

Smart Infrared Temperature Sensors

OS35 Series

Product Discontinued

As of DEC 2018

- ✓ Optics of 3:1 or 20:1
- ✓ Outputs of 0 to 5V, 0 to 10V, 4 to 20 mA, or RS232
- ✓ Ranges from -30 to 1000°C (-22 to 1832°F)
- ✓ Digital System with Auto Calibration
- ✓ Rugged Housing with Air Purge
- ✓ Automatic Emissivity Shift and Ambient Radiation Correction

The OMEGA® OS35 Series infrared temperature sensors offer intelligence in a rugged, easy-to-use package. The OS35 is centered around a high-speed microprocessor that continuously monitors and adjusts the complete system. While performing the complex algorithms determining the output, it calibrates itself about once every second, removing any concerns over drift or sudden changes. Other advanced features include emissivity shift compensation and ambient radiation error correction. The rugged housing withstands thermal and mechanical shocks. The built-in air purge prevents dust, dirt, or condensing vapors from depositing on sensor optics, assuring long-term accuracy under all environmental conditions. The integral heat exchanger eliminates drift by automatically warming (or cooling) supply air to match the optical aperture temperature.

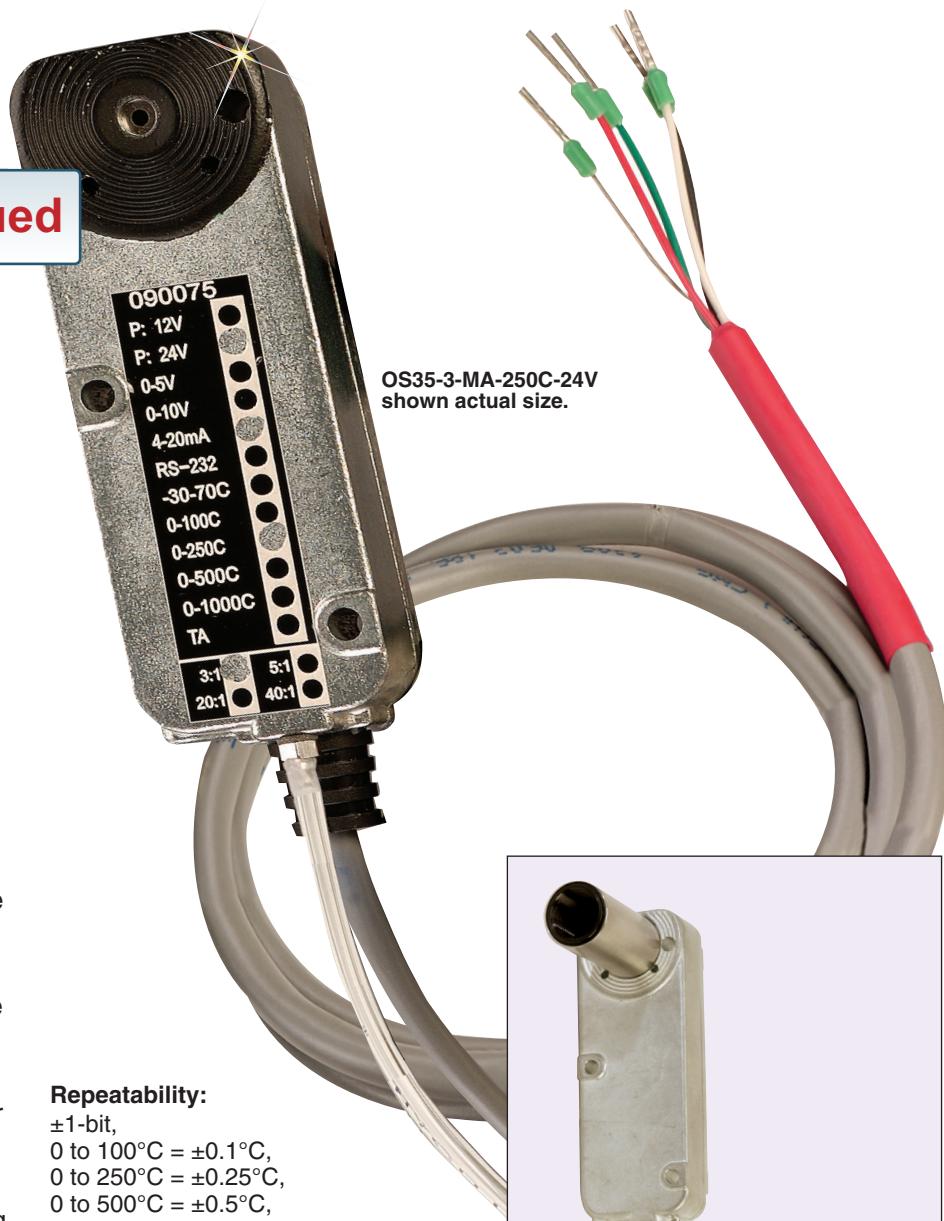
Specifications

Ranges:

-30 to 70°C (-22 to 158°F)
0 to 100°C (32 to 212°F)
0 to 250°C (32 to 482°F)
