

MR-EU1W1P

monitoring relays



- **Multifunctions monitoring relays (DC and AC voltage monitoring in 1-phase network, with adjustable thresholds)**
- Minimum value monitoring with the hysteresis mode
- Supply voltage = monitoring voltage
- Output: 1 CO (1 changeover contact)
- Cover - modular, width 17,5 mm
- Direct mounting on 35 mm rail mount acc. to EN 60715
- Recognitions, certifications, directives: RoHS,

Output circuit - contact data

Number and type of contacts		1 CO
Rated voltage		250 V AC
Max. breaking capacity	AC1	1 250 VA (5 A / 250 V AC)
Max. operating frequency		3 600 cycles/hour
• at resistive load 100 VA		360 cycles/hour
• at resistive load 1 000 VA		
Input circuit		
Supply voltage		= monitoring voltage
Rated voltage	AC	24, 230 V
	DC	24 V
Must release voltage		determined by undervoltage detection (see measured circuit)
Operating range of supply voltage		0,75...1,2 U _n
Rated power consumption	AC	230 V AC: 10,0 VA / 0,6 W
	DC	24 V AC: 1,3 VA / 0,8 W 24 V DC: 0,6 W
Range of supply frequency	AC	48...63 Hz
Duty cycle		100%
Measuring circuit	• measured value • measuring inputs	DC or AC sinus, 48...63 Hz = supply voltage AC: 230 V terminals E-F3 AC: 24 V terminals E-F2 DC: 24 V terminals E-F1
	• overload capacity • switching thresholds • hysteresis H	≥ 1,2 U _n MIN: 0,75...1,15 U _n MAX: 0,8...1,2 U _n see printing on the unit
Insulation according to EN 60664-1		
Rated surge voltage		4 000 V 1,2 / 50 μs
Overvoltage category		III
Insulation pollution degree		2 if built-in: 3
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 65 mm
Weight		72 g
Ambient temperature	• storage	-25...+70 °C
(non-condensation and/or icing)	• operating	-25...+55 °C
Cover protection category		IP 20 EN 60529
Relative humidity		15...85%
Shock resistance		15 g 11 ms
Vibration resistance		0,35 mm DA 10...55 Hz
Measuring circuit data		
Functions		UNDER, WIN minimum value monitoring with the hysteresis mode
Base accuracy		± 5% (calculated from the final range values)
Setting accuracy		± 5% (calculated from the final range values)
Repeatability		± 2%
Temperature influence		± 1% / °C
Recovery time		500 ms
LED indicator		green LED U ON - indication of supply voltage U red LEDs MIN and MAX ON/OFF - indication of failure yellow LED R ON/OFF - output relay status

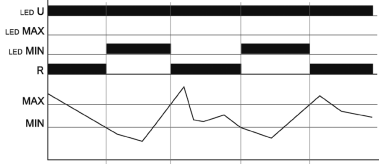
Indication of relay status - according to the set threshold.

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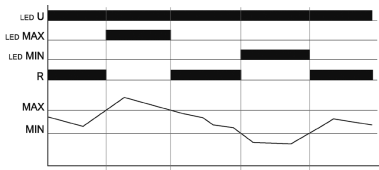
Functions

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.

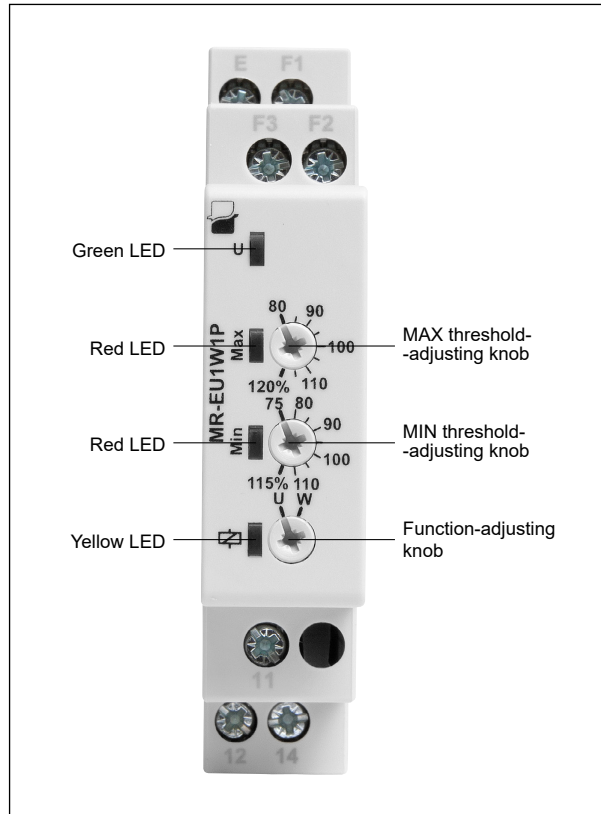
WIN - Voltage monitoring in windowfunction between **MIN** and **MAX** values.



