- **Temperature monitoring relay for Pt100 sensor**
- **4 metering ranges in one module**
- **Adjustments for setpoint and time delay**
- **Selectable range, relay inversion and time delay**
- **Cable resistance compensation**
- **1- or 2-pole relay output**
- **DC supply or AC supplies up to 230 VAC**
- **Made in accordance with the CE and EMC regulations**

C-mac® monitoring relay, type RM34, is used for temperature metering in conjunction with Pt100 temperature sensors according to DIN 43760. A 3-wire metering principle is used, which means that the module compensates for the external cable resistance. The cable monitoring circuit also ensures that the relay will release in case of short-circuit or cable breakage.

By means of a DIP-switch in the bottom of the unit you can select between 4 metering ranges and 4 different combinations of relay inversion and reaction-delay.

The 4 metering ranges are:
-50 - 50 °C
  0 - 100 °C
 50 - 150 °C
100 - 200 °C
With the relay inversion you can select, if the unit is used for heating or cooling.
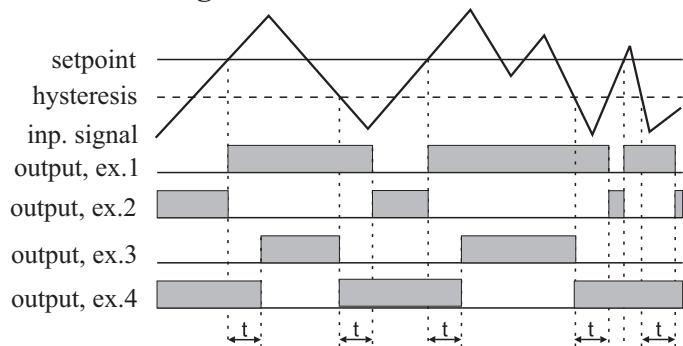The time-delay is adjustable between 0 and 10 sec.

The module is available with either 1- or 2-pole relay output.

On the front of the unit you can adjust the setpoint and reaction-delay between 0 and 10 seconds.

The unit is supplied for 24, 115 or 230 VAC supply or 10-50 VDC sypply.

Functional diagram:

Function and range selection:

SW 1	SW 2	ex. no.	function
OFF	OFF	1	Relay activates, when setpoint is exceeded, delay on release
ON	OFF	2	Relay releases, when setpoint is exceeded, delay on activate
OFF	ON	3	Delay on activate, when setpoint is exceeded
ON	ON	4	Delay on release, when setpoint is exceeded
SW 3	SW 4	Metering range	
OFF	OFF	-50 - +50 °C	
ON	OFF	0 - 100 °C	
OFF	ON	50 - 150 °C	
ON	ON	100 - 200 °C	

Comadan Produktion a/s

Common technical data:

Supply, AC:	24, 115 and 230 VAC +/- 10%
Supply frequency:	40-70 Hz
Supply, DC:	12-50 VDC
Isolation voltage:	Supply-input-output: 3.75 kV
Power consumption:	3 VA
Operation temp.:	-20°C to +60°C
Humidity:	0 - 90% RH, non-condensing
Temp. coefficient:	< 0,01% /°C

Indications:

Green LED, active:	Supply ON and input OK
flashing:	Supply ON and input signal outside the metering range or cable fault
Red LED:	Relay active

Selection of function:

S1-S2:	relay inversion and reaction delay, see table and functional diagram
S3-S4:	Selection of metering range, see table

Adjustments:

Potentiometer 1:	setpoint , 0-100% of the range
Potentiometer 2:	reaction delay, 0-10 seconds

Hysteresis:	1.5 °C

Sensor connections: Pin 5-6-7,

pin 5:	Cable compensation
pin 6-7:	Pt100 sensor

Max. load, relay:

1-pole:	8 A - 250 VAC, ohmic load
2-pole:	5 A - 250 VAC, ohmic load

EMC og safety regulations.

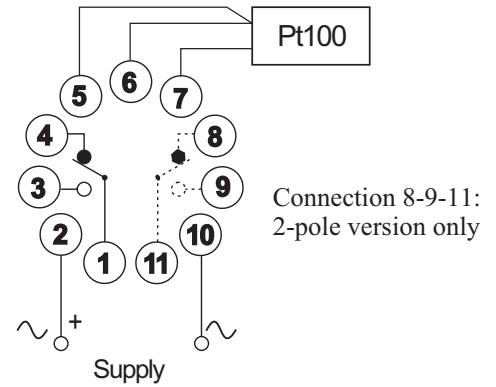|	
Emmision:	EN 50 081 - 1
Immunity:	EN 50 082 - 2
Safety:	EN 60 730

Approvals: The units are produced in accordance with the CE og low voltage regulations.
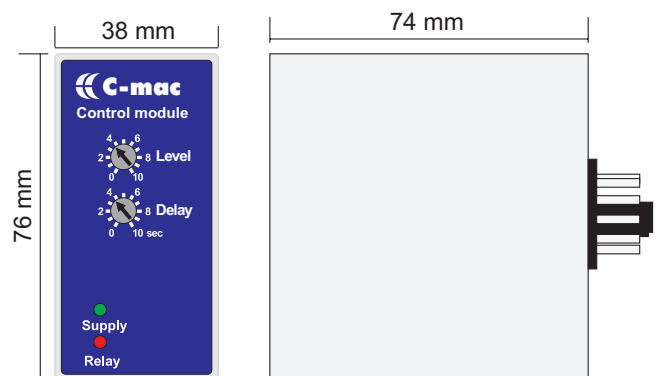
Ordering guide, RM34:

supply	type number
12-50 VDC	RM34-x-4-012
24 VAC	RM34-x-1-024
115 VAC	RM34-x-1-115
230 VAC	RM34-x-1-230

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

Connection diagram:

Connection 8-9-11: 2-pole version only

Supply

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:	190 g

Comadan Produktion a/s

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