0 to 500°C (32 to 932°F)
0 to 1000°C (32 to 1832°F)

Accuracy:

OS35-3: ±1°C or 1%
OS35-20: ±1.5°C or ±1.5%
(±2% for 0 to 1000°C range)



OS35-3-MA-250C-24V
shown actual size.



OS35-20-MA-500C-24V
shown smaller than actual size.

Repeatability:

±1-bit,
0 to 100°C = ±0.1°C,
0 to 250°C = ±0.25°C,
0 to 500°C = ±0.5°C,
0 to 1000°C = ±1°C

Output: 0 to 5V, 0 to 10V (24 Vdc power only), 4 to 20 mA (50 Ω maximum), RS232 (12 Vdc power only)

Update Time: Approximately 250 ms

Emissivity Setting: 0.90

Spectral Response: 5.5 to 20 microns

Minimum Spot Size: 3.0 mm (0.12")
15.9 mm (0.625")

Power: 12 or 24 Vdc (10%); shuts off when voltage is functionally low

Output Impedance: 750 Ω on 0 to 5V and 0 to 10V models

Minimum Load Impedance: 100 kΩ

Maximum Loop Impedance:

50 Ω maximum

Power Consumption: <800 mW at 24 Vdc and <600 mW at 12 Vdc

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

Storage Temperature: -10 to 70°C (14 to 158°F)

Relative Humidity:

95% non-condensing

Construction: Heavy-duty alloy casting

Air Purge: Built-in with small aperture and heat exchanger that minimizes drift for superb accuracy

Air Tubing: 0.9 m (3') of polyurethane tubing 1/8 OD x 0.031 wall

Cable: 0.9 m (3") of 5-conductor, tinned copper, twisted pair polypropylene, insulated with shielded wire

Rating: IP54 (with air on)

