



RAYCHEM

GM-TA Thermostat

- **EN** Installation and Operation Manual
- **DE** Montage-und Betriebsanleitung
- **FR** Manuel d'installation et d'utilisation
- **PL** Podręcznik montażu i eksploatacji
- **CZ** Návod k instalaci a nastavení
- **RU** Руководство По Монтажу И Эксплуатации
- **SV** Installations- och användarmanual

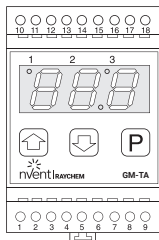


Figure A

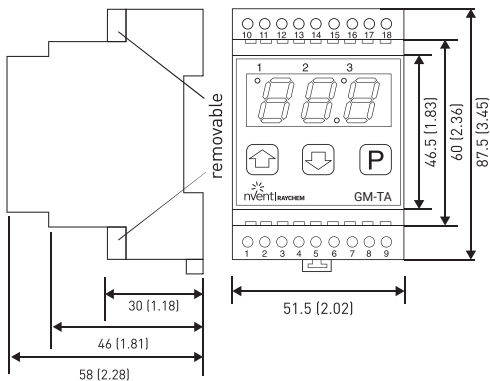
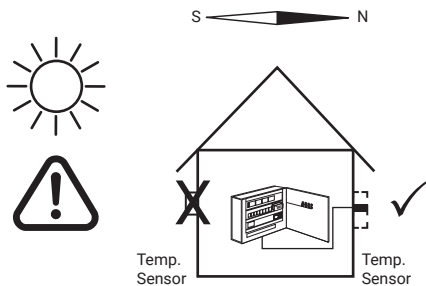


Figure B : Ambient Temp. Sensor GM-TA-AS



Precautions!

nVent RAYCHEM GM-TA is an electronic thermostat to control heating cables in roof & gutter snow melting applications. nVent recommends the use of this thermostat for roof & gutter heating circuits up to a maximum length of 30 m.

- 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.

GM-TA is to be DIN-Rail mounted within an electrical enclosure (indoor installation).

The ambient temperature sensor GM-TA-AS is to be installed outside of the building but protected from direct sun light.

Functional description

The heating is switched on in accordance with the temperature range that has been set by the user.

The control relay will switch ON the heating cable when the ambient temperature falls below the temperature set point (default: +2°C). If the temperature decreases below the lower temperature set point (e.g. SP1: -10°C) the control relay switches the heating cable OFF.

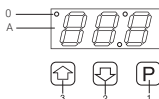
Installation

The GM-TA thermostat is intended for installation within a distribution panel. 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 wiring diagram (figure C - last page).

Outdoor installation of the GM-TA thermostat is possible by using the nVent GM-TA-OUTDOOR-BOX (PCN 1244-017966) with IP65 rating.

The GM-TA-AS sensor must be installed outside the building and securely fastened to the wall (preferably north facing) (figure B). The sensor must be connected with a sensor cable (e.g. round 3 x 1,5 mm², max. 100 m) to the GM-TA thermostat.

Display



A-LED Display (temperature and alarm)

0-Off: Heating cable OFF

-On: Heating cable ON

-Blinking: Post heating or Test

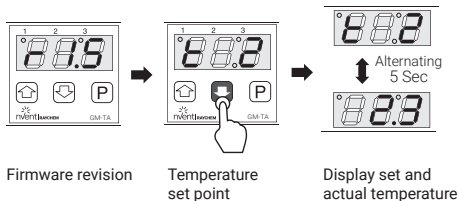
1-Program mode selection ON /OFF

2-Reduce value (change set temperatures)

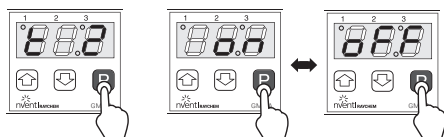
3-Increase value (change of set temperature)

