

KT15 II SERIES

ADVANCED INFRARED RADIATION THERMOMETERS FOR
NON-CONTACT TEMPERATURE MEASUREMENT WITH HIGH
PERFORMANCE AND STABILITY



MAIN FEATURES

- ✓ Wide measuring temperature range
(from -100 to 3000 °C)
- ✓ Very fast response time ≥ 5 ms
- ✓ Several spectral ranges
(between 2 and 20 μm)
- ✓ Chopped Radiation Method for highest
accuracy and long-term stability
- ✓ Measured value resolution of 0.03 °C



HEITRONICS KT15 II Thermometers guarantee stable measurements in virtually any environment due to the chopped radiation method. The digital technology and signal evaluation combined with different spectral ranges allow temperature measurements for processes from freeze drying to melting of metals. The devices of the KT15 II SERIES are a universal solution with state-of-the-art technology.

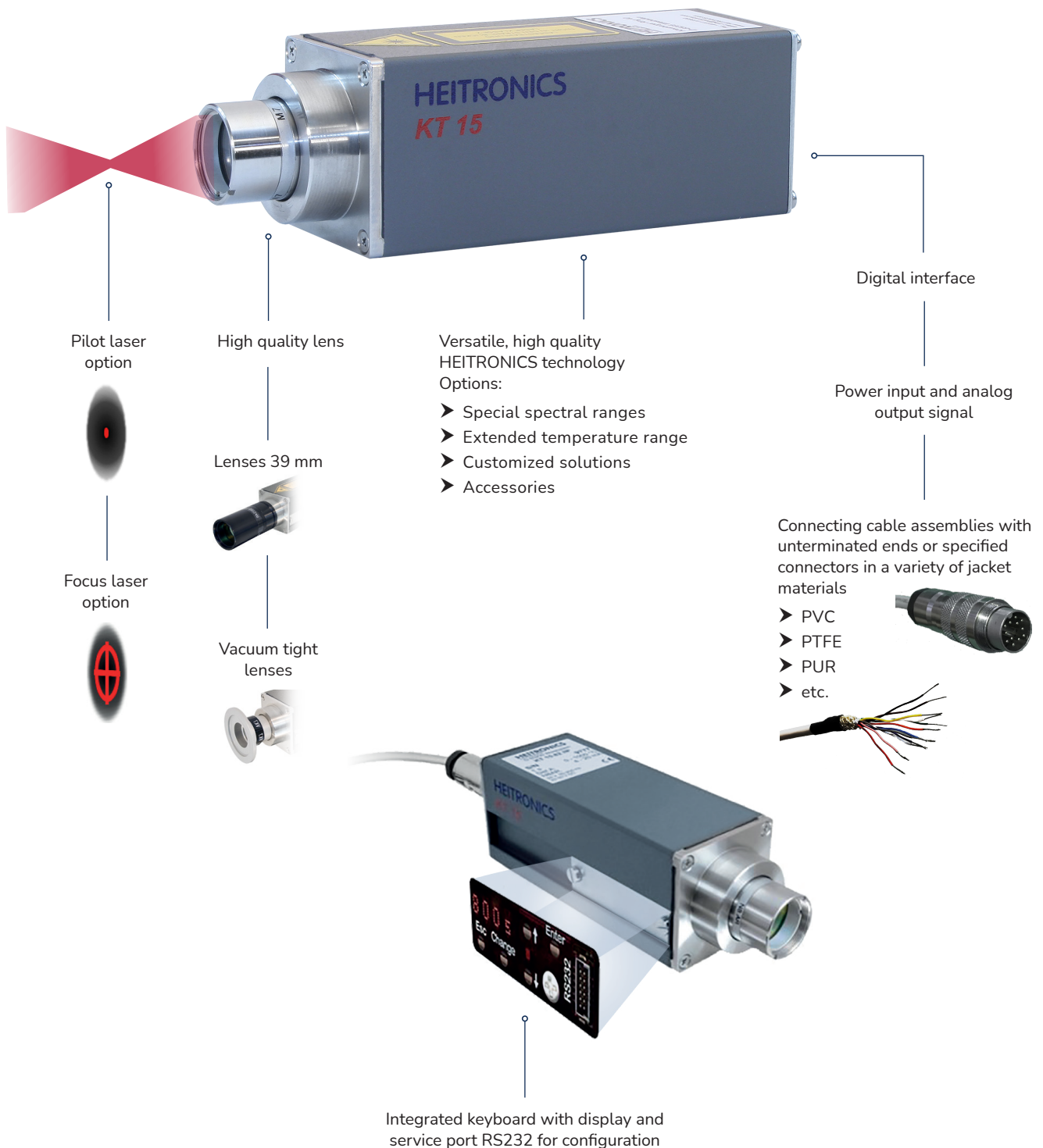
MAIN FEATURES

KT15 II Radiation Thermometers are available in a wide variety of temperature ranges from -100 to 3000 °C depending on model and application.

Measured temperature values are transmitted via an individually scalable analog output and a serial interface. Via the serial interface, it is also possible to set parameters of the KT15 II SERIES and to set the parameters for the measured value.

The KT15 II SERIES offers a wide variety of options and amenities such as lenses, pilot or focus laser, keyboard with display for operations, RS485 as well as protective mounting equipment and other accessories. A calibration certificate can be issued upon customer request.

