



More Precision

thermoMETER // Non-contact infrared temperature sensors

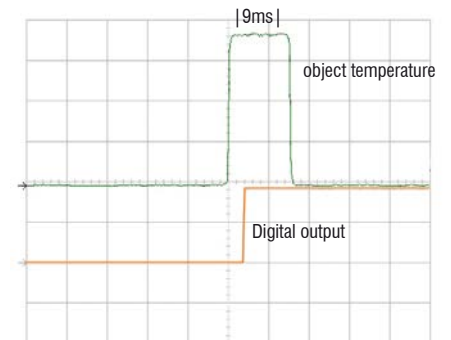




thermoMETER CTfast

IR temperature sensor with extremely short response time

- Measuring range from -50 °C to 975 °C
- One of the smallest infrared sensors worldwide with extremely short response times from 3 ms (50 % signal) to 6ms (90 % signal)
- Up to 120 °C ambient temperature without cooling
- Fast and scalable analog output with intelligent real-time data processing
- Separate controller with programming keys and backlit display



Switching output with a threshold of 50 % of the signal (SF15 model)

Optical specifications thermoMETER CTfast

□ = 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			
SF25	25:1	6.5	7.3	8	12	16	20	24	28	32	36	40	44
	distance in mm	0	100	200	300	400	500	600	700	800	900	1000	1100

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			
CF25	25:1	6.5	3.5	0.5	4	7.5	11	15.4	19.8	24.1	28.5		
	distance in mm	0	4	8	12	16	20	25	30	35	40		

Model	CTF-SF15-C3	CTF-SF25-C3
Optical resolution	15:1	25:1
Temperature range ¹⁾	-50 °C to 975 °C	
Spectral range	8 to 14 μm	
System accuracy ²⁾	±1 % or ±2 °C	
Repeatability ²⁾	±0.75 % or ±0.75 °C	
Temperature resolution ^{3),4)}	0.2 °C	0.4 °C
Response time ⁵⁾	9 ms (90 %) at analog output 4 ms (50 %) at digital output	6 ms (90 %) at analog output; 3 ms (50 %) at digital output
Emissivity/gain ¹⁾	0.100 to 1.100	
Transmissivity/gain ¹⁾	0.100 to 1.100	
Signal processing ¹⁾	peak hold, valley hold, average; extended hold function with threshold and hysteresis	
Certificate of calibration	optional	
Outputs/analog	0/4 to 20 mA, 0 to 5/10 V, thermocouple J, K	
Alarm output	open collector (24 V / 50 A)	
Outputs/digital	standard: 0/10 V (10 mA); optional: relays 2 x 60 VDC/42 VAC; 0.4 A; electrically isolated	
Digital Interface	optional	USB, RS232, RS485, Modbus RTU, Profibus DP, Ethernet
Output impedances	current output	mA max. 500 Ω (with 8 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	1 m, 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 120 °C; controller: 0 °C to 85 °C	
Storage temperature	sensor: -40 °C to 120 °C; controller: -40 °C to 85 °C	
Relative humidity	10 to 95 %, non-condensing	
Vibration	sensor	IEC 68-2-6: 3 G, 11-200 Hz, any axis
Shock	sensor	IEC 68-2-27: 50 G, 11 ms, any axis
Weight	sensor: 40 g; controller: 420 g	

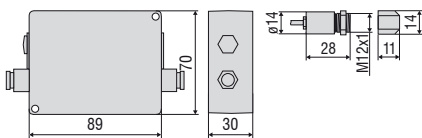
¹⁾ adjustable via programming keys or software

²⁾ ambient temperature 23 ±5 °C; whichever is greater with dynamic noise compression

³⁾ temperature of the object ≥ 20 °C

⁴⁾ with dynamic adaption at low signal levels

⁵⁾ with time constant of 100 ms with adaptive averaging T_{avg} 25 °C



Product identification

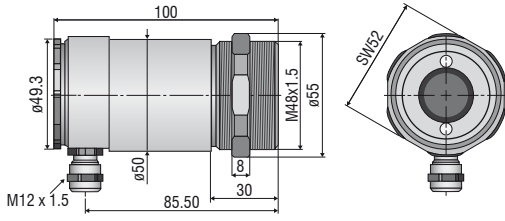
CTF-	SF15-	C3
		Cable length [1 m / 3 m (standard) / 8 m / 15 m]
		Focus [SF15 / SF25]
thermoMETER CTFast		

Accessories page 20 - 23

- Ancillary CF lens
- Protective window
- Mounting bracket / mounting bolt
- Air purge collar
- Right angle mirror
- Rail mount adapter for controller
- Massive housing
- Protective tube
- Laser sighting aid
- Digital-interface kits
- Certificate of calibration

CSLaser

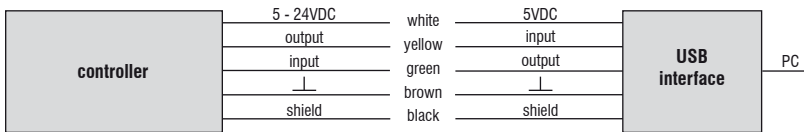
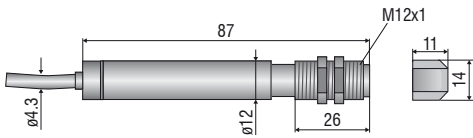
sensor



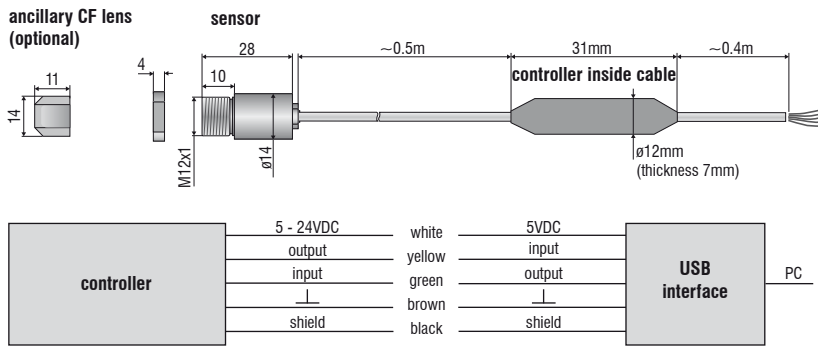
CS

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