

## optris® CSmed

Low-cost IR thermometer for medical devices  
Smart, safe and easy for -40 to 1030°C



### FEATURES

- Temperature range: -40°C to 1030°C
- Pluggable for simple changing to service purposes
- Response time: 25 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
- Scalable analog output:  
0-10 V or 0-5 V + alarmoutput or digital output
- USB programming interface, direct serial 9.6 kBaud interface
- Power supply: 5-30 V DC

#### General Specifications

Environmental rating	IP 63
Ambient temperature	-20°C to 80°C
Storage temperature	-20°C to 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	58 g

#### Electrical Specifications

Output/analog	0-5 V or 0-10 V free scalable or 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 kBaud, 0/3 V digital level/USB optional
Input (0-10V)	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	5 cmw ith ESTO - Binder 4 pol. miniature cable plug series 712
Power supply	5-30 V DC
Current draw	4 mA (ohne LED)/10 mA

#### Measurement Specifications

Temperature range (scalable via software)	-40°C to 1030°C
Spectral range	8 to 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% oder ± 1.5°C <sup>1)</sup>
Repeatability (at ambient temp. 23 ± 5°C)	± 0.75% oder ± 0.75°C <sup>1)</sup>
Temperature coefficient	± 0.05 K/K oder ± 0.05 % K <sup>3)</sup>
NETD	0.1 K <sup>2)</sup>
Response time (90%)	25 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	optris Compact Connect

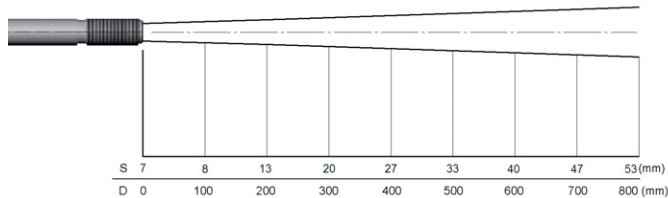
<sup>1)</sup> objecttemperature > 0°C; whichever is greater

<sup>2)</sup> at time constant 100 ms and  $T_{obj}$  25°C

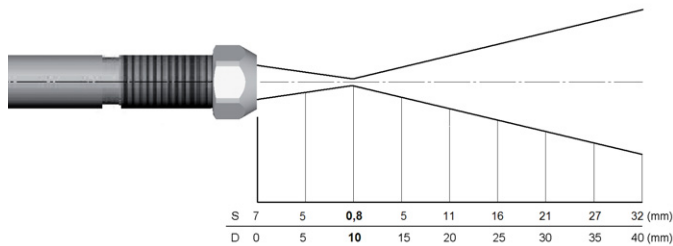
<sup>3)</sup> for ambient temperatures <18°C and >28°C; whichever is greater

## Optical Specifications

Optics, D:S = 15:1



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



## Connections

Connection analog with open collector alarm output

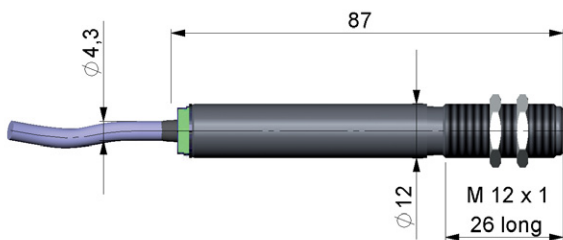


Connection digital with USB adapter cable

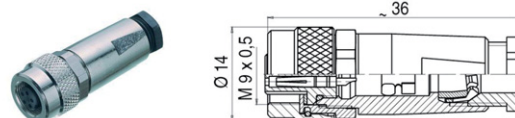


## Dimensions

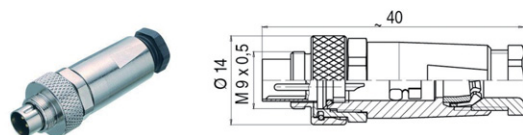
Dimensions optris CS



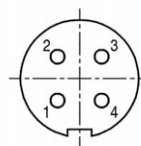
Cable box onto equipment side



Cable plug at CSmed (included in delivery)



ESTO-Binder  
Series 712 / 99-0409-1004



ESTO-Binder  
Series 712 / 99-0410-1004

pole chart contact side  
1 green 2 brown  
3 white 4 yellow