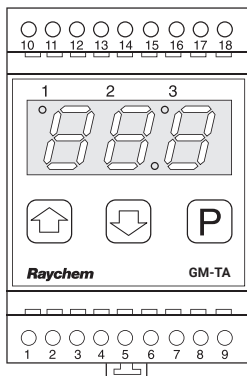




RAYCHEM

GM-TA Thermostat

Installation and Operation Manual



nVent RAYCHEM Thermostat GM-TA (PCN: 1244-017783)

- Ambient sensor GM-TA-SA (PCN:1244-017965)
- Installation instruction

PRECAUTIONS!

- Electrical installation and commissioning must be done by authorised personnel.
- To be installed and commissioned in accordance with local safety and electrical regulations.
- Do not exceed the maximum electrical ratings for the product.

The RAYCHEM GM-TA electronic thermostat is used for the efficient operation of heating cables for roof & gutter snow melting applications. The manufacturer recommends the use of this thermostat for roof & gutter heating circuits up to a maximum length of 30m.

- Din-Rail mounted within an electrical enclosure (indoor installation)

- Ambient sensor controlled,

Ambient sensor installed outside of the building

- Two temperature set-points
- Post heating function

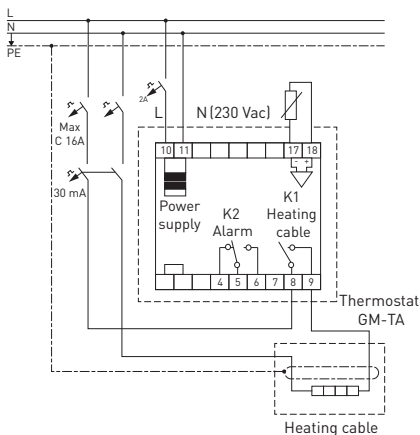
FUNCTIONAL DESCRIPTION

The heating system is switched on according to the temperature range that has been determined by the user. The control relay will switch on the heating cable when the ambient temperature falls below the temperature set point (+2°C). If the temperature decreases to the lower temperature set point e.g. (SP1: -10°C) the control relay switches the heating cable OFF.

ELECTRICAL SCHEME

Installation: The GM-TA thermostat is intended for installation within a distribution panel installed inside the building. The thermostat is to be powered from a 230 Vac electrical supply in accordance with local electrical regulations. The heating cable and earthing connections need to be made in accordance with the circuit diagrams (shown below).

Where the supply current to the contact (K1) exceeds 10A, a power cable with 2.5 mm² cross section must be used.



The GM-TA-AS Sensor must be installed outside the building and securely fastened to the wall (preferably north facing). The sensor must be connected to a sensor cable (Standard NYM 3 x 1,5 mm², max. 100 m), which will be installed in the building and connected to the GM-TA thermostat. Outdoor installation of the thermostat is possible by using the RAYCHEM GM-TA OUTDOOR-Box with IP 65 (PCN: 1244017966) rating.

TECHNICAL DATA

Technical data

Supply voltage	230 Vac, +10%/−10%, 50 Hz
Relay switching capacity	max 16 A (resistive load)
Power consumption	Max. 5 VA
Terminal size	2,5 mm ² , screwed
Operation ambient temperature range	-30°C to +40°C
Set point ambient temperature range	0°C to +6°C; default +2°C
Switching hysteresis	+1 K
Accuracy	+/- 1,5 K incl.

Programmable parameter

Temperature setting range	Set point : 0°C to 6°C;
Lower temperature range	-5°C to -25°C ; default -10°C
Post heating time	0 to 3 hrs; default: 0,5 hr, editable

Enclosure thermostat:

Installation:	DIN-rail-mounted
IP rating	IP 20

Ambient sensor:

IP rating	IP 65
Installation	Wall mounted or outdoors
Ambient sensor type	NTC 2.0K @ 25°C
	Temperature Ohm
	-5°C 6277
	0°C 5114
	+5°C 4188

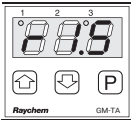
Approvals:	CE;RoHS, REACH
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Error codes:

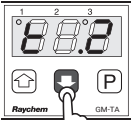
E1	Ambient temperature sensor open circuit or short circuit
E2	Internal error

OPERATION

• Set Point



Firmware revision

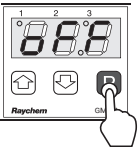
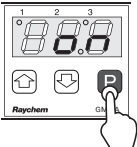
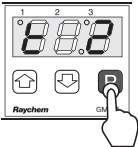


Temperature set point

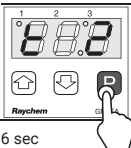


Display set and actual temperature

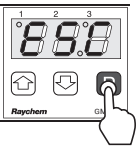
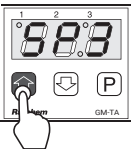
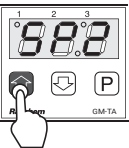
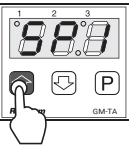
• Thermostat On Or Off Mode



• Parameter settings SP1; SP2 or SP3

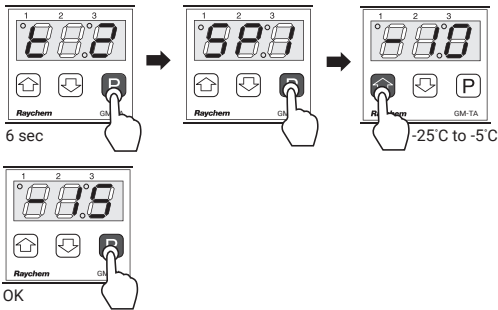


6 sec

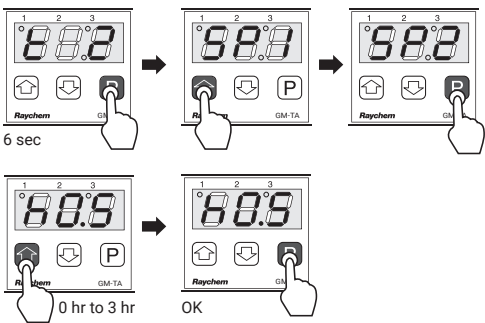


OPERATION

• Low Temperature set point SP 1

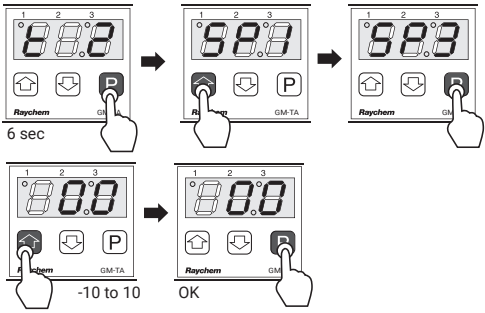


• Post heating time SP 2

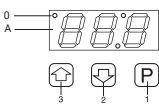


OPERATION

• Sensor correction value SP 3



DISPLAY INFO



- A-LED Display (temperature and alarm)
- 0-Heating system ON
- 1-Program mode selection ON /OFF
- 2-Reduce value (change set temperatures)
- 3-Increase value (change of set temperature)

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