

The background of the entire page is a composite image. The top half shows a city skyline at night, with several tall buildings illuminated. The bottom half shows a highway interchange with light trails from cars, suggesting motion. Overlaid on both images is a network of white, glowing arcs that connect various points, symbolizing a sensor network or data flow.

i-Tec Mini OEM

DATASHEET

Sensor Partners BV

📍 James Wattlaan 15
5151 DP Drunen
The Netherlands

☎ +31 (0)416 - 37 82 39

✉ info@sensorpartners.com

🌐 sensorpartners.com

Sensor Partners BVBA

📍 Z.1 Researchpark 310
B-1731, Zellik
Belgium

☎ +32 (0)2 - 464 96 90

✉ info@sensorpartners.com

🌐 sensorpartners.com

Low-Cost Pyrometer for Machine Manufacturers



- Miniature sensing head withstands up to 120°C ambient temperature without cooling
- Measurement ranges from -20°C to 1000°C
- Choice of outputs: 4-20 mA, 0-10 V DC, Type J or K thermocouple
- Right-angled cable entry for low-profile installations
- Optional mounting brackets, air purge collar and laser sighting tool
- High accuracy and stability
- Stainless steel sensing head, sealed to IP65
- Precision optics
- Fixed emissivity 0.95 - suitable for measuring most non-reflective non-metals, and painted surfaces

GENERAL SPECIFICATIONS

Temperature Range

-20°C to 100°C (LT models)

0°C to 250°C (MT models)

0°C to 500°C (HT models)

Output

Choice of outputs:

4-20 mA, 2-wire, loop-powered, linear with temperature,

0-10 V DC, linear with temperature,

Type J Thermocouple,

Type K Thermocouple

Field of View

Choice of options (see Optics)

Accuracy

± 1°C or 1%, whichever is greater

Repeatability

± 0.5°C or 0.5%, whichever is greater

Emissivity Setting

Fixed at 0.95

Response Time

240 ms (90% response)

Spectral Range

8 to 14 µm

ELECTRICAL

Supply Voltage Minimum

24 V DC (28 V DC max)

Sensor Voltage

12 V DC (0-10 V DC model)

6 V DC (all other models)

Maximum Current Draw

20 mA

Maximum Loop Impedance

900 Ω (4-20 mA models)

MECHANICAL

	Sensing head	Electronics Module
Construction	Stainless Steel 316	Extruded Aluminium
Lens	Silicon	-
Major Dimensions	Ø18 x 55 mm (see diagram)	25(w) x 25(h) x 105(l) mm (see diagram)
Mounting	M16 x 1 mm thread	4 Mounting Holes M3 Clearance

Sensing Head Cable Length

3 m (fixed length, not user-adjustable)

Output Cable Length

1 m (extended cable available, 30 m max)

ENVIRONMENTAL

	Sensing head	Electronics Module
Environmental Rating	IP65	IP50
Ambient Temperature Range	0°C to 120°C	0°C to 70°C
Relative Humidity	Maximum 95% non-condensing	Maximum 95% non-condensing

CE Marked

Yes

RoHS Compliant

Yes

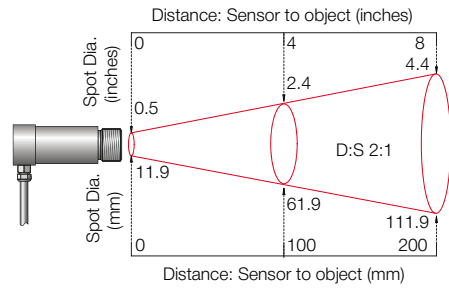
ELECTROMAGNETIC COMPATIBILITY STANDARDS

Class	Standard	Description
EMC Directive	EN61326-1:2006	Electrical equipment for measurement, control and laboratory use – Industrial
- Immunity	IEC 61000-4-2	Electrostatic Discharge Immunity
	IEC 61000-4-3	Radiated RF Field Immunity
	IEC 61000-4-4	Burst Immunity
	IEC 61000-4-6	Conducted RF Immunity
- Emissions	EN 55022A	RF Emissions Class A
	EN 55022B	RF Emissions Class B

