

- ▶ Industrial design
- ▶ Width 45mm
- ▶ AC/DC current monitoring in 1-phase mains
- ▶ Fault latch
- ▶ Position of output relay presettable
- ▶ 1 change over contact



Technical data

1. Functions

AC/DC overcurrent monitoring in 1-phase mains with adjustable threshold, timing for start-up suppression and tripping delay separately adjustable and adjustable hysteresis

2. Time ranges

| | Adjustment range | |
|----------------------------|------------------|-----|
| Start-up suppression time: | 0.1s | 10s |
| Tripping delay: | 0.1s | 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 50022
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Initial 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: | 12 to 440V AC | terminals A1-A2 (galvanically separated) selectable via transformer modules TR2 |
| Tolerance: | -15% to +10% | |
| Rated frequency: | 48 to 63Hz | |
| Rated consumption: | 2VA (1.5W) | |
| Duration of operation: | 100% | |
| Reset time: | 500ms | |
| Residual ripple for DC: | - | |
| Drop-out voltage: | >30% of the supply voltage | |

6. Output circuit

| | |
|--------------------------------------|---|
| 1 potential free change over contact | |
| 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: | 1 x 10 ⁵ 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) |
| Insulation voltage: | 250V AC (according to IEC 664-1) |
| Surge voltage: | 4kV, overvoltage category III (according to IEC 664-1) |

7. Measuring circuit

| | | |
|--------------------------------------|-------------|----------------------|
| Input: | 100mA AC/DC | terminals K-I3(+) |
| | 1A AC/DC | terminals K-I2(+) |
| | 10A AC/DC | terminals K-I1(+) |
| Overload capacity: | 100mA AC/DC | 1A |
| | 1A AC/DC | 4A |
| | 10A AC/DC | 15A (distance >20mm) |
| Input resistance: | 100mA AC/DC | 1Ω |
| | 1A AC/DC | 100mΩ |
| | 10A AC/DC | 10mΩ |
| Switching threshold I _s : | 10% to 100% | |
| Hysteresis: | 5% to 50% | |

8. Control contact Y

| | |
|-----------------------|---------------------------------|
| Function: | fault latch (Y1-Y2 bridged) |
| Connections: | potential free, terminals Y1-Y2 |
| Loadable: | no |
| Line length: | max. 5m |
| Control pulse length: | - |

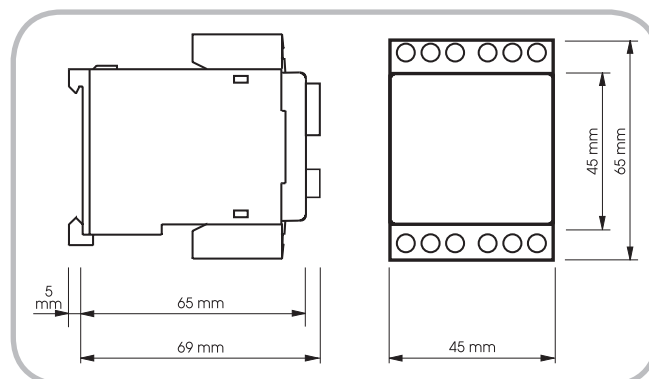
9. Accuracy

| | |
|------------------------|-----------------------------------|
| Base accuracy: | ±7% (of maximum scale value) |
| Adjustment accuracy: | ≤5% (of maximum scale value) |
| Repetition accuracy: | <1% |
| Voltage influence: | ≤0.02% / 1% supply voltage change |
| Temperature influence: | ≤0.1% / °C |

10. 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: | 3 (according to IEC 664-1) |

11. Dimensions



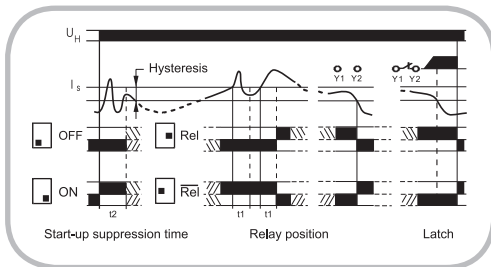
Functions

AC/DC overcurrent monitoring in 1-phase mains with adjustable threshold, timing for start-up suppression and tripping delay separately adjustable and adjustable hysteresis

When the supply voltage U is applied (green LED illuminated), the set interval of the start-up suppression (t_2) begins. Irrespective of the relay position under normal operation, the relay position for the duration of the start-up suppression can be selected with the DIP-switch 3: Relay switches into on-position (on) or remains in off-position (off). Changes of the measured current during this period do not affect the state of the output relay.

Overcurrent monitoring

When the measured current exceeds the value adjusted at the I_s -regulator the set interval of the tripping delay (t_1) begins. After the interval has expired and if the DIP-switch 2 is in the position REL (n.o.), the output relay R switches into on-position (yellow LED illuminated). When the measured current falls below the value adjusted at the I_s -regulator by more than the value adjusted at the Hysteresis-regulator the output relay switches into off-position (yellow LED not illuminated). If the fault latch is activated (bridge Y1-Y2) and the measured current has exceeded the set value once, the output relay remains in the on-position even if the measured current falls below that value by more than the hysteresis. After resetting the fault latch (opening the bridge Y1-Y2) the output relay switches into off-position. If instead of opening the bridge Y1-Y2 the supply voltage is disconnected and re-applied the measuring cycle begins again with the set interval of the start-up suppression (t_2). When the DIP-switch 2 is in the position REL (n.c.), the mode of operation of the device remains unchanged, but the operation of the output relay is inverted.



Connections

