Compact Non-Contact Infrared Temperature Sensor/Transmitter

OS137 Series

✓ 3 Temperature Ranges Available:
   OS137-1: 0 to 100°C (32 to 212°F)
   OS137-2: -18 to 260°C (0 to 500°F)
   OS137-3: -18 to 538°C (0 to 1000°F)
✓ Sensor and Transmitter Combined
✓ Adjustable Emissivity
✓ Adjustable Alarm Setpoint and Output
✓ Packaged in a 25 mm (1.0") OD by 127 mm (5.0") Long Stainless Steel NEMA 4 (IP65) Rated Housing
✓ 10:1 Optical Field of View
✓ 4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc, 10 mV/Deg, and Type K Thermocouple Outputs Available

The OMEGA® compact high performance industrial infrared sensor/transmitter model OS137 provides variety of features and options packaged into a small stainless steel housing. The standard features are adjustable emissivity, 10 to 1 optical field of view, adjustable alarm set point and voltage output to drive external relays, and 6 pre-selected analog outputs that can easily be interfaced to all meters, controllers, data loggers, recorders, computer boards, and PLCs. The unit comes with 2 hex nuts, 1.8 m (6') shielded cable for power and output connections, and complete operator’s manual.
Specifications

**Temp Range:**
- **OS137-1:** 0 to 100°C (32 to 212°F)
- **OS137-2:** -18 to 260°C (0 to 500°F)
- **OS137-3:** -18 to 538°C (0 to 1000°F)

**Accuracy:** 1.5% rdg or 3.5°F (2°C) whichever is greater

**Repeatability:** 1% rdg or 2°F (1°C)

**Field of View:** 10 to 1

**Spectral Response:** 5 to 14 microns

**Emissivity:** 0.4 to 1.0, adjustable via a single turn pot

**Response Time:** 150 msec, 0 to 63% of final value

**Outputs:**
- **-MA:** 4 to 20 mA
- **-V1:** 0 to 5 Vdc
- **-V2:** 0 to 10 Vdc
- **-K:** K thermocouple
- **-MVF:** 10 mV/°F
- **-MVC:** 10 mV/°C

**Alarm Output:** Voltage, 100 mA drive

**Alarm Set Point:** 0 to 100 % adj, set via pot

**Power:** 12 to 24 Vdc @ 50 mA

**Operating Temperature:**
- With No Cooling: 0 to 70°C
- With Water Cooling: 0 to 200°C
- With Air Cooling: 0 to 110°C

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

**Housing:** Stainless steel, NEMA 4 (IP65)

**Dimensions:** 25.4 OD x 127 mm L (1 x 5”)

**Weight:** 226 g (0.5 lb)

**Laser Sighting**
- **Wavelength (Color):** 630-670 nm (red)
- **Operating Distance:** Up to 9.1 m (30')
- **Max Laser Power Output:** Less than 1 mW

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

**FDA Classification:**
- Class II, complies with 21 CFR 1040.10

**Laser Beam Diameter:** Less than 5 mm

**Beam Divergence:** Less than 2 mrad

**Power Switch:** Slide switch on the battery pack

**Power Indicator:** Red LED

**Caution and Certification Label:** Located on the head circumference

**Aperture and Identification Label:** Located on the head circumference

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Accessories

<table>
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<tr>
<th>Model No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>OS137-MB</td>
<td>Mounting bracket</td>
</tr>
<tr>
<td>OS137-AP</td>
<td>Air purge collar</td>
</tr>
<tr>
<td>OS137-WC</td>
<td>Water/air cool jacket</td>
</tr>
<tr>
<td>OS137-LS†</td>
<td>Laser sighting</td>
</tr>
<tr>
<td>PSR-24S</td>
<td>Regulated power supply, 24 Vdc, 400 mA, screw terminal</td>
</tr>
<tr>
<td>PSR-24L</td>
<td>Regulated power supply, 24 Vdc, 400 mA, UL, stripped leads</td>
</tr>
<tr>
<td>PSR-24L-230</td>
<td>Regulated power supply, 24 Vdc, 400 mA, 6’ cord with stripped leads, 230 Vac input, CE</td>
</tr>
<tr>
<td>PSU-93</td>
<td>Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal</td>
</tr>
<tr>
<td>CAL-3-IR</td>
<td>NIST-traceable calibration</td>
</tr>
</tbody>
</table>

†OS137-LS laser sighting: 1 unit suitable for aligning multiple heads. Used during installation only.

**Ordering Example:** OS137-MB, mounting bracket.

### To Order

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>OS137-(*)-K</td>
<td>Infrared transmitter with K thermocouple output</td>
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<tr>
<td>OS137-(*)-MV-F</td>
<td>Infrared transmitter with 10 mV/°F output</td>
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<tr>
<td>OS137-(*)-MV-C</td>
<td>Infrared transmitter with 10 mV/°C output</td>
</tr>
<tr>
<td>OS137-(*)-MA</td>
<td>Infrared transmitter with 4 to 20 mA output</td>
</tr>
<tr>
<td>OS137-(*)-V1</td>
<td>Infrared transmitter with 0 to 5 Vdc output</td>
</tr>
<tr>
<td>OS137-(*)-V2</td>
<td>Infrared transmitter with 0 to 10 Vdc output</td>
</tr>
</tbody>
</table>

* Insert “1” for 0 to 100°C (32 to 212°F); Insert “2” for -18 to 260°C (0 to 500°F); Insert “3” for -18 to 538°C (0 to 1000°F).

Comes complete with two mounting nuts and operator’s manual.

**Ordering Examples:**
- OS137-1-MA, infrared transmitter with temperature range of 0 to 100°C (32 to 212°F) and 4 to 20 mA output.
- OS137-1-V1 and CNi8DH33, infrared transmitter with temperature range of 0 to 100°C (32 to 212°F) and 0 to 5 Vdc output, and ¾ DIN temperature controller.
- OS137-1-V1-26FT, OS137 with 26 feet of power/output cable.

**Extended Warranty Program**

OMEGACARE™ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE™ covers parts, labor and equivalent loaners.