Infrared Radiation Pyrometer

KT12

Accurate, Non-Contact Temperature Measurements with Long Term Stability

Spectral Pyrometer
Small target size
Fast response

Chopped radiation method
for drift–free measurements

Reliable operation in
extremely
hostile environments

Accurate monitoring of
thermal processes

Infrared Radiation Pyrometers of the KT12-Series provide non-contact temperature measurements in the range from 0°C to 400 °C by intercepting the infrared (thermal) radiation emitted by all material objects.

The unique and patented HEITRONICS chopped radiation method eliminates thermal drift and compensates thermal shock. The resulting stability, combined with noise reduction signal processing circuits, are the key for the excellent temperature resolution, which allows the measurement of very small targets at short response times.

The all-metal housing of the KT12 with an external metric thread (M30*1.5) provides optimum immunity against electromagnetic interferences and full serviceability in industrial environments. A water-proof cable connector and a rigid mounting flange are included in the delivery package for convenient and reliable mounting.

The analog output signal of the KT12 is completely linearized and matches all industrial controllers or indicators with a 0 - 20 mA or 4 - 20 mA input.

Optional accessories and cooling jackets provide versatility and extend the permissible operating temperature limits up to 300°C in hostile industrial environments.

Temperature meter MS30

Laserpointer

HEITRONICS
Infrarot Messtechnik

Infrared Radiation Pyrometer KT12-Series

All Models

of the KT12–Series are delivered with two temperature ranges, 0°C to 200°C or 0°C to 400°C, two selectable response times of 50 msec and 1 sec, and two linearized selectable outputs, 0 to 20 mA and 4 to 20 mA. All parameters can be selected independent of each other.

Optical Configuration

Five different optical lenses are available for optimum selection of target sizes. The smallest target is 1 mm at a working distance of 25 mm.

Applications

cover the entire range of industrial processes, such as manufacturing and processing of plastics, drying and coating of paper or textiles, thermal forming and curing processes on a variety of materials, and, and...

Installation and Electrical Connections

The housing of the Infrared Radiation Pyrometer KT12 has an external metric thread M30*1.5. Two nuts are provided for mounting the instrument in an existing opening or to hold the rigid mounting flange with two drilled holes. All required electrical connections are combined in a water-proof flanged connector.

Accessories

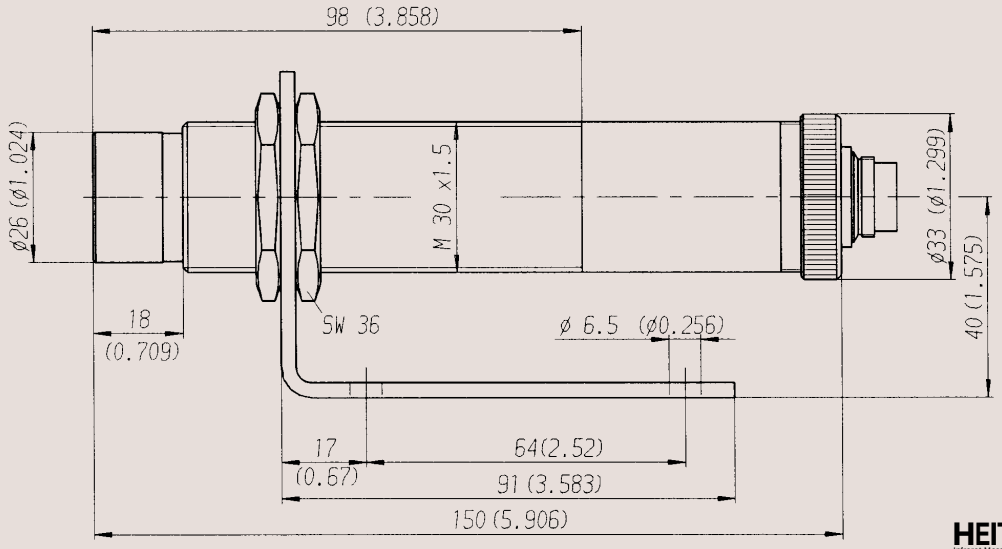
A variety of optional accessories are available for specific applications:
Optical viewfinder and alignment tools, air purge fittings to keep the lens clean, mounting accessories, protective cooling jackets for hostile environments, as well as blackbody radiators for calibration and testing the accuracy of the Infrared Radiation Pyrometer.

General Specifications

Temperature ranges	0 - 200°C or 0 - 400°C, switchable
Temperature resolution (NETD)	Depending on measured temperature and response time; typical value±0.3°C
Accuracy*	±1°C ±0.6% of the difference between target and instrument temperatures
•as a function of housing temperature	*±0.02%/°C for housing temperatures other than 25°C*
Spectral range	7 - 15 µm
Lenses*	Focus lenses with defined optical configurations
Target size diameters*	Depending on lens and instrument type. Smallest target size:
	KT12.M6 1.0 mm at 25 mm distance, KT12.L6 3.0 mm at 100 mm distance,
	KT12.N6 4.5 mm at 160 mm distance, KT12.K6 40 mm at 1,000 mm distance,
	KT12.Si distance-to-target ratio 4.5:1
Aiming on target*	Several optical and mechanical alignment tools, e.g. Laserpointer
Emissivity	Adjustable from 0.5 to 1.0 by potentiometer
Response time	50 msec or 1 sec; switchable
Analog output	0 - 20mA or 4 - 20mA; switchable
Power requirements	24 VDC, ±10% / 80 mA
Permissible operating temperature*	0°C - 70°C, with cooling jacket up to 300°C
Storage temperature	-20 bis 85° C
Protective class/Weight	NEMA4 (equivalent to IP65–DIN 4005–) / approximately 0.28 kg
Housing	Metal tube with external thread M30*1.5

**) Additional data are listed in the KT12 Supplements"Technical Data KT12"*

Housing Dimensions in mm (inch)



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