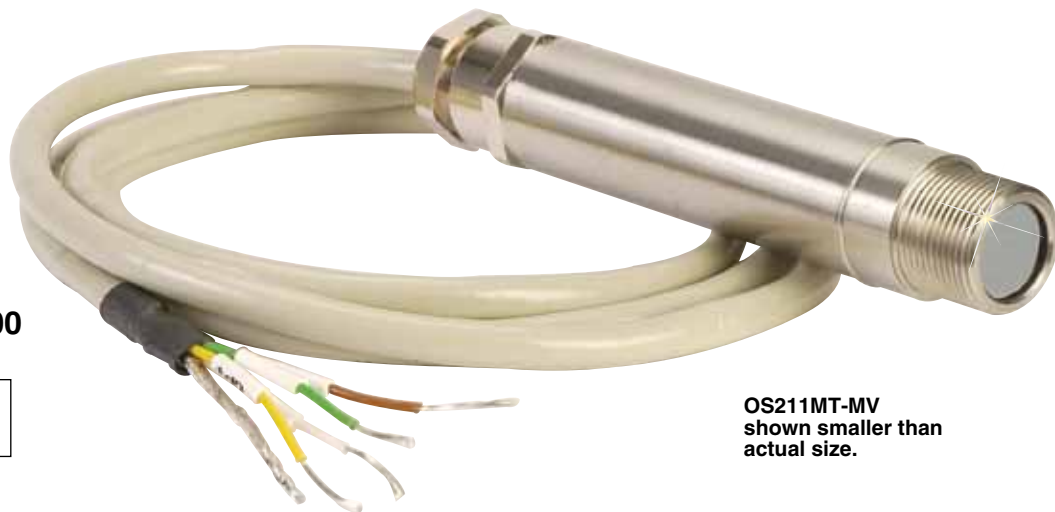


Compact Non-Contact Temperature Sensor/Transmitter with Optional Dual Output



**OS210, OS150, OS300
and OS800 Series**



Optional

OS211MT-MV
shown smaller than
actual size.

- ✓ **Temperature Range:** -20 to 500°C (-4 to 932°F)
- ✓ **Emissivity Setting:** Fixed at 0.95
- ✓ **2-Wire 4 to 20 mA Output or 4-Wire Voltage/Thermocouple Output**
- ✓ **4-Wire Unit Provides Internal Sensor Temperature**
- ✓ **Field of View:** 2:1, 15:1, 30:1 or Close Focus
- ✓ **Fast Response with High Stability**
- ✓ **Stainless Steel Housing, Sealed to IP65**
- ✓ **Quick and Easy Installation**
- ✓ **Optional Air/Water Cooled Housing, Air Purge Collar, Laser Sighting Tool and Mounting Brackets**

This Series is a range of high quality, low cost, compact sensors which measure the temperature of inaccessible or moving objects and materials. They measure temperatures from -20 to 500°C (-4 to 932°F), accurately and consistently, with an outstanding response time of 240 ms. Infrared (IR) sensors are available as either 2- or 4-wire units. Two-wire IR sensors transmit the target temperature as a 4 to 20 mA output and offer a simple solution for most non-contact temperature measurement applications. Four-wire IR sensors transmit the target temperature as a 0 to 50 mV or thermocouple output (Type J, K or T) plus the internal sensor temperature as a 4 to 20 mA output. This second output can be used to ensure that the sensor is being operated within the correct ambient temperature limits and prevent damage caused by overheating or overcooling. It can also be used to give an approximate indication of the air temperature surrounding the sensor. IR sensors are fitted with precision germanium lenses for accurate optics.

Specifications

Accuracy: $\pm 1\%$ of reading or $\pm 1^\circ\text{C}$ whichever is greater

Repeatability: $\pm 0.5\%$ of reading or $\pm 0.5^\circ\text{C}$ whichever is greater

Emissivity: Fixed at 0.95

Response Time, t_{90} : 240 ms (90% response)

Spectral Range: 8 to 14 μm

Supply Voltage: 24 Vdc (28 Vdc maximum)

Min Sensor Voltage: 6 Vdc

Max Loop Impedance: 900 Ω (4 to 20 mA output)

Output Impedance: 56 Ω (voltage/thermocouple output)

