PyroSight E Series

Infrared Temperature Sensor with Built In Laser Sighting

PSWCS

PSAP2

PSABS

- Temperature ranges from -25°C to 1600°C
- Two-wire 4-20 mA output
- Built-in through-lens laser sighting with remote activation
- Compact and rugged housing, sealed to IP65 (NEMA 4)
- Choice of optics with measured spot sizes as small as 2 mm
- M44 x 1.5 mm mounting thread, supplied with two mounting nuts
- Adjustable emissivity setting via two rotary switches
- Choice of measurement wavelengths to suit a range of applications
- Ideal for applications in the steel, iron, non-ferrous metals, glass, minerals, ceramics, chemicals and electronics industries

GENERAL SPECIFICATIONS

Temperature range
See "Model Numbers"
Response time (t_{95})
E1 and E2 models: 28 ms
E5 and E8 models: 100 ms
Laser sighting
Optional built-in through-lens laser sighting with remote activation
Emissivity setting
E1, E2, E5 models: 0.1 to 1.0
E8 models: 0.3 to 1.0
Spectral response
See "Model Numbers"
Operating temperature
Without laser sighting in use -20°C to +60°C
With laser sighting in use 0°C to +50°C
Accuracy*
E1 and E2 models: ±0.5% of reading
E5 models: ±1% of reading
E8 models: ±1% of reading or ±1°C, whichever is greater
Repeatability
E1 and E2 models: ±0.25% of reading or ±0.5°C, whichever is greater
E5 and E8 models: ±0.5% of reading
Maximum loop impedance
700 Ω (on 4-20 mA loop)
Power supply
12 to 32 V DC (on 4-20 mA loop)
12 to 32 V DC (laser sighting power supply loop, max. current draw 100 mA)
Storage temperature
Without laser sighting in use -30°C to +70°C
With laser sighting in use -10°C to +50°C
* Relative accuracy for operating temperature +23°C ±5°C and target emissivity of 1.0

MECHANICAL

Dimensions
Ø 45 mm x length 200 mm
Mounting thread
M44 x 1.5 mm, length 25 mm
Weight
0.5 kg
Construction
Anodised aluminium
Environmental rating
IP65 (NEMA-4)

Items included as standard
Sensor with factory-fitted cable, two mounting nuts, operator's guide

MODEL NUMBERS

PS-xx-x-x-xx-xx

Calibration certificate
NC = Not included
CC = Included

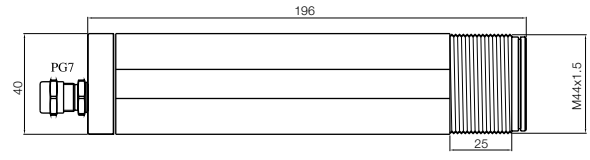
Connection cable length
2M = 2 metres
8M = 8 metres

Laser sighting
N = None
L = Built in through-lens laser sighting

Spectral response, temperature range and field of view*
E1-1 = 0.9 µm, 600 to 1600 °C, spot size 6 mm @ 500 mm
E1-2 = 0.9 µm, 600 to 1600 °C, spot size 16 mm @ 1 m
E2-1 = 1.6 µm, 300 to 1600 °C, spot size 6 mm @ 500 mm
E2-2 = 1.6 µm, 300 to 1600 °C, spot size 3 mm @ 300 mm
E2-3 = 1.6 µm, 300 to 1600 °C, spot size 2 mm @ 100 mm
E5-1 = 5.1 µm, 150 to 1300 °C, spot size 17 mm @ 550 mm
E5-2 = 5.1 µm, 800 to 2000 °C, spot size 6.5 mm @ 300 mm
E8-1 = 8-14 µm, -25 to 1000 °C, spot size 21 mm @ 600 mm
E8-2 = 8-14 µm, 0 to 800 °C, spot size 80 mm @ 1 m
E8-3 = 8-14 µm, 0 to 400 °C, spot size 10 mm @ 65 mm

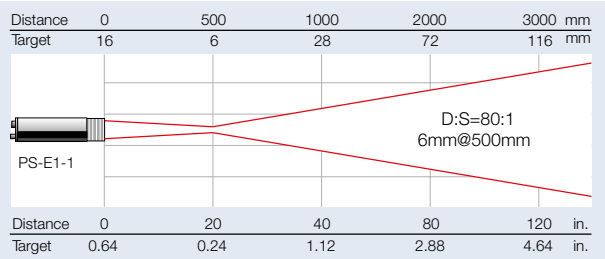
* Multiply the measured spot size by 1.2 when optional laser sighting is included.

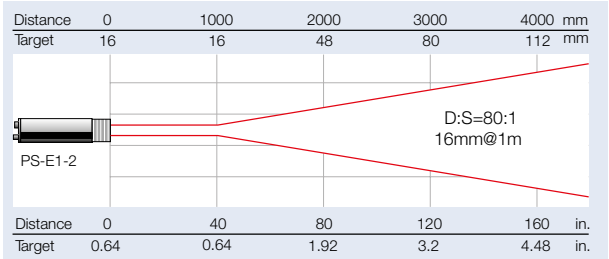
DIMENSIONS (mm)

