



More Precision

thermoMETER // Non-contact infrared temperature sensors





thermoMETER CSmicro

Miniature OEM infrared temperature sensor with controller integrated in the cable

- Measuring range from -40 °C to 1030 °C
- Applicable in ambient temperatures up to 120 °C without cooling (sensor)
- Robust, silicon-coated lens
- Integrated controller with LED alarm display and intelligent sighting aid, alarm signal, temperature-code display or self-diagnostics
- Integrated controller in the cable
- Scalable analog output and simultaneous alarm output
- Protection against short circuit and polarity change
- Programmable controller
- Optional USB interface and software for programming
- Best price - ideal for OEM applications

Optical specifications thermoMETER CSmicro

□ = smallest spot size / focal point (mm)

| Standard Focus | | | | | | | | | | | |
|---|----------------|-----|------|------|------|------|------|------|------|------|------|
| SF15 | 15:1 | 6.5 | 11.6 | 16.6 | 21.7 | 26.7 | 35 | 43.3 | 51.6 | 59.9 | |
| | distance in mm | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | |
| Close Focus (with optionally available CF lens) | | | | | | | | | | | |
| CF15 | 15:1 | 7 | 3.9 | 0.8 | 4.7 | 8.6 | 10.9 | 12.5 | 16.4 | 20.3 | 24.2 |
| | distance in mm | 0 | 5 | 10 | 15 | 20 | 23 | 25 | 30 | 35 | 40 |

| Model | CSmi-SF15-C1 |
|-----------------------------------|--|
| Optical resolution | 15:1 |
| Temperature range | -40 °C to 1030 °C ¹⁾ |
| Spectral range | 8 to 14 μm |
| System accuracy | ±1.0 % or ±1.0 °C ⁴⁾ |
| Repeatability | ±0.5 % or ±0.5 °C ³⁾ |
| Temperature coefficient | ± 0.05 °C/°C or ± 0.05 % °C ⁵⁾ |
| Temperature resolution | 0.15 °C ⁶⁾ |
| Response time (90 %) | 14 ms (adjustable up to 999 s via optional programming adapter) |
| Emissivity/Gain | 0.100 to 1.100 ²⁾ |
| Transmissivity/gain ¹⁾ | 0.100 to 1.100 |
| Signal processing ¹⁾ | peak hold, valley hold, average; extended hold function with threshold and hysteresis |
| Dimensions of controller | length 35 mm; ø12 mm |
| Outputs/analog | 0 to 5 V or 0 to 10 V 1/10/100 mV/°C |
| Max. loop resistance | - |
| Outputs/alarm | alarm (50 mA / 24 V) |
| Outputs/digital (optional) | mono-/bidirectional, 9.6 kBaud, 0/3 V level, alternative USB |
| Inputs | programmable functional inputs for external emissivity adjustment (0 to 5 VDC), hold function or USB communication |
| LED functions | alarm display, automatic aiming aid, self-diagnostics, temperature display (via temp. code) |
| Cable length | 1 m (standard length); 0.5 m between sensor and controller; 0.4 m between controller and terminal device |
| Power supply | 9 mA (5 to 30 VDC) |
| Protection class | IP65 (NEMA-4) sensor head |
| Ambient temperature | sensor: -20 °C to 120 °C controller: -20 °C to 80 °C |
| Storage temperature | -40 °C to 85 °C (sensor and controller) |
| 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 | 42 g |

¹⁾ adjustable via software

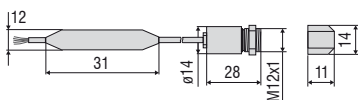
²⁾ adjustable via 0 to 5 VDC input or software

³⁾ ambient temperature 23 ± 5 °C; whichever is greater; object temperature ≥ 0 °C

⁴⁾ ambient temperature 23 ± 5 °C; whichever is greater; object temperature > 20 °C

⁵⁾ with object temperature < 100 °C; time constant from > 0.2 s

⁶⁾ with object temperature > 20 °C; time constant from > 0.2 s



Product identification

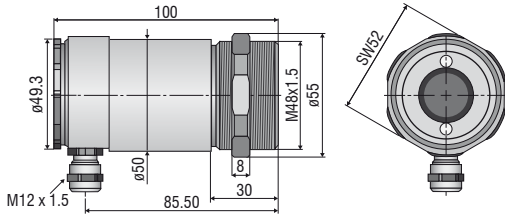
| | | |
|--|-------|----|
| CSmi - | SF15- | C1 |
| Cable length [1 m (standard) other cable lengths on request] | | |
| Focus [SF / CF] | | |
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Accessories page 32 - 35

- Ancillary CF lens
- Protective window
- Mounting bracket / mounting bolt
- Air purge collar
- Right angle mirror
- USB kit

CSLaser

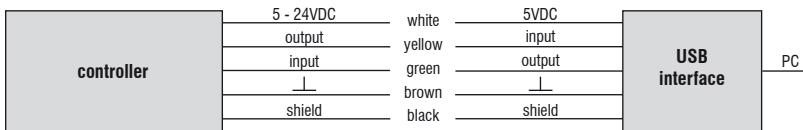
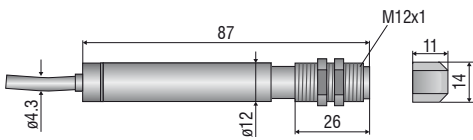
sensor



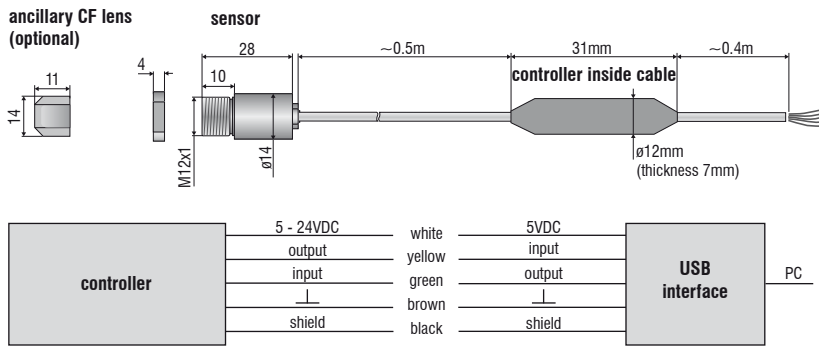
CS

sensor with integrated controller

ancillary CF lens (optional)



CSmicro / CSmicro 2W



Infrared thermal imagers from Micro-Epsilon



thermoIMAGER TIM Compact thermal imaging cameras for industrial temperature monitoring

- Temperature range from -20 °C to 1900 °C
- Ideal for OEM
- Real-time thermography using license-free software
- Protective housing for harsh environments
- Special variants for the glass, metal and plastics industries