

Complete Wireless Thermocouple Connector System



The Smart Connector™

**FCC/Industry
Canada, SRRC
Approved**

**Additional
Receivers
Available**



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

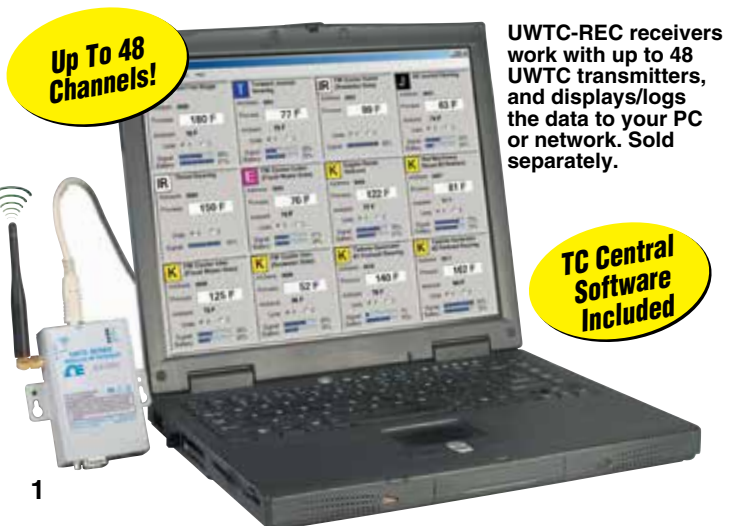
UWTC Series



- ✓ **User Configurable for Type J, K, T, E, R, S, B, N, C Thermocouple Input**
- ✓ **Free 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.

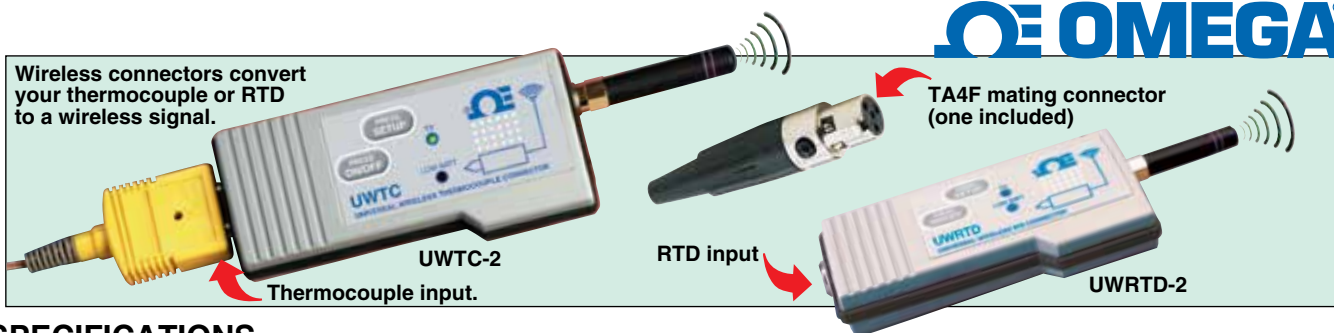
Each unit can be programmed in the field to work as a Type J, K, T, E, R, S, B, N or C calibration connector. When activated the connector will transmit readings continuously at pre-set time interval that was programmed by the user during the initial setup. Each unit measures and transmits: Thermocouple 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 provided 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 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.



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

**TC Central
Software
Included**

Wireless connectors convert your thermocouple or RTD to a wireless signal.



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:

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

Software (Included Free): 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:

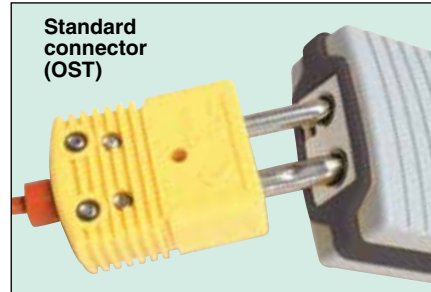
Thermocouple Reading, Connector Ambient Reading, RF Transmit Strength and Battery Condition

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

Weight: 70 grams

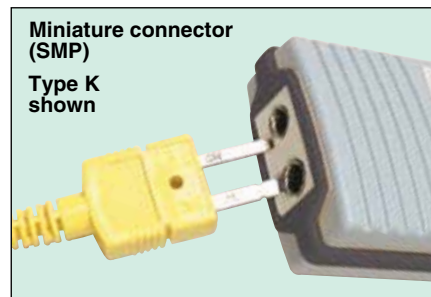
Case: ABS plastic

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 and FREE measurement and data logging software are both 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.