

NRG PVT1 PV TEMPERATURE SENSOR TECHNICAL PRODUCT SHEET



Overview

The NRG PVT1 module temperature sensor provides PV module temperature for PV performance monitoring. The sensor includes an adhesion kit for affixing the sensor to PV modules to ensure proper installation, and is compatible with the NRG SymphoniePRO data logger as well as data acquisition systems which can accept a 2- or 4- wire thermistor input.

Specifications

Measurement Range	-55 °C to 150 °C (-67 °F to 302 °F)
Signal Type	10 k Ω NTC thermistor
Transfer Function	A = 0.001032 B = 0.0002387 C = 0.000000158
Steinhart-Hart Coefficients (sensor can be programmed to offer temp in °F)	
Accuracy	± 0.2 °C from 0 to 70 °C (± 0.36 °F from 32 to 158°F)
Supply Voltage	N/A
Supply Current	15 μ A maximum (supplied by logger)
Mounting	Attaches to back of PV panels with adhesive tape

Tools Required

- Small NRG screw driver
- Alcohol prep wipes
- Adhesive strain relief stickers

NRG PVT1 PV Temperature Sensor Installation Process

1. Sensor placement.

Monofacial module: Install sensor on module back sheet located in center of a cell nearest the center of the module. Any highlighted cell will suffice.

Bifacial module: Unless otherwise specified, place the sensor in a gap between cells in the center of module.

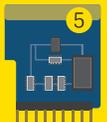
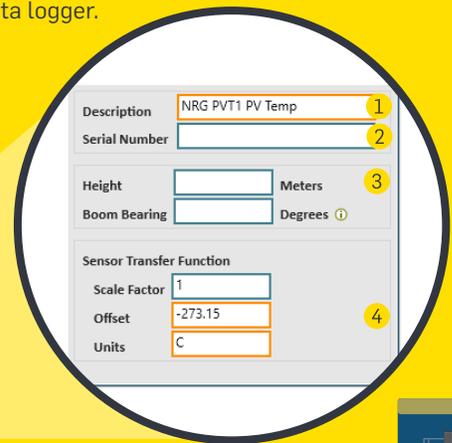
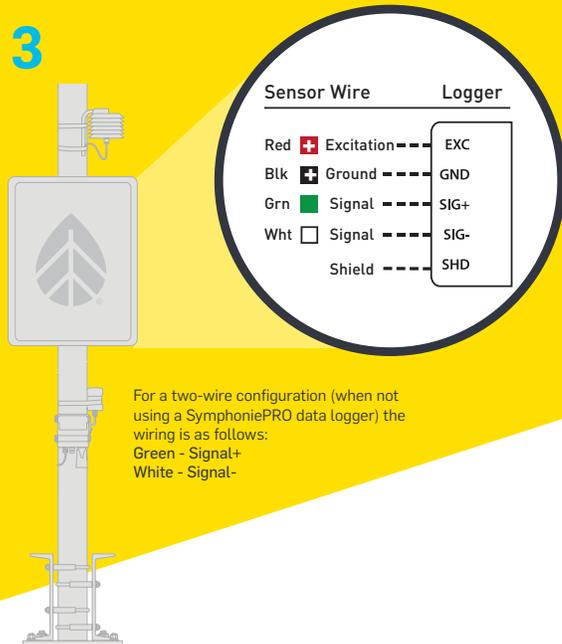
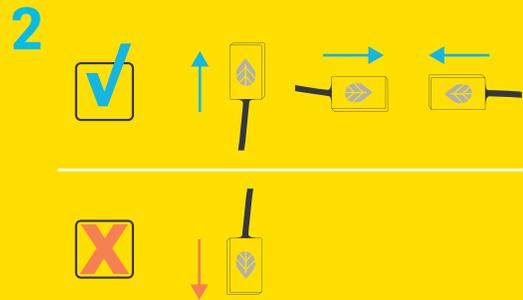
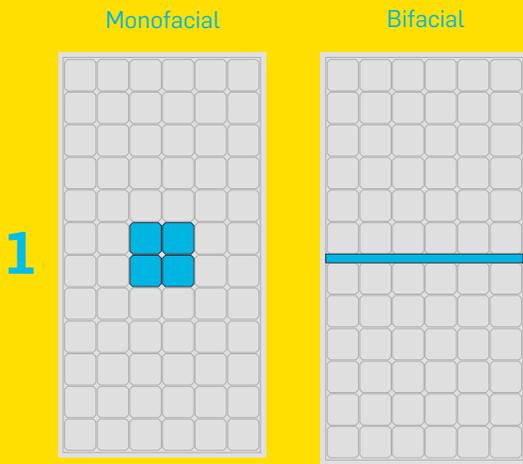
- Thoroughly clean the location where the PVT1 sensor will be installed using the provided alcohol wipe. Let the panel dry before proceeding to next step.
- Peel the backing off the sensor and place it onto the panel. Hold in place for 15 seconds.
- Remove the round circular sticker and cover the PVT1 sensor.
- Use the four strain relief stickers to secure the cable to the panel.
- Run the sensor wire from the panel to the data logger, making sure to secure the cable in place. Wire the sensor cable into the data logger.

2. Sensor orientation.

Do not orient inverted. *For single-axis tracking installations, orient the sensor cable along the axis of the torque tube.*

3. Wire the sensor cable into the data logger.

4. Program SymphoniePRO Logger.



SymphoniePRO Logger Programming

Use the SymphoniePRO Desktop Application to program the sensor settings into the data logger:

- Choose "NRG PVT1 PV Temp" from the "Load From Defaults" drop-down menu.
- Enter the sensor's serial number.
- Enter the height of sensors from the ground.
- Leave the Scale Factor and Offset as the default.
- Insert P-SCM 9420 into the appropriate P-SCM slot in the front of the logger.

For more information:

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 ISO 9001: 2015 Certified
 ISO 14001: 2015 Self-Certified