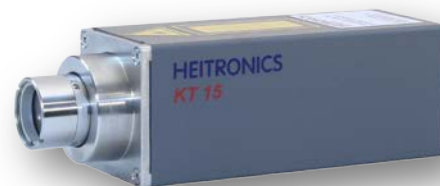


Technical Data Sheet

KT15.83 IIP

Infrared Radiation Thermometer



- Highest accuracy and long-term stability
- Vacuum tight objectives
- Fast response time from 5 ms on - even at low temperatures
- RS485 interface option

Measurement specifications

| | |
|---|--|
| Temperature range: | 0 ... 500 °C |
| Spectral response: | 8 ... 20 μm |
| Measurement uncertainty: | ± 0.5 °C plus 0.7 % of the temperature difference between measured target and instrument |
| Temperature resolution (NETD): | Typical value is 0.05 °C (2 Sigma, by t_{90} : 3 s, 20 °C; $\epsilon = 1$) Depending on the measured temperature and the response time |
| Long-term stability: | Better than 0.01 % of the absolute measured temperature in Kelvin per month |
| Field of view: | From Ø 0.7 mm (± 5 %) on, depending on optic and detector |
| Response time (t_{90}): | Adjustable from 30 ms to 600 s, option: 5 ms, 10 ms |
| Temperature unit: | °C, K or °F |
| Emissivity: | 0.100 ... 1.000 in 0.001 steps |
| Lens: | ZnSe, Ge |

Electrical specifications / Functions

| | | |
|--|---|--------------------------------|
| Analog output: | 0 ... 1 V; 0 ... 10 V; 0 ... 20 mA; 4 ... 20 mA; resolution: 16 bit | |
| Function: | Actual, maximum or minimum value (scalable (minimum span 50 K)) | |
| Analog input option: | 0 ... 10 V | |
| Function: | Compensation of ambient temperature influence, transmittance, reflection and emissivity | |
| Service keyboard at the side with LED display: | Operation of the instrument without computer software | |
| Digital output option: | 2x open-collector-output | |
| Function: | Threshold detection Min, Max temperature value, alarm status | |
| Digital input option: | Dry contact switch or operating voltage or open-collector | |
| Function: | Reset of memory, (de-)activate digital outputs or laser | |
| Thermal switch option: | Switching temperature > 70 °C, maximum load ≤ 48 V, ≤ 0.5 A | |
| Function: | Internal temperature alarm | |
| Serial interface: | RS232 interface, bi-directional 9.6 ... 115.2 kBaud, optional: RS485 | |
| Laser aiming options: | Integrated pilot laser or focus laser | |
| Programmable via serial interface and service keyboard: | 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: 24 V ± 10 %, 48 ... 400 Hz |
| Power consumption: | < 150 mA at 24 VDC | 3.5 W |

Technical Data Sheet

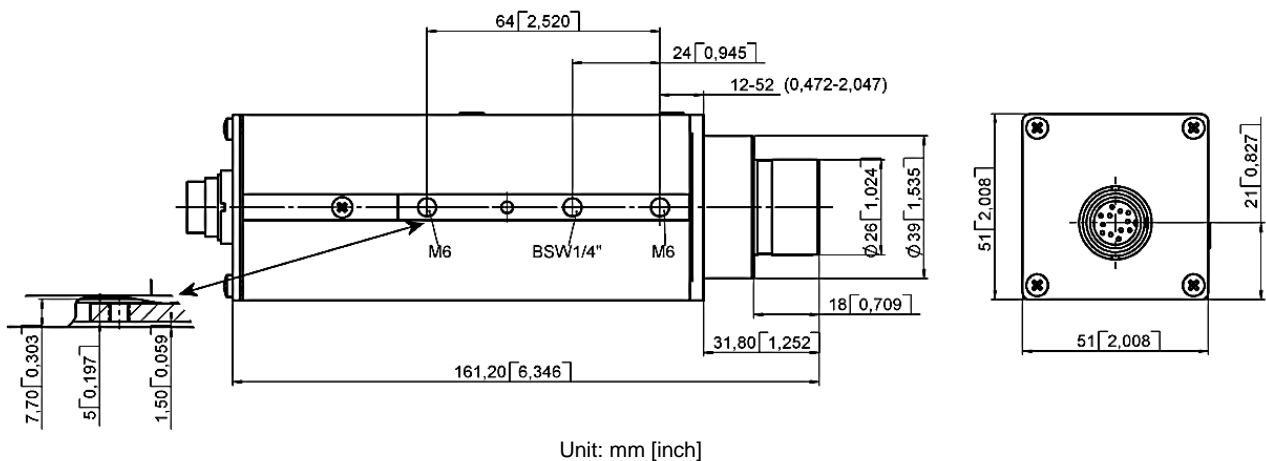
General specifications

| | |
|---|--|
| Storage temperature: | -20 ... 70 °C |
| Permissible ambient temperature: | -20 ... 60 °C (optional with protective cooling jacket WK15 up to 250 °C) |
| Protection class: | IP65 (IEC), (NEMA6) |
| Protection against oscillation: | DIN 40046 BL.8, test: FC, vibration resistance: A B1 E, Frequency range: 10 ... 55 Hz, amplitude: ± 0.2 mm, duration of test: 30 min |
| Housing: | Stainless steel and aluminum |
| Weight: | Appr. 0.55 kg |

Scope of supply and options¹

| | |
|---------------------------------|--|
| Accessories: | <ul style="list-style-type: none"> ■² Manual KT15 II ■ Software EasyConfig □ Software EasyMeas ■ Connecting cable with 12-pin female connector 2 m length, PVC, unterminated ends □ Connecting cable ≥ 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 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; IP66) □ Weatherproof housing |
| Adapter and flanges: | □ See document Options and Accessories |
| Bus interface: | □ With transducer |

Dimensions³



¹ Special model specification on request

² ■ Standard function

□ Option

³ Dimensions shown are subject to change to actual specifications.