

optris® CSmicro 2W hs LT

Infrared thermometer for measurement of smallest temperature differences of 0.025°C



FEATURES

- New benchmark in low noise IR-thermometry
- Suitable for relative measurement of smallest temperature differences of 0.025°C
- Touches the physical limits ensuring low ambient temperature drift
- Green LED alarm indication, aiming support, self diagnostic or temperature code indication
- Complete solid state design without any moving parts
- Assures usability of a new class of ultra low noise level IR thermometers
- Stainless steel housing with compact dimensions

General specifications

| | |
|----------------------|--------------------------------------|
| Environmental rating | IP 65 (NEMA-4) |
| Ambient temperature | -20°C to 75°C ¹⁾ |
| Storage temperature | -40°C to 85°C |
| Relative humidity | 10 - 95%, non condensing |
| Vibration | IEC 68-2-6: 3 G, 11-200 Hz, any axis |
| Shock | IEC 68-2-27: 50 G, 11 ms, any axis |
| Weight | 200 g |

Electrical specifications

| | |
|----------------|--|
| Output/analog | 4-20 mA |
| Output/alarm | 0-30 V/500 mA (open collector) |
| Output/digital | uni-/bidirectional, 9.6 kBaud, 0/3V digital level, USB (option) |
| Input | Programmable functional input for triggered signal output or peak-hold function |
| Loop impedance | 1000 Ω ²⁾ |
| LED functions | alarm indication, automatic aiming support, self diagnostic, temperature indication (via temp. code) |
| Cable length | 1 m standard, 3.5 m optional (0.5 m between sensing head and electronics) |
| Power supply | 5-30 V DC |

¹⁾ for Vcc (supply voltage) 5-12 VDC/ at Vcc > 12 VDC the max. ambient temperature of the electronics is 65 °C

²⁾ in dependence on supply voltage

Measurement specifications

| | |
|---|---|
| Temperature range | -20°C to 150°C |
| Spectral range | 8 - 14 μm |
| Optical resolution (90 % energy) | 15:1 |
| CF-Optics (optional) | 0.8 mm @ 10 mm |
| System accuracy | ± 1.0% or ± 1.0°C ^{1), 2), 3)} |
| Repeatability | ± 0.3% or ± 0.3°C ^{1), 2), 3)} |
| Temperature coefficient | ± 0.05 K/K oder ± 0.05 % K ⁴⁾ |
| Temperature resolution | 0.025 K ³⁾ (AVG > 0,2 s) |
| Response time | 150 ms (adjustable up to 999 s via optional programming device) |
| Emissivity/Amplification (adjustable via software) | 0.100 - 1.100 |
| Transmissivity (adjustable via software) | 0.100 - 1.100 |
| Signal processing (parameter adjustable only via optional software) | peak hold, valley hold, average; extended hold function with threshold and hysteresis |
| Dimensions of electronics | Length: 35 mm Diameter: 12 mm |
| Software | optris Compact Connect |

