



USB Infrared Temperature Sensor for Benchtop, Laboratory and Education

OS-MINIUSB



- ✓ **Miniature Non-Contact Temperature Sensor with USB Communications**
- ✓ **Measures Non-Metal Surfaces from -20 to 1000°C (-4 to 1832°F)**
- ✓ **Fast Response Time: 125 ms**
- ✓ **USB Cable and PC Software Included for Data Logging and Configuration**
- ✓ **Open Modbus® Protocol—Use Your Own Software to Communicate with the Sensor**



OS-MINIUSB-SN21 shown slightly larger than actual size.

Benchtop and Laboratory

With the precision and robustness of our industrial pyrometers, and the plug-and-play convenience of USB, the OS-MINIUSB is the ideal fixed mount IR temperature sensor for testing and experimentation.

Education

The OS-MINIUSB is ideal for teaching science concepts such as emissivity, reflectivity, thermal conductivity, energy transfer, insulation and internal energy.

The OS-MINIUSB is a miniature infrared sensor that measures the surface temperature of a solid or liquid without contact. It can measure non-metal surfaces between -20 and 1000°C (-4 and 1832°F), with a response time of just 125 ms.

Materials including paper, thick plastics, rubber, food and organic materials, as well as painted metals and most dirty, rusty or oily surfaces, are measured accurately, safely and cleanly.

A choice of optics is available to measure small or large targets at distances ranging from a few millimeters up to tens of meters.

The OS-MINIUSB has a rugged stainless steel housing, sealed to IP65, and is built to withstand ambient temperatures of up to 75°C (167°F).

Compact

The sensor is just 45 mm (1.77") long (plus cable gland), so it can fit into very small spaces. The USB interface is built into the sensor, so there is no need for additional bulky interface modules.

Temperature Display Features

- Graph of measured temperature and sensor temperature
- Sensor configuration
- Data logging to an Excel® compatible file
- Connect multiple sensors to the same software
- Simple, touch-friendly interface
- Free software included with every sensor; download from the OMEGA website
- Or use the provided Modbus details to connect the sensor to your own software



Specifications

Temperature Range: -20 to 1000°C (-4 to 1832°F)

Interface: USB

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

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

Emissivity Setting: 0.2 to 1.0

Response Time: t90 125 ms (90% response)

Spectral Range: 8 to 14 μm

Supply Voltage: 5 Vdc (provided by USB)

Supply Current: 50 mA max

VIRTUAL COM PORT

Baud Rate: 9600 baud *

Format: 8 data bits, no parity, 1 stop bit *

Protocol: Modbus over Serial Line

* Other configurations available upon request.



CONFIGURATION

Configuration Method: Via USB using included software or Modbus

Configurable Parameters: Emissivity Setting, Averaging, Reflected Energy Compensation

MECHANICAL

Construction: Stainless Steel

Dimensions: 18 mm Dia x 45 mm L (0.71 x 1.8")

Thread Mounting: M16 x 1 mm pitch

Cable Length: 1.5 m (5')

Weight with Cable: 85 g (3 oz)

ENVIRONMENTAL

Environmental Rating: IP65

Ambient Temperature: 0 to 75°C (32 to 167°F)

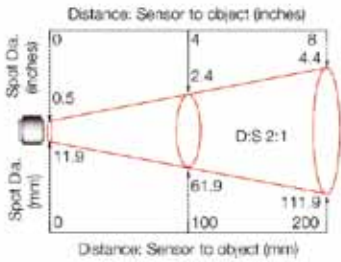
Relative Humidity: 95% max, non-condensing

CONFORMITY

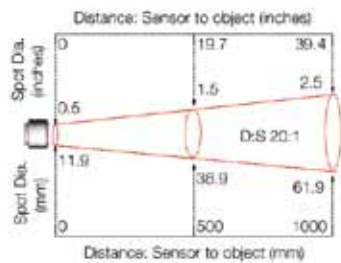
RoHS Compliant: Yes

Electromagnetic Compatibility: EN61326-1, EN61326-2-3 (Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements - Industrial)

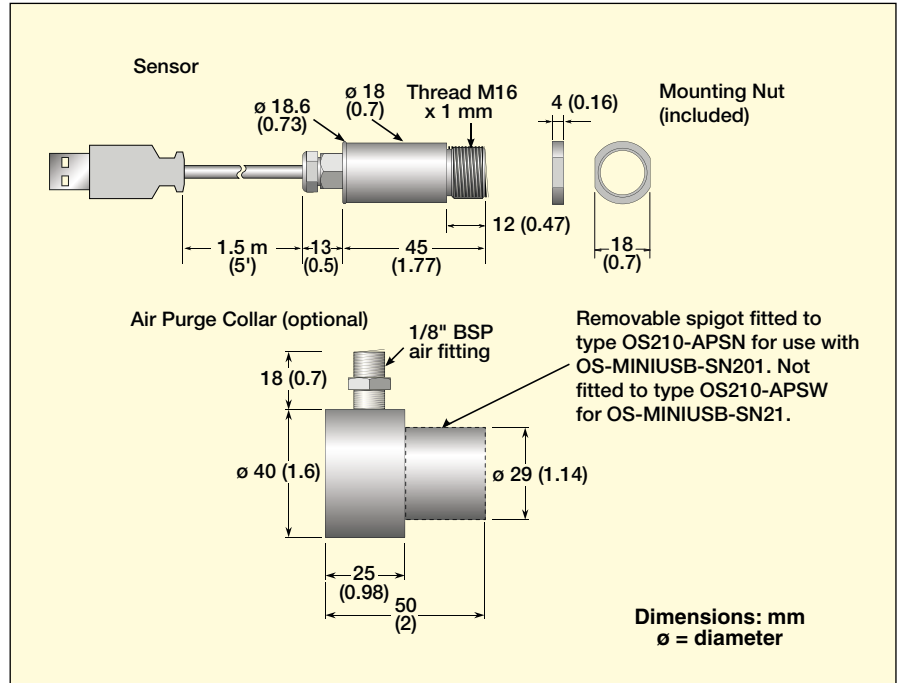
Diameter of target spot measured versus distance from sensing head (90% energy)



OS-MINIUSB-SN21



OS-MINIUSB-SN201



Dimensions: mm
 \varnothing = diameter

To Order

Model No.	Field of View
OS-MINIUSB-SN21	OS-MINIUSB sensor with 2:1 divergent optics
OS-MINIUSB-SN201	OS-MINIUSB sensor with 20:1 divergent optics

Accessories

Model No.	Description
OS210-ABS	Adjustable mounting bracket (2-axis)
OS210-FBS	Fixed mounting bracket
OS210-APSW	Air purge collar for OS-MINIUSB-SN201
OS210-APSN	Air purge collar for OS-MINIUSB-SN21
-CAL*	Calibration certificate
OS210-LSTS	Laser sighting tool (includes laser)

* Add suffix to model number.

Comes complete with sensing head, mounting nut, USB cable, USB connector, and software.

Ordering Example: OS-MINIUSB-SN201, miniature infrared sensor with USB output and 20:1 divergent optics.