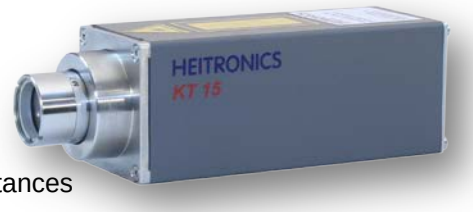
HEITRONICS
Infrarot Messtechnik

Technical Data Sheet

KT15.85 IIP

Infrared Radiation Thermometer



- Highest accuracy and long-term stability
- Application: Atmospheric measurement at large measuring disctances
- Fast response time from 5 ms on - even at low temperatures
- RS485 interface option

Mesurement specifications	
Temperature range:	-25 … 200 °C
Spectral response:	9.6 … 11.5 µm
Measurement uncertainty:	± 0.5 °C plus 0.7 % of the temperature difference between measured target and instrument
Temperature resolution (NETD):	Typical value is 0.25 °C (2 Sigma, by t_{90}: 3 s, 20 °C; Ɛ = 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: **Function:**	0 … 1 V; 0 … 10 V; 0 … 20 mA; 4 … 20 mA; resolution: 16 bit Actual, maximum or minimum value (scalable (minimum span 50 K))	
Analog input option: **Function:**	0 … 10 V 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: **Function:**	2x open-collector-output Threshold detection Min, Max temperature value, alarm status	
Digital input option: **Function:**	Dry contact switch or operating voltage or open-collector Reset of memory, (de-)activate digital outputs or laser	
Thermal switch option: **Function:**	Switching temperature > 70 °C, maximum load ≤ 48 V, ≤ 0.5 A 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

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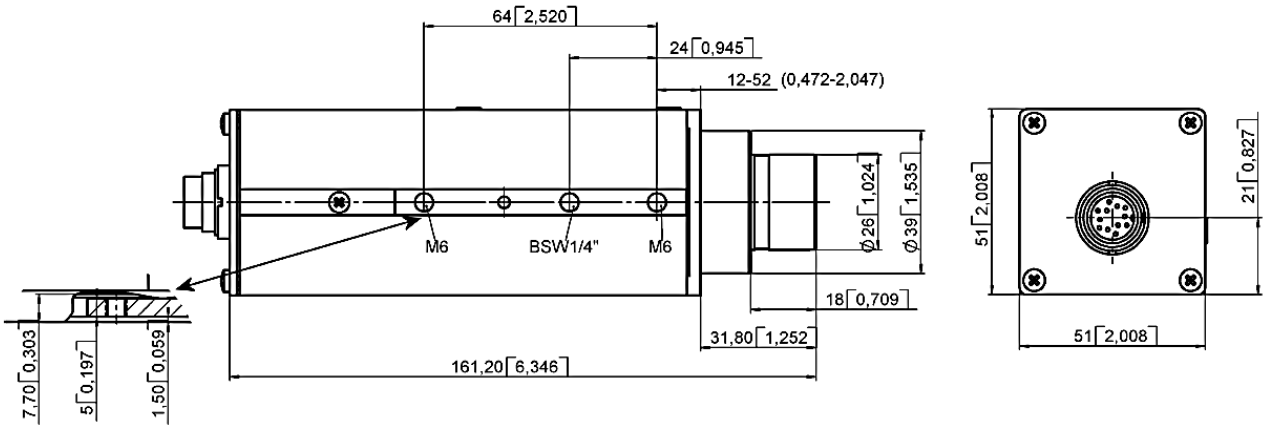
General specifications	
Storage temperature:	-20 … 70 °C
Permissible ambient temperature:	-20 … 60 °C (optional with protective cooling jacket WK15 up to 250 °C)
Protection class:	IP65 (IEC), (NEMA6)
Protection against oscillation:	DIN 40046 BL.8, test: FC, vibration resistance: A B1 E, Frequency range: 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 options[1]		
Accessories:	■[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:	□	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

Dimensions[3]



Unit: mm [inch]

1 Special model specification on request
2 ■ Standard function
□ Option
3 Dimensions shown are subject to change to actual specifications.

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Technische Änderungen und redaktionelle Irrtümer vorbehalten. Specifications are subject to change without notice.