



Monitoring relays - ENYA series

Undercurrent monitoring

2 change over contacts

Width 35 mm

Installation design



Technical data

1. Functions

a.c. undercurrent monitoring in 1-phase mains, timing for start-up suppression and tripping delay separately adjustable.

UNDER Undercurrent monitoring

2. Time ranges

	Adjustment range
Start-up suppression time (Start):	0s to 20min
Tripping delay (Delay):	0s to 20min

3. Indicators

Green LED U/t ON/OFF:	indication of supply voltage
Green LED U/t flashes:	indication of start-up suppression time
Red min LED ON/OFF:	indication of failure of the corresponding threshold
Red min LED flashes:	indication of tripping delay of the corresponding threshold
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. Supply circuit

Supply voltage:	230V a.c.
Terminals:	A1-A2
Tolerance:	-15% to +15% of U_N
Rated consumption:	5.2VA (0.9W)
Rated frequency:	a.c. 48 of 63Hz
Duration of operation:	100%
Reset time:	500ms
Wave form:	Sinus
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

2 potential free change over contacts
 Rated voltage: 250V a.c.
 Switching capacity: 1250VA (5A / 250V a.c.)
 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 capacity: III (in accordance with IEC 60664-1)
 Rated surge voltage: 4kV

7. Measuring circuit

Measured variable: a.c. Sinus (48 to 63Hz)
 Measuring input: terminals K-I1(+)
 Overload capacity: 16A a.c.
 Input resistance: < 0.1mΩ, @50Hz
 Switching threshold: 50mA to 500mA a.c.
 Hysteresis: set value +5%
 Overvoltage category: III (in accordance with IEC 60664-1)
 Rated surge voltage: 4kV

8. Accuracy

Base accuracy:	≤5% (of nominal value)
Frequency response:	-10% to +5% (16.6 to 400Hz)
Adjustment accuracy:	≤5% (of maximum scale value)
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: 140g

Functions

Undercurrent monitoring (UNDER)

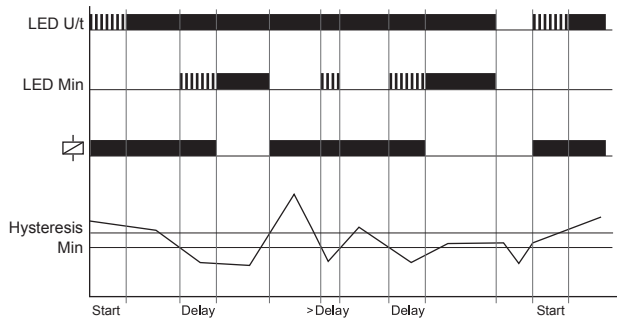
When the supply voltage U is applied and a start-up suppression time (Start) >0 is adjusted the output relay switches into on position.

During this period, changes in the measured current don't affect the state of the output relay R.

If no time is adjusted, the output relay switches into the on position if the measured current is beyond the Min-value + hysteresis.

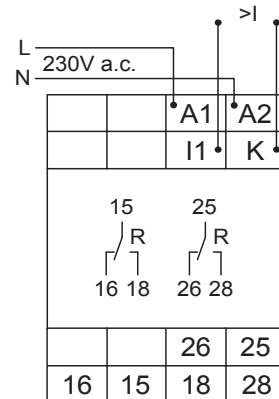
When the measured current falls below the Min-value, the output relay R switches into off position after the interval of the tripping delay (Delay) has expired.

The output relay R switches into on position again, as soon as the current exceeds the Min-value + hysteresis.

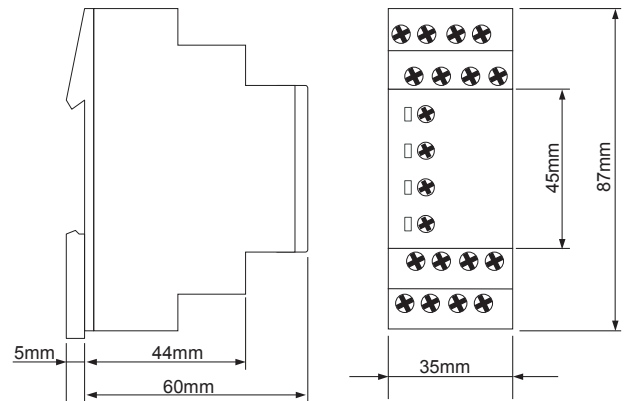


Connections

Measuring range 16A a.c., supply voltage 230V a.c.



Dimensions



Ordering information

Type	Rated voltage U_N	Functions	Switching thresholds I_s	Part. No.
E3IF500mAAC20	230V a.c.	U (Under)	50mA to 500mA a.c.	1341201