3S-MT-PT1000

Module Temperature Sensor

Module Temperature Sensor

The Module Temperature Sensor is part of the SEVEN meteorological sensor range, which includes professional and intelligent measuring sensors with a digital or analog interface for environmental and industrial applications such as PV plants.

It is a measuring transmitter used for the measurement of the PV module temperature. The PT1000 sensor is laminated between EVA film and Tedlar Backsheet. So, the construction of the module temperature sensor is same as the PV modules and it has the same heat transfer characteristics as the back of module. It is attached to the back of the module with a 3 M® sticker placed on the sensor. This specially chosen sticker provides a safe attachment of the PT1000 to the module.

The measured module temperature data are transmitted as analog or digital output signals to the data loggers and receiver units according to the input requirements.

The Module Temperature Sensor is specially designed according to the requirements of (IEC 61724-1:2021 Annex B) PV plant monitoring systems.

Benefits and Features

- Small Sensing Area for Bifacial Modules
- High Accuracy
- Fast & Simple to Install
- Ultralight Design for Better Attachment
- 10% >than PV Cell Area
- SEVEN Remote Setup Service
- SEVEN Customer Support
- 2 Years Warranty

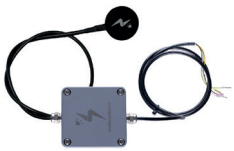
Models

3S-MT-PT1000

It is a measuring transmitter with PT1000 output used for the measurement of the PV module temperature. The measuring values are transmitted as ohmic resistance signals. It can be connected to SEVEN Irradiance Sensor or Sensor Box models with a 5-pin connector with IP 67 protection class.

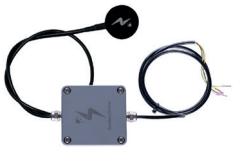
3S-MT-PT1000-I

Module temperature sensors with analog 4-20 mA output are specially designed for advanced environmental conditions. The PV module temperature is detected by a high precision PT1000 sensor and converted to analog 4-20 mA output with an electronic card placed in UV resistant and high protection box.



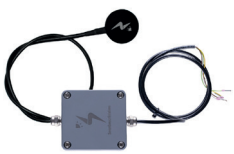
3S-MT-PT1000-U

Module temperature sensors with analog 0-10 V output are specially designed for advanced environmental conditions. The PV module temperature is detected by a high precision PT1000 sensor and converted to analog 0-10 V output with an electronic card placed in UV resistant and high protection box.



3S-MT-PT1000-MB

Professional and intelligent measuring sensors with a digital interface for environmental and industrial applications such as PV plants. The measured value can be transmitted to monitoring instruments, data loggers and other receiving units via the serial RS485 interface with MODBUS RTU protocol, up to 8 nos. PT1000 module temperature sensors can be connected to the transmitter box and provide temperature values with a single cable to receiver unit.



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Revision 0.2

3S-MT-PT1000
Module Temperature Sensor

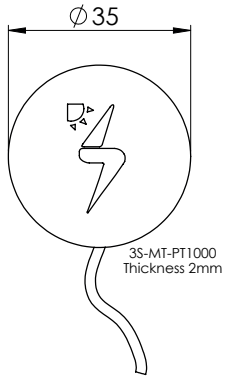
Technical Specifications

	3S-MT-PT1000	3S-MT-PT1000-MB	3S-MT-PT1000-I	3S-MT-PT1000-U
Sensor Type	PT1000			
Measuring Range	-40°C to +85°C			
Accuracy	±0.1°C			
Resolution	0.1°C			
Data Output	PT1000	RS485 up to 38400 Baud	Analog 4-20 mA	Analog 0-10 V
Communication Protocol	-	Modbus RTU	-	-
Power Supply	-	12 to 30 V DC		
Power Consumption	-	15 mA @ 24 V DC	30 mA @ 24 V DC	15 mA @24 V DC
Electrical Connection	1.5 m LIYYC11Y PUR Cable, UV and Weather Resistant	0.5 m 4x0.15 LIYYC11Y PUR Cable and 2.5 m 3x2x0.22 mm² LI2Y(SE)GRP PUR Cable, UV and Weather Resistant		3 m LIYYC11Y PUR Cable, UV and Weather Resistant
Operating Temperature Range	-40°C to +85°C			
Box Dimensions	-	82 x 80 x 55 mm (W x L x H)		115 x 65 x 55 (WxLxH)
Sensor Cover Dimensions	Ø 35 x 3 mm			
Weight	77 gr	417 gr		297 gr
IP Rating	IP 67			
Box Material	-	*ABS		
Sensor Cover	Laminated Backsheet (EVA - Tedlar)			
Mounting Method	3M® Sticker to Back of Module			
Standard	Class A according to IEC 60751:2022			
Origin	TÜRKİYE			

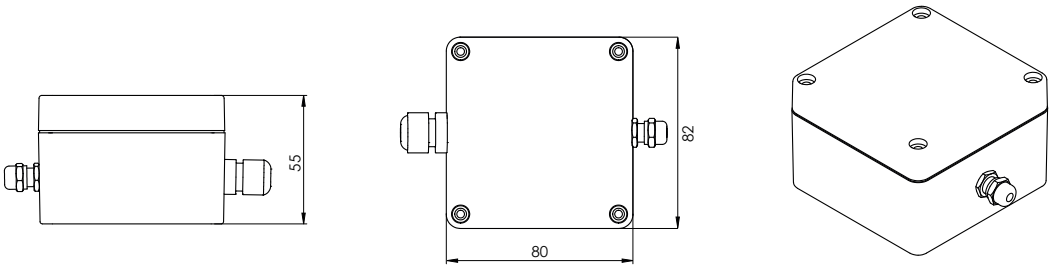
*Since this product contains plastic parts, color changes may occur when exposed to direct sunlight.

Technical Drawings

Technical Drawings of 3S-MT-PT1000, 3S-MT-PT1000-I,3S-MT-PT100-U, 3S-MT-PT1000-MB



Elektronic Box Technical Drawing



Note: All dimensions are in mm.

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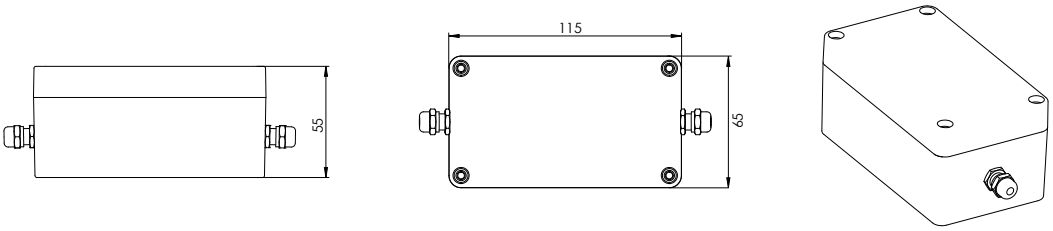
Elektronic Box Technical Drawing



Note: All dimensions are in mm.

*** SEVEN has the right to make modifications on this documentation without notice.

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