



### thermoMETER CS

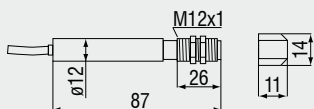
*This self contained, non contact infrared temperature sensor requires no external signal condition controller, which makes it an ideal product for OEM applications. It is fully programmable via the digital interface and provides an accurate temperature reading via the analogue or digital interface.*

- Measuring range from -40 to 400°C
- Robust precision silicon optics with AR coating
- Integrated controller with LED alarm indicator and smart electronic sighting support, selfdiagnostic or temperature code indication
- Up to 80°C ambient temperature without cooling
- Short circuit and reverse polarity protection
- Field programmable
- Adjustable emissivity
- Fast response time: 25ms
- Analogue outputs with digital interfaces option
- Wide input range: 5 - 30V DC
- Please note: available from 10 pieces

### Optical specifications thermoMETER CS

□ = smallest spot size (mm)

| Standard Focus optics                            |      |   |     |     |     |     |     |     |     |     |
|--|------|---|-----|-----|-----|-----|-----|-----|-----|-----|
| SF15   | 15:1 | 7 | 8   | 13  | 20  | 27  | 33  | 40  | 47  | 53  |
| distance in mm                                   |      | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 |
| Close Focus optics (CF lense optional available) |      |   |     |     |     |     |     |     |     |     |
| CF15   | 15:1 | 7 | 5   | 0.8 | 5   | 11  | 16  | 21  | 27  | 32  |
| distance in mm                                   |      | 0 | 5   | 10  | 15  | 20  | 25  | 30  | 35  | 40  |



### Product identification

**CS - SF15 - C1**  
 Cable length [1 m (standard) / 3 m / 8 m / 15 m]  
 Focus [SF]  
 thermoMETER CS

| Model                               | CS-SF15-C1  |
|-------------------------------------|---|
| Optical resolution                  | 15:1  |
| Temperature range <sup>1</sup>      | -40 to 400°C  |
| Spectral range                      | 8 to 14µm   |
| System accuracy <sup>2</sup>        | ±1.5% or ±1.5°C   |
| Repeatability <sup>2</sup>          | ±0.75% or ±0.75°C   |
| Temperature resolution <sup>3</sup> | ±0.1°C  |
| Response time                       | 25ms to 999s (90%), adjustable  |
| Emissivity/gain                     | 0.100 to 1.100 (adjustable via 0 to 5V DC input or software)  |
| Transmissivity/gain <sup>1</sup>    | 0.100 to 1.100  |
| Signal processing <sup>1</sup>      | peak hold, valley hold, average; extended hold function with threshold and hysteresis   |
| Certificate of calibration          | optional  |
| Outputs/analogue                    | 0 to 5V or 0 to 10V<br>1/10/100 mV/ °C  |
| Outputs/digital optional            | USB or Alarm 0-30V / 500mA (open collector)   |
| LED functions                       | alarm indication, automatic aiming support, self diagnostic, temperature indication (via temp. code)  |
| Inputs                              | programmable functional input for external emissivity/ambient temperature adjustment (0 to 5VDC), hold function or RS232 / USB (optional) communication |
| Cable length                        | 1m (standard), 3m, 8m, 15m  |
| Power supply                        | 4mA (without LED), 10mA (5 to 30VDC)  |
| Environmental rating                | IP 63 (NEMA-4)  |
| Ambient temperature                 | -20°C to 80°C   |
| Storage temperature                 | -20°C to 85°C   |
| Relative humidity                   | 10 to 95%, non condensing   |
| Vibration                           | IEC 68-2-6: 3 G, 11 to 200Hz, any axis  |
| Shock                               | IEC 68-2-27: 50 G, 11ms, any axis   |
| Weight                              | 58g   |

<sup>1</sup> adjustable via software

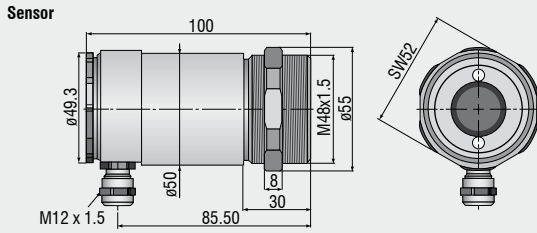
<sup>2</sup> ± ambient temperature: 23 ±5°C; whichever is greater; object temperature ≥0°C

