thermoMETER CThot

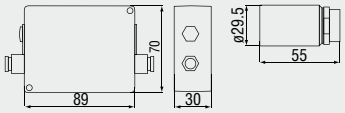
The CThot has been designed for the most extreme temperature environment applications. The thermopile detector embedded inside the sensor head is absolutely unique. It can measure in an ambient environment of 250°C without any additional external cooling. The compact sensor head is housed in a special housing to reduce any thermal shock.

- ➔ Measuring range from -40°C to 975°C
- ➔ Sensor operates in up to 250°C environment without any cooling
- ➔ High pressure stability up to 10bar (autoclave)
- ➔ Integrated high temperature cable
- ➔ Ideal for applications in dryers, ovens, heat treatment lines in the metal and glass industry, paper, plastic and textile manufacturing and semiconductor processing
- ➔ 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

Optical specifications thermoMETER CThot

□ = smallest spot size (mm)

Standard Focus optics										
SF02	**2:1**	5	50	100	150	200	250	300	350	400
SF10	**10:1**	7	10	20	30	40	50	60	70	80
	distance in mm	*0*	*100*	*200*	*300*	*400*	*500*	*600*	*700*	*800*
Close Focus optics (CF lense optional available)										
CF02	**2:1**	7	5.6	4.3	3	2.6	2.6	3	4.7	6.3
CF10	**10:1**	7	5	1.2	8	18	24			
	distance in mm	*0*	*5*	*10*	*15*	*20*	*25*	*30*	*35*	*40*



Product identification

CTH - SF02 - C3H

- Cable length [3m (standard) / 8m / 15m]
- Focus [SF02 / SF10]
- thermoMETER CThot

Model		CTH-SF02-C3H	CTH-SF10-C3H
Optical resolution		2:1	10:1
Temperature range [1]		-40 to 975°C	
Spectral range		8 to 14µm	
System accuracy [2]		±1% or ±1.5°C	
Repeatability [2]		±0.5% or ±0.5°C	
Temperature resolution		±0.25°C	
Response time		100ms	
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	channel 1	0/4 to 20mA, 0 to 5/10V, thermocouple J, K	
	channel 2	sensor temperature (-20 to 250°C as 0 to 5V or 0 to 10V), alarm output	
	optional	relay: 2 x 60VDC/ 42VAC$_{eff}$; 0.4A; optically isolated	
Outputs/digital	optional	USB, RS232, RS485, CAN, Profibus DP, Ethernet	
Output impedances	current output	mA max. 500Ω (5 to 36VDC)	
	voltage output	mV min. 100kΩ load impedance	
		thermocouple 20Ω	
Inputs		programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger (reset of hold functions)	
Cable length		3m (standard), 8m, 15m	
Power supply		8 to 36VDC; max. 100mA	
Environmental rating		IP 65 (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 200Hz, any axis	
Shock	sensor	IEC 68-2-27: 50 G, 11ms, any axis	
Weight		sensor: 40g (without massive housing); controller: 420g	

[1] adjustable via programming keys or software

[2] ± ambient temperature: 23±5°C; whichever is greater; at object temperatures ≥20°C

Accessories page 42 - 45

- Rail mount adapter for controller
- Digital-Interface kit
- Software CompactConnect
- Relay output module
- Certificate of calibration