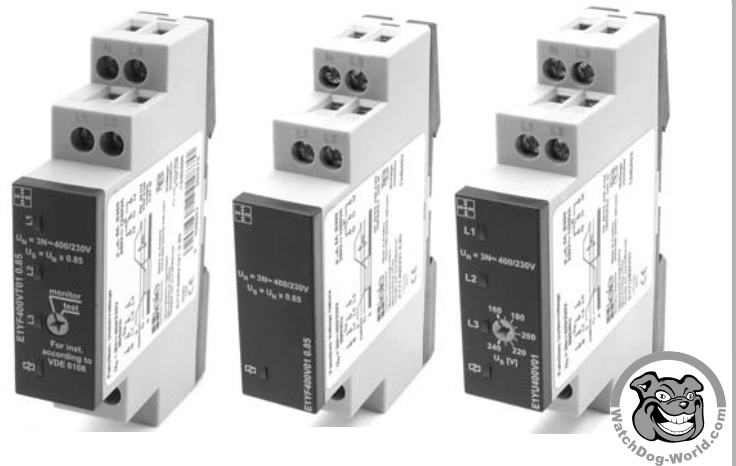


Monitoring relays - ENYA series

E1YF, E1YU

- ▶ Voltage monitoring in 3-phase mains
- ▶ 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 adjustable hysteresis.

2. Time range

Tripping delay: Adjustment range fixed, approx. 200ms

3. Indicators

Type E1YF:
Yellow LED ON/OFF: indication of relay output

Type E1YU, E1YF400VT01:
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 Un: see table ordering information or printing on the unit
Tolerance: -30% to +10% of Un
Rated consumption:
E1YF: 5VA (0,6W)
E1YU: 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 (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: 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 Us: see table ordering information or printing on the unit
Hysteresis H: approx. 5%
Overvoltage category: III (according to IEC 60664-1)
Rated surge voltage: 4kV

8. Accuracy

Base accuracy: ±5% (E1YU) of rated voltage
Adjustment accuracy: -
Repetition accuracy: ≤2%
Voltage influence: -
Temperature influence: ≤1%

9. Ambient conditions

Ambient conditions: -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: 72g
Packing of 10pcs: 670g per Package

Functions

Undervoltage monitoring for 3-phase AC mains with fixed (E1YF) or variable (E1YU) 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.

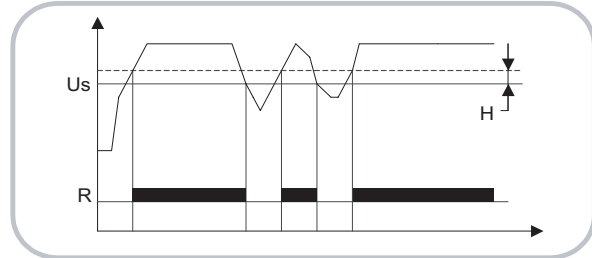
A phase failure can not be detected, if the reverse voltage coming from the load exceeds the threshold U_s .

Test function (optional)

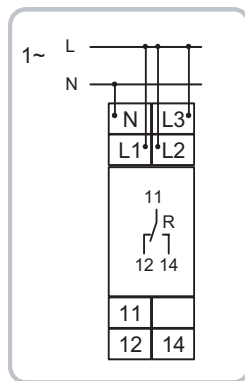
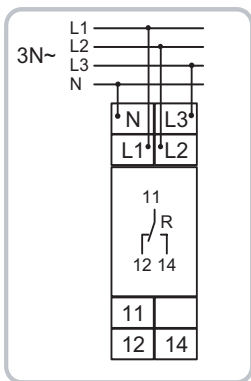
The test function enables a manually disconnection of the output relay.

Undervoltage monitoring

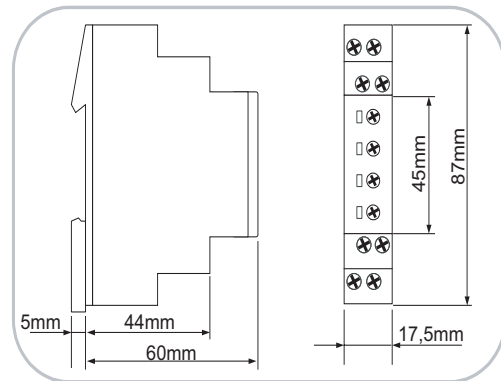
The output relay R switches into on-position (yellow LED illuminated), when the measuring voltage of all connected phases exceeds the fixed threshold by more than the fixed hysteresis. When the voltage of one of the connected phases falls below the fixed threshold, the output relay R switches into off-position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



Connections



Dimensions



Ordering information

| Types | Rated voltage U_n | Threshold voltage U_s | Options | LEDs | Part Nr. (PQ 1) | Part Nr. (PQ 10) |
|------------------|------------------------------------|-------------------------|---------------|------------------|-----------------|------------------|
| E1YF400V01 0.85 | 3N~400/230V accord. to VDE 0108 | fixed 195,5V (L-N) | - | Rel. | 1340402 | 1340402A |
| E1YU400V01 | 3(N)~400/230V | 160 - 240V (L-N) | - | L1, L2, L3, Rel. | 1340403 | |
| E1YF400VT01 0.85 | 3N~400/230V accord. to VDE 0108 | fixed 195,5V (L-N) | Test function | L1, L2, L3, Rel. | 1340406 | |