



Compact Non-Contact Temperature Sensor With Controllable Emissivity Setting

OS212, OS152, OS302 and
OS802 Series
Starts at

\$213



Optional†



OS212-LT, \$213,
shown with sensor
head (included),
shown actual size.

- ✓ Temperature Range -20 to 500°C (-4 to 932°F)
- ✓ 2-Wire 4 to 20 mA Output Proportional to Target Temperature
- ✓ 4 to 20 mA Input to Control Emissivity Setting
- ✓ Optional Manual Emissivity Adjuster
- ✓ 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

The OMEGA® Infrared 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. OMEGA sensors transmit the target temperature as a 4 to 20 mA output and offer a simple solution for most non-contact temperature measurement applications. The sensor's emissivity setting can be adjusted from 0.2 to 1.0 to cope with different target materials and is controlled by a 4 to 20 mA input. This gives the opportunity to adjust the emissivity setting automatically from a programmable logic controller (PLC). Alternatively the emissivity setting can be adjusted manually using the OS210-PT. If the 4 to 20 mA input is left open or short-circuit the emissivity setting defaults to 0.95.

† Refer to accessory chart on J-3 for NIST calibration ordering information.

Specifications

Infrared Sensor Output: 4 to 20 mA

Accuracy: ±1% of reading or ±1°C whichever is greater

Repeatability: ±0.5% of reading or ±0.5°C whichever is greater

Emissivity: 0.2 to 1.0 via 4 to 20 mA input

Response Time t90: 240 mS (90% response)

Spectral Range: 8 to 14 μm

Supply Voltage: 24 Vdc (28 Vdc max)

Min Sensor Voltage: 6 Vdc

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

Input Impedance: 50 Ω

Mechanical

Construction: Stainless Steel

Dimensions: 103 L x 18 mm D (4.05 x 0.71")

Thread Mounting: M16 x 1 mm pitch

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

Weight: 95 g (3.4 oz) with cable

Environmental Rating: IP65

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

Relative Humidity: 95% max non-condensing

Tune Emissivity Adjuster Specifications (OS210-PT)

Output: 4 to 20 mA

Supply Voltage: 24 Vdc (13V to 28 Vdc)

Display Format: 3.5 digit LCD

Display Units:

Emissivity: 0.2 to 1.0

Current: 4 to 20 mA

Adjustment: Pushbuttons (raise/lower/set)

Mechanical

Construction: Polycarbonate with gasket, transparent lid (PC) and quick release screws

Mounting: Surface

Dimensions: 65 H x 50 W x 35 mm D (2.56 x 1.97 x 1.38")

Weight: 72 g (2.5 oz)

