PyroCouple

General Purpose Infrared Temperature Sensor with Analogue Output

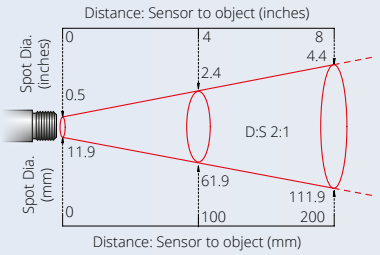


- Temperature ranges from -20°C to 500°C
- Two-wire 4-20 mA output or four-wire voltage/ thermocouple output
- Choice of precision optics for large or small targets
- Fast response with high stability
- Stainless steel housing, sealed to IP65
- Quick and easy installation
- Wide range of accessories
- Fixed emissivity 0.95 for measuring non-reflective non-metals, and painted surfaces (including painted or coated metals)
- Conforms to industrial EMC standards

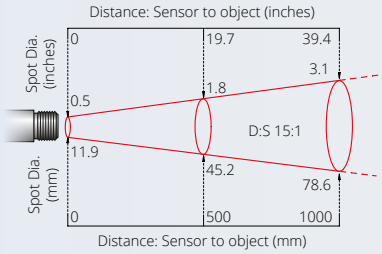
The PyroCouple is a simple infrared temperature sensor with a choice of analogue outputs. No complicated setup is required - just connect a temperature indicator and power supply, and instantly start taking measurements.

It is suitable for non-contact temperature measurement on most non-reflective non-metal surfaces, such as paper, thick plastics, asphalt, painted surfaces, food, rubber and organic materials, among many others.

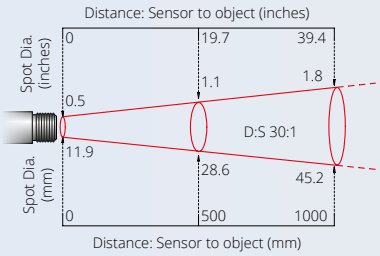
OPTICS



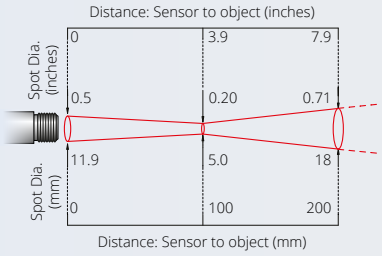
21 models



151 models



301 models



CF models

All models can measure at longer distances than shown, with a larger measured spot size.

Diagrams show the diameter of the measured target spot versus the distance from the sensing head (90% energy).

SPECIFICATIONS

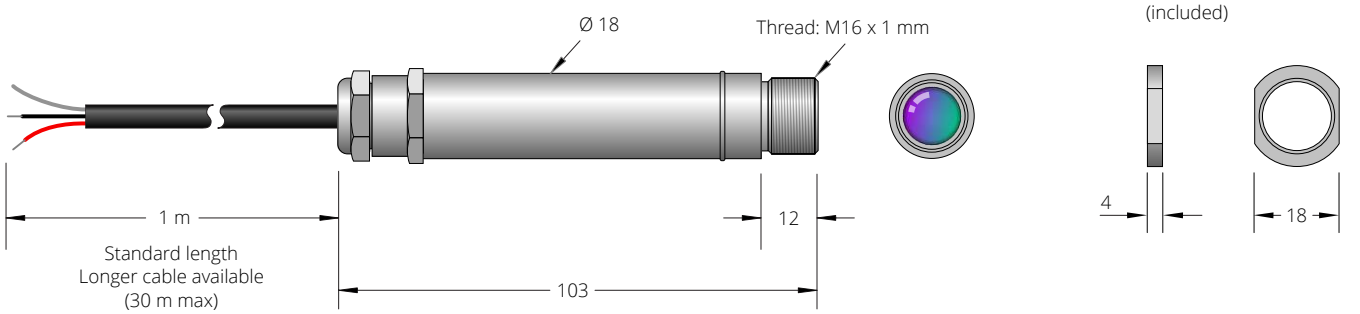
General	
Output	Choice of 4-20 mA, J or K Thermocouple, mV (See "Model Numbers")
Temperature Range	LT = -20 to +100 °C MT = 0 to 250 °C HT = 0 to 500 °C
Accuracy	±1% of reading or ±1°C, whichever is greater
Repeatability	± 0.5% of reading or ± 0.5°C, whichever is greater
Emissivity Setting	Fixed at 0.95
Response Time	240 ms (90% response)
Spectral Range	8 to 14 µm
Supply Voltage (at Sensor)	6 V DC to 28 V DC
Max. Loop Impedance	900 Ω (4-20 mA output)
Output Impedance	56 Ω (voltage/thermocouple output)
Max. Current Draw	20 mA

Mechanical	
Construction	Stainless Steel
Dimensions	18 mm diameter x 103 mm long
Thread Mounting	M16 x 1 mm pitch
Cable Length	1m (longer lengths available to order)
Weight with Cable	95 g

Environmental	
Environmental (IP) Rating	IP65
Ambient (Operating) Temperature Range	0°C to 70°C
Ambient (Operating) Humidity	95% max. non-condensing

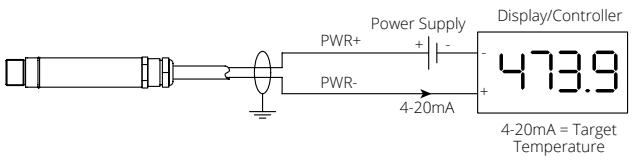
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DIMENSIONS (mm)

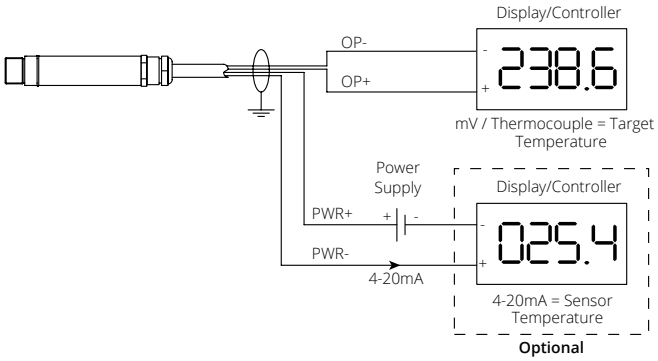


CONNECTIONS

Two-wire (option 0)



Four-wire (options 1 to 4)



MODEL NUMBERS

Optional

PC	151	MT	-	0	WJ	-	3M

Example Model Numbers:
PC151MT-0, PC301HT-4WJ-5M

Cable Length

(blank)	Standard 1 metre cable length
***n*M**	Extended cable, length *n* metres (30 m max) User may extend cable further

Cooling

(blank)	Sensor without cooling
WJ	Air/water cooled jacket with air purge collar

Output option

-0	2 wire	4-20mA
-1	4-wire	0-50mV (target temperature) 4-20mA (sensor temperature)
-3	4-wire	J Thermocouple (target temperature) 4-20mA (sensor temperature)
-4	4-wire	K Thermocouple (target temperature) 4-20mA (sensor temperature)

e.g. Model PC151HT-4 has a type K thermocouple output representing target temperatures of 0°C to 500°C plus a 4-20 mA output proportional to internal sensor temperature. For simplicity, the sensor temperature range is always set the same as the target temperature range

Temperature range

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

Field of view

21	2:1 divergent optics
151	15:1 divergent optics
301	30:1 divergent optics
CF	Close-focus optics (focal spot size 5 mm at 100 mm distance)

Series

PC	PyroCouple	Simple infrared temperature sensor for general purpose applications. Fixed emissivity 0.95, choice of analogue outputs

ACCESSORIES



Laser sighting tool **LSTS**



Dual laser sighting bracket, adjustable **DLSBAS** or fixed **DLSBFS**



Fixed mounting bracket **FBS**



Adjustable mounting bracket **ABS**



Air or water cooled jacket with air purge collar **WJ** (factory-fitted - see Model Numbers)



Air purge collar for 2:1 optics **APSW**
or for all other optics (shown above) **APSN**

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Specifications subject to change without notice