HEITRONICS
Infrarot Messtechnik

Technical Data Sheet

KT19.xx II

Infrared Radiation Thermometer

- Highest accuracy and long-term stability
- Exchange of spectral ranges
- Optional view finder and/or laser aiming
- Fast response for dynamic testing and research applications

Measurement specifications	
Temperature range[1]:	Ranges depending on the spectral range
Spectral range:	Spectral range from 0.85 to 20 µm or 0.6 to 39 µm
Measurement uncertainty:	± 0.5 °C plus 0.7 % of the temperature difference between measured target and instrument
Temperature resolution (NETD):	Depending on the measured temperature and the response time Typical value is depending on spectral range (2 Sigma, by t_{90}: 3 s, ; ε = 1)
Long-term stability:	Better than 0.01 % of the absolute measured temperature per month
Field of view:	from Ø 0.7 mm (± 5 %) on, depending on optic and detector
Response time (t_{90}):	Option
Temperature unit:	°C, K or °F
Emissivity:	0.100 … 1.000 in 0.001 steps
Lens	CaF2, ZnSe, Ge or dispersion free mirror optics with KRS-5-window

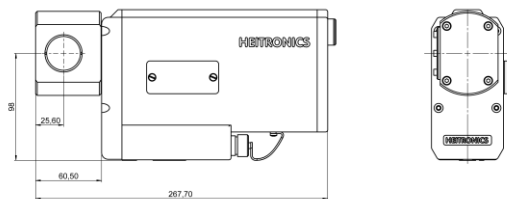| Electrical specifications / Functions	
Analog output: Function:	0 … 1 V; 0 … 10 V; 0 … 20 mA; 4 … 20 mA; resolution: 12 bit Actual, maximum or minimum value (scalable (minimum span 50 K))
Analog input: Function:	0 … 10 V Compensation of ambient temperature influence, transmittance, reflection, emissivity
Keyboard and multifunctional display:	For displaying measured value, programming parameters, alarm etc.
Digital output: Function:	2 Relay output (normally open) Threshold detection Min, Max temperature value
Digital input: Function:	Dry contact switch or voltage or open-collector Reset of memory function, (de-)activate digital outputs or laser
Thermal switch: 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, connecting cable optional
Laser aiming options:	Integrated pilot laser or focus 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: 20 … 30 V AC: 24 V ± 10 %, 48 … 400 Hz
Power consumption:	≤ 4 W

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[1] depending on configuration

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General specifications	
Storage temperature:	-20 … 70 °C
Permissible ambient temperature:	-20 … 70 °C (optional with protective cooling jacket up to 250 °C)
Protection class:	IP65
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:	Coated aluminum
Weight:	Appr. 2.4 kg
Electrical connection:	Analog output / supply voltage: 7-pin
	Digital: 12-pin

Scope of supply and options[2]	
Accessories:	■[3] Manual KT19 II
	■ Software EasyMeas
	■ Connecting cable with 7-pin female connector, 2 m length, PVC and unterminated ends
	□ Connecting cable, ≥ 5 m length: PTFE; PUR; PVC; TPE, unterminated ends or female connector
	□ Interface cable standard: 12-pin, 2 m length, PVC and unterminated ends Special: ≥ 5 m length: PTFE; PUR; PVC; TPE, unterminated ends or female connector
Calibration certificate:	□ HEITRONICS certificate
Housing:	□ Protective cooling jacket (water) WK300 up to 250 °C ambient temperature
Adapter and flanges:	□ See document Options and Accessories
Bus interface:	□ With transducer

Dimensions [4]

Unit: mm

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2 Special model specification on request.
3 ■ Standard function
　□ Option
4 The dimensions given within this document will be valid for the drawing shown.