

## DC voltage monitoring relay

Adjustment of setpoint and hysteresis

Selectable activation or release of relay

DC supply or AC supplies up to 230 VAC

1- or 2-pole relay output

Made in accordance with the **CE** and EMC regulations



The C-mac<sup>®</sup> module, type RV20 is a simple voltage monitoring relay for DC input signals.

The module is available for several different metering ranges, but the range must be specified at ordering, since each unit has only got one metering range.

By means of a connection at the relay base you can select, if the output relay should activate or release, when the setpoint is exceeded, in this way, the module can be used for both over- and under current monitoring.

### Common technical data:

**Supply voltage, AC:** 24, 115 and 230 VAC +/- 10%

**Supply frequency:** 40-70 Hz

**Variable supply:** 12-50 VDC or 48-250 VDC

**Isolation voltage:** Supply - input - output: 3.75 kV

**Supply voltage, DC:** 24 VDC +/- 10%  
Note: With this DC-supply there is no isolation between supply and internal electronics.

**Power consumption:** 2,5 VA

**Operation temp.:** -20°C to +60°C

**Humidity:** 0 - 90% RH, non-condensing

**Relay inversion:** pin 6-7  
Open: Relay releases at undervoltage  
Closed: Relay releases at overvoltage

**Adjustments:**  
Level: Potentiometer, scale 5 to 100%  
Hysteresis: Potentiometer, scale 5 to 50%

**Indications:**  
Green LED: Supply voltage connected  
Red LED: Relay active

**Accuracy, scale:** 5 %

**Temp. coefficient:** typ 0,1 % / °C

**Max. load, relay:** 1-pole: 8 A - 250 VAC  
2-pole: 5 A - 250 VAC,  
ohmic load

### EMC and safety regulations.

**Emmission:** EN 50 081 - 1

**Immunity:** EN 50 082 - 2

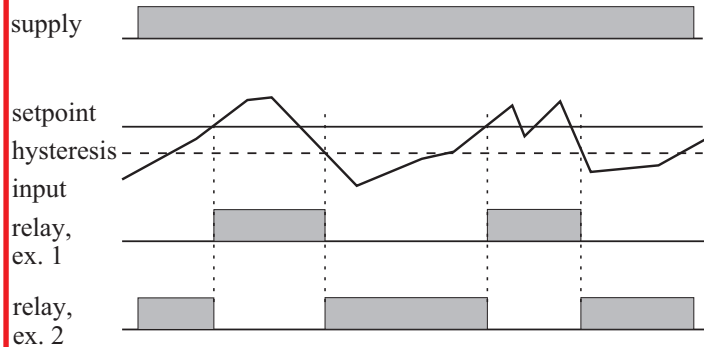
**Safety:** EN 60 730

**Approvals:** The units are produced in accordance with the CE og low voltage regulations.

### Metering ranges RV20:

| range        | inp. resist. | max voltage |
|--------------|--------------|-------------|
| 3 - 60 mV    | 150 Ω        | 1 V         |
| 7,5 - 150 mV | 150 Ω        | 2 V         |
| 0,05 - 1 V   | 1 kΩ         | 10 V        |
| 0,25 - 5 V   | 3 kΩ         | 30 V        |
| 0,5 - 10 V   | 10 kΩ        | 50 V        |
| 1 - 20 V     | 20 kΩ        | 100 V       |
| 2,5 - 50 V   | 50 kΩ        | 150 V       |

### Functional diagram:



Example 1, undervoltage monitoring  
pin 6-7 not connected

Example 2, overvoltage monitoring  
pin 6-7 connected

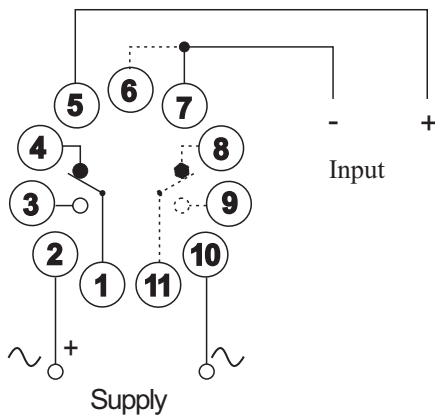
## Ordering guide, RV20:

| Supply     | Type number.     |
|------------|------------------|
| 12- 50 VDC | RV20-x-4-012-yyy |
| 48-250 VDC | RV20-x-4-048-yyy |
| 24 VDC     | RV20-x-0-024-yyy |
| 24 VAC     | RV20-x-1-024-yyy |
| 115 VAC    | RV20-x-1-115-yyy |
| 230 VAC    | RV20-x-1-230-yyy |

x = output relay:     1 = 1-pole  
                          2 = 2-pole

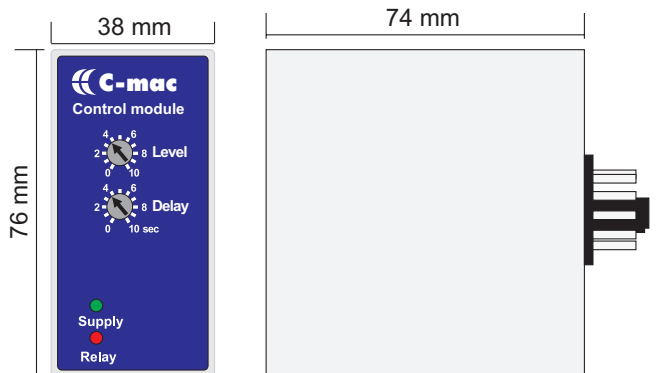
yyy = metering range: 60M = 3 - 60 mV  
                          150M = 7,5 - 150 mV  
                          1V = 0,05 - 1 V  
                          5V = 0,25 - 5 V  
                          10V = 0,5 - 10 V  
                          20V = 1 - 20 V  
                          50V = 2,5 - 50 V

## Connections, RV20:



Connections 8-9-11: 2-pole version only.

## Mechanical dimensions:



## Materials and weight:

**Housing:** NORYL-SE-1, grey, self-extinguishing

**Housing bottom:** NORYL SE-1, GFN-2, black, self-extinguishing

**Terminals:** Nickel-plated brass

**Weight:** 180 g