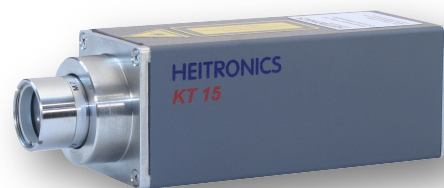


## Technical Data Sheet

# KT15.41 IIP

## Infrared Radiation Thermometer



- Highest accuracy and long-term stability
- Application: Through hot gases and flames
- Fast response time from 5 ms on - even at low temperatures
- RS485 interface option

### Measurement specifications

<b>Temperature range:</b>	250 ... 2500 °C
<b>Spectral response:</b>	3.9 µm
<b>Measurement uncertainty:</b>	± 0.5 °C plus 0.7 % of the temperature difference between measured target and instrument
<b>Temperature resolution (NETD):</b>	Typical value is 0.15 °C (2 Sigma, by $t_{90}$ : 3 s, 300 °C; $\varepsilon = 1$ ) Depending on the measured temperature and the response time
<b>Long-term stability:</b>	Better than 0.01 % of the absolute measured temperature in Kelvin per month
<b>Field of view:</b>	From Ø 0.7 mm (± 5 %) on, depending on optic and detector
<b>Response time (<math>t_{90}</math>):</b>	Adjustable from 30 ms to 600 s, option: 5 ms, 10 ms
<b>Temperature unit:</b>	°C, K or °F
<b>Emissivity:</b>	0.100 ... 1.000 in 0.001 steps
<b>Lens:</b>	CaF <sub>2</sub> , ZnSe

### Electrical specifications / Functions

<b>Analog output:</b>	0 ... 1 V; 0 ... 10 V; 0 ... 20 mA; 4 ... 20 mA; resolution: 16 bit	
<b>Function:</b>	Actual, maximum or minimum value (scalable (minimum span 50 K))	
<b>Analog input option:</b>	0 ... 10 V	
<b>Function:</b>	Compensation of ambient temperature influence, transmittance, reflection and emissivity	
<b>Service keyboard at the side with LED display:</b>	Operation of the instrument without computer software	
<b>Digital output option:</b>	2x open-collector-output	
<b>Function:</b>	Threshold detection Min, Max temperature value, alarm status	
<b>Digital input option:</b>	Dry contact switch or operating voltage or open-collector	
<b>Function:</b>	Reset of memory, (de-)activate digital outputs or laser	
<b>Thermal switch option:</b>	Switching temperature > 70 °C, maximum load ≤ 48 V, ≤ 0.5 A	
<b>Function:</b>	Internal temperature alarm	
<b>Serial interface:</b>	RS232 interface, bi-directional 9.6 ... 115.2 kBaud, optional: RS485	
<b>Laser aiming options:</b>	Integrated pilot laser or focus laser	
<b>Programmable via serial interface and service keyboard:</b>	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.	
<b>Operating voltage:</b>	DC: 10.5 ... 30 V	AC: 24 V ± 10 %, 48 ... 400 Hz
<b>Power consumption:</b>	< 150 mA at 24 VDC	3.5 W

## Technical Data Sheet

### General specifications

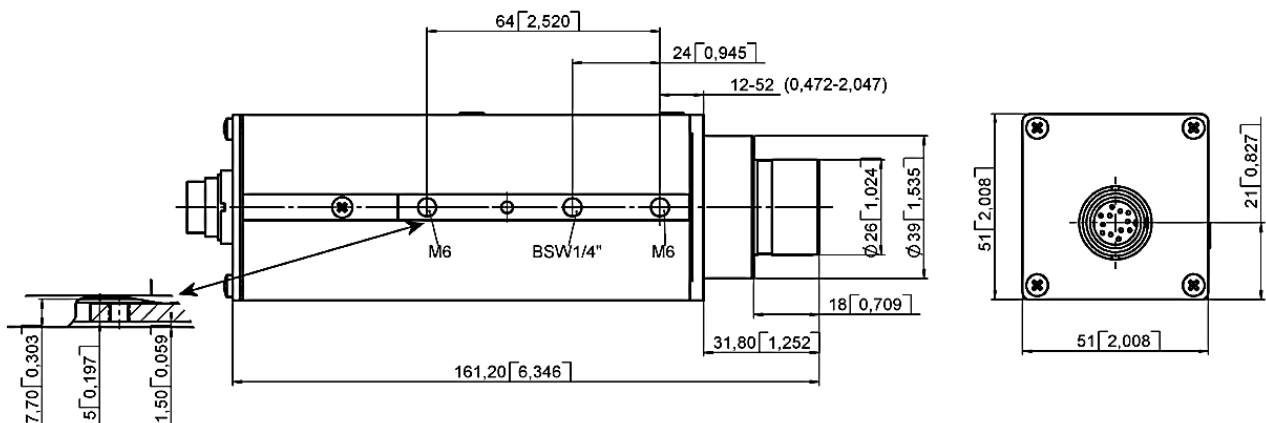
<b>Storage temperature:</b>	-20 ... 70 °C
<b>Permissible ambient temperature:</b>	-20 ... 60 °C (optional with protective cooling jacket WK15 up to 250 °C)
<b>Protection class:</b>	IP65 (IEC), (NEMA6)
<b>Protection against oscillation:</b>	DIN 40046 BL.8, test: FC, vibration resistance: A B1 E, Frequency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

### Scope of supply and options<sup>1</sup>

■ Standardfunction; □ Option

<b>Accessories:</b>	<ul style="list-style-type: none"> <li>■<sup>2</sup> Manual KT15 II</li> <li>■ Software EasyConfig</li> <li>□ Software EasyMeas</li> <li>■ Connecting cable with 12-pin female connector 2 m length, PVC, unterminated ends</li> <li>□ Connecting cable ≥ 5 m length: PTFE; PUR; PVC; TPE, unterminated ends or 12-pin female connector</li> </ul>
<b>Calibration certificate:</b>	□ HEITRONICS certificate
<b>Housing:</b>	<ul style="list-style-type: none"> <li>□ Protective cooling jacket WK15 up to 250 °C ambient temperature</li> <li>□ Ex-proof housing stainless steel (II 2 G, Ex d e IIC T5 Gb Tamb: -50 °C ... 60 °C; IP66)</li> <li>□ Weatherproof housing</li> </ul>
<b>Adapter and flanges:</b>	□ See document Options and Accessories
<b>Bus interface:</b>	□ With transducer

### Dimensions



<sup>1</sup> Special model specification on request

<sup>2</sup> ■ Standard function  
□ Option