Operation

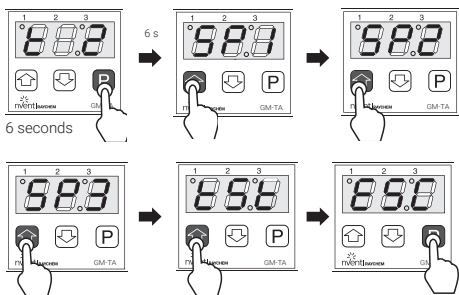
Set Point



Thermostat Control Relay: On or Off Mode

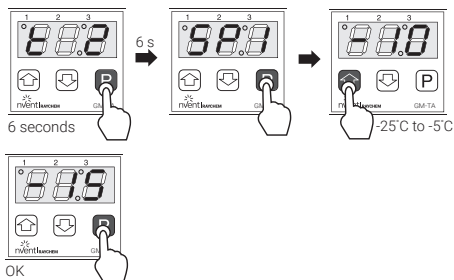


Parameter settings SP1; SP2; SP3 or Test

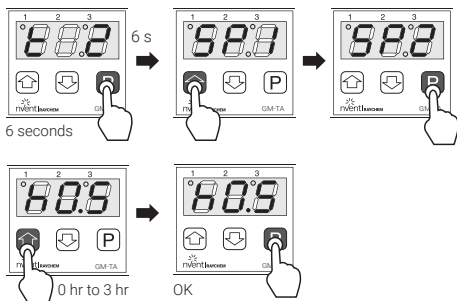


Operation

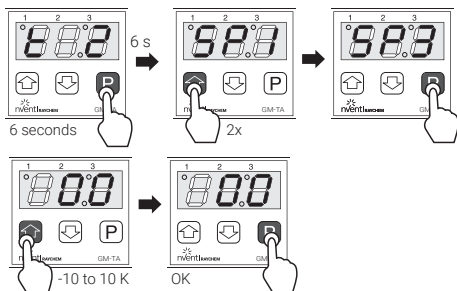
Low temperature set point SP 1



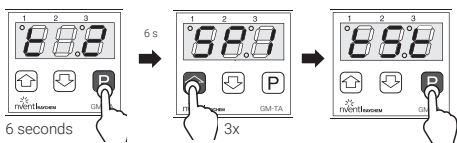
Post heating time SP 2



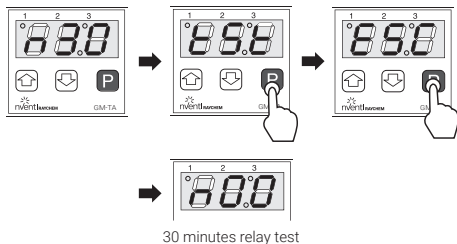
Sensor correction value SP 3



Test Control Relay – 30 minutes



manual test stop (< 30 min)



Technical data

Technical data GM-TA (PCN 1244-017783)

Supply voltage	230 Vac, +10%/–10%, 50 Hz
Relay switching capacity	Max 16 A (resistive load)
Power consumption	Max 5 VA
Terminal size	Max. 2,5 mm ² , screwed
Storage temperature	–20°C to +50°C
Operation ambient temperature range	–25°C to +40°C
Switching hysteresis	+/–1 K
Accuracy	+/– 1,5 K incl. sensor accuracy

Programmable parameters	Default
Temperature setting range	Set point : 0°C to 6°C 2°C
Lower temperature range	–5°C to –25°C –10°C
Post heating time	0 to 3 hours 0,5 h
Operating modus	On: normal operation Off: relay off (open) Test: relay On (30 minutes)

Enclosure thermostat

Installation	DIN-rail-mounted
IP rating	IP 20

Ambient sensor GM-TA-AS (PCN 1244-017965) included

IP rating	IP 65
Installation	Wall mounted / outdoors
Ambient sensor type	202AT +/-1% NTC 2.0 K @ 25°C

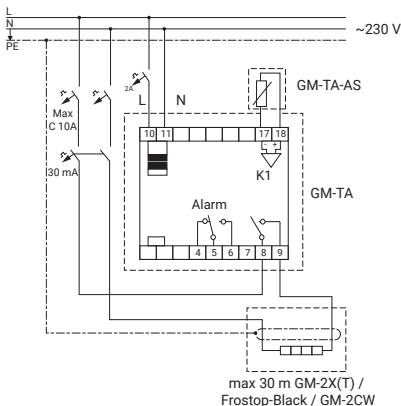
Approvals

CE, UKCA, RoHS, REACH

Error codes

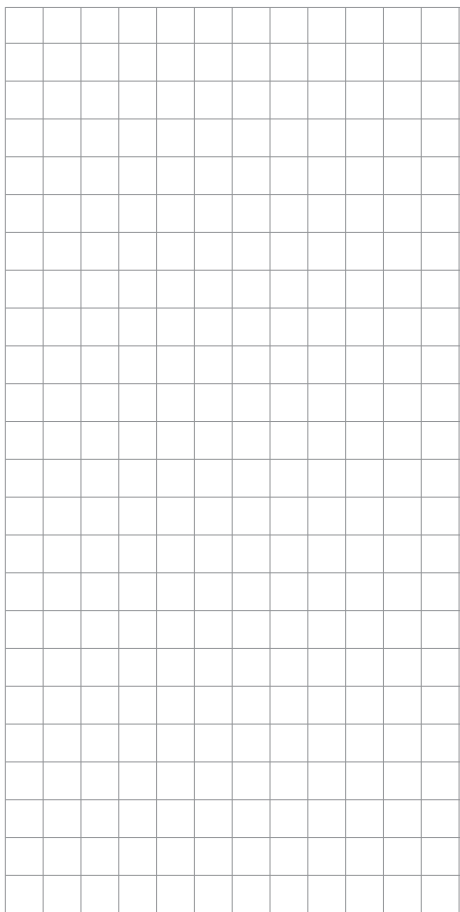
E1	Ambient sensor open circuit or short circuit / Check connections and resistance
E2	Internal error / Replace GM-TA

