

## DIN Rail Mount 22,5 mm ENRM Part number 84870210



- Regulation of 1 or 2 levels (min / max)
- Monitoring filling (UP) or emptying (DOWN) selected by a switch on the front panel
- Probes supplied with AC current
- Time delay preventing wave effect adjustable from 0.1 to 5s (ENRM)
- Sensitivity adjustable on front panel from 250  $\Omega$  to 1 M  $\Omega$  (ENRM)
- Sensitivity adjustable on front panel from 5 K $\Omega$  to 100 k  $\Omega$  (ENR)

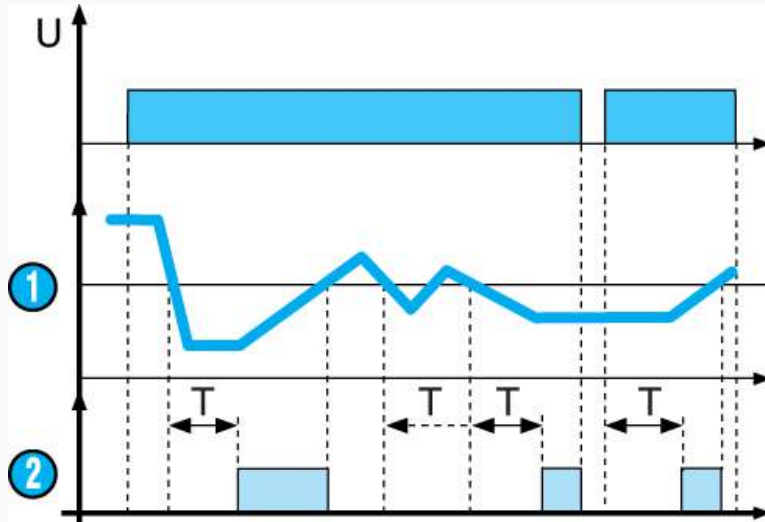
### Part numbers

| Type            | Characteristics                                    | Voltages        |
|-----------------|--|-----------------|
| 84 870 210 ENRM | Monitoring filling (UP) Monitoring emptying (DOWN) | 24 →240 V AC/DC |

### Specifications

|  |                                |
|--|--------------------------------|
| Operating range  | 24 →240 V AC/DC                |
| Operating range  | 20,4 →264 V AC/DC              |
| Maximum power consumption                              | AC 5 VA, DC 1,5 W              |
| Adjustable sensitivity                                 | 5 K $\Omega$ →100 K $\Omega$   |
| Measurement accuracy (at maximum sensitivity)          | ± 30 %                         |
| Electrode voltage (max)                                | 12 V                           |
| Electrode current (maximum)                            | 1 mA                           |
| Maximum cable capacity                                 | 10 nF                          |
| Response time high level                               | 300 ms                         |
| Response time low level                                | 500 ms                         |
| Output relay (according to AC1 resistive load)         | 1 changeover relay 8 A AC max. |
| Isolation of contacts and electrodes from power supply | 2,5 kV AC                      |
| Operating temperature range (°C)                       | -20 →+50 °C                    |
| Storage temperature range (°C)                         | -40 →+70 °C                    |
| Weight (g)   | 91                             |

### Principles



#### Monitoring a level, filling function, activation time

(level : 1 - on delay, function Up LS (Low Sensitivity : 250  $\Omega$  to 5 k $\Omega$ ), Up St (Standard Sensitivity : 5 k $\Omega$  to 100 k $\Omega$ ), Up HS (High Sensitivity : 50 k $\Omega$  to 1 M $\Omega$ ).

When the level of liquid drops below the probe for a period exceeding the value of time delay T set on the front panel, the relay energises and remains on until the level of liquid reaches the probe again.

If the level of liquid returns above the level set before the time delay elapses, the relay does not come on.

#### Note

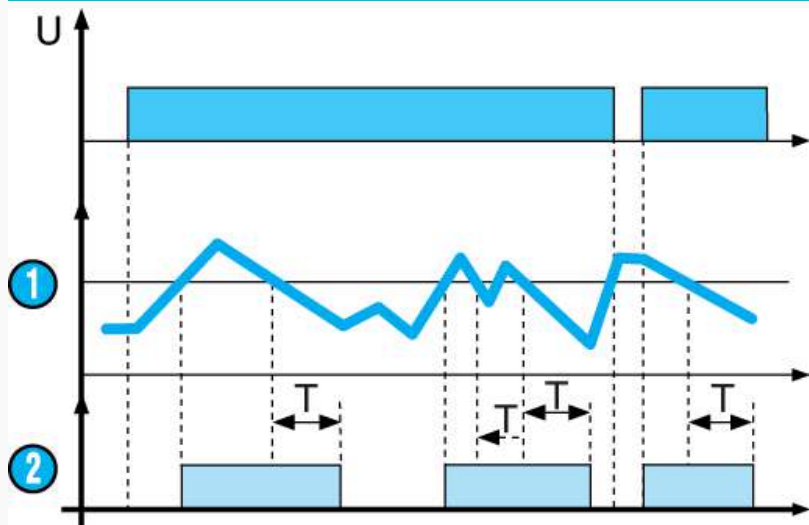
When the power returns after a power break, the output relay only energises after time delay T if the level of liquid is below the threshold.