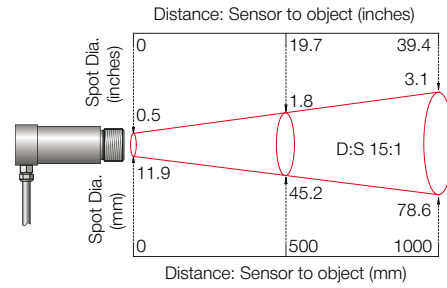
OPTICS

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

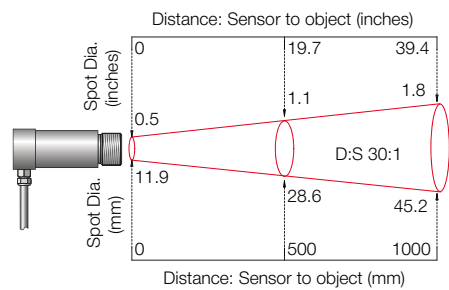
Note: Sensors can measure at longer distances than shown, with a larger measured spot size



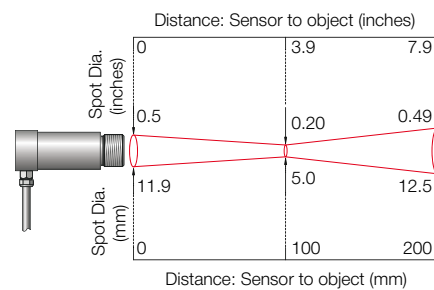
102 models



115 models



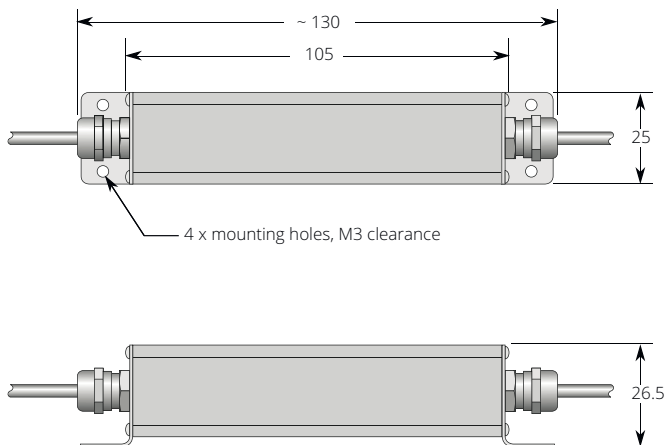
130 models



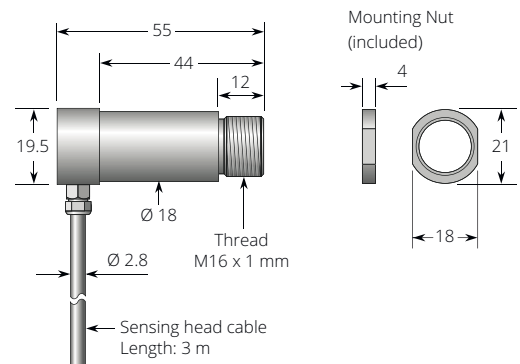
-CF models

DIMENSIONS

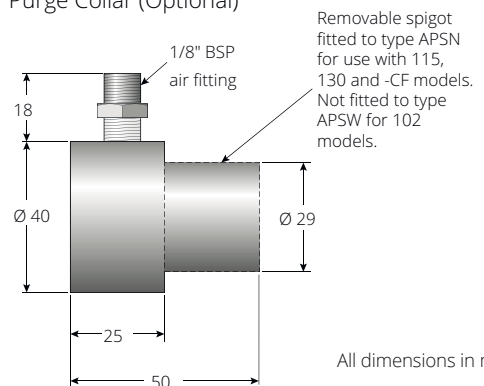
Electronics Module



Sensing Head



Air Purge Collar (Optional)

