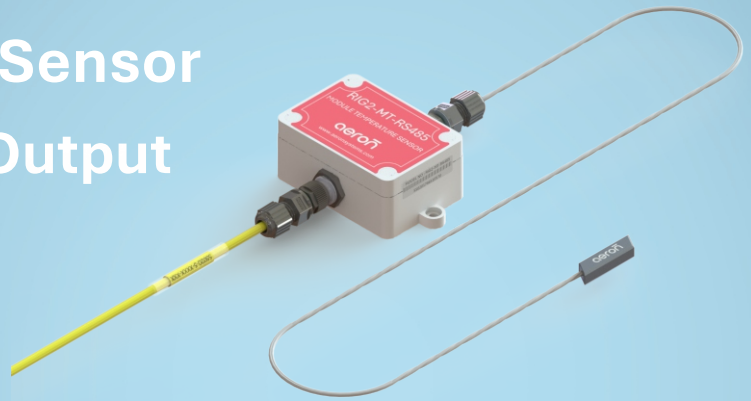


RIGEL 2 MT-RS485

Module Temperature Sensor with RS485 MODBUS Output

Class A Sensor designed
as per IEC61724-1:2021



The solar PV module temperature sensor, featuring RS485 MODBUS output and Class A accuracy compliant with IEC 61724-1:2021, is optimized for Bifacial PV modules, showcasing advanced technology.

DESCRIPTION

Aeron's Rigel 2 MT-RS485 is second generation, highly specialized sensor with RS485 Modbus RTU for accurate surface temperature measurement of solar PV modules essential for performance monitoring and control. Building on the proven design, Rigel 2 delivers faster response time and higher accuracy, enabling more precise thermal tracking under rapidly changing irradiance and operating conditions.

Housed in a robust anodized aluminum body, the PT1000 element is protected from environmental stress while maintaining excellent thermal conductivity for precise, rapid readings. The Rigel 2 MT-RS485 remains compliant with IEC 61724-1:2021 and achieves Class A accuracy, now with improved tolerances for even greater reliability.

Designed for Faster thermal response for more dynamic and timely temperature tracking, improved measurement accuracy and stability across the operating range and refined mechanical design for consistent module contact and repeatability, it supports both conventional and bifacial PV modules, with a compact, low-profile form factor that minimizes shadowing on bifacial arrays.

By delivering high-fidelity temperature data with greater speed and precision, the Rigel 2 MT-RS485 helps optimize solar power generation and supports smarter, data-driven operational strategies in modern renewable energy systems.

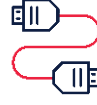
PRODUCT FEATURES

Accuracy



The sensor, an RTD PT1000, maintains Class A accuracy with a margin of $\pm(0.15 + 0.0020 | t |)$, ensuring highly precise temperature readings.

Output



The RS 485 MODBUS RTU output, an industry standard, streamlines integration, ensuring compatibility and user-friendly operation.

Designed for Bifacial PV modules



The sensor can be mounted on bifacial PV modules without impacting performance, meeting the IEC61724-1:2021 standard.

Self Adhesive



The sensor includes a high-strength adhesive for secure attachment to the module's back, ensuring long-lasting performance and reliability.

Smallest size



The sensing component's small form factor makes it ideal for all bifacial solar PV panels, ensuring efficient performance.

Non corrosive material



The sensor is enclosed in a corrosion-resistant casing ensuring its durability and reliability even in the harshest environmental conditions.

APPLICATIONS

- Solar PV Module Temperature Monitoring
- Surface Temperature Monitoring

TECHNICAL SPECIFICATIONS

RIGEL 2 MT-RS485

TEMPERATURE MEASUREMENT

Output Signal	RS 485 MODBUS RTU
Temperature Sensing Range	-40 °C to +150 °C
Accuracy	Class A $\pm(0.15 + 0.0020 t)$ *
Uncertainty	$\pm 0.3^\circ$
Resolution	0.01 °C
Sensor Element Type	RTD PT1000 Class A

* | t | is the numerical value of the temperature in °C irrespective of the sign.

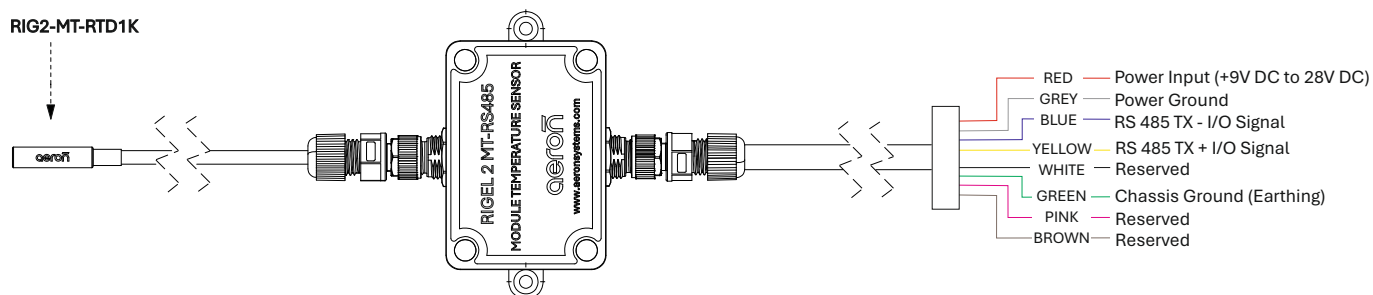
PHYSICAL AND ENVIRONMENTAL

Operating Temperature	-40 °C to +80 °C
Ingress Protection	IP65
Material	Aluminium 6082 (For Sensing Element) / ABS (Electrical Circuitry)
Dimensions	Dia. 25.4 mm x Thickness 7.2 mm (For Sensing Element)
Weight	<20 gms (excluding cable weight)
Cable Type	Li2YD11Y- 24 AWG BRD CABLE Insulation: Extruded Polyurethane

ELECTRICAL SPECIFICATIONS

Supply voltage	12 Vdc / 24 Vdc
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ELECTRICAL CONNECTION



ORDERING INFORMATION

RIGEL 2 MT-RS485 (PRODUCT CODE: 55020)