

**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 ¹⁾ |
| Cable length | 8 m (26.2 ft) |
| Power Supply | 5 – 30 V DC |

Measurement specifications

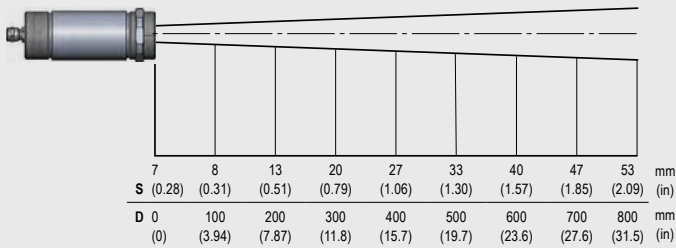
| | |
|---|---|
| Temperature range (scalable via software) | -30 °C ... 150 °C (-22 °F ... 302 °F) |
| Spectral range | 8 – 14 μm |
| Optical resolution (90 % energy) | 15:1 |
| CF-Optics (optional) | 0.8 mm @ 10 mm (0.03 in @ 0.39 in) |
| System accuracy (at ambient temp. 23 ±5 °C) (23 ±41 °F) | ±1 % or ±1 °C ²⁾ (±1 % or ±1.8 °F ²⁾) |
| Repeatability (at ambient temp. 23 ±5 °C) (23 ±0.5 °F) | ±0.3 % or ±0.3 °C ²⁾ (±0.3 % or ±0.6 °F ¹⁾) |
| 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 |

¹⁾ In dependence on supply voltage

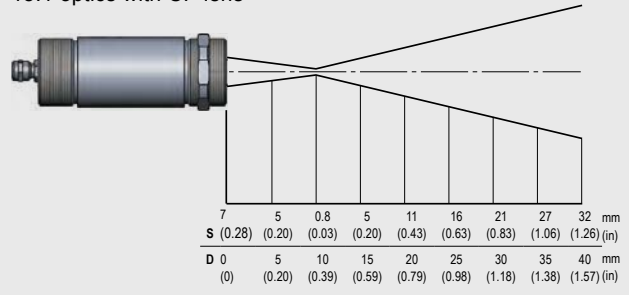
²⁾ Whichever is greater

Optical specifications

15:1 optics

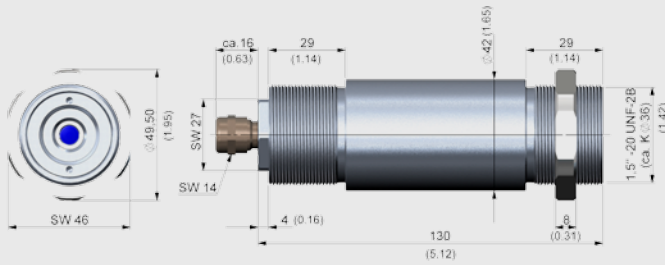


15:1 optics with CF-lens



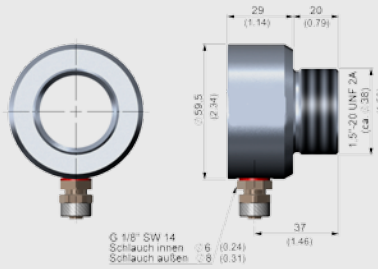
S= Spotsize / D= Distance

Dimensions

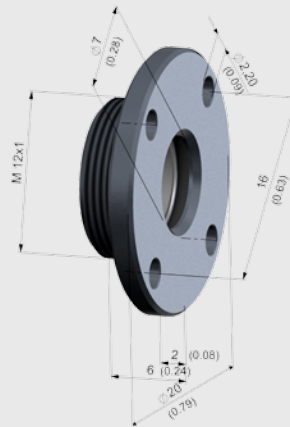


Accessories

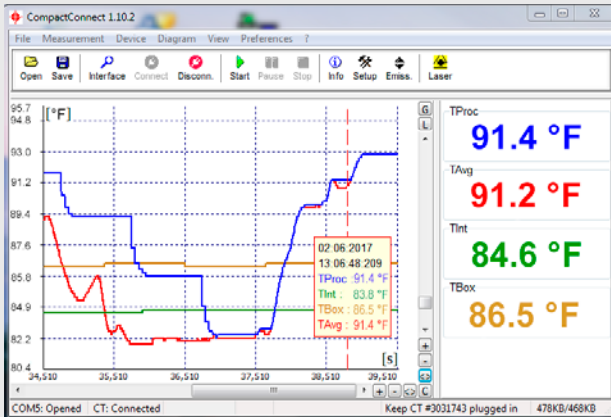
Air purge collar



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