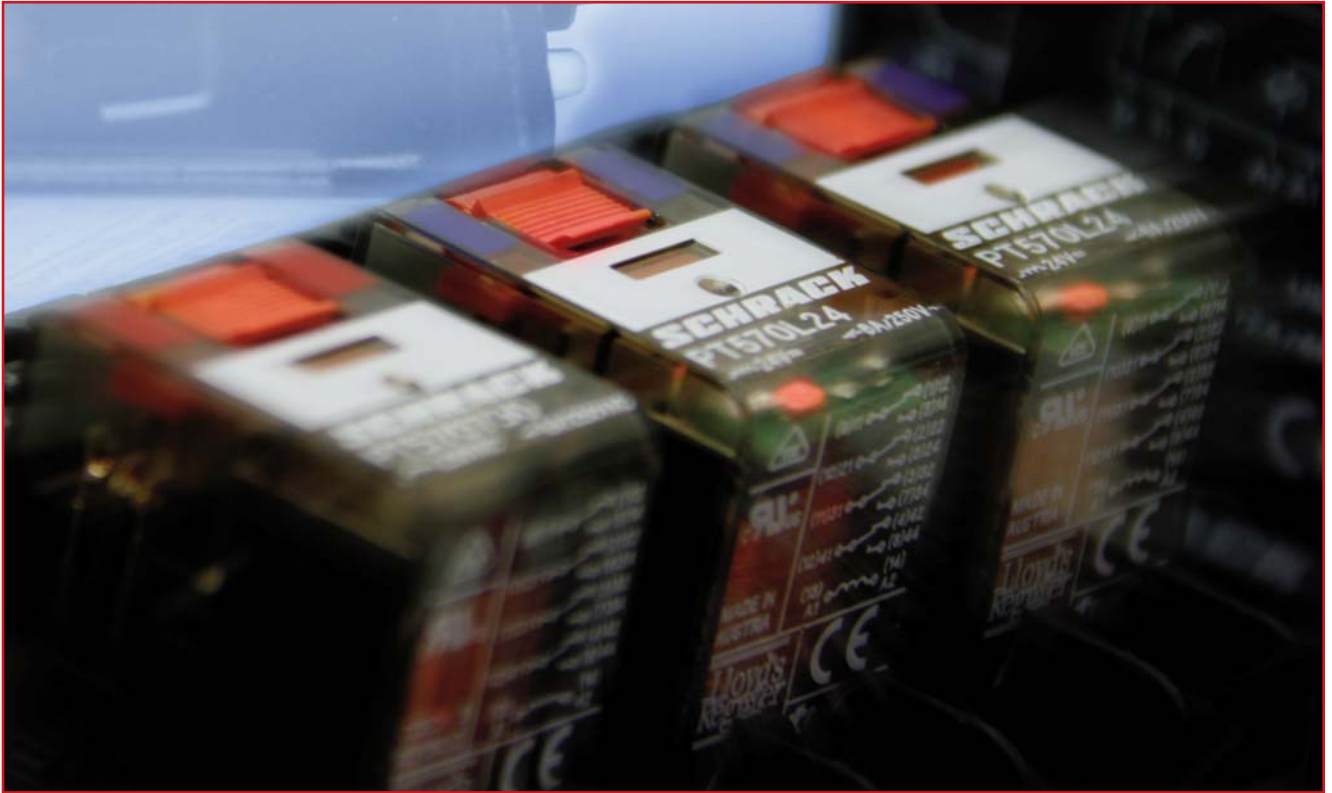
| | | 2-POLE | 4-POLE |
|--|----------------------------|-------------------------|-----------------------|
| Rated current | | 12 A | 6 A |
| Limiting continuous current | | See reduction curve | |
| Rated voltage / max. switching voltage | | AC 240 / 400 V~ | 240 V~ |
| Dielectric strength | Coil/contact set | 2500 V _{eff} | 2500 V _{eff} |
| | Open contact | 1200 V _{eff} | 1200 V _{eff} |
| | adjacent contacts | 2500 V _{eff} | 2000 V _{eff} |
| Terminals | | Screw terminals | |
| Terminal torque according to IEC 61984 | | 0.5 Nm | |
| max. | | 0.7 Nm | |
| Terminal capacity | Copper wire | 2 x 2.5 mm ² | |
| | Stranded wire | 2 x 2.5 mm ² | |
| | with ferrule (DIN 46228/1) | 2 x 1.5 mm ² | |

| DESCRIPTION | FOR RELAY TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|--|----------------|---------------|-----------|-----------------|
| Socket, inputs and outputs arranged separately, 4-pole | PT5x | 9004840411515 | | PT78742 |
| Retaining clip | PTx | 9004840417258 | | PT17021 |
| Jumper bar, 6-fold | - | 9004840617023 | | PT170R6 |
| Marking tag | - | 9004839902512 | | YPT16040 |



Order no. blue: on stock, usually ready for delivery on the day of order!

ACCESSORIES FOR MINIATURE RELAY PT – GENERAL INFORMATION



PT ACCESSORIES

SCHRACK-INFO

- Easy removal of the relay even with dense packing
- Due to plastic retaining brackets no reduction in protection classes or air and creepage distance.
- Pluggable indicator and protection modules
- Plastic retaining bracket with eject function for relay 29 mm height
- DIN rail mounts and accessories: compliant with RoHS Directive 2002/95/EC



I KNOW WHERE TO FIND IT!

WITH THE SCHRACK TECHNIK LIVE-PHONE APP

- Access technical product information at any time and from everywhere
- See availability and price immediately
- Order desired products easily

YPT DIN RAIL MOUNT WITH SCREW TERMINALS CONVENTIONAL VERSION



YPT78704

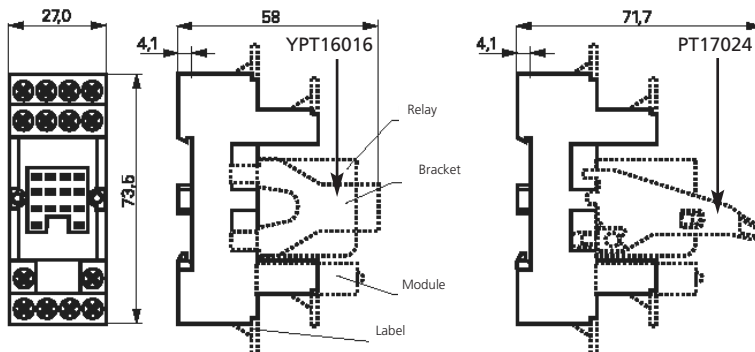
SCHRACK-INFO

- High-quality, contact-reliable terminals
- Captive terminal screws

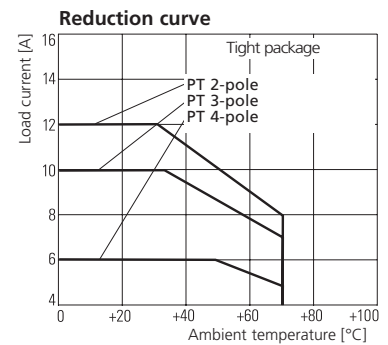
APPROVALS



DIMENSIONS (mm)



REDUCTION CURVE



TECHNICAL DATA

| | | 2-POLE | 3-POLE | 4-POLE |
|--|----------------------------|-------------------------|-----------------------|-----------------------|
| Rated current | | 12 A | 10 A | 6 A |
| Limiting continuous current | | See reduction curve | | |
| Rated voltage / max. switching voltage | | AC 250 V~ | | |
| Dielectric strength | Coil/contact set | 2500 V _{eff} | 2500 V _{eff} | 2500 V _{eff} |
| | Open contact | 1200 V _{eff} | 1200 V _{eff} | 1200 V _{eff} |
| | adjacent contacts | 2500 V _{eff} | 2500 V _{eff} | 2000 V _{eff} |
| Terminals | | Screw terminals | | |
| Terminal torque according to IEC 61984 | | 0.5 Nm | | |
| | | 0.7 Nm | | |
| Terminal capacity | Copper wire | 2 x 2.5 mm ² | | |
| | Stranded wire | 2 x 2.5 mm ² | | |
| | with ferrule (DIN 46228/1) | 2 x 1.5 mm ² | | |

| DESCRIPTION | FOR RELAY TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|--|-------------------|---------------|-----------|-----------------|
| DIN rail mount with screw terminals, 2-pole | PT2x | 9004840152913 | | YPT78702 |
| DIN rail mount with screw terminals, 3-pole | PT3x | 9004840228878 | | YPT78703 |
| DIN rail mount with screw terminals, 4-pole | PT5x | 9004839900341 | | YPT78704 |
| DIN rail mount with screw terminals, 4-pole with protection diode | PT5x with DC coil | 9004839900358 | | YPT78110 |
| Fixing clip | PTx | 9004839902529 | | YPT16016 |
| Retaining clip with eject function | PTx | 9004840617016 | | PT17024 |
| Jumper bar, 6-fold | - | 9004840617023 | | PT170R6 |
| Marking tag | - | 9004839902512 | | YPT16040 |



Order no. blue: on stock, usually ready for delivery on the day of order!

LED AND PROTECTION MODULES



YMLRW230

SCHRACK-INFO

- Compatible with screwless and screw terminal bases

| DESCRIPTION | FOR SOCKET | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|---|----------------------|------|---------------|-----------|-------------------|
| LED red 6...24 V DCV AC | YPTx, PTx, YRTx, RTx | EM07 | 9004839069253 | | YMLRA024 |
| LED red 6...24 V DC with prot. diode (A1+, A2-) | YPTx, PTx, YRTx, RTx | EM18 | 9004839069192 | | YMLRD024-A |
| LED red 6...24 V DC with prot. diode (A1-, A2+) | YPTx, PTx, YRTx, RTx | EM08 | 9004840152203 | | YMLRD024 |
| LED red 110...230 V AC | YPTx, PTx, YRTx, RTx | EM06 | 9004839069246 | | YMLRW230 |
| LED green 6...24 V DCV AC | YPTx, PTx, YRTx, RTx | EM11 | 9004839069222 | | YMLGA024 |
| LED green 6...24 V DC with prot. diode (A1+, A2-) | YPTx, PTx, YRTx, RTx | EM12 | 9004839069239 | | YMLGD024 |
| LED green 110...230 V AC | YPTx, PTx, YRTx, RTx | EM10 | 9004839034879 | | YMLGW230 |
| Protection diode (A1+, A2-), 6/230 V DC | YPTx, PTx, YRTx, RTx | EM09 | 9004839069208 | | YMF DG230 |
| RC network 6...60 V AC | YPTx, PTx, YRTx, RTx | EM02 | 9004840152272 | | YMRCW024 |
| RC network 110...230 V AC | YPTx, PTx, YRTx, RTx | EM03 | 9004840152289 | | YMRCW230 |
| Varistor 24 V AC | YPTx, PTx, YRTx, RTx | EM04 | 9004840194081 | | YMWAW024 |
| Varistor 230 V AC | YPTx, PTx, YRTx, RTx | EM05 | 9004840194098 | | YMWAW230 |



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WWW.SCHRACK.COM

- Finding product information made easy
- Buying products around the clock
- Quick access customer service

MULTIMODE RELAY MT

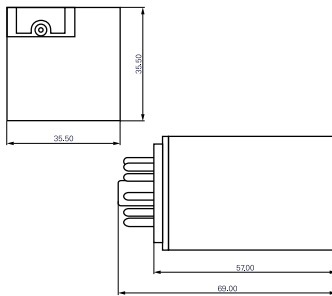


MT

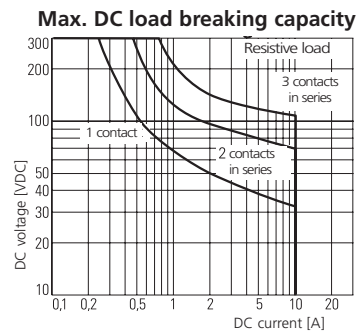
SCHRACK-INFO

- 2/3-pole 10 A, DC and AC coil
- 2 or 3 CO
- Cadmium-free contact material
- DC and AC coil
- Mechanical indicator as standard
- Electrical indicator: optional
- Test button system: touchproof, lock with lever integrated in the cap, test button pushed from the front
- Universal use in control and mechanical engineering

DIMENSIONS (mm)



LOAD BREAKING CAPACITY

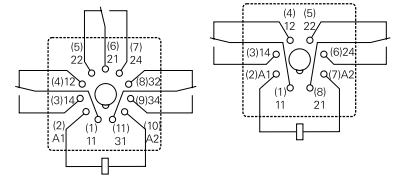


APPROVALS

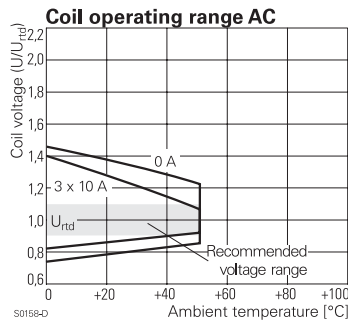
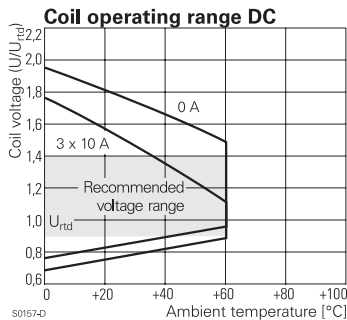


CIRCUIT DIAGRAMS

View of terminals



COIL OPERATING VOLTAGE RANGE



TYPE KEY





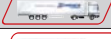

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|---|---|--|-------------|-------------|-------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|
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| Contacts | | | | | | | | | | | |
| 2 | 2 CO, 8-pole | | | | 3 | 3 CO, 11-pole | | | | | |
| Contact material | | | | | | | | | | | |
| 2 | AgNi 90/10 | | | | | | | | | | |
| 3 | AgNi 90/10, gold-plated, | | | | | | | | | | |
| Version | | | | | | | | | | | |
| 1 | DC voltage with test button | | | | 6 | AC voltage with test button | | | | | |
| 3 | DC voltage with test button and bipolar LED | | | | 8 | AC voltage with test button and LED | | | | | |
| Coil | | | | | | | | | | | |
| Coil code: please see coil table, preferred types in bold print | | | | | | | | | | | |
| Other types available on request | | | | | | | | | | | |

MULTIMODE RELAY MT – continued

TECHNICAL DATA

| CONTACT DATA | | 10 A |
|---|--------------|-----------------------------|
| Number of contacts and type | | 2 CO or 3 CO contacts |
| Contact version | | Single contact |
| Rated current | | 10 A |
| Rated voltage / max. switching voltage AC | | 250 V~ / 440 V~ |
| Max. breaking capacity AC | | 2500 VA |
| Making capacity (max.4 s at 10% duty cycle) | | 20 A |
| COIL DATA | | |
| Rated voltage range | DC coil | 12...220 VDC |
| | AC coil | 24...230 VAC |
| Rated output | DC coil | typ. 1.2 W |
| | AC coil | typ. 2.3 VA |
| Operation release voltage/coil resistance at ambient temperature 23°C | 24 VDC coil | 18 V / 2.4 V / 475 Ω ± 10% |
| | 24 VDC coil | 19.2 V / 9.6 V / 86 Ω ± 10% |
| | 230 VAC coil | 184 V / 92 V / 8300 Ω ± 10% |

Visit www.schrack.com for further technical data

| CONTACTS | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|---------------------------------------|----------|--------------|--------------------------|---------------|---|--------------------------|
| 2 CO 10 A, 8-POLE ROUND SOCKET | | | | | | |
| 2 CO | 12 V DC | AgNi 90/10 | SREL-SL-2-UKE-M1-012G-10 | 9004840108552 |  | MT221012 |
| 2 CO | 24 V DC | AgNi 90/10 | SREL-SL-2-UKE-M1-024G-10 | 9004840108569 |  | MT221024 |
| 2 CO | 12 V AC | AgNi 90/10 | SREL-SL-2-UKE-M1-012W-10 | 9004840108620 |  | MT226012 |
| 2 CO | 24 V AC | AgNi 90/10 | SREL-SL-2-UKE-M1-024W-10 | 9004840108637 |  | MT226024 |
| 2 CO | 115 V AC | AgNi 90/10 | SREL-SL-2-UKE-M1-115W-10 | 9004840108668 |  | MT226115 |
| 2 CO | 230 V AC | AgNi 90/10 | SREL-SL-2-UKE-M1-230W-10 | 9004840108675 |  | MT226230 |
| 2 CO, with LED | 230 V AC | AgNi 90/10 | SREL-SL-2-UKE-M1-230W-10 | 9004840108699 | | MT228230 |

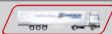



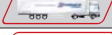



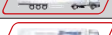










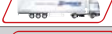


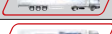


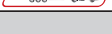





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MULTIMODE RELAY MT – continued

| CONTACTS | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|--|----------|-----------------|--------------------------|---------------|---|-----------------|
| 3 CO 10 A, 11-POLE ROUND SOCKET | | | | | | |
| 3 CO | 12 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-012G-10 | 9004839088681 |  | MT321012 |
| 3 CO | 24 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-024G-10 | 9004840108743 |  | MT321024 |
| 3 CO | 48 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-048G-10 | 9004840108750 |  | MT321048 |
| 3 CO | 60 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-060G-10 | 9004840108767 |  | MT321060 |
| 3 CO, with protection diode | 24 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-024G-10 | 9004840108774 |  | MT3210C4 |
| 3 CO | 110 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-110G-10 | 9004840108781 |  | MT321110 |
| 3 CO | 220 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-220G-10 | 9004840108842 |  | MT321220 |
| 3 CO, with LED | 24 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-024G-10 | 9004840108866 |  | MT323024 |
| 3 CO, with LED | 48 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-048G-10 | 9004840108873 |  | MT323048 |
| 3 CO, with LED | 60 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-060G-10 | 9004840108880 |  | MT323060 |
| 3 CO, with protection diode und LED | 24 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-024G-10 | 9004840108897 |  | MT3230C4 |
| 3 CO, with LED | 110 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-110G-10 | 9004840108903 |  | MT323110 |
| 3 CO, with LED | 220 V DC | AgNi 90/10 | SREL-SL-3-UKE-M1-220G-10 | 9004839090585 |  | MT323220 |
| 3 CO | 12 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-012W-10 | 9004840108934 |  | MT326012 |
| 3 CO | 24 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-024W-10 | 9004840108941 |  | MT326024 |
| 3 CO | 48 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-048W-10 | 9004840108965 |  | MT326048 |
| 3 CO | 60 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-060W-10 | 9004840108972 |  | MT326060 |
| 3 CO | 115 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-115W-10 | 9004840108996 |  | MT326115 |
| 3 CO | 230 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-230W-10 | 9004840109009 |  | MT326230 |
| 3 CO, with LED | 24 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-024W-10 | 9004839804748 |  | MT328024 |
| 3 CO, with LED | 115 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-115W-10 | 9004840109023 |  | MT328115 |
| 3 CO, with LED | 230 V AC | AgNi 90/10 | SREL-SL-3-UKE-M1-230W-10 | 9004840109030 |  | MT328230 |
| 3 CO | 24 V DC | AgNi 90/10, htv | SREL-SL-3-UKE-M1-024G-10 | 9004839088643 |  | MT331024 |
| 3 CO | 110 V DC | AgNi 90/10, htv | SREL-SL-3-UKE-M1-110G-10 | 9004840109054 |  | MT331110 |
| 3 CO | 220 V DC | AgNi 90/10, htv | SREL-SL-3-UKE-M1-220G-10 | 9004840109078 |  | MT331220 |
| 3 CO, with LED | 24 V DC | AgNi 90/10, htv | SREL-SL-3-UKE-M1-024G-10 | 9004840109085 |  | MT333024 |
| 3 CO, with protection diode und LED | 24 V DC | AgNi 90/10, htv | SREL-SL-3-UKE-M1-024G-10 | 9004840109092 |  | MT3330C4 |
| 3 CO, with LED | 220 V DC | AgNi 90/10, htv | SREL-SL-3-UKE-M1-220G-10 | 9004840160697 |  | MT333220 |
| 3 CO, with LED | 230 V AC | AgNi 90/10, htv | SREL-SL-3-UKE-M1-230W-10 | 9004840109122 |  | MT336230 |



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ACCESSORIES FOR MULTIMODE RELAYS MT AND COMPARABLE RELAYS WITH 8-/11-POLE BASE – GENERAL INFORMATION



MT ACCESSORIES

SCHRACK-INFO

- Snap-on mounting on DIN rail
- Screw fastening with centring screw
- Pozidrive screws with lift terminals
- Logical arrangement of input / output terminals
- White marking area

TECHNICAL DATA

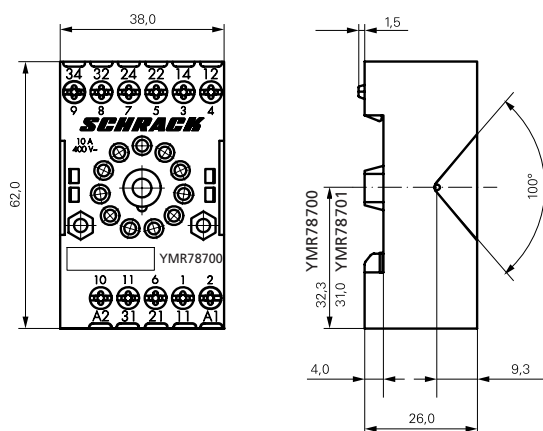
| | |
|---|-------------------------|
| Rated current | 10 A |
| Rated voltage / max. switching voltage | 240 / 400 V~ |
| Dielectric strength coil / contact set | > 3000 V _{eff} |
| Ambient temperature | +80 °C |
| Degree of protection | IP 20 |
| Mounting distance | ≥ 0 dense packing |
| Mounting / rail | DIN50024 / 22 |
| Terminal capacity | 2 x 2.5 mm ² |
| Terminal torque in according to IEC 61984 | 0.5 Nm |
| max. | 0.7 Nm |

MT PLUG-IN SOCKET WITH SCREW TERMINALS



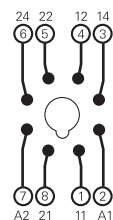
YMR78700

DIMENSIONS (mm)

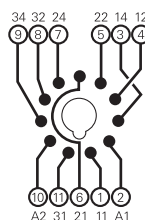


CIRCUIT DIAGRAM

2 CO contacts (YMR78701)



3 CO contacts (YMR78700)



| DESCRIPTION | FOR RELAY TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|--|----------------|---------------|-----------|-----------------|
| 8-pole MT plug-in socket with screw terminals, 2 CO | MT2x | 9004839900389 | | YMR78701 |
| 11-pole MT plug-in socket with screw terminals, 3 CO | MT3x | 9004839900396 | | YMR78700 |

MT PLUG-IN SOCKET WITH SCREW TERMINALS AND MODULE OPTION, 11-POLE

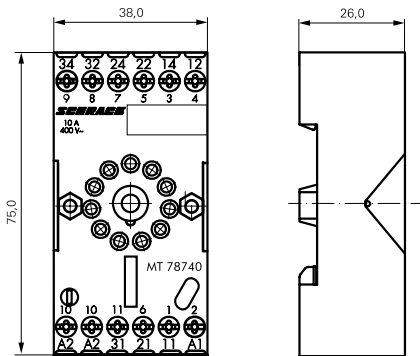


MT78740



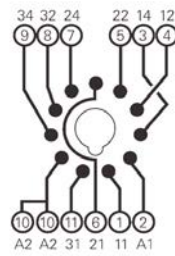
MTMF0W00/MTML0024/MTMT00A0

DIMENSIONS (mm)



CIRCUIT DIAGRAM

3-pole



TECHNICAL DATA OF THE FUNCTION MODULES

| | |
|------------------------|----------------------------|
| Rated voltage | 24...240 V~ / V~ |
| Mains frequency | 48...63 Hz |
| Repeat accuracy | ± 0.5 % |
| Repeatability | ≤ 0.5 % or 5 ms |
| Temperature influence | ≤ 0.1 %/°C |
| Time ranges switchable | 0.05 s...240 h in 8 ranges |
| Ambient temperature | -25...+55 °C |

MT PLUG-IN SOCKET WITH SCREW TERMINALS AND MODULE OPTION, 11-POLE – continued

TIME MODULE FUNCTIONS

| | | |
|--|---------------|--|
| response delayed MTMZ0W00, MTMF0W00 | U/t R | |
| reset delayed MTMF0W00 | U/t S R | |
| Single shot leading edge with pulse control MTMF0W00 | U/t S R | |
| Single shot trailing edge MTMF0W00 | U/t S R | |
| Response delayed with control contact MTMF0W00 | U/t S R | |
| Single shot leading edge MTMF0W00 | U/t R | |
| Flashing pause starting MTMF0W00 | U/t R | |
| Flashing pulse starting MTMF0W00 | U/t R | |

| DESCRIPTION | FOR RELAY TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|--|--------------------------------|---------------|-----------|-----------------|
| MT plug-in socket with screw terminals and module option, 3-pole MT3x | | 9004839052545 | | MT78740 |
| MT module with red LED 24 V AC / DC | MT3xx024 | 9004840162714 | | MTML0024 |
| MT module with protection diode A1+ | MT321x, MT331x, MT323x, MT333x | 9004840151978 | | MTMT00A0 |
| MT module with RC network 110/240 AC | MT326x, MT336x, MT328x, MT338x | 9004840151961 | | MTMU0730 |
| MT module, delayed response, multi-voltage 24 V-230 V AC / DC | MT3x | 9004840149548 | | MTMZ0W00 |
| MT module, multifunction, multivoltage 24 V-230 V AC / DC | MT3x | 9004840149555 | | MTMF0W00 |



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POWER RELAY RM



RM



RM

SCHRACK-INFO

RM 2 / 3 / 7

- 2 / 3-pole 10 / 16 A, DC and AC coil
- Switching capacity up to 6000 VA
- DC and AC coil
- Mechanical indicator
- Test button
- Plug-in or PCB mountable, fixing with tongue, DIN rail mounting
- For lift control systems, power supplies

RM 6

- 3-pole 10 / 16 A, DC and AC coil
- 2 NO contact or 3 NO contacts
- 3 mm contact gap
- DC and AC coil
- Test button
- Plug-in or PCB mountable, fixing with tongue, DIN rail mounting
- For power adapters, power supplies, pump controllers

RM 8

- 2-pole 25 A, DC and AC coil
- 2 CO contacts
- DC and AC coil
- Mechanical indicator
- Test button
- Fastening with tongue or DIN rail mounting
- For cleaning machines, heating / cooling units

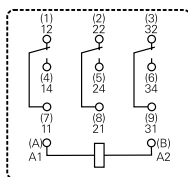
RMD

- 1-pole, 30 A, DC and AC coil
- 1 NO or 1 NO + 1 NC contact
- Switching capacity up to 7500 VA
- DC and AC coil
- Test button
- Fastening with tongue
- For battery chargers, heating controls

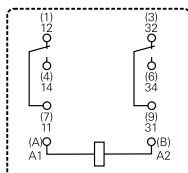
CIRCUIT DIAGRAMS

RM 2 / 3 / 7

3 CO

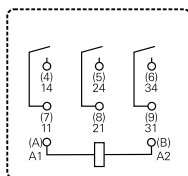


2 CO



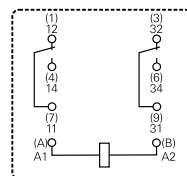
RM 6

3 NO



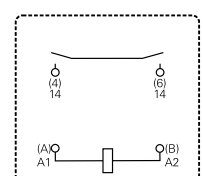
RM 8

2 CO



RMD

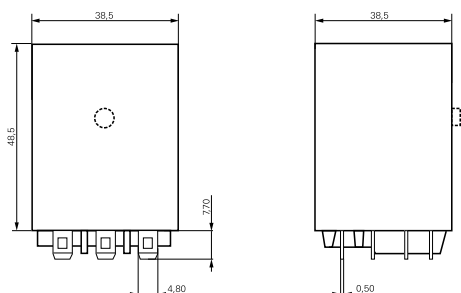
1 NO, RMD



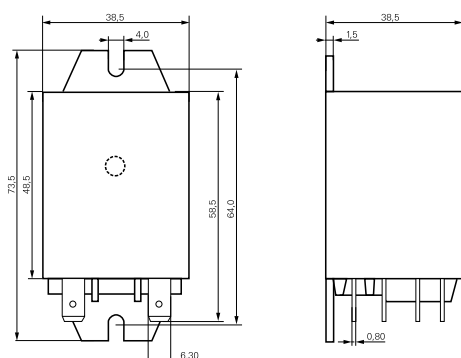
POWER RELAY RM – continued

DIMENSIONS (mm)

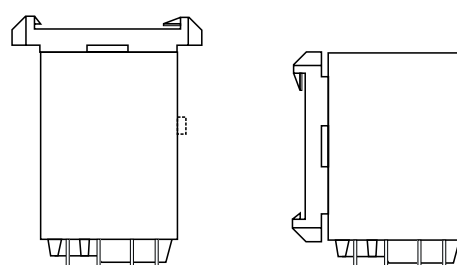
Cover without lug, plug-in connectors for plug-in socket



Cap with mounting bracket, Faston 250 (187 possible)



Cap with DIN snap mechanism (only Faston 250)
lying standing



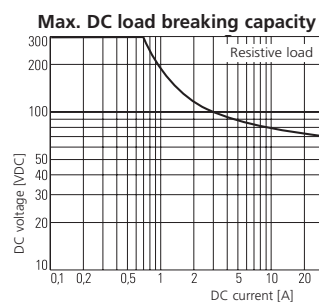
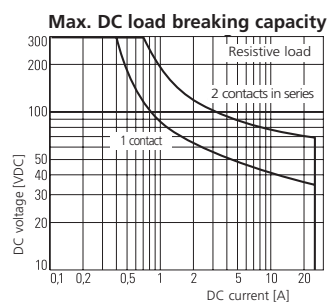
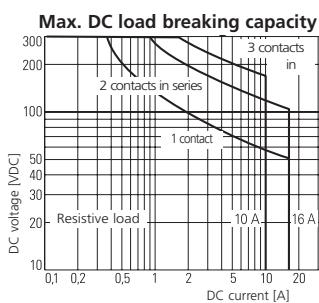
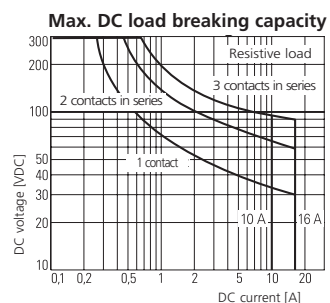
LOAD BREAKING CAPACITY

RM 2, 3, 7

RM 6

RM 8

RMD



TYPE KEY

| | | | | | | | | | | | |
|---|---|---------------------------|--|-------------|-------------|------------------|-------------|-------------|-------------|-------------|-------------|
| TYPE KEY | | <div>R</div> <div>M</div> | | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| Type | | | | | | | | | | | |
| Contacts | | | | | | | | | | | |
| 2 | 2 CO, 16 A | | | | 7 | 3 CO, 16 A | | | | | |
| 3 | 3 CO, 10 A | | | | | | | | | | |
| 6 | 3 NO, 10 A (3 mm contact gap) | | | | | | | | | | |
| 8 | 2 CO, 25 A | | | | | | | | | | |
| D | 1 NO, 30 A (bridging contact) | | | | | | | | | | |
| Version | | | | | | | | | | | |
| 0 | Without test button | | | | 3 | With test button | | | | | |
| Contacts | | | | | | | | | | | |
| 2 | Cap without lug, AMP Faston 187 | | | | | | | | | | |
| 3 | Cap with lug, AMP Faston 187 | | | | | | | | | | |
| 5 | Cap with lug, AMP Faston 250 | | | | | | | | | | |
| 8 | Cap with DIN snap mechanism, lying, AMP Faston 250 | | | | | | | | | | |
| 9 | Cap with DIN snap mechanism, standing, AMP Faston 250 | | | | | | | | | | |
| Coil code | | | | | | | | | | | |
| Coil code: please see coil table, preferred types in bold print | | | | | | | | | | | |

AMP Faston 187 = 4.8 x 0.5 mm

AMP Faston 250 = 6.3 x 0.8 mm

POWER RELAY RM – continued

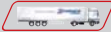

















TECHNICAL DATA

| CONTACT DATA | | RM2 | RM3 | RM7 |
|---|--------------|-----------------|-----------------|-----------------|
| Number of contacts and type | | 2 CO | 3 CO | 3 CO |
| Contact version | | Single contact | Single contact | Single contact |
| Rated current | | 16 A | 10 A | 16 A |
| Rated voltage / max. switching voltage AC | | 380 V~ / 440 V~ | 380 V~ / 440 V~ | 380 V~ / 440 V~ |
| Max. breaking capacity AC | | 6000 VA | 3800 VA | 6000 VA |
| Making capacity (max. 4 s at 10% DF) | | 40 A | 40 A | 40 A |
| Contact material | | AgCdO | AgCdO | AgCdO |
| COIL DATA | | | | |
| Rated voltage range | DC coil | 12...24 VDC | 24 VDC | 12...60 VDC |
| | AC coil | 230 VAC | 230 VAC | 24...400 VDC |
| Rated output | DC coil | 1.2 W | 1.2 W | 1.6 W |
| | AC coil | 2.3 VA | 2.3 VA | 2.8 VA |
| Operation release voltage/coil resistance at ambient temperature 23 °C | 24 VDC coil | 18 V / 2.4 V | 18 V / 2.4 V | 18 V / 2.4 V |
| | 230 VAC coil | 184 V / 92 V | 184 V / 92 V | 184 V / 92 V |
| Visit www.schrack.com for further technical data | | | | |

| CONTACT DATA | | RM6 | RM8 |
|---|--------------|-----------------|-----------------|
| Number of contacts and type | | 3 NO | 2 CO |
| Contact version | | Single contact | Single contact |
| Rated current | | 10 A | 25 A |
| Rated voltage / max. switching voltage AC | | 380 V~ / 440 V~ | 250 V~ / 440 V~ |
| Max. breaking capacity AC | | 3800 VA | 6000 VA |
| Making capacity (max. 4 s at 10% DF) | | 25 A | 60 A |
| Contact material | | AgCdO | AgCdO |
| COIL DATA | | | |
| Rated voltage range | DC coil | 24 VDC | 24 VDC |
| | AC coil | 230 VAC | 230 VAC |
| Rated output | DC coil | 1.6 W | 1.2 W |
| | AC coil | 2.8 VA | 2.8 VA |
| Operation release voltage/coil resistance at ambient temperature 23 °C | 24 VDC coil | 18 V / 2.4 V | 18 V / 2.4 V |
| | 230 VAC coil | 184 V / 92 V | 184 V / 92 V |
| Visit www.schrack.com for further technical data | | | |

| CONTACT DATA | | RMD |
|---|--------------|-----------------|
| Number of contacts and type | | 1 NO contact |
| Contact version | | Bridge context |
| Rated current | | 30 A |
| Rated voltage / max. switching voltage AC | | 250 V~ / 440 V~ |
| Max. breaking capacity AC | | 7500 VA |
| Making capacity (max. 4 s at 10% DF) | | 60 A |
| Contact material | | AgCdO |
| COIL DATA | | |
| Rated voltage range | DC coil | 6...220 VDC |
| | AC coil | 6...400 VAC |
| Rated output | DC coil | 24 VDC |
| Operation release voltage/coil resistance at ambient temperature 23 °C | 24 VDC coil | 18 V / 2.4 V |
| | 230 VAC coil | 184 V / 92 V |
| Visit www.schrack.com for further technical data | | |