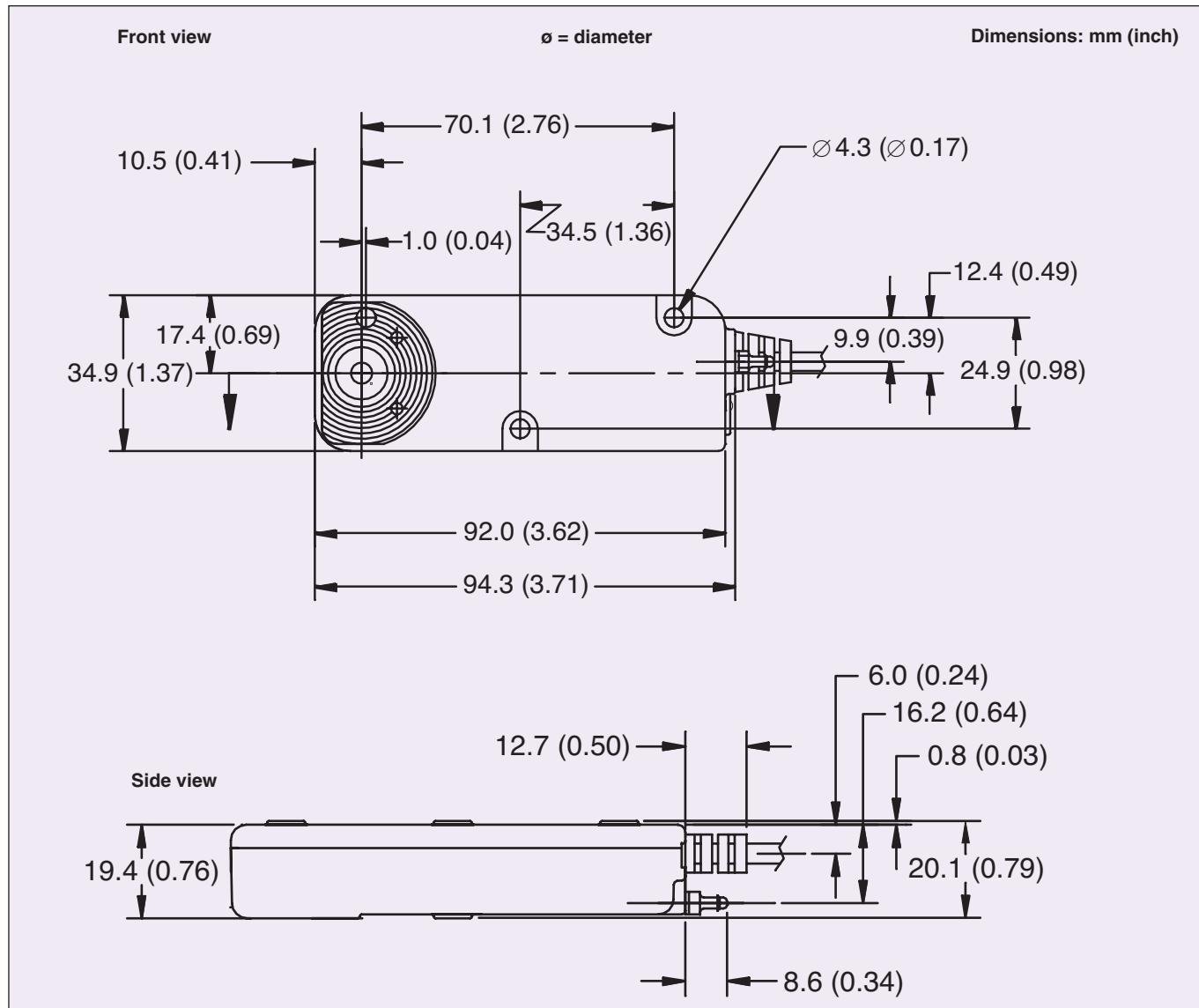
Dimensions:

94.3 H x 34.9 W x 19.4 mm D

(3.71 x 1.37 x 0.76");

OS35-20 models include a 41.3 x 19 mm (1.63 x 0.75") diameter snout

Weight: Approximately 227 g (8 oz)



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.

To Order Visit omega.com/os35 for Pricing and Details

Model No.	Description
OS35-3-MA-100C-24V	Infrared temperature sensor, 3:1 optics, 0 to 100°C (32 to 212°F) range
OS35-3-MA-250C-24V	Infrared temperature sensor, 3:1 optics, 0 to 250°C (32 to 482°F) range
OS35-3-MA-70C-24V	Infrared temperature sensor, 3:1 optics, -30 to 70°C (-22 to 158°F) range
OS35-20-MA-100C-24V	Infrared temperature sensor, 20:1 optics, 0 to 100°C (32 to 212°F) range
OS35-20-MA-250C-24V	Infrared temperature sensor, 20:1 optics, 0 to 250°C (32 to 482°F) range
OS35-20-MA-500C-24V	Infrared temperature sensor, 20:1 optics, 0 to 500°C (32 to 932°F) range
OS35-20-MA-1000C-24V	Infrared temperature sensor, 20:1 optics, 0 to 1000°C (32 to 1832°F) range

Note: For 12V power requirement, change “-24V” in model number to “-12V”, no additional cost.

For 5V output, change “-MA” in model number to “-5V”, no additional cost.

For 10V output, which is available only on 24V power models, change “-MA” in model number to “-10V”, no additional cost.

For RS232 output, which is available only in 0 to 250°C range with 12V power, change “-MA” in model number to “-RS”, no additional cost.

Comes complete with air tubing and operator's manual.

Ordering Examples: OS35-3-5V-100C-24V, infrared temperature sensor, 3:1 optics, 0 to 100°C range, 0 to 5V output.

OCW-2, OMEGACARE extends standard 2-year warranty to a total of 4 years.

OS35-20-MA-100C-24V, infrared temperature sensor, 20:1 optics, 0 to 100°C (32 to 212°F) range, 0 to 10V output.