

**Infrared thermometer
for measurement of
smallest temperature
differences of 0.025 K**

Features:

- New benchmark in low noise infrared thermometry
- Suitable for relative measurement of smallest temperature differences of 0.025 K
- 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 infrared thermometers



General specifications

Environmental rating	IP 65 (NEMA-4)
Ambient temperature	-20 °C ... 75 °C
Storage temperature	-40 °C ... 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	350 g

Electrical Specifications

Output / analog	4 – 20 mA
Output / alarm	0 – 30 V / 500 mA (open collector)
Output / digital	USB (optional)
Loop impedance	Max. 1000 Ω ¹⁾
Cable length	8 m
Power supply	5 – 30 V DC

Measurement specifications

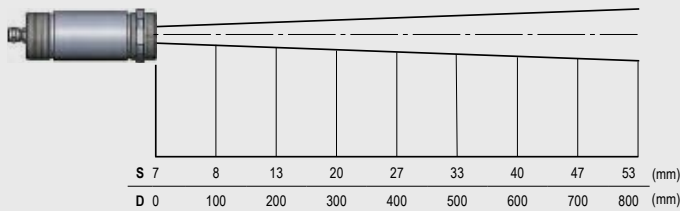
Temperature range (scalable via software)	-20 °C ... 150 °C
Spectral range	8 – 14 µm
Optical resolution (90 % energy)	15:1
CF-Optics (optional)	0.8 mm @ 10 mm
System accuracy (at ambient temperature 23 ± 5 °C and object temperature >20 °C)	±1 % or ±1 °C ²⁾
Repeatability (at ambient temperature 23 ± 5 °C and object temperature >20 °C)	±0.3 % or ±0.3 °C ²⁾
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
Software	optris® Compact Connect

¹⁾ In dependence on supply voltage

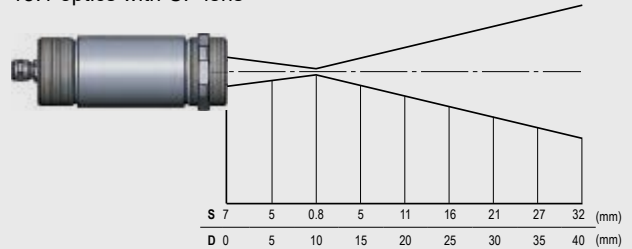
²⁾ Whichever is greater

Optical Specifications

15:1 optics

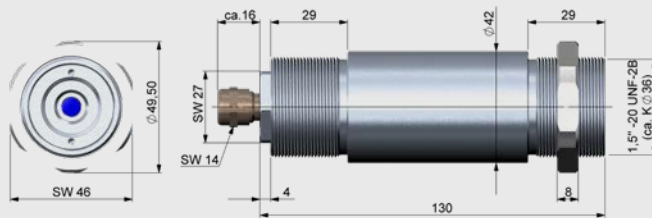


15:1 optics with CF-lens



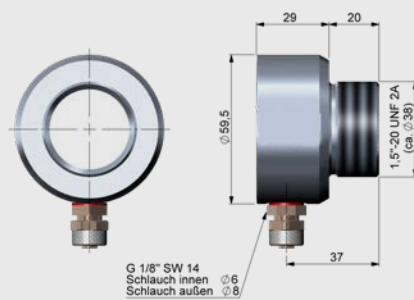
S= Spotsize / D= Distance

Dimensions

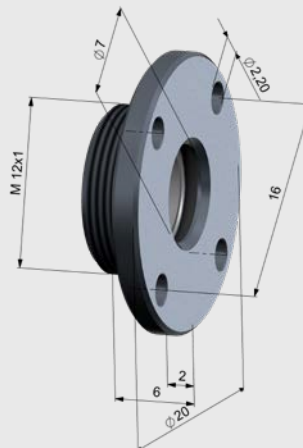


Accessories

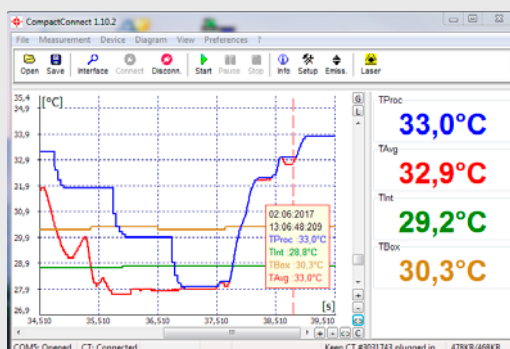
Air purge collar



CF-lens/Protective window



Compact Connect 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