Mechanical

Construction: Stainless steel

Dimensions: 103 L x 18 mm D (4.06 x 0.71")

Thread Mounting: M16 x 1 mm pitch

Cable Length: 1 m (3.3') (included) longer lengths available to order

Weight with Cable: 95 g (3.35 oz)

Environmental

Rating: IP65

Ambient Temperature Range: 0 to 70°C (32 to 158°F)

Relative Humidity: 95% max non-condensing

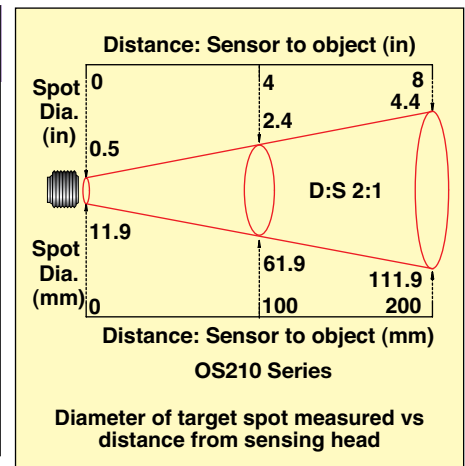


**Compact stainless steel
IP65 housing.**

OS210 Series with 2:1 Field of View

To Order		
Model No.	Temperature Range	Output
OS211-LT	-20 to 100°C (-4 to 212°F)	4 to 20 mA
OS211-MT	0 to 250°C (32 to 482°F)	4 to 20 mA
OS211-LT-MV	-20 to 100°C (-4 to 212°F)	0 to 50 mV
OS211-LT-T	-20 to 100°C (-4 to 212°F)	Type T thermocouple
OS211-LT-J	-20 to 100°C (-4 to 212°F)	Type J thermocouple
OS211-LT-K	-20 to 100°C (-4 to 212°F)	Type K thermocouple
OS211-MT-MV	0 to 250°C (32 to 482°F)	0 to 50 mV
OS211-MT-T	0 to 250°C (32 to 482°F)	Type T thermocouple
OS211-MT-J	0 to 250°C (32 to 482°F)	Type J thermocouple
OS211-MT-K	0 to 250°C (32 to 482°F)	Type K thermocouple

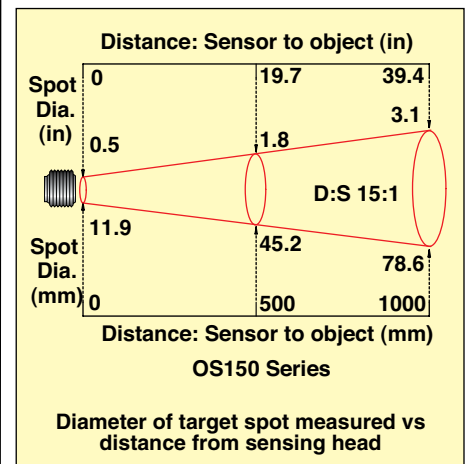
Ordering Example: OS211-MT, 2:1 field of view, 0 to 250°C (32 to 482°F) temperature range, 4 to 20 mA output.



OS150 Series with 15:1 Field of View

Model No.	Temperature Range	Output
OS151-LT	-20 to 100°C (-4 to 212°F)	4 to 20 mA
OS151-MT	0 to 250°C (32 to 482°F)	4 to 20 mA
OS151-HT	0 to 500°C (32 to 932°F)	4 to 20 mA
OS151-LT-MV	-20 to 100°C (-4 to 212°F)	0 to 50 mV
OS151-LT-T	-20 to 100°C (-4 to 212°F)	Type T thermocouple
OS151-LT-J	-20 to 100°C (-4 to 212°F)	Type J thermocouple
OS151-LT-K	-20 to 100°C (-4 to 212°F)	Type K thermocouple
OS151-MT-MV	0 to 250°C (32 to 482°F)	0 to 50 mV
OS151-MT-T	0 to 250°C (32 to 482°F)	Type T thermocouple
OS151-MT-J	0 to 250°C (32 to 482°F)	Type J thermocouple
OS151-MT-K	0 to 250°C (32 to 482°F)	Type K thermocouple
OS151-HT-MV	0 to 500°C (32 to 482°F)	0 to 50 mV
OS151-HT-J	0 to 500°C (32 to 932°F)	Type J thermocouple
OS151-HT-K	0 to 500°C (32 to 932°F)	Type K thermocouple

