

# More Precision.



## optris® CSm hs

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
- 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

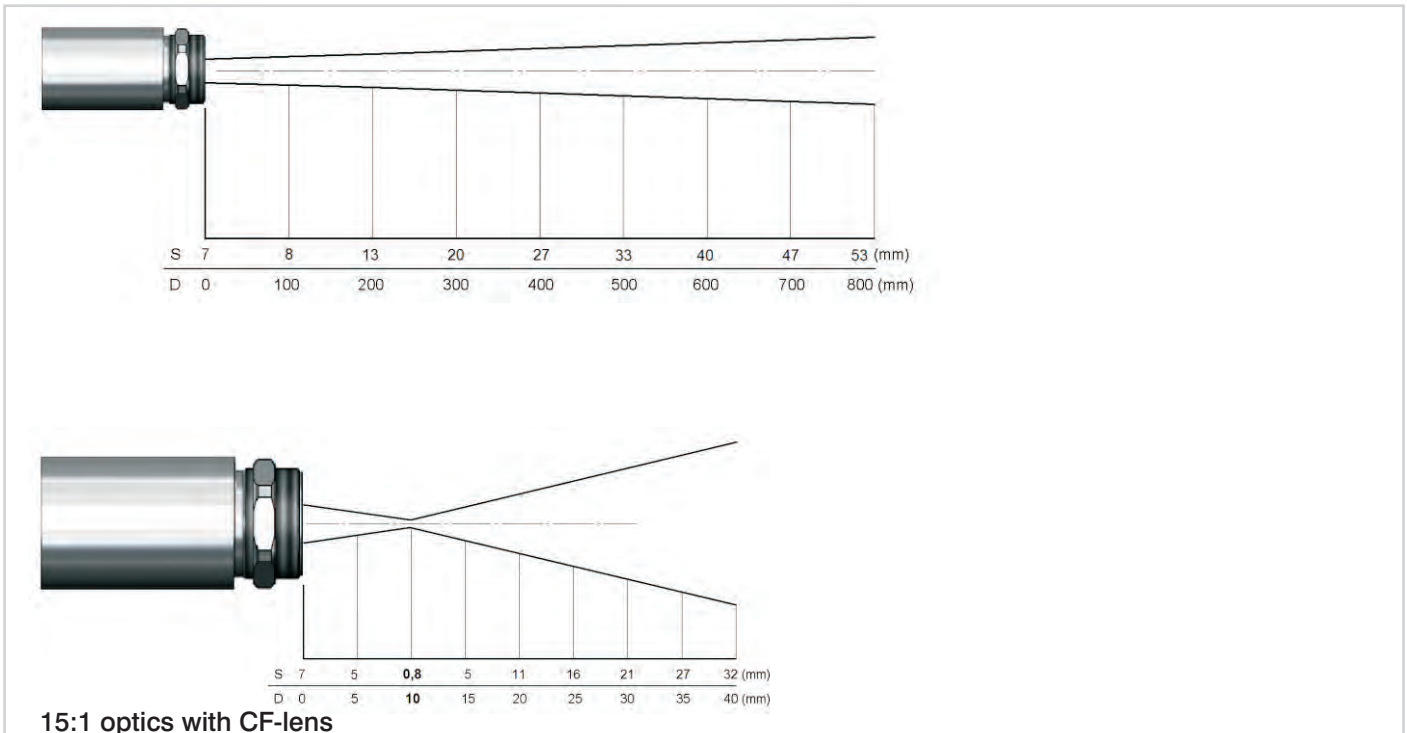
General specifications	
Environmental rating	IP 65 (NEMA-4)
Ambient temperature	-20°C - 75°C
Storage temperature	-40 - 85°C
Relative humidity	10 - 95%, non condensing
Vibration	IEC 68-2-6: 3 G, 11 - 200 Hz, any axis
Shock	IEC 68-2-27: 50 G, 11 ms, any axis
Weight	200 g
Electrical specifications	
Output /analog	4 - 20 mA
Output / alarm	0 - 30 V / 500 mA (open collector)
Outputs/digital (optional)	USB
Loop impedance	max. 1000 Ω <sup>1)</sup>
Cable length	3.5 m (0.5 m between sensor head and electronics)
Power supply	5 - 30 V DC

<sup>1)</sup> in dependence on supply voltage

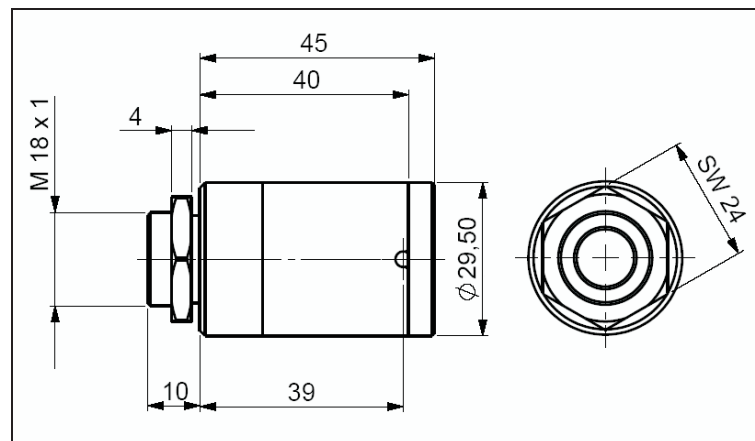
Measurement specifications	
Temperature range (scalable via software)	-20 - 150°C
Spectral range	8 - 14 μm
Optical resolution (90% energy)	15:1
CF-Optics (optional)	0.8 mm @ 10 mm
System accuracy (at ambient temperature 23 ±5°C and object temperature > 20 °C)	±1% or ±1 °C <sup>1)</sup>
Repeatability (at ambient temperature 23 ±5°C and object temperature > 20 °C)	±0.3% or ±0.3°C <sup>1)</sup>
Temperature resolution	0.025 K (for temperatures > 20°C, AVG > 0,2 s)
Response time (95%)	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

<sup>1)</sup> whichever is greater

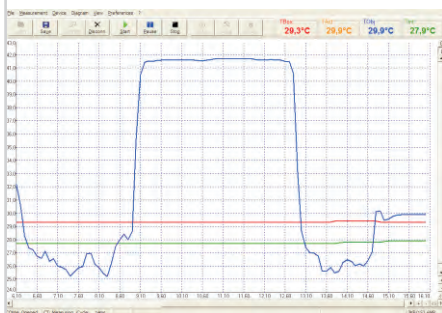
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## Dimensions



## CompactConnect 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 of the sensor
- Automatic emissivity adjustment
- The software CompactConnect allows to customize the sensor to application needs of the user