



Series: DR-SN900-RTD

Wireless RTD (PT100) Transmitter / Receiver Set



FEATURES & BENEFITS

- Wireless Bridge Between RTD Sensor and Instrument Models for RTD (PT100) Sensors
- Receiver Models 0-5, 0-10V DC or 4-20mA Output
- Up To 6 Miles Line-of-site Transmit/Receive Distance
- Powered by any 12V-24V DC Supply
- Standard 35mm Din-rail Enclosures
- Pre-configured, Ready-To-Operate
- Sold As Transmitter/Receiver Matched Set
- License Free Radio Operation

APPLACATIONS

- Temperature Measurement Signals
- Remote Sensor Monitoring & Control

Description

DR-SN900-RTD Series Wireless RTD (PT100) Transmitters feature a factory programmed transmitter / receiver matched set. The transmitter sends resistive temperature sensor measurements (RTD) to a base receiver up to 6 mile6 away using license free 900 MHz RF technology. The receiver base provides analog voltage or current (4-20ma) output. Each Transmitter/Receiver set is factory coded as a matched set and requires no field programming. Models can be solar powered.

Transmitter Operation

The wireless RTD transmitter reads analog voltage output from a PT100 sensor and then sends the measured data over the air to a remote location. The measured RTD signals are converted to digital packets and then transmitted via a license free radio transmission to a waiting control receiver.

Receiver Operation

The wireless RTD receiver decodes any incoming radio packets and converts them into linear voltage or current output signals for interfacing with PLCs, Controllers, Data Loggers or Process Measurement Instruments.

General Specifications

Radio Frequency: 900 MHz
Regulatory: FCC Part 15 (No license required)
Control Lines: 1
Antenna Connection: RP-SMA
Antennas: 7dbi, Omni-directional (Included)
Transmit/Receive Distance:
 with included antennas:
 Indoor/Urban 1000ft, Line-of-site 3 Miles
 with optional antennas:
 Indoor/Urban 1600ft, Line-of-site 6 Miles
Transmitter/Receiver Code Matching: Factory set
Wire Connection: Terminal Blocks
Operating Temperature: -22 to 113 °F (-30 to 45 °C)
Enclosures: Plastic, 35mm Din-rail Mounted

Transmitter Specifications

RF Power Output: 100mW
RF Output Impedance: 50 Ohm nominal
RF Data Rate: 10 kbps
Operating Power: 12-24V DC @ 3W max
Input Type: RTD 3-Wire (PT100) 100 ohm, $\alpha = 0.00385$
Measurement Range: See Model Table
Resolution: 10 Bits
Measurement Accuracy: +/- 3.6°F (2 °C)
Sensor Break Result: Upscale Output

Receiver Specifications

Receive Sensitivity: -100 dBm
Operating Power: 12-24V DC @ 3W max
Output: Analog, 4-20mA or 1-5V DC
RF Signal Loss Result: Holds output at last reading.

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Each Set Includes 7dbi Antennas and 9ft Antenna Extension Cables



Optional 6 Mile Distance Antenna Set

Regulatory Approvals

FCC(USA) - MCQ-XBEEESC
 IC (Canada) - 1846A-XBEEESC

Model Number	Description	Measurement Range
DR-SN900-RTD-140F-5	RTD Transmitter/Receiver, 0-5V DC Output	-40 to 140 °F (-40 to 60 °C)
DR-SN900-RTD-140F-10	RTD Transmitter/Receiver, 0-10 DC Output	-40 to 140 °F (-40 to 60 °C)
DR-SN900-RTD-140F-420	RTD Transmitter/Receiver, 4-20mA Output	-40 to 140 °F (-40 to 60 °C)
DR-SN900-RTD-500F-5	RTD Transmitter/Receiver, 0-5V DC Output	0 to 500 °F (-18 to 260 °C)
DR-SN900-RTD-500F-10	RTD Transmitter/Receiver, 0-10 DC Output	0 to 500 °F (-18 to 260 °C)
DR-SN900-RTD-500F-420	RTD Transmitter/Receiver, 4-20mA Output	0 to 500 °F (-18 to 260 °C)

Additional ranges and custom models are available, contact us for more information.
 Note: RTD Sensor Not Included.

Available Options

Model Number	Description
DRWC-900-LRANT	Optional Long-Distance Yagi Directional Antenna Set (up to 6 Miles line-of-site)

Note: Continued product improvements make specifications subject to change without notice.
Check www.imagineinstruments.com for the latest product information and updates

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Released: 15 February, 2018 :: Rev: A