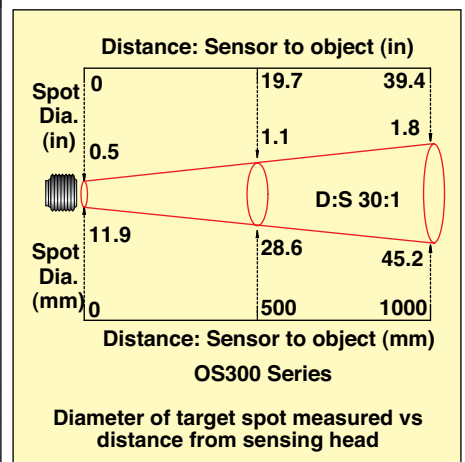
Ordering Example: OS151-MT-K, 15:1 field of view, 0 to 250°C (32 to 482°F) Type K thermocouple output.



OS300 Series with 30:1 Field of View

Model No.	Temperature Range	Output
OS301-LT	-20 to 100°C (-4 to 212°F)	4 to 20 mA
OS301-MT	0 to 250°C (32 to 482°F)	4 to 20 mA
OS301-HT	0 to 500°C (32 to 932°F)	4 to 20 mA
OS301-LT-MV	-20 to 100°C (-4 to 212°F)	0 to 50 mV
OS301-LT-T	-20 to 100°C (-4 to 212°F)	Type T thermocouple
OS301-LT-J	-20 to 100°C (-4 to 212°F)	Type J thermocouple
OS301-LT-K	-20 to 100°C (-4 to 212°F)	Type K thermocouple
OS301-MT-MV	0 to 250°C (32 to 482°F)	0 to 50 mV
OS301-MT-T	0 to 250°C (32 to 482°F)	Type T thermocouple
OS301-MT-J	0 to 250°C (32 to 482°F)	Type J thermocouple
OS301-MT-K	0 to 250°C (32 to 482°F)	Type K thermocouple
OS301-HT-MV	0 to 500°C (32 to 932°F)	0 to 50 mV
OS301-HT-J	0 to 500°C (32 to 932°F)	Type J thermocouple
OS301-HT-K	0 to 500°C (32 to 932°F)	Type K thermocouple

Ordering Example: OS301-HT-K, 30:1 field of view, 0 to 500°C (32 to 932°F) temperature range, Type K thermocouple output. OCW-3, OMEGACARESM extends standard 2-year warranty to a total of 5 years.

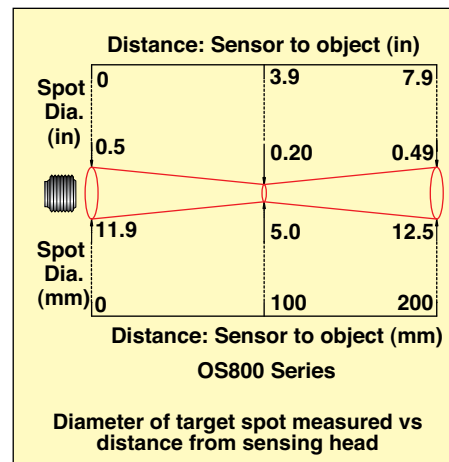


OS800 Series with Close-Focus Field of View

To Order		
Model No.	Temperature Range	Output
OS801-LT	-20 to 100°C (-4 to 212°F)	4 to 20 mA
OS801-MT	0 to 250°C (32 to 482°F)	4 to 20 mA
OS801-HT	0 to 500°C (32 to 932°F)	4 to 20 mA
OS801-LT-MV	-20 to 100°C (-4 to 212°F)	0 to 50 mV
OS801-LT-T	-20 to 100°C (-4 to 212°F)	Type T thermocouple
OS801-LT-J	-20 to 100°C (-4 to 212°F)	Type J thermocouple
OS801-LT-K	-20 to 100°C (-4 to 212°F)	Type K thermocouple
OS801-MT-MV	0 to 250°C (32 to 482°F)	0 to 50 mV
OS801-MT-T	0 to 250°C (32 to 482°F)	Type T thermocouple
OS801-MT-J	0 to 250°C (32 to 482°F)	Type J thermocouple
OS801-MT-K	0 to 250°C (32 to 482°F)	Type K thermocouple
OS801-HT-MV	0 to 500°C (32 to 932°F)	0 to 50 mV
OS801-HT-J	0 to 500°C (32 to 932°F)	Type J thermocouple
OS801-HT-K	0 to 500°C (32 to 932°F)	Type K thermocouple

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

Ordering Example: OS801-MT-K, close-focus field of view, 0 to 250°C (32 to 932°F)
Type K thermocouple output.



