NEW product

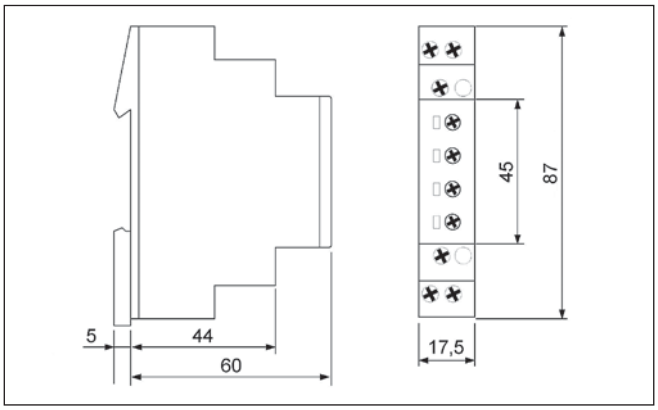
- AC current monitoring in 1-phase mains ❶
- Multifunctions monitoring relays
- Histeresis mode and the possibility of setting the tripping delay
- Supply voltage 230 V AC
- 1 changeover contact: 1 C/O
- Rated load: 5 A / 250 V AC at cat. AC1
- Installation design: width 17,5 mm
- Recognitions, certifications, directives: CE

Type of relay			**MR-EI1W1P**
Output circuit			
Number and type of contacts			1 C/O - changeover
Rated load		AC1	5 A / 250 V AC
Max. breaking capacity		AC1	1 250 VA
Max. operating frequency • at 100 VA resistive load • at 1 000 VA resistive load			3 600 cycles/hour PN-EN 60947-5-1 360 cycles/hour
Input circuit			
Supply voltage U			230 V AC; terminals (N)-Li
Rated voltage U_n			230 V AC
Drop-out voltage			AC: ≥ 0,2 U_n
Operating range of supply voltage			0,85 < U_n < 1,15
Rated power consumption			5,0 VA / 0,8 W
Rated frequency \ wave form			AC: 48...63 Hz \ AC sinus
Duty cycle			100%
Measuring circuit	• terminals		(N)-Li-Lk
	• measuring variable		AC sinus, 48...63 Hz
	• measuring input		10 A AC
	• overload capacity		13 A
	• starting current		1 s: 100 A 3 s: 50 A
	• input resistance		3 mΩ
	• swiching threshold U_s		max.: 0,1 < I_n < 1,0 min.: 0,05 < I_n < 0,95
	• hysteresis H		adjustable
Insulation			
Rated surge voltage			4 000 V AC
Overvoltage category			III PN-EN 60664-1
Insulation pollution degree			2, if built-in 3 PN-EN 60664-1
General data			
Electrical life		• resistive AC1	≥ 2 x 10^5 1 000 VA
Mechanical life (cycles)			≥ 2 x 10^7
Dimensions (L x W x H)			87 x 17,5 x 60 mm
Weight			72 g
Ambient temperature	• storage, transport		-25...+70 °C
	• operating		-25...+55 °C PN-EN 60068-1
Housing protection category			IP 40
Relative humidity			15...85% PN-EN 60721-3-3 class 3K3
Shock resistance			15 g 11 ms PN-EN 60068-2-27
Vibration resistance			0,35 mm DA 10...55 Hz PN-EN 60068-2-6
Meassuring circuit data			
Functions			OVER, OVER+LATCH, UNDER, UNDER+LATCH, WIN, WIN+LATCH ❷ histeresis mode and the possibility of setting the tripping delay
Time intervals (timing adjustment)			tripping delay (0,1...10 s)
Base accuracy			± 5% (calculate from final range value)
Setting accuracy			± 5% (calculate from final range value)
Repeatability			± 2%
Temperature influence			± 0,05% / °C
Recovery time			500 ms
LED indicator			green LED U/T ON - indication of supply voltage red LED ON/OFF - indication of failure ❸ red LED flashes - indication of tripping delay ❸ yellow LED R ON/OFF - indication of output relay

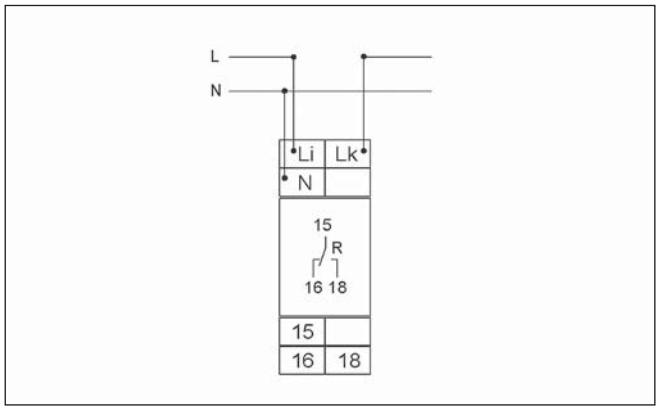
❶ With adjustable thresholdes.

❷ Selectable by means of rotary switch.
❸ Of the corresponding threshold.

Dimensions



Connections diagram

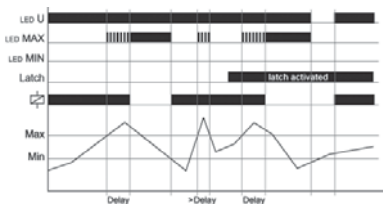


Mounting, mechanical design

Relays **MR-EI1W1P** are designed for direct mounting on 35 mm DIN rail mount, EN 50022. Mounting position: any. Self-extinguishing plastic housing, IP 40. Shockproof terminal connection according to VBG 4 (PZ1 required), IP 20. Maximum screw torgue: 1,0 Nm. Terminal capacity: 1 x 0,5 do 2,5 mm^2 with/without multicore cable end, 1 x 4 mm^2 without multicore cable end, 2 x 0,5 do 1,5 mm^2 with/without multicore cable end, 2 x 2,5 mm^2 flexible without multicore cable end.

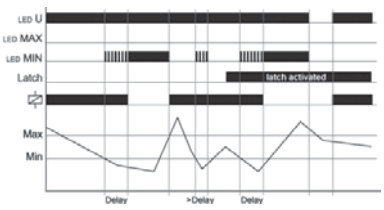
Functions

OVER, OVER+LATCH - overcurrent monitoring, overcurrent monitoring with fault latch



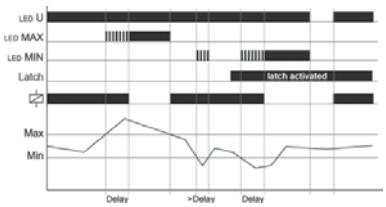
When the supply voltage U is applied, the output relay R switches into on-position, if the measured current is below the MAX-value. When the measured current exceeds the MAX-value, the output relay R switches into off-position after the interval of the tripping delay (Delay) has expired.
OVER: the output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

UNDER, UNDER+LATCH - undercurrent monitoring, undercurrent monitoring with fault 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 MIN-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.

WIN, WIN+LATCH - current monitoring in windowfunction between MIN and MAX values, current monitoring in window-function between MIN and MAX values with fault 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-enter 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.

U - supply voltage; **R** - output relay