Compact Non-Contact Infrared Temperature Transmitter

With USB PC Configurable Non-Contact Temperature Sensor with 4 to 20 mA Output

NEW

OS151-USB shown smaller than actual size.

The OS151-USB Series measures temperatures from -40 to 1000°C (-40 to 1832°F) accurately and consistently, with an outstanding response time of 240 mS. The 4 to 20 mA output is compatible with almost any indicator, controller, recorder, data logger etc. without the need for special interfacing or signal conditioning.

OS151-USB has 15:1 optics making it suitable for most applications. OS301-USB is specially designed for distant targets and has an optical resolution of 30:1. OS801-USB is designed for small targets and measures a spot size of 5 mm (0.20") diameter at 100 mm (3.9") distance. All these sensors are fully configurable from a PC using the software and USB cable supplied. This user friendly software enables the user to set the range and emissivity, compensate for reflected energy; apply filtering; select max, min, average or instantaneous readings; and peak or valley hold processing. These features can also be monitored and adjusted by an OPC (open process control) client. Other features include data acquisition, alarms and a scrolling graphical display. The sensor will operate with the 4 to 20 mA cable connected, the USB cable connected, or both. The USB cable has an IP65 connector at the sensor end. An IP65 cap protects the sensor when the USB cable is not connected.

OS151-USB Series

2 YEAR WARRANTY **NIST** *Optional* **C E** **RoHS**

✔ **Configurable Settings From a PC via Software and USB Cable (Included)**
✔ **Features Max, Min Average and Instantaneous Readings; Peak or Valley Hold; Reflected Energy Compensation**
✔ **OPC Server Capabilities**
✔ **Temperature Range -40 to 1000°C (-40 to 1832°F)**
✔ **Emissivity: 0.1 to 1.0**
✔ **Response Time 240 mS to 90%**
✔ **Stainless Steel Housing, Sealed to IP65**
✔ **Field of View: 15:1, 30:1 or Close Focus**
✔ **4 to 20 mA Output**
✔ **Quick and Easy Installation**
✔ **Optional Air/Water Cooled Housing, Air Purge Collar, Laser Sighting Tool and Mounting Brackets**

Compact stainless steel IP65 housing.

OS151-USB.

Specifications

Temperature Range: -40 to 1000°C (-40 to 1832ºF)
Field-of-View:
   OS151-USB: 15:1
   OS301-USB: 30:1
   OS801-USB: 5 at 100 mm diameter
Output: 4 to 20 mA (linear with temperature)
Configuration: Via PC port conforming to USB 2.0
Accuracy: ±1% of reading or ±1°C whichever is greater
Repeatability: ±0.5% of reading or ±0.5°C
whichever is greater
Emissivity: 0.1 to 1.0
Response Time t90: 240 mS (90% response)
Spectral Range: 8 to 14 µm
Supply Voltage: 24 Vdc (28 Vdc maximum)
Sensor Voltage: 6 Vdc minimum

Maximum Loop Impedance: 900 Ω
Maximum Span: 1000°C (1832ºF)
Minimum Span: 100°C (212ºF)
Mechanical
Construction: Stainless steel
Dimensions: 106.5 L x 25 mm D (4.19 x 0.98")
Thread Mounting: M20 x 1 mm (0.04") pitch
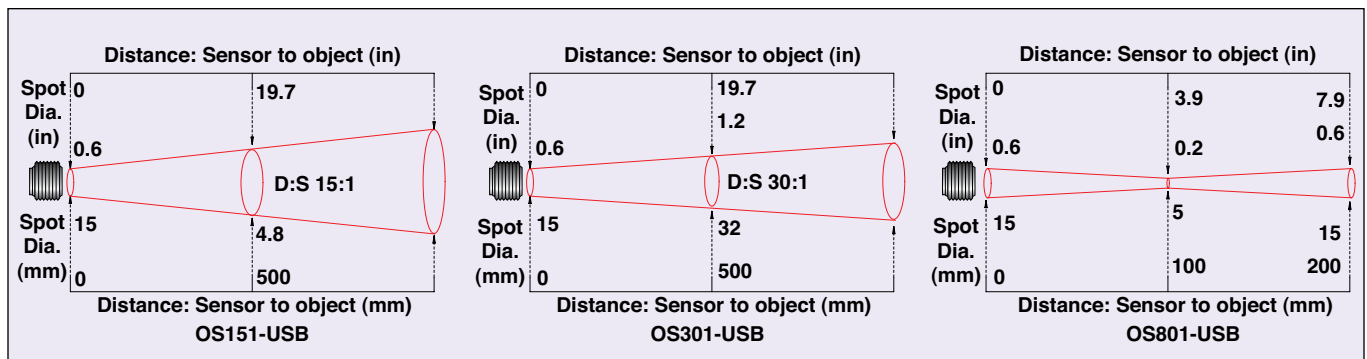**Weight with Output Cable:** 175 g (6.2 oz)
Output Cable Length: 1 m (3.3')
USB Cable Length: 1 m (3.3')
Environmental
Environmental Rating: IP65
Ambient Temperature Range: 0 to 70°C (32 to 158ºF)
Relative Humidity: 95% maximum non-condensing
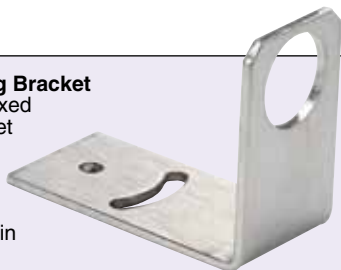

