



# More Precision

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





### thermoMETER CHot

Housed IR temperature sensor for harsh ambient conditions

- Measuring range from -40 °C to 975 °C
- Up to 250 °C ambient temperature without cooling
- Pressure-resistant sensor head up to 10 bar (autoclave applications)
- Integrated high temperature cable
- For a number of applications in dryers, kilns, heat treatment in the processing of metals, plastics, textiles and in the semiconductor industry
- Narrow-focused lenses enable diagonal alignment to the target (avoids influence by material thickness)
- Selectable and scalable analog output, optional digital interfaces

#### Optical specifications thermoMETER CHot

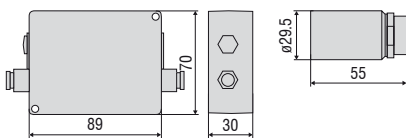
□ = smallest spot size / focal point (mm)

Standard Focus										
SF10	10:1	6.5	14.9	23.3	31.6	40	51.6	63.3	74.9	86.5
	distance in mm	0	100	200	300	400	500	600	700	800

Model		CTH-SF10-C3H
Optical resolution		10:1
Temperature range <sup>1)</sup>		-40 °C to 975 °C
Spectral range		8 to 14 μm
System accuracy <sup>2)</sup>		± 1 % or ± 1.5 °C
Repeatability <sup>2)</sup>		± 0.5 % or ± 0.5 °C
Temperature resolution		0.25 °C
Response time		100 ms
Emissivity/gain <sup>1)</sup>		0.100 to 1.100
Transmissivity/gain <sup>1)</sup>		0.100 to 1.100
Signal processing <sup>1)</sup>		peak hold, valley hold, average; extended hold function with threshold and hysteresis
Certificate of calibration		optional
Outputs/analog	channel 1	0/4 to 20 mA, 0 to 5/10 V, thermocouple J, K
	channel 2	sensor temperature (-20 to 250 °C as 0 to 5 V or 0 to 10 V), alarm output
Outputs/analog	optional	relays: 2 x 60 VDC/42 VAC <sub>eff</sub> ; 0.4 A; electrically isolated
Ausgänge/digital	optional	USB, RS232, RS485, Modbus RTU, Profibus DP, Ethernet
Output impedances	current output	mA max. 500 Ω (with 5 to 36 VDC)
	voltage output	min. 100 kΩ load impedance, thermocouple 20 Ω
Inputs		programmable functional inputs for external emissivity adjustment ambient temperature compensation, trigger (reset of hold functions)
Cable length		3 m (standard), 8 m, 15 m
Power supply		8 to 36 VDC; max. 100 mA
Protection class		IP65 (NEMA-4)
Ambient temperature		sensor: -20 °C to 250 °C; controller: 0 °C to 85 °C
Storage temperature		sensor: -40 °C to 250 °C; controller: -40 °C to 85 °C
Relative humidity		10 to 95 %, non-condensing
Vibration	sensor	IEC 68-2-6: 3 G, 11 to 200 Hz, any axis
Shock	sensor	IEC 68-2-27: 50 G, 11 ms, any axis
Weight		sensor: 40 g (without massive housing), 200 g (with solid case); controller: 420 g

<sup>1)</sup> adjustable via programming keys or software

<sup>2)</sup> ambient temperature 23 ± 5 °C and object temperatures ≥ 20 °C; whichever is greater



**Product identification**

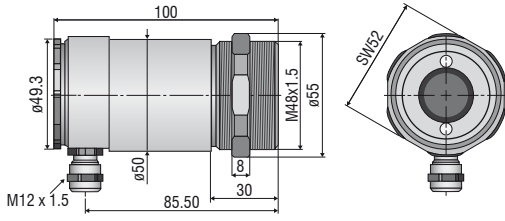
CTH-	SF10-	C3H
		Length high temperature cable [3 m (standard) / 8 m / 15 m]
		Focus [SF10]
thermoMETER CThot		

**Accessories page 20 - 23**

- Rail mount adapter for controller
- Digital-interface kits
- Certificate of calibration

**CSLaser**

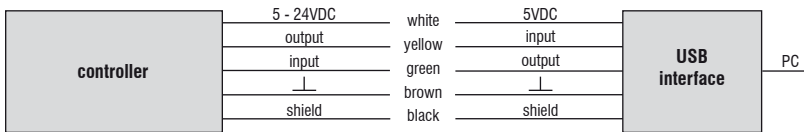
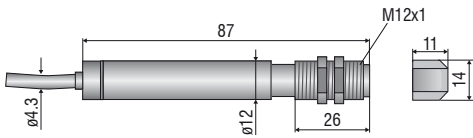
sensor



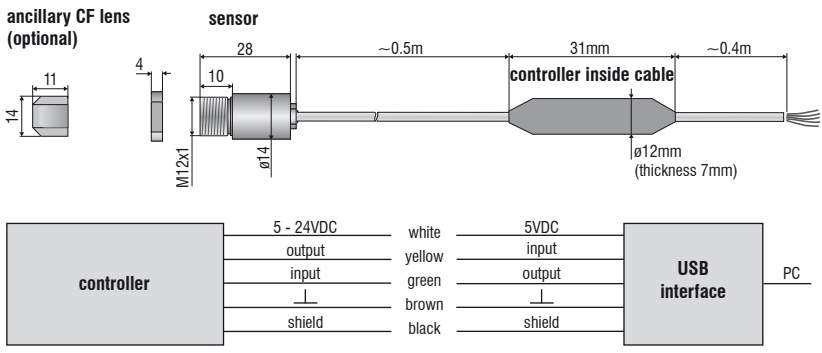
**CS**

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