



More Precision

thermoMETER // Non-contact infrared temperature sensors





thermoMETER CX

OEM temperature sensor with integrated controller

- Measuring range from -30 °C to 900 °C
- High resolution model available (CX-SF15-C8 with 0.025 °C)
- Easy two-wire installation
- Optional USB interface and software for programming
- Large supply voltage range: 5-30 VDC
- Optical resolution from 15:1, 22:1
- Simultaneous two-wire output and digital communication
- Alarm output (0-30 V / 500 mA)
- Connection dimension 1.5" for easy replacement of present sensors

Optical specifications thermoMETER CX

□ = smallest spot size / focal point (mm)

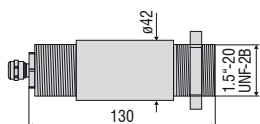
| Standard Focus | | | | | | | | | | |
|----------------|----------------|-----|------|------|------|------|------|------|------|------|
| SF15 | 15:1 | 6.5 | 11.5 | 6.6 | 21.6 | 26.6 | 34.9 | 43.2 | 51.4 | 59.7 |
| SF22 | 22:1 | 6.5 | 10.5 | 14.4 | 18.4 | 22.3 | 26.3 | 30.2 | 34.2 | 38.1 |
| | distance in mm | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 |
| Close Focus | | | | | | | | | | |
| CF15 | 15:1 | 7 | 3.9 | 0.8 | 4.7 | 8.6 | 12.5 | 16.4 | 20.3 | 24.2 |
| CF22 | 22:1 | 7 | 3.8 | 0.6 | 4.4 | 8.2 | 12 | 15.8 | 19.6 | 23.4 |
| | distance in mm | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |

| Model | CX-SF15-C8 | CX-SF22-C8 |
|---------------------------------|---------------------------------------------------------------------------------------|-------------------|
| Optical resolution | 15:1 | 22:1 |
| Temperature range ¹⁾ | -20 °C to 150 °C | -30 °C to 900 °C |
| Spectral range | 8 to 14 μm | |
| System accuracy ²⁾ | ±1 % or ±1 °C | ±1 % or ±1.4 °C |
| Repeatability ²⁾ | ±0.3 % or ±0.3 °C | ±0.5 % or ±0.7 °C |
| Temperature resolution | 0.025 °C ³⁾ | 0.1 °C |
| Response time | 150 ms (95 %) | |
| Emissivity/gain ¹⁾ | 0.100 to 1.100 | |
| Transmissivity 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 | 4 to 20 mA | |
| Output/alarms | 0 to 30 V / 500 mA (open collector) | |
| Outputs/digital (optional) | USB | |
| Output/impedance | max. 1000 Ω (depends on supply voltage) | |
| Cable length | 8 m | |
| Power supply | 5 to 30 VDC | |
| Protection class | IP65 (NEMA-4) | |
| Ambient temperature | -20 °C to 75 °C | |
| Storage temperature | -40 °C to 85 °C | |
| Relative humidity | 10 to 95 %, non-condensing | |
| Vibration | IEC 68-2-6: 3 G, 11 to 200 Hz, any axis | |
| Shock | IEC 68-2-27: 50 G, 11 ms, any axis | |
| Weight | 350 g | |

¹⁾ adjustable via software

²⁾ ambient temperature 23 ±5 °C; whichever is greater; object temperature ≥ 0 °C;

³⁾ with object temperature < 100 °C; time constant from > 0.2 s



Product identification

| | | |
|----------------|-------|--------------------|
| CX - | SF15- | C8 |
| | | Cable length [8 m] |
| | | Focus [SF / CF] |
| thermoMETER CX | | |

Accessories page 54 - 55

- Ancillary CF lens
- Protective window
- Air purge collar
- USB kit

Mechanical accessories CS / CSmicro / CSmicro 2W

| Art. No. | Model | |
|----------|-------------|-------------------------------------------------------------------------|
| 2970279 | Emissivity | Mounting bracket, fixed |
| 2970280 | TM-AB-CS | Mounting bracket, adjustable |
| 2970281 | TM-MB-CS | Mounting bolts with M12x1 thread |
| 2970282 | TM-MG-CS | Mounting fork, adjustable in 2 axes, with M12x1 fastening |
| 2970283 | TM-AP-CS | Air purge collar for 10:1 sensors |
| 2970284 | TM-APL-CS | Air purge collar, laminar |
| 2970285 | TM-APLCF-CS | Air purge collar, laminar with integrated ancillary CF lens |
| 2970286 | TM-RAM-CS | Right angle mirror for measurements 90 °C to the sensor axis |
| 2970718 | TM-USBK-CS | USB kit: USB programming adapter, CompactConnect software (as download) |

Optical accessories CS / CSmicro / CSmicro 2W

| | | |
|---------|----------|---------------------------------|
| 2970277 | TM-CF-CS | Ancillary CF lens for CS models |
| 2970278 | Aluminum | Protective window for CS models |

Calibration CS / CSmicro / CSmicro 2W

| | | |
|---------|------------|----------------------------|
| 2970288 | TM-CERT-CS | Certificate of calibration |
|---------|------------|----------------------------|

Mechanical accessories CX

| Art. No. | Model | |
|----------|----------|----------------------------------------------------------|
| 2970307 | TM-AP-CX | Air purge collar, aluminum (anodized) |
| 2970321 | TM-FB-CX | Mounting bracket, adjustable in 1 axis, stainless steel |
| 2970322 | TM-AB-CX | Mounting bracket, adjustable, in 2 axes, stainless steel |

Optical accessories CX

| | | |
|---------|----------|---------------------------------|
| 2970302 | TM-CF-CX | Ancillary CF lens for CX models |
| 2970303 | TM-PW-CX | Protective window for CX models |

Calibration CX

| | | |
|---------|------------|----------------------------|
| 2970323 | TM-CERT-CX | Certificate of calibration |
|---------|------------|----------------------------|



TM-FB-CS mounting bracket, fixed



TM-MG-CS Mounting fork with M12x1 thread, adjustable in two axes



TM-CF-CS Ancillary CF lens (only for LT models)



TM-AP-CS Air purge collar for 10:1 sensors



TM-MB-CS Mounting bolts with M12x1 thread adjustable in one axis



TM-APL-CS Air purge collar, laminar



TM-APLCF-CS Air purge collar, laminar with integrated ancillary CF lens



TM-APL-CS Air purge collar, laminar
TM-MG-CS Mounting fork



TM-AP-CX Air purge collar for CX sensors



TM-CF-CX Ancillary CF lens, TM-PW-CX Protective window



TM-RAM-CS Right angle mirror

Further IR temperature measurement devices from Micro-Epsilon



thermoIMAGER TIM
Compact USB thermal imaging cameras
for precise thermography



thermoMETER CTVideo/CSVideo
Infrared temperature sensors with crosshair
laser sighting and video output



thermoMETER Handheld
Innovative handheld pyrometer with laser
sighting for inspection and maintenance