

# Non-Contact Infrared Temperature Sensor With Wireless Transmitter



UWIR-2-NEMA  
£191

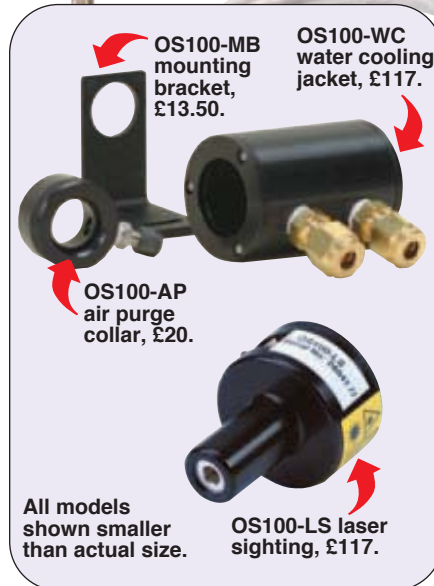


UWIR-2-NEMA, £191, shown smaller than actual size.

- ✓ -18 to 538°C (0 to 1000°F) Measurement Range
- ✓ Adjustable Emissivity from 0.10 to 1.0
- ✓ Free Software Converts Your PC Into a Multi-Channel Chart Recorder or Data Logger
- ✓ One Receiver Works with Up to 48 Transmitters
- ✓ Low Power Operation and Sleep Mode For Long Battery Life
- ✓ Each Unit Transmits:
  - Process Temperature
  - Ambient Temperature
  - Signal Strength
  - Battery Status
- ✓ Interfaces with UWTC-REC1 For Multi-Channel PC Chart Recording and Data Logging or UWTC-REC2 (Single Channel Industrial Transceiver with Analogue Output and Alarm)



IR sensor head.



All models shown smaller than actual size.

OS100-LS laser sighting, £117.

## Specifications

**Temperature Range:** -18 to 538°C (0 to 1000°F)  
**Accuracy @ 22°C (72°F) Ambient Temperature and Emissivity of 0.95 or Greater:** ±2% rdg or 2.2°C (4°F), whichever is greater

**Optical Field of View:** 6:1 (distance/spot size)

**Sensor Head Cable Extension:** Up to 15 m (50') total

**Repeatability:** ±1% rdg

**Spectral Response:** 5 to 14 microns

**Response Time:** 100 ms (0 to 63% of final value)

**Emissivity Range:** 0.1 to 1.00, adjustable

**Operating Temperature**

**Wireless Transmitter:** -10 to 70°C (14 to 158°F)

**Sensor Head:** 0 to 70°C (32 to 158°F)

**Sensor Head (-HT Model):** 0 to 85°C (32 to 185°F)

**Sensor Head with OS100-WC (Water Cooling Jacket):** 0 to 200°C (32 to 392°F)

**Operating Relative Humidity:** Less than 95% RH, non-condensing

**Water Flow Rate for OS100-WC:** 0.25 GPM, room temperature

**Thermal Shock:** About 30 minutes for 25°C (77°F) abrupt ambient temperature change

**Warm-Up Period:** 3 minutes

**Air Flow Rate (OS100-AP):** 1 CFM (0.5 L/s) (1 x 2.5")

**Laser Sight Accessory (OS100-LS) Wavelength (Color):** 630 to 670 nm (red)

OMEGA's new infrared sensor with wireless transmitter features a remote IR sensor and radio wireless transmitter in a NEMA enclosure. The miniature sensor head is ideal for measuring temperatures from -18 to 538°C (0 to 1000°F) in confined, hard-to-reach places and harsh environments. The wireless transmitter is mounted in a NEMA-4 (IP65) plastic enclosure. When activated the unit will transmit readings continuously at pre-set time interval that was programmed by the user during the initial setup. Each unit measures and transmits: IR sensor reading, 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 transmitters 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 UWTC-REC2, wireless data from one transmitter can be re-transmitted by a wired connection as a analogue voltage, current or thermocouple signal to interface with a controller, PLC or data acquisition board.

**Operating Distance (Laser Dot):** Up to 9.1 m (30')

**Max Output Optical Power:** Less than 1 mW @ -6°C (22°F) ambient temperature

**European Classification:** Class 2, EN60825-1/11.2001

**Max Operating Current:** 45 mA @ 3 Vdc

**FDA Classification:** Complies with 21 CFR 1040.10, Class II laser product

**Beam Diameter:** 5 mm (0.20")

**Beam Divergence:** <2 mrad

**Operating Temperature:** 0 to 50°C (32 to 122°F)

**Operating Relative Humidity:** Less than 95% RH, non-condensing

**Power Switch:** On/off slide switch on the battery pack

**Power Indicator:** Red LED

**Power:** Battery pack, 3 Vdc (consists of two 1.5 Vdc "AA" lithium batteries)

**Dimensions:** 38 Dia. x 50.8 mm L (1.5 x 2")

**Wireless Transmitter**

**Computer Interface:** USB

**Transmit Sample Rate:** Programmable from 1 sample/minute to 1 sample/every 2 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:** 10Bm (10 mW)

