



Monitoring relays - ENYA series

Monitoring of phase sequence and phase failure

Monitoring of asymmetry

Connection of neutral wire optional

Supply voltage = measuring voltage

1 change over contact

Width 17.5mm

Installation design



Technical data

1. Functions

Monitoring of phase sequence, phase failure and asymmetry with adjustable asymmetry, connection of neutral wire optional.

2. Time ranges

Adjustment range

Tripping delay: fixed, approx. 100ms

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 60715

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 +30% of UN

Rated consumption: 8VA (0,8W)

Rated frequency: AC 48 to 63Hz

Duty cycle: 100%

Reset time: 500ms

Hold-up time:

Drop out voltage: >20% of the supply voltage

Overvoltage category: III (in accordance with 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 AC)

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)

Overvoltage category: III (in accordance with IEC 60664-1)

Rated surge voltage: 4kV

7. Measuring circuit

Measuring variable: 3(N)~, sinus, 48 to 63Hz

(= supply voltage)

(N)-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: 4kV

8. Accuracy

Base accuracy: ≤5% (of nominal value)

Adjustment accuracy: ≤5%

Repetition accuracy: ±2%

Voltage influence: -

Temperature influence: ≤0.05% / °C

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

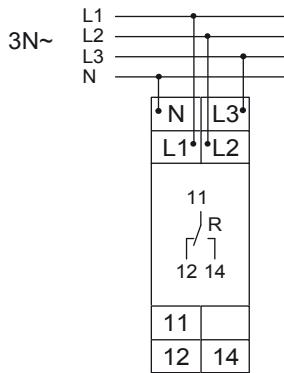
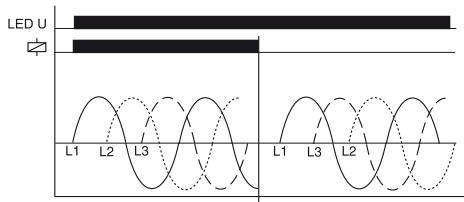
Single packing: 72g

Packing of 10pcs: 670g per Package

Functions

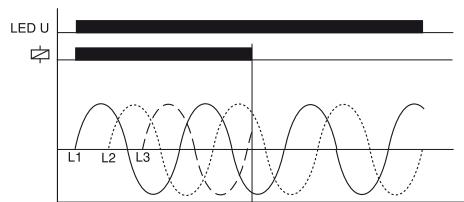
Phase sequence monitoring

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



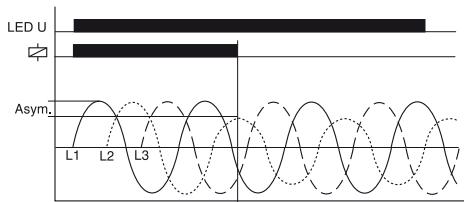
Überwachung Phasenausfall

Das Ausgangsrelais R fällt ab (gelbe LED leuchtet nicht), wenn eine der Phasen ausfällt.



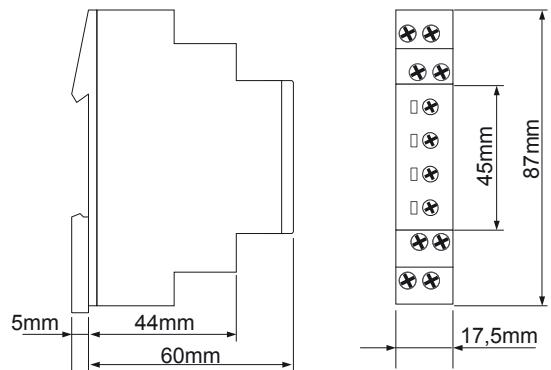
Asymmetry monitoring

The output relay R switches into off-position (yellow LED not illuminated) when the asymmetry exceeds the value set at the ASYM-regulator. Reverse voltages of a consumer (e.g. a motor which continues to run on two phases only) do not effect the disconnection.



Connections

Dimensions



Ordering Informations

Types	Rated voltage U_N	Switching thresholds	Part. No. (PQ 1)	Part. No. (PQ 10)
E1PF400VSY01	3(N)-400/230V	Asymmetrie 5%...25%	1340300	1340300A