

# More Precision



## thermoMETER CTM-4SF10-C3

### Non-contact temperature sensor

- High measurement speed for extremely fast processes
- Measurement of metals and non-metals due to large, short-wave spectral range
- Temperature measurement from 0 °C, ideal for industrial applications
- Integrated UBS interface



Model	CTM-4SF10-C3	
Optical resolution	10:1	
Measuring range	0 ... +500 °C	
Spectral range	2.2 to 6 μm	
System accuracy <sup>1)</sup>	±(0.3 % T <sub>of reading</sub> + 2 °C)	
Repeatability <sup>2)</sup>	±(0.1 % T <sub>of reading</sub> + 1 °C)	
Temperature coefficient	±0.05 K / K or ±0.03 % / K	
Temperature resolution <sup>3)</sup>	0.12 °C	
Response time <sup>4)</sup>	300 μs / 90 μs	
Emissivity	0.100 to 1.100	
Transmissivity	0.100 to 1.100	
Signal processing	Peak hold, valley hold, peak picker (high speed detection of hot spots), average; extended hold function with threshold and hysteresis	
Supply voltage	8 ... 30 VDC; 5 V via USB (1.2 W)	
Signal input	programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger (reset of hold function)	
Digital interface	USB (integrated) optional: RS232 / RS485 / Ethernet	
Analog output	0/4 ... 20 mA (max. 500 Ω) 0 ... 5/10 V (min. 100 kΩ load impedance) Thermocouple J, K, alarm (20 Ω)	
Switching output	open collector: 24 V / 50 mA relays (optional): 2 x 60 VDC / 42 VAC; 0.4 A; electrically isolated	
Connection	integrated cable, standard length 3 m, optional 8 m or 15 m possible	
Temperature range	Storage	-40 ... +85 °C (sensor and controller)
	Operation	0 ... +70 °C (sensor and controller)
Humidity	10 ... 95 % r.H., non-condensing	
Shock (DIN EN 60068-2-27)	25 and 50 g / 11 ms, each axis	
Vibration (DIN EN 60068-2-6)	3 g / 11 ... 200 Hz, each axis	
Protection class (DIN EN 60529)	IP65 (NEMA-4)	
Weight	Sensor: approx. 40 g; controller: approx. 420 g	

<sup>1)</sup> With ambient temperature: 23 ±5 °C, ε = 1, response time 1 s

<sup>2)</sup> With ambient temperature: 23 ±5 °C

<sup>3)</sup> With time constant of 1 ms and T<sub>obj</sub> = 50 °C

<sup>4)</sup> With 90 % signal; with dynamic adaption at low signal levels / 90 μs response time

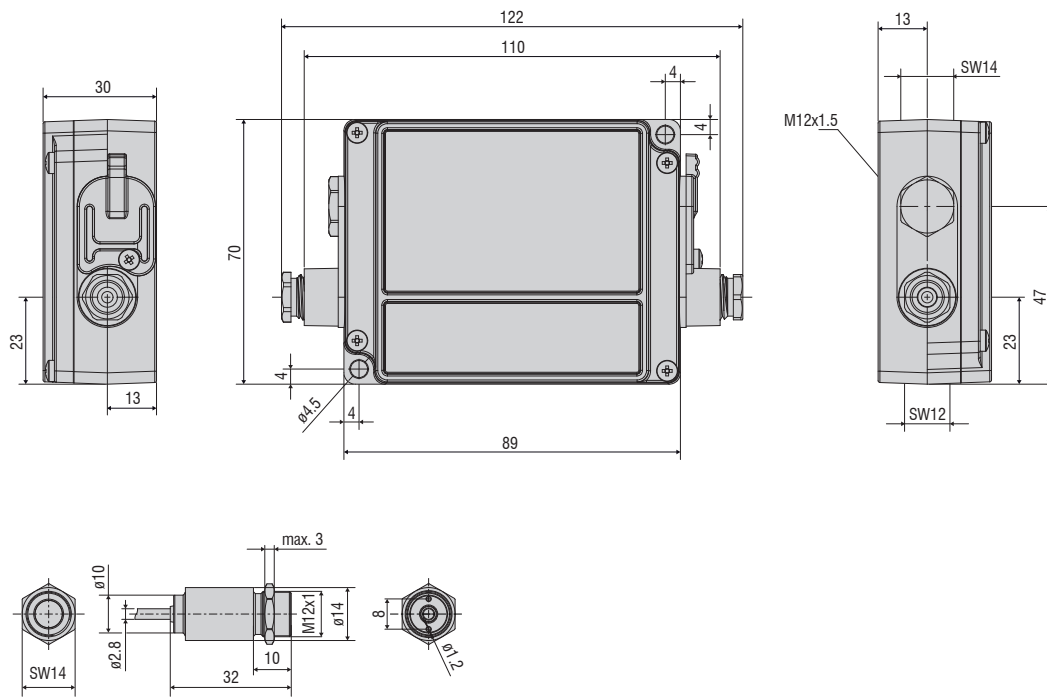
### Optical specifications thermoMETER CTM4

■ = 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

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## Dimensions:



Dimensions in mm, not to scale.