**Range of RF Link:**

**Up to 120 m (400'):** Outdoor line of sight

**Up to 40 m (130'):** Indoor/urban

**RF Data Packet Standard:**

IEEE 802.15.4, open communication architecture

**Software (Included Free):**

Requires Windows® 2000, XP or Vista operating system

**Power:** One 3.6V, lithium C cell (included)

**Battery Life (Typical):** (1.5 years) 1 sample/minute reading rate @ 25°C

**Enclosure:** NEMA-4X (IP65) Polycarbonate

**Dimensions:**

**Enclosure:** 80 L x 82 W mm (3.1 x 3.2")

**Sensor Head:** 25.4 OD x 63.5 mm L (1 x 2.5")

**Additional Wireless, Connectors, Industrial Probes, Meters, Transmitters and Sensors Available See UWTC, UWRTD and UWRN Series visit [omega.co.uk/wireless](http://omega.co.uk/wireless)**

**Standard 48-Channel Receiver, (USB Powered Only)**

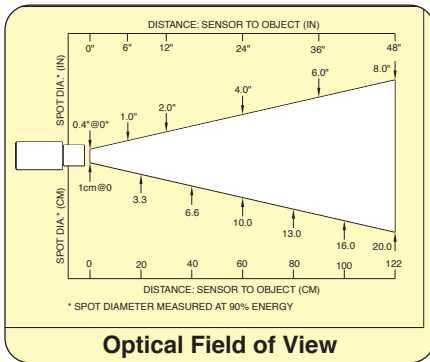
With the model UWTC-REC1 data from up to 48 wireless transmitters can be received and displayed on your PC simultaneously. This receiver connects to a USB port on your computer and must stay connected to operate and receive data.



**UWTC-REC1 £151**

**FREE Software!**

Shown smaller than actual size.



**MOST POPULAR MODELS HIGHLIGHTED!**

<b>To Order (Specify Model Number)</b>		
<b>Model No.</b>	<b>Price</b>	<b>Description</b>
<b>UWIR-2-NEMA</b>	<b>£191</b>	Non-contact wireless infrared transmitter with remote sensor head
<b>UWTC-REC1</b>	<b>151</b>	48-channel receiver (USB powered)
<b>UWTC-REC1-NEMA</b>	<b>218</b>	48-channel wireless receiver (USB powered) NEMA enclosure
<b>UWTC-REC2-(‡)</b>	<b>157</b>	48-channel wireless receiver with 1-channel analogue output
<b>UWTC-REC2-D-(‡)</b>	<b>178</b>	48-channel wireless receiver with 1-channel analogue output and LCD
<b>UWTC-REC2-(‡)-NEMA</b>	<b>224</b>	48-channel wireless receiver with 1-channel analogue output, NEMA enclosure
<b>UWTC-REC2-D-(‡)-NEMA</b>	<b>245</b>	48-channel wireless receiver with 1-channel analogue output and LCD, NEMA enclosure
<b>UWTC-REC3</b>	<b>157</b>	36-channel receiver/host with ethernet
<b>UWTC-BATT-C</b>	<b>16.75</b>	Replacement 3.6V lithium C battery
<b>UWTC-CABLE</b>	<b>3.40</b>	Spare programming cable (one included with receivers)

**Accessories**

<b>Model No.</b>	<b>Price</b>	<b>Description</b>
<b>OS100-MB</b>	<b>£13.50</b>	Mounting bracket OS100-DR 25 DIN rail mounting adaptor
<b>OS100-AP</b>	<b>20</b>	Air purge collar OS100-WC 175 water cool jacket, up to 200°C (392°F)
<b>OS100-LS</b>	<b>117</b>	Laser sighting accessory
<b>OS100-CA15FT</b>	<b>23.50</b>	Sensor head extension cable, 4.6 m (15')
<b>OS100-CA25FT</b>	<b>30</b>	Sensor head extension cable, 7.6 m (25')

Comes complete with operator's manual, software, and 3.6V lithium C battery.

(‡) For UWTC-REC2 models: add suffix "-V1" for 0 to 5 Vdc, "-V2" for 0 to 10 Vdc, "TC" for Type K thermocouple, or "-MA" for 4 to 20 mA analogue output to model number, no additional charge.

**Ordering Examples:** **UWIR-2-NEMA**, wireless infrared transmitter, **UWTC-REC1** 48-channel USB receiver, **UWTC-BATT-C**, spare battery, and **OS100-MB** sensor head bracket, £191 + 151 + 16.75 + 13.50 = **£372.25**.

**UWIR-2-NEMA**, wireless infrared transmitter, **UWTC-REC2-D-MA**, 48-channel transceiver/host with 1-channel 4 to 20 mA analogue output, alarm and local display, **UWTC-BATT-C**, spare battery, and **OS100-MB** sensor head bracket, £191 + 178 + 16.75 + 13.50 = **£399.25**

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