WL_RTD

Wireless RTD

Accurate Temperature, Without the Tangle

INTRODUCTION

- The wireless RTD transmitter is built for industrial use, ensuring reliable temperature monitoring.
- It transmits RTD sensor data wirelessly, reducing the need for long cables.
- The transmitter integrates the RTD input, wireless module, and antenna in one rugged unit.
- It is suitable for harsh environments and electrically noisy conditions.
- Data is sent to a receiver with an LCD display and analog output options like 4–20 mA/Modbus
- This makes integration with PLCs, SCADA, or analog systems simple.

FEATURES

- ISM band 868 MHZ
- Measuring input: PT100/PT1000 (2-wire, 3-wire, or 4-wire)
- Open Air Range 1 Km
- Battery status Monitoring
- Rechargeable Battery
- Easy to install
- Wireless transmission
- Low power consumption
- Configurable transmission intervals
- Analog Output Options: 4–20 mA
- LCD Display: Clear real-time temperature display on receiver unit

APPLICATIONS

- Industrial process temperature monitoring
- Boiler and furnace temperature measurement
- Cold storage and refrigerated transport
- HVAC system temperature tracking
- Cleanroom and laboratory monitoring
- Pharmaceutical manufacturing and storage
- Food and beverage processing plants
- Greenhouses and agricultural environments
- Soil and ambient temperature monitoring
- Water and wastewater treatment facilities
- Remote or inaccessible location monitoring
- Electrical cabinet and panel temperature sensing
- Oil and gas pipeline temperature measurement
- Power plant and substation equipment monitoring

OUTCOMES

- **Enhanced Operational Efficiency:** Streamlines temperature monitoring and reduces manual inspection efforts.
- **Improved System Flexibility:** Enables easy deployment across diverse locations without rewiring.
- **Fault Tolerance and Reliability:** Ensures consistent performance even in harsh industrial environments.
- **Cost-Effective Solution:** Minimizes installation and maintenance costs with wireless technology.
- **Future-Proof Connectivity:** Supports scalable integration with IoT, cloud, and automation systems.

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SPECIFICATIONS

All specifications at ambient of 25 °C, unless specified otherwise

Electrical

- Power Supply : Battery backup 3 to 5 year
- Max. Current : 90 mA
- Protections : low voltage Protection

Mechanical

Material : SS304
Dimensions : 50mm radius X 115mm height
IP rating : IP54

Programmable Parameters

- Network ID (NID): 1 to 1000
- Destination ID (DID): 1 to 1000
- Device Address: 1 to 1000
- Transmit Power : 0 dBm to 22 dBm
- All parameters configurable from software

Wireless Parameters:

Communication Protocol : Lora
Communication Frequency : 867MHz
Error Correction : FEC
Encryption : AES256

Environmental Conditions

Operating ambient temperature -10 °C to 65 °C
Relative Humidity 0 to 95%, non condensing

Sensor Parameters:

Sensor Types : RTD/Thermocouple
RTD Types : PT100/PT1000
RTD Wires : 2/3/4 Wires
Thermocuple Type :J/K/T/E

ORDERING INFORMATION

Model Number Configuration for Wireless RTD Pair

To facilitate ordering and customization of the Wireless RTD Modem, we offer a personalized model number configuration that allows you to tailor the device to your specific needs. You can specify your requirements based on voltage, range, frequency, and antenna length, ensuring that your modem perfectly fits your application.

Model Number Configuration:

CAI/WL/_/_/_
SensorType/RTD Types/RTD Wires

Configuration Options:

1. **Sensor Type:**
   - R-RTD
   - T-Thermocouple

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1. **RTD Types**
   - P100-PT100
   - P1000-PT1000
2. **RTD Wires**
   - 2- 2 wires
   - 3-3 wires
   - 4-4 wires

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1. **Thermocouple**
   - J-J Thermocouple
   - K-K Thermocouple
   - T-T Thermocouple
   - E-E Thermocouple
   - N-N Thermocouple
   - S-S Thermocouple
   - M-M Thermocouple

Example Model Numbers:

- **CAI/WL/R/P100/2:** Wireless RTD with PT100, 2 wires
- **CAI/WL/T/J:** Wireless Thermocouple with J type

List of Items

1. Wireless RTD Modem.
2. Configuration Software.