

DIN Rail Mount 17.5 mm MNS Part number 84870720



- Level control by means of a discrete sensor

Part numbers

| | Type | Sensing | Nominal voltage (V) |
|----------|------|--------------------|---------------------|
| 84870720 | MNS | By discrete sensor | 24 →240 V AC/DC |

Specifications

Supply

| | |
|--------------------------------|------------------------|
| Supply voltage Un | 24 V →240 V AC/DC |
| Voltage supply tolerance | -15 % / +10 % |
| Operating range | 20,4 V →264 V AC/DC |
| Polarity with DC voltage | No |
| AC supply voltage frequency | 50/60 Hz ± 10 % |
| Power consumption at Un | 5.5 VA in AC/2 W in DC |
| Immunity from micro power cuts | < 5 ms |

Inputs and measuring circuit

| | |
|--|---------------------|
| Display precision | ±10 % of full scale |
| Digital probe input circuit | Volt-free contact |
| Max. voltage at probe terminals | Supply voltage Un |
| Minimum pushbutton activation duration | 50 ms |
| Max input current | 1 mA |
| Max. length of probe cables | 100 m |

Timing

| | |
|--|--------------------|
| Delay on threshold crossing | 1 →10 s, (1/+10 %) |
| Repetition accuracy with constant parameters | ± 0,5 % |
| Reset time | < 100 ms |

Output

| | |
|---|---|
| Type of output | 1 single pole changeover relay |
| Type of contacts | No cadmium |
| Maximum breaking voltage | 250 V AC/DC |
| Max. breaking current | 5 A AC/DC |
| Min. breaking current | 10 mA / 5 V DC |
| Electrical life (number of operations) | 1 x 10 ⁵ |
| Breaking capacity (resistive) | 1250 VA AC |
| Maximum rate | 360 operations/hour at full load |
| Operating categories acc. to IEC/EN 60947-5-1 | AC 12, AC 13, AC 14, AC 15, DC 12, DC 13, DC 14 |
| Mechanical life (operations) | 30 x 10 ⁶ |

Insulation

| | |
|--|--|
| Nominal insulation voltage IEC/EN 60664-1 | 250 V |
| Insulation coordination (IEC/EN 60664-1) | Overvoltage category III : degree of pollution 3 |
| Rated impulse withstand voltage (IEC/EN 60664-1) | 4 kV (1,2 / 50 µs) |
| Dielectric strength (IEC/EN 60664-1) | 2 kV AC 50 Hz 1 min |
| Insulation resistance (IEC/EN 60664-1) | > 500 Ω / 500 V DC |

General characteristics

| | |
|---|--|
| Display power supply | Green LED |
| Display relay | Yellow LED |
| Casing | 17,5 mm |
| Mounting | On 35 mm symmetrical DIN rail, IEC/EN 60715 |
| Mounting position | All positions |
| Material : enclosure plastic type VO to UL94 standard | Incandescent wire test according to IEC 60695-2-11 & NF EN 60695-2-11 |
| Protection (IEC/EN 60529) | Terminal block : IP 20 Casing : IP 30 |
| Weight | 80 g |
| Connecting capacity IEC/EN 60947-1 | Rigid : 1 x 4 ² - 2 x 2,5 ² mm ² 1 x 11 AWG - 2 x 14 AWG Flexible with ferrules : 1 x 2,5 ² - 2 x 1,5 ² mm ² |

| | |
|---|---|
| | 1 x 14 AWG - 2 x 16 AWG |
| Max. tightening torques IEC/EN 60947-1 | 0,6 →1 Nm / 5,3 →8,8 Lbf.In |
| Operating temperature IEC/EN 60068-2 | -20 →+50 °C |
| Storage temperature IEC/EN 60068-2 | -40 →+70 °C |
| Humidity IEC/EN 60068-2-30 | 2 x 24 hr cycle 95 % RH max. without condensation 55 °C |
| Vibrations according to IEC/EN60068-2-6 | 10 →150 Hz, A = 0.035 mm |
| Shocks IEC/EN 60068-2-6 | 5 g |

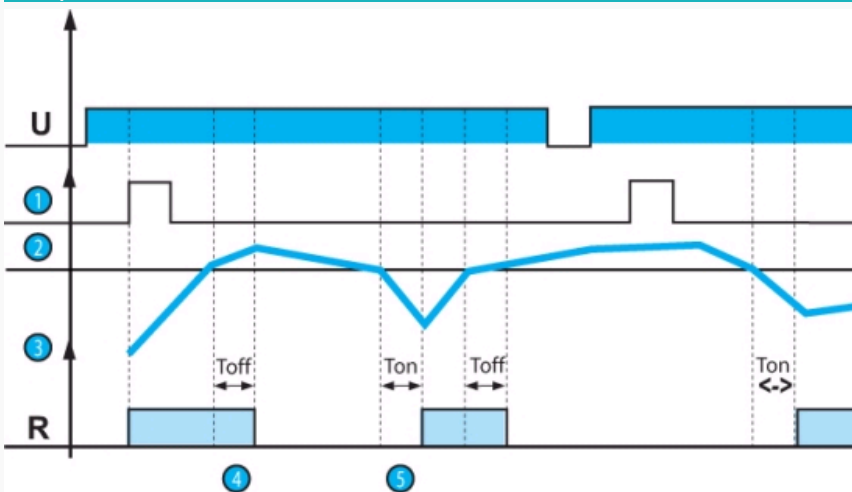
Standards

| | |
|--|---|
| Marking | CE (LVD) 73/23/EEC - EMC 89/336/EEC |
| Product standard | NF EN 60255-6 / CEI 60255-6 / UL 508 / CSA C22.2 N°14 |
| Electromagnetic compatibility | Immunity EN 61000-6-2/IEC 61000-6-2 Emission EN 61000-6-4/EN 61000-6-3 IEC 61000-6-4/IEC 61000-6-3 Emission EN 55022 class B |
| Certifications | UL, CSA, GL |
| Conformity with environmental directives | RoHS, WEEE |

