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PV Module Temperature Transducer Operation and Installation Manual (4-20mA) Model – MBMet-802

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1. Temperature Transducer - Parts

Module Temperature Sensor 4-20mA is shipped with the following parts

- A. PT1000 Sensor Unit (with three meters cable) – 1 No
- B. PT1000 to 4-20mA Transducer JB – 1 No
- C. Cable – As per customer requirement
- D. Sensor cable holding cable cradles – 3 Nos
- E. 3/16" X 2" Screw, Nut and washer set – 2 Set

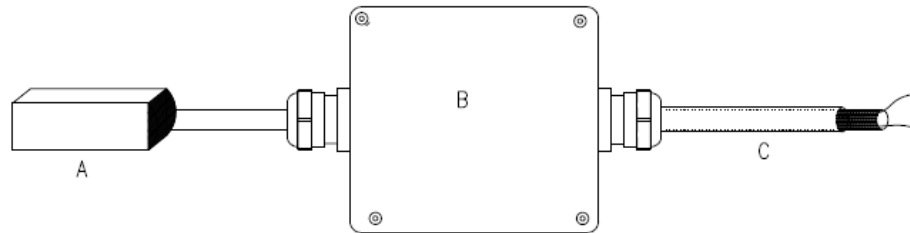


Fig 1.1 –PV Module Surface Temperature transducer

2. Installation of PV Module Sensor

Selection of the place of mounting the sensor is important factor for the correct temperature measurement of the photo-voltaic module.

- i) The sensor is to be pasted to the back side of the PV Module in the center position of the panel. Care is to be taken so that the sensor does not fall in between two cells. It should be at the center of the centermost cell of the panel as shown in the fig 2.1

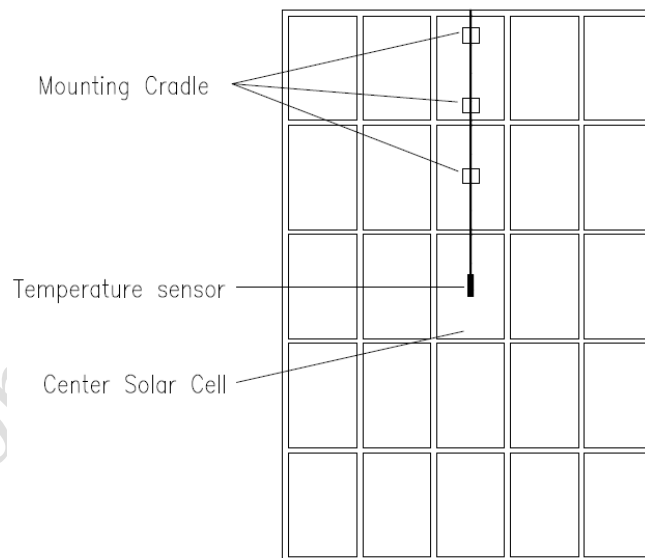


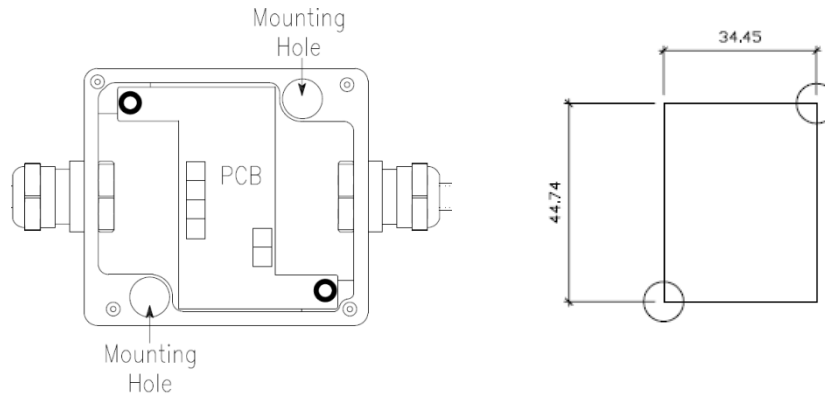
Fig 2.1 – Position of sensor installation

- ii) Use the three cable cradles with cable ties to hold the sensor cable in proper position.

3. Installation of Temperature Transmitter

The temperature transmitter is to be fixed on the legs of the solar panel structure.

