

## Save Energy During Snow Melting Operation

## **POWER MODULATOR** UPPER LIMIT TEMPERATURE SENSOR



### Features & Benefits

- > Isolated NTC temperature thermistor
- > 10KΩ @ 25°C
- > 30-foot cable
- > 24VAC
- > Rated voltage 300V
- > Semi rigid enables the sensor to be pushed into conduit
- Simple user interface for parameters set from Power Modulator controller
- Technician testing/commissioning mode enables reading actual value



Power Modulator Upper Limit Temperature Sensor



### About the Upper Limit Temperature Sensor

The Power Modulator Upper Limit Temperature Sensor is installed under the surface and measures the ground temperature. The temperature value sensed by the Power Modulator Upper Limit Temperature Sensor is used by the Power Modulator controller in its algorithm for energysaving operation of the snow-melting system.

The Power Modulator Upper Limit Temperature Sensor is connected to the Power Modulator Controller with a 30-foot (10 m), 2-wire cable coated in a semi-rigid polymeric material. The semi-rigid flexible cable enables the technician and installer to push the sensor into a long conduit without it getting bent.

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The temperature value of the Power Modulator Upper Limit Temperature Sensor can be observed by the technician (in the Technician mode parameters of the Power Modulator controller) and the location of the sensor can be adjusted based on the real-time reading.

In case of damage in the Power Modulator Upper Limit Temperature Sensor (due to external force such as digging or drilling in the ground, damaging the cable), a warning notice on the Power Modulator controller LCD will indicate that the Power Modulator Upper Limit Temperature Sensor is damaged and can be replaced.

#### **Technical Specifications**

Cable length	30-foot (10 m) two-conductor cable	Resistance	10KΩ @ 25°C
Installation	In slab inside a conduit	Operating temp.	40°F to 68°F (-40° C to 20°C)
Material	Sensor – NTC thermistor Cable jacket – TPE	Storage temp.	–50°F to 220°F (–40°C to 105°C)



**Electrical Diagram** 

connection to the Power Modulator system

R С **Z**1 Z2 Communication cable Ζ3 SFTR 120 Ohm, shielded, twisted Z4 Connect end side of shield to ground ..... Α i 2 Z5 22 В 1 ..... White → Blue → Red → White White⊁ White⊁ Black → – White -Black Black Blue . Red . Blue . Red . Blue . Black Red Black Red 1 3 2 Upper Limit GTR-SS Power Power Power Power Temperature Gutter-Mounted Modulator Modulator Modulator Modulator Sensor Ice Sensor Snow/Ice Snow/Ice Snow/Ice Snow/Ice Aerial Aerial Aerial Aerial or AIR-SS Sensor #4 Sensor #3 Sensor #2 Sensor #1 Aerial-Mounted Snow Sensor

#### Need assistance?

For more information, operating and technical manuals, please refer to www.warmlyyours.com. "Product specifications are subject to change.

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