| N° | Legend |
|----|--------|
| 1  | Level  |



|   |       |
|---|-------|
| ② | Relay |
|---|-------|

**Principles**



**Monitoring a level, emptying function, deactivation time**

(level : 1 - off delay, function Dwn LS (Low Sensitivity : 250 Ω to 5 kΩ) or Dwn St (Standard Sensitivity : 5 kΩ to 100 kΩ) or Dwn HS (High Sensitivity : 50 kΩ to 1 MΩ).

When the level of liquid rises above the probe the relay energises immediately and remains on until the level of liquid drops back below the probe for a period exceeding the value of time delay T set on the front panel.

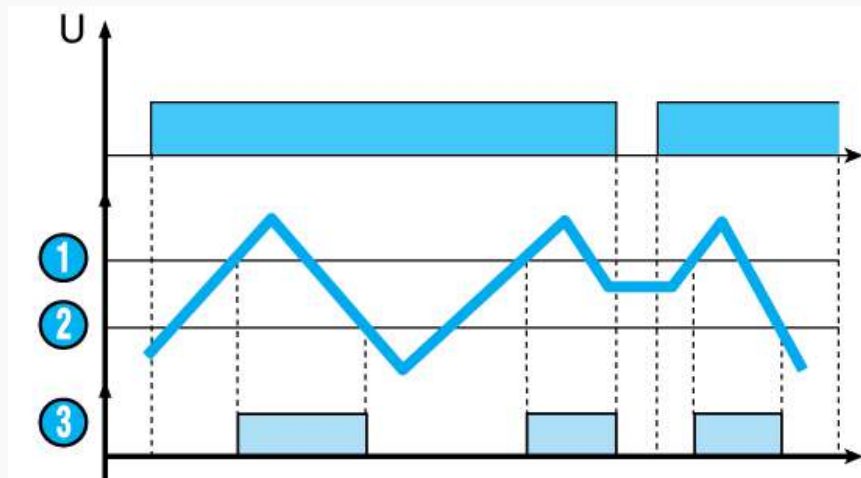
If the level of liquid returns above the level set before the time delay elapses the relay remains on.

**Note**

When the power returns after a power break, the output relay energises immediately if the level of liquid is above the threshold.

| N° | Legend |
|----|--------|
| ①  | Level  |
| ②  | Relay  |

**Principles**



**Monitoring two levels, emptying function**

(level : 2, function Dwn LS (Low Sensitivity : 250 Ω to 5 kΩ), Dwn St (Standard Sensitivity : 5 kΩ to 100 kΩ), Dwn HS (High Sensitivity : 50 kΩ to 1 MΩ).

The output relay remains open as long as the level of liquid has not reached the maximum probe. Once the maximum level is reached the contact closes and the tank can then be emptied (valve opened, pump started, etc). When the level drops below the minimum level the contact opens and interrupts the emptying process.

Note : when monitoring two levels the time delay preventing the wave effect is not in operation.

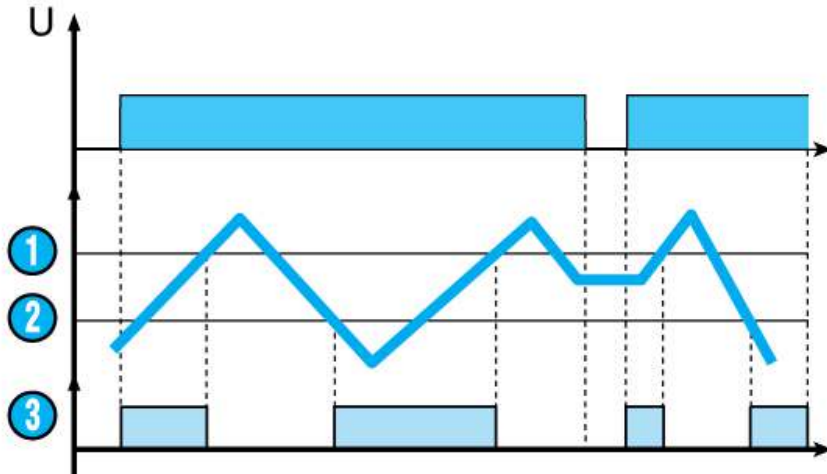
**Note**

When the power returns after a power break, the output relay energises immediately if the level of liquid is above the threshold.

| N° | Legend        |
|----|---------------|
| ①  | Maximum level |
| ②  | Minimum level |

Output relay : Down

Principles



Monitoring two levels, filling function

(level : 2, function Up LS (Low Sensitivity : 250 Ω to 5 kΩ) or Up St (Standard Sensitivity : 5 kΩ to 100 kΩ) or Up HS (High Sensitivity : 50 kΩ to 1 MΩ).

