



# Miniature Low-Cost Non-Contact Infrared Temperature Sensor/Transmitter



Miniature Stainless Steel IP65 housing

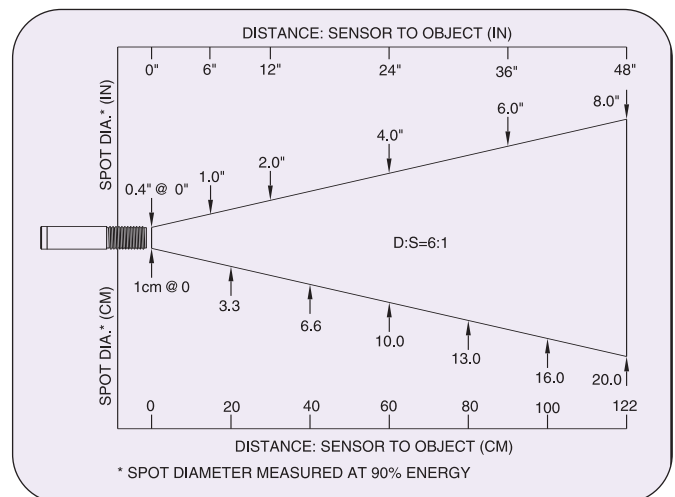


OS136 shown actual size

OS136  
Starts at  
**£117**



Each unit includes:  
two hex mounting nuts, a 1.8 m shielded cable and operator's manual.



- ✓ Two Temperature Ranges Available:  
OS136-1: -18 to 202°C  
OS136-2: 149 to 538°C
- ✓ Sensor and Transmitter Combined
- ✓ Packaged into a 19 mm O.D. by 89 mm Long Stainless Steel Housing
- ✓ Optical Field of View: 6 to 1
- ✓ Fixed Emissivity of 0.95
- ✓ IP65 Rated Housing
- ✓ 4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc, Type K Thermocouple, 10 mV/Degree Analogue Outputs Available
- ✓ Makes Fast and Accurate Measurements

OMEGA's new, miniature, low-cost, high-performance infrared sensor/transmitter model OS136 features a 19 mm O.D. by 89 mm long stainless steel housing. This mini transmitter is ideal for applications that require measuring temperature in hard-to-reach, confined, or harsh environments. The OS136 comes with a 1.8 m shielded cable for power and output connections. Models feature industry standard outputs that provide easy interfacing directly to all meters, controllers, data loggers, recorders, computer boards, and PLC's. The fixed emissivity of 0.95 allows for quick and easy measurement requiring no adjustment during installation and use.





### Temperature Range:

OS136-1: -18 to 204°C (0 to 400°F)  
OS136-2: 149 to 538°C (300 to 1000°F)

### Accuracy: @ 22°C (72°F) ambient

OS136-1: 3% of rdg or 4.4°C (8°F), whichever is greater  
OS136-2: 3% of rdg or 5.5°C (10°F), whichever is greater

From 185 to 510°C (365 to 950°F)

### Repeatability: 1% of rdg.

**Optical Field of View:** 6 to 1 (distance to spot size)

**Spectral Response:** 5 to 14 microns

**Response Time:** 150 msec, 0 to 63% of final value

**Emissivity:** Fixed at 0.95

### Analogue output:

MA: 4 to 20 mA  
V1: 0 to 5 Vdc  
V2: 0 to 10 Vdc  
K: K type thermocouple, compensated  
MVC: 10 mV/°C  
MVF: 10 mV/°F

### Output Load Requirements:

Min. Load (0 to 5 Vdc): 1 K/  
Min. Load (0 to 10 Vdc): 2 K/  
Max. Load (4 to 20 mA):  
(Power Supply – 4) / 20 mA  
Min. Load (10 mV/Deg): 10 K/  
Min. Load (K T/C): 100 K/

### Operating Ambient Temperature:

No Water Cooling: 0 to 70°C (32 to 158°F)  
With Water Cooling (OS136-WC):  
0 to 200°C (32 to 392°F)  
With Air Cooling (OS136-WC):  
0 to 110°C (32 to 230°F)

### Operating Relative Humidity:

Less than 95% RH, non-condensing

### Water Flow Rate for OS136-WC:

0.25 GPM, room temperature, minimum

**Air Flow Rate for OS136-WC:** 5 CFM (2.4 litres/sec)

**Warm-Up Period:** 1 to 2 minutes

**Thermal Shock:** About 30 minutes for 25°C abrupt ambient temperature change

### Air Flow Rate for Air Purge Collar:

1 CFM (0.5 litres/sec.)

**Transmitter Housing:** Stainless Steel 316, NEMA 4 and IP65 rated

**Power:** 12 to 24 Vdc @ 50 mA

**Dimensions:** 19 OD x 89 L mm (0.75 OD x 3.5" L)

**Weight:** 181 g (0.40 lb)

## Laser Sight Accessory Specifications

### Laser Wavelength (Colour):

630 to 670 nm (red)

