PSC-SSS-LASER-G5 SERIES

PROCESS SENSORS CORPORATION a KPM brand

NON-CONTACT INFRARED PYROMETER WITH DUAL LASER AIMING

OVERVIEW

The infrared pyrometer PSC-SSS-Laser-G5 has been specifically designed for accurate non-contact temperature measurement of glass. The PSC-SSS-Laser-G5 are two piece pyrometer systems designed for non-contact temperature measurement of glass surface, ceramics and views through sapphire windows, with temperature ranges from 100°C to 1650°C and a choice of fixed focus lenses.

The rugged, compact Stainless Steel Sensor head offers dual laser sighting for precision aiming with fast response times. The electronics box features an on-board LED temperature display / menu that provides for real time glass temperature and user selectable settings of pyrometer parameters.

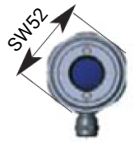
The electronics box provides multiple analog (0/4 – 20 mA, 0 - 5 / 0 - 10 Vdc, thermocouple type K or J outputs and optional digital outputs: USB, RS485, RS232, Modbus RTU, Ethernet IP, Ethernet TCIP or optically isolated relays. Associated protective cooling and air purging accessories are available for installation in harsh environments.

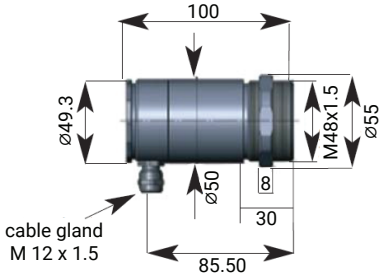
APPLICATIONS

- Ceramics, float glass, container glass, lamp production, automotive glass, and solar cells
- Views through sapphire windows and clean flames

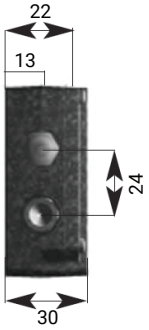
DIMENSIONS (IN MM)

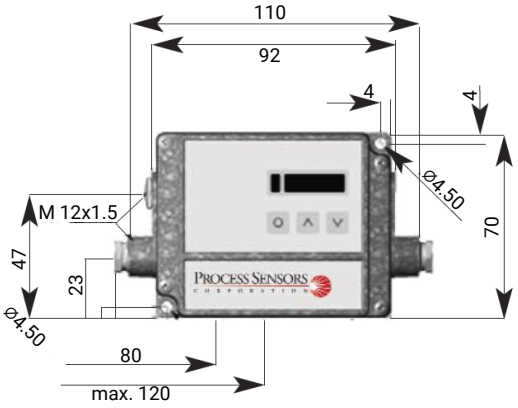
Sensing Head





Electronics





PSC-SSS-LASER-G5 FEATURES

- Temperature ranges from 100°C to 1650°C (212°F to 3002°F)
- FOV 70:1 and 45:1
- Fixed focus optics with selectable focus ranges
- Innovative dual laser sighting for precision aiming
- Stainless steel sensing head
- Suitable for ambient temperatures of up to 85°C (185°F) without additional cooling
- Cooling and protection accessories for harsh, rugged environments

PSC-SSS-LASER-G5 SERIES

GENERAL SPECIFICATIONS

Environmental Rating	IP65 (NEMA-4)
Ambient Temperature	Sensing head: -20°C to 85°C (-4°F to 185°F); 50°C (122 °F) with laser ON Electronics: 0°C to 65°C (32°F to 149°F)
Storage Temperature	Both sensing head and electronics: -40°C to 85°C (-40°F to 185°F)
Storage	-20°C to 85°C (-4°F to 185°F)
Relative Humidity	10 to 95% non-condensing
Vibration (sensor)	IEC 68-2-6: 3 G, 11 – 200 Hz, any axis
Shock (sensor)	IEC 68-2—27: 50 G, 11 ms, any axis
Weight	Sensing head: 600 g / electronics 420 g

