

## DIN Rail Mount 22.5 mm EUL Part number 84872024



- Voltage monitoring
- 2 relays to cover 6 ranges of measurement : 0.2V to 600V
- Automatic recognition AC/DC
- Frequency up to 500 Hz

### Part numbers

	Type	Measurement range	Supply voltage
84 872 024	EUL	0,2 →60 V	230 V AC

### Specifications

#### Supply

Voltage supply tolerance	-15 % / +15 % limited to -15 % / +10 % if products are mounted without space between them
Operating range	0,85 →1,15 Un
Immunity from micro power cuts	10 ms

#### Inputs and measuring circuit

Frequency of measured signal	40 →500 Hz
Threshold adjustment	10 →100 % of the measurement range
Hysteresis	5 →50 % of displayed threshold
Display precision	±10 % of full scale
Repetition accuracy with constant parameters	± 0,1 %
Measuring error with voltage drift	< 0,5 %
Measuring error with temperature drift	± 0,05 % / °C

#### Timing

Delay on threshold crossing Tt	0,1 →3 s ±10 %
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#### Output

Type of output	1 changeover AgNi, 8 AAC max
Type of contacts	No cadmium
Maximum breaking voltage	250 VAC/DC
Max. breaking current	8 AAC max.
Min. breaking current	100 mA AC/DC
Electrical life (number of operations)	AC 12 : 2000 VA - 10 <sup>5</sup> AC 15 : Cos φ = 0,3 - 6 000 DC 13 : L/R = 300 ms - 6 000
Breaking capacity (resistive)	2000 VAAC
Maximum rate	360 operations/hour at full load
Operating categories acc. to IEC/EN 60947-5-1	AC12, AC15, DC13
Mechanical life (operations)	5 x 10 <sup>6</sup>

#### Insulation

Insulation coordination (IEC/EN 60664-1)	Overvoltage category III : degree of pollution 2
Rated impulse withstand voltage (IEC/EN 60664-1)	4 kV (1,2 / 50 μs)
Dielectric strength (IEC/EN 60664-1)	2.5 kV AC 50 Hz 1 min.
Insulation resistance (IEC/EN 60664-1)	> 100 MΩ / 500 VDC

#### General characteristics

Display power supply	Green LED
Display relay	Yellow LED
Casing	22,5 mm
Mounting	On 35 mm symmetrical DIN rail, IEC/EN 60715
Mounting position	All positions
Material : enclosure plastic type VO to UL94 standard	
Protection (IEC/EN 60529)	Terminal block : IP20 Casing : IP50
Weight	160 g
Connecting capacity IEC/EN 60947-1	Rigid : 1 x 4 <sup>2</sup> - 2 x 2.5 <sup>2</sup> mm <sup>2</sup> 1 x 11 AWG - 2 x 14 AWG Flexible with ferrules : 1 x 2.5 <sup>2</sup> - 2 x 1.5 <sup>2</sup> mm <sup>2</sup> 1 x 14 AWG - 2 x 16 AWG
Max. tightening torques IEC/EN 60947-1	0,6 mN / 5,3 Lbf.In
Operating temperature IEC/EN 60068-2	-20 →+60

Storage temperature IEC/EN 60068-2	-30 → +70
Humidity IEC/EN 60068-2-30	93 % RH max. without condensation
Vibrations according to IEC/EN60068-2-6	10 → 55 Hz, A = 0.35 mm

**Standards**

Product standard	IEC/EN 60255-1
Electromagnetic compatibility (EMC)	IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4
Certifications	UL, CSA
Marking	CE (DBT) 2006/95/EC - EMC 2004/108/EC
Conformity with environmental directives	RoHS

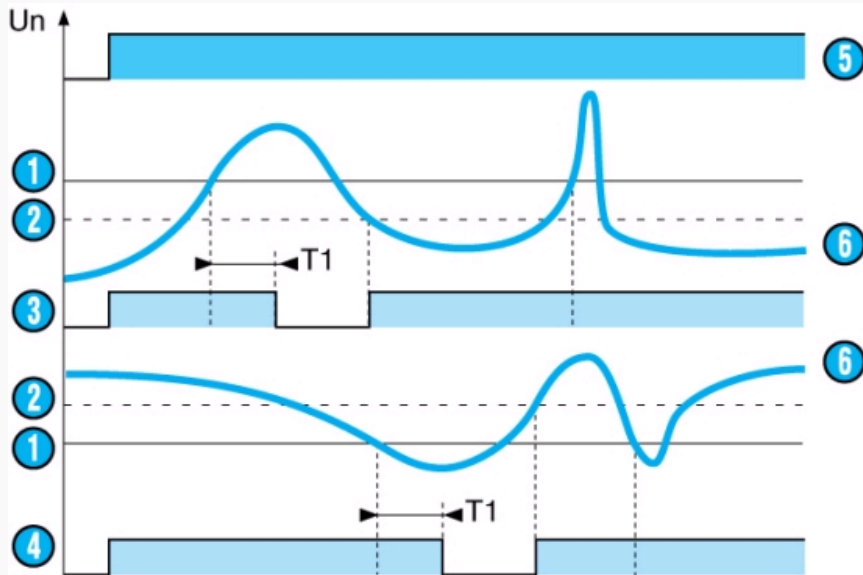
**Supply**

Supply voltage Un	24 VDC, 120 VAC, 230 VAC
Polarity with DC voltage	DC : yes
Galvanic isolation of power supply/measurement	DC : no galvanic isolation. In this case, the product power supply and measuring circuit power supply must be electrically isolated AC : galvanic isolation by transformer
Power consumption at Un	DC : 1 W AC : 3 VA