Accessories

| Description | Code |
|---|----------|
| Removable sealable cover for 17.5 mm casing | 84800000 |

Principles



Operating principle

MNS - Level controller using a discrete sensor

This product is designed to control a level by means of a discrete probe (float switch).

On power-up, the relay remains in the rest position. The level control function only begins after the pushbutton (PB) is pressed. This pushbutton is located on the front of the product, but can also be remotely located between Y1 and A1.

The output relay only closes if the float switch is open. If the level rises enough to make the float switch close, the relay will be deactivated after the time delay Toff.

When the level drops and the probe opens, the relay is re-energised after the time delay Ton.

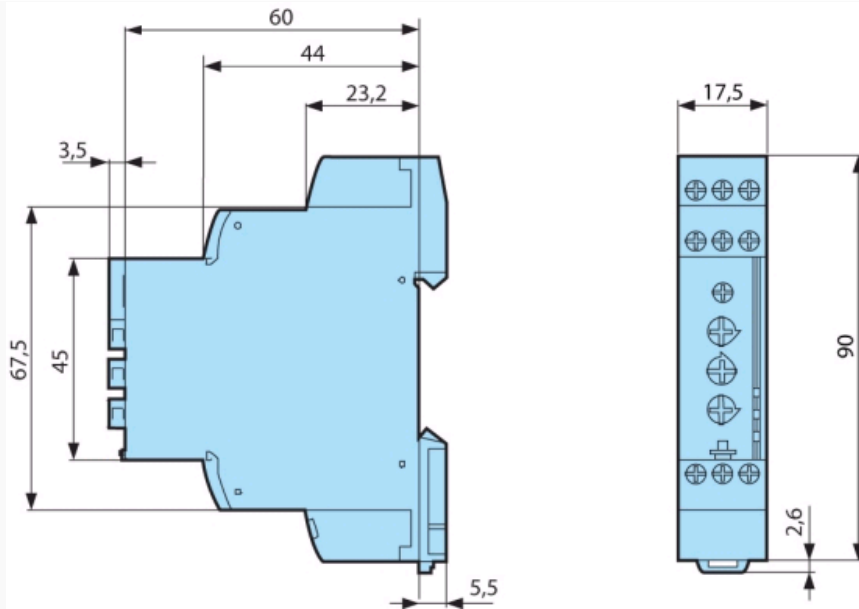
The LEDs flash when the product is energised but the cycle has not started (PB has not yet been pressed).

The time delays Ton and Toff are set at between 0.1 and 10 sec by means of two potentiometers on the front face.

| N° | Legend |
|----|----------------------|
| ① | Cycle start PB |
| ② | High threshold level |
| ③ | Monitored level |
| ④ | Ton time delay |
| ⑤ | Toff time delay |

Dimensions (mm)

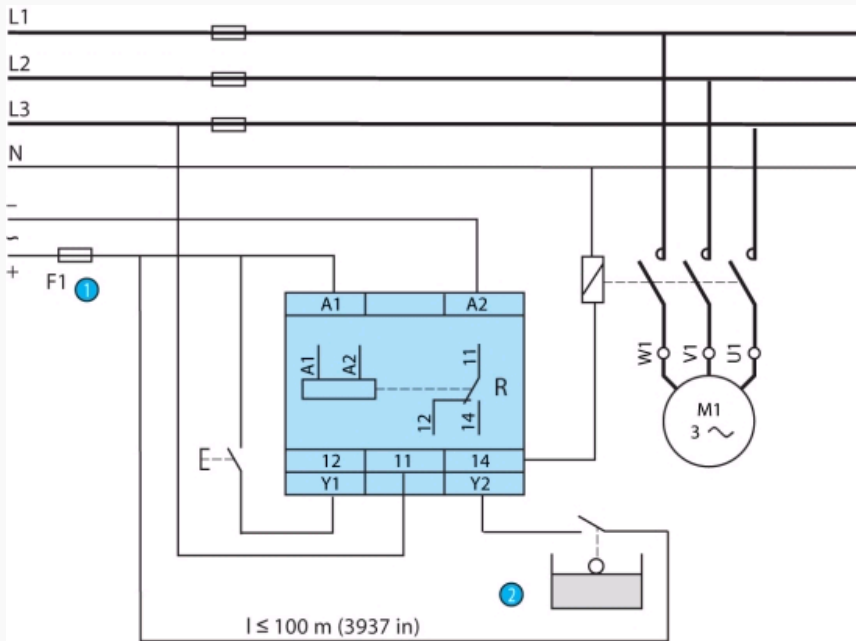
MNS



mm

Connections

MNS



| N° | Legend |
|----|---|
| 1 | Fusible ultra rapide 1 A ou coupe circuit |
| 2 | "Float" switch |

Product adaptations



- Customisable colours and labels
- Fixed time delay or adjustable range