



Wireless Thermocouple Transmitter / Receiver Set



FEATURES & BENEFITS

Wireless Bridge Between TC Sensor and Instrument Models for Type-T, Type-J or Type-K Thermocouples Receiver Models 0-5, 0-10V DC or 4-20mA Output Up To 1 Mile 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-SN24-TC Series Wireless Thermocouple Transmitters feature a factory programmed transmitter / receiver matched set. The transmitter sends Thermocouple measurements to a base receiver up to 1 mile away using license free 2.4 GHz 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 thermocouple transmitter reads analog voltage output from a type-K Thermocouple sensor and then sends the measured data over the air to a remote location. The measured thermocouple signals are converted to digital packets and then transmitted via a license free radio transmission to a waiting control receiver.

Receiver Operation

The wireless thermocouple 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: 2.4 GHz

Regulatory: FCC Part 15 (No license required)

Control Lines: 1

Antenna Connection: RP-SMA

Antennas: 5dbi, Omni-directional (Included)

Transmit/Receive Distance: with included antennas:

Indoor/Urban 100ft, Line-of-site 600ft

with optional antennas:

Indoor/Urban 300ft, Line-of-site 1 Mile

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: 63mW

RF Output Impedance: 50 Ohm nominal

RF Data Rate: 250 kbps

Operating Power 12-24V DC @ 3W max

Input Type: Type-T, J or K Thermocouple (See model table)

Measurement Range: See Model Table

Resolution: 10 Bits

Measurement Accuracy: +/- 4.5°F (2.5 °C) Sensor Break Result: Upscale Output

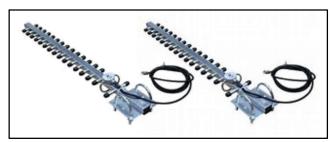
Receiver Specifications

Receive Sensitivity: -100 dBm

Operating Power: 12-24V DC @ 3W max Output: Analog, 0-5V DC, 0-10V DC or 4-20mA RF Signal Loss Result: Holds output at last reading. Series: DR-SN24-TC



Each Set Includes 5dbi Antennas and 9ft Antenna Extension Cables



Optional 1 Mile Distance Antenna Set

Regulatory Approvals

FCC(USA) - OUR-XBEEPRO IC (Canada) - 4214A-XBEEPRO

Model Number	Description	Measurement Range
DR-SN24-TCT-100F-5	T-Type Transmitter/Receiver, 0-5V DC Output	-100 to 100 °F (-73 to 38 °C)
DR-SN24-TCT-100F-10	T-Type Transmitter/Receiver, 0-10 DC Output	-100 to 100 °F (-73 to 38 °C)
DR-SN24-TCT-100F-420	T-Type Transmitter/Receiver, 4-20mA Output	-100 to 100 °F (-73 to 38 °C)
DR-SN24-TCT-200F-5	T-Type Transmitter/Receiver, 0-5V DC Output	0 to 200 °F (-18 to 38 °C)
DR-SN24-TCT-200F-10	T-Type Transmitter/Receiver, 0-10 DC Output	0 to 200 °F (-18 to 38 °C)
DR-SN24-TCT-200F-420	T-Type Transmitter/Receiver, 4-20mA Output	0 to 200 °F (-18 to 38 °C)
DR-SN24-TCJ-500F-5	J-Type Transmitter/Receiver, 0-5V DC Output	0 to 500 °F (-18 to 260 °C)
DR-SN24-TCJ-500F-10	J-Type Transmitter/Receiver, 0-10 DC Output	0 to 500 °F (-18 to 260 °C)
DR-SN24-TCJ-500F-420	J-Type Transmitter/Receiver, 4-20mA Output	0 to 500 °F (-18 to 260 °C)
DR-SN24-TCJ-800F-5	J-Type Transmitter/Receiver, 0-5V DC Output	0 to 800 °F (-18 to 427 °C)

DR-SN24-TCJ-800F-10	J-Type Transmitter/Receiver, 0-10 DC Output	0 to 800 °F (-18 to 427 °C)
DR-SN24-TCJ-800F-420	J-Type Transmitter/Receiver, 4-20mA Output	0 to 800 °F (-18 to 427 °C)
DR-SN24-TCK-1000F-5	K-Type Transmitter/Receiver, 0-5V DC Output	0 to1000 °F (-18 to 538 °C)
DR-SN24-TCK-1000F-10	K-Type Transmitter/Receiver, 0-10 DC Output	0 to1000 °F (-18 to 538 °C)
DR-SN24-TCK-1000F-420	K-Type Transmitter/Receiver, 4-20mA Output	0 to1000 °F (-18 to 538 °C)
DR-SN24-TCK-2000F-5	K-Type Transmitter/Receiver, 0-5V DC Output	0 to 2000 °F (-18 to 1093 °C)
DR-SN24-TCK-2000F-10	K-Type Transmitter/Receiver, 0-10 DC Output	0 to 2000 °F (-18 to 1093 °C)
DR-SN24-TCK-2000F-420	K-Type Transmitter/Receiver, 4-20mA Output	0 to 2000 °F (-18 to 1093 °C)

Note: Thermocouple Sensor Not Included.

Available Options

Model Number	Description
DRWC-24-LRANT	Optional Long-Distance Yagi Directional Antenna Set (up to 1 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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