POWER RELAY RM – continued

| CONTACTS | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|-------------------------------|----------|--------------|--------------------------|---------------|---|----------------------------|
| 10 A | | | | | | |
| 3 CO, (for RM socket) | 24 V DC | AgCdO | SREL-SL-3-UKE-M1-024G-10 | 9004840105346 |  | RM332024-D |
| 3 CO, (for RM socket) | | | | | | |
| without test button | 24 V DC | AgCdO | SREL-SL-3-UKE-M1-024G-10 | 9004840110319 |  | RM302024-D |
| 3 CO, (for RM socket) | 230 V AC | AgCdO | SREL-SL-3-UKE-M1-230W-10 | 9004840105353 |  | RM332730SE |
| 16 A | | | | | | |
| 3 NO, 3 mm (for RM socket) | 24 V DC | AgCdO | SREL-SL-3-AKE-M1-024G-10 | 9004840101478 |  | RM632024-A |
| 3 NO, (for RM socket) | 24 V DC | AgCdO | SREL-SL-3-AKE-M1-024G-10 | 9004840125238 | | RM602024 |
| 3 NO, (for RM socket) | 24 V DC | AgCdO | SREL-SL-3-UKE-M1-024G-10 | 9004840101478 |  | RM632024-A |
| 16 A | | | | | | |
| 2 CO, (for RM socket) | 24 V DC | AgCdO | SREL-SL-2-UKE-M1-024G-10 | 9004840109955 | | RM232024-D |
| 3 CO, (for RM socket) | 12 V DC | AgCdO | SREL-SL-3-UKE-M1-012G-16 | 9004840105513 |  | RM732012-C |
| 3 CO, (for RM socket) | 24 V DC | AgCdO | SREL-SL-3-UKE-M1-024G-16 | 9004840105360 |  | RM732024-C |
| 3 CO, (for RM socket) | | | | | | |
| without test button | 24 V DC | AgCdO | SREL-SL-3-UKE-M1-024G-16 | 9004840105384 |  | RM702024-C |
| 3 CO, (for RM socket) | 60 V DC | AgCdO | SREL-SL-3-UKE-M1-060G-16 | 9004840101225 | | RM732060 |
| 3 CO, (for RM socket) | 24 V AC | AgCdO | SREL-SL-3-UKE-M1-024W-16 | 9004840104233 |  | RM732524-C |
| 3 CO, (for RM socket) | 230 V AC | AgCdO | SREL-SL-3-UKE-M1-230W-16 | 9004839086984 |  | RM732730 |
| 3 CO | 230 V AC | AgCdO | SREL-SL-3-UKE-M1-230W-16 | 9004840103786 |  | RM735730SE |
| 3 CO | 400 V AC | AgCdO | SREL-SL-3-UKE-M1-400W-16 | 9004840385113 |  | RM732900 |
| 3 CO | 24 V DC | AgCdO | SREL-LL-3-UKE-M1-024G-16 | 9004840103816 |  | RM738024-C |
| 3 CO | 230 V AC | AgCdO | SREL-LL-3-UKE-M1-230W-16 | 9004840103854 |  | RM738730-C |
| 3 CO | 230 V AC | AgCdO | SREL-SL-3-UKE-M1-230W-16 | 9004840100020 |  | RM739730SE |
| 25 A | | | | | | |
| 2 CO | 24 V DC | AgCdO | SREL-SL-2-UKE-M1-024G-25 | 9004840104264 |  | RM835024 |
| 2 CO | 24 V DC | AgCdO | SREL-LL-2-UKE-M1-024G-25 | 9004840100037 |  | RM838024 |
| 2 CO | 24 V DC | AgCdO | SREL-SL-2-UKE-M1-024G-25 | 9004840104042 |  | RM839024 |
| 2 CO | 230 V AC | AgCdO | SREL-SL-2-UKE-M1-230W-25 | 9004840105742 | | RM805730 |
| 2 CO | 230 V AC | AgCdO | SREL-SL-2-UKE-M1-230W-25 | 9004840142815 | | RM809730 |
| 2 CO | 230 V AC | AgCdO | SREL-SL-2-UKE-M1-230W-25 | 9004840100938 |  | RM835730SE |
| 2 CO | 230 V AC | AgCdO | SREL-SL-2-UKE-M1-230W-25 | 9004840111149 |  | RM839730 |
| 30 A | | | | | | |
| 3 NO | 24 V DC | AgCdO | LEIST-REL-GS-BRK-30A | 9004840189087 |  | RMD05024 |



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ACCESSORIES FOR POWER RELAYS RM – GENERAL INFORMATION



RM ACCESSORIES

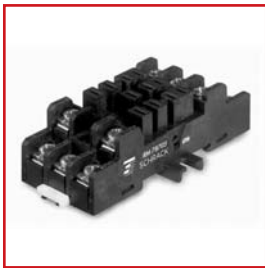
SCHRACK-INFO

- 2 / 3-pole, 10 / 16 A
- suitable, e.g.. for the relays: RM332, RM632, RM732

TECHNICAL DATA

| | UP TO 250 V AC |
|--|-----------------------|
| Rated current | 16 A |
| Rated voltage / max. switching voltage | 250 V~ |
| Dielectric strength coil / contact set | > 2500 V _e |
| Ambient temperature | -40...+40 °C |
| Terminal torque | 0.8 Nm |
| max. | 1.2 Nm |

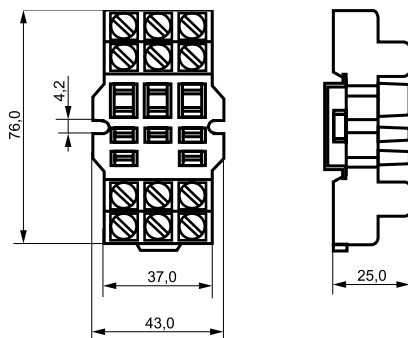
RM PLUG-IN SOCKET WITH SCREW TERMINALS



RM78705

DIMENSIONS (mm)

RM78705

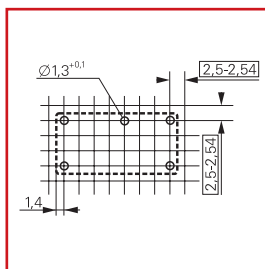
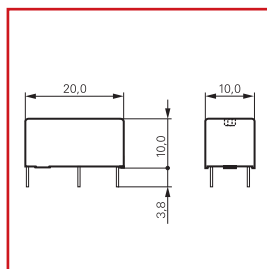


| DESCRIPTION | FOR RELAY TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------------|---------------|---|----------------|
| RM-socket for screw fastening up to 250 V AC | RMxx2x (187 Faston) | 9004839013621 |  | RM78705 |



Order no. blue: on stock, usually ready for delivery on the day of order!

PCB RELAYS PE / PE BISTABLE

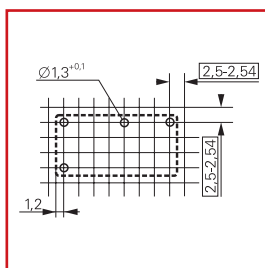
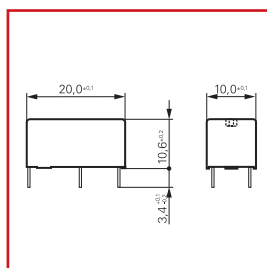


SCHRACK-INFO

- 1 CO or 1 NO contact, 5 A
- Coil 3 to 48 V DC monostable or bistable
- Nominal coil power: 200 mW
- For industrial electronics, domestic appliances, battery-powered equipment
- Technical data at www.schrack.com

| CONTACTS | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|-----------|---------|--------------|--------------------------|---------------|-----------|-----------------|
| 1 CO, 5 A | 5 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-005G-05 | 9004840158632 | | PE014005 |
| 1 CO, 5 A | 12 V DC | AgNi 90/10 | PREL-SL-1-UKE-M1-012G-05 | 9004840160598 | | PE014012 |

MINIATURE PCB RELAYS RE

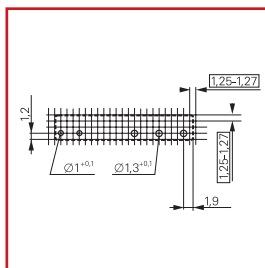
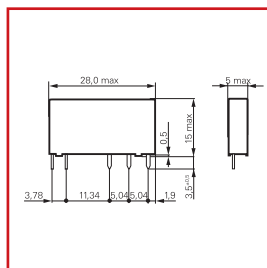


SCHRACK-INFO

- 1 NO contact, 6 A
- Coil 5 to 48 V DC
- Nominal coil power: 200 mW
- For PLCs, timer relays, temperature controllers, interface cards, domestic appliances
- Technical data at www.schrack.com

| CONTACTS | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|-----------|---------|--------------|--------------------------|---------------|-----------|-----------------|
| 1 NO, 6 A | 5 V DC | AgCdO | PREL-SW-1-AKE-M1-005G-06 | 9004840159110 | | RE030005 |
| 1 NO, 6 A | 12 V DC | AgCdO | PREL-SW-1-AKE-M1-012G-06 | 9004840155167 | | RE030012 |
| 1 NO, 6 A | 24 V DC | AgCdO | PREL-SW-1-AKE-M1-024G-06 | 9004839000270 | | RE030024 |

SLIM PCB RELAY SNR

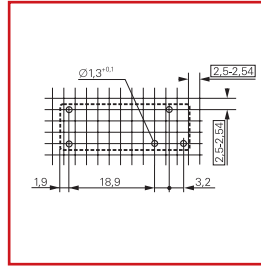
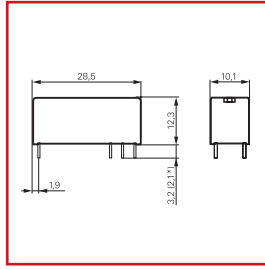


SCHRACK-INFO

- 1 CO or 1 NO contact, 6 A
- Coil 5 to 60 V DC
- Nominal coil power: 170 mW
- For heating control, narrowest coupling elements, interface applications, PLC, I/O modules
- Technical data at www.schrack.com

| CONTACTS | COIL | CONTACT MAT. | TYPE | EAN CODE | AVAILABLE | ORDER NO. |
|-----------|---------|--------------|------------------------------|---------------|-----------|-----------------|
| 1 CO, 6 A | 12 V DC | AgSnO | PREL-SW-1-UKE-M1-012G-06-5.0 | 9004840240535 | | SNR03012 |
| 1 CO, 6 A | 24 V DC | AgSnO | PREL-SW-1-UKE-M1-024G-06-5.0 | 9004840175097 | | SNR03024 |
| 1 NO, 6 A | 24 V DC | AgSnO | PREL-SW-1-AKE-M1-024G-06-5.0 | 9004840177299 | | SNR13024 |

PCB RELAY RY II

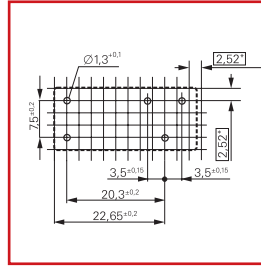
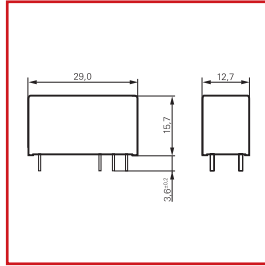


SCHRACK-INFO

- Pinning 5 mm
- 1 CO, NO or NC contact, 8 A
- Coil 5 to 60 V DC
- Nominal coil power: 220 mW
- for heating controls, timer relays, timers
- Technical data at www.schrack.com

| CONTACTS | PINNING | COIL | EAN-CODE | AVAILABLE | ORDER NO. |
|-----------|---------|---------|---------------|-----------|-----------------|
| 1 CO, 8 A | 3.2 mm | 12 V DC | 9004840158212 | | RY210012 |
| 1 CO, 8 A | 3.2 mm | 24 V DC | 9004840155112 | | RY210024 |
| 1 NO, 8 A | 5 mm | 12 V DC | 9004840185867 | | RY530012 |
| 1 CO, 8 A | 3.2 mm | 24 V DC | 9004840156126 | | RY612024 |

POWER RELAYS RT



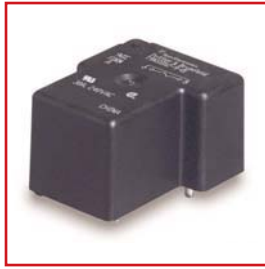
SCHRACK-INFO

- 1 and 2 CO or NO contacts, 8/12/16 A
- Coil 5 to 110 V DC, 24 to 230 V AC
- Monostable and bistable
- Inrush, sensitive and high-temperature
- Pinning 3.5 and 5 mm
- Universal application
- Technical data at www.schrack.com

| CONTACTS | PINNING | COIL | EAN-CODE | AVAILABLE | ORDER NO. |
|-----------|---------|--------------------|---------------|-----------|-----------------|
| 2 CO, 8 A | 5 mm | 6 V DC | 9004840158939 | | RT424006 |
| 2 CO, 8 A | 5 mm | 12 V DC | 9004839019241 | | RT424012 |
| 2 CO, 8 A | 5 mm | 24 V DC | 9004839019142 | | RT424024 |
| 2 CO, 8 A | 5 mm | 48 V DC | 9004839027185 | | RT424048 |
| 2 CO, 8 A | 5 mm | 60 V DC | 9004840193558 | | RT424060 |
| 2 CO, 8 A | 5 mm | 110 V DC | 9004840191561 | | RT424110 |
| 2 CO, 8 A | 5 mm | 24 V AC | 9004839034602 | | RT424524 |
| 2 CO, 8 A | 5 mm | 48 V AC | 9004840167641 | | RT424548 |
| 2 CO, 8 A | 5 mm | 115 V AC | 9004840158021 | | RT424615 |
| 2 CO, 8 A | 5 mm | 230 V AC | 9004839034282 | | RT424730 |
| 2 CO, 8 A | 5 mm | 5 V DC - bistable | 9004840166491 | | RT424A05 |
| 2 CO, 8 A | 5 mm | 24 V DC - bistable | 9004840193572 | | RT424A24 |
| 2 CO, 8 A | 5 mm | 12 V DC - bistable | 9004840158205 | | RT424F12 |
| 2 CO, 8 A | 5 mm | 24 V DC - bistable | 9004840160864 | | RT424F24 |
| 2 CO, 8 A | 5 mm | 24 V DC | 9004840160628 | | RT425024 |
| 2 CO, 8 A | 5 mm | 115 V AC | 9004840187748 | | RT425615 |
| 2 CO, 8 A | 5 mm | 230 V AC | 9004840166040 | | RT425730 |
| 2 CO, 8 A | 5 mm | 24 V DC | 9004839029103 | | RTE24024 |



OTHER PCB RELAYS



SCHRACK-INFO

- RP 2
- Card relay E (RP 1, V23057)

| CONTACTS | PINNING | COIL | EAN-CODE | AVAILABLE | ORDER NO. |
|------------|---------|----------|---------------|-----------|-------------------|
| 1 CO, 16 A | 5 mm | 12 V DC | 9004840155181 | | RP310012-A |
| 1 CO, 16 A | 5 mm | 24 V DC | 9004840166033 | | RP310024-A |
| 1 CO, 8 A | 3.5 mm | 24 V DC | 9004840155235 | | RP418024-A |
| 2 CO, 8 A | 5 mm | 12 V DC | 9004840155242 | | RP420012-B |
| 2 CO, 8 A | 5 mm | 24 V DC | 9004840155259 | | RP420024-B |
| 2 CO, 8 A | 5 mm | 24 V AC | 9004840189964 | | RP420524-B |
| 2 CO, 8 A | 5 mm | 230 V AC | 9004840189988 | | RP420730-B |
| 2 CO, 8 A | 5 mm | 24 V DC | 9004840157970 | | RP421024-B |
| 2 CO, 8 A | 5 mm | 48 V DC | 9004840160581 | | RP421048-B |
| 1 CO, 8 A | 2.5 mm | 12 V DC | 9004840166910 | | RP510012-E |
| 1 CO, 8 A | 2.5 mm | 24 V DC | 9004840165029 | | RP510024-E |
| 1 CO, 8 A | 2.5 mm | 60 V DC | 9004840231175 | | RP510060-E |
| 1 NO, 8 A | 2.5 mm | 24 V DC | 9004840180107 | | RP531024-H |
| 1 CO, 8 A | 2.5 mm | 5 V DC | 9004840160840 | | RP610005-E |
| 1 CO, 8 A | 2.5 mm | 12 V DC | 9004840172720 | | RP610012-E |
| 1 CO, 8 A | 2.5 mm | 24 V DC | 9004840165012 | | RP611024-E |
| 1 CO, 16 A | 5 mm | 24 V DC | 9004840185508 | | RP710024-A |
| 2 CO, 8 A | 5 mm | 24 V DC | 9004840185546 | | RP820024-A |
| 2 CO, 8 A | 5 mm | 24 V DC | 9004840169720 | | RP821024-A |
| 1 NO, 10 A | 5 mm | 24 V DC | 9004840161427 | | RTH84024 |



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SOCKETS FOR PCB CONNECTION



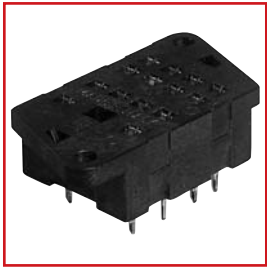
RP78601



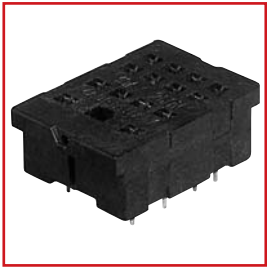
RT16041

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|-----------|----------------|
| SOCKET | | | |
| PCB socket for PCB relay with 3.5 mm pinning | 9004840157888 | | RP78601 |
| PCB socket for PCB relay with 5.0 mm pinning | 9004840100518 | | RP78602 |
| ACCESSORIES | | | |
| Retaining clip for RT relay | 9004840167764 | | RT16041 |
| Retaining clip for RT PCB socket, metal | 9004840191578 | | RT28516 |

PT SOCKETS WITH SOLDER/PCB TERMINALS



PT78600



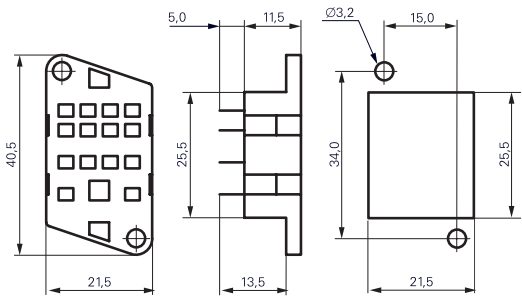
PT78604

SCHRACK-INFO

- Rated current: 10 A
- Rated voltage: 250 V~
- Dielectric strength peak/cont.: >1500 V_{eff}
- Ambient temperature: -40...+70 °C

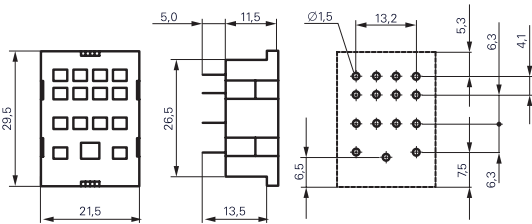
DIMENSIONS (mm)

Plug-in socket with solder terminals, 4-pole PT78600



Mounting plate recess

Plug-in sockets with PCB terminals PT78602/03/04



| DESCRIPTION | PU | EAN CODE | AVAILABLE | ORDER NO. |
|---|-----|---------------|-----------|----------------|
| PT SOCKET WITH SOLDER/PCB TERMINALS | | | | |
| Plug-in socket with PCB terminals, 4-pole, 6 A | 100 | 9004840226829 | | PT78604 |
| Plug-in socket with PCB terminals, 3-pole, 10 A | 100 | 9004840153996 | | PT78603 |
| ACCESSORIES FOR PT SOCKETS | | | | |
| Retaining clip for PCB socket, metal | 10 | 9004840154108 | | PT28802 |



Order no. blue: on stock, usually ready for delivery on the day of order!

MT PLUG-IN BASES WITH SOLDER-PINS



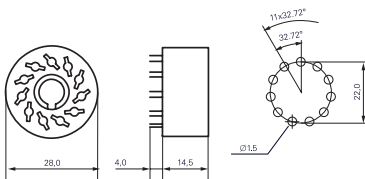
MT78603

SCHRACK-INFO

- Rated current 10 A
- Rated voltage 250 V~
- Dielectric strength peak/cont. >2500 V_{eff}
- Ambient temperature -40...+70 °C

DIMENSIONS (mm)

Plug-in sockets 11-pole with PCB terminals MT787 603



| DESCRIPTION | WxHxD (mm) | PU | EAN CODE | AVAILABLE | ORDER NO. |
|--|------------|----|---------------|-----------|-----------|
| 11-pole plug-in socket with PCB terminal | Ø 28x19 | 25 | 9004840226881 | | MT78603 |

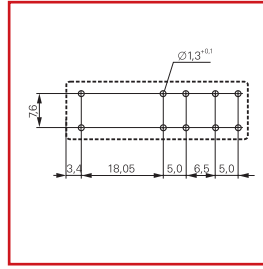
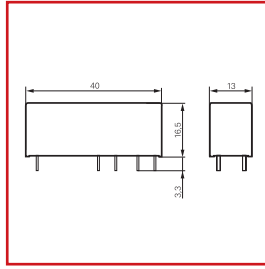


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RELAY WITH FORCE GUIDED CONTACTS SR4D/M

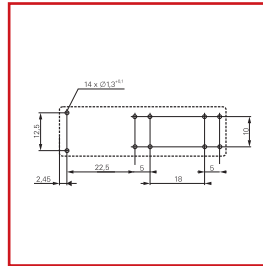
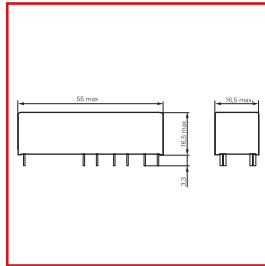


SCHRACK-INFO

- 3 NO, 1 NC or 2 NO, 2 NC, 8 A
- Coil 5 to 110 V DC
- Technical data at www.schrack.com

| CONTACTS | PINNING | COIL | EAN-CODE | AVAILABLE | ORDER NO. |
|-----------|---------|---------|---------------|-----------|-----------------|
| 1 NO, 6 A | 5 mm | 24 V DC | 9004840378269 | | SR2X5024 |
| 2 CO, 6 A | 5 mm | 24 V DC | 9004840226713 | | SR2Y5024 |

RELAY WITH FORCE GUIDED CONTACTS SR6



SCHRACK-INFO

- 4 NO, 2 NC, 8 A
- 3 NO, 3 NC, 8 A
- 5 NO, 1 NC, 8 A
- Coil 5 to 110 V DC
- Technical data at www.schrack.com

| CONTACTS | COIL | EAN-CODE | AVAILABLE | ORDER NO. |
|-----------------|---------|---------------|-----------|-----------|
| 2 NO, 2 NC, 6 A | 24 V DC | 9004840226720 | | SR4D4024 |
| 3 NO, 1 NC, 8 A | 24 V DC | 9004840373219 | | SR4M4024 |



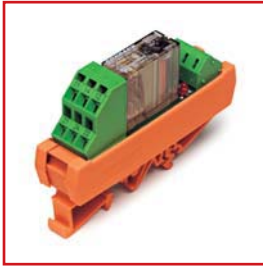
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RELAY WITH FORCE GUIDED CONTACTS SR2Z

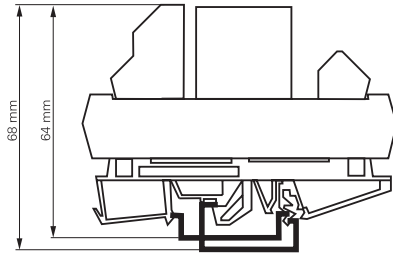


SR2Z

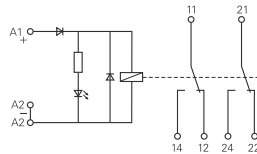
SCHRACK-INFO

- 2-pole 6 A
- 2 CO, 6 A
- Coil 24 V DC
- SR2 on DIN rail module
- Screwless terminals

DIMENSIONS (mm)



CIRCUIT DIAGRAM



TYPE KEY

| | | | | | | | | | | | | |
|--|---------------------------|--|--|--|--|--------------|--------------|--------------|--|--|--|--|
| Type | <div>S</div> <div>R</div> | | | | | <div>2</div> | <div>Z</div> | <div>Y</div> | <div>0</div> <div>2</div> <div>4</div> | | | |
| Contacts | | | | | | | | | | | | |
| | Y | | | | | 2 CO | | | | | | |
| Coil | | | | | | | | | | | | |
| DC coil code = nominal voltage (z. B. 024 = 24 V~) | | | | | | | | | | | | |

TECHNICAL DATA

| CONTACT DATA | | |
|--|----------------------|---|
| Contact type | | Single contact, positive action |
| Rated current | | 6 A |
| Rated voltage / max. switching voltage AC | | 250 V~ / V = |
| Max. breaking capacity AC | | 1500 VA |
| Contact material | | AgNi |
| Recommended minimum load | | > 10 mA / 5 V |
| INSULATION | | |
| Initial dielectric strength between | Coil and contacts | 4000 V _{eff} |
| | Open contact circuit | 1000 V _{eff} |
| | Adjacent contacts | 2000 V _{eff} |
| Clearance/Creepage between | Coil and contacts | 8 / 8 mm |
| | Adjacent contacts | 3 / 3 mm |
| Insulation to IEC 50178 between | Coil and contacts | Reinforced |
| | Adjacent contacts | Basic |
| OTHER DATA | | |
| Ambient temperature | | -25...+50 °C |
| Mechanical endurance | | > 10x10 ⁶ operations |
| Max. switching frequency with/without load | | 6 min ⁻¹ / 300 min ⁻¹ |
| Terminal cross section (according to IEC) | | |
| | Copper wire | 0.2...2.5 mm ² |
| | Stranded wire | 0.2...2.5 mm ² |
| | AWG | 28...14 |
| Installation position | | Any |
| Mounting | | On DIN rail without gap |
| Connection | | Screwless terminals |

| CONTACTS | COIL | EAN-CODE | AVAILABLE | ORDER NO. |
|-----------------|---------|---------------|-----------|-----------|
| 4 NO, 2 NC, 8 A | 24 V DC | 9004840251517 | | SR6B4024 |



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RELAY WITH FORCE GUIDED CONTACTS SR6Z

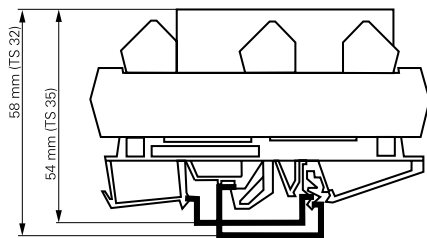


SR6Z

SCHRACK-INFO

- 6-pole 8 A
- 4 NO, 2 NC, 8 A
- Coil 24 VDC
- SR6 on DIN rail module
- Screwless terminals
- Module width 46 mm
- For lift and escalator control, machine control

DIMENSIONS (mm)



Module width 46 mm, module length 87 mm
Suitable for mounting rails according
to DIN EN 50022 or DIN EN 50035

TYPE KEY

| | | | | | | |
|---|---|---|---|--|--|--|
| S | R | 6 | Z | | | |
|---|---|---|---|--|--|--|

Type

Contacts

B 4 NO and 2 NC

Coil

DC coil code = nominal voltage (e.g. 024 = V_{DC})

Other types available on request

TECHNICAL DATA

| CONTACT DATA | | |
|--|----------------------|---|
| Contact type | | Single contact, positive action |
| Rated current | | 8 A |
| Rated voltage / max. switching voltage AC | | 250 V~ / V = |
| Max. breaking capacity AC | | 2000 VA |
| Contact material | | AgSnO |
| Recommended minimum load | | > 50 mW |
| INSULATION | | |
| Initial dielectric strength between | Coil and contacts | 3000 V _{eff} |
| | Open contact circuit | 1000 V _{eff} |
| | Adjacent contacts | 3000 V _{eff} |
| Clearance/Creepage between | Coil and contacts | 5.5 / 5.5 mm |
| | Adjacent contacts | 3 / 3 mm |
| Insulation to IEC 50178 between | Coil and contacts | Reinforced |
| | Adjacent contacts | Basic |
| OTHER DATA | | |
| Ambient temperature | | -25...+50 °C |
| Mechanical endurance | | > 10x10 ⁶ operations |
| Max. switching frequency with/without load | | 6 min ⁻¹ / 300 min ⁻¹ |
| Terminal cross section (according to IEC) | | |
| | Copper wire | 0.2...2.5 mm ² |
| | Stranded wire | 0.2...2.5 mm ² |
| | AWG | 28...14 |
| Installation position | | Any |
| Mounting | | On DIN rail without gap |
| Connection | | Screwless terminals |

| CONTACTS | COIL | TYPE | EAN-CODE | AVAILABLE | ORDER NO. |
|-----------|---------|-----------------------------|---------------|-----------|-----------|
| 2 CO, 6 A | 24 V DC | PREL-BG-2UKE-M1-024G-06-DIN | 9004840537185 | | SR2ZY024 |



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MODULAR RELAYS

COUPLING RELAY FOR DIN-RAIL

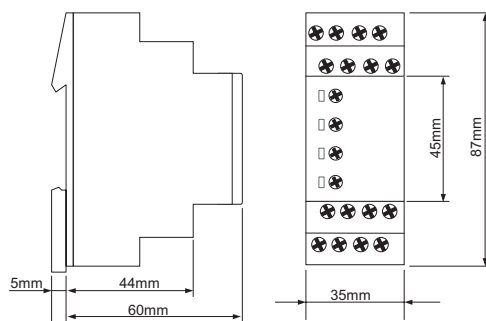


B2652000

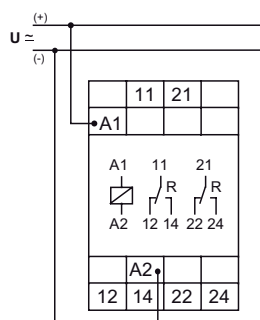
SCHRACK-INFO

- Modular relay
- 1 CO or 2 CO
- Width 35 mm
- Installation design
- Low noise

DIMENSIONS (mm)



CIRCUIT DIAGRAM


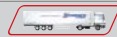


FUNCTIONAL DESCRIPTION



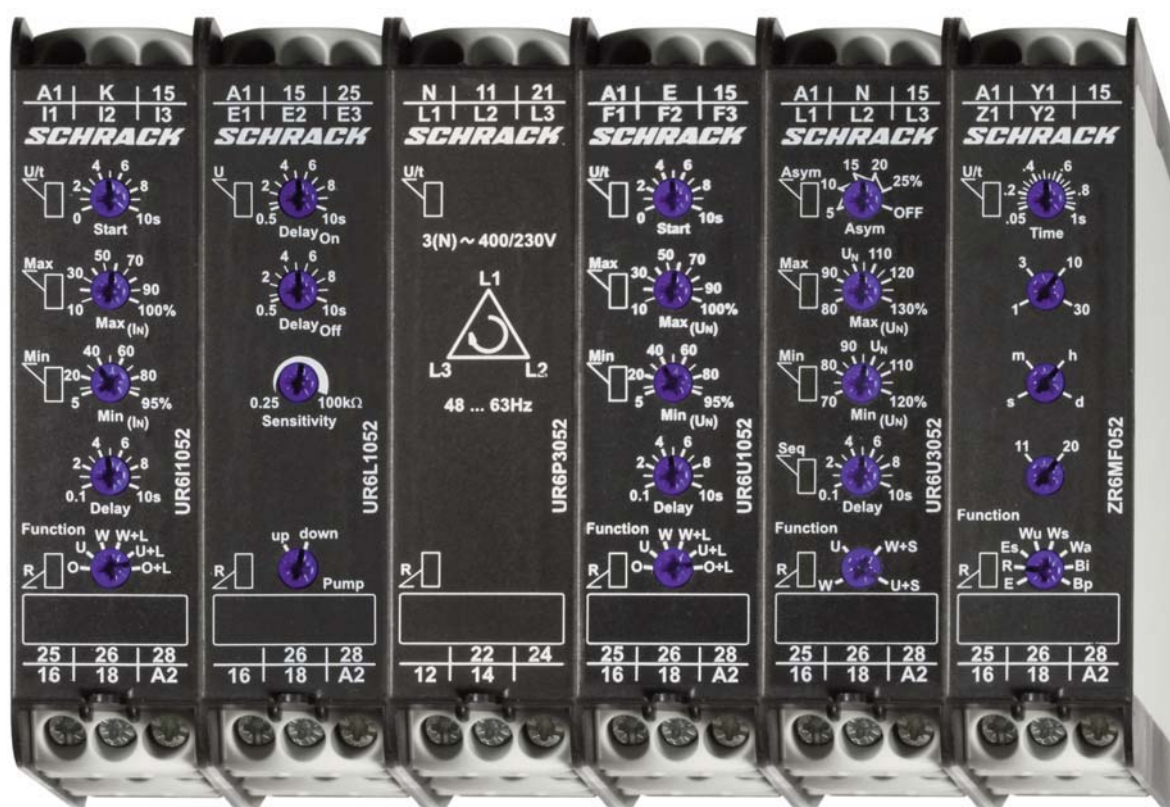
TECHNICAL DATA

| | |
|--|---|
| FUNCTIONS | |
| Coupling relay | |
| INDICATORS | |
| Yellow LED R ON/OFF | Position of output relay |
| MECHANICAL DESIGN | |
| Housing made of self-extinguishing plastic, degree of protection | IP40 |
| Mounting on DIN rail TS 35 according to EN 60715 | |
| Installation position | Any |
| Touch-proof clamping yoke terminals according to VBG 4 (PZ1 required), degree of protection IP20 | |
| Tightening torque | Max 1 Nm |
| Terminal capacity | 1 x 0.5 to 2.5 mm ² with/without ferrule |
| | 1 x 4 mm ² without ferrule |
| | 2 x 0.5 to 1.5 mm ² with/without ferrules |
| | 2 x 2.5 mm ² flexible with/without ferrules |
| INPUT CIRCUIT | |
| Supply voltage | 12 to 240 V~/DC (2 CO) and 24 to 240 V~/DC (1 CO) |
| Terminals | A1(+)-A2 |
| Tolerance | -10% to +10% |
| Rated consumption | 6 VA (2 W) |
| Rated frequency | AC 48 to 63 Hz |
| Duty cycle | 100% |
| Recovery time | 100 ms |
| Residual ripple for DC | 10% |
| Drop-out voltage | >30% of min supply voltage |
| Overvoltage category | III (according to IEC 60664-1) |
| Rated surge voltage | 4kV |
| OUTPUT CIRCUIT | |
| 1 or 2 potential-free changeover switches | |
| Rated voltage | 250 V~ |
| Switching capacity | 2000 VA (8 A / 250 V) |
| Fuse | 8A fast acting |
| Mechanical endurance | 20 x 10 ⁶ operations |
| Electrical endurance | 2 x 10 ⁵ operations at 1000 VA resistive load |
| Switching frequency | Max. 6/min at 1000 VA resistive load (according to IEC 60947-5-1) |
| Overvoltage category | III (according to IEC 60664-1) |
| Rated surge voltage | 4 kV |
| AMBIENT CONDITIONS | |
| Ambient temperature | -25 to +55 °C |
| Relative humidity | 15% to 85% (according to IEC 60721-3-3 class 3K3) |
| Pollution degree | 2, when built-in 3 (according to IEC 60664-1) |
| WEIGHT | |
| Individual packaging | 100g |

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|-----------------------------------|---------------|---|-----------------|
| Modular relay, 1 CO, 24-240 V~/DC | 9004840557381 |  | BZ651000 |
| Modular relay, 2 CO, 12-240 V~/DC | 9004840557473 |  | BZ652000 |

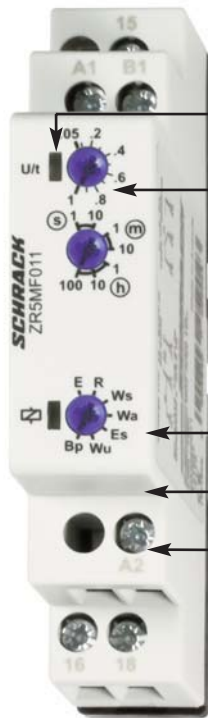


TIME- AND MONITORING RELAYS



MEASURING AND MONITORING RELAYS

SERIES 5



OPERATION DISPLAY

LARGE TIME RANGE 50 ms – 100 h

MANY FUNCTIONS

45 mm CAP DIMENSION

MULTI-VOLTAGE 12 or 24 V~/DC – 240 V~/DC

SERIES 6



INDUSTRIAL DESIGN

WIDTH 22.5 mm

MANY FUNCTIONS, E.G.:

- Monitoring of phase sequence and phase failure
- Detection of neutral wire break
- Windows function
- 16.6 – 400 Hz
- Thermal resistor relay
- Delayed contacts possible
- Time range of timer relay: 1 s to 30 days

TIME RELAY ZR5E0011



SCHRACK-INFO

Wide input voltage range
1 change over contact
Width 17,5 mm
Installation design

TECHNICAL DATA

1. Functions

The function has to be set before connecting the relay to the supply voltage.

E ON delay

2. Time ranges

| Time range | Adjustment range |
|------------|------------------|
| 1 s | 50 ms |
| 10 s | 500 ms |
| 1 min | 3 s |
| 10 min | 30 s |
| 1 h | 3 min |
| 10 h | 30 min |
| 100 h | 5 h |

3. Indicators

Green LED U/t ON: indication of supply voltage
Green LED U/t flashes: indication of time period
Yellow LED R ON/OFF: indication of relay outputs

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
Tightening torque: max. 1 Nm
Terminal capacity:
1 x 0.5 to 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 to 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: Terminals A1(+)-A2
Types ZR5..24-240 V AC/DC: 24 to 240 V AC/DC
Tolerance: 24 V-15% to 240 V+10%
Rated consumption: 4 VA (1.5 W)
Rated frequency: AC 48 to 63 Hz
Duty cycle: 100%
Reset time: 100 ms
Residual ripple for DC: 10%
Drop-out voltage: >30% of minimum rated supply voltage
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4 kV

6. Output circuit

1 potential free change over contact
Rated voltage: 250 V AC
Switching capacity: 2000 VA (8 A / 250V)
Fusing: 8 A fast acting
Mechanical life: 20 x 10⁶ operations
Electrical life: 2 x 10⁵ operations
at 1000 VA resistive load
Switching frequency: max. 60/min at 100 VA resistive load
max. 6/min at 1000 VA resistive load
(according to IEC 947-5-1)
Overvoltage category: III. (according to IEC 60664-1)
Rated surge voltage: 4 kV

7. Control input

Input not potential free: Terminals A1-B1
Loadable: yes
Max. line length: 10m
Trigger level (sensitivity): automatic adaption to supply voltage
Min. control pulse length: DC 50 ms / AC 100 ms

8. Accuracy

Base accuracy: ±1% of maximum scale value
Adjustment accuracy: <5% of maximum scale value
Repetition accuracy: <0.5% or ±5 ms
Voltage influence: -
Temperature influence: ≤0.01% / °C

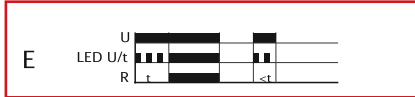
9. Ambient conditions

Ambient temperature: -25 to +55 °C
(according to IEC 68-1)
Storage temperature: -25 to +70 °C
Transport temperature: -25 to +70 °C
Relative humidity: 15% to 85%
(according to IEC 721-3-3 class 3K3)
Pollution degree: 2, if built in 3
(according to IEC 664-1)
Vibration resistance: 10 to 55 Hz 0.35 mm
(according to IEC 68-2-6)
Shock resistance: 15 g 11 ms
(according to IEC 68-2-27)

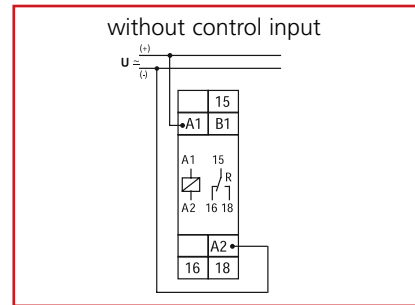
FUNCTIONS

ON delay (E)

When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the expiry of the interval t , the interval already expired is erased and is restarted when the supply voltage is next applied.



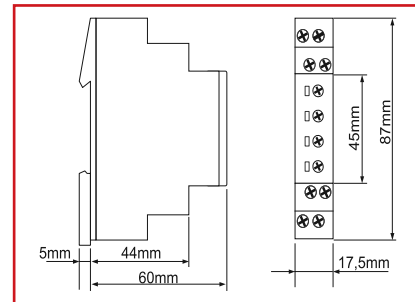
CONNECTIONS




WEIGHT

Single packing: 72 g

DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|---|-----------------|
| Single function time relay E (ON delay), 24-240VAC, 1 change over, 8A/250V | 9004840459029 |  | ZR5E0011 |



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TIME RELAY ZR5R0011



SCHRACK-INFO

Wide input voltage range
1 change over contact
Width 17,5 mm
Installation design

TECHNICAL DATA

1. Functions

The function has to be set before connecting the relay to the supply voltage.

R OFF delay

2. Time ranges

| Time range | Adjustment range | |
|------------|------------------|--------|
| 1 s | 50 ms | 1 s |
| 10 s | 500 ms | 10 s |
| 1 min | 3 s | 1 min |
| 10 min | 30 s | 10 min |
| 1 h | 3 min | 1 h |
| 10 h | 30 min | 10 h |
| 100 h | 5 h | 100 h |

3. Indicators

Green LED U/t ON: indication of supply voltage
Green LED U/t flashes: indication of time period
Yellow LED R ON/OFF: indication of relay outputs

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
Tightening torque: max. 1 Nm
Terminal capacity:
1 x 0.5 to 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 to 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: Terminals A1(+)-A2
Types ZR5..24-240 V AC/DC: 24 to 240 V AC/DC
Tolerance: 24 V-15% to 240 V+10%
Rated consumption: 4 VA (1.5 W)
Rated frequency: AC 48 to 63 Hz
Duty cycle: 100%
Reset time: 100 ms
Residual ripple for DC: 10%
Drop-out voltage: >30% of minimum rated supply voltage
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4 kV

6. Output circuit

1 potential free change over contact
Rated voltage: 250 V AC
Switching capacity: 2000 VA (8 A / 250V)
Fusing: 8 A fast acting
Mechanical life: 20 x 10⁶ operations
Electrical life: 2 x 10⁵ operations
at 1000 VA resistive load
Switching frequency: max. 60/min at 100 VA resistive load
max. 6/min at 1000 VA resistive load
(according to IEC 947-5-1)
Overvoltage category: III. (according to IEC 60664-1)
Rated surge voltage: 4 kV

7. Control input

Input not potential free: Terminals A1-B1
Loadable: yes
Max. line length: 10m
Trigger level (sensitivity): automatic adaption to supply voltage
Min. control pulse length: DC 50 ms / AC 100 ms

8. Accuracy

Base accuracy: ±1% of maximum scale value
Adjustment accuracy: <5% of maximum scale value
Repetition accuracy: <0.5% or ±5 ms
Voltage influence: -
Temperature influence: ≤0.01% / °C

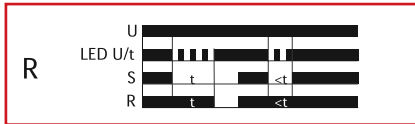
9. Ambient conditions

Ambient temperature: -25 to +55 °C
(according to IEC 68-1)
Storage temperature: -25 to +70 °C
Transport temperature: -25 to +70 °C
Relative humidity: 15% to 85%
(according to IEC 721-3-3 class 3K3)
Pollution degree: 2, if built in 3
(according to IEC 664-1)
Vibration resistance: 10 to 55 Hz 0.35 mm
(according to IEC 68-2-6)
Shock resistance: 15 g 11 ms
(according to IEC 68-2-27)

FUNCTIONS

OFF delay (R)

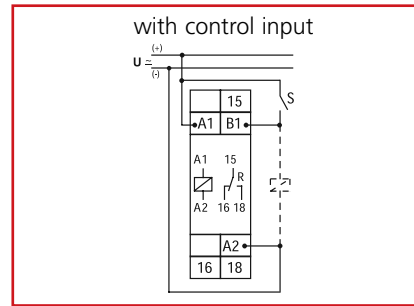
The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (yellow LED illuminated). If the control contact is opened, the set interval t begins (green LED flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). If the control contact is closed again before the interval t has expired, the interval already expired is erased and is restarted.



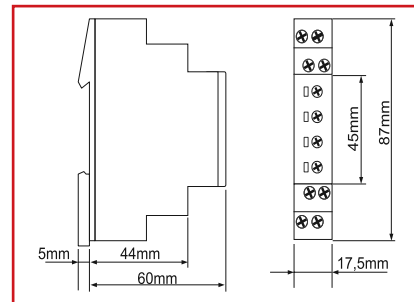
WEIGHT

Single packing: 72 g

CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|-----------|-----------|
| Single function time relay R (OFF delay), 24-240VAC, 1 change over, 8A/250V | 9004840459050 | | ZR5R0011 |



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TIME RELAY ZR5ER011



SCHRACK-INFO

2 functions
7 time ranges
Wide input voltage range
1 change over contact
Width 17,5 mm
Installation design

TECHNICAL DATA

1. Functions

The function has to be set before connecting the relay to the supply voltage.

E ON delay
R OFF delay

2. Time ranges

| Time range | Adjustment range | |
|------------|------------------|--------|
| 1 s | 50 ms | 1 s |
| 10 s | 500 ms | 10 s |
| 1 min | 3 s | 1 min |
| 10 min | 30 s | 10 min |
| 1 h | 3 min | 1 h |
| 10 h | 30 min | 10 h |
| 100 h | 5 h | 100 h |

3. Indicators

Green LED U/t ON: indication of supply voltage
Green LED U/t flashes: indication of time period
Yellow LED R ON/OFF: indication of relay outputs

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
Tightening torque: max. 1 Nm
Terminal capacity:
1 x 0.5 to 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 to 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: Terminals A1(+)-A2
Types ZR5..24-240 V AC/DC: 24 to 240 V AC/DC
Tolerance: 24 V-15% to 240 V+10%
Rated consumption: 4 VA (1.5 W)
Rated frequency: AC 48 to 63 Hz
Duty cycle: 100%
Reset time: 100 ms
Residual ripple for DC: 10%
Drop-out voltage: >30% of minimum rated supply voltage
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4 kV

6. Output circuit

1 potential free change over contact
Rated voltage: 250 V AC
Switching capacity: 2000 VA (8 A / 250V)
Fusing: 8 A fast acting
Mechanical life: 20 x 10⁶ operations
Electrical life: 2 x 10⁵ operations
at 1000 VA resistive load
Switching frequency: max. 60/min at 100 VA resistive load
max. 6/min at 1000 VA resistive load
(according to IEC 947-5-1)
Overvoltage category: III. (according to IEC 60664-1)
Rated surge voltage: 4 kV

7. Control input

Input not potential free: Terminals A1-B1
Loadable: yes
Max. line length: 10m
Trigger level (sensitivity): automatic adaption to supply voltage
Min. control pulse length: DC 50 ms / AC 100 ms

8. Accuracy

Base accuracy: ±1% of maximum scale value
Adjustment accuracy: <5% of maximum scale value
Repetition accuracy: <0.5% or ±5 ms
Voltage influence: -
Temperature influence: ≤0.01% / °C

9. Ambient conditions

Ambient temperature: -25 to +55 °C
(according to IEC 68-1)
Storage temperature: -25 to +70 °C
Transport temperature: -25 to +70 °C
Relative humidity: 15% to 85%
(according to IEC 721-3-3 class 3K3)
Pollution degree: 2, if built in 3
(according to IEC 664-1)
Vibration resistance: 10 to 55 Hz 0.35 mm
(according to IEC 68-2-6)
Shock resistance: 15 g 11 ms
(according to IEC 68-2-27)

FUNCTIONS

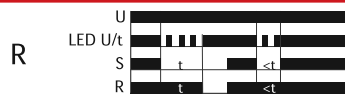
ON delay (E)

When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the expiry of the interval t , the interval already expired is erased and is restarted when the supply voltage is next applied.



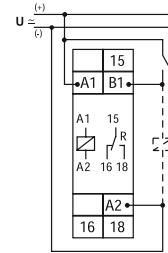
OFF delay (R)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (yellow LED illuminated). If the control contact is opened, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). If the control contact is closed again before the interval t has expired, the interval already expired is erased and is restarted.

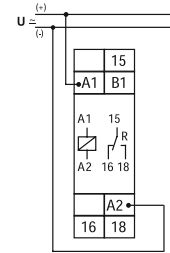


CONNECTIONS

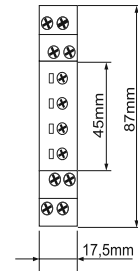
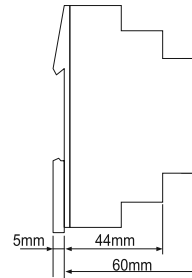
with control input



without control input




DIMENSIONS



WEIGHT

Single packing: 72 g

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|---|-----------------|
| Double function time relay E (ON delay) + R (OFF delay), 24-240VAC, 1 change over, 8A/250V | 9004840459036 |  | ZR5ER011 |



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MULTIFUNCTION TIME RELAY ZR5MF011



SCHRACK-INFO

- Timers multifunctional
- Up to 7 functions
- 7 time ranges
- Wide input voltage range
- 1 change over contact
- Width 17,5 mm
- Installation design

TECHNICAL DATA

1. Functions

The functions has to be set before connecting the relay to the supply voltage.

| | |
|----|--|
| E | ON delay |
| R | OFF delay |
| Ws | Single shot leading edge with control input |
| Wa | Single shot trailing edge with control input |
| Es | ON delay with control input |
| Wu | Single shot leading edge voltage controlled |
| Bp | Flasher pause first |

2. Time ranges

| Time range | Adjustment range | |
|------------|------------------|--------|
| 1 s | 50 ms | 1 s |
| 10 s | 500 ms | 10 s |
| 1 min | 3 s | 1 min |
| 10 min | 30 s | 10 min |
| 1 h | 3 min | 1 h |
| 10 h | 30 min | 10 h |
| 100 h | 5 h | 100 h |

3. Indicators

| | |
|------------------------|------------------------------|
| Green LED U/t ON: | indication of supply voltage |
| Green LED U/t flashes: | indication of time period |
| Yellow LED R ON/OFF: | indication of relay output |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20

Tightening torque: max. 1 Nm

Terminal capacity:

- 1 x 0.5 to 2.5 mm² with/without multicore cable end
- 1 x 4 mm² without multicore cable end
- 2 x 0.5 to 1.5 mm² with/without multicore cable end
- 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

| | |
|-------------------------|--------------------------------------|
| Supply voltage: | terminals A1(+)-A2 |
| Type ZR5MF025 | 12 to 240 V AC/DC |
| Tolerance: | 12 V-10% to 240 V+10% |
| Rated consumption: | 4 VA (1.5 W) |
| Rated frequency: | AC 48 to 63 Hz |
| Duty cycle: | 100% |
| Reset time: | 100 ms |
| Residual ripple for DC: | 10% |
| Drop-out voltage: | >30% of minimum rated supply voltage |

| | |
|-----------------------|--------------------------------|
| Overvoltage category: | III (according to IEC 60664-1) |
| Rated surge voltage: | 4kV |

6. Output circuit

| | |
|--------------------------------------|-------------------------------------|
| 1 potential free change over contact | |
| Rated voltage: | 250 V AC |
| Switching capacity: | 2000 VA (8 A / 250 V) |
| Fusing: | 8 A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations |
| | at 1000 VA resistive load |
| Switching frequency: | max. 60/min at 100VA resistive load |
| | max. 6/min at 1000VA resistive load |
| | (according to IEC 947-5-1) |

| | |
|-----------------------|---------------------------------|
| Overvoltage category: | III. (according to IEC 60664-1) |
| Rated surge voltage: | 4kV |

7. Control input

| | |
|------------------------------|--------------------------------------|
| Input not potential free: | terminals A1-B1 |
| Loadable: | yes |
| Max. line length: | 10m |
| Trigger level (sensitivity): | automatic adaption to supply voltage |
| Min. control pulse length: | DC 50 ms / AC 100 ms |

8. Accuracy

| | |
|------------------------|----------------------------|
| Base accuracy: | ±1% of maximum scale value |
| Adjustment accuracy: | <5% of maximum scale value |
| Repetition accuracy: | <0.5% or ±5 ms |
| Voltage influence: | - |
| Temperature influence: | ≤0.01% / °C |

9. Ambient conditions

| | |
|------------------------|--|
| Ambient temperature: | -25 to +55 °C (according to IEC 68-1) |
| Storage temperature: | -25 to +70 °C |
| Transport temperature: | -25 to +70 °C |
| Relative humidity: | 15% to 85% (according to IEC 721-3-3 class 3K3) |
| Pollution degree: | 2, if built in 3 (according to IEC 664-1) |
| Vibrations resistance: | 10 to 55 Hz 0.35 mm (according to IEC 68-2-6) |
| Shock resistance: | 15 g 11 ms (according to IEC 68-2-27) |

FUNCTIONS

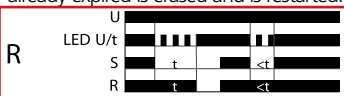
ON delay (E)

When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the expiry of the interval t, the interval already expired is erased and is restarted when the supply voltage is next applied.



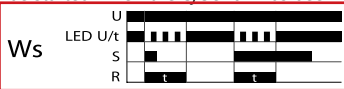
OFF delay (R)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (yellow LED illuminated). If the control contact is opened, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). If the control contact is closed again before the interval t has expired, the interval already expired is erased and is restarted.



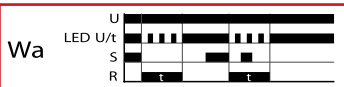
Single shot leading edge with control input (Ws)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (green LED U/t illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



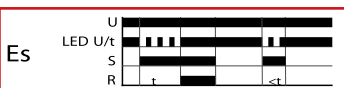
Single shot trailing edge with control input (Wa)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). Closing the control contact S has no influence on the condition of the output R. When the control contact is opened, the output relay switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated), the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



ON delay with control input (Es)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the control contact is opened again. If the control contact is opened before the interval t has expired, the interval already expired is erased and is restarted with the next cycle.



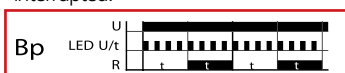
Single shot leading edge voltage controlled (Wu)

When the supply voltage U is applied, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the interval t has expired, the output relay switches into off-position. The interval already is erased and is restarted when the supply voltage is next applied.

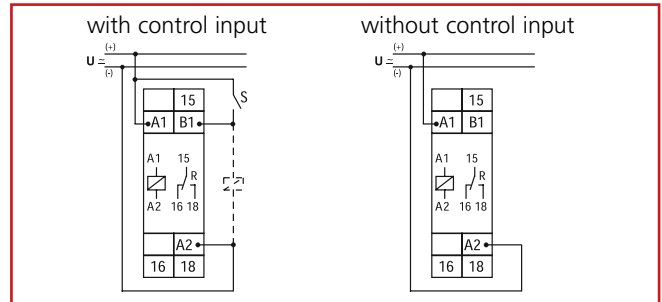


Flasher pause first (Bp)

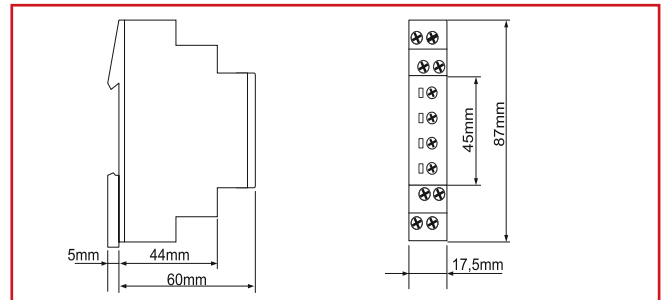
When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins again. After the interval t has expired, the output relay switches into off-position (yellow LED not illuminated). The output relay is triggered at a ratio of 1:1 until the supply voltage is interrupted.



CONNECTIONS



DIMENSIONS



WEIGHT

Single packing: 72 g

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|-----------|-----------|
| Multifunction time relay E, R, Ws, Wa, Es, Wu, Bp, 12-240VAC, 1 change over, 8A/250V | 9004840459043 | | ZR5MF011 |



Order no. blue: on stock, usually ready for delivery on the day of order!



MULTIFUNCTION TIME RELAY ZR5MF025



SCHRACK-INFO

- Timers multifunctional
- Up to 7 functions
- 7 time ranges
- Wide input voltage range
- 2 change-over contacts
- Width 35 mm
- Installation design

TECHNICAL DATA

1. Functions

The functions has to be set before connecting the relay to the supply voltage.

| | |
|----|--|
| E | ON delay |
| R | OFF delay |
| Ws | Single shot leading edge with control input |
| Wa | Single shot trailing edge with control input |
| Es | ON delay with control input |
| Wu | Single shot leading edge voltage controlled |
| Bp | Flasher pause first |

2. Time ranges

| Time range | Adjustment range | |
|------------|------------------|--------|
| 1 s | 50 ms | 1 s |
| 10 s | 500 ms | 10 s |
| 1 min | 3 s | 1 min |
| 10 min | 30 s | 10 min |
| 1 h | 3 min | 1 h |
| 10 h | 30 min | 10 h |
| 100 h | 5 h | 100 h |

3. Indicators

| | |
|------------------------|------------------------------|
| Green LED U/t ON: | indication of supply voltage |
| Green LED U/t flashes: | indication of time period |
| Yellow LED R ON/OFF: | indication of relay output |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-rail TS 35 according to EN 50022
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Tightening torque: max. 1 Nm
 Terminal capacity:
 1 x 0.5 to 2.5 mm² with/without multicore cable end
 1 x 4 mm² without multicore cable end
 2 x 0.5 to 1.5 mm² with/without multicore cable end
 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

| | |
|-------------------------|--------------------------------------|
| Supply voltage: | terminals A1(+)-A2 |
| Type ZR5MF025 | 12 to 240 V AC/DC |
| Tolerance: | 12 V-10% to 240 V+10% |
| Rated consumption: | 6 VA (2 W) |
| Rated frequency: | AC 48 to 63 Hz |
| Duty cycle: | 100% |
| Reset time: | 100 ms |
| Residual ripple for DC: | 10% |
| Drop-out voltage: | >30% of minimum rated supply voltage |

| | |
|-----------------------|--------------------------------|
| Overvoltage category: | III (according to IEC 60664-1) |
| Rated surge voltage: | 4kV |

6. Output circuit

| | |
|---------------------------------------|-------------------------------------|
| 2 potential free change over contacts | |
| Rated voltage: | 250 V AC |
| Switching capacity: | 2000 VA (8 A / 250 V) |
| Fusing: | 8 A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations |
| | at 1000 VA resistive load |
| Switching frequency: | max. 60/min at 100VA resistive load |
| | max. 6/min at 1000VA resistive load |
| | (according to IEC 947-5-1) |

| | |
|-----------------------|---------------------------------|
| Overvoltage category: | III. (according to IEC 60664-1) |
| Rated surge voltage: | 4kV |

7. Control input

| | |
|------------------------------|--------------------------------------|
| Input not potential free: | terminals A1-B1 |
| Loadable: | yes |
| Max. line length: | 10m |
| Trigger level (sensitivity): | automatic adaption to supply voltage |
| Min. control pulse length: | DC 50 ms / AC 100 ms |

8. Accuracy

| | |
|------------------------|----------------------------|
| Base accuracy: | ±1% of maximum scale value |
| Adjustment accuracy: | <5% of maximum scale value |
| Repetition accuracy: | <0.5% or ±5 ms |
| Voltage influence: | - |
| Temperature influence: | ≤0.01% / °C |

9. Ambient conditions

| | |
|------------------------|--|
| Ambient temperature: | -25 to +55 °C (according to IEC 68-1) |
| Storage temperature: | -25 to +70 °C |
| Transport temperature: | -25 to +70 °C |
| Relative humidity: | 15% to 85% (according to IEC 721-3-3 class 3K3) |
| Pollution degree: | 2, if built in 3 (according to IEC 664-1) |
| Vibrations resistance: | 10 to 55 Hz 0.35 mm (according to IEC 68-2-6) |
| Shock resistance: | 15 g 11 ms (according to IEC 68-2-27) |

FUNCTIONS

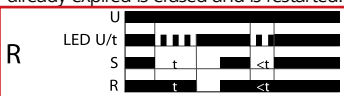
ON delay (E)

When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the expiry of the interval t , the interval already expired is erased and is restarted when the supply voltage is next applied.



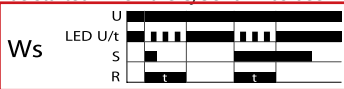
OFF delay (R)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (yellow LED illuminated). If the control contact is opened, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). If the control contact is closed again before the interval t has expired, the interval already expired is erased and is restarted.



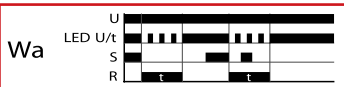
Single shot leading edge with control input (Ws)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (green LED U/t illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



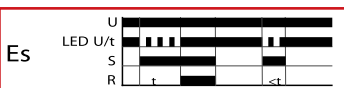
Single shot trailing edge with control input (Wa)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). Closing the control contact S has no influence on the condition of the output R . When the control contact is opened, the output relay switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated), the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



ON delay with control input (Es)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the control contact is opened again. If the control contact is opened before the interval t has expired, the interval already expired is erased and is restarted with the next cycle.



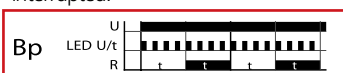
Single shot leading edge voltage controlled (Wu)

When the supply voltage U is applied, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the interval t has expired, the output relay switches into off-position. The interval already is erased and is restarted when the supply voltage is next applied.

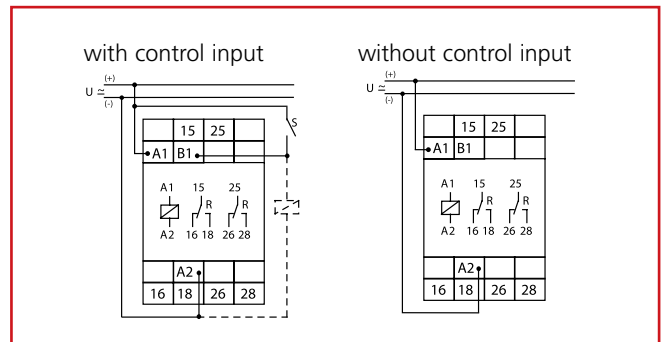


Flasher pause first (Bp)

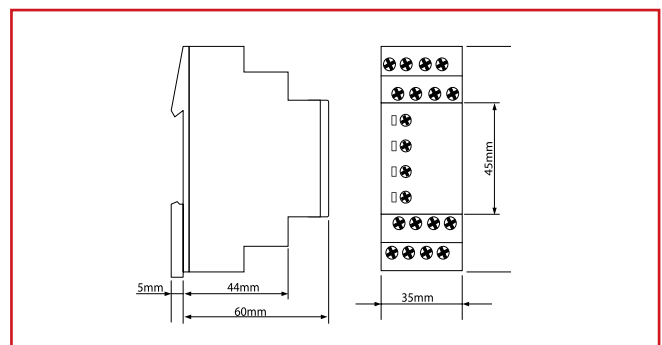
When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins again. After the interval t has expired, the output relay switches into off-position (yellow LED not illuminated). The output relay is triggered at a ratio of 1:1 until the supply voltage is interrupted.



CONNECTIONS



DIMENSIONS



WEIGHT

Single packing: 106g

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|-----------|-----------|
| Multifunction time relay, 12-240VAC, 2 change over, 8A/250V | 9004840507287 | | ZR5MF025 |



Order no. blue: on stock, usually ready for delivery on the day of order!

MULTIFUNCTION TIME RELAY ZR6MF052



- 16 functions
- 16 time ranges
- Connection of remote potentiometer possible
- Zoom voltage 24 to 240V AC/DC
- 2 change-over contacts
- Width 22.5 mm
- Industrial design

TECHNICAL DATA

1. Functions

1 delayed contact (terminals 15-16-18) and
1 instantaneous contact (terminals 25-26-28)

| | |
|------|--|
| E11 | ON delay |
| R11 | OFF delay with control contact |
| Es11 | ON delay with control contact |
| Wu11 | Single shot leading edge voltage controlled |
| Ws11 | Single shot leading edge with control contact |
| Wa11 | Single shot trailing edge with control contact |
| Bi11 | Flasher pulse first |
| Bp11 | Flasher pause first |

2 delayed contacts

| | |
|------|--|
| E20 | ON delay |
| R20 | OFF delay with control contact |
| Es20 | ON delay with control contact |
| Wu20 | Single shot leading edge voltage controlled |
| Ws20 | Single shot leading edge with control contact |
| Wa20 | Single shot trailing edge with control contact |
| Bi20 | Flasher pulse first |
| Bp20 | Flasher pause first |

2. Time ranges

| Time range | Adjustment range | |
|------------|------------------|-------|
| 1s | 50ms | 1s |
| 3s | 150ms | 3s |
| 10s | 500ms | 10s |
| 30s | 1500ms | 30s |
| 1min | 3s | 1min |
| 3min | 9s | 3min |
| 10min | 30s | 10min |
| 30min | 90s | 30min |
| 1h | 3min | 1h |
| 3h | 9min | 3h |
| 10h | 30min | 10h |
| 30h | 90min | 30h |
| 1d | 72min | 1d |
| 3d | 216min | 3d |
| 10d | 12h | 10d |
| 30d | 36h | 30d |

3. Indicators

| | |
|--------------------|------------------------------|
| Green LED ON: | indication of supply voltage |
| Green LED flashes: | indication of time period |
| Yellow LED ON/OFF: | indication of relay output |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-Rail TS 35 according to EN 60715
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20

Tightening torque: max. 1Nm

Terminal capacity:

- 1 x 0.5 bis 2.5 mm² with/without multicore cable end
- 1 x 4 mm² without multicore cable end
- 2 x 0.5 bis 1.5 mm² with/without multicore cable end
- 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: 24 to 240V AC/DC terminals A1-A2 (galvanically separated)

Tolerance:
24 to 240V DC -20% to +25%
24 to 240V AC -15% to +10%

Rated frequency:
24 to 240V AC 48 to 400Hz
48 to 240V AC 16 to 48Hz

Rated consumption: 4.5VA (1W)

Duration of operation: 100%

Reset time: 500ms

Wave form for AC: Sinus

Residual ripple for DC: 10%

Drop-out voltage: >15% of the supply voltage
Overvoltage category: III (in accordance with IEC 60661-1)

Rated surge voltage: 4kV

6. Output circuit

| | |
|---------------------------------------|--|
| 2 potential free change-over contacts | |
| Rated voltage: | 250V AC |
| Switching capacity (distance <5mm): | 750VA (3A / 250V AC) |
| Switching capacity (distance >5mm): | 1250VA (5A / 250V AC) |
| Fusing: | 5A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical Life: | 2 x 10 ⁵ operations at 1000VA resistive load |
| Switching frequency: | max. 60/min at 100VA resistive load max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1) |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

7. Control contact

| | |
|------------------------|---|
| Activation: | bridge Y1-Y2 |
| Potential free: | yes, basic isolation against input and output circuit |
| Loadable: | no |
| Control voltage: | max. 5V |
| Short circuit current: | max. 1mA |
| Line length: | max. 10m |
| Control pulse length: | min. 50ms |

8. Remote potentiometer (not included)

The internal potentiometer is de-activated when a remote potentiometer is connected!

| | |
|------------------------|--|
| Connections: | 1MΩ potentiometer (type RONDO R2), terminals Z1-Y2 |
| Line type: | twisted pair |
| Control voltage: | max. 5V |
| Short circuit current: | max. μA |
| Line length: | max. 5m |

9. Accuracy

| | |
|------------------------|---|
| Base accuracy: | ±1% (of maximum scale value) using 1MΩ remote potentiometer |
| Frequency response: | - |
| Adjustment accuracy: | ≤5% (of maximum scale value) using 1MΩ remote potentiometer |
| Repetition accuracy: | <0.5% or ±5ms |
| Voltage influence: | - |
| Temperature influence: | ≤0.01% / °C |

10. Ambient conditions

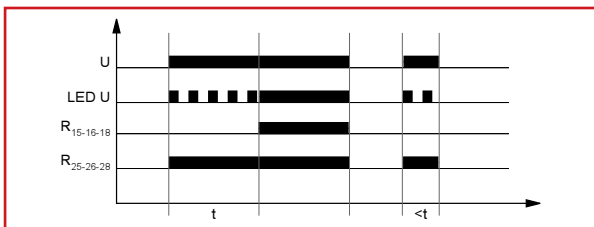
| | |
|------------------------|---|
| Ambient temperature: | -25 to +55°C (in accordance with IEC 60068-1) -25 to +40°C (in accordance with UL 508) |
| Storage temperature: | -25 to +70°C |
| Transport temperature: | -25 to +70°C |
| Relative humidity: | 15% to 85% (in accordance with IEC 60721-3-3 class 3K3) |
| Pollution degree: | 3 (in accordance with IEC 60664-1) |
| Vibration resistance: | 10 to 55Hz 0.35 mm (in accordance with IEC 60068-2-6) |
| Shock resistance: | 15g 11ms (in accordance with IEC 60068-2-27) |

FUNCTIONS

The internal potentiometer is de-activated when a remote-potentiometer is connected !The function has to be set before connecting the relay to the supply voltage.

