

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



Technical data

1. Functions

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

DIP-Switch 1: AC/DC preselection

DIP-Switch 2:

- REL relay in on-position if error occurs
- REL relays in off-position if error occurs

DIP-Switch 3:

- ON Relay picks up during the start-up suppression time (t_2)
- OFF Relay remains in off position during the start-up suppression time (t_2)

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 VBG4 (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 ends
- 2 x 2.5mm² flexibel without multicore cable ends

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: 1250VA (5A / 250V AC)
- Fusing: 5A fast acting
- Mechanical life: 20 x 10⁶ operations
- Electrical life: 1 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)

Rated voltage:

250V AC (according to IEC 664-1)

Rated surge voltage:

2.5kV, overvoltage category II (according to IEC 664-1)

7. Measuring circuit

Input:

- 30V AC/DC
- 60V AC/DC
- 300V AC/DC
- 600V AC/DC

- terminals E1-F1(+)
- terminals E1-F2(+)
- terminals E1-F3(+)
- terminals E2-F3(+)

Overload capacity:

- 30V AC/DC
- 60V AC/DC
- 300V AC/DC
- 600V AC/DC

- 60V
- 80V
- 360V
- 720V

Input resistance:

- 30V AC/DC
- 60V AC/DC
- 300V AC/DC
- 600V AC/DC

- 33kΩ
- 80kΩ
- 470kΩ
- 1MΩ

Switching threshold:

10% to 100%

Hysteresis:

5% to 50%

8. Control contact Y

Functions:

latch (Y1-Y2 bridged)

Connections:

potential free, terminals Y1-Y2

Loadable:

No

Line length:

max. 5m

Control pulse length:

—

9. Accuracy

Base accuracy:

±5% (of maximum scale value)

Adjustment accuracy:

≤5% (of maximum scale value)

Repetition accuracy:

<1%

Voltage influence:

≤0.02% / 1% supply voltage change

Temperature influence:

≤0.02% / °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:

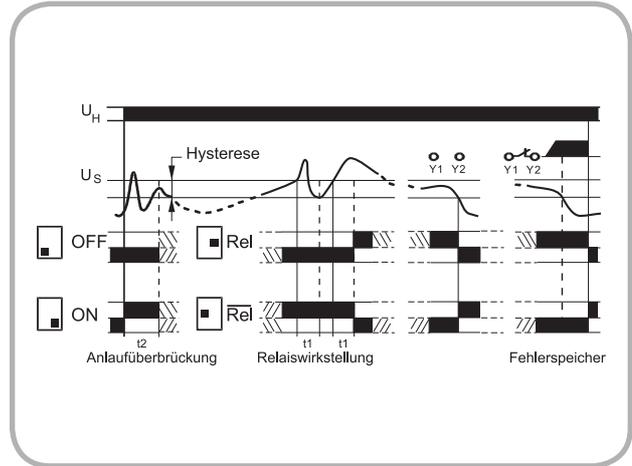
3 (according to IEC 664-1)

Functions

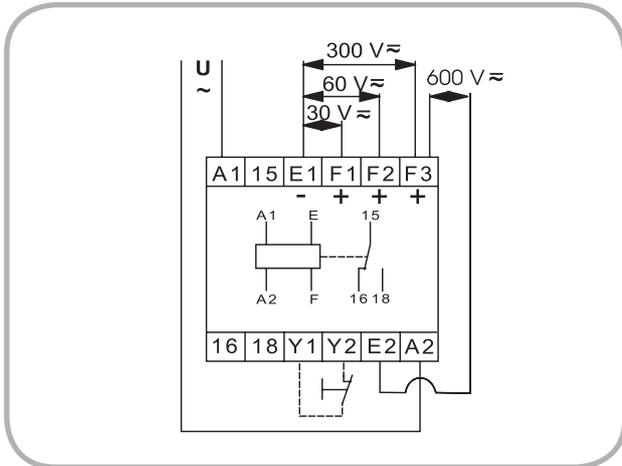
When the supply voltage U is applied (green LED illuminated), the set interval of the start-up suppression (t_2) begins. Irrespective of the relay position under normal operation, the relay position for the duration of the start-up suppression can be selected with the DIP-switch 3: Relay switches into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

Overvoltage monitoring

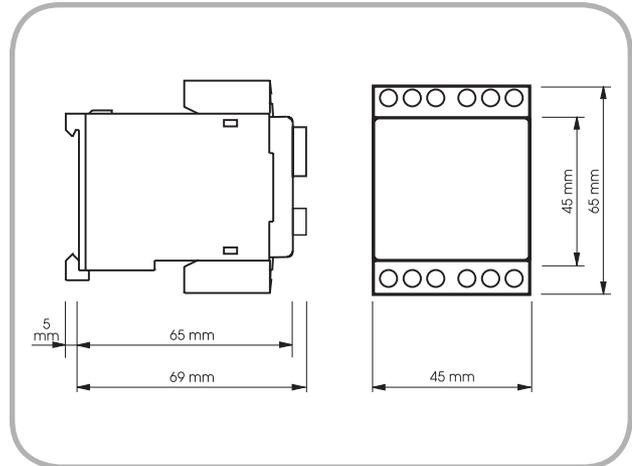
When the measured voltage exceeds the value adjusted at the U_S -regulator the set interval of the tripping delay (t_1) begins. After the interval has expired and if the DIP-switch 2 is in the position REL (n.o.), the output relay R switches into on-position (yellow LED illuminated). When the measured voltage falls below the value adjusted at the U_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 voltage has exceeded the set value once, the output relay remains in the on-position even if the measured voltage 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 time (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



Dimensions



Subject to alterations and errors