



"Where
Technology
Meets Insight."



AMBIENT RELATIVE HUMIDITY TEMPERATURE **SENSOR FOR PANELS**

AMP-WRHTC

www.amptronics.com



AMP-WRHTC

Wireless Temperature / Humidity Sensor

Overview

AMP-WRHTC is an industrial-grade **wireless temperature and humidity sensor** designed for continuous environmental monitoring in electrical and industrial installations. The sensor measures ambient temperature and relative humidity at **60-second** intervals and **wirelessly transmits** the data to the receiver for real-time monitoring and analysis. Sensor data is encrypted using symmetric **AES-128 encryption**.



Supporting multiple frequency bands for global deployment, AMP-WRHT ensures reliable wireless communication across different regions. The wireless design enables data transmission without opening electrical panels, enhancing safety and reducing installation complexity.

The RHT monitoring solution is widely used in electrical panels, control rooms, data centres, substations, telecom shelters, battery rooms, and industrial environments where temperature and humidity directly impact equipment reliability. By continuously monitoring ambient conditions, the system helps prevent condensation, corrosion, overheating, and premature equipment failure, ensuring safe operation, improved asset life, and reduced maintenance downtime.

AMP-WRHT offers flexible and non-intrusive mounting options. Magnetic mounting, strap-around cable installation, screw mounting and adhesive mounting using industrial-grade 3M tape. Installation can be performed without system shutdown, making it ideal for live environments.

By providing continuous environmental data, AMP-WRHT helps identify potential issues early, enabling proactive maintenance and preventing failures caused by overheating or excessive humidity.



Features



24/7 hotspot detection



Range - 50mts



Wireless Communication
AES-128 encryption



Battery-powered
Lifespan - 5 yrs



Temp -20°C to 85°C
Humidity 0 to 95%,



Multiple Mounting Options*

Benefits

Organizations - Drive Safer, More Reliable Electrical Operations



- Gain continuous visibility into the condition of critical electrical assets and connections.
- Reduce CAPEX and OPEX by minimizing dependence on periodic thermographic inspections.
- Enhance workplace safety by reducing the need for personnel to interact with energized or potentially hazardous equipment.
- Identify emerging thermal issues early to prevent costly failures, unplanned downtime, and asset damage.
- Maximize asset performance, reliability, and lifecycle ROI through continuous condition monitoring.

Engineers - Enable Predictive Maintenance with Actionable Insights



- Extend asset service life through condition-based and predictive maintenance strategies.
- Eliminate the need for manual temperature checks at inaccessible or difficult-to-reach connection points.
- Transition from reactive maintenance to proactive asset management with continuous thermal intelligence.
- Monitor critical connection temperatures accurately and identify abnormal conditions before they escalate.
- Use real-time temperature data to support informed maintenance decisions and reduce the risk of unexpected failures.

Operations - Monitor Critical Connections in Real Time



- Continuously monitor the temperature of critical electrical connections and assets.
- Detect abnormal temperature rise and compromised joints before they develop into critical failures.
- Reduce the risk and cost of unplanned outages through early detection of developing faults.
- Receive real-time alarms and alerts when temperature conditions exceed defined thresholds.
- Improve operational reliability with continuous visibility into the health of critical electrical infrastructure.



Technical Data

General

Description	Value
Model Number	AMP-WRHTC
Product Type	Sensor & RF Transmitter
Sensors	Digital Temperature Sensor (Internal Calibrated)
Mounting	Magnetic Mount, Starp, Screw and Stickable
Installation Location	Bus Ducts, Electrical Panels, Switchgear, MCC Panels, Control Panels
Enclosure	PA66 Nylon (Fire Retard) Temperature Withstand up to 150°C
Battery	1200mAh ,3.6V
Sensing device battery life	5Years

Communication

Description	Value
Wireless	Wireless Communication
Communication Range	50 Meter
Frequency	865-867MHz, 920-923MHz, 923-926MHz
Transmission Frequency	1 minute default (Configurable up to 5min through Receiver)
Antenna	Inbuilt
Supported Controllers / Gateway	BBC969-485RC, BBC969-27C, AMP-IoTG
Data encryption	AES-128 encryption

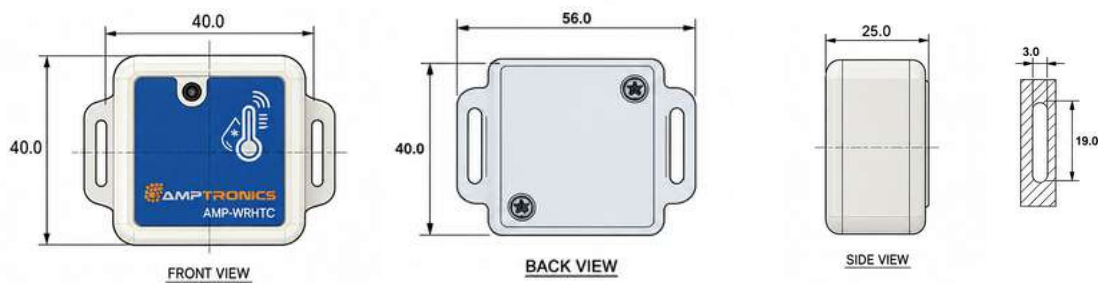
Measured values

Description	Value
RHT Sensor Range	Humidity: 0 to95%RH, Temperature: 0 to 125°C
RHT Accuracy	Humidity: ±2%RH, Temperature: ±0.5°C
Resolution	Temperature: 0.1°C, Humidity: 0.1%RH

Mechanical

Description	Value
Dimensions (L×W×H)	56x 40 x 25mm
Weight	30gms

Dimensions



Ampronics Systems Pvt. Ltd.
 Saranya Bldg, Nagarajuna Hilla, Punjagutta,
 Hyderabad, Telangana, India, 500082
 Tel: +91-40-4077096
 Email : info@ampronics.com

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