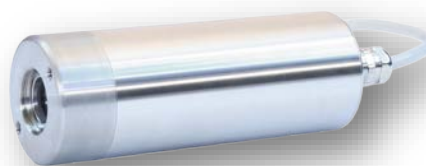


Technical Data Sheet

CT13.77

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	
Temperature range:	0 ... 500 °C
Spectral range:	7.5 ... 7.9 µm
Measurement uncertainty:	± 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.
Temperature resolution (NETD):	Depending on the measured temperature and the response time Typical value is 0.5 °C (2 Sigma, by t_{90} : 3 s, 100 °C; $\epsilon = 1$)
Long-term stability:	Better than 0.01 % of the absolute measured temperature per month
Field of view:	from Ø 1 mm (± 5 %) ... 3.4 mm, depending on optic and detector
Response time (t_{90}):	Selectable from 30 ms ... 10 s
Temperature unit:	°C, K or °F
Emissivity:	0.100 ... 1.000 in 0.001 steps
Lens:	CaF ₂ , ZnSe
Electrical specifications / Functions	
Analog output:	0 ... 20 mA; 4 ... 20 mA; resolution: 12 bit
Function:	Actual, maximum or minimum value (scalable (minimum span 50 K))
Digital output option:	Open-collector
Function:	Threshold detection Min, Max temperature value
Digital input option:	Dry contact switch, operating voltage, open-collector
Function:	Reset of memory function, (de-)activate digital outputs or laser
Serial interface:	RS232 interface, bi-directional 9.6 ... 57.6 kBaud
Laser aiming option:	Integrated pilot laser
Programmable via serial interface:	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.
Operating voltage:	DC: 10.5 ... 30 V AC: 12 ... 24 V ± 10 %, 48 ... 400 Hz
Power consumption:	≤ 2.5 W

Technical Data Sheet

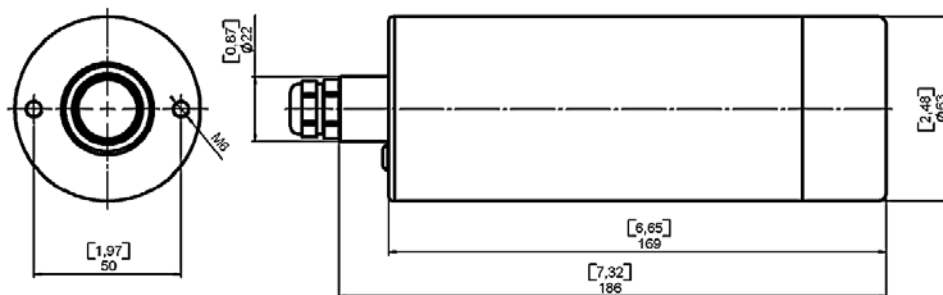
General specifications

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

Scope of supply and options¹

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

Dimensions³



Unit: mm [inch]

¹ Special model specification on request.

² ■ Standard function

□ Option

³ Dimensions shown are subject to change to actual specifications.