WIRELESS RTD PROBE/TRANSMITTER ASSEMBLY
For Use in Hygienic Applications

UWRTD-NB9W Series

1 YEAR WARRANTY ☐ C € FC

✔ **Stainless Steel Construction with White Polypropylene Transmitter Housing**

✔ **Complete, Ready to Install and Operate Assembly is Available With or Without 3-A Approved Thermowells for CIP (Clean-in-Place) Hygienic Applications**

✔ **Includes Probe and Wireless Radio Transmitter**

✔ **Free Software Converts Your PC Into a Multi-Channel Chart Recorder or Data Logger**

✔ **Interface up to 48 Different Wireless Transmitters With One Receiver**

✔ **Low Power Operation and Sleep Mode Allows for Long Battery Life**

✔ **Each Wireless Probe Assembly Transmits Process Temperature, Ambient Temperature, Signal Strength and Battery Status in Real Time**

✔ **Works with All OMEGA® UWTC Series USB or Web Enabled Ethernet Receivers and Wi Series Meter/ Controller/Scanner and DIN Rail Receivers**

UWRTD-NB9W-1PT316-14-4-B, , shown close to actual size.

Available with or without 3-A thermowell. Wells also available separately.

Another Sani-Fit™ Product from OMEGA

OMEGAs new Wireless RTD Probe Assemblies for hygienic applications feature a complete, ready to install, pre-wired PT100 sensor and wireless transmitter package. Each battery powered wireless unit will transmit measurements back to a host receiver up to 120 m (400') away. Each unit comes factory assembled, tested, calibrated and pre-programmed for fast installation. When activated, the unit will transmit readings continuously at pre-set time intervals that were programmed by the user during initial setup and installation. Each unit measures and transmits: process temperature, ambient temperature wireless link signal strength and battery condition to a remote host and the data is displayed on the PC in real time using the free provided software.

Typical Wireless System

With OMEGAs wireless probes and receivers you can connect directly to a process recorder, as well as to your computer, to print and save your data!

NEW
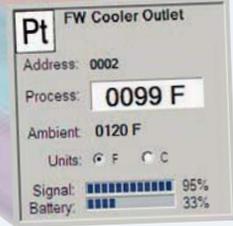
UWRTD-NB9W standard hygienic probe assembly without thermowell.

Pt FW Cooler Outlet
Address: 0002
Process: **0099 F**
Ambient: 0120 F
Units: ⊙ F ○ C
Signal: ▮▮▮▮▮▮▮▮▮▮ 95%
Battery: ▮▮▮▮ 33%

UWTC SERIES WIRELESS RF RECEIVER 2.4 GHz

USB

Analogue output

UWTC-REC2 wireless receiver with analogue output, see receivers on page S-9 and S-10.

CTXL-DPR chart recorder, see pages X-7 to X-10 for details.

SPECIFICATIONS

Available Types: 100 Ω (standard), 500 Ω, 1000 Ω (special order)

RTD Measurement Range:
0.00385: -200 to 850°C (-328 to 1562°F)
0.00392: -100 to 457°C (-148 to 854°F)

RTD Measurement Accuracy: ±0.5°C (1°F) of reading

RTD Measurement Resolution: 1°C/1°F

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

RTD Probe/Sensor: Pt100, Class "A"

Computer Interface: USB (one programming cable included with all receivers)

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

RF Output Power: 10 dBm (10 mW)

Range of RF Link: Up to 120 m (400') outdoor line of sight; up to 40 m (130') indoor/urban

Software (Included Free): Requires Windows® 98, ME, 2000, XP or Vista (32 bit)

Internal Battery: One 3.6V lithium, 8.4 Ah capacity (C-cell) included

Battery Life (Typical): (3 years) 1 sample/minute reading rate @ 25°C (77°F)

Data Transmitted to Host: Process reading, ambient reading, transmit strength and battery condition

Probe Assembly Material: Stainless Steel

Transmitter Housing Material: White polypropylene head

Note: *Because of transmission frequency regulations, these products may only be used in the United States, Canada and Europe.*