The output relay remains on as long as the level of liquid has not reached the maximum probe. As soon as the maximum level is reached the contact opens and pumping stops. When the level drops below the minimum level the contact closes again and pumping restarts to bring the level of liquid back up.

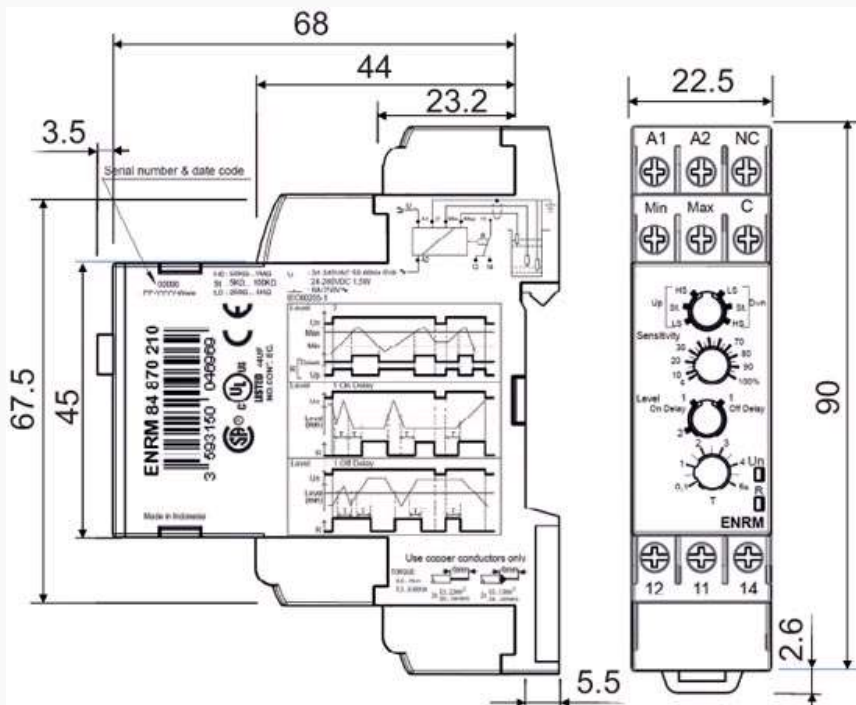
Note : When monitoring the two levels the time delay preventing the wave effect is not in operation.

**Note**  
When the power returns after a power break, the output relay energises immediately if the level of liquid is below the threshold.

| N° | Legend            |
|----|-------------------|
| 1  | Maximum level     |
| 2  | Minimum level     |
| 3  | Output relay : Up |

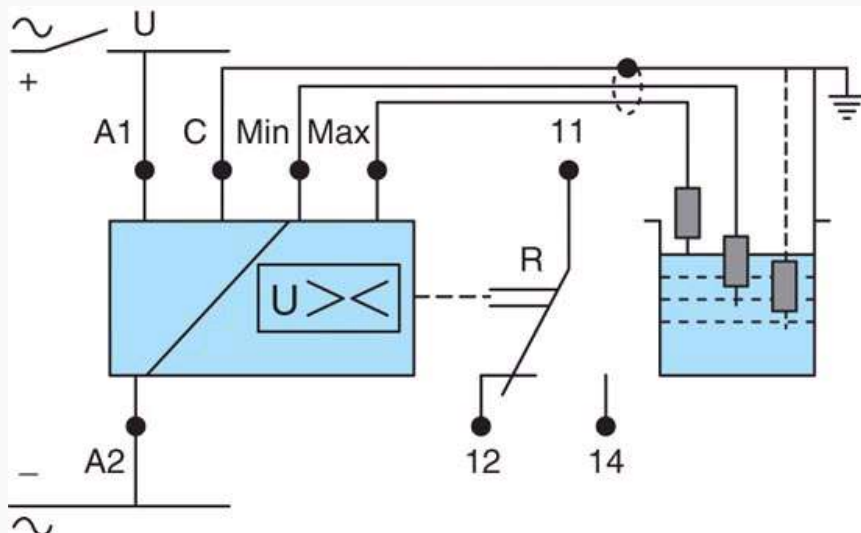
Dimensions (mm)

ENRM



## Connections

## ENRM



## Connections

## CA ENRM

 CA ENRM