Air Temperature and Relative Humidity Sensor

Class A Sensor designed as per IEC61724-1:2021



An integrated sensor measures Air Temperature and Relative Humidity featuring RS485 Modbus RTU output, ensuring accurate environmental monitoring by measuring multiple factors concurrently.

DESCRIPTION

ALT-TH110 is a combined Air Temperature and Relative Humidity sensor with RS485 Modbus RTU output and represents a comprehensive and integrated solution for environmental monitoring applications. This multi-parameter approach allows for a holistic understanding of the ambient conditions.

The sensor body is constructed from stainless steel (SS) material, featuring a stainless steel sintered porous filter, enhancing the robustness, durability, and performance. These materials are chosen for their ability to withstand harsh environmental conditions, ensuring the sensor's stability and accuracy over an extended operational life.

The sensor is designed to adhere to the stringent accuracy requirements outlined in the IEC 61724-1:2021 standard, achieving Class A accuracy. This ensures that the parameter measurements are of the highest precision and reliability and optimizes overall system performance.

The sensor features an RS485 Modbus RTU output, allowing real-time data output suitable for integration into weather stations, HVAC systems, Building Management Systems (BMS), Industrial processes, Industrial automation systems and SCADA systems. The sensor can be used outdoors with a UV radiation shield (to be ordered separately) & indoors directly without radiation shield.

PRODUCT FEATURES

Compliance

The sensor conforms to the Class A accuracy standard of IEC61724-1:2021, guaranteeing precise measurement performance according to industry regulations.

Uncertainty

Temperature sensor uncertainty is less than ±1°C, while relative humidity uncertainty is less than ±3%.

Output

The industry- standard RS485 Modbus RTU output streamlines integration, ensuring effortless compatibility and user-friendly operation across diverse industrial applications and systems.

Rugged

The sensor's stainless steel (SS) body, featuring a porous sintered filter and IP65 rating, guarantees ruggedness and suitability for all weather conditions.

Interchangeability

The sensor's versatility extends to both indoor and outdoor settings, with an optional UV radiation shield, making it the optimal choice for all applications.

Multi-Parameter

An all-in-one sensor simplifies environmental monitoring by providing comprehensive data collection for various parameters within a single device.

APPLICATIONS

- Renewable Metrological Stations
- Cold Chain Vehicle Monitoring
- HVAC Systems
- Air Quality Monitoring System

TECHNICAL SPECIFICATIONS

ALT-TH110

Air Temperature

Measurement Range:	- 40°C to 125°C
Measurement Uncertainty:	± 0.2°C (max)
Resolution:	0.01°C

Relative Humidity

Measurement Range:	0% to 100% RH
Measurement Uncertainty:	1% RH
Resolution:	0.01% RH

OTHER PARAMETERS

Output:	RS485 MODBUS RTU
Power Supply:	9V to 17V DC
Device Type:	Probe
IP Protection:	IP65
Housing material:	SS304/SS316
Filter Type:	Porous sintered SS filter

ORDERING INFORMATION

ALT-TH110 (Product Code: 52017)