

## RC15: AC-current monitor RC20: DC-current monitor

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® modules, type RC15 and RC20 are simple current monitoring relays, for AC- and DC input signals, respectively.

The modules are 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 undercurrent

Closed: Relay releases at overcurrent

**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:

	range	int. shunt	max current
<b>RC15:</b>	0,05 - 1 A AC	0,220 Ω	3 A
	0,25 - 5 A AC	0,033 Ω	8 A
<b>RC20:</b>	0,05 - 1 mA	100 Ω	10 mA
	1 - 20 mA	5,00 Ω	100 mA
	5 - 100 mA	1,30 Ω	500 mA
	25 - 500 mA	0,20 Ω	2 A
	0,1 - 2 A	0,07 Ω	6 A
	0,25 - 5 A	0,03 Ω	10 A

### Functional diagram:

supply

setpoint

hysteresis

input

relay,

ex. 1

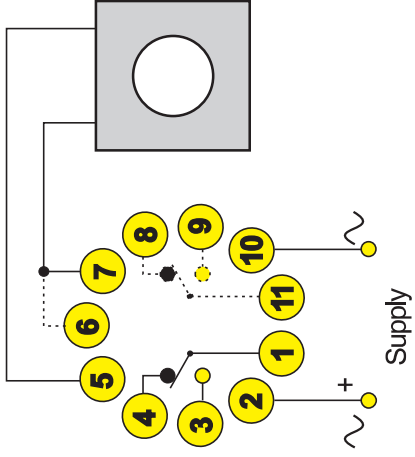
relay,

ex. 2

Example 1, undercurrent monitoring  
pin 6-7 not connected

Example 2, overcurrent monitoring  
pin 6-7 connected

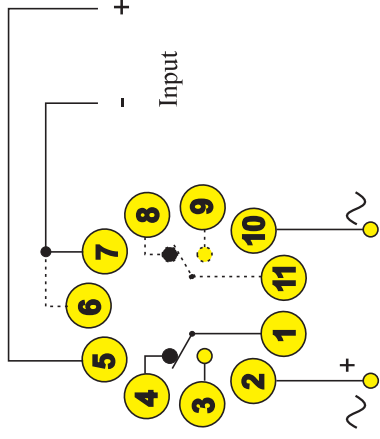
### Connections, RC15:



Supply

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

### Connections, RC20:



Supply

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

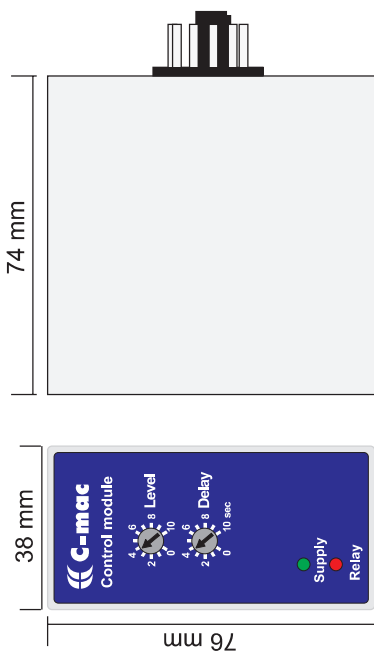
### Ordering guide, RC20:

Supply	Type number.
12- 50 VDC	RC20-x-4-012-yyy
48-250 VDC	RC20-x-4-048-yyy
24 VDC	RC20-x-0-024-yyy
24 VAC	RC20-x-1-024-yyy
115 VAC	RC20-x-1-115-yyy
230 VAC	RC20-x-1-230-yyy

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

yyy = metering range: 1M = 0,05 - 1 mA  
20M = 1 - 20 mA  
100M = 5 - 100 mA  
500M = 25 - 500 mA  
2A = 0,1 - 2 A  
5A = 0,25 - 5 A

### 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

### Ordering guide, RC15:

Supply	Type number.
12- 50 VDC	RC15-x-4-012-y
48-250 VDC	RC15-x-4-048-y
24 VDC	RC15-x-0-024-y
24 VAC	RC15-x-1-024-y
115 VAC	RC15-x-1-115-y
230 VAC	RC15-x-1-230-y

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

y = metering range: 1 = 0,05 - 5 A AC  
5 = 0,25 - 5 A AC

- 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® 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:** Potentiometer, scale 5 to 100%
- Level: Potentiometer, scale 5 to 50%
- Hysteresis: Supply voltage connected
- Indications:** Relay active
- Green LED: 5 %
- Red LED: typ 0,1 % / °C
- Accuracy, scale:** 1-pole: 8 A - 250 VAC
- Temp. coefficient:** 2-pole: 5 A - 250 VAC,
- Max. load, relay:** ohmic load

**EMC and safety regulations.**

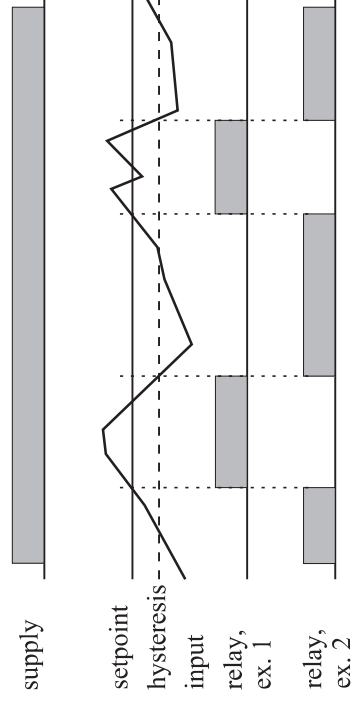
- Emmission:** EN 50 081 - 1
- Immunity:** EN 50 082 - 2
- Safety:** EN 60 730

**Approvals:** The units are produced in accordance with the CE and 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

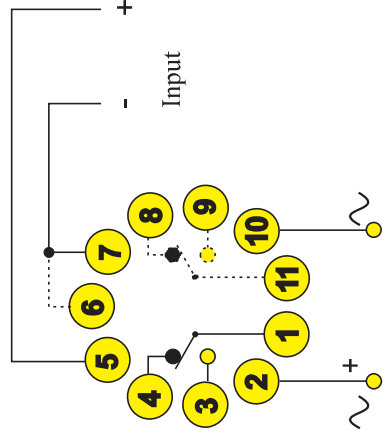
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24 VAC	RV20-x-1-024-yyy
115 VAC	RV20-x-1-115-yyy
230 VAC	RV20-x-1-230-yyy

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

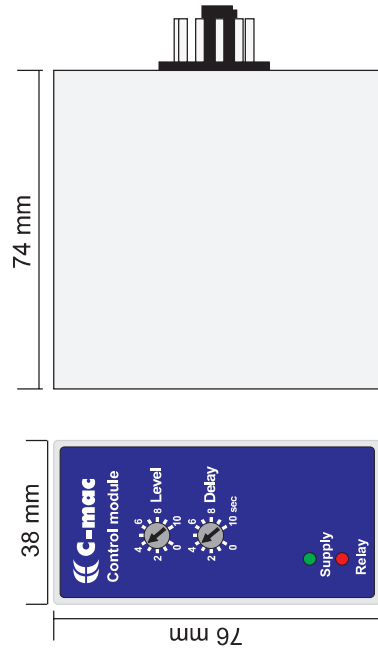
### Connections, RV20:



Supply

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

### Mechanical dimensions:



### Materials and weight:

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**Housing bottom:** NORYL SE-1, GFN-2, black, self-extinguishing  
**Terminals:** Nickel-plated brass  
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