

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



Technical data

1. Functions

AC/DC voltage monitoring in 1-phase mains with adjustable threshold and hysteresis.

UNDER	Undervoltage monitoring
WIN	Monitoring the window between Min and Max

2. Time ranges

	Adjustment range
Start-up suppression time (Start):	-
Tripping delay (Delay):	-

3. Indicators

Green LED ON/OFF:	indication of supply voltage
Red LED ON/OFF:	indication of failure 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 2.5mm² 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. Input circuit

Supply voltage:	(= measuring voltage)
Terminals:	
230V AC	E-F3
24V AC	E-F2
24V DC	E-F1(+)
Rated voltage Un:	see table ordering information or printing on the unit
Tolerance:	-25% to +20% of Un
Rated consumption:	
230V AC	10VA (0.6W)
24V AC	1.3VA (0.8W)
24V DC	0.6W
Rated frequency:	AC 48 to 63Hz
Duration of operation:	100%
Reset time:	500ms
Wave form:	DC, AC Sinus
Hold-up time:	-
Drop-out voltage:	determined by undervoltage detection (see measured circuit)
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 10⁶ operations
 Electrical life: 2 x 10⁵ operations at 1000VA resistive load max. 60/min at 100VA resistive load max. 6/min at 1000VA resistive load (according to IEC 947-5-1)
 Switching frequency:
 Overvoltage category: III. (according to IEC 60664-1)
 Rated surge voltage: 4kV

7. Measuring circuit

Measuring variable: DC or AC Sinus, 48 to 63Hz
 Measuring input: (= supply voltage)
 Terminals:
 230V AC E-F3
 24V AC E-F2 Distance between the devices must be greater than 5mm!
 24V DC E-F1(+)
 Overload capacity: 120% of Un
 Input resistance: -
 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 rated value
 Adjustment accuracy: ±5% of rated value
 Repetition accuracy: ≤2% of rated 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)

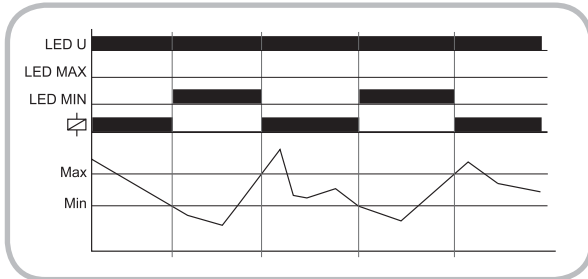
10. Weight

Single packing : 75g
 Package of 10pcs: 684g per package

Functions

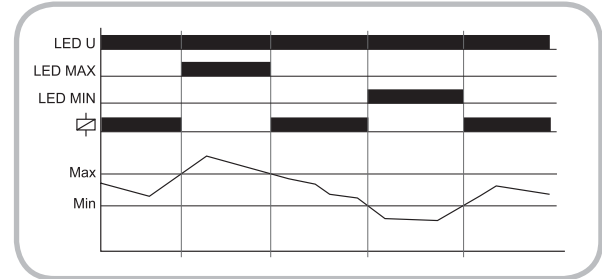
Undervoltage monitoring (UNDER)

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.

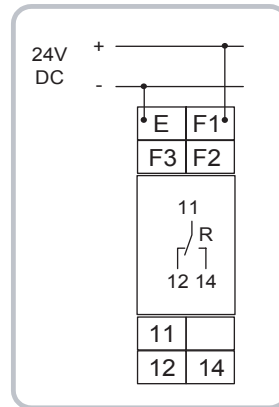
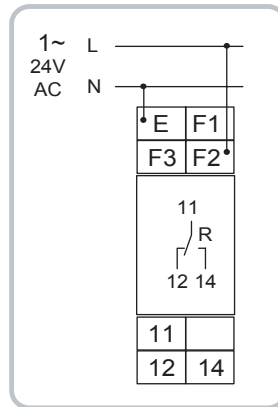
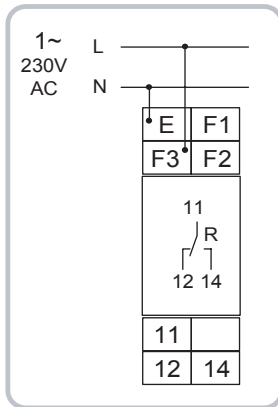


Window function (WIN)

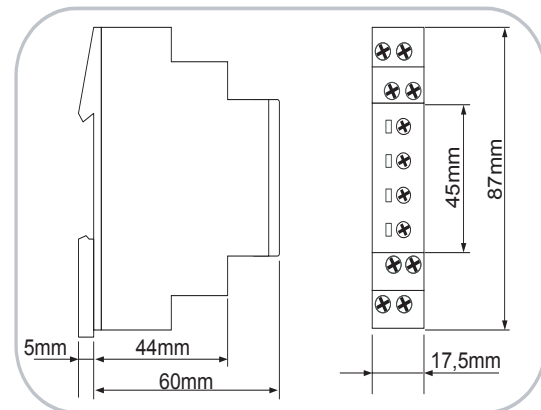
When the supply voltage U is applied, the output relay R switches into on-position, if the measured voltage is within the adjusted window. When the measured voltage left the window between Min and Max, the output relay R switches into off-position. The output relay R switches into on-position again,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



Connections



Dimensions



Ordering informations

Type	Rated voltage Un	Functions	Switching threshold Us	Delay	Hysteresis	Part Nr. (PQ 1)
E1UM230V01	24VAC/DC 230VAC	U, W	Max: 80% to 120% of Un Min: 75% of 115% of Un	-	adjustable	1340101