

- ▶ Voltage monitoring in 3-phase mains
- ▶ Undervoltage monitoring
- ▶ Supply voltage = measured voltage
- ▶ 2 change over contacts
- ▶ Width 35 mm
- ▶ Installation design



Technical data

1. Functions

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

2. Time ranges

Tripping delay: Adjustment range fixed, approx. 200ms

3. Indicators

Type E3YF400V02 0.85:
 Green LED ON/OFF: indication of supply voltage
 Yellow LED ON/OFF: indication of relay output

Type E3YF400VT02 0.85:
 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 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: (= measured voltage)
 Terminals: N-L1-L2-L3
 Rated voltage U_N : see table ordering information or printing on the unit
 Tolerance: -30% to +30% of U_N
 Rated consumption: 11VA (1,2W)
 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: 6kV

6. Output circuit

2 potential free change over contacts
 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. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1)
 III (in accordance with IEC 60664-1)
 6kV

Overvoltage category:
 Rated surge voltage:

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
 Hysteresis H: approx. 5%
 Overvoltage category: III (in accordance with IEC 60664-1)
 Rated surge voltage: 6kV

8. Accuracy

Base accuracy: ±5%
 Adjustment accuracy: -
 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 accordance with IEC 60664-1)

10. Weight

Single packing: 109g

Functions

Undervoltage monitoring for 3-phase AC mains with fixed adjustable switching threshold and fixed adjustable 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.

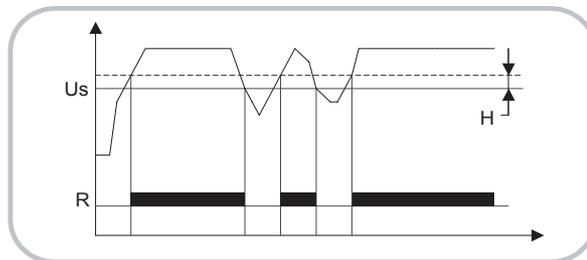
A phase failure can not be detected, if the reverse voltage coming from the load exceeds the threshold U_s .

Test function (optional)

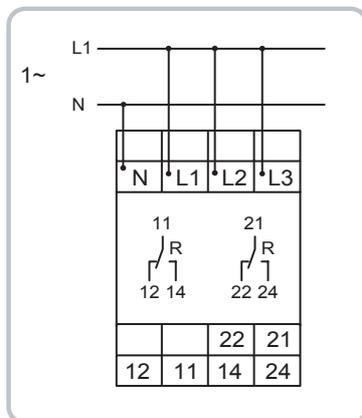
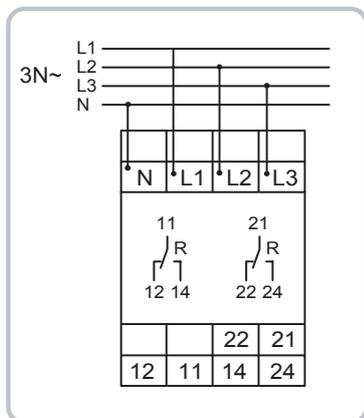
The test function enables a manually disconnection of the output relay.

Undervoltage monitoring

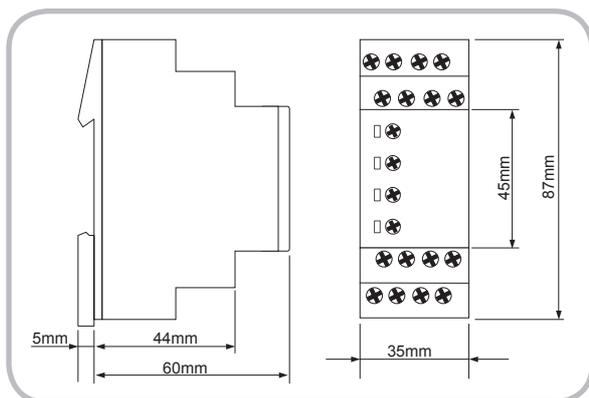
The output relay R switches into on-position (yellow LED illuminated), when the measuring voltage of all connected phases exceeds the fixed threshold by more than the fixed hysteresis. When the voltage of one of the connected phases falls below the fixed threshold, the output relay R switches into off-position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



Connections



Dimensions



Ordering information

Type	Rated voltage U_N	Switching threshold U_S	Options	LEDs	Part Nr. (PQ 1)
E3YF400V02 0.85	3N~400/230V accord. to VDE 0108	fixed 195,5V (L-N)	-	U, Rel.	1341401
E3YF400VT02 0.85	3N~400/230V accord. to VDE 0108	fixed 195,5V (L-N)	Test function	L1, L2, L3, Rel.	1341402