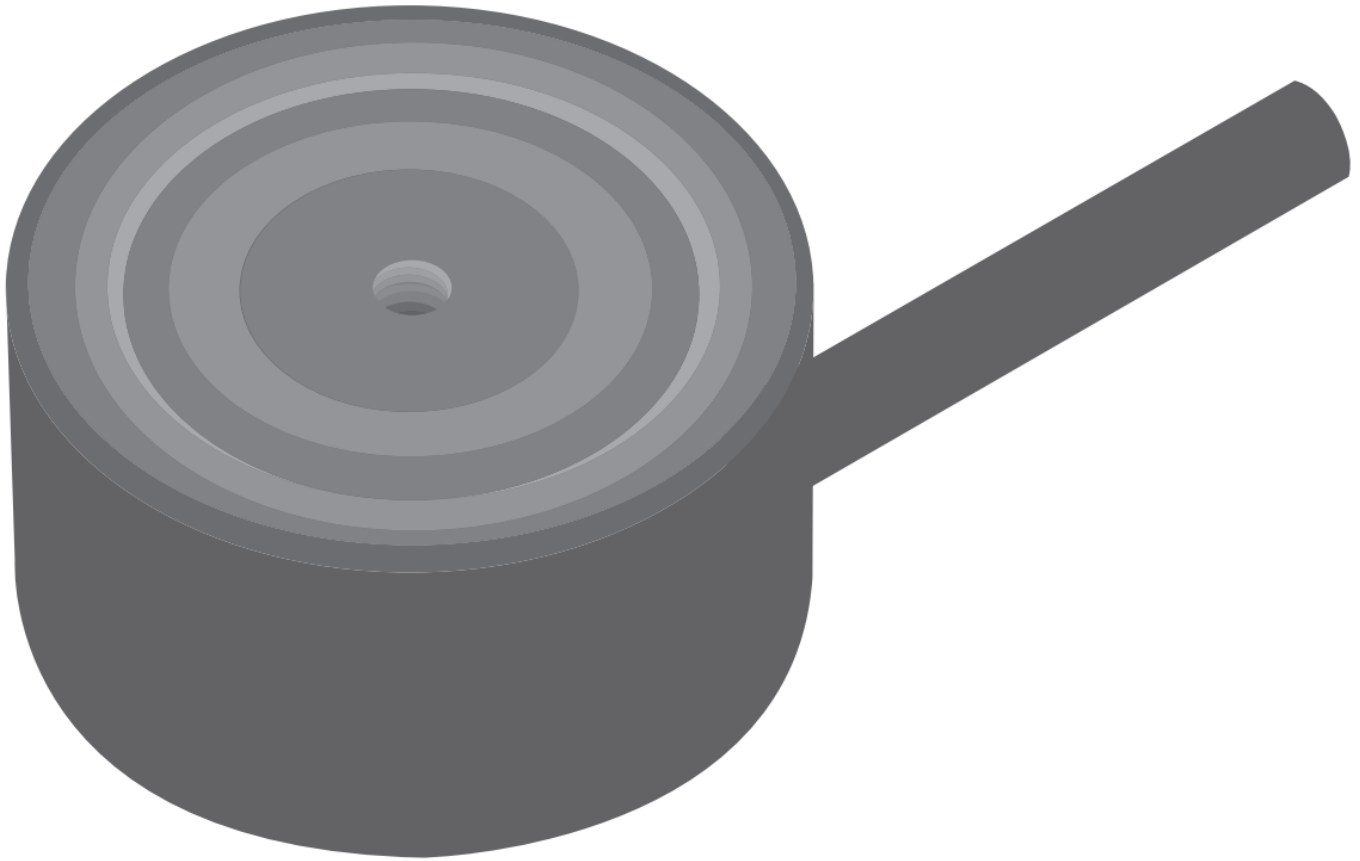




## **nVent RAYCHEM RayStat-M2-G Sensor Temperature and Moisture Instruction Manual**

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**nVent RAYCHEM RayStat-M2-G Sensor Temperature and Moisture**



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## List of figures

The following figures are located at the back of the instructions:

**Fig. 1:** Snow melting application

**Fig. 2:** nVent RAYCHEM RAYSTAT-M2-G-Sensor

**Fig. 3:** nVent RAYCHEM RAYSTAT-M2-G-Sensor wiring

**Fig. 4:** RAYSTAT-M2 controller troubleshooting

## Ground sensor type RayStat-M2-G-Sensor

Designed for embedding into the surface of the outdoor area.  
Detects both temperature and moisture.

