TEMPSENS

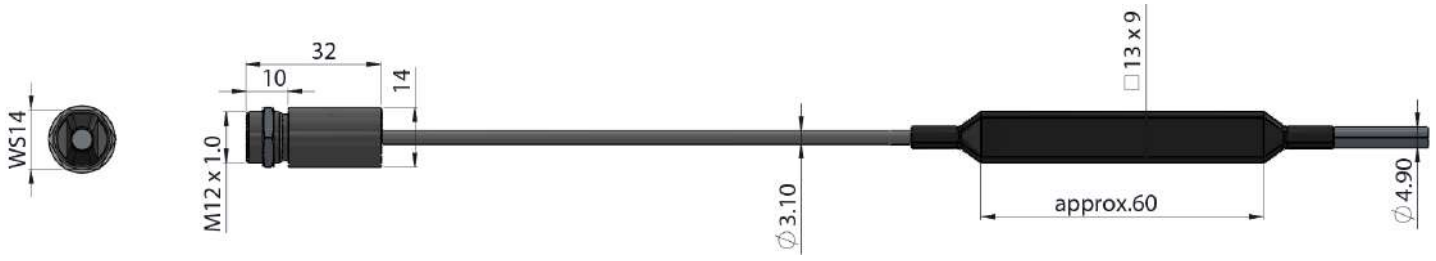
TECHNICAL DATASHEET

Edge Micro
-40 to 1100°C
Robust miniature pyrometer

Features

- Short response time of 20 ms for fast inline processes
- Excellent temperature stability for high precision, even with strongly fluctuating ambient temperatures
- Preconfigured current or voltage analog output (switchable via software)
- Robust sensor head design for high-temperature applications up to 120°C
- Alarm output
- Parallel digital and analog operation
- Fast and easy installation with preconfigured settings
- High measurement accuracy and repeatability
- Wide range of optical resolutions for different measuring distances
- Adjustable emissivity for accurate measurement of various materials
- Fast signal processing for dynamic temperature monitoring
- High signal stability in harsh industrial environments
- Simple integration into existing control systems

Pyrometer Drawing



*all dimensions in mm

Spot Sizes

Standard Focus (in mm)								
SF 15	15:1	6.5	11.5	14	18	23.5	29.5	35.5
Distance		0	100	200	300	400	500	600

Close Focus (when using the screwable CF lens, in mm)								
CF 15	15:1	6.5	3.7	0.8	4.4	8.1	11.8	15.4
Distance		0	5	10	15	20	25	30

= smallest spot size / focal point (mm)

The ratio D:S (example 15:1, see table) describes the ratio Distance (distance from the front edge of the sensor to the measuring object) to Spot size (measurement spot size)

Technical Specifications

Model		Micro
Optical resolution		15:1
Measuring range[1]		-40 °C up to 600 °C (1100 °C)
Spectral range		8 to 14 µm
System accuracy[2]		±1.0 % or ±1.0 °C
Repeatability[2]		±0.5 % or ±0.5 °C
Temperature resolution (NETD)[3]		50 mK
Response time[4]		20 ms
Emissivity		0.100 to 1.100
Transmittance		0.100 to 1.100
Signal processing		Intelligent averaging, Min/Max, Hold function with threshold/hysteresis (adjustable via software)
Supply voltage		5 ... 30 VDC
Max. current consumption		⩽ 4 mA (voltage output) / ⩽ 20 mA (2-wire current output)
Digital interface		3.3V-LVTTL or TTL to USB Converter
Analog output[5]		4 ... 20 mA (two-wire current output) / 0 ... 5 V; 0 ... 10 V (voltage output) freely scalable within the measuring range
Switching output		Open collector for alarm; 500 mA
Connection		Integrated cable with open ends (ferrules); standard length 0.5 m sensor and connection cable; optional sensor cable with 3 m, 6 m or 15 m and connection cable with 3 m available
Mounting	Sensor	Direct fastening via integrated M12x1 thread or fastening using the hexagon nut included in the scope of delivery

Model			Micro
Temp. range	Sensor	Storage	-40 ... 85 °C
		Operation	-20 ... 120 °C
	Controller	Storage	-40 ... 85 °C
		Operation	-20 ... 80 °C
Humidity			10 % RH ... 95 % RH (non-condensing)
Shock (DIN EN 60068-2-27)			50g, 11 ms, each axis
Vibration (DIN EN 60068-2-6)			3g / 11 ... 200 Hz, each axis
Protection class (DIN EN 60529)	Sensor		IP65
	Controller[7]		IP65
Material	Sensor		Stainless steel (1.4404)
Weight			approx. 20 g(sensor only)
Control and indicator elements[6]			Sensor configuration optionally possible via InfraSoft

[1] Measuring range can optionally be extended to 1100 °C
[2] At ambient temperature of 24±2 °C; whichever is greater (ε=1)
[3] With a time constant of 200 ms and an object temperature of 200 °C
[4] 0 - 90 % energy; adjustable via software
[5] Preconfigured for current or voltage on delivery; switchable via InfraSoft (requires USB converter); voltage scaling depending on the supply voltage
[6] Access with InfraSoft requires USB converter (see accessories)

Accessories

TM-AP8 Air purge collar with 8 mm hose connection

TM-APL Air purge collar laminar

TM-AP Air purge collar

TM-USB A TTL to USB Converter

TM-TA Pipe Adapter

TM-FB Mounting Bracket

TM-T20 Reflection Protection Tube, M12x1 External Thread