**Inputs and measuring circuit**

Measurement range	0,2 → 60 V E1-M : 0,2 → 2 V E2-M : 1 → 10 V E3-M : 6 → 60 V
Input resistance	E1-M : 2kΩ E2-M : 10kΩ E3-M : 60kΩ
Permanent overload at 20 °C	E1-M : 4 V E2-M : 20 V E3-M : 120 V
Peak overload < 1ms at 20 °C	E1-M : 50 V E2-M : 100 V E3-M : 300 V

**Principles**

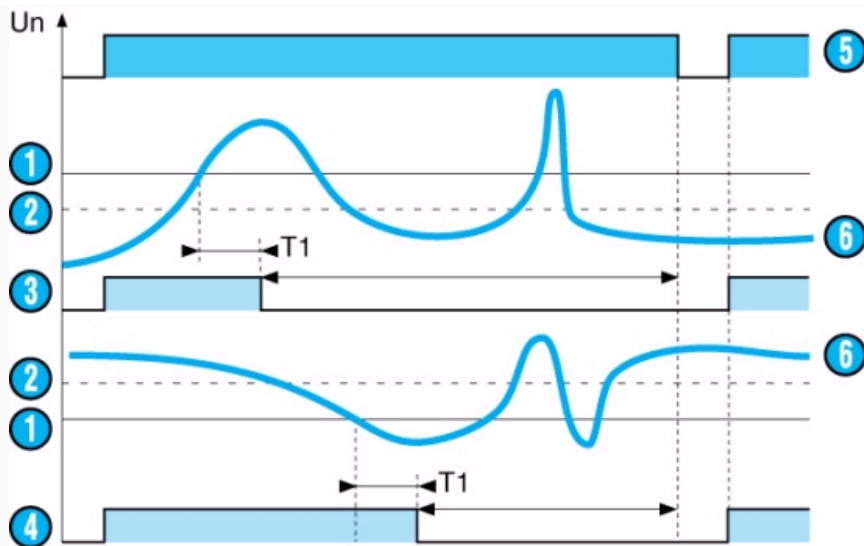


When the value of the controlled voltage, AC or DC, reaches the threshold  $U_e$  displayed on the front face, the output relay changes state at the end of a time delay  $T_1$ , which can be set on the front face at between 0.1 and 3s.

Once the voltage drops below 5 to 50 % of the threshold (hysteresis), the output relay changes state again instantly. Changing the hysteresis on the front face does not therefore modify the value of the preset threshold.

N°	Legend
1	Threshold $U_e$
2	Hysteresis
3	UPPER function
4	UNDER function
5	Unit power-up
6	Controlled voltage

**Principles**

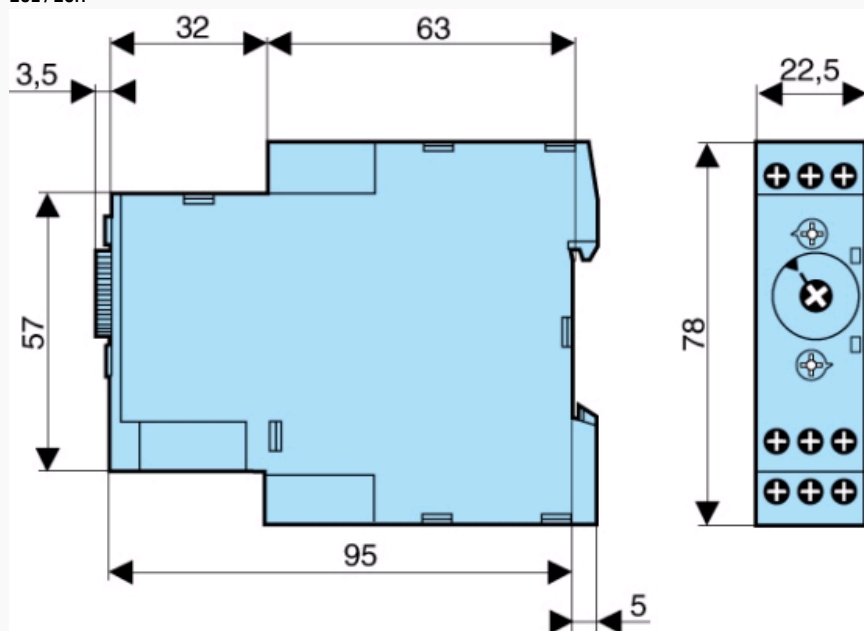


When the value of the controlled voltage, AC or DC, reaches the treshold  $U_e$  displayed on the front face, the output relay changes state at the end of a time delay  $T_1$ , which can be set on the front face at between 0.1 and 3s and remains latched in this position.

