



Monitoring relays - ENYA series  
 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 adjustable threshold  $U_s$  and fixed adjustable hysteresis.

### 2. Time ranges

Tripping delay: Adjustment range fixed, approx. 200ms

### 3. Indicators

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 output relay

### 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 2.5mm<sup>2</sup> with/without multicore cable end  
 1 x 4mm<sup>2</sup> without multicore cable end  
 2 x 0.5 to 1.5mm<sup>2</sup> with/without multicore cable end  
 2 x 2.5mm<sup>2</sup> 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: a.c. 48 to 63Hz  
 Duty cycle: 100%  
 Reset time: 500ms  
 Hold-up time: -  
 Drop out voltage: determined by undervoltage detection (see measured circuit)  
 Overvoltage categorie: III (in accordance with IEC 60664-1)  
 Rated surge voltage: 6kV

### 6. Output circuit

2 potential free change over contacts  
 Rated voltage: 250V a.c.  
 Switching capacity: 1250VA (5A / 250V)  
 Fusing: 5A fast acting  
 Mechanical life: 20 x 10<sup>6</sup> operations  
 Electrical life: 2 x 10<sup>5</sup> operations at 1000VA resistive load  
 Switching frequency: max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1)  
 Overvoltage categorie: III (in accordance with IEC 60664-1)  
 Rated surge voltage: 6kV

### 7. Measuring circuit

Measuring variable: a.c. 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  $U_s$ : 160V-240V of  $U_N$   
 Hysteresis H: approx. 5%  
 Overvoltage categorie: III (in accordance with IEC 60664-1)  
 Rated surge voltage: 6kV

### 8. Accuracy

Base accuracy: ≤5% (of nominal value)  
 Adjustment accuracy: -  
 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 (in accordance with IEC 60664-1)

### 10. Weight

Single packing: 104.70g

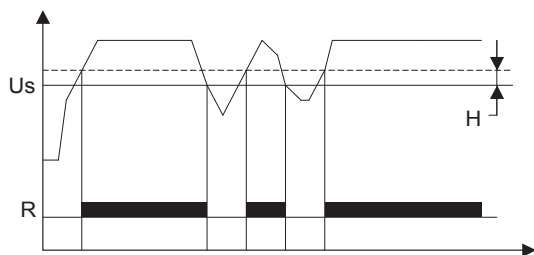
## Functions

Undervoltage monitoring for 3-phase mains with adjustable 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.

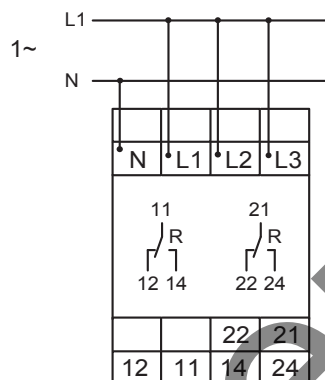
A phase failure can not be detected, if reverse voltage coming from the load exceeds the threshold  $U_s$ .

### Undervoltage monitoring

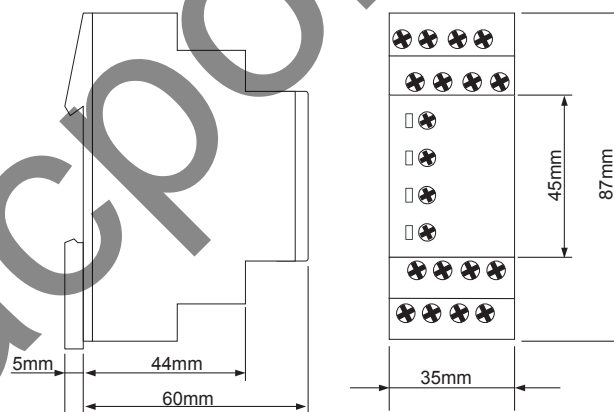
The output relay R switches into on-position (yellow LED illuminated), when the measuring voltage of all connected phases exceeds the threshold  $U_s$  by more than the fixed hysteresis. When the voltage of one of the connected phases (L1, L2 or L3) falls below the fixed threshold (green LED L1, L2 or L3 illuminated), the output relay R switches into off-position again (yellow LED not illuminated).



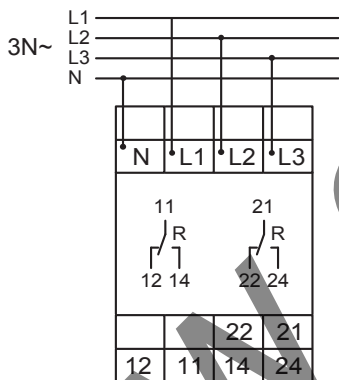
## Connections



## Dimensions



## Connections



## Ordering information

Type	Rated voltage $U_n$	Switching thresholds $U_s$	Options	LEDs	Part. No.
E3YU400V02	3(N)-400/230V	160-240V (L-N)	-	L1, L2, L3, Rel.	1341404