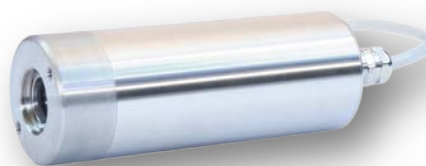


Technical Data Sheet

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}): | Adjustable from 30 ms to 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, (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

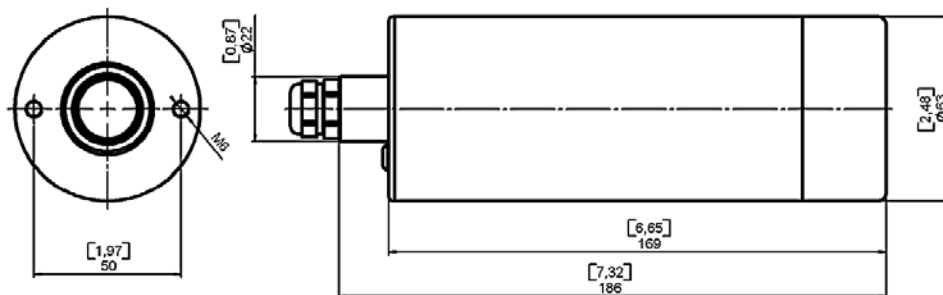
General specifications

| | |
|---|--|
| 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.