Thermowell Options

Order Code*	Thermowell Model No.		Order Code*	Thermowell Model No.	
A	1 1/2-S-260-U1 5/8-316SS		F	1 1/2-S-385-U1 5/8-316SS	
B	1 1/2-S-260-U2 1/2-316SS		G	1 1/2-S-385-U2 1/2-316SS	
C	1 1/2-S-260-U4 1/2-316SS		H	1 1/2-S-385-U4 1/2-316SS	
D	1 1/2-S-260-U7 1/2-316SS		I	1 1/2-S-385-U7 1/2-316SS	
E	1 1/2-S-260-U10 1/2-316SS		J	1 1/2-S-385-U10 1/2-316SS	

* Models available with thermowells. Add order codes and additional price to model numbers.

Ordering Examples: UWRTD-NB9W-1PT316-14-4-B, *probe/transmitter assembly with 3-A thermowell, wireless RTD probe/transmitter assembly, 102 mm (4") long 0.00385 curve Pt100 probe with 6.35 mm (¼") diameter 316 stainless steel sheath, white polypropylene head with built-in wireless transmitter, **1/2-S-260-U21/2-316,** 3-A, stainless steel thermowell with 2½ insertion length, 152 mm (4") element length and 38 mm (1½") #16 AMP end cap.*

UWRTD-NB9W-1PT316-14-6-C, *probe/transmitter assembly with 3-A thermowell, wireless RTD probe/transmitter assembly, 152 mm (6") long 0.00385 curve Pt100 probe with 6.35 mm (¼") diameter 316 stainless steel sheath, white polypropylene head with built-in wireless transmitter, **1/2-S-260-U41/2-316,** 3-A, stainless steel thermowell with 4½ insertion length, 152 mm (6") element length and 1½" (38 mm) #16 AMP end cap.*

UWRTD-NB9W-1PT316-14-4, *probe/transmitter assembly (without thermowell), wireless RTD probe/transmitter assembly, 102 mm (4") long 0.00385 curve Pt100 probe with 6.35 mm (¼") diameter 316 stainless steel sheath, white polypropylene head with built-in wireless transmitter.*

UWRTD-NB9W-1PT316-14-6, *probe/transmitter assembly (without thermowell), wireless RTD probe/transmitter assembly, 152 mm (6") long 0.00385 curve Pt100 probe with 6.35 mm (¼") diameter 316 stainless steel sheath, white polypropylene head with built-in wireless transmitter.*

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WIRELESS RECEIVERS
With USB Connection and Analogue Output

USB connection (cable included)

Available with 4 to 20 mA, 0 to 5 Vdc, and 0 to 10 Vdc. Mating connector and cable included.

48-Channel USB Receiver

UWTC-REC1

Shown smaller than actual size.

With the UWTC-REC1 data from up 48 wireless connectors or probe assemblies can be received and displayed on your PC simultaneously. This receiver connects to an unused USB port on your computer and must stay connected to operate and receive data.

SPECIFICATIONS
Power: USB bus 5V powered, 300 mA consumption max
**USB Compatibility:** USB 1.1, USB 2.0
LED Indicators: TX (transmit), RX (receive), SB (standby), PWR (USB power)
Radio Frequency (RF): ISM 2.4 GHz, direct sequence spread
Protocol: IEEE 802.15.4
Cable Type: USB 4P(A) Male to USB Mini 5P(B) Male
Ambient Operating Conditions: -10 to 70°C, 0 to 95% RH (non-condensing)
Dimensions: 91 L x 62 W x 22 mm H (3.6 x 2.4 x 0.9") (without antenna)
Weight: 168 g (0.45 lb) with antenna
Enclosure/Housing: Painted steel

48-Channel USB Receiver with Analogue Output and Display Option

UWTC-REC2-D

When USB powered data from up to 48 wireless connectors or probe assemblies can be received and displayed on your computer simultaneously. When DC adaptor powered, data from one channel can also be re-transmitted as a hard wired analogue current, voltage or thermocouple signal output.

Shown smaller than actual size.

