

PSC-SSS-Laser-3M Series

Non-contact temperature measurement with precise aiming from 50°C to 600°C



FEATURES

- Accurate temperature measurements of metals, secondary metal processing and ceramic materials
- Double laser aiming marks real spot location at any distance
- Optical resolution up to 100:1 with selectable focus
- Temperature ranges from 50°C to 600°C, measuring spots up from 0.7 mm and response times up from 1ms
- Usable up to 85°C ambient temperature without cooling
- Short measuring wave length of 2.3 μm reduces error of temperature readings on surfaces with low or unknown emissivity

| General specifications | |
|----------------------------|--|
| Environmental rating | IP 65 (NEMA-4) |
| Ambient temperature | sensing head: -40 - 85°C electronics: 0 - 85°C |
| Storage temperature | sensing head: -40 - 125°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 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 (-40 - 85°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, Ethernet |
| Output impedances | mA max. 500 Ω (with 5 - 36 V DC) mV min. 100 k Ω 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. 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) ¹⁾ | 50 - 375°C (3ML) 100 - 600°C (3MH) |
| Spectral range | 2.3 μm |
| Optical resolution (90% Energy) | 40:1 (3ML) 100:1 (3MH) |
| System accuracy ²⁾ (at ambient temperature 23 \pm 5°C) | \pm (0.3% of reading + 2°C) |
| Repeatability (at ambient temperature 23 \pm 5°C) | \pm (0.1% of reading + 1°C) |
| Temperature resolution (digital) | 0.1 K |
| Exposure time (90% signal) ³⁾ | 1 ms |
| Emissivity/Gain (adjustable via programming keys or software) | 0.100 - 1.100 |
| Transmissivity/Gain (adjustable via programming keys or software) | 0.100 - 1.000 |
| Signal processing (parameter adjustable via programming keys or software, respectively) | peak hold, valley hold, average; extended hold function with threshold and hysteresis |

¹⁾ T_{object} > T_{sensing head} + 25°C

²⁾ E = 1, response time 1s

³⁾ with dynamic adaptation at low signal levels

PSC-SSS-Laser-3M Series

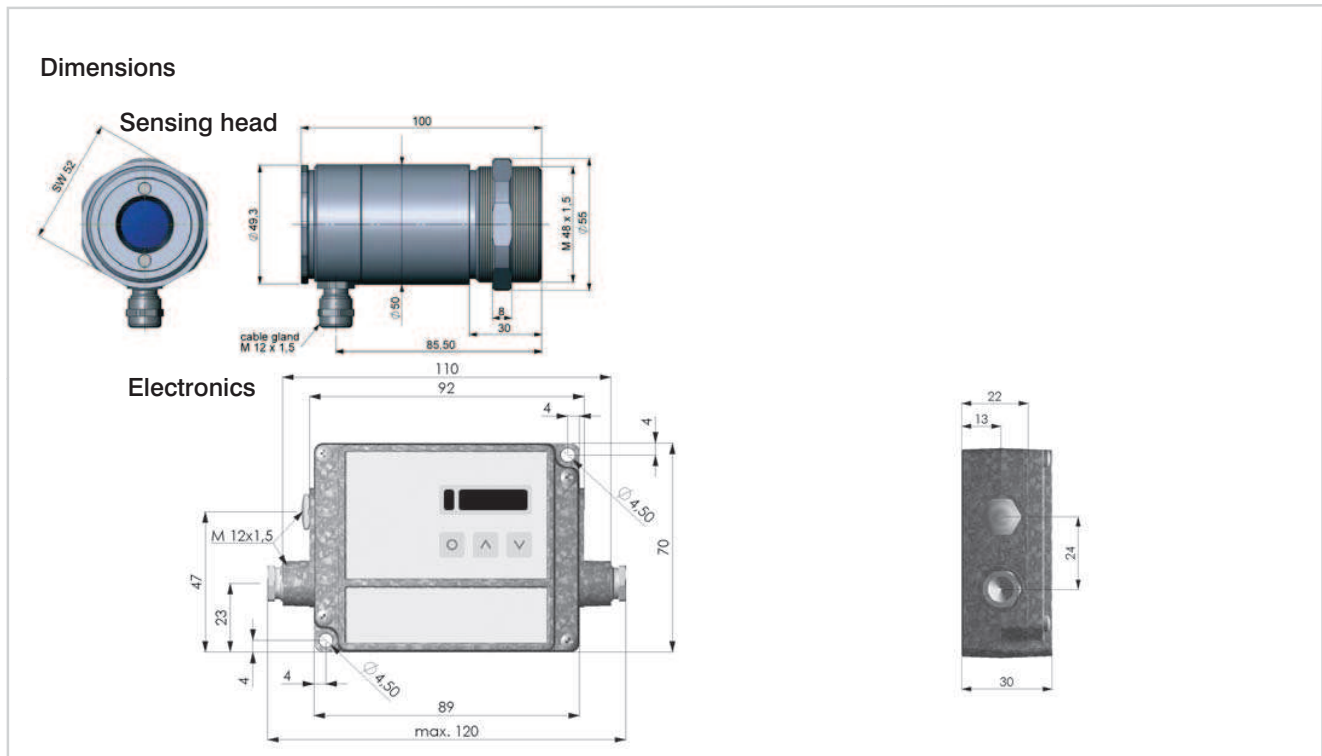
Optical specifications

PSC-SSSL-3ML

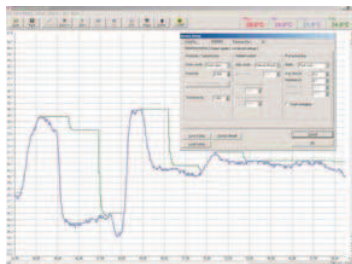
| | |
|-----|-------------------|
| FF | 60 mm @ 3600 mm |
| SF | 18.3 mm @ 1100 mm |
| CF1 | 1.2 mm @ 70 mm |
| CF2 | 2.5 mm @ 150 mm |
| CF3 | 3.3 mm @ 200 mm |
| CF4 | 7.5 mm @ 450 mm |

PSC-SSSL-3MH

| | |
|-----|-----------------|
| FF | 36 mm @ 3600 mm |
| SF | 11 mm @ 1100 mm |
| CF1 | 0.7 mm @ 70 mm |
| CF2 | 1.5 mm @ 150 mm |
| CF3 | 2 mm @ 200 mm |
| CF4 | 4.5 mm @ 450 mm |



PSC Spot 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
- Software allows to customize the sensor to application needs of the user