## Mounting of sensor

To be mounted where snow and ice problems normally occur.

The sensor must be embedded horizontally with its top flush with the surroundings with the help of the accompanying installation plate.

To be mounted on a hard foundation, e.g. in a concrete base or asphalt.

## Mounting of sensor cable

The cable must be mounted in accordance with applicable local regulations.

The cable must never be installed parallel to power cables as electrical interference may distort the sensor signal.

The sensor is supplied with 10 m cable which can be extended up to 200 m using standard installation cable:

6×1,5 mm<sup>2</sup>. The total resistance of the cable must be less than 10 Ω.

## Product overview

1 = Snow melting thermostat RayStat-M2

2 = Junction box (Only if sensor cable is too short)

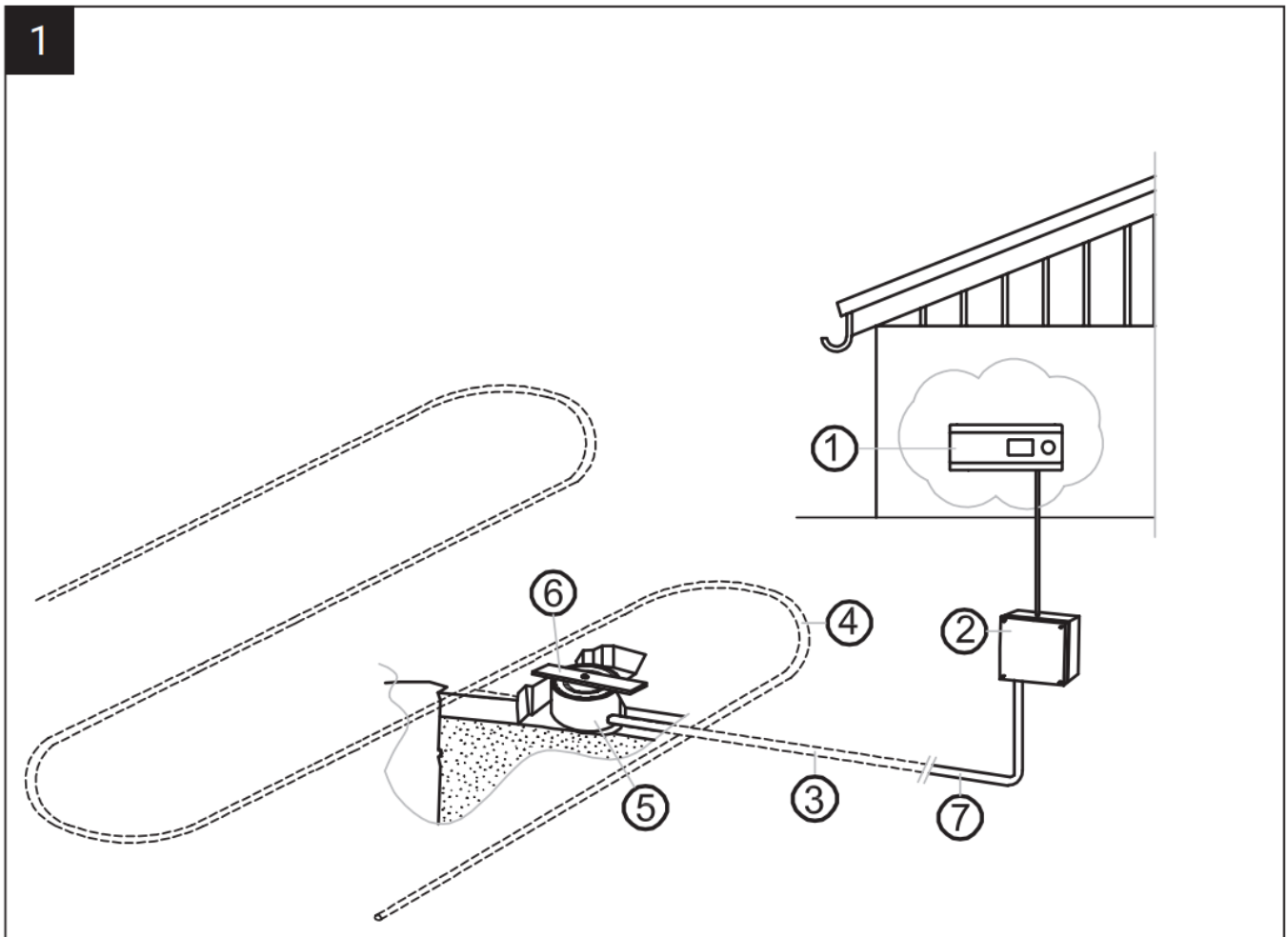
3 = Conduit for sensor cable

4 = Heating cable

5 = RayStat-M2-G-Sensor

6 = Metal bracket plate for alignment purposes

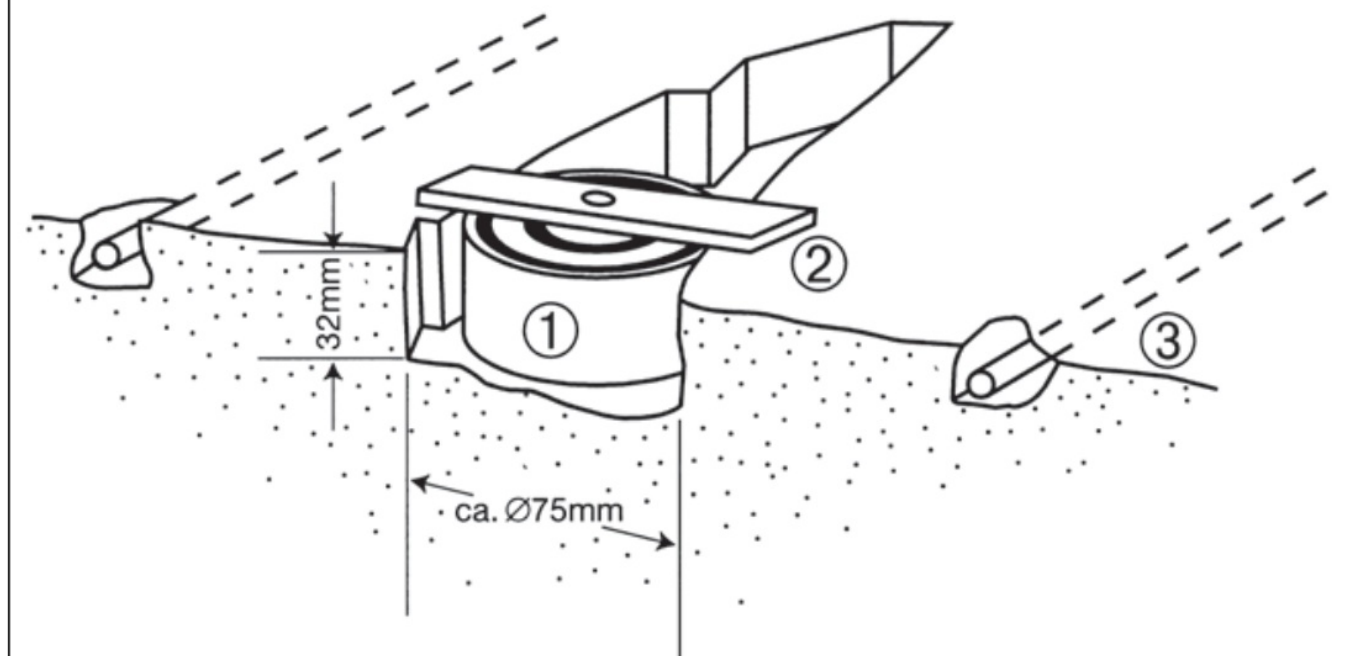
7 = Sensor cable



1 = RayStat-M2-G-Sensor

2 = Metal bracket plate for alignment purposes

3 = Heating cable

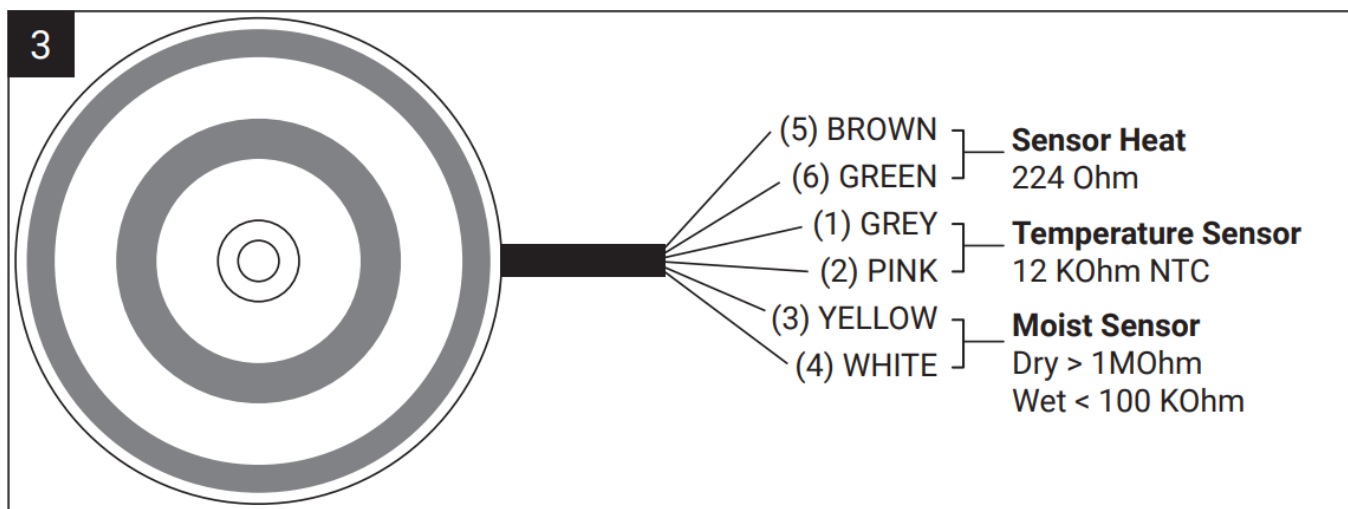


## TROUBLESHOOTING

### RAYSTAT-M2-G-Sensor

VIA-DU-S20 Temp.: (1) GREY & (2) PINK / VIA-DU-A10

NTC 12 kΩ @ 25°C – RAYSTAT-M2-G-Sensor / RAYSTAT-M2-A-Sensor						
-20°C = 1122 46Ω	11°C = 22300 Ω	16°C = 17750 Ω	21°C = 14238 Ω	26°C = 11506 Ω	35°C = 7978Ω	60°C = 3201Ω
-10°C = 6392 9Ω	12°C = 21292 Ω	17°C = 16974 Ω	22°C = 13636 Ω	27°C = 11035 Ω	40°C = 6569Ω	70°C = 2306Ω
0°C = 37942Ω	13°C = 20335 Ω	18°C = 16237 Ω	23°C = 13064 Ω	28°C = 10587 Ω	45°C = 5442Ω	80°C = 1692Ω
5°C = 29645Ω	14°C = 19428 Ω	19°C = 15537 Ω	24°C = 12519 Ω	29°C = 10159 Ω	50°C = 4535Ω	90°C = 1263Ω
10°C = 23364 Ω	15°C = 18567 Ω	20°C = 14871 Ω	25°C = 12000 Ω	30°C = 9752Ω	55°C = 3800Ω	100°C = 958 Ω



- VIA-DU-S20 Heat.: (5) BROWN & (6) GREEN: +/- 224 Ohm
- VIA-DU-S20 Moist.: (3) YELLOW & (4) WHITE: Dry > 1MOhm / Wet: < 100kOhm

**RAYSTAT-M2-A-Sensor: -> NTC 12 kΩ @ 25°C**

### **RAYSTAT-M2 controller**

The RAYSTAT-M2 controller relay: terminals 5 & 7.

