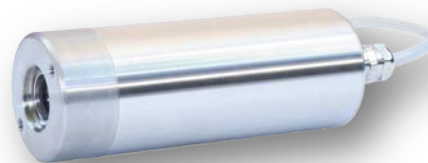


## Technical Data Sheet

### CT13.22

#### Infrared Radiation Thermometer

- Highest accuracy and long-term stability
- Pilot laser
- Very fast response time from 30 ms on
- Robust stainless steel housing IP68



Measurement specifications	
<b>Temperature range:</b>	0 ... 1400 °C
<b>Spectral range:</b>	2 ... 4.5 μm
<b>Measurement uncertainty:</b>	± 0.8 °C plus 0.8 % of the temperature difference between measured target and instrument or value of temperature resolution. The higher value shall prevail.
<b>Temperature resolution (NETD):</b>	Depending on the measured temperature and the response time Typical value is 1.2 °C (2 Sigma, by $t_{90}$ : 3 s, 100 °C; $\epsilon = 1$ )
<b>Long-term stability:</b>	Better than 0.01 % of the absolute measured temperature per month
<b>Field of view:</b>	from Ø 1 mm (± 5 %) ... 3.4 mm, depending on optic and detector
<b>Response time (<math>t_{90}</math>):</b>	Adjustable from 30 ms to 10 s
<b>Temperature unit:</b>	°C, K or °F
<b>Emissivity:</b>	0.100 ... 1.000 in 0.001 steps
<b>Lens:</b>	CaF <sub>2</sub> , ZnSe
Electrical specifications / Functions	
<b>Analog output:</b>	0 ... 20 mA; 4 ... 20 mA; resolution: 12 bit
<b>Function:</b>	Actual, maximum or minimum value (scalable (minimum span 50 K))
<b>Digital output option:</b>	Open-collector
<b>Function:</b>	Threshold detection Min, Max temperature value
<b>Digital input option:</b>	Dry contact switch, operating voltage, open-collector
<b>Function:</b>	Reset of memory, (de-)activate digital outputs or laser
<b>Serial interface:</b>	RS232 interface, bi-directional 9.6 ... 57.6 kBaud
<b>Laser aiming option:</b>	Integrated pilot laser
<b>Programmable via serial interface:</b>	Emissivity, analog output, analog output function, response time, temperature unit, Min and Max value memory adjustable with decay rate, reset by contact or temperature threshold, alarm switching point, time period etc.
<b>Operating voltage:</b>	DC: 10.5 ... 30 V                      AC: 12 ... 24 V ± 10 %, 48 ... 400 Hz
<b>Power consumption:</b>	≤ 2.5 W

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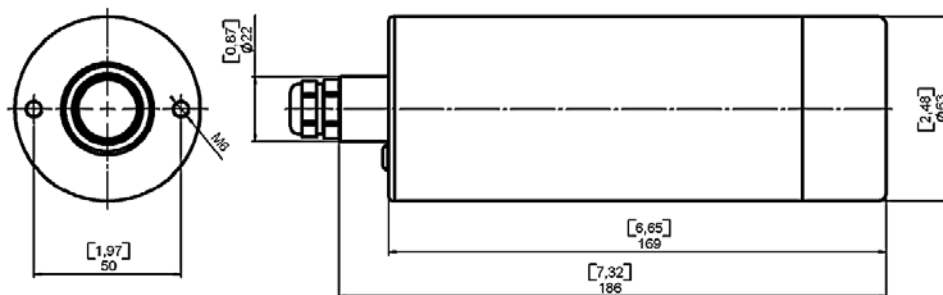
### General specifications

<b>Storage temperature:</b>	-40 ... +85 °C
<b>Permissible ambient temperature:</b>	-25 ... +60 °C (optional with protective cooling jacket up to 250 °C)
<b>Protection class:</b>	IP68 (IEC), (NEMA4)
<b>Protection against oscillation:</b>	EN 60068-2-6, frequency range: 10 ... 500 Hz, 10 ... 60 Hz, amplitude: 0.35 mm, 60 ... 500 Hz, acceleration : 100 m/s <sup>2</sup> Resistance to vibrations : class B
<b>Housing:</b>	Stainless steel
<b>Weight:</b>	Appr. 1.4 kg

### Scope of supply and options<sup>1</sup>

<b>Accessories:</b>	<ul style="list-style-type: none"> <li>■<sup>2</sup> Manual CT13</li> <li>■ Software EasyConfig</li> <li>□ Software EasyMeas</li> <li>■ Connecting cable, 12-pin, hardwired, 5 m length, PVC, unterminated ends</li> <li>□ Connecting cable, hardwired, ≥ 5 m length: PTFE; PUR; PVC; TPE, unterminated ends or 12-pin female connector</li> </ul>
<b>Calibration certificate:</b>	□ HEITRONICS certificate
<b>Housing:</b>	<ul style="list-style-type: none"> <li>□ Protective cooling jacket (water) WK15 up to 250 °C ambient temperature</li> <li>□ Ex-proof housing stainless steel (II 2 G, Ex d e IIC T5 Gb Tamb: -50 °C ... 60 °C)</li> </ul>
<b>Adapter and flanges:</b>	□ See document Options and Accessories
<b>Vacuum flange ISO-KF:</b>	□ DN25, DN40 (at 10 <sup>-4</sup> Pa (10 <sup>-6</sup> Torr)), the leakage is < 10 <sup>-8</sup> std cm <sup>3</sup> /s
<b>Protective foil:</b>	□ For lenses for measuring objects < 200 °C, Resistant to aggressive cleaners
<b>Bus interface:</b>	□ with transducer

### Dimensions<sup>3</sup>



Unit: mm [inch]

<sup>1</sup> Special model specification on request.

<sup>2</sup> ■ Standard function

□ Option

<sup>3</sup> Dimensions shown are subject to change to actual specifications.