

More Precision.



optris® CSmicro 2W LT

low cost micro size two-wire infrared thermometers for -30 - 900°C



FEATURES

- Temperature range: -30°C to 900°C
- Size: M12x1, 28 mm long, stainless steel housing
- Scalable 4 - 20 mA analog output / additional simultaneous alarm output
- Rugged coated silicon optics
- Usable up to 120°C ambient temperature without cooling (sensing head)
- Cable built in electronics
- Short circuit and polarity reversal protection
- Adjustable signal processing
- Optional USB programming interface and software
- Wide power range: 5 - 30 V DC

General Specifications	
Environmental rating	IP65 (NEMA-4)
Ambient temperature	-20 - 120°C (sensing head)
	-20 - 75°C (electronics)
Storage temperature	-40 - 85°C (sensing head and electronics)
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	42 g
Electrical Specifications	
Output/analog	4 - 20 mA
Loop resistance	max. 1000 Ω ¹⁾
Output/alarm	0 - 30 V / 500 mA (open collector)
Output/digital	uni / bidirectional, 9,6 kBaud, 0/3 V digital level, USB optional
Cable length	1 m
	0.5 m between sensing head and electronics
	0.4 m between electronics and terminal
Power supply	5 - 30 V DC

¹⁾ in dependence on supply voltage

Measurement Specifications	
Temperature range (scalable via software)	-30 - 900°C
Spectral range	8 - 14 μm
Optical resolution (90% energy)	15:1
CF-lens (optional)	0.8 mm @ 10 mm
System accuracy	$\pm 1.0\%$ or $\pm 1.5^\circ\text{C}^{1), 2)}$
Repeatability	$\pm 0.75\%$ or $\pm 0.75^\circ\text{C}^{1), 2)}$
NETD	0.1 K ^{1), 3)}
Response time (90%)	30 ms
Emissivity/Gain (adjustable via software)	0.100 - 1.100
Transmissivity (adjustable via software)	0.100 - 1.000
Signal processing (parameter adjustable via software)	peak hold, valley hold, average
Dimensions of electronics	length
	diameter
	45 mm 12 mm

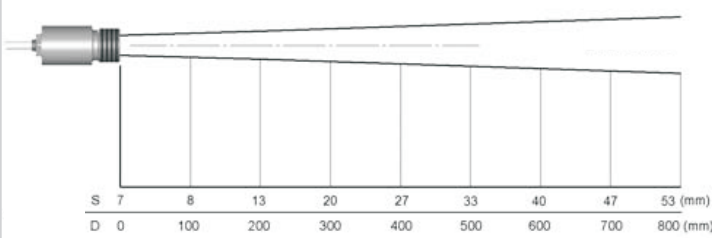
¹⁾ object temperature > 0°C; whichever is greater

²⁾ at ambient temperature 23 $\pm 5^\circ\text{C}$, $\epsilon = 1$, response time 1s

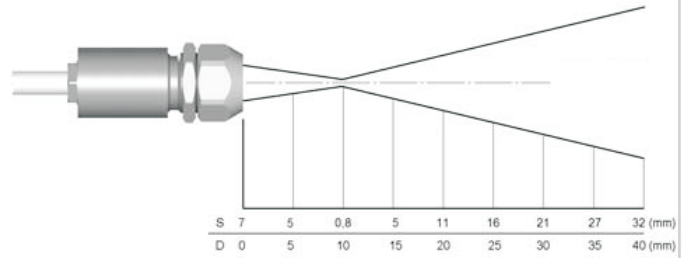
³⁾ at time constant 50 ms and $T_{\text{amb}} 25^\circ\text{C}$

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Optical Specifications



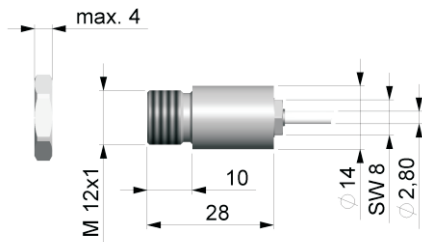
CSmicro 2W LT
D:S = 15:1



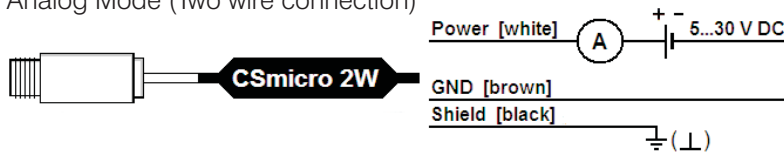
CSmicro 2W LT with CF-lens
D:S = 15:1 (far field = 1,2:1)

Dimensions / Connections

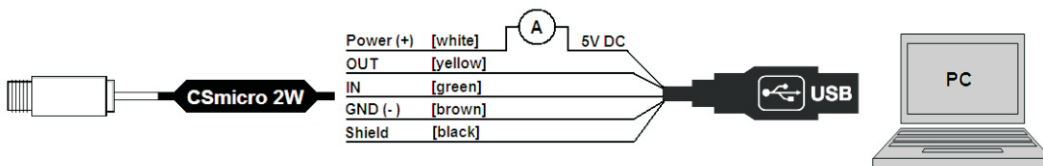
Dimensions CSmicro 2W



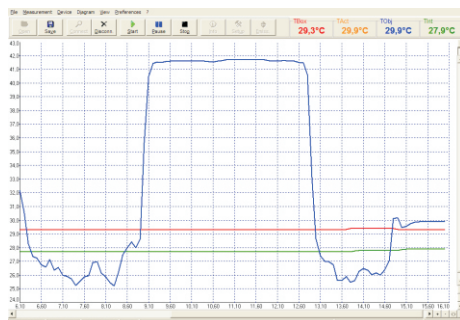
Analog Mode (Two wire connection)



Combined Mode (analog and digital)



CompactConnect 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 the sensor outputs
- The software Compact Connect allows to customize the sensor to application needs of the user