**Operating Distance:** Up to 9.1 m (30')

### Max. Laser Power Output:

Less than 1 mW @ 22°C ambient

### Safety Classification:

Class 2 EN60825-1/11.2001

### FDA Classification:

Class II Laser Product.  
Complies with 21 CFR 1040.10

### Laser Beam Diameter:

Less than 5 mm (0.2")

**Beam Divergence:** Less than 2 mrad

### Operating Temperature:

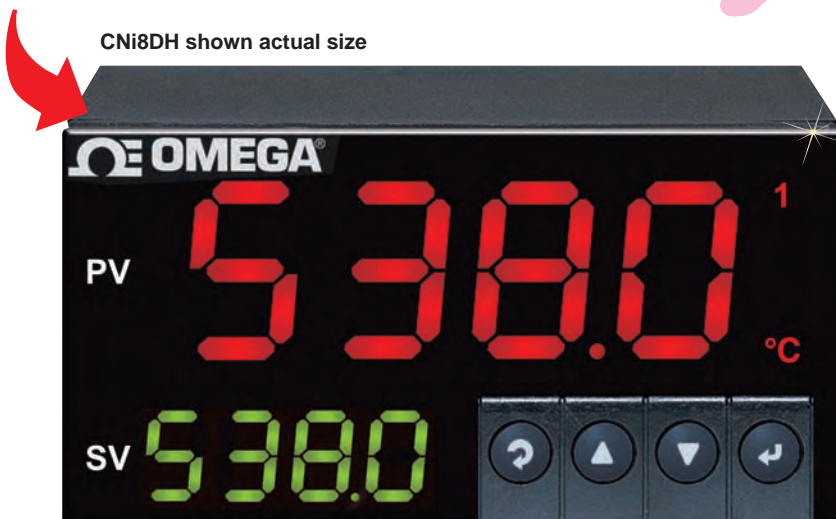
0 to 50°C (32 to 122°F)

### Operating Relative Humidity:

Less than 95% RH, non-condensing

Connect your OS136 to a precision controller model CNI8DH, £228, sold separately. Please see Section M for complete information on this and other iSeries meters and controllers.

CNI8DH shown actual size



### Power Switch:

On/off, slide switch on the battery pack

**Power Indicator:** Red LED

**Power:** Battery pack, 3 Vdc

### Caution and Certification Label:

Located on the head sight circumference

### Identification Label:

Located on the head sight circumference

### Aperture Label:

Located on the head sight circumference

### Dimensions:

38 Ø x 50.8 mm L (1.5 x 2")

## ☐ MOST POPULAR MODELS HIGHLIGHTED!

### To Order (Specify Model Number)

Model Number	Price	Description
OS136-(*)-MV-F	£117	Infrared transmitter with 10 mV/°F output
OS136-(*)-MV-C	117	Infrared transmitter with 10 mV/°C output
OS136-(*)-MA	117	Infrared transmitter with 4 to 20 mA output
OS136-(*)-V1	117	Infrared transmitter with 0 to 5 Vdc output
OS136-(*)-V2	117	Infrared transmitter with 0 to 10 Vdc output
OS136-(*)-K	117	Infrared transmitter with type K T/C output

\* Insert "1" for -18 to 202°C (0 to 400°F); Insert "2" for 149 to 538°C (300 to 1000°F).

**Ordering Examples:** OS136-1-MA, infrared transmitter with temperature range of -18 to 202°C (0 to 400°F) and 4 to 20 mA output, £117.

OS136-1-V1 and CNI8DH33, infrared transmitter with temperature range of -18 to 202°C (0 to 400°F), 0 to 5 Vdc output, and 1/2 DIN temperature controller, £117 + 228 = £345.

## Accessories

Model	Price	Description
OS100-MB	£13.50	Mounting bracket
OS100-AP	20.00	Air purge collar
OS136-WC	101.00	Water/air cool jacket
OS100-LS†	117.00	Laser sighting
TX4W-50	50.00	4-conductor shielded high-temp cable, 15 m
TX4-100	19.00	4-conductor shielded cable, 30 m
PSR-24L-230	40.00	Regulated power supply, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
PSU-93-UK	27.00	Unregulated power supply, 16 Vdc, 300 mA max, 230 Vac UK plug
CALIBRATION	90.00	Traceable calibration certificate

† OS136-LS laser sighting: One unit suitable for aligning multiple heads. Used during installation only.

Ordering Example: OS100-MB, mounting bracket, £13.50.