PSR-24L, \$60, shown smaller than actual size.



PSR-24S, \$60, shown smaller than actual size.



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM 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
PSU-93	Unregulated power supply, 16 to 23 Vdc, 300 mA maximum, screw terminal
TX8-100	Power/output cable, 30 m (98')

Options (Not Field Installable)

Suffix	Description
-WC	For air/water cooled jacket (includes air purge collar); must be ordered with sensor; cannot be retrofitted
-CE(*)	Cable extended, for uncooled PC sensor, standard 4 to 20 mA output, 30 m (98') maximum total cable length
-CEV(*)	Cable extended, for PC sensor, for 0 to 50 mV output, 30 m (98') maximum total cable length
-CET(*)	Cable extended, for PC sensor, for Type T thermocouple output, 30 m (98') maximum total cable length
-CEJK(*)	Cable extended, for PC sensor for Types J and K thermocouple 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

OS210-FBS



Fixed Mounting Bracket

The L-shaped fixed mounting bracket offers a rigid support for the sensor and allows fine adjustment in a single plane.

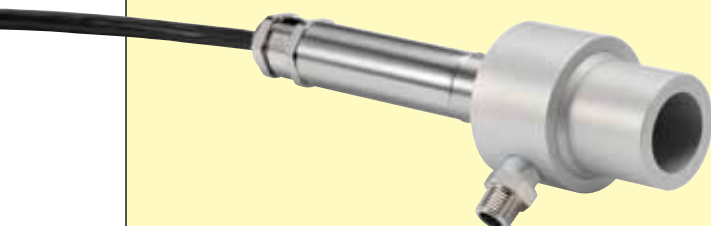
OS210-ABS



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.

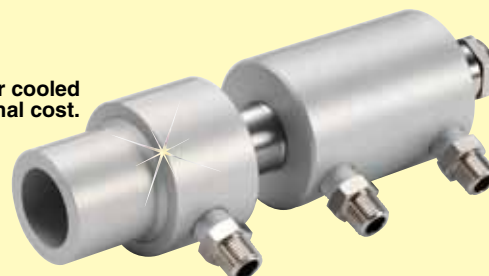
OS210-APSN



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.

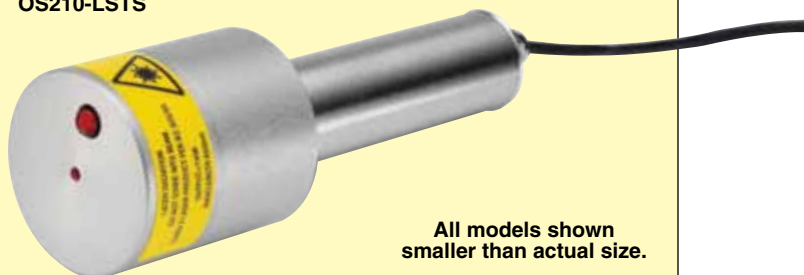
Option "WC" air/water cooled jacket, additional cost.



Air Water Cooled Housing

The air/water cooled housing allows the sensor to withstand ambient temperatures which exceed the normal 70°C limit. Air or water (depending on the degree of cooling required) flows into one of the fittings on the side and out of the other. To prevent condensation forming on the lens, the air/water cooled housing is supplied complete with an air purge collar. Please note, the air/water cooled housing must be ordered with the sensor and cannot be fitted by the user.

OS210-LSTS



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.

All models shown smaller than actual size.

Accessories

Model No.	Description
OS210-FBS	Fixed bracket for compact sensors
OS210-ABS	Adjustable bracket for compact sensors
OS210-APSW	Air purge collar for compact 2:1 sensors
OS210-APSN	Air purge collar for compact 15:1, 30:1 and close-focus sensors
OS210-LSTS	Laser sighting tool for compact sensors
CAL-3-IR†	NIST-traceable calibration