

- ▶ AC current monitoring in 1-phase mains
- ▶ Multifunction
- ▶ 1 change over contact
- ▶ Width 17.5 mm
- ▶ Installation design



Subject to alterations and errors

## Technical data

### 1. Functions

AC current monitoring in 1-phase mains with adjustable threshold, hysteresis and tripping delay.

OVER	Overcurrent monitoring
UNDER	Undercurrent monitoring
WIN	Monitoring the window between Min and Max
OVER+Latch	Overcurrent monitoring with fault latch
UNDER+Latch	Undercurrent monitoring with fault latch
WIN+Latch	Monitoring the window between Min and Max with fault latch

### 2. Time ranges

	Adjustment range
Start-up suppression time (Start):	-
Tripping delay (Delay):	0,1 to 10s

### 3. Indicators

Green LED ON/OFF:	indication of supply voltage
Red LED ON/OFF:	indication of failure of the corresponding threshold
Red LED flashes:	indication of tripping delay of the corresponding threshold
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 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 2.5mm<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:	230V AC
Terminals:	Li-N
Tolerance:	-15% to +15% of Un
Rated consumption:	5VA (0.8W)
Rated frequency:	AC 48 to 63Hz
Duration of operation:	100%
Reset time:	500ms
Wave form:	Sinus
Hold-up time:	-
Drop-out voltage:	>20% of rated voltage
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 10 <sup>6</sup> operations
Electrical life:	2 x 10 <sup>5</sup> operations at 1000VA resistive load max. 60/min at 100VA resistive load (according to IEC 947-5-1)
Switching frequency:	III. (according to IEC 60664-1)
Overvoltage category:	4kV
Rated surge voltage:	

### 7. Measuring circuit

Measuring variable:	AC sinus, 48 to 63Hz
Measuring input:	10A AC
Terminals:	Li, Lk
Overload capacity:	13A (ex 10A - distance > 5mm)
Starting current:	
1s	100A
3s	50A
Input resistance:	3mΩ
Switching threshold Us:	see table ordering information or printing on the unit
Hysteresis H:	see table ordering information or printing on the unit
Overvoltage category:	III (according to IEC 60664-1)
Rated surge voltage:	4kV

### 8. Accuracy

Base accuracy:	±5% of nominal value
Adjustment accuracy:	±5% of nominal value
Repetition accuracy:	≤2% of nominal value
Voltage influence:	-
Temperature influence:	0,05% / °C

### 9. Ambient conditions

Ambient temperature:	-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
Package of 10pcs:	655g per package

## Functions

### Overcurrent monitoring (OVER, OVER+Latch)

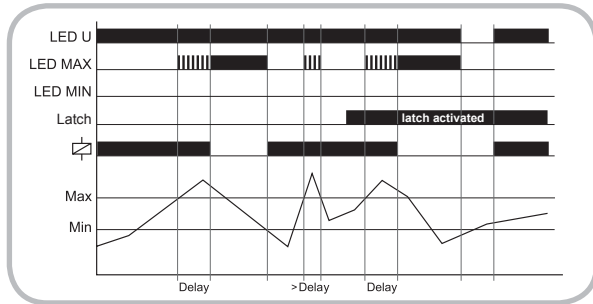
When the supply voltage U is applied, the output relay R switches into on-position, if the measured current is below the Max-value. When the measured current exceeds the Max-value, the output relay R switches into off-position after the interval of the tripping delay (Delay) has expired.

#### OVER:

The output relay R switches into on-position again, if the current falls below the Min-value.

#### OVER+Latch:

The output relay R switches only into on-position again by interrupting and re-applying of the supply voltage, provided that the measured current is below the Max-value.



### Window function (WIN, WIN+Latch)

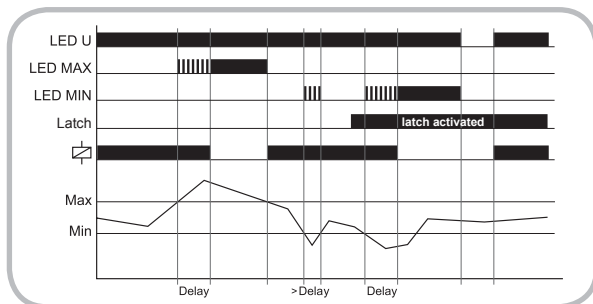
When the supply voltage U is applied, the output relay R switches into on-position, if the measured current is within the adjusted window. When the measured current leaves the window between Min and Max, the output relay R switches into off-position after the interval of the tripping delay (Delay) has expired.

#### WIN:

The output relay R switches into on-position again, if the current re-enters the adjusted window.

#### WIN+Latch:

The output relay R switches only into on-position again by interrupting and re-applying of the supply voltage, provided that the measured current is within the threshold values.



### Undercurrent monitoring (UNDER, UNDER+Latch)

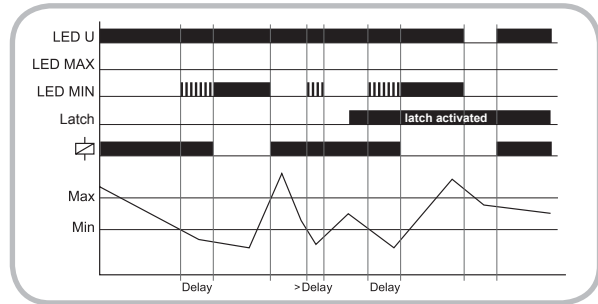
When the supply voltage U is applied, the output relay R switches into on-position, if the measured current is beyond the Min-value. When the measured current falls below the Min-value, the output relay R switches into off-position after the interval of the tripping delay (Delay) has expired.

#### UNDER:

The output relay R switches into on-position again, if the current exceeds the Max-value.

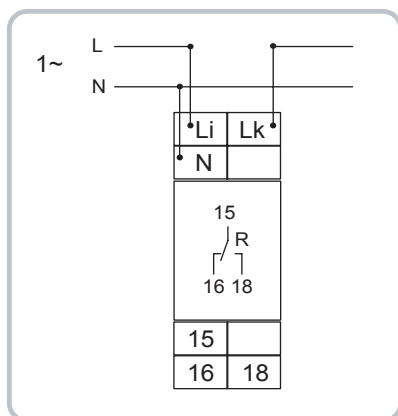
#### UNDER+Latch:

The output relay R switches only into on-position again by interrupting and re-applying of the supply voltage, provided that the measured current is beyond the Min-value.

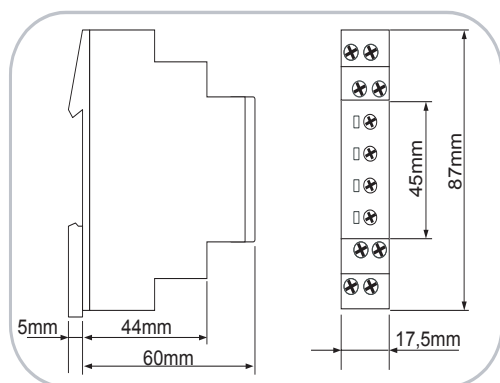


## Connections

E1IM10AACL10 230V AC



## Dimensions



Subject to alterations and errors

## Ordering informations

Type	Rated voltage Un	Functions	Switching threshold Is	Delay	Hysteresis	Part. Nr. (PQ 1)
E1IM10AACL10	230VAC	O, U, W, O+L, U+L, W+L	Max: 10% to 100% of In Min: 5% to 95% of In	0,1s to 10s	adjustable	1340200