

More Precision.

optris® CSmicro 2W

low cost micro size two-wire infrared thermometers for -30 - 1600°C



FEATURES

- Temperature ranges: -30 to 1600°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 125°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 - 28 V DC

General Specifications	
Environmental rating	IP65 (NEMA-4)
Ambient temperature	-20 - 125°C (sensing head) 0 - 85°C (electronics)
Storage temperature	-20 - 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. 1000Ω 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 - 28 V DC

¹⁾ in dependence on supply voltage

Measurement Specifications	
Temperature ranges	- 30 - 900°C (LT) 385 - 1600°C (2MH)
Spectral range	8 - 14 μm (LT) 1,6 μm (2MH)
Optical resolution	15:1 (LT) 75:1 (2MH)
CF-lens for LT model (optional)	0.8 mm @ 10 mm
System accuracy	±1.0% or ±1.5°C ^{1,2} (LT) ±(0,3% of reading +2°C) ³ (2MH)
Repeatability	±0.75% or ±0.75°C ^{1,2} (LT) ±(0,1% of reading +1°C) ³ (2MH)
Temperature resolution LT model (at object temperature > 20°C and time constant >0.2 s)	0.1°C
Temperature resolution 2MH model	0.1°C
Response time (90%)	150 ms (LT) 10 ms (2MH)
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	70 mm
diameter	12 mm

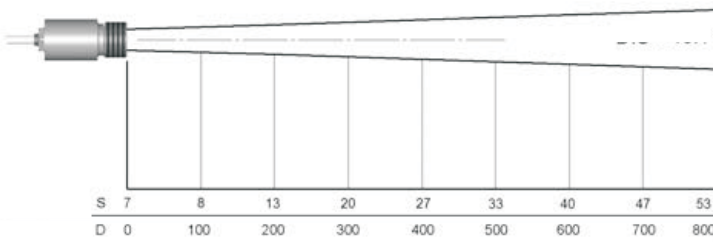
¹⁾ object temperature > 0°C; whichever is greater

²⁾ at ambient temperature 23 ±5°C

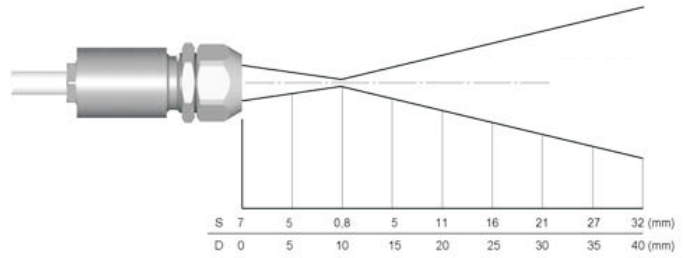
³⁾ Epsilon = 1, response time 1s

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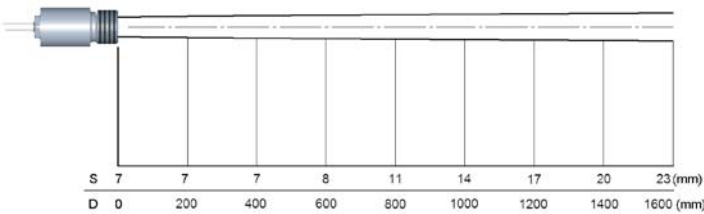
Optical Specifications



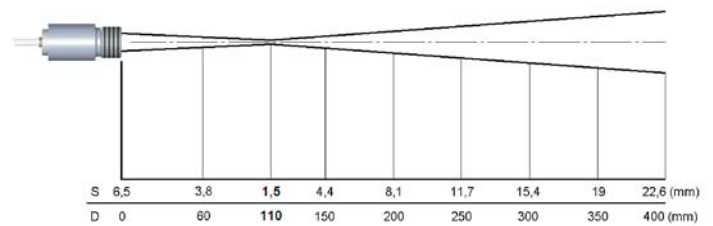
CSmicro 2W LT D:S = 15:1



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

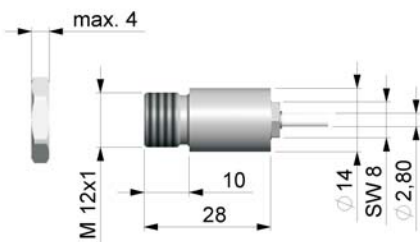


CSmicro 2W 2MH SF D:S = 75:1

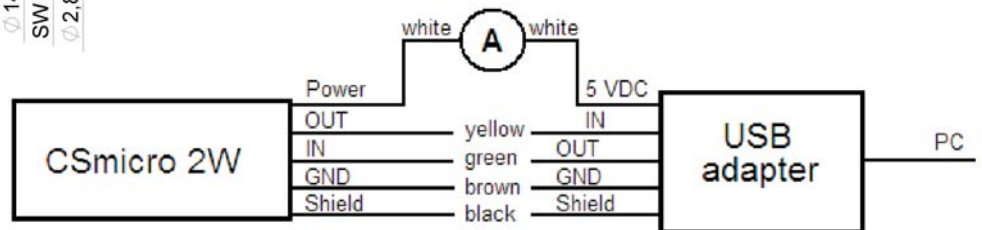
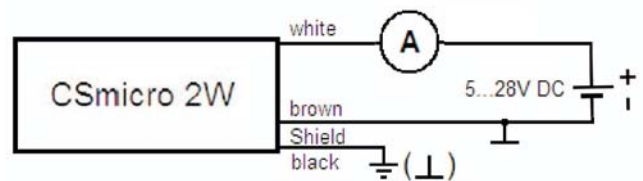


CSmicro 2W 2MH CF D:S = 75:1 (far field 14:1)

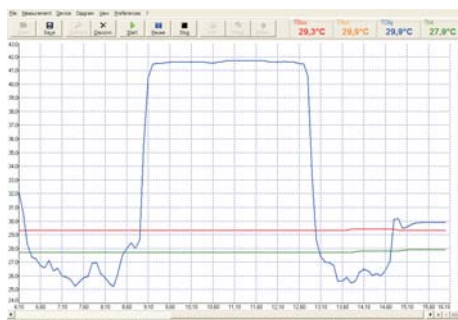
Dimensions / Connections



Dimensions CSmicro 2W



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