

Multi-Channel Wireless TEMPERATURE SENSOR

TECHNICAL DATA SHEET

**ELECTRONICS
4ALL**

ORDER CODE: TP-400R8
CATEGORY: Sensors

Multi-Channel Temperature Intelligence. Powering Smarter Decisions.

PRODUCT OVERVIEW

General Description

The TP-400R8 Multi-Channel Wireless Temperature Sensor is a high-performance, battery-powered device designed to monitor up to 8 temperature points simultaneously. This multi-channel capability enables precise, condition-based insights across multiple assets, reducing the need for multiple individual sensors. Powered by either the BP-100 non-rechargeable or BP-100R rechargeable battery pack, the TP-400R8 offers extended operation time and easy battery swaps without disrupting performance. Its robust design and reliable Bluetooth 5.0 connectivity make it an ideal solution for continuous, real-time monitoring in demanding industrial environments.



PRODUCT BENEFITS

01 Multi-Channel

Monitor up to 8 temperature points at once with a single device, reducing sensor deployment costs, simplifying installation, and revealing patterns that single-point sensors might miss.

04 Flexible Placement

The RTD sensor can be positioned remotely from the transmitter, enabling monitoring in hard-to-access or restricted areas such as radio exclusion zones.

02 Extended Operation

BP-100 battery packs provide long-lasting operation in both rechargeable and non-rechargeable formats, ensuring continuous monitoring in diverse environments.

05 Service-Friendly

Transmitters can be mounted in convenient areas, enabling safe and quick battery swaps without needing to access hard-to-reach equipment.

03 Hot-Swap Batteries

Replace battery packs on the fly without disrupting performance or data collection, keeping monitoring uninterrupted at all times.

06 Cable Reduction

A single transmitter for multiple RTDs minimizes cable runs across equipment, reducing installation time, clutter, and potential failure points.








MEASURED PARAMETERS



Multi-Channel
Temperature



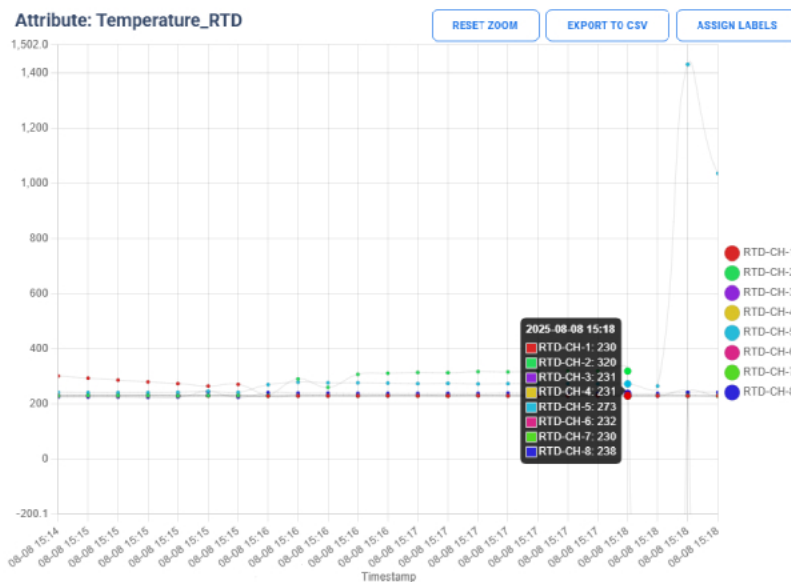
FEATURES

-  **24/7 Alarm Notifications**
Continuously monitors conditions and sends alerts when temperature thresholds are exceeded
-  **Extended Battery Operation**
Ultra-low-power design, delivering over 5 years of continuous use at a 5-minute reporting interval
-  **Fast, Scalable Deployment**
Compact and easy to mount—ready for rapid rollout across enterprise-wide operations
-  **Automatic Data Logging**
Securely records all measurements and events for traceability, audits, and long-term trend analysis
-  **Accessible Data**
Sends data through a secure gateway to a central dashboard for real-time viewing and trend analysis
-  **Wireless Data Transmission**
Bluetooth connectivity enables quick, cable-free data transfer for flexible monitoring
-  **Simple Installation**
Compact design mounts easily utilizing screws on a threaded plate within the device

