



NEW
product

- AC/DC voltage monitoring in 1-phase mains ❶
- Multifunctions monitoring relays
- Minimum value supervision with the hysteresis mode
- Supply voltage = measuring voltage
- 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-EU1W1P

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		3 600 cycles/hour
• at 100 VA resistive load		360 cycles/hour
• at 1 000 VA resistive load		PN-EN 60947-5-1

Input circuit

Supply voltage U		= measuring voltage; terminals: 230 V AC: E-F3 24 V AC: E-F2 24 V DC: E-F1
Rated voltage U _n		24 V AC/DC, 230 V AC
Drop-out voltage		determined by undervoltage detection (see measured circuit)
Operating range of supply voltage		0,75 < U _n < 1,2
Rated power consumption		230 V AC: 10,0 VA / 0,6 W 24 V AC: 1,3 VA / 0,8 W 24 V DC: 0,6 W
Rated frequency \ wave form		AC: 48...63 Hz \ DC, AC sinus
Duty cycle		100%
Measuring circuit	<ul style="list-style-type: none"> • terminals • measuring variable • measuring input • overload capacity • switching threshold U_s • hysteresis H 	230 V AC: E-F3 24 V AC: E-F2 24 V DC: E-F1 DC or AC sinus, 48...63 Hz = supply voltage ≥ 1,2 U _n max.: 0,8 < U _n < 1,2 min.: 0,75 < U _n < 1,15 see table ordering information or printing on the unit

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	<ul style="list-style-type: none"> • storage, transport • operating 	-25...+70 °C -25...+55 °C PN-EN 60068-1
Housing protection category		IP40
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

Measuring circuit data

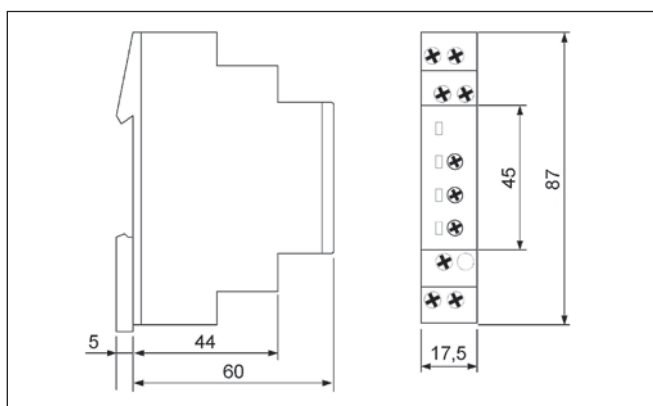
Functions		UNDER, WIN ❷ minimum value supervision with the hysteresis mode
Base accuracy		± 5% (calculate from final range value)
Setting accuracy		± 5% (calculate from final range value)
Repeatability		± 2%
Temperature influence		± 1% / °C
Recovery time		500 ms
LED indicator		green LED ON/OFF - indication of supply voltage red LED ON/OFF - indication of failure ❸ yellow LED R ON/OFF - indication of output relay

❶ With adjustable threshold.

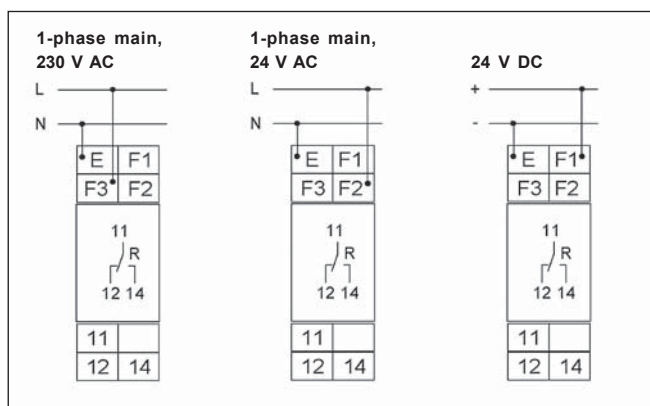
❷ Selectable by means of rotary switch.

❸ Of the corresponding threshold.

Dimensions



Connections diagrams

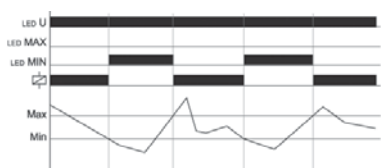


Mounting, mechanical design

Relays **MR-EU1W1P** 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 torque: 1,0 Nm. Terminal capacity: 1 x 0,5 do 2,5 mm² with/without multicore cable end, 1 x 4 mm² without multicore cable end, 2 x 0,5 do 1,5 mm² with/without multicore cable end, 2 x 2,5 mm² flexible without multicore cable end.

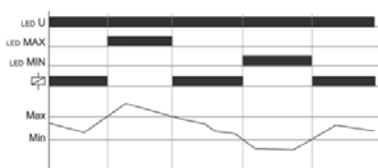
Functions

UNDER - undervoltage monitoring



When the supply voltage **U** is applied, the output relay **R** switches into on-position, if the measured voltage is beyond the MIN-value. When the measured voltage falls below the MIN-value, the output relay **R** switches into off-position. The output relay **R** switches into on-position again, if the voltage exceeds the MAX-value.

WIN - voltage monitoring in windowfunction between MIN and MAX values



When the supply voltage **U** is applied, the output relay **R** switches into on-position, if the measured voltage is within the adjusted window. When the measured voltage left the window between MIN and MAX, the output relay **R** switches into off-position. The output relay **R** switches into on-position again, if the voltage re-enter the adjusted window.

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