- i) Open the cover of the enclosure
- ii) Mount the transducer in the legs of the solar panel with the help of the 3/16" X 2" Screw, Nut and washer set provided along with the sensor



- ii) Install the transmitter as per details in the picture provided below.

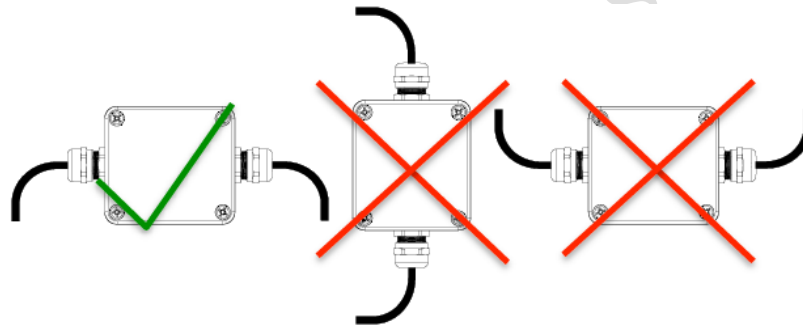


Fig 3.3 – Enclosure mounting in correct way

- iv) Fix the enclosure to the structure.

4. Connection of PV Temperature Transducer:

- i) Open the top cover of the transmitter.
- ii) Connect the sensor extension cable as shown in the fig 4.1 (for 3 wire PT1000 sensor, the 4th terminal to be shorted with the 3rd terminal inside transducer)

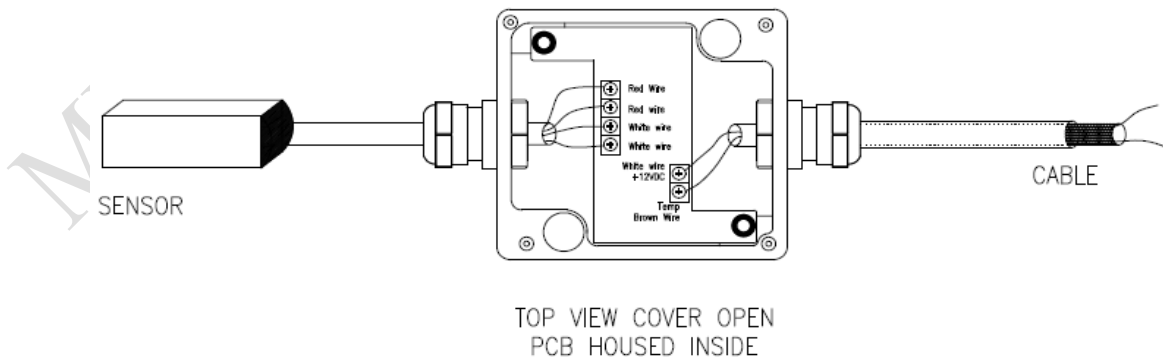


Fig 4.1 – Wiring inside the enclosure

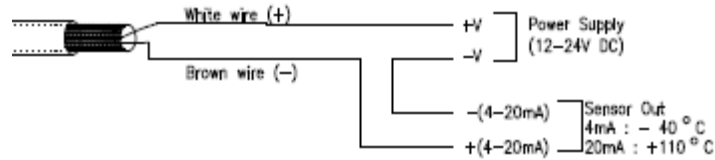


Fig 5.1 – Field wiring

5. PV Temperature Transducer Specifications:

Model	MBMet-802
Measurement Range	-40° to +110°C
Temperature Accuracy	±0.1°C
Temperature Stability	<0.02°C per year
Sensor Element Type	RTD Class A
Sensor Cable-Length	PTFE insulated cable – 3 meters
Sensor Housing	Self-Adhesive Aluminum
Self-Adhesive Tape	High temperature conductive acrylic adhesive Tape. Operating temperature tolerance up to 149°C.
Sensor Transmitter Housing	Powder Coated-Cast Aluminum, IP67
Sensor Transmitter Cable	Length : 5 meters (default), PVC insulated
Sensor Transmitter Output	4 to 20mA
Power supply	Self-loop powered(12 to 24 VDC)
Operating Atmospheric Temperature	-10°C to +70°C
Sensor Standard	Meets IEC-61724-1 (2017-03) Class A