



Series ENYA

Monitoring of phase sequence and phase failure

Monitoring of asymmetry

Supply voltage = measuring voltage

1 change over contact

Width 17.5 mm

Installation design



Read and understand these instructions before installing, operating or maintaining the equipment.



Danger!

Never carry out work on live parts! Danger of fatal injury! The product must not be used in case of obvious damage. To be installed by an authorized person.

Technical data

1. Functions

Voltage monitoring in 3-phase mains. Monitoring of phase sequence, phase failure and asymmetry with adjustable asymmetry.

2. Time ranges

| | |
|-----------------|--|
| Tripping delay: | Adjustment range fixed, app. 100 ms |
|-----------------|--|

3. Anzeigen

| | |
|--------------------|------------------------------|
| Green LED U/t 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. 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: | (= measured voltage) |
| Terminals: | L1-L2-L3 |
| Rated voltage U_N : | 3~ 208V/120V to 480V/277V |
| Tolerance: | -10% to +10% of U_N |
| Rated consumption: | 10VA (1W) @ 400V / 50Hz 16VA (1,5W) @ 480V / 60Hz |
| Rated frequency: | a.c. 48 to 63Hz |
| Duty cycle: | 100% |
| Reset time: | 500 ms |
| Hold-up time: | - |
| Drop out voltage: | >20% of the supply voltage |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4 kV |

6. Output circuit

| | |
|--------------------------------------|---|
| 1 potential free change over contact | |
| Rated voltage: | 250V a.c. |
| Switching capacity: | 1250VA (5A / 250V a.c.) |
| 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: | 4kV |

7. Measuring circuit

| | |
|-----------------------|---|
| Measuring variable: | 3~, Sinus, 48 to 63 Hz |
| Measuring input: | (= supply voltage) |
| Terminals: | L1-L2-L3 |
| Overload capacity: | determined by tolerance specified for supply voltage |
| Input resistance: | - |
| Asymmetry: | 5% ... 25% |
| Overvoltage category: | III (in accordance with IEC 60664-1) |
| Rated surge voltage: | 4 kV |

8. Accuracy

| | |
|------------------------|-------------|
| Base accuracy: | ≤5% |
| Adjustment accuracy: | ≤5% |
| Repetition accuracy: | ±2% |
| Voltage influence: | - |
| Temperature influence: | ≤0.05% / °C |

9. Ambient conditions

| | |
|------------------------|---|
| Ambient temperature: | -25 to +55°C at operating frequencies >50Hz and ambient temperatures above 40°C a side distance to other units of 5mm must be observed. |
| 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 (in accordance with IEC 60664-1) |

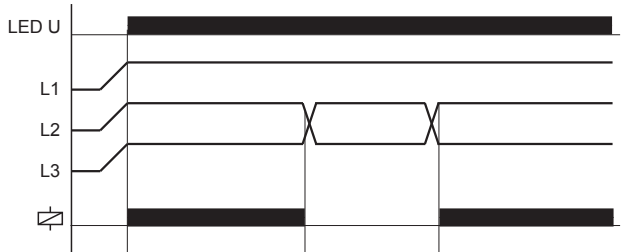
10. Weight

| | |
|-------------------|-------------------|
| Single packing: | 72 g |
| Packing of 10pcs: | 670 g per package |

Functions

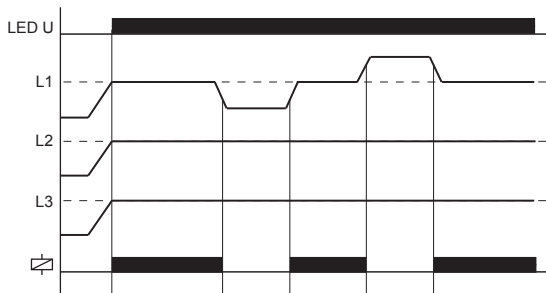
Phase sequence monitoring

When all the phases are connected in the correct sequence and the measured asymmetry is less than the set 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).



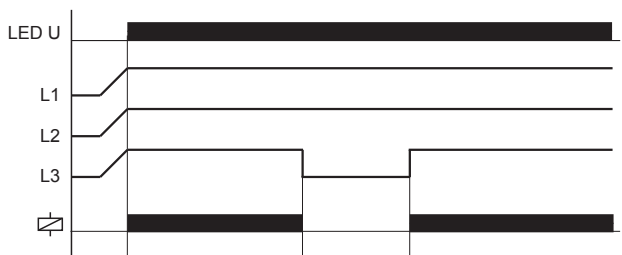
Asymmetry monitoring

As soon as the asymmetry exceeds the value at the ASYM-regulator, the output relay R switches 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.

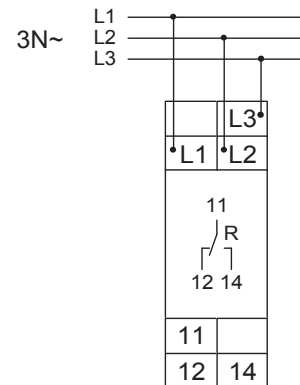


Phase failure monitoring

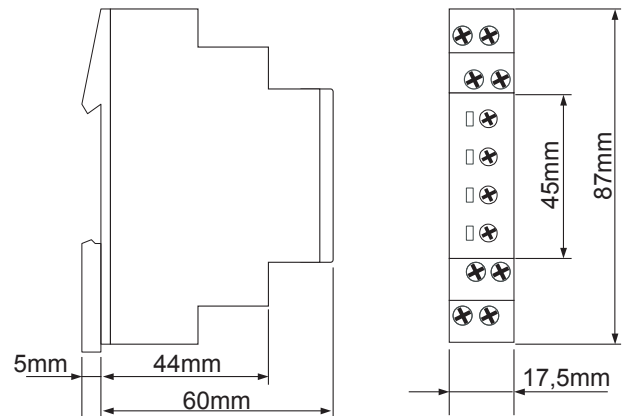
As soon as one of the three phases fails, the output relay R switches into off-position (yellow LED not illuminated).



Connections



Dimensions



Ordering information

| Types | Rated voltage U_N | Switching threshold | Part No. |
|-------------------|---------------------|---------------------|----------|
| E1PF480Y/277VSY01 | 3~480/277V | Asymmetry 5%...25% | 1340306 |

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Subject to alterations and errors

tele
Technik Braucht Kontrolle