



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
- 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
- Analog 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 color LCD backlit display



Software CompactConnect

- Display, graphic charting and recording of temperature readings
- Easy system configuration and sensor calibration
- Sophisticated signal processing features
- Programming of input and output channels

Optical specifications thermoMETER CThot

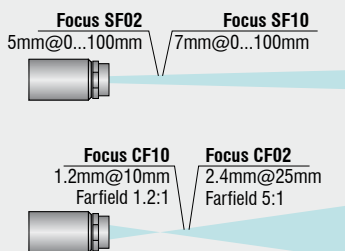
□ = smallest spot size (mm)

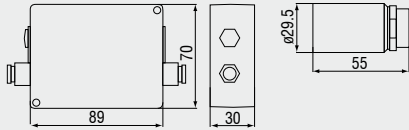
Standard Focus optics

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

CF02	2:1	7	5.6	4.3	3	2.5	2.4	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 Fiber cable length [3 m (standard) / 8 m / 15 m]
 Focus [SF02 / SF10]
 thermoMETER CThat

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/analog	channel 1 channel 2 optional	0/4 to 20mA, 0 to 5/10V, thermocouple J, K sensor temperature (-40 to 250°C as 0 to 5V or 0 to 10V), alarm output relay: 2 x 60V DC/ 42VACeff; 0.4A; optically isolated
Outputs/digital	optional	USB, RS232, RS485, CAN, Profibus DP, Ethernet
Output impedances	current output voltage output	mA max. 500Ω (5 to 36VDC) 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 44 - 47

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