PyroSigma

Miniature Pyrometer with Built-In Display

Underside showing lens and mounting screw holes

- Industrial infrared temperature sensor
- Temperature range 0°C to 1000°C
- Built-in OLED temperature display
- Fully configurable via push-button controls
- Voltage and alarm outputs
- Precision optics with narrow viewing angle
- Fast 125ms response with high stability
- Rugged aluminium and ABS housing
- Extremely small size: 30 x Ø31 mm
- Low cost and high performance

SPECIFICATIONS

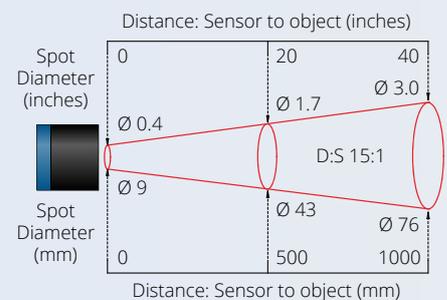| General	
Measurement Temperature Range	0°C to 1000 °C
Analogue Output	Selectable 0-5, 1-5 or 0-10 V DC, linear with measured temperature, rescalable via display & controls
Alarm Output	Open collector alarm output with adjustable temperature threshold and hysteresis
Accuracy	± 1.5% of reading or ± 1.5°C, whichever is greater
Repeatability	± 0.5% of reading or ± 0.5°C, whichever is greater
Emissivity Setting	Adjustable 0.20 to 1.00 via display & controls
Response Time	125 ms
Spectral Range	8 to 14 µm
Supply Voltage (at Sensor)	24 V DC 6 V DC to 28 V DC (12 V DC minimum if using 0-10 V output)
Max. Supply Voltage (at Sensor)	28 V DC
Min. Supply Voltage (at Sensor)	6 V DC
Max. Current Draw	30 mA
Max Temperature Span (Linear Output)	1000°C (full temperature range)
Min Temperature Span (Linear Output)	100°C
Open Collector Alarm Output	6 to 24 V DC, 50 mA max (see Connections)

Mechanical	
Construction	Black anodised aluminium and blue ABS
Cable Length	1 m as standard (longer lengths available to order)
Weight with 1 m Cable	65 g

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

Configuration	
Configurable Parameters	· Temperature range (linear output) · Alarm output threshold and hysteresis · Emissivity setting · Reflected temperature
Temperature Units	°C / °F
Signal Processing	Averaging Period (0.25 to 60 seconds)
Peak/Valley Hold	Hold Period (0.25 to 1200 seconds)

Configuration	
Electromagnetic Compatibility (EMC)	EN61326-1, EN61326-2-3 (Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements)
RoHS Compliant	Yes

OPTICS

The sensor can measure at longer distances than shown, with a larger measured spot size.
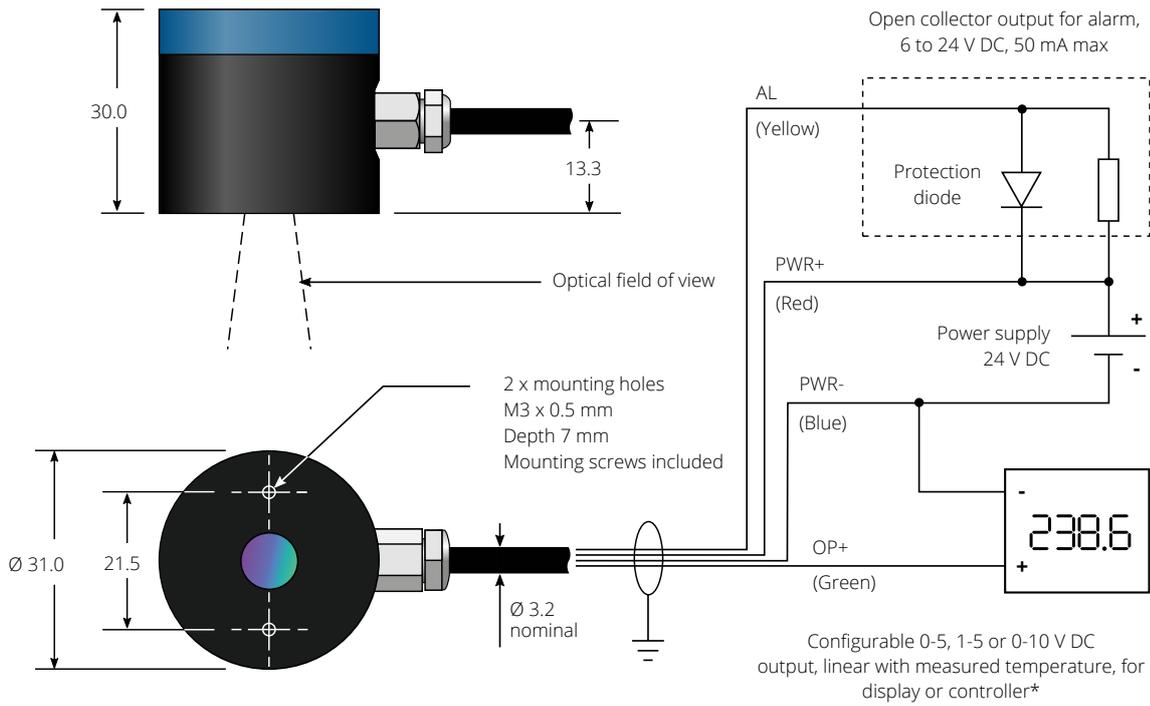
Spot sizes shown are for 90% energy.