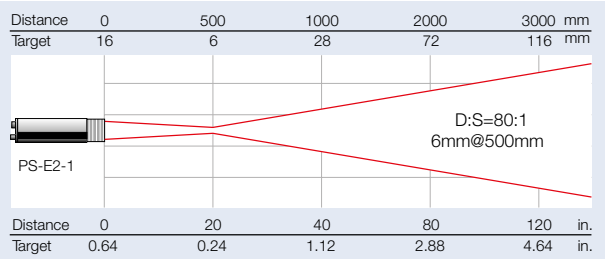


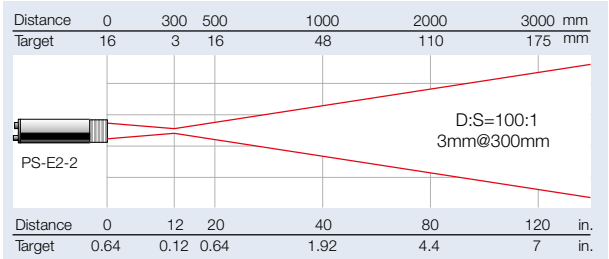
CALEX ELECTRONICS LIMITED

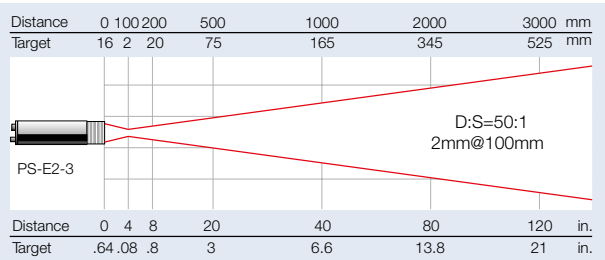
DIAMETER OF TARGET SPOT MEASURED VERSUS DISTANCE FROM SENSING HEAD

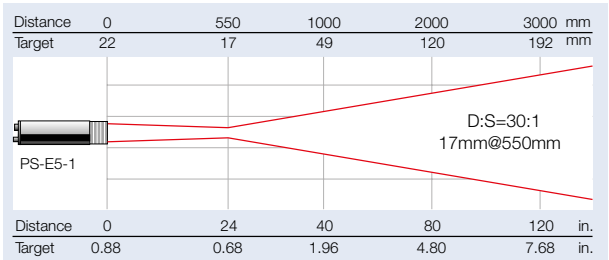


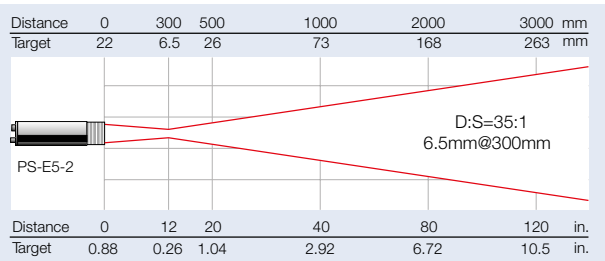


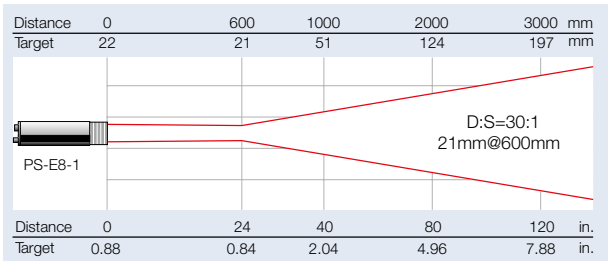


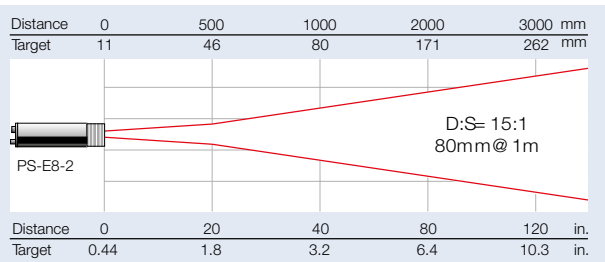


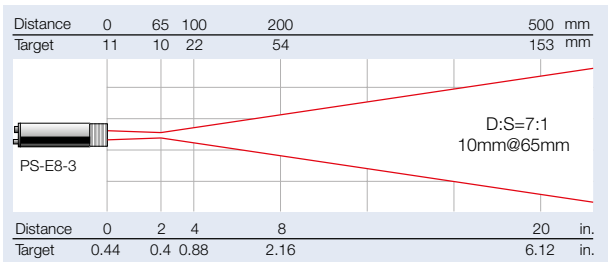












* Measured spot diameters are calculated at 95% energy

ACCESSORIES

PSABS Mounting bracket, 2-axis rotation
PSFBS Mounting bracket, 1-axis rotation

PSAP1 Air purge collar with M44 x 1.5 mm male thread
PSAP2 Air purge collar without mounting thread
PSAP3 Air purge collar with 1" BSPP female thread
PSAP4 Air purge collar with 1 1/2" BSPP female thread

PSACS Air cooling system with air purge collar
PSWCS Water cooling system, stainless steel
PSCSF DN100 flange for PSWCS
PSCSFW DN100 1 1/2" adapter flange for PSWCS, M44x1.5 mm thread, with window holder
PSWBK7 BK7 glass window (35x2 mm) for PSCSFW
PSWSAPH Sapphire window (35x2 mm) for PSCSFW
PSWZNSE Zinc selenide window (35x2 mm) for PSCSFW

Flanges, stainless steel AISI 304:
PSF1 127 mm diameter, 1 1/2" BSPP male to 3/4" BSPP female, ANSI 150
PSF2 157 mm diameter, 1 1/2" BSPP female through hole
PSF3 157 mm diameter, 1 1/2" BSPP male to 1 1/4" BSPP female
PSF4 127 mm diameter, 1 1/2" BSPP male to 3/4" BSPP female

Sight tubes, stainless steel AISI 304:
PST1 1 1/2" BSPP male, length 450 mm
PST2 1 1/2" BSPP male, length 600 mm
PST3 ¾" BSPP male, length 300 mm
PST4 ¾" BSPP male, length 150 mm
PST5 1 1/4" BSPP male, length 400 mm

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Specifications subject to change without notice