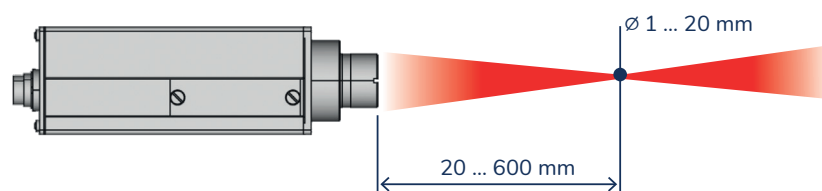
OVERVIEW



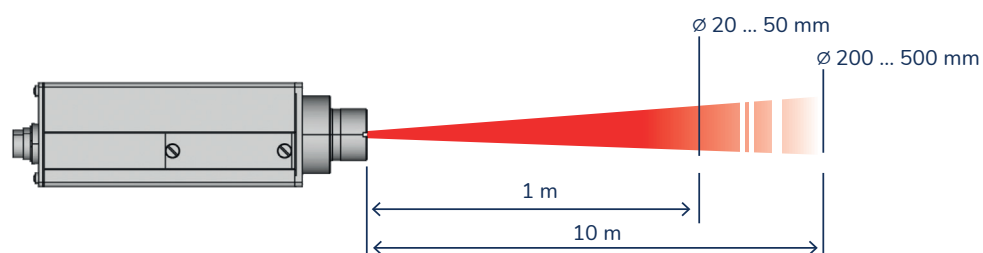
LENSES

A large selection of lenses is available to optimize the required measurement. The following figures show the measuring spot sizes depending on the distance between the thermometer and the object to be measured. Detailed field of view diagrams depend on temperature range, spectral range and other specific application criteria.

CLOSE FOCUS



FAR FIELD FOCUS



INTERFACES

KT15 II Radiation Thermometers have a configurable analog output. It can be set as voltage or mA output and scaled to a desired temperature range. The devices can be parameterized via the serial interface using HEITRONICS EasyConfig or EasyMeas software.

Measured (value) data is indicated by serial ASCII protocol and can be evaluated via EasyMeas software or with software provided by the customer.

ANALOG INTERFACES

Analog output

- 0 ... 1 V, 0 ... 10 V; 0 ... 20 mA, 4 ... 20 mA
- Actual, maximum or minimum value (scalable)

Analog input option

- 0 ... 10 V
- Compensation of ambient temperature influence, transmittance, reflection and emissivity

Thermal switch option

- Switching temperature $> 70 \text{ }^\circ\text{C}$
- Maximum load $\leq 48 \text{ V}$, $\leq 0.5 \text{ A}$
- Internal temperature alarm

DIGITAL INTERFACES

- Standard: RS232
- RS485 option
- BUS interface via module on request

Software

- EasyConfig configuration and display software
- EasyMeas includes recording and playback (option)

ASCII universal protocol to use with

- other hyperterminal software (not supplied by HEITRONICS)
- customer based Data exchange

Digital output option

- 2x open-collector-output
- Threshold detection Min, Max temperature value
- Alarm status

Digital input option

- Dry contact switch
- Operating voltage or open-collector
- Reset of memory, (de-)activate digital outputs or laser

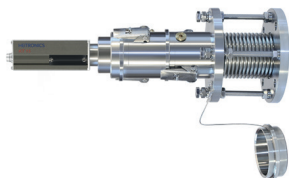
MODELS

MODEL	SPECTRAL RANGE	APPLICATION	
KT15.01 II	2.00 ... 2.70 μm	➤ High temperatures	Metals, metal oxide, Ceramic, Glass volume
KT15.02 II	2.00 ... 4.50 μm	➤ Low temperatures	
KT15.21 II	3.43 \pm 0.15 μm	➤ Thin plastic films with CH band ➤ Organic coating materials (oil, paint)	Plastic films
KT15.23 II	6.80 \pm 0.15 μm	➤ Thin plastic films (e.g. PE, PP, PVC)	
KT15.24 II	7.93 \pm 0.15 μm	➤ Thin plastic films (e.g. PET, PA, fluorocarbon)	
KT15.25 II	8.05 \pm 0.15 μm	➤ Thin plastic films (e.g. PTFE, PET, PVC)	
KT15.41 II	3.90 \pm 0.10 μm	➤ Glass volume, measurements through hot gases and flames	Glass, Quartz Gases
KT15.42 II	4.90 ... 5.50 μm	➤ Glass (processing), quartz	
KT15.43 II	7.50 ... 8.20 μm	➤ Glass, quartz, ceramics, thin glass	
KT15.45 II	7.50 ... 7.90 μm	➤ Ultra-thin glass and minimized influence of background temperatures	
KT15.61 II	4.26 \pm 0.13 μm	➤ Hot gases and flames (CO ₂ band)	Hot gases, flames
KT15.62 II	4.50 \pm 0.10 μm	➤ Hot gases and flames (CO ₂ and CO band)	
KT15.63 II	4.66 \pm 0.10 μm	➤ Hot gases and flames (CO band)	
KT15.67 II		➤ Boiler diameter < 4 m	Combustion gas
KT15.69 II		➤ Hot gases in incinerators, rotary kilns	
KT15.81 II	8.00 ... 10.00 μm	➤ Paper, textiles, rubber, wood, ceramics, thicker plastics (> 1 mm)	Materials without high surface reflectivity
KT15.82 II	8.00 ... 14.00 μm	➤ Painted or coated surfaces, asphalt, building materials	
KT15.83 II	8.00 ... 20.00 μm	➤ Electronic components, food, liquids	
KT15.85 II	9.60 ... 11.50 μm	➤ Meteorological, biological, agricultural studies, large measuring distances	
KT15.99 II		➤ Several spectral ranges available, temperature range depending on application	Special applications

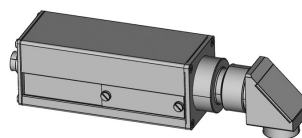
MOUNTINGS AND ACCESSORIES



KT15 II with SC15
LineScanner



Mounting flange



90° Deflection



Ex-proof housing

HEITRONICS

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Specifications are subject to change without notice