SPECIFICATIONS
Power: USB bus +5V powered, 300 mA consumption max, plus 12 to 16 Vdc, 300 mA, AC wall adaptor (supplied with unit)
USB Compatibility: USB 1.1, USB 2.0
LED Indicators: TX (transmit), RX (receive), SB (standby) PWR (USB power)
Radio Frequency (RF): ISM 2.4 GHz, direct sequence spread
Protocol: IEEE 802.15.4
Cable Type: USB 4P(A) male to USB mini 5P(B) male
Ambient Operating Conditions: -10 to 70°C, 0 to 95% RH (non-condensing)
Analogue Output: -V1: 0 to 5 Vdc;**-V2:** 0-10 Vdc;
-TC: Type-K; **Thermocouple -MA:** 4 to 20 mA
Analogue Output Accuracy: ±2.0°C (3.6°F) @ 23°C (all models)
Local Display: Backlit LCD (UWTC-REC2-D only)
Dimensions: 91 L x 62 W x 22 mm H (3.6 x 2.4 x 0.9") (without antenna)
Weight: 168 g (0.45 lb) with antenna
Enclosure/Housing: Painted steel

WIRELESS RECEIVER
for Web-Based Monitoring of Temperature

Model UWTC-REC3

✔ **Receiver Connects Directly to an Ethernet or the Internet**
✔ **Does Not Require a Host Computer**
✔ **Serves Active Web Pages to Display Real Time Temperature Readings and Charts**
✔ **Works with any UWTC or UWRTD Series Wireless Connectors or Probe Assemblies**
✔ **Alarm Notification can be Sent to E-mail, Including Text Messages to Internet Enabled Cell Phones and PDAs**
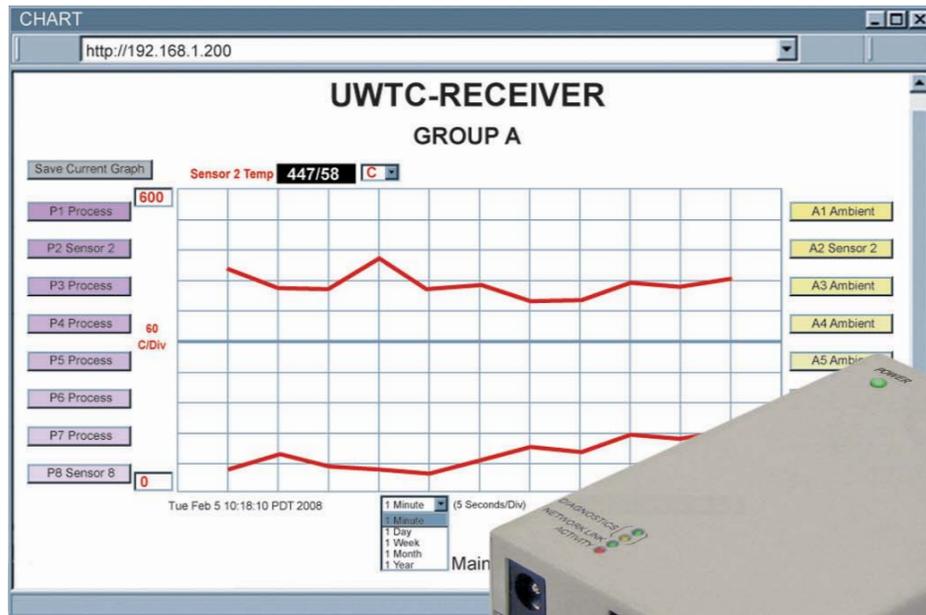
UWTC-REC3 £157, shown smaller than actual size. Includes DC power adaptor, ethernet cable and operator's manual.
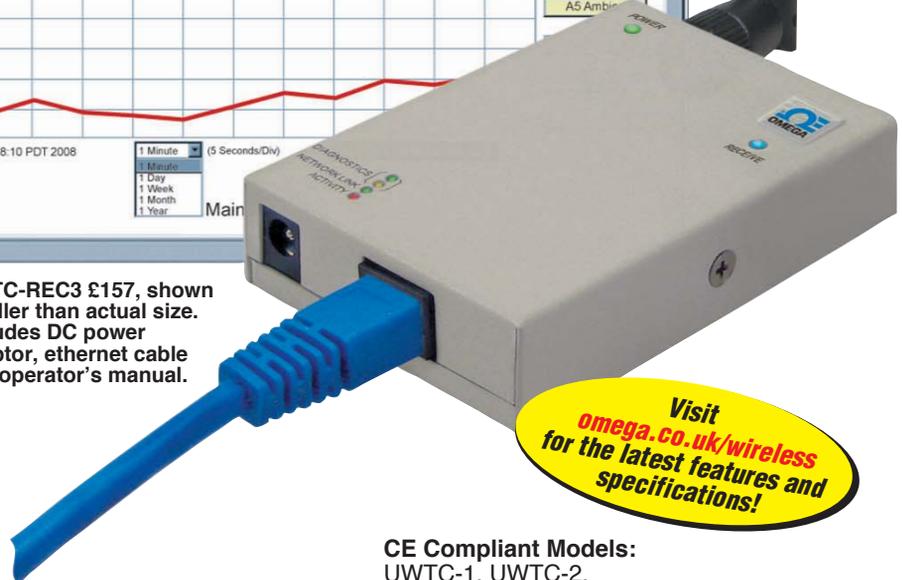
The OMEGA® UWTC-REC3 receiver lets you monitor and record temperature over an Ethernet network or the Internet without any special software-just your web browser. The receiver is an independent node on the network sending and receiving data in standard TCP/IP packets. It is easily configured from a web browser and can be password protected. The UWTC-REC3 can trigger an alarm if variables go above or below a set-point that you can determine. Your alarm can be sent by e-mail to a single user or to a group distribution list, including text messages to Internet enable mobile phones and PDAs. The OMEGA "Mail Notifier" software is a free and easy-to-use program for this application.

