RIGEL 2 MT-A420

Module Temperature Sensor with 4-20mA Output

Class A Sensor designed as per IEC61724-1:2021

The solar PV module temperature sensor, featuring 4-20mA 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-A420 is second generation, highly specialized sensor with analog 4-20mA output 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-A420 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-A420 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 ±(0.15 + 0.0020 | t |), ensuring highly precise temperature readings.

Output

The 4-20mA current 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-A420

TEMPERATURE MEASUREMENT

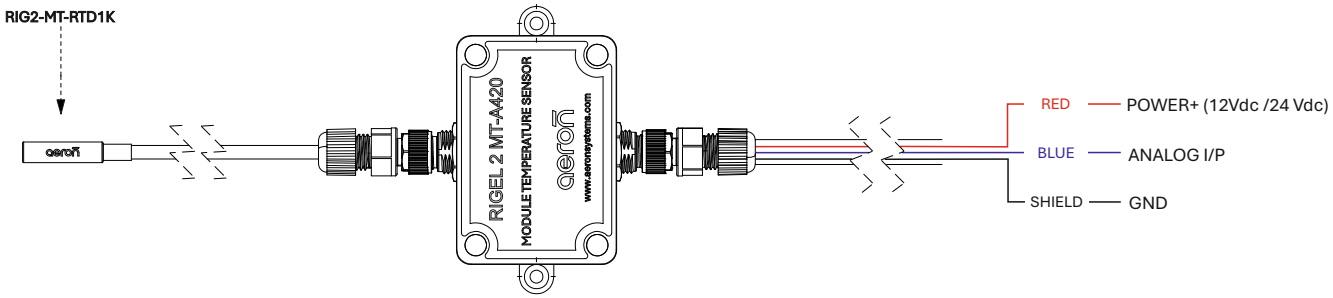
Output Signal	4 to 20 mA Current
Temperature Range	-40 °C to +150 °C
Accuracy	Class A ±(0.15 + 0.0020 | t |)*
Uncertainty	±0.3°
Resolution	0.01 °C
Sensor Element Type	RTD PT1000 Class A
Current Consumption	0.5 mA

PHYSICAL AND ENVIRONMENTAL

Operating Temperature	-40 °C to +150 °C
Ingress Protection	IP65
Material	Aluminium 6082
Dimensions	Dia. 25.4 mm x Thickness 7.2 mm
Weight	<15 gms (excluding cable weight)
Cable Type	Diameter: 0.216 cm (0.085 in.) Length: 2 meters

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

ELECTRICAL CONNECTION



ORDERING INFORMATION

RIGEL 2 MT-A420 (PRODUCT CODE: 55009)