DIMENSIONS AND CONNECTIONS

30.0

13.3

Open collector output for alarm,
6 to 24 V DC, 50 mA max

AL
(Yellow)

Protection
diode

PWR+
(Red)

Power supply
24 V DC

+

-

Optical field of view

2 x mounting holes
M3 x 0.5 mm
Depth 7 mm
Mounting screws included

PWR-
(Blue)

238.6

Ø 31.0   21.5

Ø 3.2
nominal

OP+
(Green)

-

+

Configurable 0-5, 1-5 or 0-10 V DC
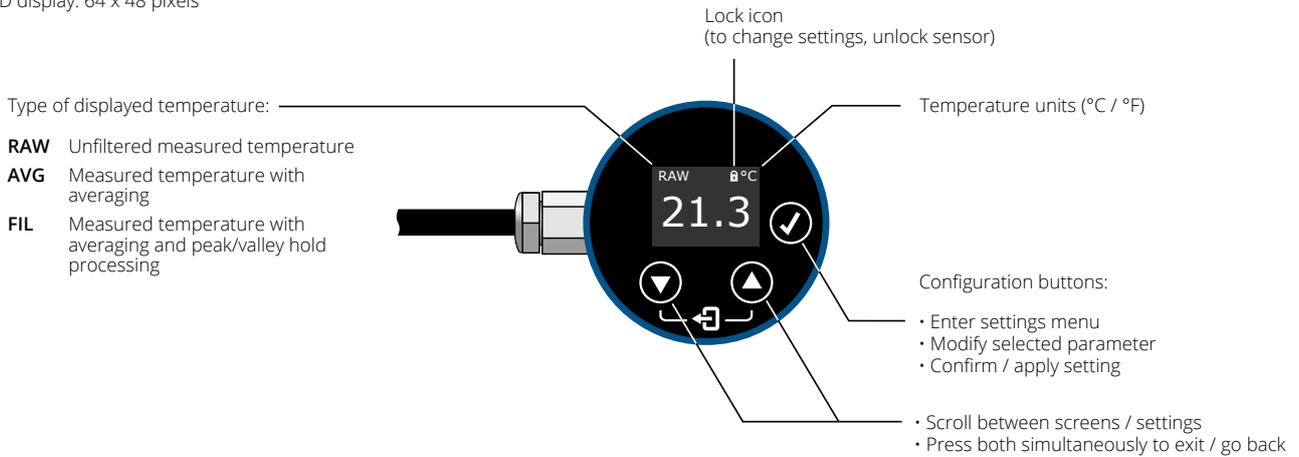output, linear with measured temperature, for
display or controller*

* A choice of indicating controllers, providing temperature display and
relay outputs, is also available. Contact Calex for more information.

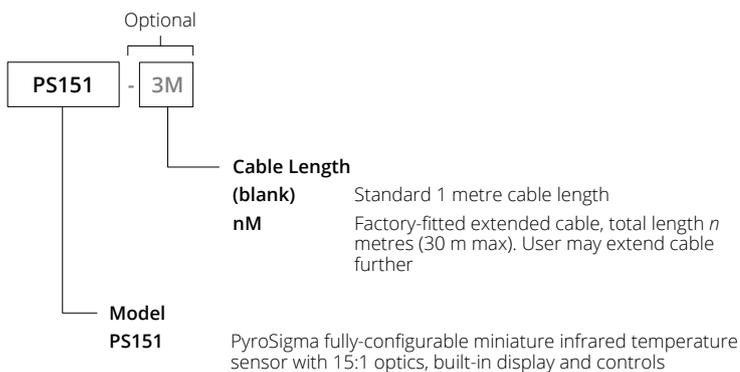All dimensions in mm

DISPLAY AND CONTROLS

OLED display: 64 x 48 pixels

Lock icon
(to change settings, unlock sensor)

Type of displayed temperature:

RAW Unfiltered measured temperature

AVG Measured temperature with
averaging

FIL Measured temperature with
averaging and peak/valley hold
processing

Temperature units (°C / °F)

RAW 🔒°C
21.3 ✓

Configuration buttons:

· Enter settings menu
· Modify selected parameter
· Confirm / apply setting

· Scroll between screens / settings
· Press both simultaneously to exit / go back

MODEL NUMBERS

Optional

PS151 - 3M

Cable Length

(blank)   Standard 1 metre cable length

nM   Factory-fitted extended cable, total length *n*
metres (30 m max). User may extend cable
further

Model

PS151   PyroSigma fully-configurable miniature infrared temperature
sensor with 15:1 optics, built-in display and controls

ACCESSORIES

Adjustable mounting
bracket **ABN** (pictured)

Fixed mounting bracket
FBN

Air purge collar **APN**