

**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 (-4 °F ... 167 °F)
Storage temperature	-40 °C ... 85 °C (-40 °F ... 176 °F)
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	350 g (12.3 oz)

**Electrical Specifications**

Outputs / analog	0/4 – 20 mA
Output / alarm	0 – 30 V / 500 mA (open collector)
Outputs / digital	USB (optional)
Loop impedances	Max. 1000 Ω <sup>1)</sup>
Cable length	8 m (26.2 ft)
Power Supply	5 – 30 V DC

**Measurement specifications**

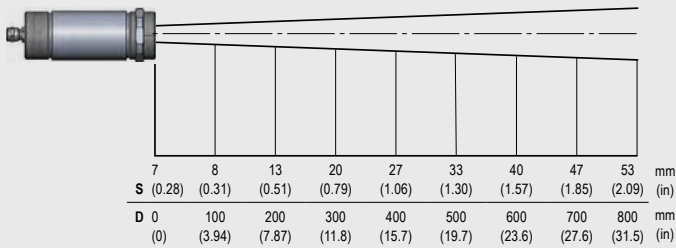
Temperature range (scalable via software)	-30 °C ... 150 °C (-22 °F ... 302 °F)
Spectral range	8 – 14 μm
Optical resolution (90 % energy)	15:1
CF-Optics (optional)	0.8 mm @ 10 mm (0.03 in @ 0.39 in)
System accuracy (at ambient temp. 23 ±5 °C) (23 ±41 °F)	±1 % or ±1 °C <sup>2)</sup> (±1 % or ±1.8 °F <sup>2)</sup> )
Repeatability (at ambient temp. 23 ±5 °C) (23 ±0.5 °F)	±0.3 % or ±0.3 °C <sup>2)</sup> (±0.3 % or ±0.6 °F <sup>1)</sup> )
Temperature resolution	0.025 K (for temperatures >20 °C [>68 °F], AVG >0.2 s)
Response time (95 %)	150 ms (adjustable up to 999 s via optional programming device)
Emissivity/ Gain (adjustable via programming keys or software)	0.100 – 1.100
Transmissivity/ Gain (adjustable via programming keys or software)	0.100 – 1.100
Signal processing (parameter adjustable via programming keys or software, respectively)	Peak hold, valley hold, average; extended hold function with threshold and hysteresis
Software	optris® Compact Connect

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

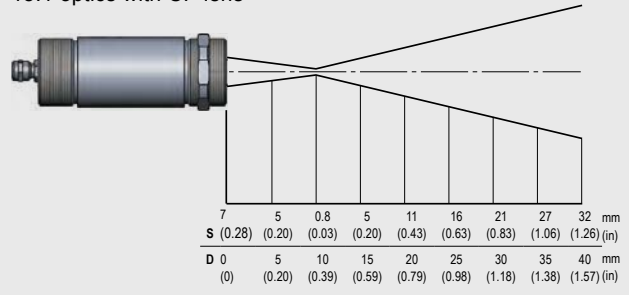
<sup>2)</sup> Whichever is greater

## Optical specifications

15:1 optics

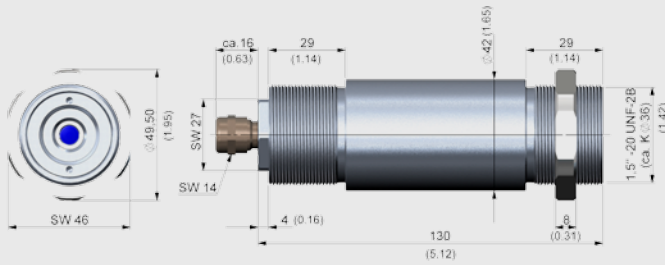


15:1 optics with CF-lens



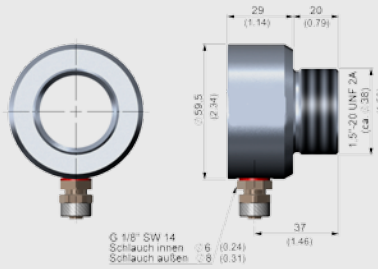
S= Spotsize / D= Distance

## Dimensions

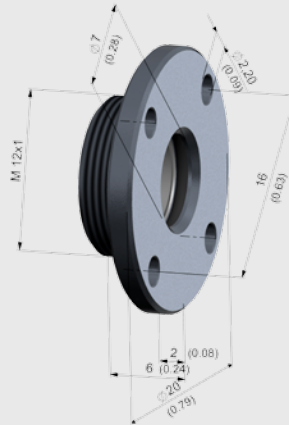


## Accessories

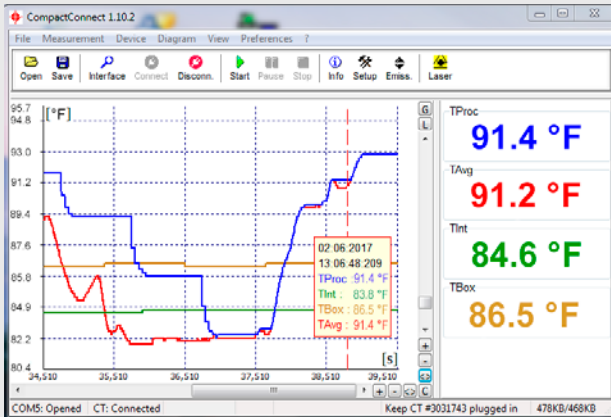
Air purge collar



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