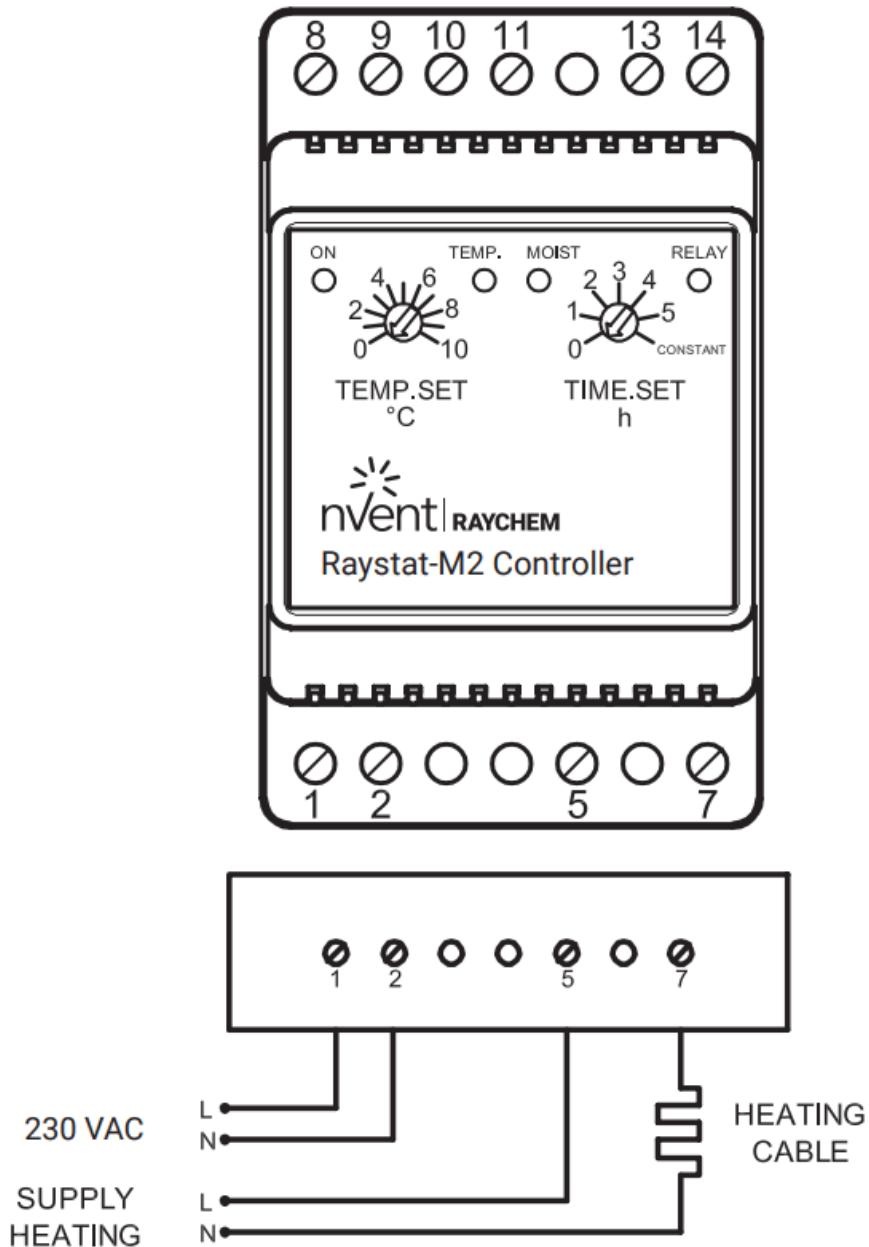
Relay 5 – 7: NO (Open Loop / > 10MOhm)

Relay 5 – 7: Closed: 0 Ohm

To obtain 230 Vac output on terminal 7, one has to supply 230 Vac on terminal 5 in addition to the 230 Vac supply to the controller itself (L on terminal 1 & N on terminal 2).

In order to obtain Line voltage on terminal 7 when the relay is closed, one must supply terminal 5 with Line voltage:

# RayStat-M2



## CUSTOMER SUPPORT



Tel 0800 969 013

Fax 0800 968 624

[salesthermalUK@nVent.com](mailto:salesthermalUK@nVent.com)


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RAYCHEM-IM-H82006-RayStatM2GSensor-ML-2303



## Documents / Resources

 <p>RayStat-M2-G Sensor</p>	<p><a href="#">nVent RAYCHEM RayStat-M2-G Sensor Temperature and Moisture</a> [pdf] Instruction Manual RayStat-M2-G Sensor Temperature and Moisture, RayStat-M2-G, Sensor Temperature and Moisture, Temperature and Moisture</p>
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## References

- [🌟 Building a more Sustainable and Electrified World | nVent](#)
- [🌟 Electrical Heat Tracing | Heat Tracing | nVent RAYCHEM](#)
- [User Manual](#)

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