

# Compact Non-Contact Infrared Temperature Sensor/Transmitter



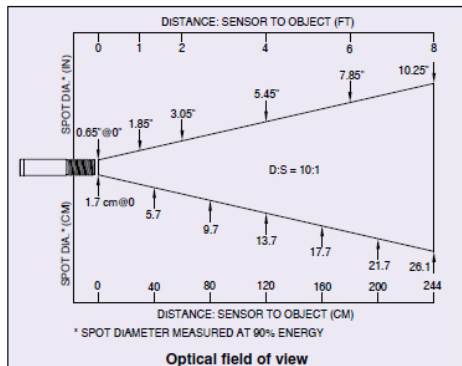
OS137A  
shown smaller  
than actual size

- ✔ **3 Temperature Ranges Available:**  
 OS137A-1: 0 to 100°C (32 to 212°F)  
 OS137A-2: -18 to 260°C (0 to 500°F)  
 OS137A-3: -18 to 538°C (0 to 1000°F)
- ✔ **Sensor and Transmitter Combined**
- ✔ **Adjustable Emissivity**
- ✔ **Adjustable Alarm Setpoint and Output**
- ✔ **Packaged in a 25 mm (1.0") OD by 127 mm (5.0") Long Stainless Steel NEMA 4 (IP65) Rated Housing**
- ✔ **10:1 Optical Field of View**
- ✔ **4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc, 10 mV/Deg, and Type K Thermocouple Outputs Available**



Compact stainless steel  
NEMA 4 housing.

The Omega compact high performance industrial infrared sensor/transmitter model OS137A provides variety of features and options packaged into a small stainless steel housing. The standard features are adjustable emissivity, 10 to 1 optical field of view, adjustable alarm set point and voltage output to drive external relays, and 6 pre-selected analog outputs that can easily be interfaced to all meters, controllers, data loggers, recorders, computer boards, and PLCs. The unit comes with 2 hex nuts, 1.8 m (6') shielded cable for power and output connections, and operator's manual.



**Optical field of view**

# Specifications



## Temp Range:

- OS137A-1: 0 to 100°C (32 to 212°F)
- OS137A-2: -18 to 260°C (0 to 500°F)
- OS137A-3: -18 to 538°C (0 to 1000°F)

## Accuracy:

- OS137A-1: 3% of Rdg or 4.4°C (8°F) whichever is greater
- OS137A-2: 3% of Rdg or 4.4°C (8°F) whichever is greater
- OS137A-3: 3% of Rdg or 5.5°C (10°F) whichever is greater

## Repeatability: 1% rdg or 2°F (1°C)

## Field of View: 10 to 1

## Spectral Response: 5.5 to 14 microns

## Emissivity: 0.5 to 1.0, adjustable via a single turn pot

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

## Outputs:

- MA: 4 to 20 mA
- V1: 0 to 5 Vdc
- V2: 0 to 10 Vdc
- K: K thermocouple
- MVf: 10 mV/°F
- MVC: 10 mV/°C

## Alarm Output: Voltage, 100 mA drive

## Alarm Set Point: 0 to 100 % adj,

set via pot

## Power: 12 to 24 Vdc @ 50 mA

## Operating Temperature:

- With No Cooling: 0 to 70°C
- With Water Cooling: 0 to 200°C
- With Air Cooling: 0 to 110°C

## Operating Relative Humidity:

Less than 95% RH, non-condensing

## Housing: Stainless steel, NEMA 4 (IP65)

## Dimensions: 25.4 OD x 127 mm L (1 x 5")

## Weight: 226 g (0.5 lb)

## LASER SIGHTING

## Wavelength (Color): 630-670 nm (red)

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

## Max Laser Power Output:

Less than 1 mW

## European Classification:

Class 2, EN60825-1/11.2001

## FDA Classification: Class II, complies

with 21 CFR 1040.10

## Laser Beam Diameter: Less than 5 mm

## Beam Divergence: Less than 2 mrad

## Power Switch: Slide switch on the

battery pack

## Power Indicator: Red LED

## Caution and Certification Label:

Located on the head circumference

## Aperture and Identification Label:

Located on the head circumference

CNI8DH shown actual size.



Connect your OS137A to a precision controller model CNI8DH, sold separately.



## To Order

Model No.	Description
OS137A-(*)-K	Infrared transmitter with K thermocouple output
OS137A-(*)-MV-F	Infrared transmitter with 10 mV/°F output
OS137A-(*)-MV-C	Infrared transmitter with 10 mV/°C output
OS137A-(*)-MA	Infrared transmitter with 4 to 20 mA output
OS137A-(*)-V1	Infrared transmitter with 0 to 5 Vdc output
OS137A-(*)-V2	Infrared transmitter with 0 to 10 Vdc output

\* Insert "1" for 0 to 100°C (32 to 212°F); Insert "2" for -18 to 260°C (0 to 500°F);

Insert "3" for -18 to 538°C (0 to 1000°F).

Comes complete with two mounting nuts and operator's manual.

To order with longer power/output cable, up to 30 m (100'), add suffix "-(\*\*)FT" to model number, and add an additional cost for each additional foot over 1.8 m (6').

\*\* Specify length in feet.

**Ordering Examples:** OS137A-1-MA, infrared transmitter with temperature range of 0 to 100°C (32 to 212°F) and 4 to 20 mA output.

OS137A-1-V1 and CNI8DH33, infrared transmitter with temperature range of 0 to 100°C (32 to 212°F) and 0 to 5 Vdc output, and 18 DIN temperature controller.

OS137A-1-V1-26FT, OS137A with 26 feet of power/output cable.

## Accessories

Model No.	Description
OS137-MB	Mounting bracket
OS137-AP	Air purge collar
OS137-WC	Water/air cool jacket
OS137-LS†	Laser sighting
PSR-24S	Regulated power supply, 24 Vdc, 400 mA, screw terminal
PSR-24L	Regulated power supply, 24 Vdc, 400 mA, UL, stripped leads
PSR-24L-230	Regulated power supply, 24 Vdc, 400 mA, 6' cord with stripped leads, 230 Vac input, CE
PSU-93	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
CAL-3-IR	NIST-traceable calibration

† OS137-LS laser sighting: 1 unit suitable for aligning multiple heads. Used during installation only.

Ordering Example: OS137-MB, mounting bracket.