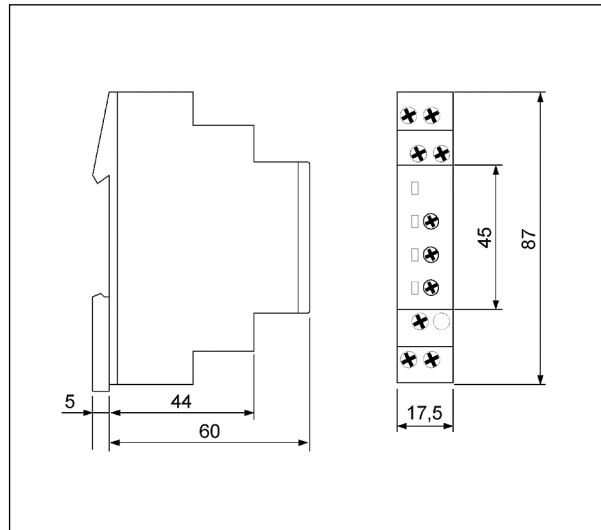
When the supply voltage **U** is applied, the output relay **R** switches into on-position, if the measured voltage is within the adjusted window. When the measured voltage left the window between **MIN** and **MAX**, the output relay **R** switches into off-position. The output relay **R** switches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

U - supply voltage; **R** - output state of the relay; **MIN**, **MAX** - relay status

Front panel description



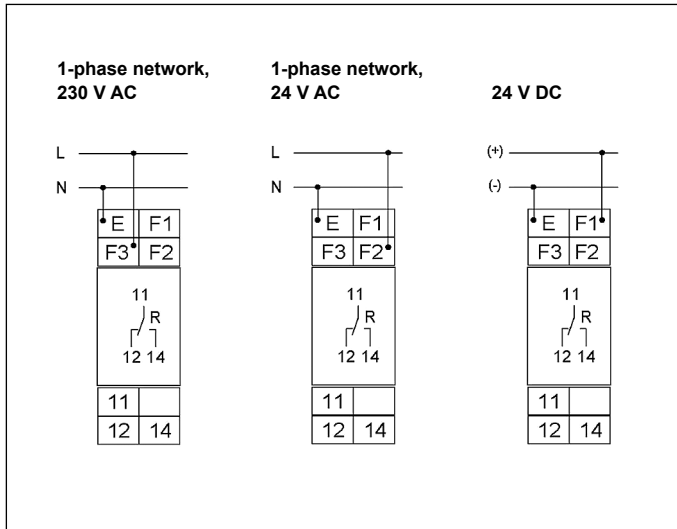
Dimensions



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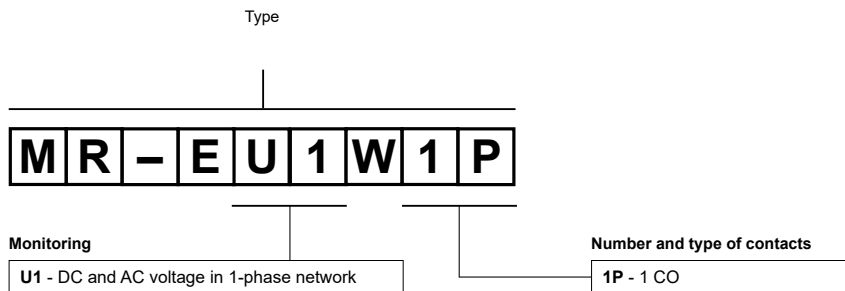
Connection diagrams



Mounting

Relays **MR-EU1W1P** are designed for direct mounting on 35 mm rail mount acc. to EN 60715. Operational position - any. **Terminals - cross section of the connection cables:** 1 x 0,5 ... 2,5 mm² with/without multicore cable end, 1 x 4 mm² without multicore cable end, 2 x 0,5 ... 1,5 mm² with/without multicore cable end, 2 x 2,5 mm² flexible without multicore cable end.

Ordering codes



Example of ordering code:

MR-EU1W1P

monitoring relay **MR-EU1W1P**, multifunction (relay perform 2 functions), cover - modular, width 17,5 mm, one changeover contact, rated monitoring voltages: AC - 230 V, 24 V; DC - 24 V

PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.