



thermoMETER CTlaser

Innovative precision infrared temperature sensor marking the actual spot size on your measurement target at any distance

- Measuring range from -50°C to 975°C
- Extreme small measurement spot down to 0.9mm
- Real mapping of the actual spot size, with automatic laser protection
- Precision optics (75:1) with different models for a specific focus point
- Up to 85°C ambient temperature without cooling
- 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 CTlaser

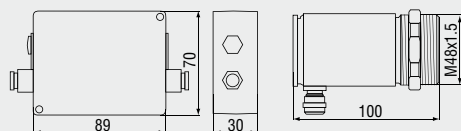
□ = smallest spot size (mm)

| Standard optics | | | | | | | | | | | | | | | | | |
|--------------------|-------------|----|------|------|------|-----|------|------|------|------|------|------|------|------|------|-----|-----|
| SF75 optics | 75:1 | 20 | 19.5 | 19 | 18.5 | 18 | 17.5 | 17 | 16.5 | 16 | 20.5 | 25 | 34 | 43 | 52 | | |
| distance in mm | | 0 | 150 | 300 | 450 | 600 | 750 | 900 | 1050 | 1200 | 1350 | 1500 | 1800 | 2100 | 2400 | | |
| Close Focus optics | | | | | | | | | | | | | | | | | |
| CF1 optics | 75:1 | 20 | 9 | 5 | 0.9 | 10 | 25 | 40 | 55 | 70 | 85 | 100 | 115 | 130 | 160 | 190 | 220 |
| CF2 optics | 75:1 | 20 | 16 | 14 | 11 | 8 | 1.9 | 9 | 16.5 | 24 | 31 | 38 | 45.5 | 53 | 68 | 82 | 97 |
| CF3 optics | 75:1 | 20 | 17 | 16 | 14 | 11 | 7 | 2.75 | 8.5 | 14 | 19.5 | 25.5 | 31 | 37 | 48 | 60 | 71 |
| CF4 optics | 75:1 | 20 | 19 | 18.5 | 18 | 17 | 15.5 | 14 | 12.5 | 11 | 9 | 7.5 | 5.9 | 9 | 15 | 20 | 26 |
| distance in mm | | 0 | 40 | 50 | 70 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 700 | 800 |

Product identification

CTL - SF75 - C3

Cable length [3 m Standard / 8 m / 15 m]
 Focus [SF75 / CF1 / CF2 / CF3 / CF4]
 thermoMETER CTLaser



| Model | CTL-SF75-C3 | |
|----------------------------------|---|---|
| Optical resolution | 75:1 | |
| Temperature range ¹ | -50°C to 975°C | |
| Spectral range | 8 to 14μm | |
| System accuracy ^{2,3} | ±1% or ±1°C | |
| Repeatability ² | ±0.5% or ±0.5°C | |
| Temperature resolution | 0.1°C | |
| Response time (90% signal) | 120ms | |
| Emissivity/gain ¹ | 0.100 to 1.100 | |
| Transmissivity/gain ¹ | 0.100 to 1.000 | |
| Signal processing ¹ | peak hold, valley hold, average; extended hold function with threshold and hysteresis | |
| Certificate of calibration | optional | |
| Outputs/analogue | channel 1 channel 2 optional | 0/4 to 20mA, 0 to 5/10V, thermocouple J, K sensor temperature (-20 to 180°C as 0 to 5V or 0 to 10V), alarm output relay: 2 x 60VDC/ 42VAC _{eff} ; 0.4A; optically isolated |
| Alarm output | | open - collector (24V/ 50mA) |
| Outputs/digital | optional | USB, RS232, RS485, CAN, Profibus DP, Ethernet |
| Output impedances | current output voltage output | mA max. 500Ω (with 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. 160mA |
| Laser | | class II (635nm), 1mW, ON/OFF via controller or software |
| Environmental rating | | IP 65 (NEMA-4) |
| Ambient temperature | | sensor: -20°C to 85°C (50°C if Laser ON) controller: 0°C to 85°C |
| Storage temperature | | sensor: -40°C to 85°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: 600g; controller: 420g |

¹ adjustable via controller or software

² ± ambient temperature: 23 ±5°C; whichever is greater

³ temperature of the object >0°C

Accessories page 22 - 23

- ▶ Mounting bracket
- ▶ Air purge collar
- ▶ Rail mount adapter for controller
- ▶ Water cooled housing
- ▶ Interface kit
- ▶ Software CompactConnect
- ▶ Certificate of calibration



LASER RADIATION
 DO NOT STARE IN THE BEAM
 CLASS 2 LASER
 EN60825-1:2002
 P≤1mW; λ=630-650nm