# PyroMini OEM

# Low-Cost Pyrometer for Machine Manufacturers



- Miniature sensing head withstands up to 120°C ambient temperature without cooling
- Measurement ranges from -20°C to 500°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
- 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 ± 0.5°C or 0.5%, whichever is greater Repeatability

**Emissivity Setting** Fixed at 0.95

**Response Time** 240 ms (90% response)

**Spectral Range**  $8 to 14 \mu m$ 

# **ELECTRICAL**

24 V DC (28 V DC max) **Supply Voltage** 12 V DC (0-10 V DC model) **Minimum Sensor Voltage** 8 V DC (all other models) **Maximum Current Draw** 

20 mA (normal use) 22 mA (fault condition)

**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** 

**Output Cable Length** 1 m (extended cable available, 30 m max)

#### **ENVIRONMENTAL**

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

**CE Marked** Yes **RoHS Compliant** 

#### **ELECTROMAGNETIC COMPATIBILITY STANDARDS**

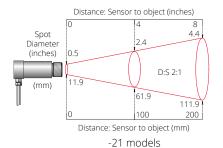
Class	Standard	Description
EMC Directive	EN61326-1:2013	Electrical equipment for
		measurement, control and
		laboratory use – Industrial
- Immunity	IEC 61000-4-2	Electrostatic Discharge Immunity
	IEC 61000-4-3	Radiated RF Field Immunity
	IEC 61000-4-4	Burst Immunity
	IEC 61000-4-6	Conducted RF Immunity
- Emissions	EN 55022A	RF Emissions Class A
	EN 55022B	RF Emissions Class B

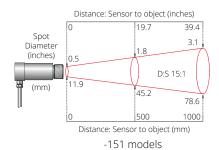


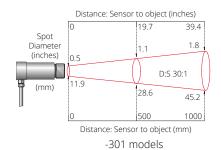


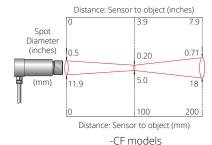
# **OPTICS**

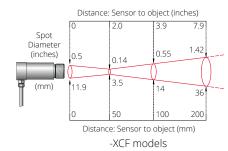
Diameter of target spot measured vs. distance from sensing head (90% energy) Note: Sensors can measure at longer distances than shown, with a larger measured spot size





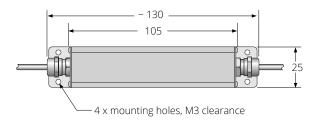






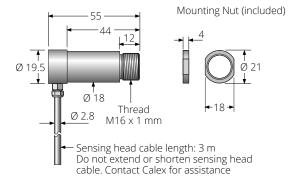
#### **DIMENSIONS**

# **Electronics Module**

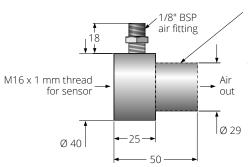




# **Sensing Head**



#### Air Purge Collar (Optional)



Removable spigot fitted to type APSN for use with -151, -301 and -CF models. Not fitted to type APSW for -21 models.

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

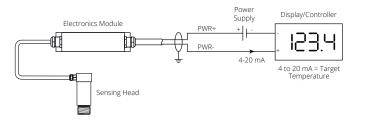
#### 4-wire Models (Thermocouple Output)

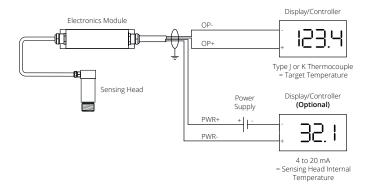
Wire Tag	Function
PWR+	Power +24 V DC *
PWR-	Power 0 V DC *
OP+	Output +
OP-	Output -
(no tag)	Shield drain

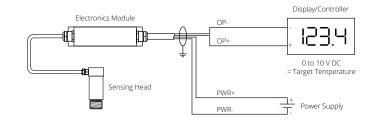
\* Sensing head internal temperature is provided as a 4-20 mA signal on the power loop. It is possible to use the sensor without measuring this signal; in that case power should be connected directly to PWR+ and PWR-.

#### 4-wire Models (Voltage Output)

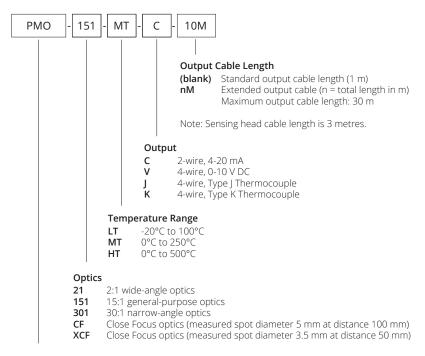
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Wire Tag	Function	
PWR+	Power +24 V DC	
PWR-	Power 0 V DC	
OP+	Target Temperature Output +	
OP-	Target Temperature Output -	
(no tag)	Shield drain	







# **MODEL NUMBERS**



РМО PyroMini OEM infrared temperature sensor with miniature sensing head and separate electronics module

### **OPTIONS AND ACCESSORIES**

CALCERTA	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)