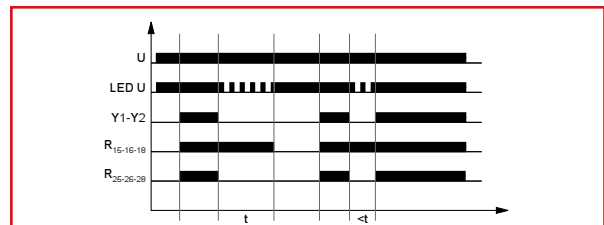
ON delay (E11)

When the supply voltage U is applied, the instantaneous contact switches into on-position and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact switches into on-position (yellow LED illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the expiry of the interval t, the interval already expired is erased and is restarted when the supply voltage is next applied.



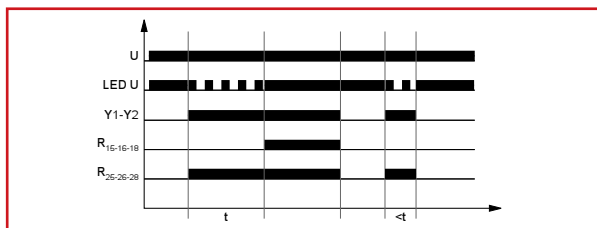
OFF delay with control contact (R11)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, both contacts switch into on-position (yellow LED illuminated). If the control contact is opened, the instantaneous contact switches into off-position and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact switches into off-position (yellow LED not illuminated). If the control contact is closed again before the interval t has expired, the interval already expired is erased and is restarted with the next cycle.



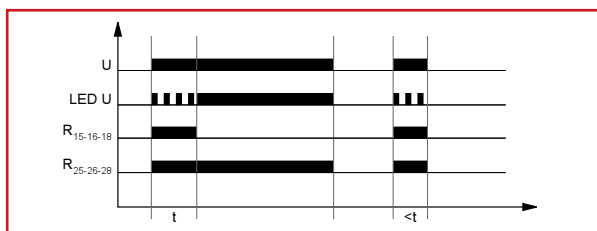
ON delay with control contact (Es11)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, the instantaneous contact switches into on-position and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact switches into on-position (yellow LED illuminated). This status remains until the control contact is opened again. If the control contact is opened before the interval t has expired, the interval already expired is erased and is restarted with the next cycle.



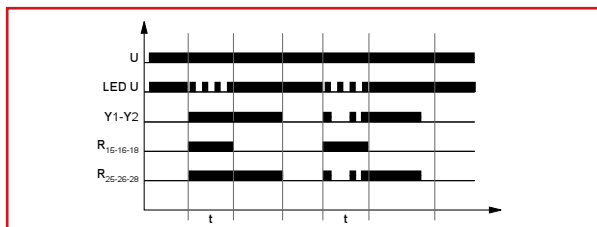
Single shot leading edge voltage controlled (Wu11)

When the supply voltage U is applied, both contacts switch into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact switches into off-position (yellow LED not illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the interval t has expired, the both contacts switch into off-position. The interval already expired is erased and is restarted when the supply voltage is next applied.



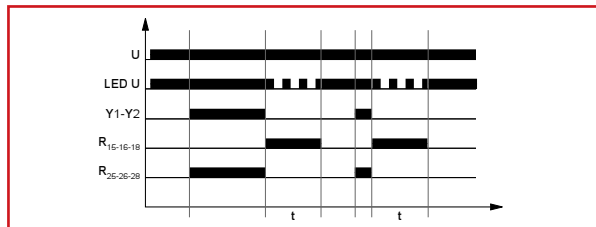
Single shot leading edge with control contact (Ws11)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, both contacts switch into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact switches into off-position (yellow LED not illuminated). The instantaneous contact remains in on-position, until the control contact is opened again. During the interval, the control contact (and the instantaneous contact) can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



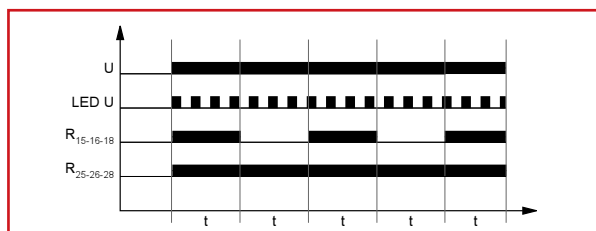
Single shot trailing edge with control contact (Wa11)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed the instantaneous contact switches into on-position. When the control contact is opened, the instantaneous contact switches into off-position, the delayed contact switches into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated), the delayed contact switches into off-position (yellow LED not illuminated). During the interval, the control contact (and the instantaneous contact) can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



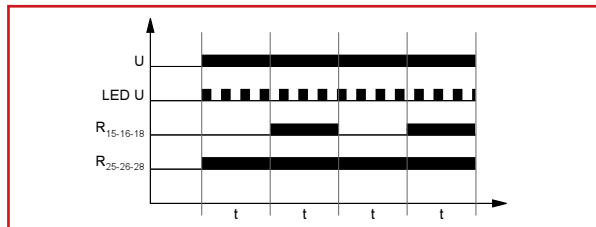
Flasher pulse first (Bi11)

When the supply voltage U is applied, the instantaneous contact and the delayed contact switch into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired, the delayed contact switches into off-position (yellow LED not illuminated) and the set interval t begins again. The delayed contact is triggered at a ratio of 1:1 until the supply voltage is interrupted.



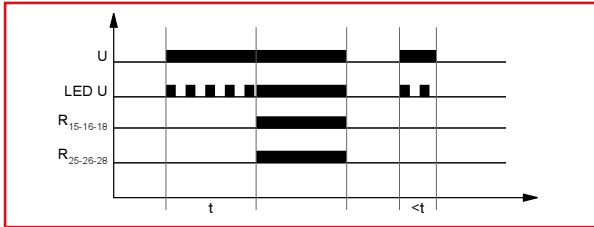
Flasher pause first (Bp11)

When the supply voltage U is applied, the instantaneous contact switches into on-position and the set interval t begins (green LED flashes). After the interval t has expired, the delayed contact switches into on-position (yellow LED illuminated) and the set interval t begins again. After the interval t has expired, the delayed contact switches into off-position (yellow LED not illuminated). The delayed contact is triggered at a ratio of 1:1 until the supply voltage is interrupted.



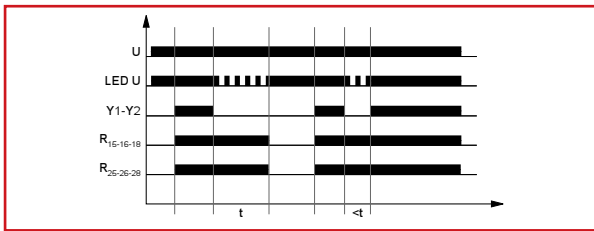
ON delay (E20)

When the supply voltage U is applied, the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the expiry of the interval t, the interval already expired is erased and is restarted when the supply voltage is next applied.



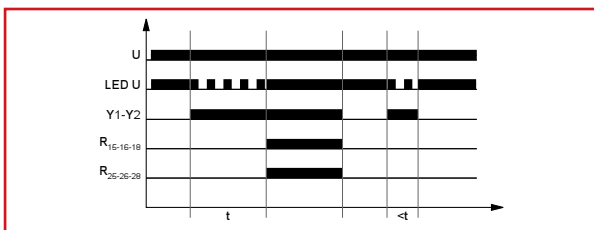
OFF delay with control contact (R20)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, the output relay R switches into on-position (yellow LED illuminated). If the control contact is opened, the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the output relay switches into off-position (yellow LED not illuminated). If the control contact is closed again before the interval t has expired, the interval already expired is erased and is restarted with the next cycle.



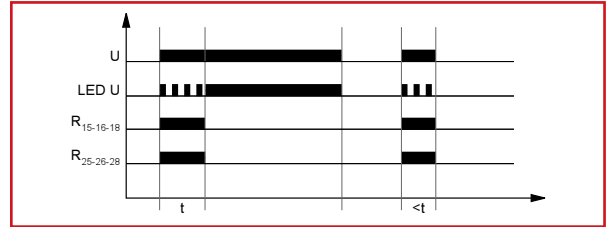
ON delay with control contact (Es20)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the control contact is opened again. If the control contact is opened before the interval t has expired, the interval already expired is erased and is restarted with the next cycle.



Single shot leading edge voltage controlled (Wu20)

When the supply voltage U is applied, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the output relay switches into off-position (yellow LED not illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the interval t has expired, the output relay switches into off-position. The interval already expired is erased and is restarted when the supply voltage is next applied.



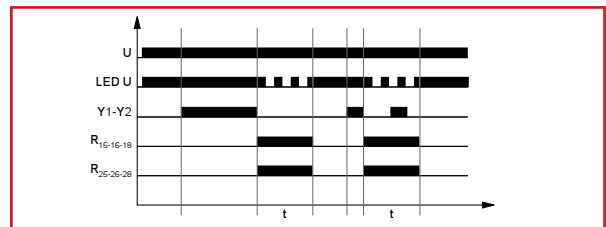
Single shot leading edge with control contact (Ws20)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



Single shot trailing edge with control contact (Wa20)

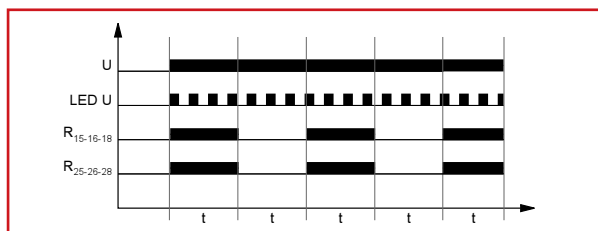
The supply voltage U must be constantly applied to the device (green LED illuminated). Closing the control contact Y1-Y2 has no influence on the condition of the output relay R. When the control contact is opened, the output relay switches into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated), the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



TIME RELAYS

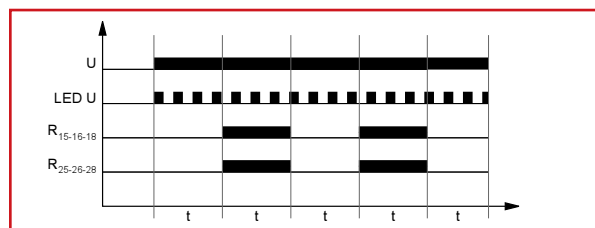
Flasher pulse first (Bi20)

When the supply voltage U is applied, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired, the output relay switches into off-position (yellow LED not illuminated) and the set interval t begins again. The output relay is triggered at a ratio of 1:1 until the supply voltage is interrupted.

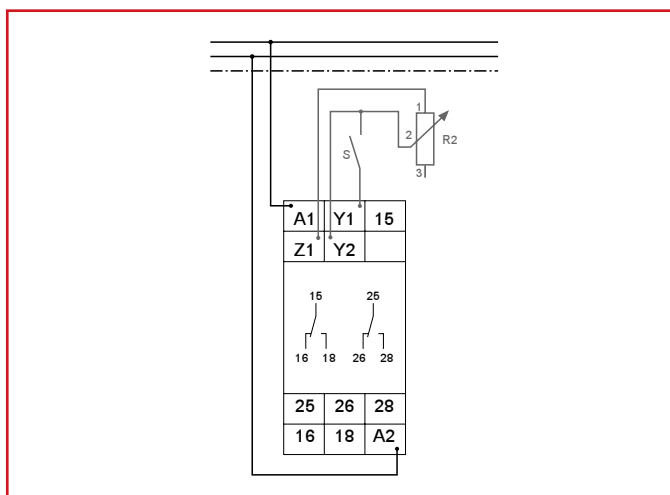


Flasher pause first (Bp20)

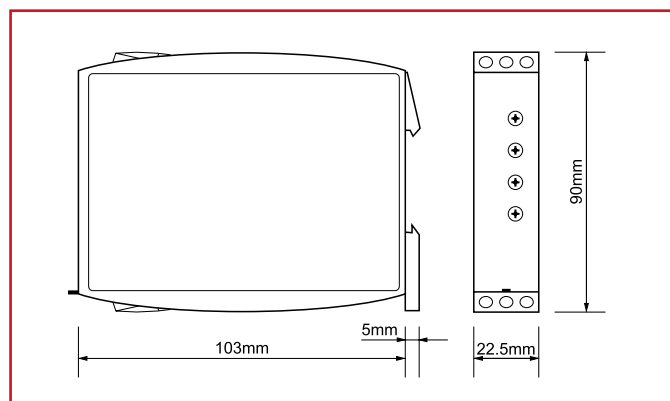
When the supply voltage U is applied, the set interval t begins (green LED flashes). After the interval t has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins again. After the interval t has expired, the output relay switches into off-position (yellow LED not illuminated). The output relay is triggered at a ratio of 1:1 until the supply voltage is interrupted.



CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|-----------|-----------------|
| Multifunction time relay, 2 change over, 24-240V AC/DC, industrial design | 9004840557466 | | ZR6MF052 |



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FLASHER TIME RELAY ZR5B0011



SCHRACK-INFO

- Asymmetric flasher
- 7 time ranges
- Wide input voltage range
- 1 change over contact
- Width 17,5 mm
- Installation design

TECHNICAL DATA

1. Functions

- lp Asymmetric flasher pause first
li Asymmetric flasher pulse first
(A1-B1 bridged)

2. Time ranges

| Time range | Adjustment range | |
|------------|------------------|--------|
| 1 s | 50 ms | 1 s |
| 10 s | 500 ms | 10 s |
| 1 min | 3 s | 1 min |
| 10 min | 30 s | 10 min |
| 1 h | 3 min | 1 h |
| 10 h | 30 min | 10 h |
| 100 h | 5 h | 100 h |

3. Indicators

- Green LED U/t ON: indication of supply voltage
Green LED U/t slow flashing: indication of time period t1
Green LED U/t fast flashing: indication of time period t2
Yellow LED R ON/OFF: indication of relay output

4. Mechanical design

- Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
Tightening torque: max. 1 Nm
Terminal capacity:
1 x 0.5 to 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 to 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

- Supply voltage: Terminals A1(+)-A2
Type ZR5B0011
12-240 V AC/DC: 12 to 240 V AC/DC
Tolerance: 12 V-10% to 240 V+10%
Rated consumption: 4 VA (1.5 W)
Rated frequency: AC 48 to 63 Hz
Duty cycle: 100%
Reset time: 100 ms
Residual ripple for DC: 10%
Drop-out voltage: >30% of minimum rated supply voltage
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4 kV

6. Output circuit

- 1 potential free change over contact
Rated voltage: 250 V AC
Switching capacity: 2000 VA (8 A / 250 V)
Fusing: 8 A fast acting
Mechanical life: 20 x 10⁶ operations
Electrical life: 2 x 10⁵ operations
at 1000 VA resistive load
Switching frequency: max. 60/min at 100 VA resistive load
max. 6/min at 1000 VA resistive load
(according to IEC 947-5-1)
Overvoltage category: III. (according to IEC 60664-1)
Rated surge voltage: 4 kV

7. Control input

- Input not potential free: Terminals A1-B1
Loadable: yes
Max. line length: 10 m
Trigger level (sensitivity): automatic adaption to supply voltage
Min. control pulse length: DC 50 ms / AC 100 ms

8. Accuracy

- Base accuracy: ±1% of maximum scale value
Adjustment accuracy: <5% of maximum scale value
Repetition accuracy: <0.5% or ±5 ms
Voltage influence: -
Temperature influence: ≤0.01% / °C

9. Ambient conditions

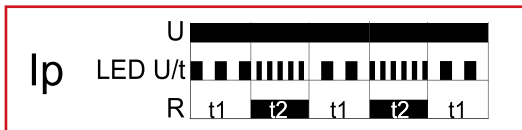
- Ambient temperature: -25 to +55 °C (according to IEC 68-1)
Storage temperature: -25 to +70 °C
Transport temperature: -25 to +70 °C
Relative humidity: 15% to 85%
(according to IEC 721-3-3 class 3K3)
Pollution degree: 2, if built in 3
(according to IEC 664-1)
Vibration resistance: 10 to 55 Hz 0.35 mm
(according to IEC 68-2-6)
Shock resistance: 15 g 11 ms
(according to IEC 68-2-27)

FUNCTIONS

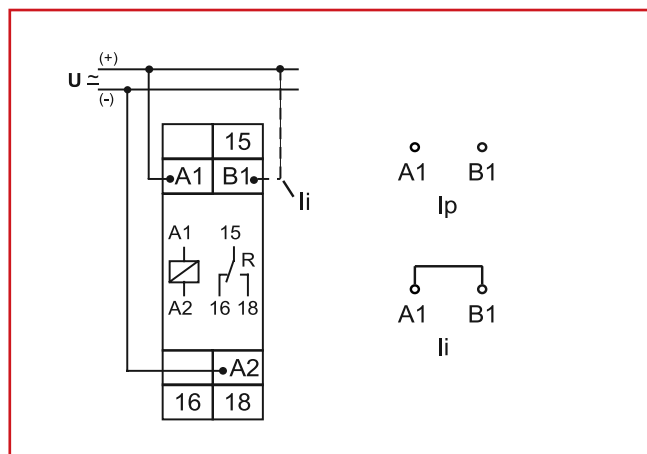
Asymmetric flasher pause first (Ip)

When the supply voltage U is applied, the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into off-position (yellow LED not illuminated).

The output relay is triggered at the ratio of t1:t2 until the supply voltage is interrupted.



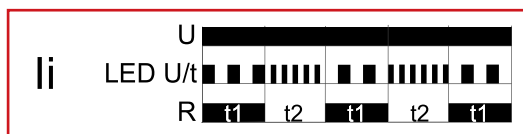
CONNECTIONS



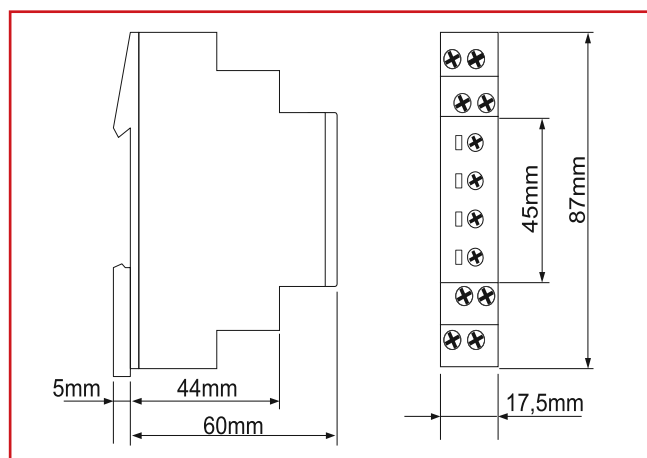
Asymmetric flasher pulse first (Ii)

When the supply voltage U is applied, the output relay R switches into on-position (yellow LED illuminated) and the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay switches into off-position (yellow LED not illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into on-position (yellow LED illuminated).

The output relay is triggered at the ratio of t1:t2 until the supply voltage is interrupted.



DIMENSIONS



WEIGHT

Single packing: 72 g

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|-----------|-----------------|
| Flasher time relay, 12-240VAC, 1 change over, 8A/250V | 9004840459012 | | ZR5B0011 |



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PULSE TIME RELAY ZR5B0025



SCHRACK-INFO

- Asymmetric flasher, 2-time multifunction
- 7 Time ranges
- Wide input voltage range
- 2 change-over contacts
- Width 35 mm
- Installation design

TECHNICAL DATA

1. Functions

The function has to be set before connecting the relay to the supply voltage.

| | |
|------|--|
| Ip | Asymmetric flasher pause first |
| Ii | Asymmetric flasher pulse first |
| ER | ON delay and OFF delay with control contact |
| EWu | ON delay single shot leading edge voltage controlled |
| EWs | ON delay single shot leading edge with control contact |
| WsWa | Single shot leading and single shot trailing edge with control contact |
| Wt | Pulse sequence monitoring |

2. Time ranges

| Time range | Adjustment range | |
|------------|------------------|--------|
| 1 s | 50 ms | 1 s |
| 10 s | 500 ms | 10 s |
| 1 min | 3 s | 1 min |
| 10 min | 30 s | 10 min |
| 1 h | 3 min | 1 h |
| 10 h | 30 min | 10 h |
| 100 h | 5 h | 100 h |

3. Indicators

| | |
|------------------------------|------------------------------|
| Green LED U/t ON: | indication of supply voltage |
| Green LED U/t slow flashing: | indication of time period t1 |
| Green LED U/t fast flashing: | indication of time period t2 |
| Yellow LED ON/OFF: | indication of relay output |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-rail TS 35 according to EN 50022
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Tightening torque: max. 1 Nm
 Terminal capacity:
 1 x 0.5 to 2.5 mm² with/without multicore cable end
 1 x 4 mm² without multicore cable end
 2 x 0.5 to 1.5 mm² with/without multicore cable end
 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

| | |
|------------------------|-----------------------|
| Supply voltage: | terminals A1(+) - A2 |
| Types ZR5B0025 | |
| 12-240 V AC/DC: | 12 to 240 V AC/DC |
| Tolerance: | 12 V-10% to 240 V+10% |
| Rated frequency: | 48 to 63 Hz |
| Rated consumption: | 6 VA (2 W) |
| Duration of operation: | 100% |

| | |
|------------------------|--------------------------------|
| Reset time: | 100 ms |
| Residual ripple of DC: | - |
| Drop-out voltage: | >30% of the supply voltage |
| Overvoltage category: | III (according to IEC 60664-1) |
| Rated surge voltage: | 4 kV |

6. Output circuit

| | |
|---------------------------------------|---|
| 2 potential free change over contacts | |
| Rated voltage: | 250 V AC |
| Switching capacity: | 2000 VA (8 A / 250 V) |
| Fusing: | 8 A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations at 1000 VA resistive load |
| Switching frequency: | max. 60/min at 100 VA resistive load max. 6/min at 1000 VA resistive load (according to IEC 947-5-1) |
| Overvoltage category: | III (according to IEC 60664-1) |
| Rated surge: | 4 kV |

7. Control input

| | |
|------------------------------|--------------------------------------|
| Input not potential free: | terminals A1-B1 |
| Loadable: | yes |
| Max. line length: | 10 m |
| Trigger level (sensitivity): | automatic adaption to supply voltage |
| Max. control pulse length: | DC 50 ms / AC 100 ms |

8. Accuracy

| | |
|------------------------|----------------------------|
| Base accuracy: | ±1% of maximum scale value |
| Adjusting accuracy: | ≤5% of maximum scale value |
| Repetition accuracy: | <0.5% or ±5 ms |
| Voltage influence: | - |
| Temperature influence: | ≤0.01% / °C |

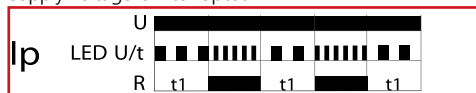
9. Ambient conditions

| | |
|------------------------|---|
| Ambient temperature: | -25 to +55 °C (according to IEC 68-1) |
| Storage temperature: | -25 to +70 °C |
| Transport temperature: | -25 to +70 °C |
| Relative humidity: | 15% to 85% (according to IEC 721-3-3 class 3K3) |
| Pollution degree: | 2, if built in 3 (according to IEC 664-1) |
| Vibration resistance: | 10 to 55 Hz 0.35 mm (according to IEC 68-2-6) |
| Shock resistance: | 15 g 11 ms (according to IEC 68-2-27) |

FUNCTIONS

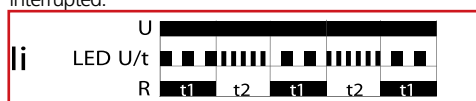
Asymmetric flasher pause first (lp)

When the supply voltage U is applied, the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into off-position (yellow LED not illuminated). The output relay is triggered at the ratio of t1:t2 until the supply voltage is interrupted.



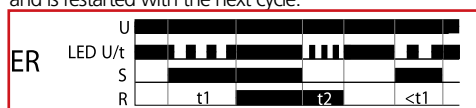
Asymmetric flasher pulse first (li)

When the supply voltage U is applied, the output relay R switches into on-position (yellow LED illuminated) and the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay switches into off-position (yellow LED not illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into on-position (yellow LED illuminated). The output relay is triggered at the ratio of t1:t2 until the supply voltage is interrupted.



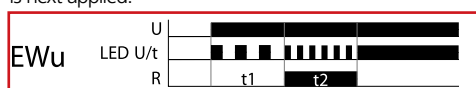
ON delay and OFF delay with control contact (ER)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay R switches into on-position (yellow LED illuminated). If the control contact is opened, the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into off-position (yellow LED not illuminated). If the control contact is opened before the interval t1 has expired, the interval already expired is erased and is restarted with the next cycle.



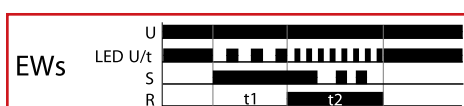
ON delay and single shot leading edge voltage controlled (EWu)

When the supply voltage U is applied, the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into off-position (yellow LED not illuminated). If the supply voltage is interrupted before the interval t1+t2 has expired, the interval already expired is erased and is restarted when the supply voltage is next applied.



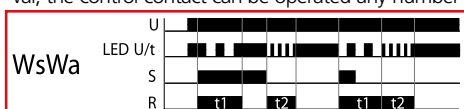
ON delay and single shot leading edge with control contact (EWs)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



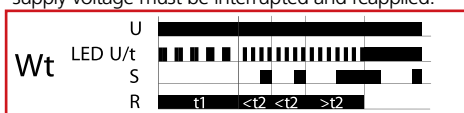
Single shot leading and single shot trailing edge with control contact (WsWa)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (yellow LED illuminated) and the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay R switches into off-position (yellow LED not illuminated). If the control contact is opened, the output relay again switches into on-position (yellow LED illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times.

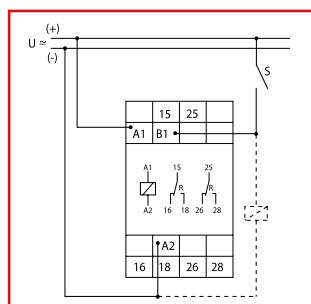


Pulse sequence monitoring (Wt)

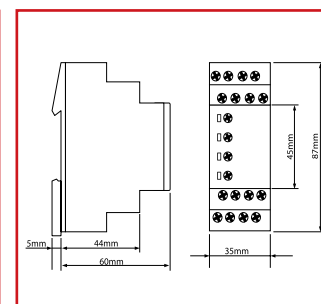
When the supply voltage U is applied, the set interval t1 begins (green LED U/t flashes slowly) and the output relay R switches into on-position (yellow LED illuminated). After the interval t1 has expired, the set interval t2 begins (green LED U/t flashes fast). So that the output relay R remains in on-position, the control contact S must be closed and opened again within the set interval t2. If this does not happen, the output relay R switches into off-position (yellow LED not illuminated) and all further pulses at the control contact are ignored. To restart the function the supply voltage must be interrupted and reapplied.



CONNECTIONS



DIMENSIONS



WEIGHT

Single packing: 106g

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|-----------|-----------|
| Pulse time relay, 7 functions, 12-240VAC, 2 change over, 8A/250V | 9004840507263 | | ZR5B0025 |

STAR-DELTA-RELAY ZR5SD025



SCHRACK-INFO

- Star-Delta start up
- 2 change-over contacts
- Wide input voltage ran
- Width 35 mm
- Installation design

TECHNICAL DATA

1. Functions

S Star-delta start up

2. Time ranges

Start-up time

| Time range | Adjustment range |
|------------|------------------|
| 10 s | 500 ms 10 s |
| 30 s | 1500 ms 30 s |
| 1 min | 3 s 1 min |
| 3 min | 9 s 3 min |

Transit time (fixed)

40 ms
60 ms
80 ms
100 ms

3. Indicators

| | |
|------------------------|---|
| Green LED U/t ON: | indication of supply voltage delta-contactor in on-position (terminals 25-28) |
| Green LED U/t flashes: | indication of time period star time |
| Yellow LED R ON/OFF: | indication of star contactor (terminals 15-18) |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required),
IP rating IP20
Tightening torque: max. 1 Nm
Terminal capacity:
1 x 0.5 to 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 to 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: terminals A1(+)-A2
Type ZR5SD025 12 to 240 V AC/DC
Tolerance: 12 V-10% to 240 V+10%
Rated consumption: 4 VA (1.5 W)
Rated frequency: AC 48 to 63Hz
Duty cycle: 100%

Reset time: 100 ms
Residual ripple of DC: 10%
Drop-out voltage: >30% of the supply voltage
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4 kV

6. Output circuit

2 potential free change over contacts
Rated surge: 250 V AC
Switching capacity: 2000 VA (8 A / 250 V)
Fusing: 8 A fast acting
Mechanical life: 20 x 10⁶ operations
Electrical life: 2 x 10⁵ operations
at 1000 VA resistive load
Switching frequency: max. 60/min at 100 VA
resistive load
max. 6/min at 1000 VA
resistive load
(according to IEC 947-5-1)
Overvoltage category: III. (according to IEC 60664-1)
Rated surge voltage: 4 kV

7. Accuracy

Base accuracy: ±1% of maximum scale value
Adjustment accuracy: <5% of maximum scale value
Repetition accuracy: <0.5% or ±5 ms
Voltage influence: -
Temperature influence: ≤0.01% / °C

8. Ambient conditions

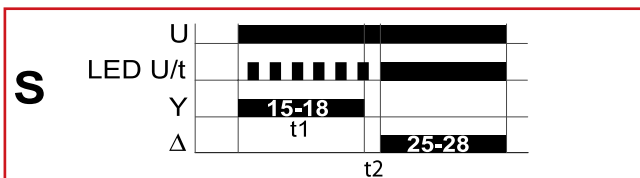
Ambient temperature: -25 to +55 °C
(according to IEC 68-1)
Storage temperature: -25 to +70 °C
Transport temperature: -25 to +70 °C
Relative humidity: 15% to 85%
(according to IEC 721-3-3
Klasse 3K3)
Pollution degree: 2, if built in 3
(according to IEC 664-1)
Vibration resistance: 10 to 55 Hz 0.35 mm
(according to IEC 68-2-6)
Shock resistance: 15 g 11 ms
(according to IEC 68-2-27)

TIME DELAYS

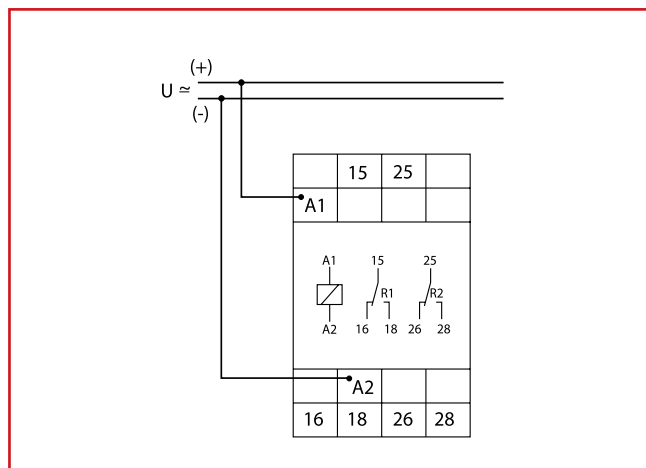
FUNCTIONS

Star-delta start up

When the supply voltage U is applied, the star-contact switches into on-position (yellow LED illuminated) and the set star-time t_1 begins (green LED U/t flashes). After the interval t_1 has expired (green LED U/t illuminated), the star-contact switches into off-position (yellow LED not illuminated) and the set transit-time t_2 begins. After the interval t_2 has expired, the contact for the delta-contactor switches into on-position. To restart the function, the supply voltage must be interrupted and reapplied.