ELECTRICAL SPECIFICATIONS

Outputs / Analog:	Channel 1: 0/4 – 20 mA, 0- 5/10 V, thermocouple J, K Channel 2: Sensing head temperature, alarm output Optional: Relay: 2 x 60 V DC/42 V ACeff: 0.4 A; optically isolated
Outputs / Digital (optional)	USB, RS485, RS232, Modbus RTU, Ethernet IP, Ethernet TCIP
Inputs	Programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger (reset of hold functions)
Cable Length	3 m (standard), 8 m, 15 m
Current Draw	Max. 160 mA
Power Supply	8 – 36 V DC
Laser 635 nm	1mW, ON/OFF via electronic box or software

MEASUREMENT SPECIFICATIONS

Temperature Range (Scalable via Programming Keys or Software)	100°C to 1200°C (212°F to 2192°F) G5L 250°C to 1550°C (482°F to 2822 °F) G5H
Spectral Range	5.2 µm
Optical Resolution	45:1 (G5L) 70:1 (G5H)
Selectable Focus (G5H) (for G5L-Models, See Optical Charts)	CF1 1 mm @ 70 mm CF2 2.2 mm @ 150mm CF3 2.9 mm @ 200 mm CF4 6/5 mm @ 450 mm SF 17 mm @ 1200 mm
System Accuracy (at Ambient Temperature 23ºC ± 5ºC)	±1%
Temperature Resolution (NETD)	0.1ºC / 1ºC
Response Time (90% signal)	80 ms (G5H) / 120 ms (G5L)
Emissivity / Gain (Adjustable Via Programming Keys or Software)	0.100 – 1.100
Signal Processing	Peak hold, valley hold, average, extended hold function with threshold and hysteresis

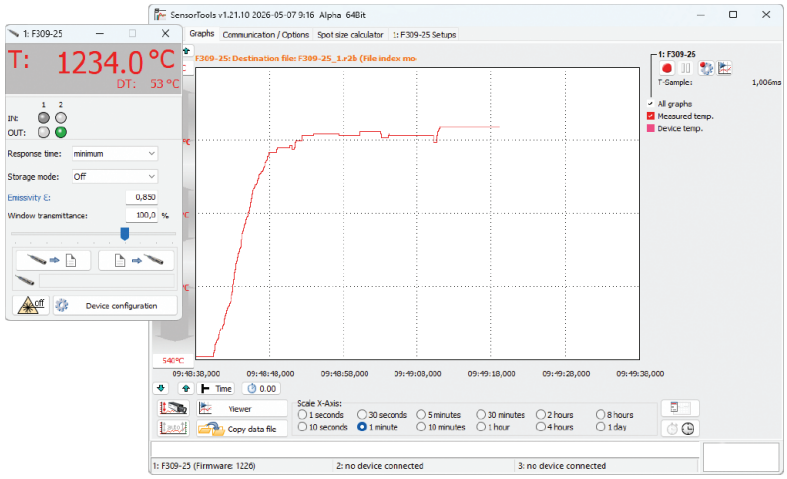
OPTICS DATA

Distance to Spot Size	PSC-SSS-Laser-G5L 45:1	PSC-SSS-Laser-G5H 70:1
SF	1200 mm for 27 mm spot	1200 mm for 17mm
CF1	70 mm for 1.6 mm	70 mm for 1 mm
CF2	150 mm for 3.4 mm	150 mm for 2.2 mm
CF3	200 mm for 4.5 mm	200 mm for 2.9 mm
CF4	450 mm for 10 mm	450 mm for 6.5 mm

SF= Standard Focus
CF= Close Focus

PSCCONNECT SOFTWARE

- Software for easy sensor setup and remote controlling, supports multi-tasking
- Graphic display for temperature trends and automatic data logging for analysis and documentation with 1 ms response time
- Adjustment of signal processing functions and programming of outputs and functional inputs of the sensor
- Automatic emissivity adjustment
- The software, PSCconnect, allows to customize the sensor to application needs of the user



ACCESSORIES

Mounting bracket, adjustable in two axes

Water cooling with air purge for sensing head

Mounting device or cooling housing

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