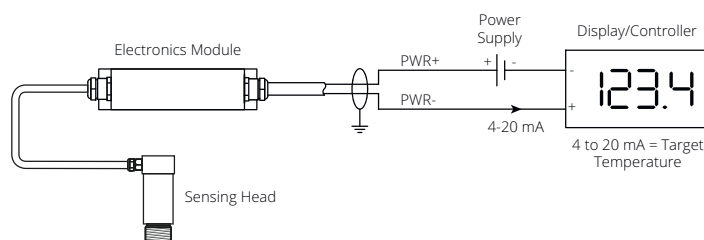


All dimensions in mm

ELECTRICAL INSTALLATION

2-wire Models (4-20 mA Output)

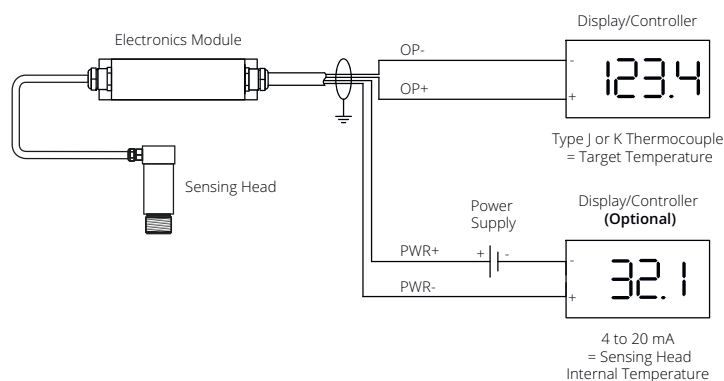
Wire Tag	Function
PWR+	Power +24 V DC (4-20 mA loop)
PWR-	Power 0 V DC (4-20 mA loop)
(no tag)	Shield drain



4-wire Models (Thermocouple Output)

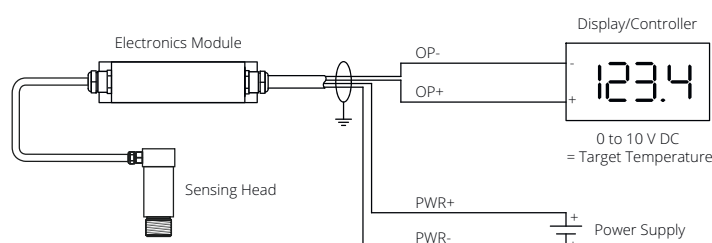
Wire Tag	Function
PWR+	Power +24 V DC *
PWR-	Power 0 V DC *
OP+	Output +
OP-	Output -
(no tag)	Shield drain

* Sensing head internal temperature is provided as a 4-20 mA signal on the power loop. It is possible to use the sensor without measuring this signal; in that case power should be connected directly to PWR+ and PWR-.



4-wire Models (Voltage Output)

Wire Tag	Function
PWR+	Power +24 V DC
PWR-	Power 0 V DC
OP+	Target Temperature Output +
OP-	Target Temperature Output -
(no tag)	Shield drain



MODEL NUMBERS

i-Tec Mini OEM - 115 - MT - C - 10M

Output Cable Length

(blank) Standard output cable length (1 m)
nM Extended output cable (n = total length in m)
Maximum output cable length: 30 m

Note: Sensing head cable length is 3 metres.

Output

C 2-wire, 4-20 mA
V 4-wire, 0-10 V DC
J 4-wire, Type J Thermocouple
K 4-wire, Type K Thermocouple

Temperature Range

LT -20°C to 100°C
MT 0°C to 250°C
HT 0°C to 500°C
XT 0°C to 1000°C

Optics

102 2:1 wide-angle optics
115 15:1 general-purpose optics
130 30:1 narrow-angle optics
CF Close Focus optics (measured spot diameter 5 mm at distance 100 mm)

OPTIONS AND ACCESSORIES

CALCERT	Calibration certificate
LSTS	Laser sighting tool
ABS	Adjustable mounting bracket
FBS	Fixed mounting bracket
APSN	Air purge collar (15:1, 30:1, Close Focus optics)
APSW	Air purge collar (2:1 optics)

i-Tec Mini OEM PyroMini OEM infrared temperature sensor with miniature sensing head and separate electronics module