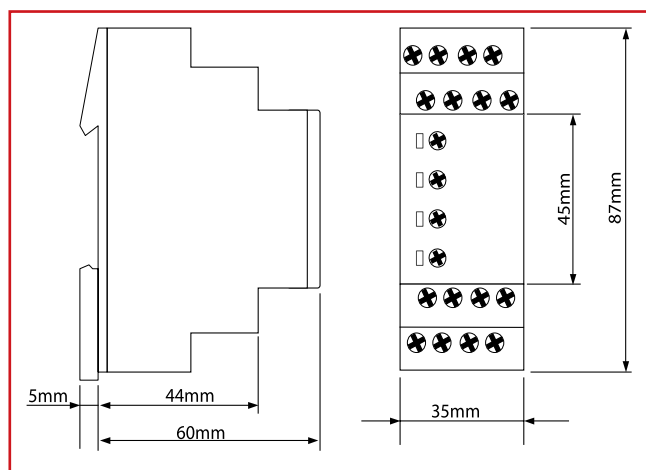
CONNECTIONS



WEIGHT

Single packing: 106 g

DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|------------|-----------------|
| Star-delta-relay, 12-240VAC, 2 change over | 9004840507300 | 900 | ZR5SD025 |



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STAR-DELTA-RELAY ZR6SD052



- Star-Delta start-up
- Supply voltage selectable via power modules
- 2 change-over contacts
- Width 22.5 mm
- Industrial design

TECHNICAL DATA

1. Functions

S Star-Delta start-up

2. Zeitbereiche

Start-up time

| Time range | Adjustment range | |
|------------|------------------|------|
| 10s | 500ms | 1s |
| 3s | 1500ms | 30s |
| 1min | 3s | 1min |
| 3min | 9s | 3min |

Transit time

Time range (fixed)

40ms
60ms
80ms
100ms

3. Indicators

Green LED ON: indication of supply voltage
delta-contactor in on-position
(terminals 25-28)

Green LED flashes: indication of star-time

Yellow LED ON/OFF: indication of star-contactor
(terminals 15-18)

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-Rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4
(PZ1 required), IP rating IP20
Tightening torque: max. 1Nm
Terminal capacity:
1 x 0.5 bis 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 bis 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage:
12 to 400V AC

Tolerance:

Rated frequency:

Rated consumption:

Duration of operation:

Reset time:

Residual ripple for DC:

Drop-out voltage:

Overvoltage category:

Rated surge voltage:

terminals A1-A2 (galvanically
separated) selectable via power
modules TR2
according to specification of
power module
according to specification of
power module
2VA (1.5W)
100%
100ms
-
>30% of the supply voltage
III (in accordance with
IEC 60664-1)
4kV

6. Output circuit

2 potential free change-over contacts

Rated voltage: 250V AC

Schaltleistung: 750VA (3A / 250V AC)

If the *distance* between the devices is *less than 5mm!*

Switching capacity: 1250VA (5A / 250V AC)

If the *distance* between the devices is *greater than 5mm!*

Fusing: 5A fast acting

Mechanical life: 20 x 10⁶ operations

Electrical Life: 2 x 10⁵ operations at 1000VA
resistive load

Switching frequency: max. 60/min bei 100VA

resistive load

max. 6/min bei 1000VA

resistive load (in accordance with
IEC 60947-5-1)

Overvoltage category: III (in accordance with IEC 60664-1)

Rated surge voltage: 4kV

7. Accuracy

Base accuracy: ±1% (of maximum scale value)

Frequency response: -

Adjustment accuracy: ≤5% (of maximum scale value)

Repetition accuracy: <0.5% or ±5ms

Voltage influence: -

temperature influence: ≤0.01% / °C

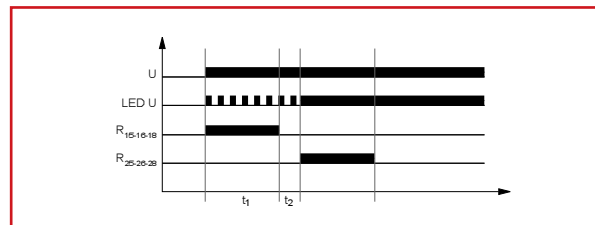
8. Ambient conditions

| | |
|------------------------|---|
| Ambient temperature: | -25 to +55°C (in accordance with IEC 60068-1) -25 to +40°C (in accordance with UL 508) |
| Storage temperature: | -25 to +70°C |
| Transport temperature: | -25 to +70°C |
| Relative humidity: | 15% to 85% (in accordance with IEC 60721-3-3 class 3K3) |
| Pollution degree: | 3 (in accordance with IEC 60664-1) |
| Vibration resistance: | 10 to 55Hz 0.35mm (in accordance with IEC 60068-2-6) |
| Shock resistance: | 15g 11ms (in accordance with IEC 60068-2-27) |

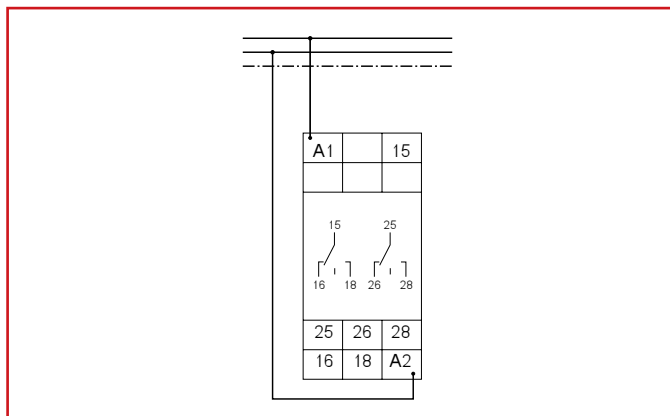
FUNCTIONS

Star-Delta start-up (S)

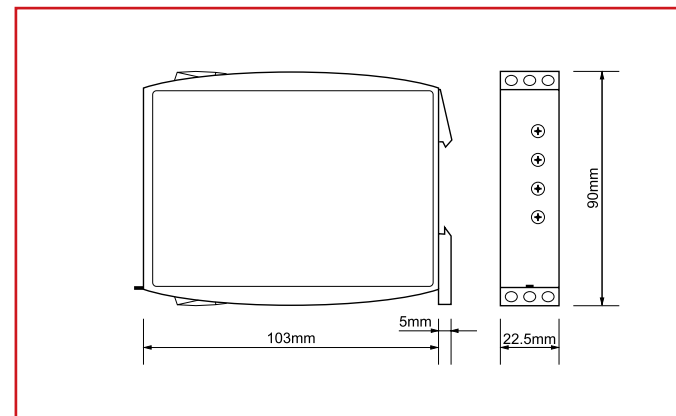
When the supply voltage U is applied, the star-contact switches into on-position (yellow LED illuminated) and the set star-time t1 begins (green LED flashing). After the interval t1 has expired (green LED illuminated) the star-contact switches into off-position (yellow LED not illuminated) and the set transit-time t2 begins. After the interval t2 has expired the delta-contact switches into on-position. To restart the function the supply voltage must be interrupted and re-applied.



CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|-----------|-----------|
| Star-delta-relay, 2 change over, industrial design | 9004840557459 | | ZR6SD052 |



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EMERGENCY LIGHT TEST RELAY ZR5RT011



- Timer for automatic test of emergency lights
- Integrated test key
- 1 change over contact
- Width 17.5 mm
- Installation design

TECHNICAL DATA

1. Functions

Ws Single shot leading edge with control contact

2. Time ranges

Time range reversible between 10min, 30min, 60min, 90min, 2h and 3h

3. Indicators

Green LED U/t ON: indication of supply voltage
Green LED U/t flashes: indication of time period t
Green LED U/t flashes fast: abort of time period t
Yellow LED ON/OFF: indication of relay output

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP 40
Mounted on DIN-rail TS 35 according to EN 60715
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
Tightening torque: max. 1Nm
Terminal capacity:
1 x 0.5 to 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 to 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: 230V AC
Terminals: L-N
Tolerance: -15% to +10%
Rated frequency: 48 to 63Hz
Rated consumption: 2VA (1.0W)
Duty cycle: 100%
Reset time: 500ms
Ripple and noise at DC: -
Drop out voltage: >30% of supply voltage
Overvoltage category: III (in accordance with IEC 60664-1)
Rated surge voltage: 4kV

6. Output circuit

1 change over contact

NORMALLY OPEN CONTACT

Terminals: L-18
Rated voltage: 250V AC
Switching capacity: 1250VA (5A / 250V AC)

NORMALLY CLOSED CONTACT

Terminals: L-16
Rated voltage: 250V AC
Switching capacity: 2500VA (10A / 250V AC)
If the distance between the devices is less than 5mm!

Switching capacity: 4000VA (16A / 250V AC)
If the distance between the devices is greater than 5mm!
Start-up peak (20ms): 80A

Mechanical life: 30 x 10⁶ operations
Electrical life:
Resistive load: 10⁵ operations at 16A 250V
Lamp load: 80.000 operations at 1000W 250V

7. Accuracy

Base accuracy: ±5%
Adjustment accuracy: -
Repetition accuracy: <2%
Voltage influence: -
Temperature influence: ≤1%

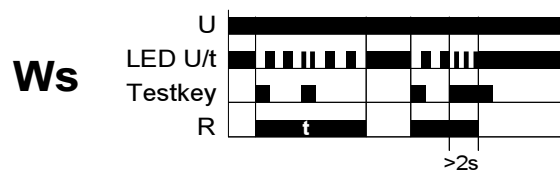
8. Ambient conditions

Ambient temperature: -25 to +55°C
Storage temperature: -25 to +70°C
Transport temperature: -25 to +70°C
Relative humidity: 15% to 85% (in accordance with IEC 60721-3-3 class 3K3)
Pollution degree: 2, if built in 3 (in accordance with IEC 60664-1)

FUNCTIONS

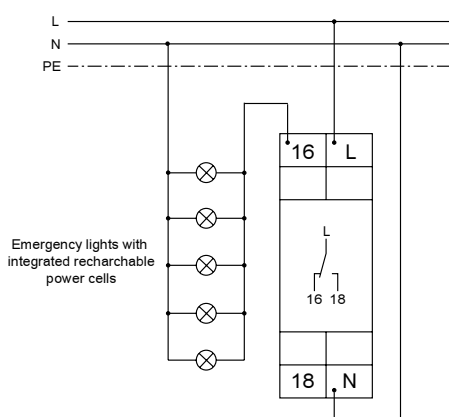
Single shot leading edge with control contact (Ws)

The supply voltage U must be constantly to the device (green LED U/t illuminated). Pressing the integrated test key forces the output relay R to switch into on-position (yellow LED illuminated), so the emergency lights are disconnected from the mains and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated), the output relay R switches into off-position (yellow LED not illuminated) and the emergency lights are reconnected to the mains. During the interval, the test key can be operated any number of times. Prolonged pressure on the test key (>2s) aborts the running test interval (green LED U/t flashes fast) and a further cycle can be started.

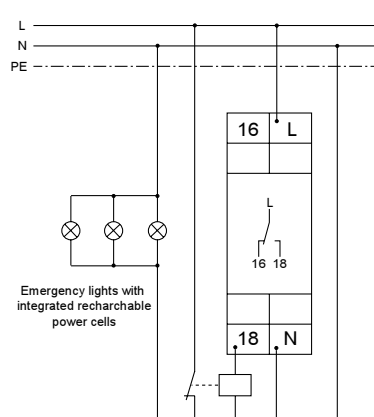


CONNECTIONS

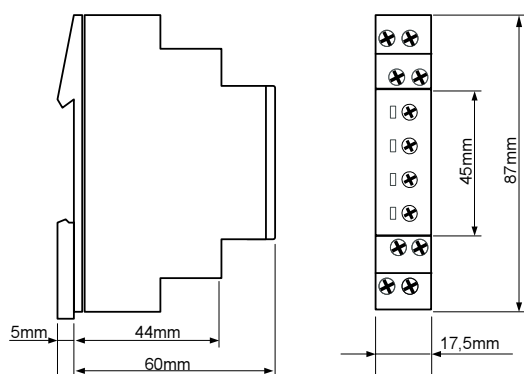
Direct connection of emergency lights (I < 16A)



Switching emergency lights with contactor (I > 16A)

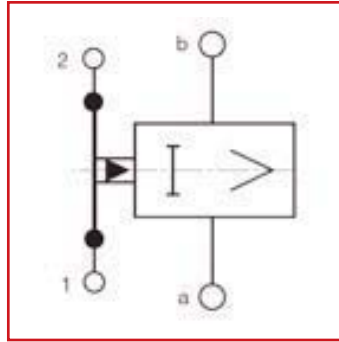


DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|----------------------------|---------------|-----------|-----------------|
| Emergency light test relay | 9004840557374 | | ZRSRT011 |

LOAD SHEEDING RELAY BZ601000




SCHRACK INFO

- For reduction of the necessary cross section of a line with big consumers
- Also for electronically regulated instantaneous water heater
- Assembly on DIN-rail according to DIN EN 50 052 or mounting plate

TECHNICAL DATA

| | |
|---|------------------------------------|
| Rated current range AC | 6,7...39 A |
| Rated power range for load at 230 V AC | 1,5...9 kW |
| Rated power range for load at AC 3~230/400 V | 4,6...27 kW |
| Operating power consumption | 0,5...4 VA |
| Tripping current | ≤ 5,7 A AC |
| Maximum continuous current | 43 A AC |
| Thermal continuous load at 40°C | 2,5 W |
| Connection (a and b) screw terminal; wire cross section | 2,5...16 mm ² |
| Contact | 1 NC |
| Rated current at 250 V AC | 1 A |
| Contact material | silver plated |
| Maximum switching voltage | 400 V AC |
| Maximum switching capacity | 250 VA |
| Peak inrush current | 5 A |
| Electrical life at rated load | 10 ⁵ operations |
| Mechanical life | 10 x 10 ⁵ operations |
| Duty cycle | 100% |
| Max. switching frequency | 1800 operations/hour at rated load |
| Max. operating temperature | 40°C |
| Opening time/closing time | 10...20 ms/≥ 20 ms |
| Contact resistance | ca. 3 mΩ |
| Test voltage: contact/winding | 2500 V AC |
| Insulation class acc. to VDE 0110 | C/250 V |
| Protection degree housing | IP 40 |
| Connection (1 and 2) | Schraubklemmen |
| Wire cross section (1 and 2) | 0,75...4 mm ² |
| Weight | ca. 90 g |

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|---|-----------------|
| Load sheeding relay 6,7 – 39 A 400V-AC | 9004840378429 |  | BZ601000 |



Order no. blue: on stock, usually ready for delivery on the day of order!

VOLTAGE MONITORING RELAY UR5U1011



SCHRACK-INFO

- AC/DC voltage monitoring in 1-phase mains
- Undervoltage monitoring
- 1 change over contact
- Width 17.5 mm
- Installation design

TECHNICAL DATA

1. Functions

AC/DC undervoltage monitoring in 1-phase mains with adjustable threshold and fixed hysteresis.

UNDER Undervoltage monitoring

2. Time ranges

Tripping delay (Delay): Adjustment range -

3. Indicators

Green LED ON/OFF: indication of supply voltage
Yellow LED ON/OFF: indication of relay output

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
Tightening torque: max. 1Nm
Terminal capacity:
1 x 0.5 to 2.5mm² with/without multicore cable end
1 x 4mm² without multicore cable end
2 x 0.5 to 1.5mm² with/without multicore cable end
2 x 2.5mm² flexible without multicore cable end

5. Input circuit

Supply voltage: (= measuring voltage)
Terminals:
230V AC E-F3
24V AC E-F2 (distance > 5mm)
24V DC E-F1(+)
Rated voltage Un: see table ordering information or printing on the unit
Tolerance: -25% to +20% of Un
Rated consumption:
230V AC 10VA (0.6W)
24V AC 1.3VA (0.8W)
24V DC 0.6W
Rated frequency: AC 48 to 63Hz
Duration of operation: 100%
Reset time: 500ms
Wave form: DC, AC Sinus
Hold-up time: -
Drop-out voltage: >60% of supply voltage
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4kV

6. Output circuit

1 potential free change over contact
Rated voltage: 250V AC
Switching capacity: 1250VA (5A / 250V)
Fusing: 5A fast acting
Mechanical life: 20 x 10⁶ operations
Electrical life: 2 x 10⁵ operations at 1000VA resistive load
Switching frequency: max. 60/min at 100VA resistive load
max. 6/min at 1000VA resistive load (according to IEC 947-5-1)
Overvoltage category: III. (according to IEC 60664-1)
Rated surge voltage: 4kV

7. Measuring circuit

Measuring variable: DC or AC Sinus, 48 to 63Hz
Measuring input: (= supply voltage)
Terminals:
230V AC E-F3
24V AC E-F2 Distance between the devices must be greater than 5mm!
24V DC E-F1(+)
Overload capacity: 120% of Un
Input resistance: -
Switching threshold Us: see table ordering information or printing on the unit
Hysteresis H: see table ordering information or printing on the unit
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4kV

8. Accuracy

Base accuracy: ±5% of rated value
Adjustment accuracy: ±5% of rated value
Repetition accuracy: ≤2% of rated value
Voltage influence: -
Temperature influence: 0,05% / °C

9. Ambient conditions

Ambient temperature: -25 to +55°C (according to IEC 68-1)
Storage temperature: -25 to +70°C
Transport temperature: -25 to +70°C
Relative humidity: 15% to 85% (according to IEC 721-3-3 class 3K3)
Pollution degree: 2, if built in 3 (according to IEC 664-1)
Vibration resistance: 10 to 55 Hz 0.35mm (according to IEC 68-2-6)
Shock resistance: 15g 11ms (according to IEC 68-2-27)

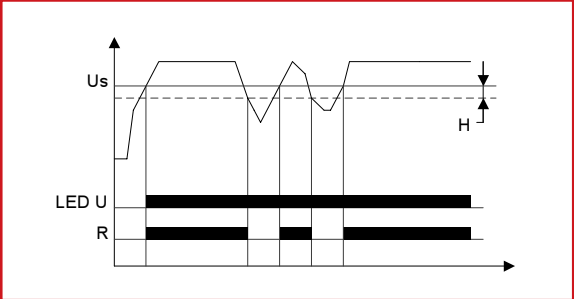
10. Weight

Single packing: 74g

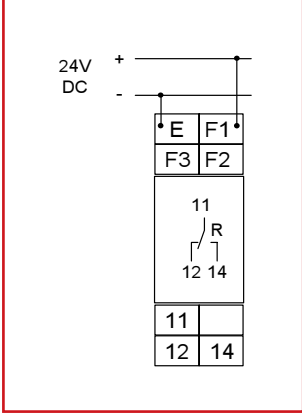
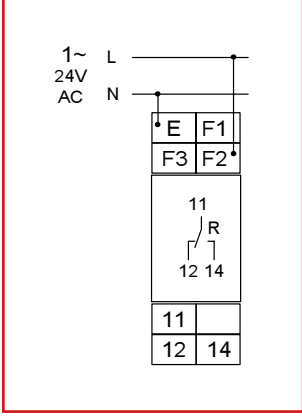
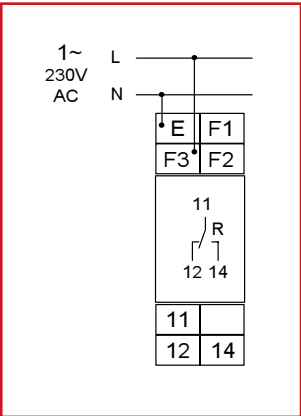
FUNCTIONS

The supply voltage U must be constantly applied to the device (green LED illuminated).

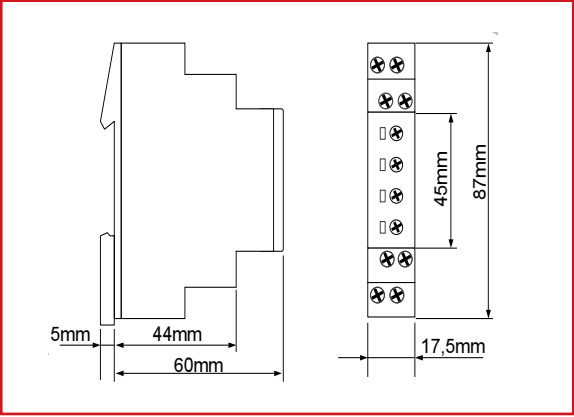
The output relay R switches into on-position (yellow LED illuminated) when the measured voltage U exceeds the value adjusted at the U_s -regulator. The output relay R switches into off-position (yellow LED not illuminated) when the measured value for the voltage falls below the set value by more than the fixed hysteresis.



CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|---|-----------------|
| Voltage monitoring relay, 1 change over, 1 phase, AC/DC | 9004840517125 |  | UR5U1011 |



VOLTAGE MONITORING RELAY UR6U1052



- AC/DC voltage monitoring in 1-phase mains
- Multifunction
- 16.6 to 400 Hz
- Fault latch
- Zoom voltage 24 to 240V AC/DC
- 2 change-over contacts
- Width 22.5 mm
- Industrial design

TECHNICAL DATA

1. Functions

AC/DC voltage monitoring in 1-phase mains with adjustable thresholds, timing for start-up suppression and tripping delay separately adjustable and the following functions (selectable by means of rotary switch)

| | |
|-------------|--|
| OVER | Overvoltage monitoring |
| OVER+LATCH | Overvoltage monitoring with fault latch |
| UNDER | Undervoltage monitoring |
| UNDER+LATCH | Undervoltage monitoring with fault latch |
| WIN | Monitoring the window between Min and Max |
| WIN+LATCH | Monitoring the window between Min and Max with fault latch |

2. Time ranges

| | |
|----------------------------|------------------|
| | Adjustment range |
| Start-up suppression time: | 0s 10s |
| Tripping delay: | 0.1s 10s |

3. Indicators

| | |
|--------------------|---|
| Green LED ON: | indication of supply voltage |
| Green LED flashes: | indication of start-up suppression time |
| Yellow LED ON/OFF: | indication of relay output |
| Red LED ON/OFF: | indication of failure of the corresponding threshold |
| Red LED flashes: | indication of tripping delay of the corresponding threshold |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-Rail TS 35 according to EN 60715
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Tightening torque: max. 1Nm
 Terminal capacity:
 1 x 0.5 bis 2.5 mm² with/without multicore cable end
 1 x 4 mm² without multicore cable end
 2 x 0.5 bis 1.5 mm² with/without multicore cable end
 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

| | | |
|-------------------------|--------------------------------|--|
| Supply voltage: | 24 to 240V AC/DC | terminals A1-A2 (galvanically separated) |
| Tolerance: | 24 to 240V DC 24 to 240V AC | -20% to +25% -15% to +10% |
| Rated frequency: | 24 to 240V AC 48 to 240V AC | 48 to 400Hz 16 to 48Hz |
| Rated consumption: | | 4.5VA (1W) |
| Duration of operation: | | 100% |
| Reset time: | | 500ms |
| Wave form for AC: | | Sinus |
| Residual ripple for DC: | | 10% |
| Drop-out voltage: | | >15% of the supply voltage |
| Overvoltage category: | | III (in accordance with IEC 60661-1) |
| Rated surge voltage: | | 4kV |

6. Output circuit

| | |
|---------------------------------------|---|
| 2 potential free change-over contacts | |
| Rated voltage: | 250V AC |
| Switching capacity (distance <5 mm): | 750VA (3A / 250V AC) |
| Switching capacity (distance >5 mm): | 1250VA (5A / 250V AC) |
| Fusing: | 5A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations at 1000VA resistive load |
| Switching frequency: | max. 60/min at 100VA resistive load max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1) |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

7. Measuring circuit

| | |
|-----------------------|---|
| Fusing: | max. 20A (in accordance with UL 508) |
| Measured variable: | DC or AC Sinus (16.6 to 400Hz) |
| Input: | |
| 30V AC/DC | terminals E-F1(+) |
| 60V AC/DC | terminals E-F2(+) |
| 300V AC/DC | terminals E-F3(+) |
| Overload capacity: | |
| 30V AC/DC | 100V _{eff} |
| 60V AC/DC | 150V _{eff} |
| 300V AC/DC | 440V _{eff} |
| Input resistance: | |
| 30V AC/DC | 47Ω |
| 60V AC/DC | 100Ω |
| 300V AC/DC | 470Ω |
| Switching threshold: | |
| Max | 10% to 100% von U _N |
| Min | 5% to 95% von U _N |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

8. Accuracy

| | |
|------------------------|-----------------------------------|
| Base accuracy: | ±5% (of maximum scale value) |
| Frequency response: | -10% to +5% (at 16.6 to 400Hz) |
| Adjustment accuracy: | ≤5% (of maximum scale value) |
| Repetition accuracy: | ≤2% |
| Voltage influence: | ≤0.5% |
| Temperature influence: | ≤0.1% / °C |

9. Ambient conditions

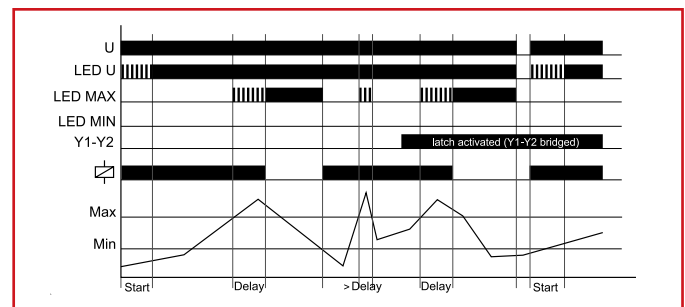
| | |
|------------------------|---|
| Ambient temperature: | -25 to +55°C (in accordance with IEC 60068-1) -25 to +40°C (in accordance with UL 508) |
| Storage temperature: | -25 to +70°C |
| Transport temperature: | -25 to +70°C |
| Relative humidity: | 15% to 85% (in accordance with IEC 60721-3-3 class 3K3) |
| Pollution degree: | 3 (in accordance with IEC 60664-1) |
| Vibration resistance: | 10 to 55Hz 0.35 mm (in accordance with IEC 60068-2-6) |
| Shock resistance: | 15g 11ms (in accordance with IEC 60068-2-27) |

FUNCTIONS

When the supply voltage U is applied, the output relays switch into on-position (yellow LED illuminated) and the set interval of the start-up suppression (START) begins (green LED U flashes). Changes of the measured voltage during this period do not affect the state of the output relay. After the interval has expired the green LED is illuminated steadily. For all the functions the LEDs MIN and MAX are flashing alternating, when the minimum value for the measured voltage was chosen to be greater than the maximum value.

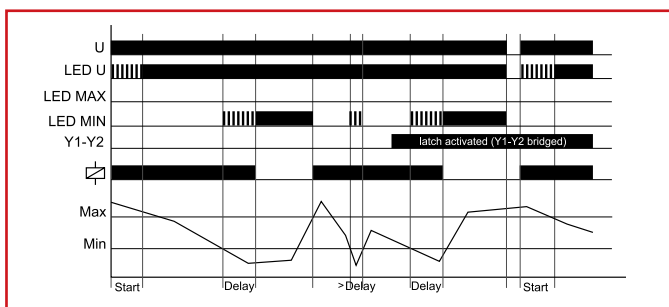
Overvoltage monitoring (OVER, OVER+LATCH)

When the measured voltage exceeds the value adjusted at the MAX-regulator, the set interval of the tripping delay (DELAY) begins (red LED MAX flashes). After the interval has expired (red LED MAX illuminated), the output relays switch into off-position (yellow LED not illuminated). The output relays again switch into on-position (yellow LED illuminated), when the measured voltage falls below the value adjusted at the MIN-regulator (red LED MAX not illuminated). If the fault latch is activated (OVER+LATCH) and the measured voltage remains above the MAX-value longer than the set interval of the tripping delay, the output relays remain in the off-position even if the measured voltage falls below the value adjusted at the MIN-regulator. After resetting the failure (interrupting and re-applying the supply voltage), the output relays switch into on-position and a new measuring cycle begins with the set interval of the start-up suppression (START).



Undervoltage monitoring (UNDER, UNDER+LATCH)

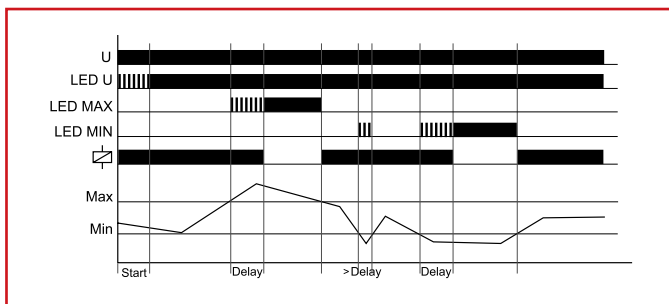
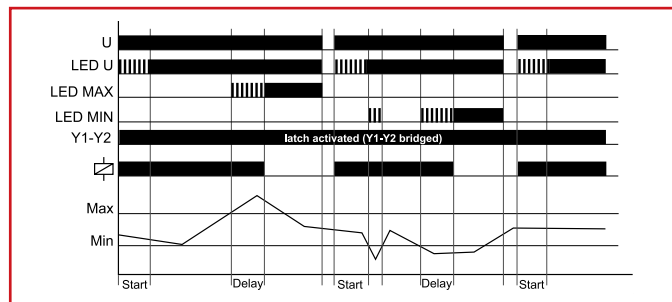
When the measured voltage falls below the value adjusted at the MIN-regulator, the set interval of the tripping delay (DELAY) begins (red LED MIN flashes). After the interval has expired (red LED MIN illuminated), the output relays switch into off-position (yellow LED not illuminated). The output relays again switch into on-position (yellow LED illuminated), when the measured voltage exceeds the value adjusted at the MAX-regulator. If the fault latch is activated (UNDER+LATCH) and the measured voltage remains below the MIN-value longer than the set interval of the tripping delay, the output relays remain in the off-position even if the measured voltage exceeds the value adjusted at the MAX-regulator. After resetting the failure (interrupting and re-applying the supply voltage), the output relays switch into on-position and a new measuring cycle begins with the set interval of the start-up suppression (START).



If the fault latch is activated (WIN+LATCH) and the measured voltage remains below the MIN-value longer than the set interval of the tripping delay, the output relays remain in the off-position even if the measured voltage exceeds the value adjusted at the MIN-regulator. If the measured voltage remains above the MAX-value longer than the set interval of the tripping delay, the output relays remain in the off-position even if the measured voltage falls below the value adjusted at the MAX-regulator. After resetting the failure (interrupting and re-applying the supply voltage), the output relays switch into on-position and a new measuring cycle begins with the set interval of the start-up suppression (START).

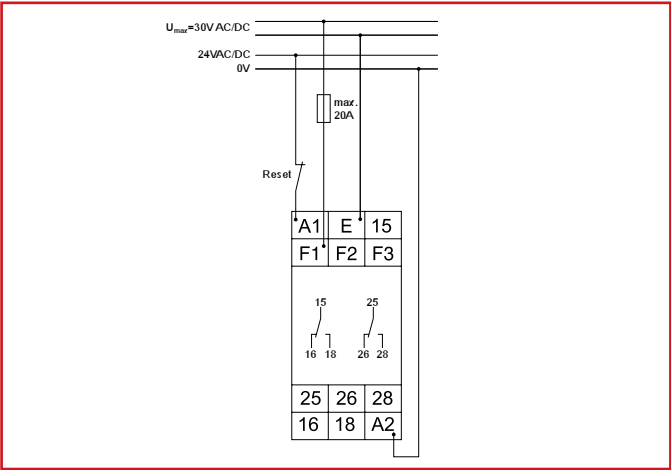
Window function (WIN, WIN+LATCH)

The output relays switch into on-position (yellow LED illuminated) when the measured voltage exceeds the value adjusted at the MIN-regulator. When the measured voltage exceeds the value adjusted at the MAX-regulator, the set interval of the tripping delay (DELAY) begins (red LED MAX flashes). After the interval has expired (red LED MAX illuminated), the output relays switch into off-position (yellow LED not illuminated). The output relays again switch into on-position (yellow LED illuminated) when the measured voltage falls below the value adjusted at the MAX-regulator. When the measured voltage falls below the value adjusted at the MIN-regulator, the set interval of the tripping delay (DELAY) begins again (red LED MIN flashes). After the interval has expired (red LED MIN illuminated), the output relays switch into off-position (yellow LED not illuminated).