<sup>3</sup> temperature of the object <100°C and time constant >0.2s

### Accessories page 60 - 61

- ▶ CF lense
- ▶ Protective window
- ▶ Mounting bracket / Mounting bolt
- ▶ Air purge collar
- ▶ Right angle mirror
- ▶ Software CompactConnect
- ▶ USB Kit

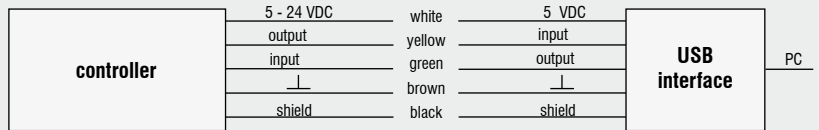
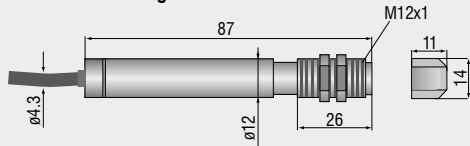
**CSLaser**



**CS**

sensor with integrated controller

CF lens

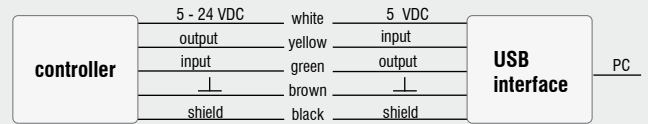
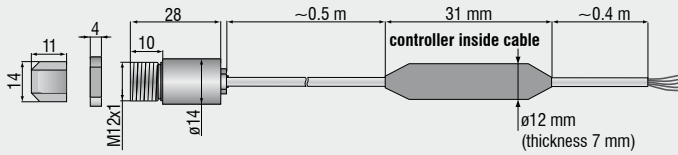


**CSmicro**

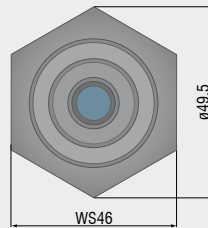
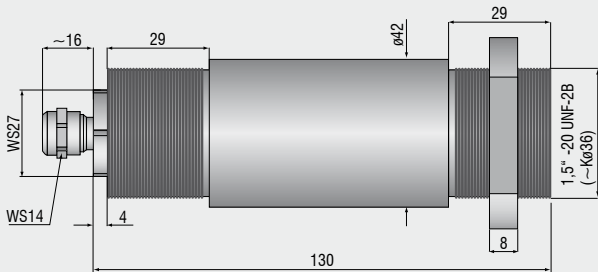
CF lens

sensor

controller inside cable



**CX**



**Mechanical accessories CS / CSmicro**

| Art. No. | Model       | Description  |
|----------|-------------|--|
| 2970279  | TM-FB-CS    | Mounting bracket, fixed                                |
| 2970280  | TM-AB-CS    | Mounting bracket, adjustable                           |
| 2970281  | TM-MB-CS    | Mounting bolt with M12x1 thread                        |
| 2970282  | TM-MG-CS    | Mounting fork, adjustable in 2 axes, with thread M12x1 |
| 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, integrated CF-lens          |
| 2970286  | TM-RAM-CS   | Right angle mirror for 90°C measurements               |
| 2970287  | TM-USBK-CS  | USB interface kit incl. software Compact-Connect       |

**Optical accessories CS / CSmicro**

|         |          |                                 |
|---------|----------|---------------------------------|
| 2970277 | TM-CF-CS | CF-Lens for CS series           |
| 2970278 | TM-PW-CS | Protective window for CS series |