The UWTC-REC3 receiver serves active web pages to display real time temperature readings and charts. You can also log data in standard data formats for use in a spreadsheet or data acquisition program such as Excel or Visual Basic. OMEGA offers a free, user-friendly program for logging data to Excel.

OMEGA offers an OPC Server software (£198) that makes it easy to intergrate the UWTC-REC3 wireless receiver with many popular data acquisition and Automation programs.

SPECIFICATIONS

Ethernet: 10Base-T (RJ45)
Supported Protocols: TCP/IP, ARP, ICMP, DHCP, DNS, HTTP, and Telnet
LED Indicators: Network Activity, Network Link, Diagnostics, Receive and Power
Management: Device configuration and monitoring through embedded WEB server
Embedded WEB Server: Serves WEB pages (JAVA™ Applets) containing real-time data and live updated charts within definable time intervals

Power
Power Input: 9 to 12 Vdc
Consumption: 2.5 W max
Safety Qualifed ac Power Adaptor (Included) Nominal Output: 9 Vdc @ 0.5 A
Input: 100 to 240 Vac, 50/60 Hz

CE Compliant Models:
UWTC-1, UWTC-2,
UWTC-REC1,
UWTC-REC2-V1,
UWTC-REC2-V2,
UWTC-REC2-MA,
UWTC-REC2-D-V1,
UWTC-REC2-D-V2,
UWTC-REC2-D-MA
Note: Because of transmission frequency regulations, these products may only be used in the United States, Canada and Europe (please note CE compliance of the specific model for use in Europe).

Wireless Communication
Protocol: IEEE 802.15.4
Frequency: 2.4 GHz, channel #12
Network Topology: Star topology
Range: Up to 120 m (400') without obstructions or interference environment
Operating Temperature: 0 to 70°C (32 to 158°F), 90% RH non-condensing
Storage Temperature: -40 to 125°C (-40 to 257°F)

General
Agency Approval: FCC, EN300328
Software: Field firmware upgradeable; including an excel program for automatic data logging within definable time intervals, compatible with all Windows® operating systems

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wiDR33-U wireless DIN rail receiver, £265, shown smaller than actual size. Visit **omega.co.uk/widr_series**

wi Series

AVAILABLE NOW

A wireless panel meter/controller/scanner and wireless DIN rail receivers that work with all UWTC, UWRTD Series wireless connectors and wireless industrial probes.

wi833-U wireless panel meter/controller/scanner with patented colour display, £265, shown smaller than actual size. Visit **omega.co.uk/wi8_series**

MOST POPULAR MODELS HIGHLIGHTED!

