PROCESS SENSORS CORPORATION

PSC SSS-Hot

Precise non-contact temperature measurement from -40°C to 975°C under rough environmental conditions

FEATURES

- New innovative infrared thermometer for hot ambient temperatures up to 250°C (482°F) without the need for cooling
- Applications in dryers, ovens, heat treatment lines, metal and glass industry, paper, plastic, textile manufacturing and semiconductor processsing . Temperature range of -40°C to 975°C (-40°F to 1787°F) with a response time from 100 ms.
- Choice of Optics: 10:1 or 2:1
- Electronics box for programming and temperature display
- Analog outputs 0/4-20mA, 0-5V/10V, thermocouple type K or J and integrated digital interfaces (optional) Profibus DP, USB, RS232, RS485

General specifications	
Environmental rating	IP 65 (NEMA-4)
Ambient temperature	sensing head: -20 - 250°C electronics: 0 - 85°C
Storage temperature	sensing head: -40 - 250°C electronics: -40 - 85°C
Relative humidity	10 - 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 40 g (without massive housing) 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 (-40 - 250°C as 0 - 5 V or 0 - 10 V), alarm output
Alarm output	Open - collector (24V/50mA)
Optional	relay: 2 x 60 V DC/42 V AC_{eff}; 0.4 A; optically isolated
Outputs/digital (optional)	USB, RS232, RS485, CAN, Profibus DP
Output impedances	mA max. 500 Ω (with 5 - 36 V DC) mV min. 100 kΩ load impedance thermocouple 20 Ω
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. 100 mA
Power supply	8 - 36 V DC

Measurement specifications	
Temperature range (scalable via programming keys or software)	-40° to 1787°F (-40° to 975°C)
Spectral range	8 - 14 µm
Optical resolution	10:1, 2:1
System accuracy[2] (at ambient temperature 23 ±5°C)	±1 % or ±1.5°C[1]
Repeatability[2] (at ambient temperature 23 ±5°C)	±0.5 % or ±0.5°C[1]
Temperature resolution (NETD)	0.25°C
Response time	100 ms
Emissivity/Gain (adjustable via programming keys or software)	0.100 - 1.100
Transmissivity/Gain (adjustable via programming keys or software)	0.100 - 1.100
Signal processing (parameter adjustable via programming keys or software, respectively)	peak hold, valley hold, average; extended hold function with threshold and hysteresis

[1] whichever is greater
[2] at object temberpatures ≥ 20°C

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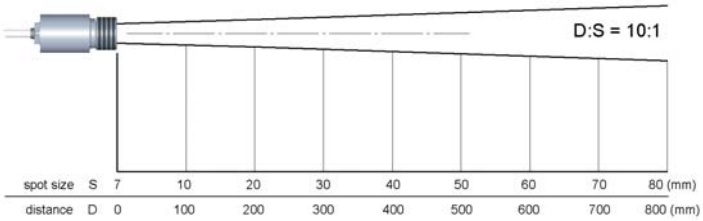
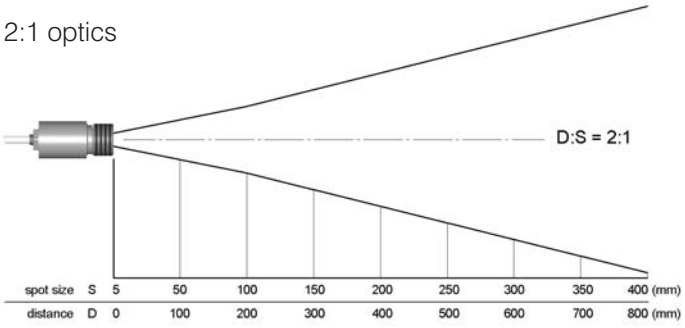
Optical specifications

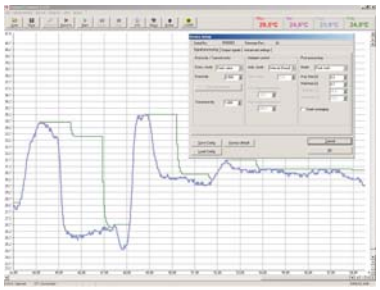
10:1 optics



2:1 optics



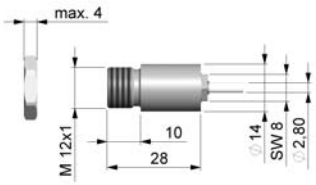
PSCConnect Software



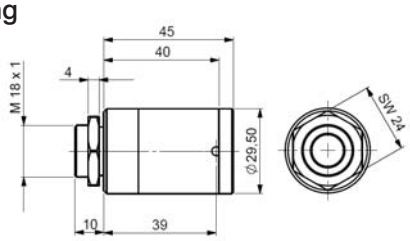
- Software for easy sensor setup and remote controlling, supports multi tasking
- Graphic display for temperature trends and automatic data logging for analysis and documentation with 1 ms response time
- Adjustment of signal processing functions and programming of outputs and functional inputs of the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

Dimensions

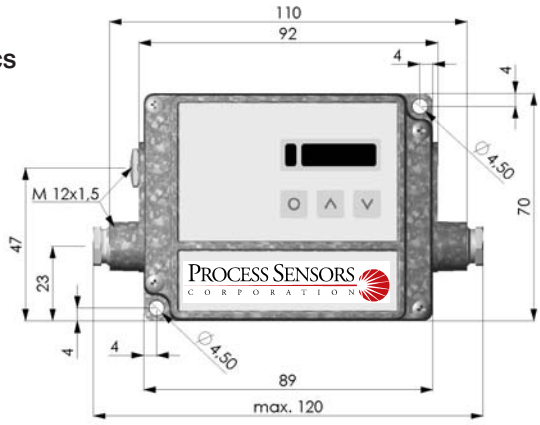
Sensing head

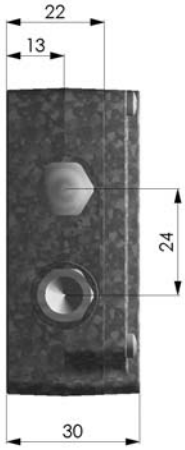


Massive housing



Electronics





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