N°	Legend
1	Treshold $U_e$
2	Hysteresis
3	UPPER function
4	UNDER function
5	Unit power-up
6	Controlled voltage
7	*** TRADUCTION MANQUANTE ***

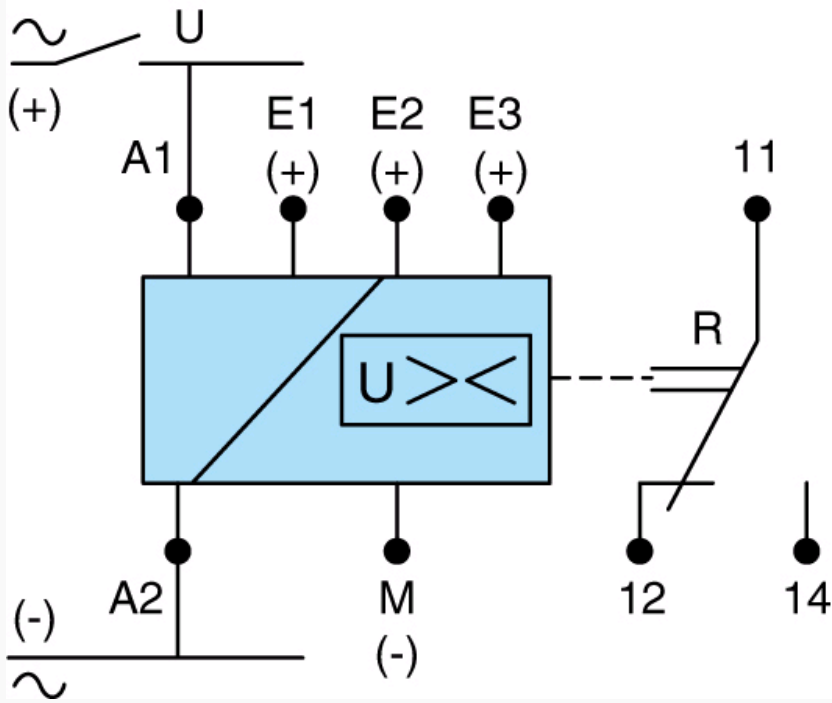
Dimensions (mm)

EUL / EUH



Connections

EUL

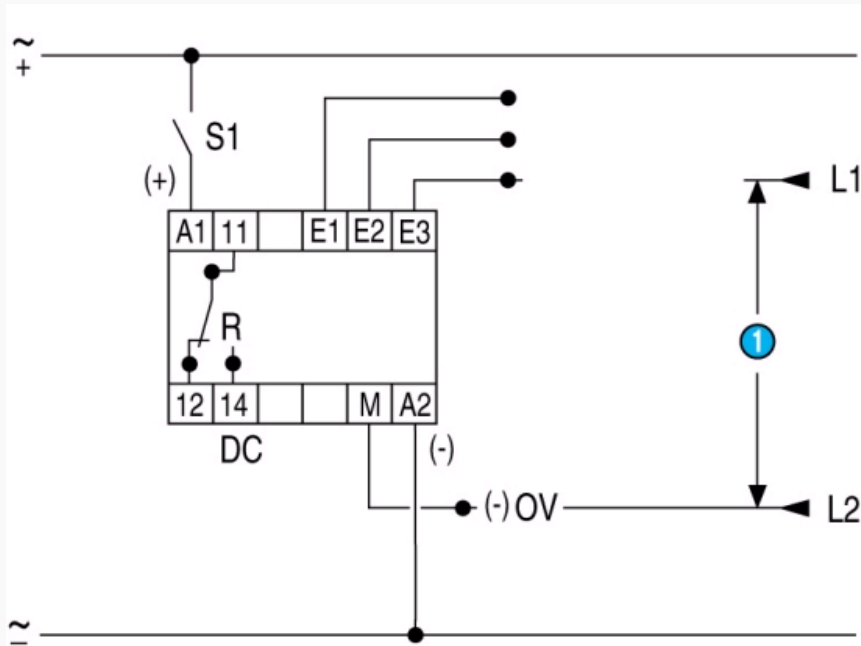


**Legend**

A1 - A2 : Supply voltage

**Connections**

EUL / EUH



N°	Legend
1	Supply voltage to be monitored

**Connections**

CA 84872020

CA 84872020

**Product adaptations**

- Customisable colours and labels
- Measuring ranges within the generic limits
- Fixed threshold in the generic measurement range
- Fixed or adjustable time delay
- Adjustable hysteresis

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