To Order *(Specify Model Number)*

Model No.		Description
UWRTD-S-2		Wireless RTD transmitter, polypropylene housing, M12 connection
UWRTD-2-NEMA		Wireless RTD transmitter NEMA enclosure
UWRTD-NB9W-(†)-(††)-4		Wireless RTD probe/transmitter/head assembly (4" probe)
UWRTD-NB9W-(†)-(††)-6		Wireless RTD probe/transmitter/head assembly (6" probe)
UWRTD-NB9W-(†)-(††)-4-B		Wireless RTD probe/transmitter/head assembly (4" probe) with 316 SS thermowell
UWRTD-NB9W-(†)-(††)-6-C		Wireless RTD probe/transmitter/head assembly (6" probe) with 316 SS thermowell
UWTC-REC1		48-channel receiver (USB powered)
UWTC-REC1-NEMA		48-channel wireless receiver (USB powered) NEMA enclosure
UWTC-REC2-(*)		48-channel wireless receiver with 1-channel analog output
UWTC-REC2-D-(*)		48-channel wireless receiver with 1-channel analogue output and LCD display
UWTC-REC2-(*)-NEMA		48-channel wireless receiver with 1-channel analogue output, NEMA enclosure
UWTC-REC2-D-(*)-NEMA		48-channel wireless receiver with 1-channel analogue output and LCD display, NEMA enclosure
UWTC-REC3		32-channel receiver/host with Ethernet
wiDR33-U		8-channel wireless DIN rail receiver
wi833-U		8-channel wireless meter, scanner, controller
UWTC-BATT		Replacement battery for UWRTD-S-2
UWTC-BATT-C		Replacement battery for UWRTD-NB9W, UWRTD-2-NEMA
UWTC-CABLE		Spare programming cable (one included with receivers)

UWRTD-S-2 comes complete with transmitter/antenna assembly, battery, mounting bracket and M12 sensor cable.
UWRTD-NB9 comes complete with probe, head/transmitter/antenna assembly and battery.
UWRTD-2-NEMA comes complete with antenna, NEMA case/transmitter and battery.
UWTC-REC1 comes complete with antenna, operator's manual, software, USB programming cable.
UWTC-REC2 comes complete with antenna, operator's manual, software, USB programming cable, output cable and DC power supply.
UWTC-REC3 comes complete with antenna, operator's manual, USB programming cable, Ethernet cable and DC power supply.

* *For UWTC-REC2 models, specify analogue output:* **"V1"** *for 0 to 5 Vdc,* **"V2"** *for 0 to 10 Vdc,* **"TC"** *for Type K thermocouple, or* **"MA"** *for 4 to 20 mA, no additional charge.*

† *For UWRTD-NB9 models, specify sensor type and probe sheath:* **"1PT304"** *for 100 Ω, 0.00385 curve with 304 SS sheath, or* **"1PT316"** *for 100 Ω, 0.00385 curve with 316 SS sheath, insert* **"2PT304"** *for 100 Ω, 0.00392 curve with 304 SS sheath, or* **"2PT316"** *for 100 Ω, 0.00392 curve with 316 SS sheath, no additional charge.*

†† *Specify sheath diameter:* **"116"** *for 1.59 mm (¹⁄₁₆"),* **"18"** *for 3.18 mm (¹⁄₈"),* **"316"** *for 4.78 mm (³⁄₁₆"), or* **"14"** *for 6.35 mm (¹⁄₄").*

Ordering Examples: UWRTD-NB9W-1PT316-18-6, *wireless RTD probe assembly, 100 Ω, 0.00385 curve, 316 SS sheath, 3.18 mm (¹⁄₈") sheath diameter, 152 mm (6") long.*

UWRTD-S-2, *polypropylene wireless RTD/transmitter,* **UWTC-REC2-MA,** *48-channel transceiver with 1-channel, 4 to 20 mA analogue output and alarm, and* **UWTC-BATT,** *spare battery.*

UWRTD-2-NEMA, *wireless NEMA RTD/transmitter,* **UWTC-REC1,** *48-channel USB receiver, and* **UWTC-BATT-C,** *spare battery*
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