

optris® CS

Simple access into multiple sensor installations:
Smart, safe and easy for -40 to 1030°C



FEATURES

- Temperature range: -40 to 1030°C
- Response time: 25 ms
- Optical Resolution 15:1
- Green LED alarm indication, aiming support, selfdiagnostic or temperature code indication
- Usable up to 80°C ambient temperature without cooling
- Scalable analog output: 0 - 10 V or 0 - 5 V + alarm output or digital output
- USB programming interface, direct serial 9.6 kBaud interface
- Power supply: 5 - 30 VDC

General Specifications

Environmental rating	IP63
Ambient temperature	-20 - 80°C
Storage temperature	-20 - 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	58 g

Electrical Specifications

Output / analog	0 - 5 V or 0 - 10 V free scalable or alarm with adjustable voltage levels
Output / alarm 3-state alarm output	0 - 30 V / 50 mA (open collector) adjustable threshold values and voltage level for: no alarm, pre-alarm, alarm
Output / digital	uni, bidirectional, 9.6 kBaud, 0/3 V digital level / USB optional
Input (0 - 10 V)	programmable functional input for external emissivity setting/ ambient temperature adjustment, triggered signal output or peak-hold function
LED functions	alarm indication, automatic aiming support, self diagnostic, temperature indication (via temp. code)
Cable length	1 m (standard), 3 m, 8 m, 15 m
Power supply	5 - 30 VDC
Current draw	4 mA (without LED) / 10 mA

Measurement Specifications

Temperature range (scalable via software)	-40 - 1030°C
Spectral range	8 - 14 μm
Optical resolution (90% energy)	15:1
CF-lens (optional)	0.8 mm @ 10 mm
System accuracy (at ambient temperature 23 ±5°C)	±1.5% or ±1.5°C ¹⁾
Repeatability (at ambient temperature 23 ±5°C)	±0.75% or ±0.75°C ¹⁾
Temperature coefficient NETD	±0.05 K/K or ±0.05 %/K ³⁾ 0.1 K ²⁾
Response time (90%)	25 ms (adjustable up to 999 s)
Emissivity/Gain (adjustable via 0 - 10 V DC input or software)	0.100 - 1.100
Transmissivity (adjustable via software)	0.100 - 1.100
Signal processing (parameter adjustable via software)	peak hold, valley hold, average; extended hold function with threshold and hysteresis
Software	optris Compact Connect

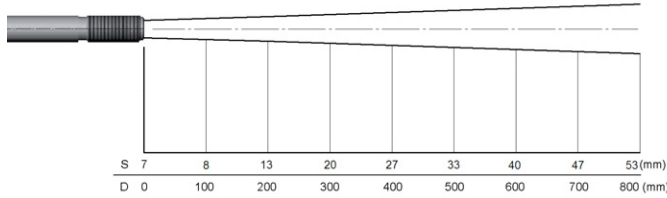
1) object temperature > 0°C; whichever is greater

2) at time constant 100 ms and T_{obj} 25°C

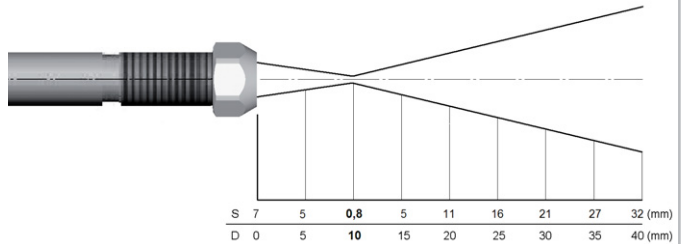
3) for ambient temperatures <18°C and >28°C; whichever is greater

Optical Specifications

15:1 optics



15:1 optics with CF-lens



Connections

Connection analog with open collector alarm output

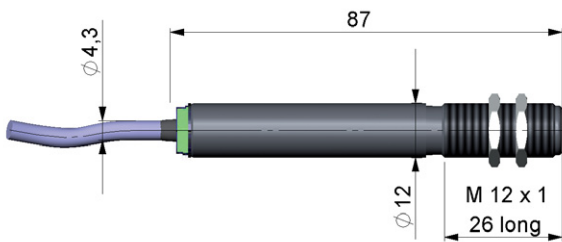


Connection digital with USB adapter cable

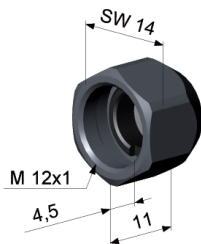


Dimensions / Accessories

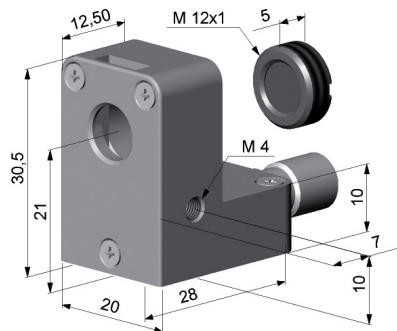
Side view with clamps



CF-lens



Air purge collar, optional with integrated CF-lens



Mounting bracket, fixed