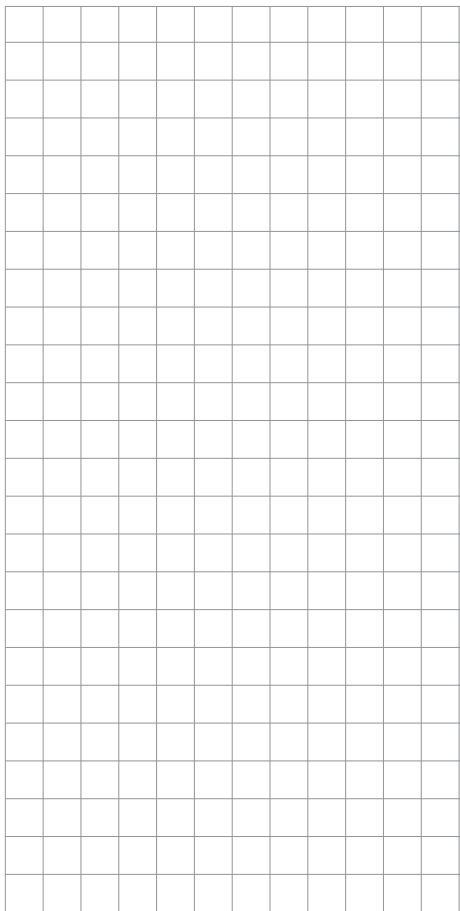
Figure C



Temp. sensor GM-TA-AS (202AT +/-1% NTC 2.0 K Ω @ 25°C)

TEMP.	R (k Ω)
-40°C	32,34
-35°C	24,96
-30°C	19,48
-25°C	15,29
-20°C	12,11
-15°C	9,655
-10°C	7,763
-5°C	6,277
0°C	5,114
+5°C	4,188
+10°C	3,454
+15°C	2,862
+20°C	2,387
+30°C	1,684
+40°C	1,211





België/Belgique

Tel +32 16 21 35 02
Fax +32 16 21 36 04
salesbelux@nVent.com

Bulgaria

Tel +359 5686 6886
Fax +359 5686 6886
salesee@nVent.com

Česká Republika

Tel +420 606 069 618
czechinfo@nVent.com

Danmark

Tel +45 70 11 04 00
salesdk@nVent.com

Deutschland

Tel 0800 1818205
salesde@nVent.com

España

Tel +34 911 59 30 60
Fax +34 900 98 32 64
ntm-sales-es@nVent.com

France

Tél 0800 906045
salesfr@nVent.com

Hrvatska

Tel +385 1 605 01 88
Fax +385 1 605 01 88
salesee@nVent.com

Italia

Tel +39 02 577 61 51
Fax +39 02 577 61 55 28
salesit@nVent.com

Lietuva/Latvija/Eesti

Tel +370 5 2136633
Fax +370 5 2330084
info.baltic@nVent.com

Magyarország

Tel +36 1 253 7617
Fax +36 1 253 7618
saleshu@nVent.com

Nederland

Tel 0800 0224978
salesnl@nVent.com

Norge

Tel +47 66 81 79 90
salesno@nVent.com

Österreich

Tel 0800 29 74 10
salesat@nVent.com

Polska

Tel +48 22 331 29 50
Fax +48 22 331 29 51
salespl@nVent.com

Republic of Kazakhstan

Tel +7 7122 32 09 68
Fax +7 7122 32 55 54
saleskz@nVent.com

Россия

Тел +7 495 926 18 85
Факс +7 495 926 18 86
salesru@nVent.com

Serbia and Montenegro

Tel +381 230 401 770
Fax +381 230 401 770
salesee@nVent.com

Schweiz/Suisse

Tel +41 (41) 766 30 80
Fax +41 (41) 766 30 81
infoBaar@nVent.com

Suomi

Puh 0800 11 67 99
salesfi@nVent.com

Sverige

Tel +46 31 335 58 00
salesse@nVent.com

Türkiye

Tel +90 560 977 6467
Fax +32 16 21 36 04
salesee@nVent.com

United Kingdom

Tel 0800 969 013
salesthermalUK@nVent.com



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