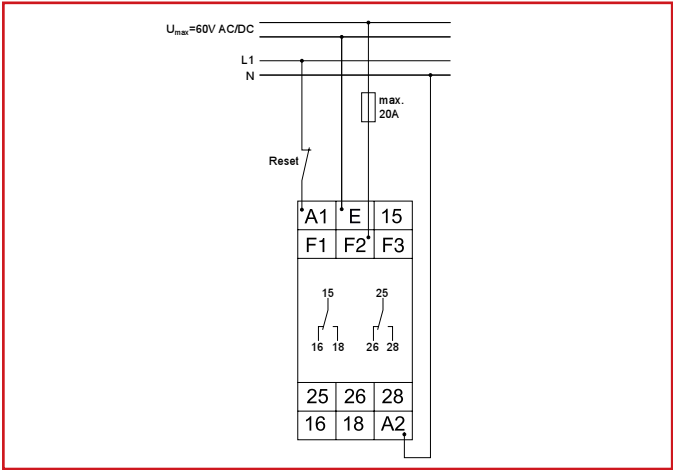


CONNECTIONS

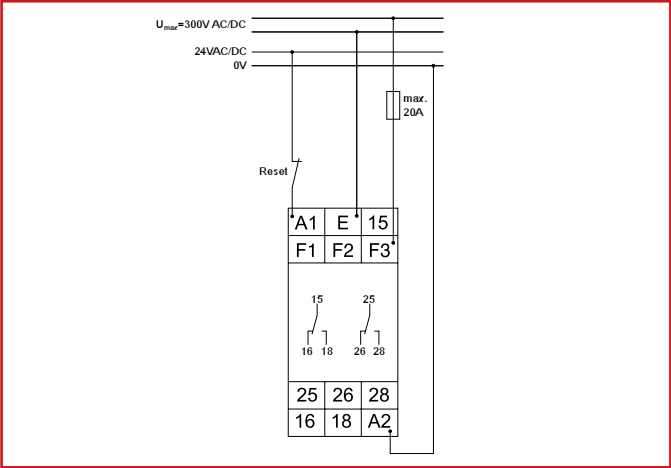
Range 30V, supply voltage 24V AC/DC and fault latch



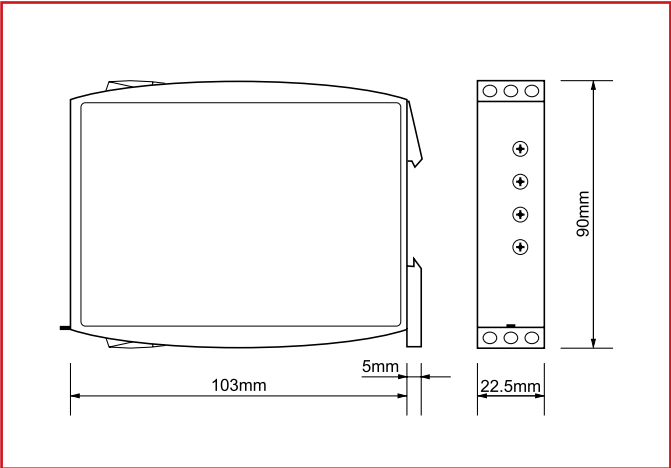
Range 60V, supply voltage 230V AC and fault latch




Range 300V, supply voltage 24V AC/DC and fault latch



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|---|-----------------|
| Voltage monitoring relay, 2 change over, 1 phase, 24-240V AC/DC, industrial design | 9004840557398 |  | UR6U1052 |



Order no. blue: on stock, usually ready for delivery on the day of order!



VOLTAGE MONITORING 3-PHASE RELAY UR5U3011



SCHRACK-INFO

- Undervoltage monitoring
- Supply voltage = measured voltage
- 1 change over contact
- Width 17.5 mm
- Installation design

TECHNICAL DATA

1. Functions

Undervoltage monitoring in 3-phase mains (each phase against the neutral wire) with fixed or variable threshold voltage U_S and fixed hysteresis.

2. Time range

Tripping delay: Adjustment range
fixed, approx. 200ms

3. Indicators

Green LED L1 ON/OFF: indication of supply voltage L1-N
Green LED L2 ON/OFF: indication of supply voltage L2-N
Green LED L3 ON/OFF: indication of supply voltage L3-N
Yellow LED ON/OFF: indication of relay output

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 60715
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required)
IP rating: IP20
Tightening torque: max. 1Nm
Terminal capacity:
1 x 0.5 to 2.5mm² with/without multicore cable end
1 x 4mm² without multicore cable end
2 x 0.5 to 1.5mm² with/without multicore cable end
2 x 2.5mm² flexible without multicore cable end

5. Input circuit

Supply voltage: (= measured voltage)
Terminals: N-L1-L2-L3
Rated voltage U_N : 400 / 230V
Tolerance: -30% to +10% of U_N
Rated consumption:
UR5U3011: 8VA (0,8W)
Rated frequency: AC 48 to 63Hz
Duty cycle: 100%
Reset time: 500ms
Hold-up time: -
Drop out voltage: determined by undervoltage detection
(see measured circuit)
Overvoltage category: III (in accordance with IEC 60664-1)
Rated surge voltage: 4kV

6. Output circuit

1 potential free change over contact
Rated voltage: 250V AC
Switching capacity: 1250VA (5A / 250V)
Fusing: 5A fast acting
Mechanical life: 20 x 10⁶ operations
Electrical life: 2 x 10⁵ operations
at 1000V resistive load
Switching frequency: max. 6/min at 1000VA resistive load
(in accordance with IEC 60947-5-1)
Overvoltage category: III (in accordance with IEC 60664-1)
Rated surge voltage: 4kV

7. Measuring circuit

Measuring variable: AC sinus, 48 to 63Hz
Measuring input: (= supply voltage)
Terminals: N-L1-L2-L3
Overload capacity: determined by tolerance
specified for supply voltage
Input resistance: -
Switching threshold U_S : see table ordering information
or printing on the unit
Hysteresis H: approx. 5%
Overvoltage category: III (in accordance with IEC 60664-1)
Rated surge voltage: 4kV

8. Accuracy

Base accuracy: ±5% of nominal value
Adjustment accuracy: -
Repetition accuracy: ≤2%
Voltage influence: -
Temperature influence: ≤0,05%/°C

9. Ambient conditions

Ambient conditions: -25 to +55°C
Storage temperature: -25 to +70°C
Transport temperature: -25 to +70°C
Relative humidity: 15% to 85%
(in acc. with IEC 60721-3-3 class 3K3)
Pollution degree: 2, if built-in 3
(in acc. with IEC 60664-1)

10. Weight

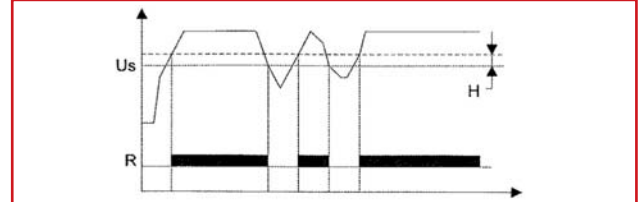
Single packing: 72g

FUNCTIONS

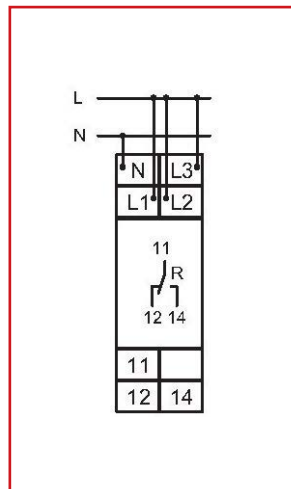
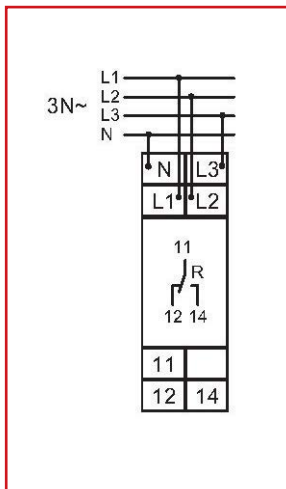
Undervoltage monitoring for 3-phase AC mains with variable threshold voltage U_S and fixed hysteresis. All measuring inputs (L1, L2 and L3) must be connected to phase voltage. If single or 2-phase monitoring is required, unused input terminals (L) must be connected to mains voltage to have proper L-N voltage on the terminals L1, L2 and L3. A phase failure can not be detected, if the reverse voltage coming from the load exceeds the threshold U_S relay.

Undervoltage monitoring

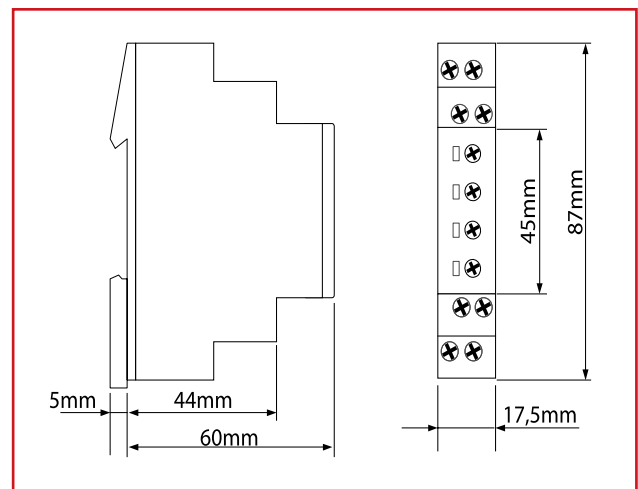
The output relay R switches into on-position (yellow LED illuminated), when the measuring voltage of all connected phases exceeds the fixed threshold U_S by more than the fixed hysteresis H . When the voltage of one of the connected phases (L1, L2 or L3) falls below the fixed threshold, the output relay R switches into off-position again (yellow LED not illuminated).




CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|---|-----------------|
| Voltage monitoring relay, 1 change over, 3 phases | 9004840459074 |  | UR5U3011 |



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VOLTAGE MONITORING 3-PHASE RELAY UR6U3052



- Voltage monitoring in 3-phase mains
- Multifunction
- Monitoring of phase sequence and phase failure
- Monitoring of asymmetry selectable
- Connection of neutral wire optional
- Detection of loss of neutral wire
- Zoom voltage 24 to 240V AC/DC
- 2 change-over contacts
- Width 22.5mm
- Industrial design

TECHNICAL DATA

1. Functions

Voltage monitoring in 3-phase mains with adjustable thresholds, adjustable tripping delay, monitoring of phase sequence and phase failure, monitoring of asymmetry with adjustable threshold and the following functions (selectable by means of rotary switch)

| | |
|-----------|--|
| UNDER | Undervoltage monitoring |
| UNDER+SEQ | Undervoltage monitoring and monitoring of phase sequence |
| WIN | Monitoring of window between Min and Max |
| WIN+SEQ | Monitoring the window between Min and Max and monitoring of phase sequence |

2. Time ranges

| | Adjustment range | |
|----------------------------|------------------|-----|
| Start-up suppression time: | - | |
| Tripping delay: | 0.1s | 10s |

3. Indicators

| | |
|--------------------|---|
| Red LED ON/OFF: | indication of failure of the corresponding threshold |
| Red LED flashes: | indication of tripping delay of the corresponding threshold |
| Yellow LED ON/OFF: | indication of relay output |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-Rail TS 35 according to EN 60715
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Tightening torque: max. 1Nm
 Terminal capacity:

- 1 x 0.5 to 2.5 mm² with/without multicore cable end
- 1 x 4 mm² without multicore cable end
- 2 x 0.5 to 1.5 mm² with/without multicore cable end
- 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

| | | |
|-------------------------|--------------------------------|--|
| Supply voltage: | 24 to 240V AC/DC | terminals A1-A2 (galvanically separated) |
| Tolerance: | 24 to 240V DC 24 to 240V AC | -20% to +25% -15% to +10% |
| Rated frequency: | 24 to 240V AC 48 to 240V AC | 48 to 400Hz 16 to 48Hz |
| Rated consumption: | | 4.5VA (1W) |
| Duration of operation: | | 100% |
| Reset time: | | 500ms |
| Wave form for AC: | | Sinus |
| Residual ripple for DC: | | 10% |
| Drop-out voltage: | | >15% of the supply voltage |
| Overvoltage category: | | III (in accordance with IEC 60661-1) |
| Rated surge voltage: | | 4kV |

6. Output circuit

| | |
|--------------------------------------|---|
| | 2 potential free change-over contacts |
| Rated voltage: | 250V AC |
| Switching capacity (distance <5 mm): | 750VA (3A / 250V AC) |
| Switching capacity (distance >5 mm): | 1250VA (5A / 250V AC) |
| Fusing: | 5A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations at 1000VA resistive load |
| Switching frequency: | max. 60/min at 100VA resistive load max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1) |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

7. Measuring circuit

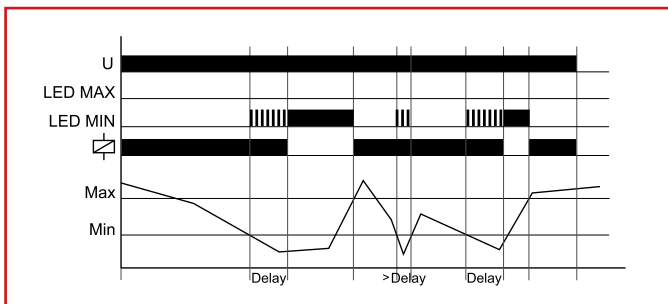
| | |
|-----------------------|---------------------------------------|
| Fusing: | max. 20A (in accordance with UL 508) |
| Measured variable: | AC Sinus (48 to 63Hz) |
| Input: | 3(N)~ 400/230V terminals (N)-L1-L2-L3 |
| Overload capacity: | 3(N)~ 400/230V 3(N)~600/346V |
| Input resistance: | 3(N)~ 400/230V 1MΩ |
| Switching threshold | |
| Max: | -20% to +30% of UN |
| Min: | -30% to +20% of UN |
| Asymmetry: | 5% to 25% |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

FUNCTIONS

For all the functions the LEDs MIN and MAX are flashing alternating, when the minimum value for the measured voltage was chosen to be greater than the maximum value. If a failure already exists when the device is activated, the output relays remain in off-position and the LED for the corresponding threshold is illuminated.

Under voltage monitoring (UNDER, UNDER+SEQ)

When the measured voltage (mean value of phase-to-phase voltages) falls below the value adjusted at the MIN-regulator, the set interval of the tripping delay (DELAY) begins (red LED MIN flashes). After the interval has expired (red LED MIN illuminated), the output relays switch into off-position (yellow LED not illuminated). The output relays again switch into on-position (yellow LED illuminated), when the measured voltage exceeds the value adjusted at the MAX-regulator.



Window function (WIN, WIN+SEQ)

The output relays switch into on-position (yellow LED illuminated) when the measured voltage (mean value of phase-to-phase voltages) exceeds the value adjusted at the MIN-regulator. When the measured voltage exceeds the value adjusted at the MAX-regulator, the set interval of the tripping delay (DELAY) begins (red LED MAX flashes). After the interval has expired (red LED MAX illuminated), the output relays switch into off-position (yellow LED not illuminated).

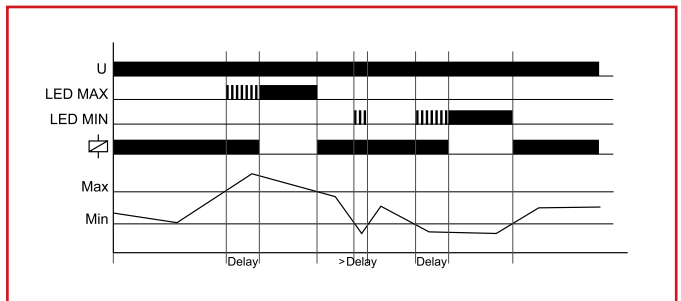
8. Accuracy

| | |
|------------------------|------------------------------|
| Base accuracy: | ±5% (of maximum scale value) |
| Frequency response: | - |
| Adjustment accuracy: | ±5% (of maximum scale value) |
| Repetition accuracy: | ±2% |
| Voltage influence: | ±0.5% |
| Temperature influence: | ±0.1% / °C |

9. Ambient conditions

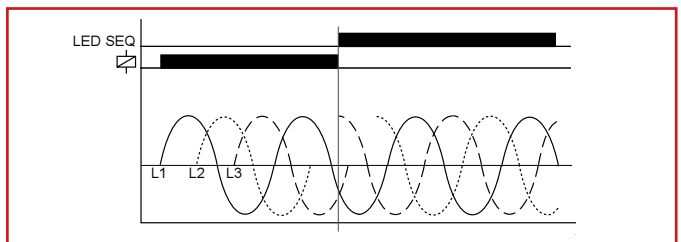
| | |
|------------------------|---|
| Ambient temperature: | -25 to +55°C (in accordance with IEC 60068-1) -25 to +40°C (in accordance with UL 508) |
| Storage temperature: | -25 to +70°C |
| Transport temperature: | -25 to +70°C |
| Relative humidity: | 15% to 85% (in accordance with IEC 60721-3-3 class 3K3) |
| Pollution degree: | 3 (in accordance with IEC 60664-1) |
| Vibration resistance: | 10 to 55Hz 0.35mm (in accordance with IEC 60068-2-6) |
| Shock resistance: | 15g 11ms (in accordance with IEC 60068-2-27) |

When the measured voltage falls below the value adjusted at the MAX-regulator (red LED MAX not illuminated). The output relays again switch into on-position (yellow LED illuminated) when the measured voltage falls below the value adjusted at the MIN-regulator, the set interval of the tripping delay (DELAY) begins again (red LED MIN flashes). After the interval has expired (red LED MIN illuminated), the output relays switch into off-position (yellow LED not illuminated).



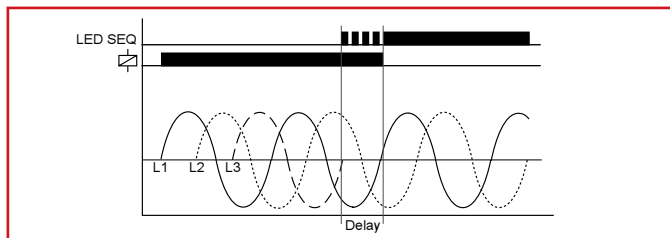
Phase sequence monitoring (SEQ)

Phase sequence monitoring is selectable for all functions. If a change in phase sequence is detected (red LED SEQ illuminated), the output relays switch into off-position immediately (yellow LED not illuminated).



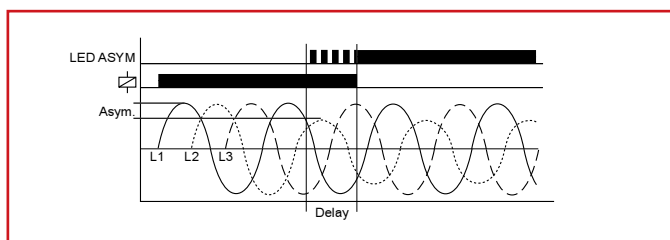
Phase failure monitoring (SEQ)

If one of the phase voltages fails, the set interval of the tripping delay (DELAY) begins (red LED SEQ flashes). After the interval has expired (red LED SEQ illuminated), the output relays switch into off-position (yellow LED not illuminated). Reverse voltages of a consumer (e.g. a motor which continues to run on two phases only) do not effect the disconnection but can be monitored by using a proper value for the asymmetry.



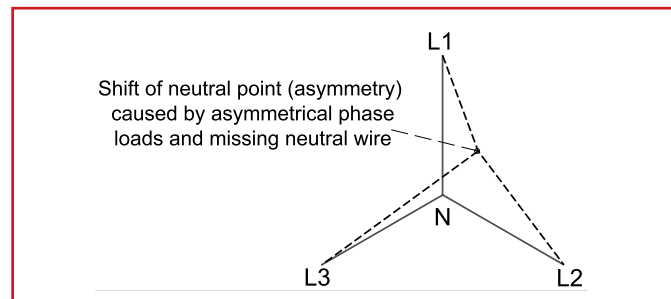
Asymmetry monitoring

If the asymmetry of the phase-to-phase voltages exceeds the value set at the ASYM-regulator, the set interval of the tripping delay (DELAY) begins (red LED ASYM flashes). After the interval has expired (red LED ASYM illuminated), the output relays switch into off-position (yellow LED not illuminated). If the neutral wire is connected to the device, the asymmetry of the phase voltages referred to the neutral wire (Y-voltage) is monitored also. In that case both values of the asymmetry are evaluated and if one of the values exceeds the value set at the ASYM-regulator, the set interval of the tripping delay (DELAY) begins (red LED ASYM flashes). After the interval has expired (red LED ASYM illuminated), the output relays switch into off-position (yellow LED not illuminated).



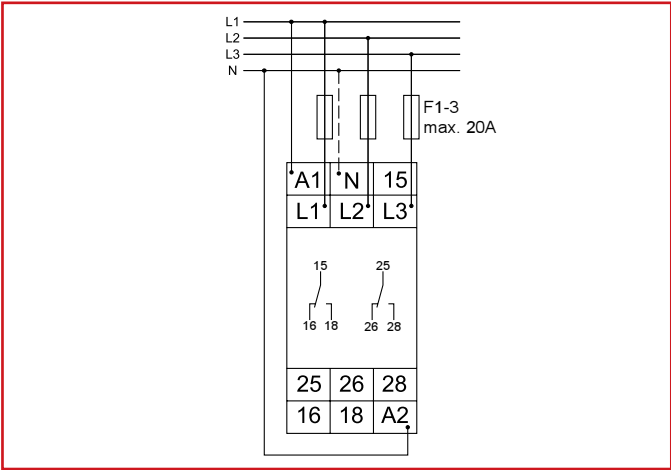
Loss of neutral wire by means of evaluation of asymmetry

A break of the neutral wire between power line and machinery is detected as soon as asymmetry between phase-to-phase voltage and neutral wire occurs. If the asymmetry exceeds the value set at the ASYM-regulator, the set interval of the tripping delay (DELAY) begins (red LED ASYM flashes). After the interval has expired (red LED ASYM illuminated), the output relays switch into off-position (yellow LED not illuminated). A break of the neutral wire between our device and the machinery can not be detected.

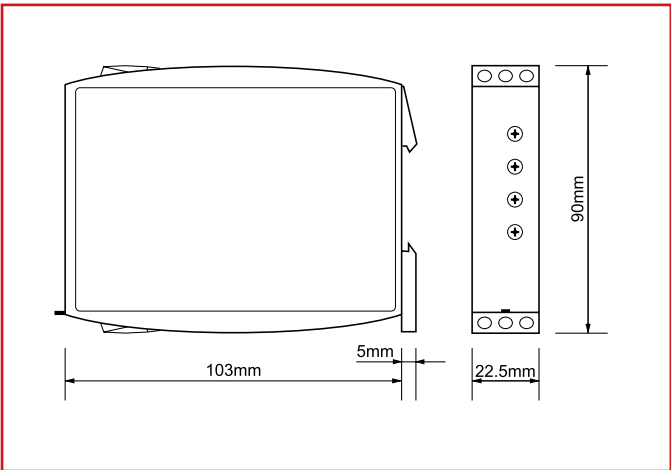


CONNECTIONS

24-240V, supply voltage 230V AC



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|-----------|-----------------|
| Voltage monitoring relay, 2 change over, 3 phases, 24-240V AC/DC, industrial design | 9004840557404 | | UR6U3052 |



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VOLTAGE MONITORING 3-PHASE RELAY UR5U3N11



- Undervoltage monitoring
- 1 change over contact
- Installation design

TECHNICAL DATA

1. Functions

Undervoltage monitoring in 3-phase mains (each phase against the neutral wire) with fixed threshold voltage U_S and fixed hysteresis.

2. Time range

Adjustment range

Tripping delay: fixed, approx. 200ms

3. Indicators

Yellow LED ON/OFF: indication of relay output

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40

Mounted on DIN-rail TS 35 according to EN 60715

Mounting position: any

Shockproof terminal connection according to VBG 4

(PZ1 required), IP rating IP20

Tightening torque: max. 1Nm

Terminal capacity:

- 1 x 0.5 to 2.5 mm² with/without multicore cable end
- 1 x 4 mm² without multicore cable end
- 2 x 0.5 bis 1.5 mm² with/without multicore cable end
- 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: (= measured voltage)

Terminals: N-L1-L2-L3

Tolerance: -30% to +15% of U_N

Rated voltage U_N : 3N~400/230V

Rated consumption: 5VA (0,6W)

Rated frequency: AC 48 to 63Hz

Duty cycle: 100%

Reset time: 500ms

Hold-up time: –

Drop out voltage: determined by undervoltage detection (see measured circuit)

Overvoltage category: III (in acc. with IEC 60661-1)

Rated surge voltage: 4kV

6. Output circuit

1 potential free change over contact

Rated voltage: 250V AC

Switching capacity: 1250VA (5A / 250V)

Fusing: 5A fast acting

Mechanical life: 20 x 10⁶ operations

Electrical life: 2 x 10⁵ operations

at 1000VA resistive load
max. 6/min at 100VA resistive load (in acc. with IEC 60947-5-1)

Overvoltage category: III (in acc. with IEC 60664-1)

Rated surge voltage: 4kV

7. Measuring circuit

Measuring variable: AC sinus, 48 to 63Hz

Measuring input: (= supply voltage)

Terminals: N-L1-L2-L3

Overload capacity: determined by tolerance specified for supply voltage

Input resistance: –

Switching threshold U_S : fixed 195,5V (L-N)

Hysteresis H: approx. 5%

Overvoltage category: III (in acc. with IEC 60664-1)

Rated surge voltage: 4kV

8. Accuracy

Base accuracy: ≤5% of nominal value

Adjustment accuracy: –

Repetition accuracy: ≤2%

Voltage influence: –

Temperature influence: ≤0,05% / °C

9. Ambient conditions

Ambient conditions: -25 to +55°C

Storage temperature: -25 to +70°C

Transport temperature: -25 to +70°C

Relative humidity: 15% to 85% (in acc. with IEC 60721-3-3 class 3K3)

Pollution degree: 2, if built-in 3 (in acc. with IEC 60664-1)

10. Weight

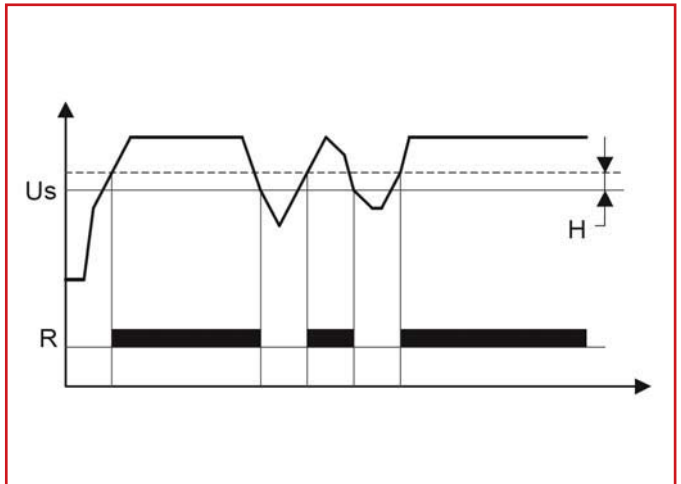
Single packing: 72g

FUNCTIONS

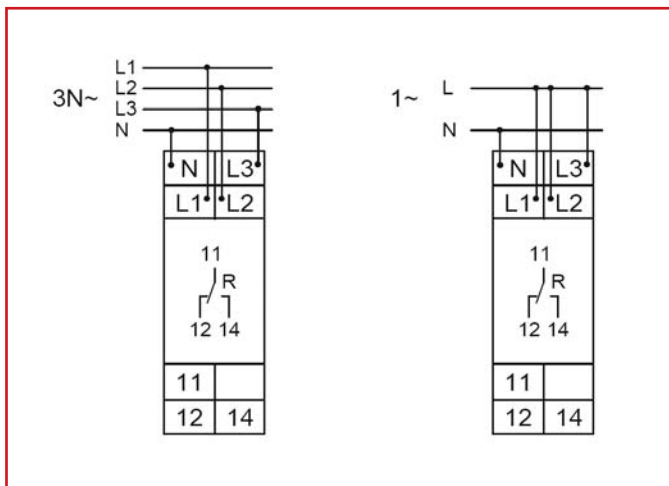
Undervoltage monitoring for 3-phase AC mains with fixed threshold voltage U_s and fixed hysteresis. All measuring inputs (L1, L2 and L3) must be connected to phase voltage. If single or 2-phase monitoring is required, unused input terminals (L) must be connected to mains voltage to have proper L-N voltage on the terminals L1, L2 and L3. A phase failure can not be detected, if the reverse voltage coming from the load exceeds the threshold U_s .

Undervoltage monitoring

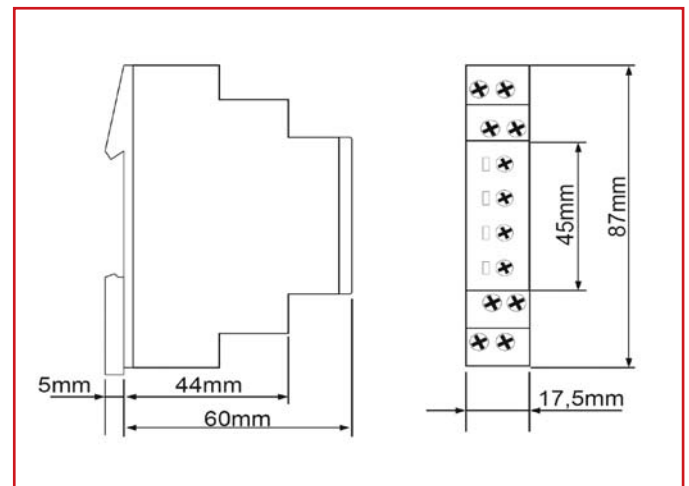
The output relay R switches into on-position (yellow LED illuminated), when the measuring voltage of all connected phases exceeds the fixed threshold U_s by more than the fixed hysteresis H. When the voltage of one of the connected phases (L1, L2 or L3) falls below the fixed threshold, the output relay R switches into off-position again (yellow LED not illuminated).



CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|-----------|-----------------|
| Voltage monitoring relay 3-phase to neutral, fixed $U_s = 195.5 \text{ V}$ | 9004840591057 | | UR5U3N11 |



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VOLTAGE MONITORING RELAY URU20301

SCHRACK-INFO

- Voltage monitoring in 3-phase mains
- Undervoltage monitoring
- ON delay
- Supply voltage = measuring voltage
- 1 change over contact
- Width 17.5 mm
- Installation design

TECHNICAL DATA

1. Functions

Undervoltage monitoring in 3-phase mains (each phase against the neutral wire) with adjustable ON delay, fixed threshold and fixed hysteresis.

2. Time ranges

| | |
|-----------------|----------------------|
| Tripping delay: | Adjustment range |
| ON delay t: | fixed, approx. 200ms |
| | 5min to 15min |

3. Indicators

| | |
|------------------------|----------------------------|
| Green LED U/t ON: | all 3 tensions are alright |
| Green LED U/t flashes: | indication of time period |
| Yellow LED ON/OFF: | indication of relay output |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-Rail TS 35 according to EN 50022
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Tightening torque: max. 1Nm
 Terminal capacity:
 1 x 0.5 bis 2.5 mm² with/without multicore cable end
 1 x 4 mm² without multicore cable end
 2 x 0.5 to 1.5 mm² with/without multicore cable end
 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

| | |
|--------------------------------|--|
| Supply voltage: | (= measured voltage) |
| Terminals: | N-L1-L2-L3 |
| Rated voltage U _N : | 3N~400/230V |
| Tolerance: | -30% to +30% of U _N |
| Rated consumption: | 6 VA (0,8 W) |
| Rated frequency: | 48 to 63 Hz |
| Duty cycle: | 100% |
| Reset time: | 500 ms |
| Hold-up time: | - |
| Drop out voltage: | determined by undervoltage detection (see measuring circuit) |
| Overvoltage category: | III (in acc. with IEC 60664-1) |
| Rated surge voltage: | 4 kV |

6. Output circuit

| | |
|--------------------------------------|--|
| 1 potential free change-over contact | |
| Rated voltage: | 250V AC |
| Switching capacity: | 1250VA (5A / 250V) |
| Fusing: | 5A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations at 1000VA resistive load |
| Switching frequency: | max. 60/min at 100VA resistive load max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1) |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

7. Measuring circuit

| | |
|--------------------------------------|--|
| Measuring variable: | AC sinus, 48 to 63 Hz |
| Measuring input: | (=supply voltage) |
| Terminals: | N- L1- L2- L3 |
| Overload capacity: | determined by tolerance specified for supply voltage |
| Input resistance: | - |
| Switching threshold U _s : | fixed 165V (L-N) |
| Hysteresis H: | approx. 5% |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

8. Accuracy

| | |
|------------------------|----------------------------|
| Base accuracy: | ±5% of rated value |
| Adjustment accuracy: | ≤5% of maximum scale value |
| Repetition accuracy: | ±2% |
| Voltage influence: | - |
| Temperature influence: | ≤1% |

9. Ambient conditions

| | |
|------------------------|---|
| Ambient temperature: | -25 to +55°C |
| Storage temperature: | -25 to +70°C |
| Transport temperature: | -25 to +70°C |
| Relative humidity: | 15% to 85% (in accordance with IEC 60721-3-3 class 3K3) |
| Pollution degree: | 2, if built in 3 (in acc. with IEC 60664-1) |

10. Weight

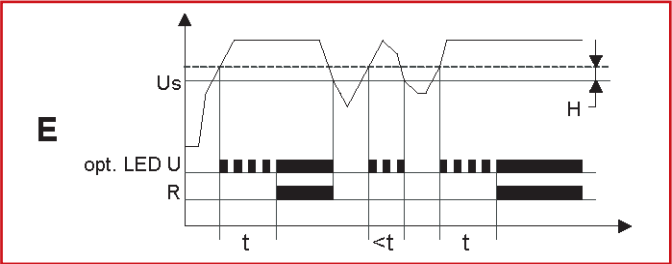
| | |
|-----------------|-----|
| Single packing: | 72g |
|-----------------|-----|

FUNCTIONS

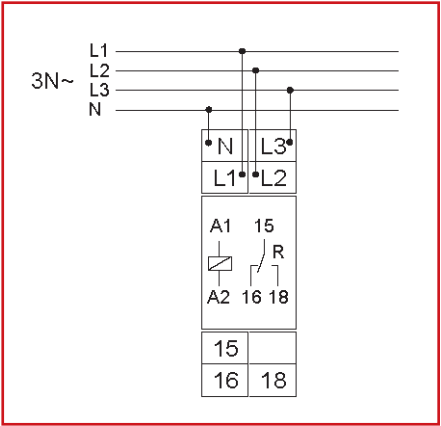
Undervoltage monitoring for 3-phase mains with fixed threshold voltage and fixed hysteresis. All measuring inputs (L1, L2 and L3) must be connected to phase voltage. If single or 2-phase monitoring is required, unused input terminals (L) must be connected to mains voltage to have proper L-N voltage on the terminals L1, L2 and L3. If there is a reverse voltage on account of a consumer, which exceeds the fixed threshold, detection of phase failure isn't possible.

