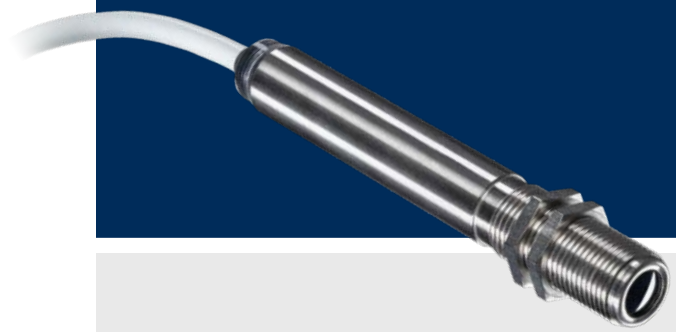
optris CS LT
TECHNICAL DATA

optris infrared measurements

The easy access to non-contact temperature measurement: Smart, safe and fast from -50 to 1030 °C



Features:

- Temperature range: –50 °C to 1030 °C
- Response time: 14 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
- Several outputs selectable: 0–10 V or 0–5 V free scalable or thermocouple type K, alarm output or digital output
- Easy adjustment via IRmobile Android App and Windows software (CompactConnect)
- Power supply: 5–30 V DC

General Specifications	
Environmental rating	IP 63
Ambient temperature	–20 °C ... 80 °C
Storage temperature	–40 °C ... 85 °C
Relative humidity	10 – 95 %, non condensing
Vibration	IEC 60068-2-6 (sinus shaped) IEC 60068-2-64 (broadband noise)
Shock	IEC 60068-2-27 (25G and 50G)
Weight	58 g

Electrical Specifications	
Output / analog	Selectable: 0 – 5 V or 0 – 10 V free scalable or thermocouple type K/ alarm with adjustable voltage levels
Output / alarm	0 – 30 V/ 50 mA (open collector)
3-state alarm output	Adjustable threshold values and voltage level for: no alarm, pre-alarm, alarm
Output / digital	Uni/ bidirectional, 9,6 / 115,2 kBaud (adjustable via software), 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 V DC
Current draw	4 mA (without LED) / 10 mA

Measurement Specifications	
Temperature range (scalable via software)	–50 °C ... 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 temp. 23 ±5 °C)	±1,5 % or ±1,5 °C[1]
Repeatability (at ambient temp. 23 ±5 °C)	±0,75 % or ±0,75 °C[1]
Temperature coefficient	±0,05 K/K or ±0,05 % / K[2]
NETD	50 mK[3]
Response time (90 %)	14 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 / App	optris CompactConnect / IRmobile

[1] Object temperature > 0°C ; whichever is greater

[2] For ambient temperatures <18°C and >28°C; whichever is greater

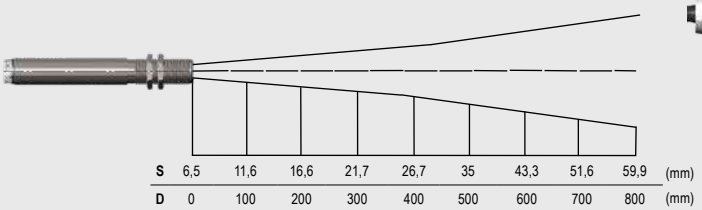
[3] At time constant 200 ms and T_{Obj} 200°C

Optris GmbH · Ferdinand-Buisson-Str. 14 · 13127 Berlin · Germany
Phone: +49 30 500 197-0 · Fax: +49 30 500 197-10 · E-mail: info@optris.global · www.optris.global

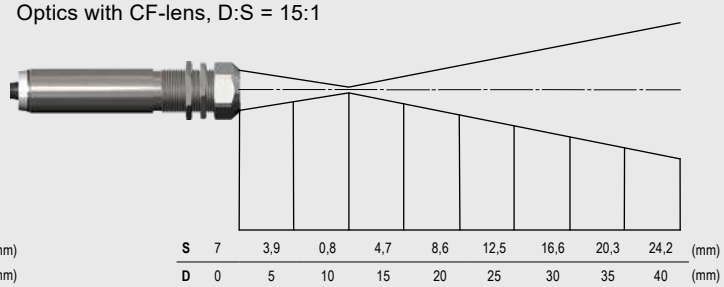
optris CS LT

Optical Specifications

Optics, D:S = 15:1



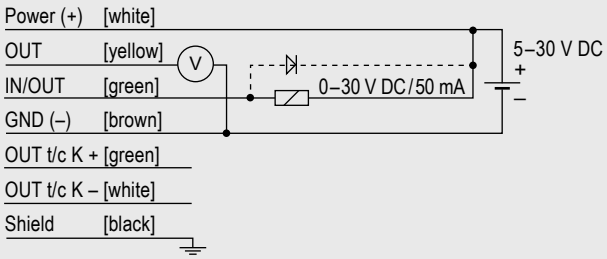
Optics with CF-lens, D:S = 15:1



Connections

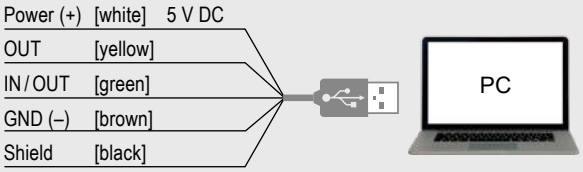
Connection analog with open collector alarm output (e.g. to actuate a relay)





Connection digital with the optional IR app connector





The CS LT can be connected to a smartphone via the IR app connector.



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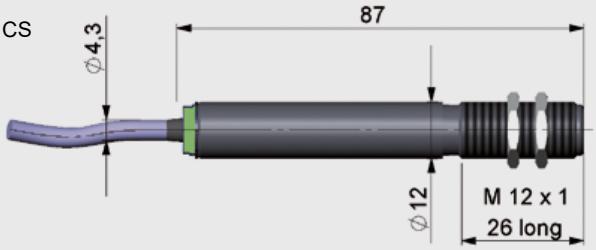
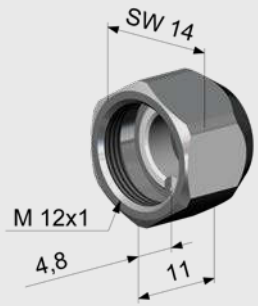
Dimensions / Accessories (examples)

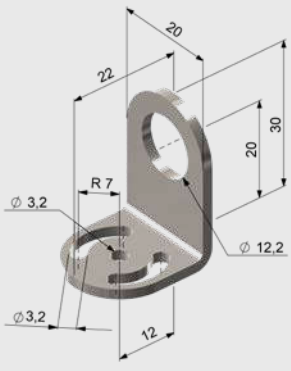
Dimensions optris CS



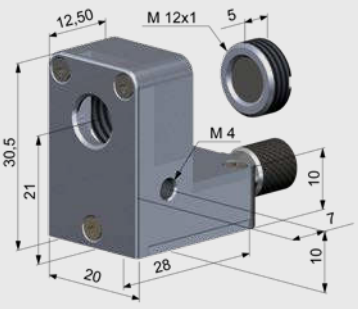
CF-lens (ACCTCF)



Mounting bracket,fixed (ACCTFB)



Air purge collar, optional with integrated CF-lens (ACCTAPLCF)



Specifications are subject to change without notice · CS LT DS-EN2020-09-A