VISUALIZATION SOFTWARE

Real-Time Alarm Level Display and Historical Data

E4A's IoT Manager software provides a customizable interface to leverage the TP-400R8's multi-channel temperature monitoring. Users can track up to 8 temperature points simultaneously for a detailed view of equipment hotspots and overall performance. The dashboard displays real-time data intuitively, while alerts notify operators if any readings fall outside set thresholds. By turning insights from multiple points into actionable data, the software supports condition-based maintenance, reducing downtime and extending asset life. With seamless visualization and proactive alerts, IoT Manager keeps industrial systems safe, efficient, and reliable



E4A IOT MANAGER

Unlock the full potential of your sensor network with E4A's IoT Manager — a powerful, web-based platform designed for real-time monitoring, control, and analysis of your IoT devices.

- 01 Device Management Dashboard
- 02 Real-Time Monitoring
- 03 Historical Data Review
- 04 Data Analytics and Visualization
- 05 Remote Configurability and Upgrades
- 06 Plus Much More!



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Just scan the QR code and follow the prompts. Once you contact us, we'll handle the setup and get you connected - quick and hassle-free.

TECHNICAL SPECIFICATIONS

Power Supply

Main Power	3VDC, BP-100 (non-rechargeable) 3.6VDC, BP-100R (rechargeable)
Battery Capacity	6000mAh (non-rechargeable) 6800mAh (rechargeable)
Input Voltage Range	1.8VDC to 5.0VDC
Average Current	22uA

Operating Specifications

Operating Temperature	-20°C to +60°C
Storage Temperature	-20°C to +70°C (battery installed)
Permissible Humidity	20-85% RH (non-condensing)
Ingress Protection Rating	IP30 (without battery) IP55 (with battery)
Pollution Degree	2
Protection Class	3
Altitude	2000m

Measurement Characteristics

Temperature Probes	PT-100 probe (auto-detected) PT-1000 probe (auto-detected)
Measurement Range	-50°C to +260°C
Accuracy	±0.4°C (full range, factory calibrated)
RTD Probe Interface	3 wire, ANSI male blade (7.9mm pitch)

SPARE PARTS AND ACCESSORIES

Part Description E4A Part Number

Quad-Band Gateway	E4A-BFA-00005-01
Dual-Band Gateway	E4A-BFA-00004-01
BP-100 Battery Pack	E4A-BFA-00008-00
BP-100R Battery Pack	E4A-BFA-00009-00
3-Wire PT-100 RTD	E4A-CAS-00004-00

CERTIFICATIONS

FCC	2AXVKTP400
Industry Canada	26661-TP400
Safety	Pending

Physical Characteristics

Housing Material	ABS plastic
Physical Dimensions	Height: 110mm / 4.3 inches (without battery) Height: 147.5mm / 5.8 inches (with battery) Width: 100mm Ø / 3.9 inches
Weight	320g (without battery) 525g (with battery)
Mounting	1/4-28 UNF thread mount 13.5mm deep bolt hole

Communications

Wireless Module	2.4GHz Bluetooth 5.0 transceiver
Communication Range	200m line of sight
Communication Interval	User programmable in 10s increments
Security	AES 128-bit crypto accelerator ECC and RSA public key accelerator (PKA) SHA2 accelerator (full suite up to SHA-512) True Random Number Generator (TRNG)

User Interface

Pushbuttons	3 push buttons (pairing, trigger data report, enable/disable serial terminal interface)
Status LED	5 status LED (red, green, orange)
Alarm Range	User programmable

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DISTRIBUTORS