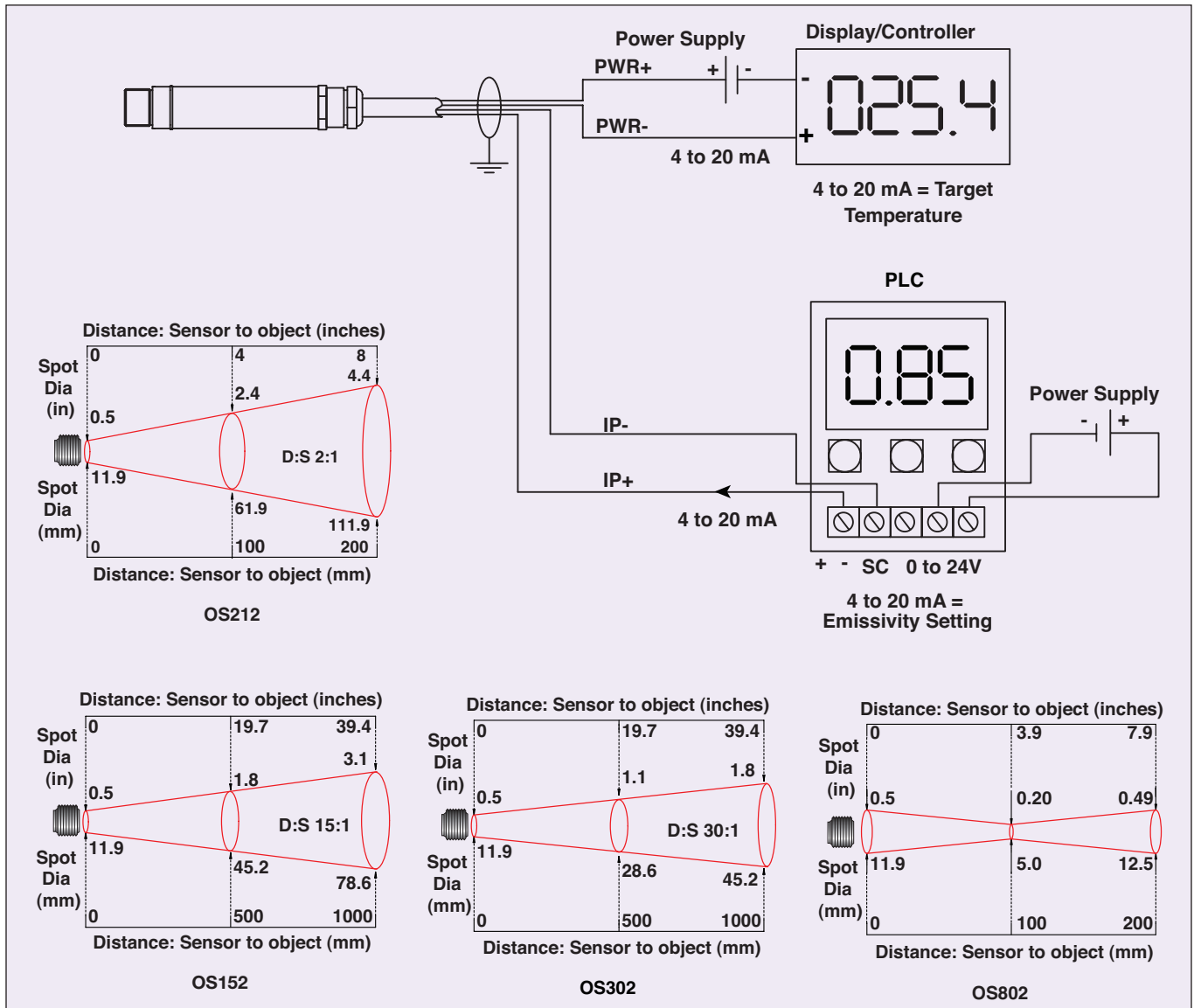
Environmental

Rating: IP65

Ambient Temperature Range: 0 to 70°C (312 to 158°F)

Relative Humidity: 95% max non-condensing

Wiring Diagram and Distance: Spot Ratios





MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)				
Model No.	Price	Optics	Temperature Range	Output with Adjustable Emissivity
OS212-LT	\$213	2:1	-20 to 100°C (-4 to 212°F)	4 to 20 mA
OS212-MT	213	2:1	0 to 250°C (32 to 482°F)	4 to 20 mA
OS152-LT	247	15:1	-20 to 100°C (-4 to 212°F)	4 to 20 mA
OS152-MT	247	15:1	0 to 250°C (32 to 482°F)	4 to 20 mA
OS152-HT	247	15:1	0 to 500°C (32 to 932°F)	4 to 20 mA
OS302-LT	338	30:1	-20 to 100°C (-4 to 212°F)	4 to 20 mA
OS302-MT	338	30:1	0 to 250°C (32 to 482°F)	4 to 20 mA
OS302-HT	338	30:1	0 to 500°C (32 to 932°F)	4 to 20 mA
OS802-LT	423	Close-focus	-20 to 100°C (-4 to 212°F)	4 to 20 mA
OS802-MT	423	Close-focus	0 to 250°C (32 to 482°F)	4 to 20 mA
OS802-HT	423	Close-focus	0 to 500°C (32 to 932°F)	4 to 20 mA

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

Ordering Examples: OS212-MT, 2:1 optics, 0 to 250°C (32 to 482°F) temperature range, 4 to 20 mA output, adjustable emissivity, \$213.

OS302-HT, 30:1 optics, 0 to 500°C (32 to 932°F) temperature range, 4 to 20 mA output, adjustable emissivity, \$338. OCW-3, OMEGACARESM extends standard 2-year warranty to a total of 5 years (\$105), \$338 + 85 = \$423.

Options (Not Field Installable)

Suffix	Price/Meter	Description
-WC	\$221	For air/water cooled jacket (includes air purge collar) must be ordered with sensor; cannot be retrofitted
-CE(*)	6/meter	Cable extended, for uncooled PE sensor, 30 m (98') max total cable length
-CEHT(*)	13/meter	Cable extended, high temperature, for cooled PE sensor, 30 m (98') max 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. Insert cable length in meters.

Accessories

Model No.	Price	Description
OS210-PT	\$126	Tune emissivity adjuster, 24 Vdc input, 4 to 20 mA output
OS210-FBS	15	Fixed bracket for compact sensors
OS210-ABS	36	Adjustable bracket for compact sensors
OS210-APSW	58	Air purge collar for compact 2:1 sensors
OS210-APSN	66	Air purge collar for compact 15:1, 30:1 and close-focus sensors
OS210-LSTS	306	Laser sighting tool for compact sensors
CAL-3-IRT†	125	NIST-traceable calibration

Power Supplies

AVAILABLE FOR FAST DELIVERY!

Model No.	Price	Description
PSR-24S	\$60	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	60	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	60	Regulated power supply, european plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
TX8-100	95	Power/output cable, 30 m (100')



UNITED STATES

www.omega.com
1-800-TC-OMEGA
Stamford, CT.

CANADA

www.omega.ca
Laval(Quebec)
1-800-TC-OMEGA

GERMANY

www.omega.de
Deckenpfronn, Germany
0800-8266342

UNITED KINGDOM

www.omega.co.uk
Manchester, England
0800-488-488

FRANCE

www.omega.fr
Guyancourt, France
088-466-342

CZECH REPUBLIC

www.omegaeng.cz
Karviná, Czech Republic
596-311-899

BENELUX

www.omega.nl
Amstelveen, NL
0800-099-33-44



More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters