## 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** Distance: Sensor to object (inches) Distance: Sensor to object (inches) 39.4 Spot Dia. (inches) 3.1 D:S 2:1 Spot Dia. (mm) Spot Dia. (mm) 45.2 61.9 78.6 100 500 1000 Distance: Sensor to object (mm) Distance: Sensor to object (mm) 151 models 21 models Distance: Sensor to object (inches) Distance: Sensor to object (inches) Spot Dia. (inches) Spot Dia. (inches) 0.5 0.20 0.71 D:S 30:1 11.9 5.0 18 Spot Dia. (mm) 28.6 Spot Dia. 45.2 100 200 500 1000 Distance: Sensor to object (mm) 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).

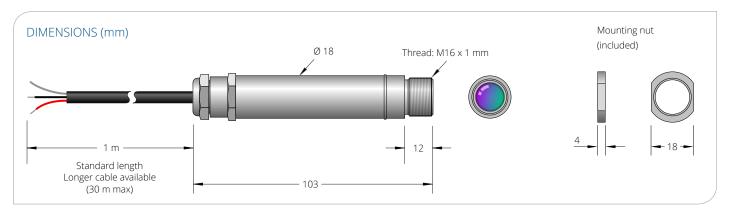
#### **SPECIFICATIONS**

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	$56 \Omega$ (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

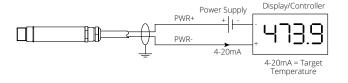




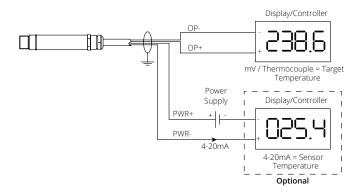
#### **CONNECTIONS**

#### Two-wire (option 0)

**MODEL NUMBERS** 



#### Four-wire (options 1 to 4)



#### Optional Example Model Numbers: PC151MT-0, PC301HT-4WJ-5M PC 151 MT 0 WJ 3M Cable Length (blank) Standard 1 metre cable length nMExtended cable, length n metres (30 m max) User may extend cable further Cooling (blank) Sensor without cooling Air/water cooled jacket with air purge collar Output option 4-20mA -0 2 wire -1 4-wire 0-50mV (target temperature)



**ACCESSORIES** 

Laser sighting tool  ${\bf LSTS}$ 



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** 

# — Temperature range LT -20°C to +100 °C MT 0°C to 250 °C

-3

4-wire

4-wire

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

4-20mA (sensor temperature) J Thermocouple (target temperature) 4-20mA (sensor temperature)

e.g. Model PC151HT-4 has a type K thermocouple output representing target temperatures of  $0^{\circ}\text{C}$  to  $500^{\circ}\text{C}$  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

K Thermocouple (target temperature) 4-20mA (sensor temperature)