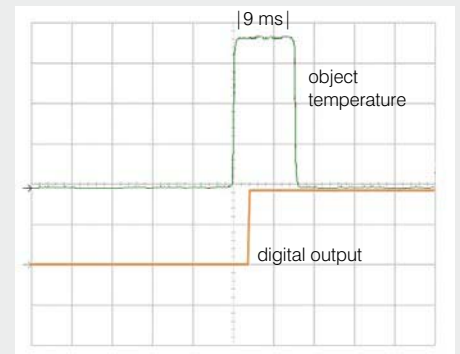## thermoMETER CTfast

This unit incorporates the world's fastest thermopile detector. It captures fast events or moving objects and gets an accurate temperature reading with an response time as little as 3ms / 6ms.

➔ Measuring range from -50 to 975°C

➔ One of the smallest infrared sensors worldwide with response times as short as 3ms (50% signal) and 6ms (90% signal)

➔ Continuous process monitoring with an unchoppered sensor system.
   Note: Conventional fast pyroelectrical infrared sensors
   with mechanical chopper see processes only part of the time

➔ Easy to assemble in multiple arrays for line scanning of small and fast objects
   (hotspot detection) using a bus communication

➔ Analogue and digital output, thermocouple J/K emulation and serial interface

➔ Fully programmable instrument for enhanced signal processing and I/O control

➔ Separate controller with easy accessible programming keys and
   multi colour LCD backlit display

Time constants for temperature jumps between 25°C and 180°C (Model SF15)

Optical specifications thermoMETER CTfast

☐ = smallest spot size (mm)

Standard Focus optics												
SF15	**15:1**	7	8	13	20	27	33	40	47	53			
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 optics (CF lense optional available)											
CF15	**15:1**	7	5	0.8	5	11	16	21	27	32	
distance in mm		0	5	10	15	20	25	30	35	40	
CF25	**25:1**	6.2	3.4	0.5	3.8	7.1	10.4	14.5	18.7	22.8	27
distance in mm		0	4	8	12	16	20	25	30	35	40
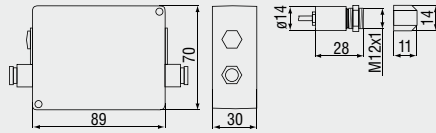
Product identification

CTF - SF15 - C3

Cable length [1m / 3m (standard) / 8m / 15m]
Focus [SF15 / SF25]
thermoMETER CTfast

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 14μm	
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]	9ms (90%) at analogue output 4ms (50%) at digital output	6ms (90%) at analogue output 3ms (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/analogue		0/4 to 20mA; 0 to 5/10V; thermocouple J, K	
Alarm output		open-collector (24V/ 50mA)	
Outputs/digital	standard	0/10V (10mA)	
	optional	optional: relay: 2 x 60VDC / 42V AC; 0.4 mA; optically isolated	
Digital Interface	optional	USB, RS232, RS485, CAN, Profibus DP, Ethernet	
Output impedances	current output	mA max. 500Ω (8 to 36VDC) mV	
	voltage output	min. 100kΩ load impedance ; thermocouple 20Ω	
Inputs		programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger (reset of hold functions)	
Cable length		1m, 3m (standard), 8m, 15m	
Power supply		8 to 36VDC; max. 100mA	

Environmental rating	IP 65 (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 to 200Hz, any axis
Shock	sensor	IEC 68-2-27: 50 G, 11ms, any axis
Weight	sensor: 40g; controller: 420g	

[1] adjustable via programming keys or software
[2] ± ambient temperature 23 ±5°C; whichever is greater with dynamic noise compression
[3] at object temperature ≥20°C
[4] at time constant 100ms with smart averaging and T_{obj} 25°C
[5] with dynamic adaption at low signal levels

Accessories page 42 - 45

▸ CF lense
▸ Protective window
▸ Mounting bracket / Mounting bolt
▸ Air purge collar

▸ Right angle mirror
▸ Rail mount adapter for controller
▸ Massive housing
▸ Protective tube

▸ Laser sighting tool
▸ Digital-Interface kit
▸ Software CompactConnect
▸ Certificate of calibration