Weather Resistant Non-Contact Infrared Temperature Sensor With Wireless Transmitter

**UWIR-2A-NEMA**

**UWIR-2A-NEMA-HT**

- Transmit Data Wirelessly in Real-Time, up to 120 m (440')
- -18 to 538°C (0 to 1000°F) Measurement Range
- Adjustable Emissivity from 0.10 to 1.0
- Low Power Operation and Sleep Mode For Long Battery Life
- Weather Resistant NEMA 4X (IP65) Enclosure
- Works with UWTC-REC Receivers for a Complete Wireless System

Omega’s 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 4X (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. Each compatible “UW” Series receiver includes free software that converts your PC into a monitor, chart recorder, or data logger. Readings can be saved and later printed or exported to a spreadsheet file.

Each Unit Transmits:
- Process and Ambient Temperatures
- Signal Strength
- Battery Status
- IR Sensor Readings

**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:** 1.8 m (6') standard; up to 15 m (50') total length capable
- **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 (−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 (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)
- **Battery Life (Typ):** 3 years @ 1 sample/minute reading rate @ 25°C (77°F)
- **Laser Sight Accessory (OS100-LS):**
  - **Input:** Infrared temperature
  - **Resolution:** 1°C (1°F)

For Available Receivers, Visit Us Online!
OS100-AP air purge collar to keep the lens free of particles or debris. Both shown smaller than actual size.

OS100-WC water cooling jacket for use to 200°C.

Range of RF Link:
- Indoor/Urban: Up to 40 m (131')
- Outdoor Line of Sight: Up to 120 m (400')

RF Output Power: 10 dBm (10 mW)
Sample Rate: 2 sec to 2 min
Radio Frequency (RF) Transceiver Carrier: ISM 2.4 GHz direct sequence spread spectrum
Outdoor Line of Sight: Up to 120 m (400')
Wavelength (Color): 630 to 670 nm (red)

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
RF Output Power: 10 dBm (10 mW)
Sample Rate: 2 sec to 2 min
Radio Frequency (RF) Transceiver Carrier: ISM 2.4 GHz direct sequence spread spectrum
Outdoor Line of Sight: Up to 120 m (400')
Wavelength (Color): 630 to 670 nm (red)

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: One 3.6V, lithium “C” cell battery (included)
Dimensions: 145.8 L x 94.7 W x 50.8 mm H (5.74 x 3.73 x 2")

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To Order

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>UWIR-2A-NEMA</td>
<td>Non-contact wireless infrared transmitter with NEMA enclosure and remote sensor, 1.8 m (6') cable</td>
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<tr>
<td>UWIR-2A-NEMA-HT</td>
<td>Non-contact wireless infrared transmitter with NEMA enclosure and remote sensor, 1.8 m (6') cable, high temperature</td>
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Accessories/Receivers

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<tbody>
<tr>
<td>OS100-MB</td>
<td>Mounting bracket</td>
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<tr>
<td>OS100-DR</td>
<td>DIN rail mounting adaptor</td>
</tr>
<tr>
<td>OS100-AP</td>
<td>Air purge collar</td>
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<tr>
<td>OS100-WC</td>
<td>Water cool jacket, up to 200°C (392°F)</td>
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<tr>
<td>OS100-LS</td>
<td>Laser sighting accessory</td>
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<tr>
<td>OS100-CA15FT</td>
<td>Sensor head extension cable, 4.6 m (15')</td>
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<tr>
<td>OS100-CA25FT</td>
<td>Sensor head extension cable, 7.6 m (25')</td>
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<tr>
<td>UWTC-REC1</td>
<td>USB powered 48-channel transmitter receiver</td>
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<tr>
<td>UWTC-REC2(*)</td>
<td>48-channel receiver with analog output</td>
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<tr>
<td>UWTC-REC2-D(*)</td>
<td>48-channel receiver with analog output and display</td>
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<tr>
<td>UWTC-REC3</td>
<td>32-channel wireless receiver with ethernet</td>
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<tr>
<td>UWTC-REC4(*)</td>
<td>48-channel DIN rail receiver with 4 analog outputs and alarms</td>
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<tr>
<td>UWTC-REC6(*)</td>
<td>1-channel transceiver with analog output</td>
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<tr>
<td>UWTC-CABLE</td>
<td>Spare USB programming/communication cable</td>
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<td>UWM-DINRAIL</td>
<td>DIN rail mounting bracket assembly</td>
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<td>BATT-C-3.6V</td>
<td>Replacement 3V C cell Li battery</td>
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Comes complete with operator’s manual, antenna, and 3.6V lithium “C” battery.

* Specify analog output signal: “V1” for 0 to 5 Vdc; “V2” for 0 to 10 Vdc, or “MA” for 4 to 20 mA.

Ordering Examples: UWIR-2A-NEMA, wireless infrared transmitter, UWTC-REC1, 48-channel USB receiver, and OS100-MB, sensor head bracket.

UWIR-2A-NEMA-HT, wireless infrared transmitter high temperature, UWTC-REC2-D-MA, 48-channel transceiver/host with 1-channel, 4 to 20 mA analog output, alarm, and local display, and OS100-LS, laser sighting accessory.