OS151-USB   OS301-USB   OS801-USB

All models shown smaller than actual size.

Fixed Mounting Bracket
The L-shaped fixed mounting bracket offers a rigid support for the sensor and allows fine adjustment in a single plane. **OSUSB-FBL.**

Adjustable Mounting Bracket
The adjustable mounting bracket consists of a fixed mounting bracket plus another L-shaped bracket. When assembled as shown the adjustable mounting bracket offers a rigid support for the sensor and allows fine adjustment in two planes. **OSUSB-ABL.**
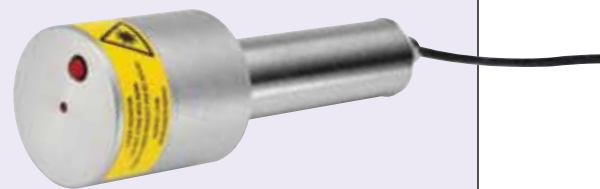
Air Purge Collar
The air purge collar is used to keep dust, fumes, moisture and other contaminants away from the lens. Air flows into the fitting on the side and out of the aperture at the front. **OSUSB-APL.**

Laser Sighting Tool
The laser sighting tool screws onto the front of the sensor during installation and indicates precisely where the sensor is aiming. Once the sensor has been aimed at the centre of the target and locked in position the laser sighting tool can be removed. The laser is activated by means of a push button on the front of the tool which has a latching mechanism. **OSUSB-LSTL.**

To Order

Model No.	Description	Optics	Output
OS151-USB	Configurable infrared temperature sensor	15:1	4 to 20 mA
OS301-USB	Configurable infrared temperature sensor	30:1	4 to 20 mA
OS801-USB	Configurable infrared temperature sensor (5 mm diameter measurement spot at 100 mm distance)	Close-focus	4 to 20 mA

Comes complete with sensor head, 1 m (3.3') cable, USB cable, software, and operator's manual.

Ordering Examples: OS301-USB-WC, *configurable infrared temperature sensor with 30:1 optics, 4 to 20 mA output, USB cable PC software, and water cooled jacket.*

OS151-USB-CE(3), *configurable infrared temperature sensor with 15:1 optics, 4 to 20 mA output, USB cable and PC software with additional 3 m (9.8') of cable extension.* ***OCW-3,*** *OMEGACARE℠ extends standard 2-year warranty to a total 5 years.*

Options (Not Field Installable)

Suffix	Description
-WC	For air/water cooled jacket (includes air purge collar)
-CE(*)	Cable extended, for uncooled PC sensor, standard 4 to 20 mA output, 30 m (98') maximum total cable length
-CEHT(*)	Cable extended, high temperature, for cooled PC standard 4 to 20 mA output, 30 m (98') maximum total cable length

* *1 m (3.3') cable is included as standard on every sensor. Extended cable is added to that length, add suffix to model number.*

Accessories

Model No.	Description
OSUSB-FBL	Fixed bracket for IR USB
OSUSB-ABL	Adjustable bracket for IR USB
OSUSB-APL	Air purge collar for IR USB
OSUSB-LSTL	Laser sighting tool for IR USB
CAL-3-IR	NIST-traceable calibration

OMEGA CARE℠
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.

Power Supplies

Model No.	Description
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
TX8-100	Power/output cable, 30 m (98')

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