



# More Precision

**thermoMETER** // Non-contact infrared temperature sensors





### thermoMETER CS

Compact OEM sensor with integrated controller

- Measuring range from -40 °C to 400 °C
- Applicable in ambient temperatures up to 80 °C without cooling
- Robust, silicon-coated lens
- Integrated controller with LED alarm display and intelligent sighting aid, alarm signal, temperature-code display or self-diagnostics
- Protection against short circuit and polarity change
- Programmable controller
- Different outputs: 0-10 V or 0-5 V freely scalable, alarm output, digital output
- Optional USB interface and software for programming, direct, serial 9.6 / 115.2 kBaud interface
- Extensive supply voltage range: 5 - 30 VDC
- Best price - ideal for OEM applications
- *Please note: available from 10 pieces*

#### Optical specifications thermoMETER CS

□ = smallest spot size / focal point (mm)

Standard Focus										
SF15	15:1	6.5	11.6	16.6	21.7	26.7	35	43.3	51.6	59.9
	distance in mm	0	100	200	300	400	500	600	700	800
Close Focus (with optionally available CF lens)										
CF15	15:1	7	3.9	0.8	4.7	8.6	12.5	16.4	20.3	24.2
	distance in mm	0	5	10	15	20	25	30	35	40

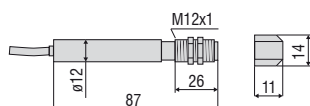
Model	CS-SF15-C1
Optical resolution	15:1
Temperature range <sup>1)</sup>	-40 °C to 400 °C
Spectral range	8 to 14 μm
System accuracy <sup>2)</sup>	±1.5 % or ±1.5 °C
Repeatability <sup>2)</sup>	±0.75 % or ±0.75 °C
Temperature coefficient <sup>3)</sup>	±0.05 °C/K or ±0.05 %/K
Temperature resolution <sup>4)</sup>	0.05 °C
Response time	14 ms to 999 s (90 %), adjustable
Emissivity/Gain	0.100 to 1.100 (adjustable via 0 to 10 VDC input or software)
Transmissivity/gain	0.100 to 1.100 (adjustable via software)
Signal processing <sup>1)</sup>	Peak hold, valley hold, average; extended hold function with threshold and hysteresis
Outputs/analog	0 to 5 V or 0 to 10 V, freely scalable via software
Alarm output	Alarm 0-30 V / 50 mA (open collector)
3-state alarm output	adjustable thresholds and voltage levels for: no alarm, pre-alarm, alarm
Outputs/digital	mono-/bidirectional, 9.6 / 115.2 kBaud (adjustable via software), 0/3 V level/USB optional
LED functions	alarm display, automatic aiming aid, self-diagnostics, temperature display (via temp. code)
Inputs	programmable functional inputs for external emissivity adjustment, ambient temperature compensation (0 to 10 VDC), hold function or RS232 / USB (optional) communication
Cable length	1 m (standard), 3 m, 8 m, 15 m
Power supply	4 mA (without LED); 10 mA (5 to 30 VDC)
Protection class	IP63 (NEMA-4)
Ambient temperature	-20 °C to 80 °C
Storage temperature	-40 °C to 85 °C
Relative humidity	10 to 95 %, non-condensing
Vibration	IEC 68-2-6: 3 G, 11 to 200 Hz, any axis
Shock	IEC 68-2-27: 50 G, 11 ms, any axis
Weight	approx. 58 g

<sup>1)</sup> Adjustable via software

<sup>2)</sup> Ambient temperature: 23 ±5 °C; whichever is greater; object temperature ≥ 0 °C

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

<sup>4)</sup> With object temperature < 100 °C and time constant of > 0.2 s



**Product identification**

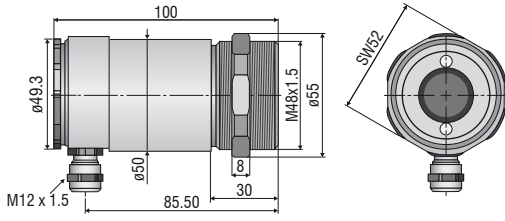
CS -	SF15-	C1
		Cable length [1 m (standard) / 3 m / 8 m / 15 m]
		Focus [SF]
thermoMETER CS		

**Accessories page 32 - 35**

- Ancillary CF lens
- Protective window
- Mounting bracket / mounting bolt
- Air purge collar
- Right angle mirror

**CSLaser**

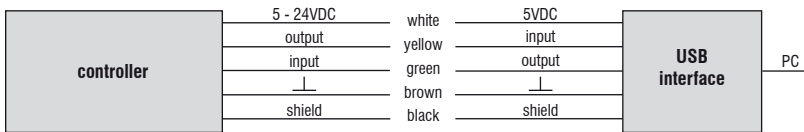
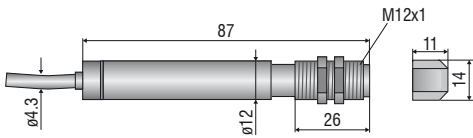
sensor



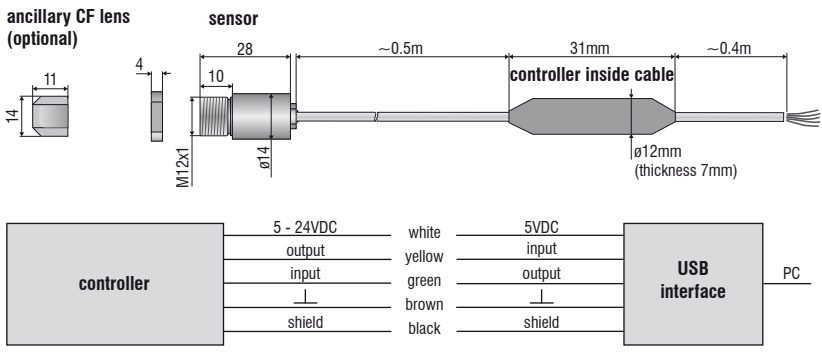
**CS**

sensor with integrated controller

ancillary CF lens (optional)



CSmicro / CSMicro 2W



## Infrared thermal imagers from Micro-Epsilon



### **thermoIMAGER TIM** Compact thermal imaging cameras for industrial temperature monitoring

- Temperature range from -20 °C to 1900 °C
- Ideal for OEM
- Real-time thermography using license-free software
- Protective housing for harsh environments
- Special variants for the glass, metal and plastics industries