Undervoltage monitoring with ON delay (Option E)

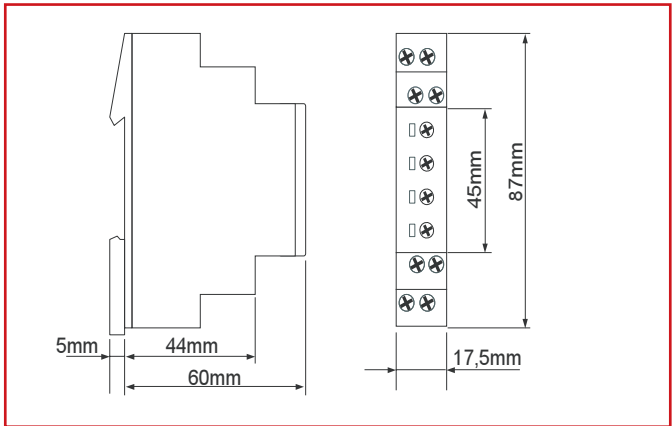
When the voltage of all connected phases exceeds the fixed threshold by more than the fixed hysteresis, the set interval t begins (green LED U/t flashes). After the set interval t has expired, the output relay R switches into on-position (yellow LED R illuminated, green LED U/t illuminated). When the voltage of one of the connected phases falls below the fixed threshold, the output relay R switches into off-position (yellow LED R not illuminated, green LED U/t not illuminated).



CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|-----------|------------|
| Voltage monitoring relay, on delay, 1 change over, 3 phases | 9004840418125 | | URU20301-T |



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CURRENT MONITORING RELAY UR5I1011



SCHRACK-INFO

- AC current monitoring in 1-phase mains
- 1 change over contact
- Width 17.5 mm
- Installation design

TECHNICAL DATA

1. Functions

AC current monitoring in 1-phase mains with adjustable threshold and fixed hysteresis.

2. Time ranges

Tripping delay (Delay): Adjustment range
- -

3. Indicators

Green LED ON: indication of supply voltage
Yellow LED ON/OFF: indication of relay output

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required),
IP rating IP20
Tightening torque: max. 1 Nm
Terminal capacity:
1 x 0.5 to 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 to 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: 230 V AC
Terminals: Li-N
Tolerance: -15% to +15% of Un
Rated consumption: 5 VA (0,8 W)
Rated frequency: AC 48 to 63 Hz
Duty cycle: 100%
Reset time: 500 ms
Wave form: Sinus
Hold-up time: -
Drop out voltage: >20% of rated voltage
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4 kV

6. Output circuit

1 potential free change over contact
Rated voltage: 250 V AC
Switching capacity: 1250 VA (5 A / 250 V AC)
Fusing: 5A fast acting

Mechanical life:

20 x 10⁶ operations

Electrical life:

2 x 10⁵ operations
at 1000 VA resistive load
max. 60/min at 100 VA
resistive load
max. 6/min at 1000 VA
resistive load

Switching frequency:

(according to IEC 947-5-1)
III. (according to IEC 60664-1)
4 kV

Overvoltage category:

Rated surge voltage:

7. Measuring circuit

Measuring variable: AC sinus, 48 to 63 Hz
Measuring input: 5A AC
Terminals: Li, Lk
Overload capacity: 7A (ex 5A - distance > 5mm)
Starting current:
1s 40A
3s 20A
Input resistance: 10 mΩ
Switching threshold Is: 10% to 100% of In
Hysteresis H: fixed 10%
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4 kV

8. Accuracy

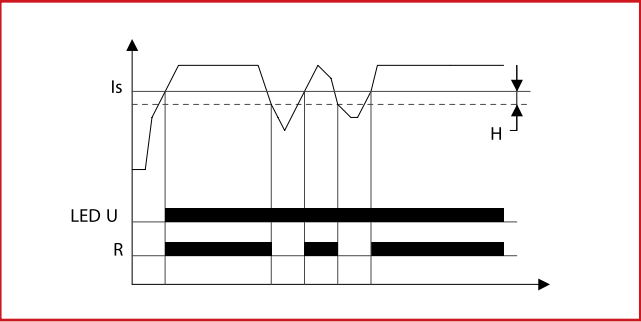
Base accuracy: ±5% of maximum scale value
Adjustment accuracy: ≤5% of maximum scale value
Repetition accuracy: ±2%
Voltage influence: -
Temperature influence: ≤0.05% / °C

9. Ambient conditions

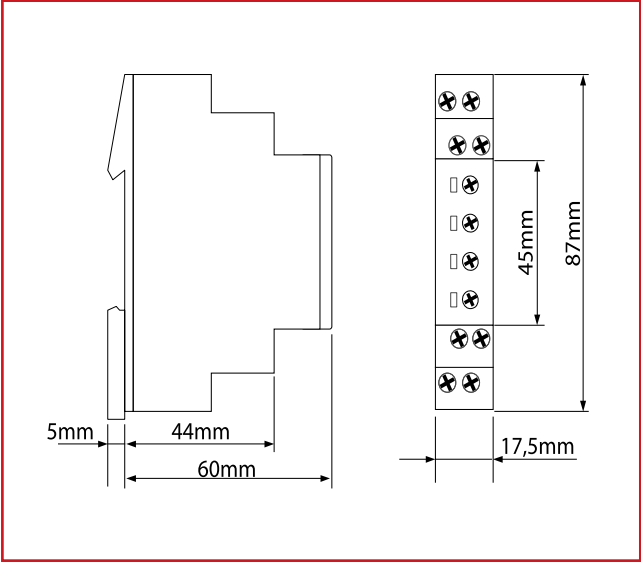
Ambient temperature: -25 to +55 °C
(according to IEC 68-1)
Storage temperature: -25 to +70 °C
Transport temperature: -25 to +70 °C
Relative humidity: 15% to 85%
(according to IEC 721-3-3 class 3K3)
Pollution degree: 2, if built in 3
(according to IEC 664-1)
Vibration resistance: 10 to 55 Hz 0.35 mm
(according to IEC 68-2-6)
Shock resistance: 15 g 11 ms
(according to IEC 68-2-27)

FUNCTIONS

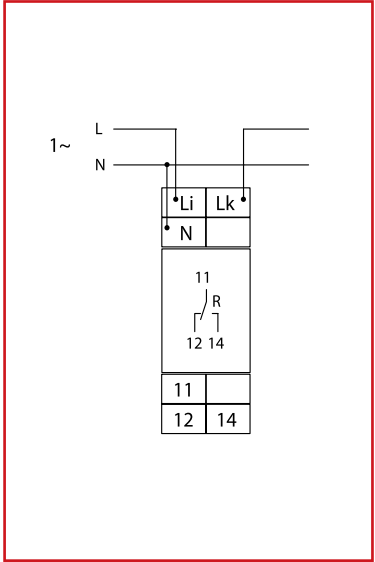
The supply voltage U must be constantly applied to the device (green LED illuminated). The output relay R switches into on-position (yellow LED illuminated) when the measured current exceeds the value adjusted at the Is regulator. The output relay R switches into off-position (yellow LED not illuminated) when the measured value for the current falls below the set value by more than the fixed hysteresis.



DIMENSIONS




CONNECTIONS



WEIGHT

Single packing: 70g

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|---|----------------|
| Current monitoring relay, 1 change over, 1 phase | 9004840507317 |  | URS1011 |



CURRENT MONITORING RELAY UR6I1052



- AC/DC current monitoring in 1-phase mains
- Multifunction
- 16.6 to 400Hz
- Fault latch
- Zoom voltage 24 to 240V AC/DC
- 2 change-over contacts
- Width 22.5mm
- Industrial design

TECHNICAL DATA

1. Functions

AC/DC current monitoring in 1-phase mains with adjustable thresholds, timing for start-up suppression and tripping delay separately adjustable and the following functions (selectable by means of rotary switch)

| | |
|-------------|--|
| OVER | Overcurrent monitoring |
| OVER+LATCH | Overcurrent monitoring with fault latch |
| UNDER | Undercurrent monitoring |
| UNDER+LATCH | Undercurrent monitoring with fault latch |
| WIN | Monitoring the window between Min and Max |
| WIN+LATCH | Monitoring the window between Min and Max with fault latch |

2. Time ranges

| | |
|----------------------------|------------------|
| | Adjustment range |
| Start-up suppression time: | 0s 10s |
| Tripping delay: | 0.1s 10s |

3. Indicators

| | |
|--------------------|---|
| Green LED ON: | indication of supply voltage |
| Green LED flashes: | indication of start-up suppression time |
| Yellow LED ON/OFF: | indication of relay output |
| Red LED ON/OFF: | indication of failure of the corresponding threshold |
| Red LED flashes: | indication of tripping delay of the corresponding threshold |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-Rail TS 35 according to EN 60715
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Tightening torque: max. 1Nm
 Terminal capacity:
 1 x 0.5 to 2.5 mm² with/without multicore cable end
 1 x 4 mm² without multicore cable end
 2 x 0.5 to 1.5 mm² with/without multicore cable end
 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

| | | |
|-------------------------|--------------------------------|--|
| Supply voltage: | 24 to 240V AC/DC | terminals A1-A2 (galvanically separated) |
| Tolerance: | 24 to 240V DC 24 to 240V AC | -20% to +25% -15% to +10% |
| Rated frequency: | 24 to 240V AC 48 to 240V AC | 48 to 400Hz 16 to 48Hz |
| Rated consumption: | | 4.5VA (1W) |
| Duration of operation: | | 100% |
| Reset time: | | 500ms |
| Wave form for AC: | | Sinus |
| Residual ripple for DC: | | 10% |
| Drop-out voltage: | | >15% of the supply voltage |
| Overvoltage category: | | III (in accordance with IEC 60661-1) |
| Rated surge voltage: | | 4kV |

6. Output circuit

| | |
|---------------------------------------|--|
| 2 potential free change-over contacts | |
| Rated voltage: | 250V AC |
| Switching capacity (distance <5 mm): | 750VA (3A / 250V AC) |
| Switching capacity (distance > 5mm): | 1250VA (5A / 250V AC) |
| Fusing: | 5A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations at 1000VA resistive load |
| Switching frequency: | max. 60/min at 100VA resistive load max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1) |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

7. Measuring circuit

| | |
|-----------------------|--------------------------------------|
| Measured variable: | DC or AC Sinus (16.6 to 400Hz) |
| Input: | |
| 20mA AC/DC | terminals K-I1(+) |
| 1A AC/DC | terminals K-I2(+) |
| 5A AC/DC | terminals K-I3(+) |
| Overload capacity: | |
| 20mA AC/DC | 250mA |
| 1A AC/DC | 3A |
| 5A AC/DC | 10A |
| Input resistance: | |
| 20mA AC/DC | 2.7Ω |
| 1A AC/DC | 47mΩ |
| 5A AC/DC | 10mΩ |
| Switching threshold: | |
| Max | 10% to 100% of IN |
| Min | 5% to 95% of IN |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

8. Accuracy

| | |
|------------------------|-------------------------------|
| Base accuracy: | ±5% (of maximum scale value) |
| Frequency response: | -10% to +5% (16.6 to 400Hz) |
| Adjustment accuracy: | ≤ 5% (of maximum scale value) |
| Repetition accuracy: | ≤ 2% |
| Voltage influence: | - |
| Temperature influence: | ≤ 0.1% / °C |

9. Ambient conditions

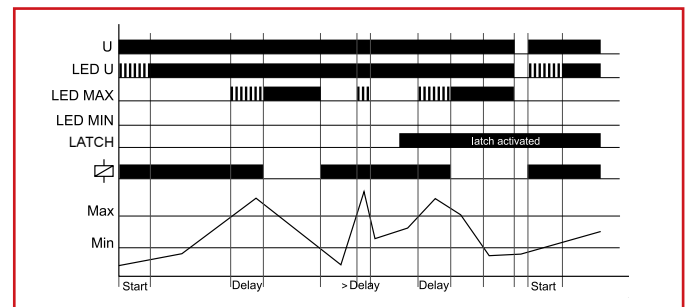
| | |
|------------------------|---|
| Ambient temperature: | -25 to +55°C (in accordance with IEC 60068-1) -25 to +40°C (in accordance with UL 508) |
| Storage temperature: | -25 to +70°C |
| Transport temperature: | -25 to +70°C |
| Relative humidity: | 15% to 85% (in accordance with IEC 60721-3-3 class 3K3) 3 (in accordance with IEC 60664-1) |
| Pollution degree: | 3 (in accordance with IEC 60664-1) |
| Vibration resistance: | 10 to 55Hz 0.35mm (in accordance with IEC 60068-2-6) |
| Shock resistance: | 15g 11ms (in accordance with IEC 60068-2-27) |

FUNCTIONS

When the supply voltage U is applied, the output relays switch into on-position (yellow LED illuminated) and the set interval of the startup suppression (START) begins (green LED U flashes). Changes of the measured current during this period do not affect the state of the output relay. After the interval has expired the green LED is illuminated steadily. For all the functions the LEDs MIN and MAX are flashing alternating, when the minimum value for the measured current was chosen to be greater than the maximum value

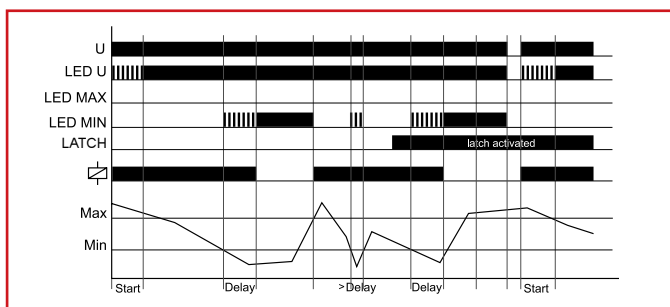
Overcurrent monitoring (OVER, OVER+LATCH)

When the measured current exceeds the value adjusted at the MAX-regulator, the set interval of the tripping delay (DELAY) begins (red LED MAX flashes). After the interval has expired (red LED MAX illuminated), the output relays switch into off-position (yellow LED not illuminated). The output relays again switch into on-position (yellow LED illuminated), when the measured current falls below the value adjusted at the MIN-regulator (red LED MAX not illuminated). If the fault latch is activated (OVER+LATCH) and the measured current remains above the MAX-value longer than the set interval of the tripping delay, the output relays remain in the off-position even if the measured current falls below the value adjusted at the MIN-regulator. After resetting the failure (interrupting and re-applying the supply voltage), the output relays switch into on-position and a new measuring cycle begins with the set interval of the start-up suppression (START).



Undercurrent monitoring (UNDER, UNDER+LATCH)

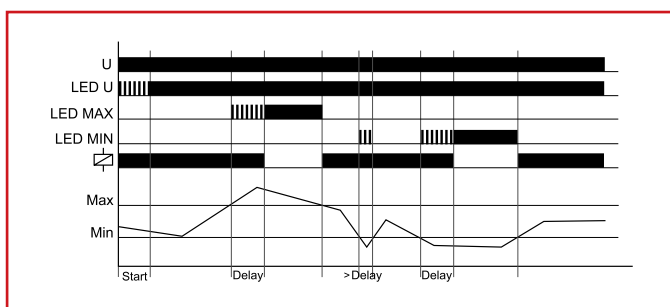
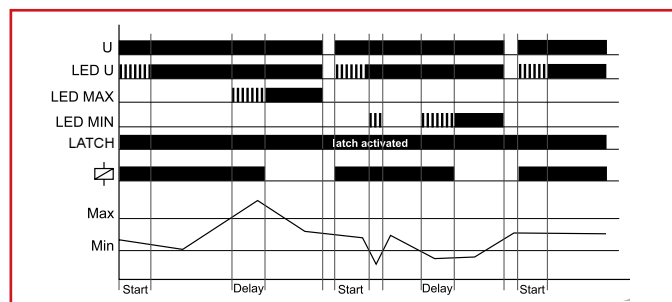
When the measured current falls below the value adjusted at the MIN-regulator, the set interval of the tripping delay (DELAY) begins (red LED MIN flashes). After the interval has expired (red LED MIN illuminated), the output relays switch into off-position (yellow LED not illuminated). The output relays again switch into on-position (yellow LED illuminated), when the measured current exceeds the value adjusted at the MAX-regulator. If the fault latch is activated (UNDER+LATCH) and the measured current remains below the MIN-value longer than the set interval of the tripping delay, the output relays remain in the off-position even if the measured current exceeds the value adjusted at the MAX-regulator. After resetting the failure (interrupting and re-applying the supply voltage), the output relays switch into on-position and a new measuring cycle begins with the set interval of the start-up suppression (START).



If the fault latch is activated (WIN+LATCH) and the measured current remains below the MIN-value longer than the set interval of the tripping delay, the output relays remain in the off-position even if the measured current exceeds the value adjusted at the MIN-regulator. If the measured current remains above the MAX-value longer than the set interval of the tripping delay, the output relays remain in the off-position even if the measured current falls below the value adjusted at the MAX-regulator. After resetting the failure (interrupting and reapplying the supply voltage), the output relays switch into on-position and a new measuring cycle begins with the set interval of the start-up suppression (START).

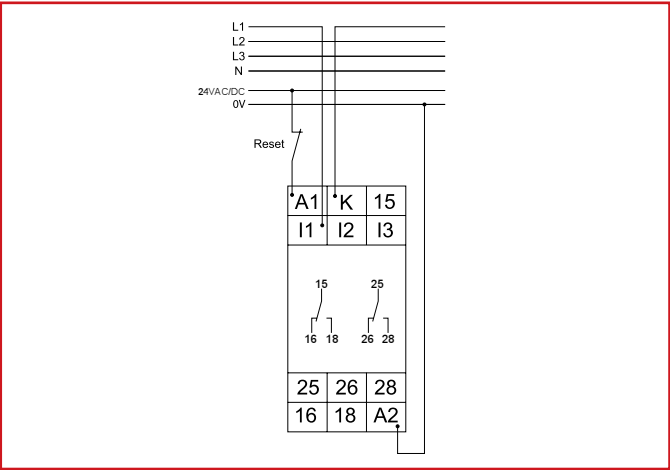
Window function (WIN, WIN+LATCH)

The output relays switch into on-position (yellow LED illuminated) when the measured current exceeds the value adjusted at the MIN-regulator. When the measured current exceeds the value adjusted at the MAX-regulator, the set interval of the tripping delay (DELAY) begins (red LED MAX flashes). After the interval has expired (red LED MAX illuminated), the output relays switch into off-position (yellow LED not illuminated). The output relays again switch into on-position (yellow LED illuminated) when the measured current falls below the value adjusted at the MAX-regulator (red LED MAX not illuminated). When the measured current falls below the value adjusted at the MIN-regulator, the set interval of the tripping delay (DELAY) begins again (red LED MIN flashes). After the interval has expired (red LED MIN illuminated), the output relays switch into off-position (yellow LED not illuminated).

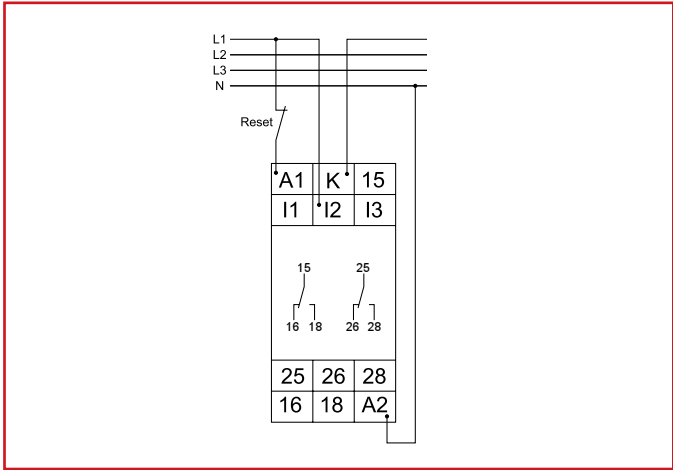


CONNECTIONS

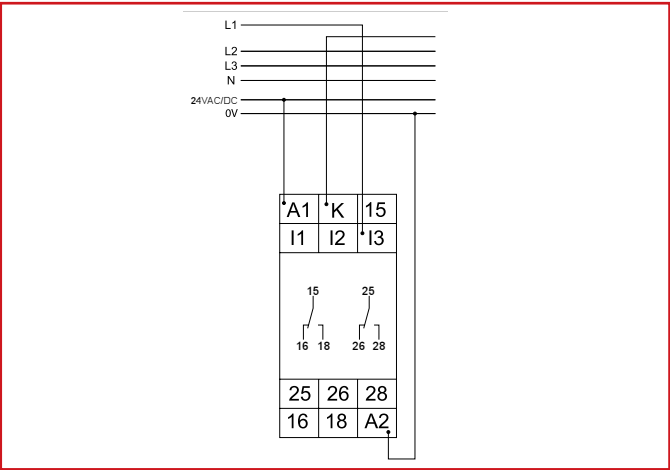
Range 20mA, supply voltage 24V AC/DC and fault latch



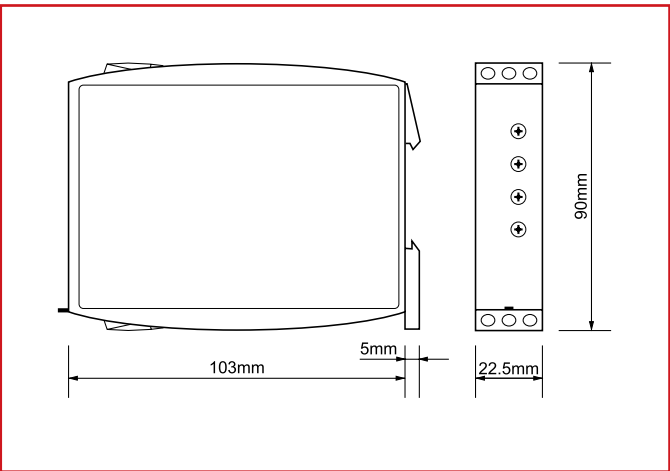
Range 1A, supply voltage 230V AC and fault latch



Range 5A, supply voltage 24V AC/DC without fault latch



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|---|-----------------|
| Current monitoring relay, 2 change over, 1 phase, 24-240V AC/DC | 9004840557442 |  | UR611052 |



Order no. blue: on stock, usually ready for delivery on the day of order!

PHASE MONITORING RELAY UR5P3011



SCHRACK-INFO

- Output relay
- 1 potential free change over contact

TECHNICAL DATA

1. Functions

Monitoring of phase sequence, phase failure and asymmetry with adjustable asymmetry, connection of neutral wire optional.

2. Time ranges

Tripping delay: fixed, approx. 100 ms

3. Indicators

Green LED ON: indication of supply voltage
Yellow LED ON/OFF: indication of relay output

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-Rail TS 35 according to EN 50022
Mounting position: any
Tightening torque: max. 1Nm
Terminal capacity:
1 x 0.5 bis 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 to 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: (= measured voltage)
Terminals: (N)-L1-L2-L3
Rated voltage U_n : 3(N)-400/230V AC
Tolerance: -30% to +30% of U_n
Rated consumption: 8 VA (0,8 W)
Rated frequency: AC 48 to 63 Hz
Duty cycle: 100%
Reset time: 500 ms
Hold-up time: -
Drop out voltage: >20% of the supply voltage
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4 kV

6. Output circuit

1 potential free change-over contact
Rated voltage: 250V AC
Switching capacity: 1250VA (5A / 250V)
Fusing: 5A fast acting
Mechanical life: 20 x 10⁶ operations
Electrical life: 2 x 10⁵ operations
at 1000VA resistive load
Switching frequency: max. 60/min at 100VA resistive load
max. 6/min at 1000VA resistive load
(according to IEC 60947-5-1)
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4kV

7. Measuring circuit

Measuring variable: 3(N)~, sinus, 48 to 63 Hz
Measuring input: (=supply voltage)
Terminals: (N)- L1- L2- L3
Overload capacity: determined by tolerance
specified for supply voltage
Input resistance: -
Asymmetry: 5% to 25% adjustable,
or disengageable
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4 kV

8. Accuracy

Base accuracy: ±5% of maximum scale value
Adjustment accuracy: ≤5% of maximum scale value
Repetition accuracy: ±2%
Voltage influence: -
Temperature influence: ≤0.05% / ° C

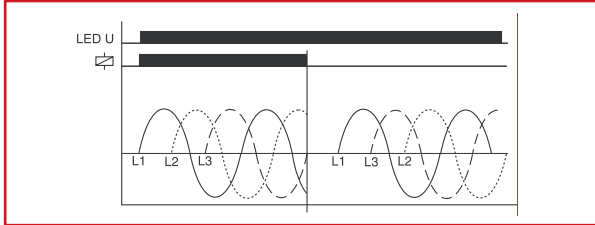
9. Ambient conditions

Ambient temperature: -25 to +55°C (acc. to IEC 60068-1)
Storage temperature: -25 to +70°C
Transport temperature: -25 to +70°C
Relative humidity: 15% to 85%
(acc. to IEC 60721-3-3 class 3K3)
Pollution degree: 2, if built in 3 (acc. to IEC 60664-1)
Vibration resistance: 10 to 55Hz 0.35 mm
(according to IEC 60068-2-6)
Shock resistance: 15g 11ms (acc. to IEC 60068-2-27)

FUNCTIONS

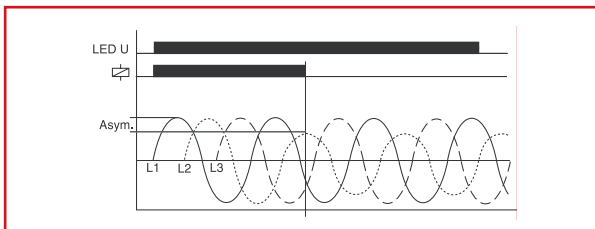
Phase sequence monitoring

When all the phases are connected in the correct sequence and the measured asymmetry is less than the fixed value, the output relay switches into on-position (yellow LED illuminated). When the phase sequence changes, the output relay switches into off-position (yellow LED not illuminated).



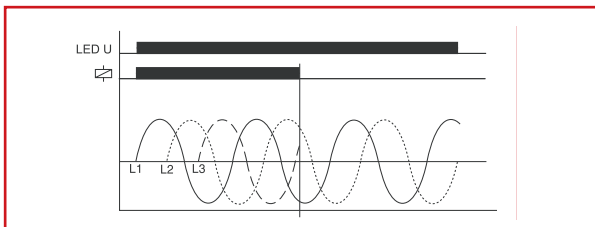
Asymmetry monitoring

The output relay R switches into off-position (yellow LED not illuminated) when the asymmetry exceeds the value set at the ASYM-regulator. Reverse voltages of a consumer (e.g. a motor which continues to run on two phases only) do not effect the disconnection.

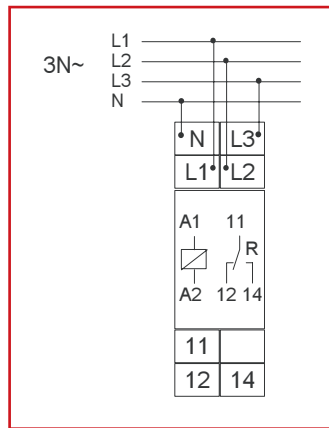


Phase failure monitoring

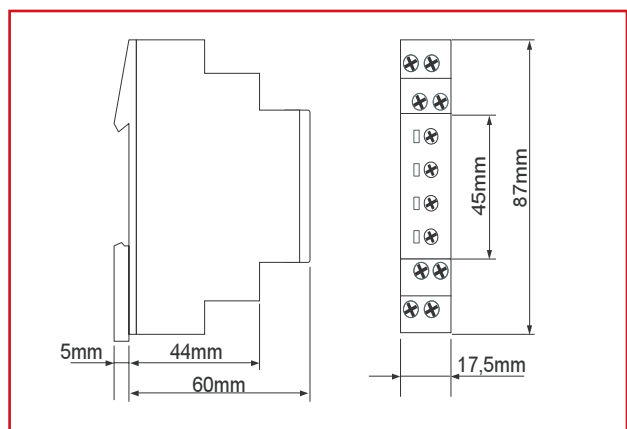
The output relay switches into off-position (yellow LED not illuminated), when one of the three phases fails.



CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---|---------------|-----------|-----------|
| Phase monitoring relay, 17,5 x 87 x 65 mm | 9004840459067 | | UR5P3011 |



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PHASE MONITORING RELAY UR6P3052



- Voltage monitoring in 3-phase mains
- Monitoring of phase sequence and phase failure
- Detection of reverse voltage
- Connection of neutral wire optional
- Supply voltage = measuring voltage
- 2 change-over contacts
- Width 22.5 mm
- Industrial design

TECHNICAL DATA

1. Functions

Monitoring of phase sequence, phase failure and detection of return voltage (by means of evaluating the asymmetry)

2. Time ranges

| | |
|----------------------------|-------------------|
| | Adjustment range |
| Start-up suppression time: | fixed, max. 500ms |
| Tripping delay: | fixed, max. 350ms |

3. Indicators

| | |
|--------------------|------------------------------|
| Green LED ON: | indication of supply voltage |
| Yellow LED ON/OFF: | indication of relay output |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-Rail TS 35 according to EN 60715
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Tightening torque: max. 1Nm
 Terminal capacity:
 1 x 0.5 bis 2.5 mm² with/without multicore cable end
 1 x 4 mm² without multicore cable end
 2 x 0.5 bis 1.5 mm² with/without multicore cable end
 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

| | | |
|-------------------------|--------------------------------------|---|
| Supply voltage: | 3(N)~ 400/230V | terminals (N)-L1-L2-L3 (= measuring voltage) |
| Tolerance: | 3(N)~ 400/230V | 3(N)~ 342 to 457V |
| Rated frequency: | 48 to 63Hz | |
| Rated consumption: | 3(N)~ 400/230V | 9VA |
| Duration of operation: | 100% | |
| Reset time: | 500ms | |
| Residual ripple for DC: | - | |
| Drop-out voltage: | >20% of the supply voltage | |
| Overvoltage category: | III (in accordance with IEC 60664-1) | |
| Rated surge voltage: | 4kV | |

6. Output circuit

| | |
|---------------------------------------|---|
| 2 potential free change-over contacts | |
| Rated voltage: | 250V AC |
| Switching capacity (distance <5 mm): | 750VA (3A / 250V) |
| Switching capacity (distance >5 mm): | 1250VA (5A / 250V) |
| Fusing: | 5A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations at 1000VA resistive load |
| Switching frequency: | max. 60/min at 100VA resistive load max. 60/min at 1000VA resistive load (in accordance with IEC 60947-5-1) |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

7. Measuring circuit

| | |
|-----------------------|---|
| Measured variable: | AC Sinus, (48 to 63Hz) |
| Input: | 3(N)~ 400/230V terminals (N)-L1-L2-L3 (= supply voltage) |
| Overload capacity: | 3(N)~ 400/230V 3(N)~ 457/264V |
| Input resistance: | 3(N)~ 400/230V 15kΩ |
| Asymmetry: | fixed, typ. 30% |
| Overvoltage category: | III (according to IEC 60664-1) |
| Rated surge voltage: | 4kV |

8. Accuracy

| | |
|------------------------|---|
| Base accuracy: | - |
| Frequency response: | - |
| Adjustment accuracy: | - |
| Repetition accuracy: | - |
| Voltage influence: | - |
| Temperature influence: | - |

9. Ambient conditions

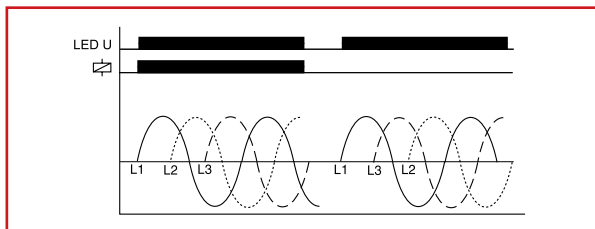
| | |
|------------------------|---|
| Ambient temperature: | -25 to +55°C (in accordance with IEC 60068-1) -25 to +40°C (in accordance with UL 508) |
| Storage temperature: | -25 to +70°C |
| Transport temperature: | -25 to +70°C |
| Relative humidity: | 15% to 85% (in accordance with IEC 60721-3-3 class 3K3) |

| | |
|-----------------------|---|
| Pollution degree: | 3 (in accordance with IEC 60664-1) |
| Vibration resistance: | 10 to 55Hz 0.35 mm (in accordance with IEC 60068-2-6) |
| Shock resistance: | 15g 11ms (in accordance with IEC 60068-2-27) |

FUNCTIONS

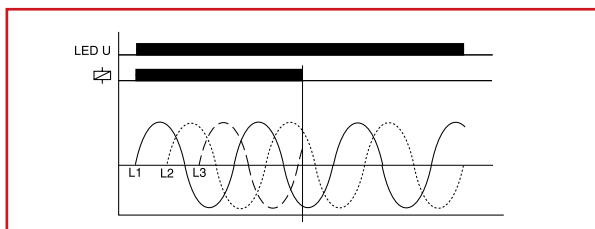
Phase sequence monitoring

When all the phases are connected in the correct sequence and the measured asymmetry is less than the fixed value, the output relays switch into on-position (yellow LED illuminated). When the phase sequence changes, the output relays switch into off-position (yellow LED not illuminated).



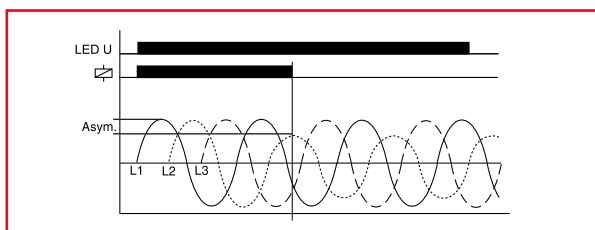
Phase failure monitoring

When one of the three phases fails, the output relays switch into off-position (yellow LED not illuminated).

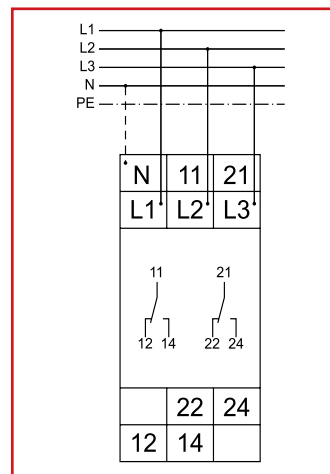


Detection of reverse voltage (by means of evaluation of asymmetry)

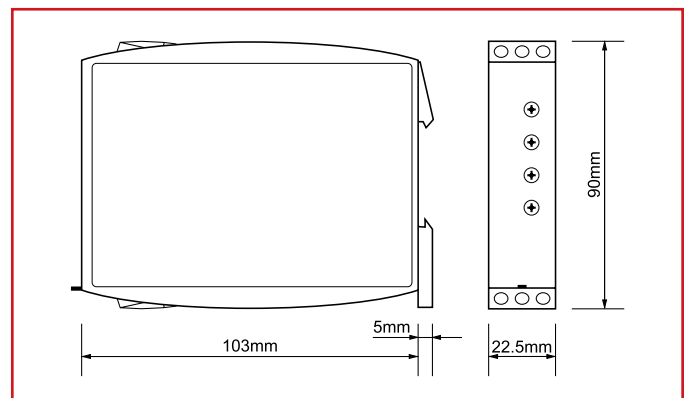
The output relays switch into off-position (yellow LED not illuminated) when the asymmetry between the phase voltages exceeds the fixed value of the asymmetry. An asymmetry caused by the reverse voltage of a consumer (e.g. a motor which continues to run on two phases only) does not effect the disconnection.



CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|-----------|-----------|
| Phase monitoring relay, 2 change over, 3 phases, industrial design | 9004840557428 | | UR6P3052 |



THERMISTOR MONITORING RELAY UR5R1021



SCHRACK-INFO

- Tripping unit for temperature monitoring of the motor winding with and without short circuit monitoring of the thermistor line (selectable by means of terminals)
- Optional evaluation of one thermal contact
- Test function with integrated reset key
- Rated isolated voltage on the sensor circuit up to 690V
- 1 change over contact
- Width 35mm
- Installation design

TECHNICAL DATA

1. Functions

Temperature monitoring of the motor winding (max. 6 PTC) with fault latch for temperature sensors in accordance with DIN 44081, short circuit monitoring of the thermistor line (selectable by means of terminals), integrated test/reset key.

2. Time ranges

| | Adjustment range |
|------------------------------------|------------------|
| Start-up suppression time (Start): | - |
| Tripping delay (Delay): | - |

3. Indicators

| | |
|-----------------|------------------------------|
| Green LED ON: | indication of supply voltage |
| Red LED ON/OFF: | indication of failure |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-Rail TS 35 according to EN 50022
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Tightening torque: max. 1Nm
 Terminal capacity:
 1 x 0.5 to 2.5mm² with/without multicore cable end
 1 x 4mm² without multicore cable end
 2 x 0.5 to 1.5mm² with/without multicore cable end
 2 x 2.5mm² flexible without multicore cable end

5. Input voltage

| | |
|-------------------------|--|
| Supply voltage: | 230V AC |
| Terminals: | A1-A2 |
| Rated voltage Un: | see table ordering information or printing on the unit |
| Tolerance: | -15% to +10% of Un |
| Rated consumption: | 1,3VA (1V) |
| Rated frequency: | AC 48 to 63Hz |
| Duty cycle: | 100% |
| Reset time: | 250ms |
| Residual ripple for DC: | 50ms |
| Drop-out voltage: | >30% of the supply voltage |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 6kV |

6. Output circuit

| | |
|--------------------------------------|---|
| 1 potential free change over contact | |
| Terminals: | 11-12-14 |
| Rated voltage: | 250V AC |
| Switching capacity: | 1250VA AC1 B300/P300 (in accordance with IEC 60947-5-1); therm. constant current 5A |
| Fusing: | 5A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations at 1000VA resistive load |
| Switching frequency: | max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1) |
| Overvoltage category | III. (in accordance with IEC 60664-1) |
| Rated surge voltage: | 6kV |

7. Measuring circuit

| | |
|---|--|
| Terminals: | T1-T2 or T1-T3 |
| Initial resistance: | <1.5kΩ |
| Response value (relay in off-position): | ≥3.6kΩ |
| Release value (relay in on-position): | ≤1.65kΩ |
| Disconnection (short circuit thermistor): | yes at T1-T2 no at T1-T3 |
| Measuring voltage T1-T2: | ≤7.5V at R ≤4.0kΩ (in accordance with EN 60947-8) |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 6kV |

8. Control contact R

| | |
|-----------------------|---|
| Function: | connection of an external reset key |
| Loadable: | no |
| Line length R1-R2: | max. 10m (twisted pair) |
| Control pulse length: | min. 50ms |
| Reset: | potential free normally open contact, terminals R1-R2 |

Note: The terminals R2-T2 are internal affiliated with each other!!

9. Accuracy

| | |
|------------------------|-------------|
| Base accuracy: | ±5% |
| Adjustment accuracy: | - |
| Repetition accuracy: | ≤1% |
| Voltage influence: | - |
| Temperature influence: | ≤0.15% / °C |

10. Ambient conditions

| | |
|------------------------|--|
| Ambient temperature: | -25 to +55°C |
| Storage temperature: | -25 to +70°C |
| Transport temperature: | -25 to +70°C |
| Relative humidity: | 15% to 85% (in accordance with IEC 60721-3-3 class 3K3) |
| Pollution degree: | 2, if built in 3 (in accordance with IEC 60664-1) |

11. Weight

| | |
|-----------------|---------|
| Single packing: | 137,20g |
|-----------------|---------|

FUNCTIONS

Temperature monitoring of the motor winding with fault latch

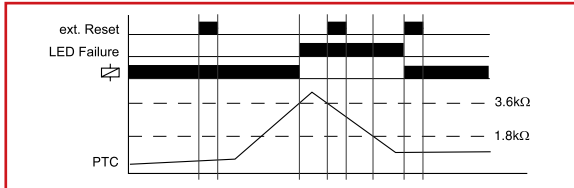
If the supply voltage U is applied (green LED illuminated) and the cumulative resistance of the PTC-circuit is less than $3.6k\Omega$ (standard temperature of the motor), the output relay switches into on-position.

Pressing the test/reset key under this conditions forces the output relay to switch into off-position. It remains in state as long as the test/reset key is pressed and thus the switching function can be checked in case of fault. The test function is not effective by using an external reset key.

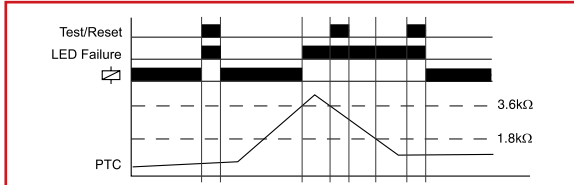
When the cumulative resistance of the PTC-circuit exceeds $3.6k\Omega$ (at least one of the PTCs has reached the cut-off temperature), the output relay switches into off-position (red LED illuminated).

The output relay switches into on-position again (red LED not illuminated), if the cumulative resistance drops below $1.65k\Omega$ by cooling down of the PTC and either a reset key (internal or external) was pressed or the supply voltage was disconnected and re-applied.

Application of an external Reset

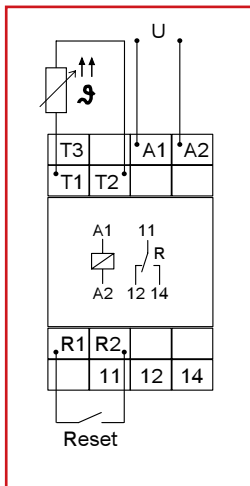


Application of internal Test/Reset - key

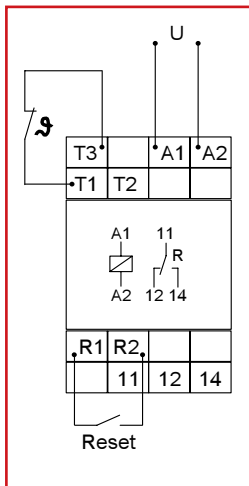


CONNECTIONS

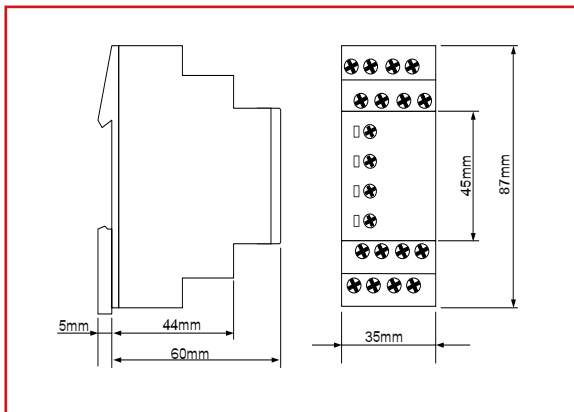
Monitoring Temperature sensor



Monitoring Thermal contact




DIMENSIONS



Note:

Only one of this circuit versions (either monitoring of the temperature sensor or monitoring of the thermal contact) can be executed!!

| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|---|-----------|
| Thermistor monitoring relay, 1 change over, input 230V | 9004840515091 |  | UR5R1021 |



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THERMISTOR MONITORING RELAY UR6R1052



- Temperature monitoring of the motor winding
- 2 change-over contacts
- External reset key connectable
- Width 22.5mm
- Industrial design

TECHNICAL DATA

1. Functions

Temperature monitoring of the motor winding (max. 6 PTC) with fault latch, for temperature probes in accordance with DIN 44081
Test function with integrated test/reset key

2. Time ranges

| | Adjustment range |
|----------------------------|------------------|
| Start-up suppression time: | - |
| Tripping delay: | - |

3. Indicators

| | |
|-----------------|------------------------------|
| Green LED ON: | indication of supply voltage |
| Red LED ON/OFF: | indication of failure |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-Rail TS 35 according to EN 60715
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
Tightening torque: max. 1Nm
Terminal capacity:

- 1 x 0.5 to 2.5 mm² with/without multicore cable end
- 1 x 4 mm² without multicore cable end
- 2 x 0.5 to 1.5 mm² with/without multicore cable end
- 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

| | | |
|-------------------------|--------------------------------|--|
| Supply voltage: | 240V AC/DC | terminals A1-A2 (galvanically separated) |
| Tolerance: | 24 to 240V DC 24 to 240V AC | -20% to +25% -15% to +10% |
| Rated frequency: | 24 to 240V AC 48 to 240V AC | 48 to 400Hz 16 to 48Hz |
| Rated consumption: | | 4.5VA (1W) |
| Duration of operation: | | 100% |
| Reset time: | | 500ms |
| Wave form for AC: | | Sinus |
| Residual ripple for DC: | | 10% |
| Drop-out voltage: | | >15% of the supply voltage |
| Overvoltage category: | | III (in accordance with IEC 60661-1) |
| Rated surge voltage: | | 4kV |

6. Output circuit

| | |
|--------------------------------------|---|
| | 2 potential free change-over contacts |
| Rated voltage: | 250V AC |
| Switching capacity (distance <5 mm): | 750VA (3A / 250V AC) |
| Switching capacity (distance >5 mm): | 1250VA (5A / 250V AC) |
| Fusing: | 5A fast acting |
| Mechanical life: | 20 x 10 ⁶ operations |
| Electrical life: | 2 x 10 ⁵ operations at 1000VA resistive load |
| Switching frequency: | max. 60/min at 100VA resistive load max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1) |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

7. Measuring circuit

| | |
|---|--|
| Input: | terminals T1-T2 |
| Initial resistance: | <1.5kΩ |
| Response value (relay in off-position): | ≥ 3.6kΩ |
| Release value (relay in on-position): | ≤ 1.8kΩ |
| Disconnection (short circuit thermistor): | no |
| Measuring voltage T1-T2: | ≤ 2.5V DC at R " 4.0kΩ (in accordance with DIN VDE 0660 part 302) |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4kV |

8. Control contact R

| | |
|-----------------------|--|
| Function: | external reset key |
| Loadable: | no |
| Line length R-T2: | max. 10m (twisted pair) |
| Control pulse length: | - |
| Reset: | potential free normally open contact, terminals R-T2 |

9. Accuracy

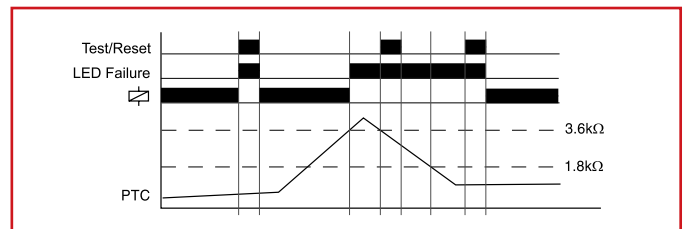
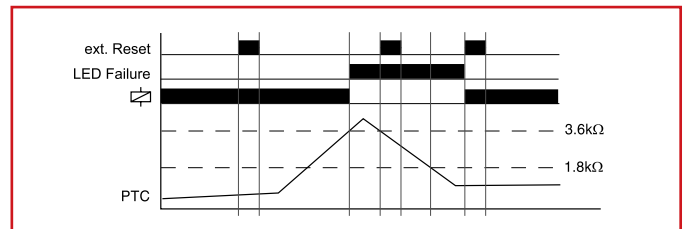
| | |
|----------------------|-------------------------------|
| Base accuracy: | ±10% (of maximum scale value) |
| Frequency response: | - |
| Adjustment accuracy: | - |
| Repetition accuracy: | ≤ 1% |
| Voltage influence: | ≤ 2.2% |

| | |
|-------------------------------|---|
| Temperature influence: | ≤ 0.1% / °C |
| 10. Ambient conditions | |
| Ambient temperature: | -25 to +55°C (in accordance with IEC 60068-1) -25 to +40°C (in accordance with UL 508) |
| Storage temperature: | -25 to +70°C |
| Transport temperature: | -25 to +70°C |
| Relative humidity: | 15% to 85% (in accordance with IEC 60721-3-3 class 3K3) |
| Pollution degree: | 3 (in accordance with IEC 60664-1) |
| Vibration resistance: | 10 to 55Hz 0.35mm (in accordance with IEC 60068-2-6) |

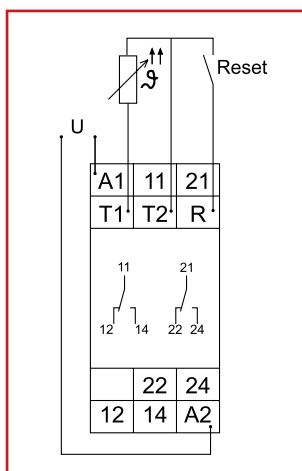
| | |
|-------------------|---|
| Shock resistance: | 15g 11ms (in accordance with IEC 60068-2-27) |
|-------------------|---|

FUNCTIONS

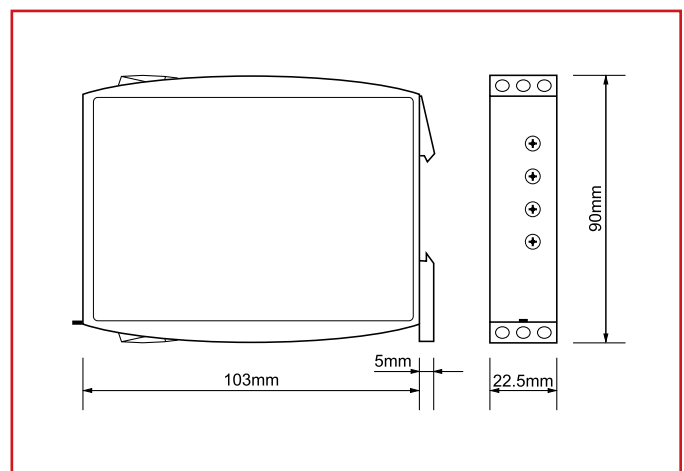
If the supply voltage U is applied (green LED illuminated) and the cumulative resistance of the PTC-circuit is less than 3.6kΩ (standard temperature of the motor), the output relays switch into on-position. Pressing the test/reset key under this conditions forces the output relays to switch into off-position. They remain in this state as long as the test/reset key is pressed and thus the switching function can be checked in case of fault. The test function is not effective using an external reset key. When the cumulative resistance of the PTC-circuit exceeds 3.6kΩ (at least one of the PTCs has reached the cut-off temperature), the output relays switch into off-position (red LED illuminated). The output relays again switch into on-position (red LED not illuminated), if the cumulative resistance drops below 1.8kΩ by cooling down of the PTC and either a reset key (internal or external) was pressed or the supply voltage was disconnected and re-applied.



CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|--|---------------|---|-----------------|
| Thermistor monitoring relay, 2 change over, 24-240V AC/DC, industrial design | 9004840557411 |  | UR6R1052 |



Order no. blue: on stock, usually ready for delivery on the day of order!

LEVEL MONITORING RELAY UR5L1021



SCHRACK-INFO

- Level monitoring of conductive liquids
- Multifunction
- Secure isolation of the measuring circuit
- 1 change over contact
- Width 35mm
- Installation design

TECHNICAL DATA

1. Functions

Level monitoring of conductive liquid, timing for tripping delay and turn-off delay separately adjustable and the following functions (selectable by means of rotary switch):

Pump up pump up or minimum monitoring
Pump down pump down or maximum monitoring

2. Time ranges

| | Adjustment range |
|-----------------------------|------------------|
| Tripping delay (Delay ON): | 0.5s to 10s |
| Turn-off delay (Delay OFF): | 0.5s to 10s |

3. Indicators

Green LED ON: indication of supply voltage
Yellow LED ON/OFF: indication of output relay

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required),
IP rating IP20
Tightening torque: max. 1Nm
Terminal capacity:
1 x 0.5 to 2.5mm² with/without multicore cable end
1 x 4mm² without multicore cable end
2 x 0.5 to 1.5mm² with/without multicore cable end
2 x 2.5mm² flexible without multicore cable end

5. Input circuit

Terminals: A1-A2
Rated voltage Un: see table ordering information or
 printing on the unit
Tolerance: -15% of +10% of Un
Rated consumption: 2VA (1.0W)
Rated frequency: AC 48 to 63Hz
Duty cycle: 100%
Reset time: 500ms
Hold-up time: -
Drop-out voltage: >30% of supply voltage
Overvoltage category: III (in accordance with IEC 60664-1)
Rated surge voltage: 6kV

6. Output circuit

1 potential free change over contact
Rated voltage: 250V AC
Switching capacity: 1250VA AC1 B300/P300
 (in accordance with IEC 60947-5-1)
 therm. constant current 5A
Fusing: 5A fast acting
Mechanical life: 20 x 10⁶ operations
Electrical life: 2 x 10⁵ operations
 at 1000VA resistive load
Switching frequency: max. 6/min at 1000VA resistive load
 (in accordance with IEC 60947-5-1)
Overvoltage category: III. (in accordance with IEC 60664-1)
Rated surge voltage: 6kV

7. Measuring circuit

Measuring input: conductive probes
 (Type SK1, SK2, SK3)
Terminals: E1-E2-E3
Sensitivity: 0,25 to 100k Ω (4mS to 10 μ S)
Sensor voltage: 12V AC
Sensor current: max. 7mA
Wiring distance (capacity of cable 100nF/km):
 max. 1000m (set value <50%)
 max. 100m (set value 100%)
Overvoltage category: III (in accordance with IEC 60664-1)
Rated surge voltage: 6kV

8. Accuracy

Base accuracy: -
Adjusting accuracy: -
Repetition accuracy: -
Voltage influence: -
Temperature influence: -

9. Ambient conditions

Ambient temperature: -25 to +55°C
Storage temperature: -25 to +70°C
Transport temperature: -25 to +70°C
Relative humidity: 15% to 85%
 (in accordance with IEC 60721-3-3
 class 3K3)
Pollution degree: 2, if built in 3
 (in accordance with IEC 60664-1)

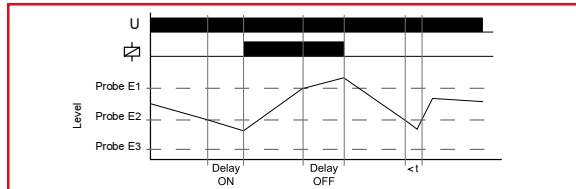
10. Weight

Single packing: 140g

FUNCTIONS

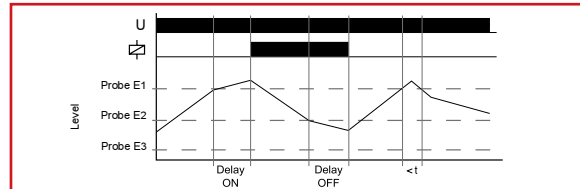
Pump up

Connection of the probe rods E1, E2 and E3. Alternatively the electrically conducting container can be connected in lieu of the test probe E3. When the air-fluid level falls below the minimum probe E2 the set interval of tripping delay (Delay ON) begins. After the expiration of the interval, the output relays R switches into on-position (yellow LED illuminated). When the air-fluid level again rises above the maximum probe E1, the set interval of turn-off delay (Delay OFF) begins. After the expiration of the interval the output relays R switches into off-position (yellow LED not illuminated).



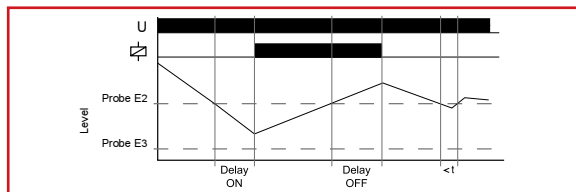
Pump down

Connection of the probe rods E1, E2 and E3. Alternatively the electrically conducting container can be connected in lieu of the test probe E3. When the maximum probe E1 gets moistened the set interval of tripping delay (Delay ON) begins. After the expiration of the interval the output relays R switches into on-position (yellow LED illuminated). When the air-fluid level falls below the minimum probe E2, the set interval of turn-off delay (Delay OFF) begins. After the expiration of the interval, the output relays R switches into off-position (yellow LED not illuminated).



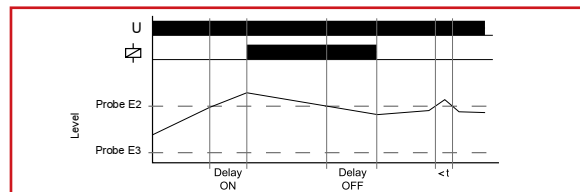
Minimum monitoring (Pump up)

Connection the probe rods E2 and E3 (bridge E1-E3). Alternatively the electrically conducting container can be connected in lieu of the test probe E3. When the air-fluid level falls below the probe E2 the set interval of tripping delay (Delay ON) begins. After the expiration of the interval, the output relays R switches into on-position (yellow LED illuminated). When the air-fluid level again rises above the probe E2, the set interval of turn-off delay (Delay OFF) begins. After the expiration of the interval the output relays R switches into off-position (yellow LED not illuminated).



Maximum monitoring (Pump down)

Connection of probe rods E2 and E3 (bridge E1-E3). Alternatively the electrically conducting container can be connected in lieu of the test probe E3. When the probe E2 gets moistened the set interval of tripping delay (Delay ON) begins. After the expiration of the interval the output relays R switches into on-position (yellow LED illuminated). When the air-fluid level sinks below the probe E2, the set interval of turn-off delay (Delay OFF) begins. After the expiration of the interval the output relays R switches into off-position (yellow LED not illuminated).



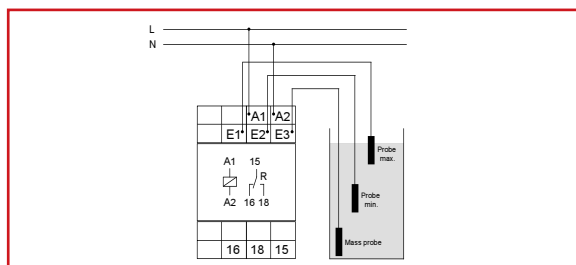
Note

Use cables with low capacity for wiring the probes especially with extended wiring length.

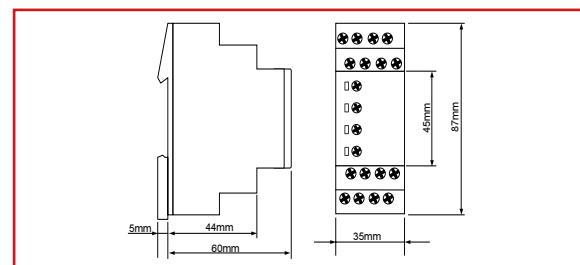
Following processes are suggested for the adjustment:

- The existent time delay should be to minimum (0,5s).
- The function selector switch must be in position pump down.
- Turn the sensitivity controller slowly clockwise from min to max until the relais switches into on-position. (probes must be in dipped state)
- The moistened probes should be taken out of the liquid to control if the relais switches into off-position. If the relais doesn't switch into off-position, turn the sensitivity controller slightly back to min. (counter clockwise)
- Set the existent time delay to desired value to fade out a short term moisten the probes by waves in the liquid.
- Set the function selector switch to desired position. (either pump up or pump down)

CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---------------------------------------|---------------|-----------|-----------------|
| Level monitoring relay, 1 change over | 9004840515084 | | UR5L1021 |
| Single probe | 9004840519655 | | URL91010 |
| Level sensor, 1 rod | 9004840203264 | | URL90010 |
| Level sensor, 2 rods | 9004840203271 | | URL90020 |
| Level sensor, 3 rods | 9004840203288 | | URL90030 |

LEVEL MONITORING RELAY UR6L1052



- Level monitoring of conductive liquids
- Multifunction
- Secure isolation of the measuring circuit
- 2 change-over contacts
- Width 22.5 mm
- Industrial design

TECHNICAL DATA

1. Functions

Level monitoring of conductive liquid, timing for tripping delay and turn-off delay separately adjustable and the following functions (selectable by means of rotary switch)

| | |
|-----------|---------------------------------|
| Pump up | pump up or minimum monitoring |
| Pump down | pump down or maximum monitoring |

2. Time ranges

| | Adjustment range | |
|-----------------------------|------------------|-----|
| Tripping delay (Delay ON): | 0.5s | 10s |
| Turn-off delay (Delay OFF): | 0.5s | 10s |

3. Indicators

| | |
|--------------------|------------------------------|
| Green LED ON: | indication of supply voltage |
| Yellow LED ON/OFF: | indication of relay output |

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40 Mounted on DIN-Rail TS 35 according to EN 60715

Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20

Tightening torque: max. 1Nm

Terminal capacity:

- 1 x 0.5 to 2.5 mm² with/without multicore cable end
- 1 x 4 mm² without multicore cable end
- 2 x 0.5 to 1.5 mm² with/without multicore cable end
- 2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage: 230V AC terminals A1-A2

Tolerance:

230V AC -15% to +15%

Rated frequency: 48 to 63Hz

Rated consumption:

230V AC 2VA (1.5W)

Duration of operation: 100%

Reset time: 500ms

Residual ripple for DC:

-

Drop-out voltage: >30% of the supply voltage

Overvoltage category: III (in acc. with IEC 60664-1)

Rated surge voltage: 4kV

6. Output circuit

2 potential free change-over contacts

Rated voltage: 250V AC

Switching capacity (distance <5 mm):

750VA (3A / 250V)

Switching capacity (distance >5 mm):

1250VA (5A / 250V)

Fusing: 5A fast acting

Mechanical life: 20 x 10⁶ Operations

Elektrische Lebensdauer: 2 x 10⁵ Operations at 1000VA resistive load

Switching frequency: max. 60/min at 100VA resistive load

max. 6/min at 1000VA resistive load

(in accordance with IEC 60947-5-1)

Overvoltage category: III (in accordance with IEC 60664-1)

Rated surge voltage: 4kV

7. Measuring circuit

Input: conductive probes (type SK1, SK2, SK3) terminals E1-E2-E3

Sensitivity: 0.25 to 100k Ω (4mS to 1 μ S)

Sensor voltage: 12V AC

Sensor current: max. 7mA

Wiring distance (capacity of cable 100nF/km) max. 1000m (set value <50%) max. 100m (set value 100%)

Overvoltage category: III (in accordance with IEC 60664-1)

Rated surge voltage: 6kV

8. Accuracy

Adjustment accuracy: -

Repetition accuracy: -

Voltage influence: -

Temperature influence: -

9. Ambient conditions

Ambient temperature: -25 to +55°C (in acc. with IEC 60068-1)
-25 to +40°C (in acc. with UL 508)

Storage temperature: -25 to +70°C

Transport temperature: -25 to +70°C

Relative humidity: 15% to 85% (in accordance with IEC 60721-3-3 class 3K3)

Pollution degree: 3 (in acc. with IEC 60664-1)

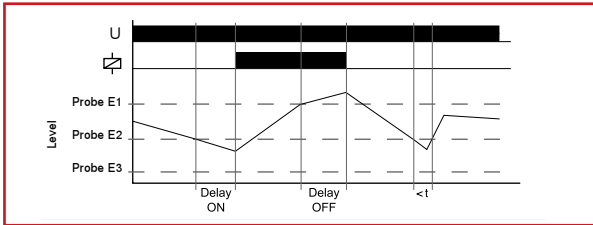
Vibration resistance: 10 to 55Hz 0.35 mm (in acc. with IEC 60068-2-6)

Shock resistance: 15g 11ms (in acc. with IEC 60068-2-27)

FUNCTIONS

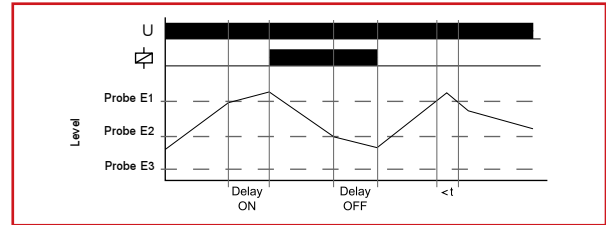
Pump up

Connection of the probe rods E1, E2 and E3. Alternatively the electrically conducting container can be connected in lieu of the test probe E3. When the air-fluid level falls below the minimum probe E2 the set interval of the tripping delay (DELAY ON) begins. After the expiration of the interval the output relays switch into on-position (yellow LED illuminated). When the air-fluid level again rises above the maximum probe E1, the set interval of the turn-off delay (DELAY OFF) begins. After the expiration of the interval the output relays switch into off-position (yellow LED not illuminated).



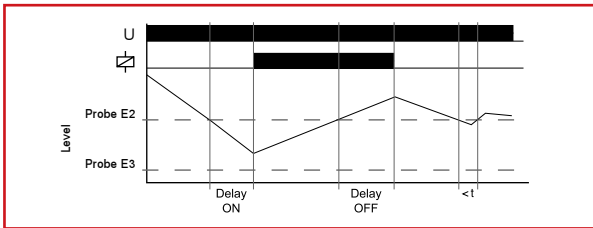
Pump down

Connection of the probe rods E1, E2 and E3. Alternatively the electrically conducting container can be connected in lieu of the test probe E3. When the maximum probe E1 gets moistened the set interval of the tripping delay (DELAY ON) begins. After the expiration of the interval the output relays switch into on-position (yellow LED illuminated). When the air-fluid level falls below the minimum probe E2, the set interval of the turn-off delay (DELAY OFF) begins. After the expiration of the interval the output relays switch into off-position (yellow LED not illuminated).



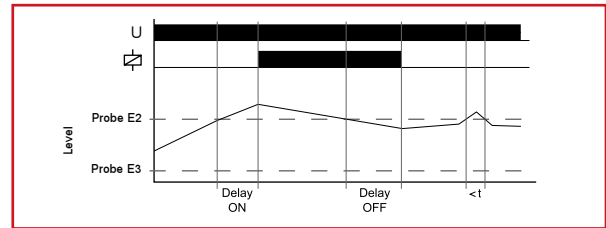
Minimum monitoring (Pump up)

Connection of probe rods E2 and E3 (Bridge E1-E3). Alternatively the electrically conducting container can be connected in lieu of the test probe E3. When the air-fluid level falls below the probe E2 the set interval of the tripping delay (DELAY ON) begins. After the expiration of the interval the output relays switch into on-position (yellow LED illuminated). When the air-fluid level again rises above the probe E2, the set interval of the turn-off delay (DELAY OFF) begins. After the expiration of the interval the output relays switch into off-position (yellow LED not illuminated).



Maximum monitoring (Pump down)

Connection of probe rods E2 and E3 (Bridge E1-E3). Alternatively the electrically conducting container can be connected in lieu of the test probe E3. When the probe E2 gets moistened the set interval of the tripping delay (DELAY ON) begins. After the expiration of the interval the output relays switch into on-position (yellow LED illuminated). When the air-fluid level sinks below the probe E2, the set interval of the turn-off delay (DELAY OFF) begins. After the expiration of the interval the output relays switch into off-position (yellow LED not illuminated).



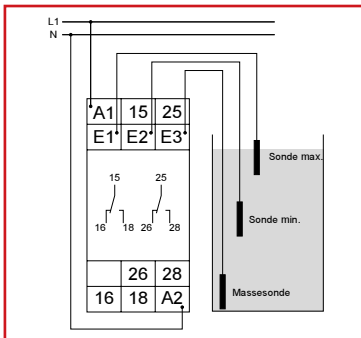
NOTE

Use cables with low capacity for wiring the probes especially with extended wiring length.

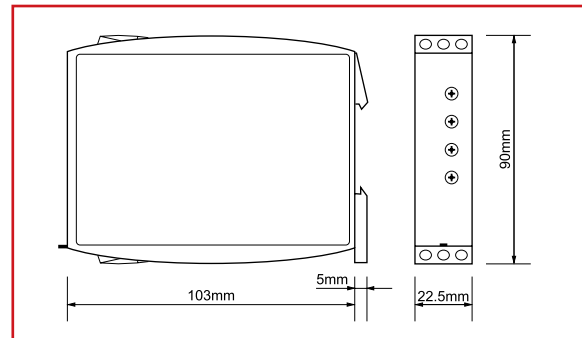
Following processes are suggested for the adjustment:

- The existent time delay should be to minimum (0,5s).
- The function selector switch must be in position pump down.
- Turn the sensitivity controller slowly clockwise from min to max until the relais switch into on-position. (probes must be in dipped state)
- The moistened probes should be taken out of the liquid to control if the relais switch into off-position. If the relais doesn't switch into off-position, turn the sensitivity controller slightly back to min. (counter clockwise)
- Set the existent time delay to desired value to fade out a short term moisten the probes by waves in the liquid.
- Set the function selector switch to desired position (either pump up or pump down)

CONNECTIONS



DIMENSIONS



| DESCRIPTION | EAN CODE | AVAILABLE | ORDER NO. |
|---------------------------------------|---------------|-----------|-----------------|
| Level monitoring relay, 2 change over | 9004840557435 | | UR6L1052 |
| Single probe | 9004840519655 | | URL91010 |
| Level sensor, 1 rod | 9004840203264 | | URL90010 |
| Level sensor, 2 rods | 9004840203271 | | URL90020 |
| Level sensor, 3 rods | 9004840203288 | | URL90030 |