**Calibration CS / CSmicro**

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

**Mechanical accessories CX**

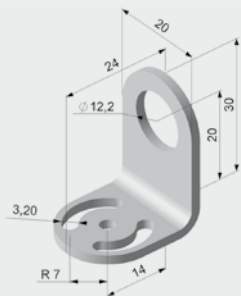
| Art. No. | Model      | Description   |
|----------|------------|---|
| 2970307  | TM-AP-CX   | Air purge collar, aluminium (anodized)                    |
| 2970321  | TM-FB-CX   | Mounting bracket, adjustable in one axis, stainless steel |
| 2970322  | TM-AB-CX   | Mounting bracket, adjustable in two axes, stainless steel |
| 2970311  | TM-USBK-CX | USB-Kit: USB programming adapter, Software CompactConnect |

**Optical accessories CX**

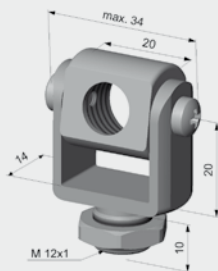
|         |          |                                      |
|---------|----------|--------------------------------------|
| 2970302 | TM-CF-CX | CF-lens for thermoMETER CX           |
| 2970303 | TM-PW-CX | Protective window for thermoMETER CX |

**Calibration CX**

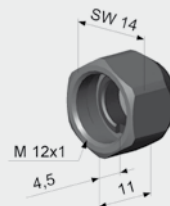
|         |            |                            |
|---------|------------|----------------------------|
| 2970323 | TM-CERT-CX | Certificate of calibration |
|---------|------------|----------------------------|



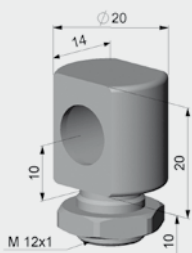
TM-FB-CS Mounting bracket, fixed



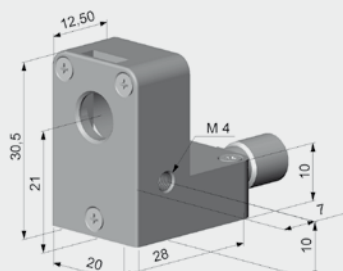
TM-MG-CS Mounting fork with M 12x1 thread adjustable in two axes



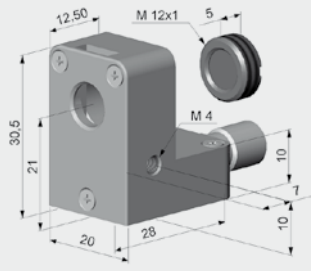
TM-CF-CS Close Focus Lens (LT sensors only)



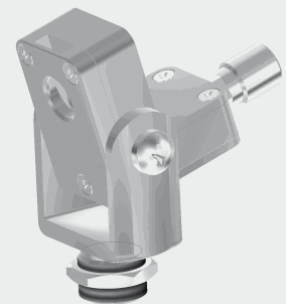
TM-MB-CS Mounting bolt with M12x1 thread adjustable



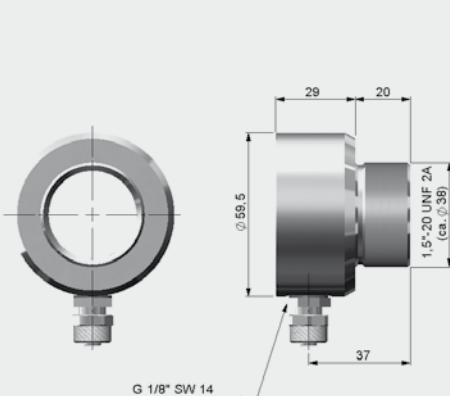
TM-APL-CS Air purge collar



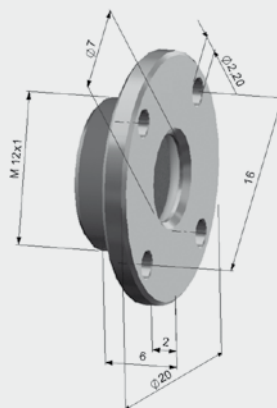
TM-APLCF-CS Air purge collar, laminar, integrated CF-lens



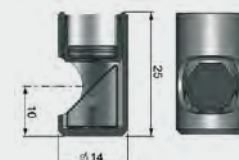
TM-APL-CS Laminar air purge collar and TM-MG-CS Mounting fork



TM-AP-CX Air purge collar CX sensors



TM-CF-CX CF-Lens  
TM-PW-CX Protective window



TM-RAM-CS Right angle mirror