

Complete Wireless Thermocouple Connector System

The Smart Connector™



Additional Receivers Available

FCC/Industry Canada, SRRCC Approved

Plug Your Probe Into a Smart Connector to Make a Smart Sensor!



Wireless connector.

Thermocouple input.

Bumper Band™

UWTC Series



- ✓ User Configurable for Type J, K, T, E, R, S, B, N, C Thermocouple Input
- ✓ Free Downloadable Software Converts Your PC Into a Multi-Channel Chart Recorder or Data Logger
- ✓ FCC Compliant (All Models)
- ✓ Built-In Cold Junction Compensation and Linearization
- ✓ Unique Design Accepts Both Miniature and Standard Size Probes and Connectors
- ✓ One Receiver Works with Multiple Wireless Remote Connectors
- ✓ Low Power Operation and Sleep Mode for Long Battery Life
- ✓ Wireless Connector Transmits Thermocouple Temperature, Ambient Temperature, Signal Strength and Battery Status in Real-Time
- ✓ Interfaces with Model UWTC-REC1 for Multi-Channel PC Chart Recording and Data Logging or Model UWTC-REC2 (Single Channel Industrial Transceiver with Analog Output and Alarm)

Omega's wireless thermocouple connector features stand-alone, compact, battery powered thermocouple connectors that transmit their readings back to a host receiver up to 120 m (400') away.

Each unit can be programmed in the field to work as a Type J, K, T, E, R, S, B, N or C calibration connector. When activated the connector will transmit readings continuously at pre-set time interval that was programmed by the user during the initial setup. Each unit measures and transmits: Thermocouple Input Reading, Connector Ambient Temperature, RF Signal Strength and Battery Condition to the host and is displayed on the PC screen in real-time using the downloadable software. When used with host receiver UWTC-REC1 data from up to 48 wireless thermocouple connectors can be received and displayed. Each unit includes free downloadable software that converts your PC into a strip chart recorder or data logger so readings can be saved and later printed or exported to a spread sheet file.

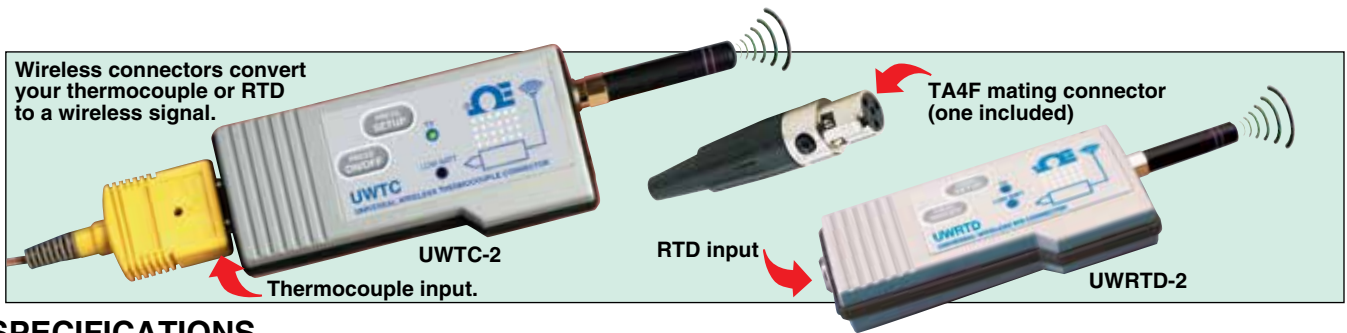
When used with host transceiver UWTC-REC2 wireless data from one connector can be re-transmitted out of the receiver by a wired connection as an analog voltage, current or thermocouple signal to interface with a controller, PLC or data acquisition board.

Up To 48 Channels!

UWTC-REC receivers work with up to 48 UWTC transmitters, and displays/logs the data to your PC or network. Sold separately.