¹⁾ whichever is greater

²⁾ at ambient temperature 23 ± 5°C

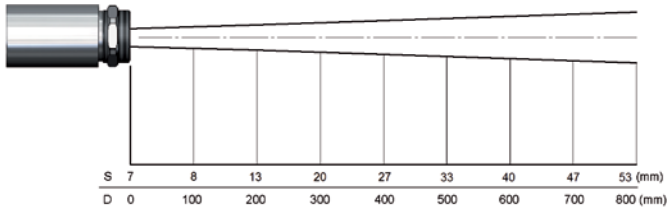
³⁾ for temperatures > 20°C

⁴⁾ for ambient temperatures <18°C and >28°C; whichever is greater

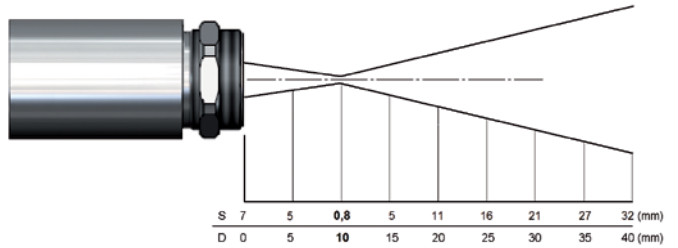
optris® CSmicro 2W hs LT

Optical Specifications

Optics, D:S = 15:1

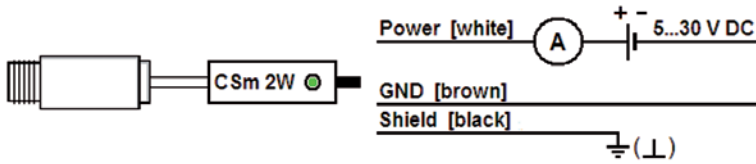


Optics with CF-lens, D:S = 15:1

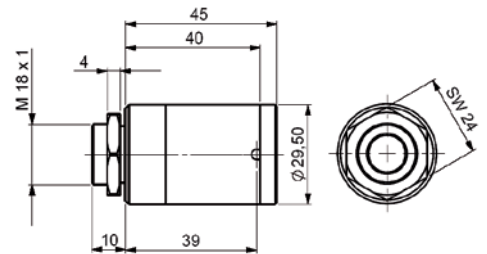


Dimensions/Interfaces

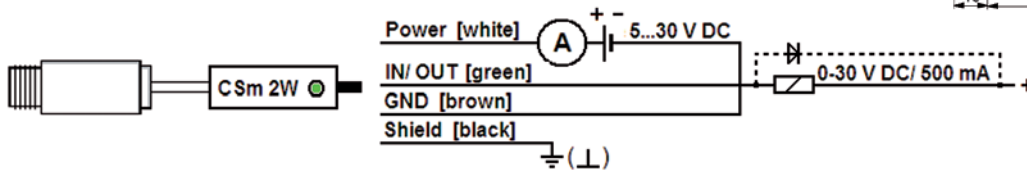
Analog Mode (Two wire connection)



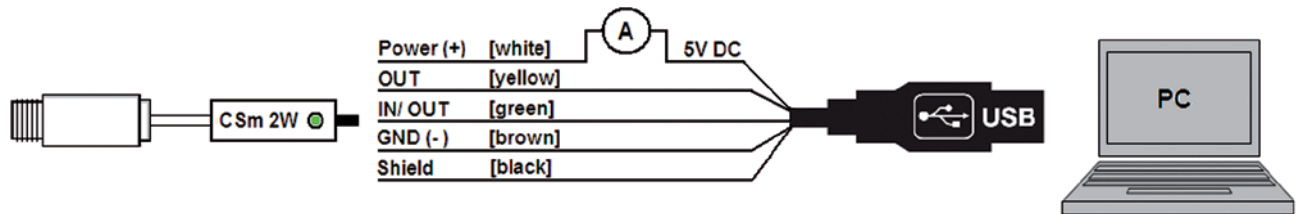
Dimensions optris CSmicro 2W hs LT



Connection analog with open collector alarm output

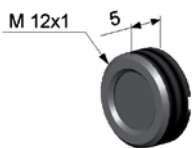


Combined Mode (analog and digital)

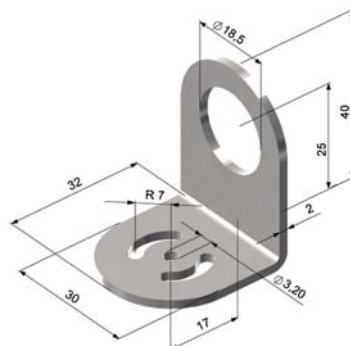


Dimensions/Accessories (examples)

CF-lens with external thread (ACCTCFE)



Mounting bracket, adjustable in one axis (ACCTFBMH)



Air purge collar (ACCTAPMH)