Download TC Central Software





SPECIFICATIONS

(Complete specifications available online)

UWTC Input:

J, K, T, E, R, S, B, C or N;
software selectable

UWRTD Input:

100 Ω
Pt RTD; 0.00385 or 0.00392 curve;
software selectable

Measurement Range:

J: -100 to 760°C (-148 to 1400°F)
K: -100 to 1260°C (-148 to 2300°F)
T: -200 to 400°C (-328 to 752°F)
E: -200 to 1000°C (-328 to 1832°F)
R: 260 to 1760°C (500 to 3200°F)
S: 260 to 1760°C (500 to 3200°F)
B: 870 to 1820°C (1598 to 3308°F)
C: 0 to 2315°C (32 to 4200°F)
N: -100 to 1260°C (-148 to 2300°F)
Pt100, 0.00385: -200 to 850°C (-328 to 1562°F)
Pt100, 0.00392: -100 to 457°C (-148 to 854°F)

Accuracy:

Types J and K: ±0.5% rdg or ±1.0°C (1.8°F), whichever is greater
Types T, E, and N: ±0.5% rdg or ±2.0°C (3.6°F), whichever is greater
Types R, S, B and C: ±0.5% FS
Pt100: ±0.5°C (1.0°F)

Resolution:

1°C/1°F
Cold Junction Compensation (Automatic): -10 to 70°C (14 to 158°F)

Thermocouple Connection: Universal female accepts both standard male (OSTW Series) or miniature male (SMPW Series) mating connector

RTD: Series "T" receptacle, type TA4M; TA4F mating connector included

Operating Environment: -10 to 70°C (14 to 158°F)

Computer Interface: USB (one interface cable included with receiver)

Transmit Sample Rate: Programmable from 1 sample/minute to 1 sample/ every 5 seconds
Radio Frequency (RF) Transceiver

Carrier: ISM 2.4 GHz, direct sequence spread spectrum, license free worldwide (2.450 to 2.490 GHz -12 channels)

RF Output Power

UWTC-2, UWRTD-2: 10dBm (10 mW)

Range of RF Link

UWTC-2, UWRTD-2: Up to 120 m (400') outdoor line of sight; Up to 45 m (130') indoor/urban

RF Data Packet Standard: IEEE 802.15.4, open communication architecture

Downloadable Software: Compatible with Windows (2000, XP, Vista, and 7) operating system

Connector Internal Battery: One 3.6 V lithium, 2.4 Ah capacity (AA) (included)

Battery Life (Typical- 1 sample/ minute reading rate @ 25°C (77°F): 1 year

Data Transmitted to Host:

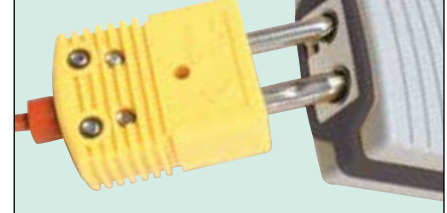
Thermocouple Reading, Connector Ambient Reading, RF Transmit Strength and Battery Condition

Dimensions: 100 L x 50 W x 25 mm H (without antenna) (4 x 2 x 1")

Weight: 70 grams

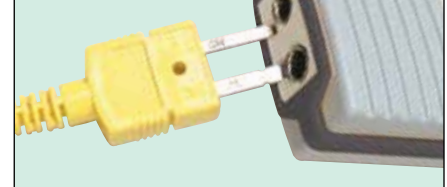
Case: ABS plastic

Standard connector (OST)



Miniature connector (SMP)

Type K shown



Free Thermocouple Included!

UWTC includes a free 1 m (40") Type K insulated beaded wire thermocouple with subminiature connector and wire spool caddy (1 per channel). **Order a Spare!**
Model No. SC-GG-K-30-36.

Note: Because of transmission frequency regulations, the UWTC-2 and UWRTD-2 products are approved for use in the United States, Canada, Europe, Mexico, Brazil, China, Korea, Singapore, and Japan.

To Order

Model No.	Description
UWTC-2	Thermocouple-to-wireless connector/converter, extended distance 120 m (400')
UWRTD-2	RTD-to-wireless connector/converter, extended distance 120 m (400')
SC-GG-K-30-36	Spare Type K beaded wire thermocouple sensor for model UWTC
UWTC-REC1	48-channel receiver/host (USB powered)
UWTC-ANT-LR	Optional high-performance antenna (standard antenna included)
UWTC-BATT	Replacement battery, 3.6V "AA" lithium (one included)
TA4F	Spare RTD mating connector for UWRTD (one included)

Note: USB programming cable included with compatible UW Series wireless receivers and transceivers.

UWTC comes complete with 3.6V "AA" lithium battery, mounting bracket, Type K beaded wire thermocouple and operator's manual.

UWRTD comes complete with 3.6V "AA" lithium battery, mounting bracket, TA4F mating connector and operator's manual.

Ordering Example: UWTC-2, wireless thermocouple connector/transmitter with 120 m (400') range, plus UWTC-REC1 48-channel receiver/host.