

## Technical Data Sheet

# MTS05 II

## Infrared Radiation Thermometer

- Miniature stainless steel sensor head, IP65
- Wide temperature range from -40 °C ... 700 °C
- Ambient temperature up to 180 °C / 200 °C
- Interchangeable calibrated sensor heads
- Field of view from 2 mm on



### Measurement specifications

<b>Temperature range:</b>	-40 ... 700 °C
<b>Spectral response:</b>	8 ... 14 μm
<b>Measurement uncertainty:</b>	± 1 °C plus 0.8 % of the temperature difference between measured target and instrument
<b>Temperature resolution (NETD):</b>	Depending on the measured temperature and the response time Typical value is 0.1 °C (at 180 ms, 23 °C ε = 1)
<b>Reproducibility:</b>	± 0.5 % of the measured temperature or 0.5 °C
<b>Field of view:</b>	Distance-to-target-ratio 10:1 or 2:1 and Ø 2 mm at 17 mm distance with optic system
<b>Response time (t<sub>90</sub>):</b>	Adjustable from 180 ms to 30 s (0.5 s; 1 s; 2 s; 5 s; 10 s; 30 s)
<b>Temperature unit:</b>	°C or °F
<b>Emissivity:</b>	0.100 ... 1.000 (1.200) in 0.001 steps
<b>Lens:</b>	Ge
	Distance-to-target-ratio 10:1 with lens or 2:1 without lens

### Electrical specifications / Functions

<b>Analog output:</b>	4 scalable output signals, temperature linear 0 ... 5 V, 0 ... 20 mA, 4 ... 20 mA
<b>Function:</b>	Thermocouple type K or J. Actual, Max or Min value, scalable temperature span from 51 K
<b>Alarm relay:</b>	Programmable with hysteresis ( 50 VDC, 0.2 A)
<b>Digital input option:</b>	Dry contact switch, voltage, open-collector
<b>Function:</b>	Reset of memory, (de-)activate digital outputs
<b>Serial interface:</b>	RS232 interface, bi-directional 1.200 ... 19.200 bps, for programming and data transfer
<b>Programmable via serial interface:</b>	All parameters are configurable via interface: Temperature range, analog output 0/4 ... 20 mA, 0 ... 5 V, thermocouple type J and K, actual value or Min and Max value, integrated Min and Max value memory including delete function, emissivity setting, reflected ambient temperature, alarm relay with hysteresis
<b>Operating voltage:</b>	DC: 10 ... 30 V
<b>Power consumption:</b>	< 60    ≤ 1.8 W

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### General specifications

<b>Storage temperature:</b>	-20 ... 70 °C
<b>Permissible ambient temperature:</b>	0 ... 85 °C (optional with air-cooling 0 ... 250 °C, type H: 0 ... 180 °C)
<b>Protection class:</b>	IP65 distance-to-target-ratio 10:1 with optic system IP20 distance-to-target-ratio 2:1 without lens
<b>Sensor Head:</b>	Stainless steel
<b>Signal processor:</b>	Varnished aluminum with display
<b>Display:</b>	Display indicates temperature / -unit, emissivity, 4-figure, LCD, illuminated
<b>Weight:</b>	Appr. 320 g

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

■ Standard function; □ Option

#### Accessories:

- <sup>2</sup> Manual MTS05 II
- EasySensor:  
Software for parametrization, collecting measurement data, data storing, data evaluation
- Sensor head cable 3 m or 5 m length

□



Cooling and air purge assembly for cable and sensor head



Air purge housing for sensor head 10:1 and 2:1 (not with optic system)

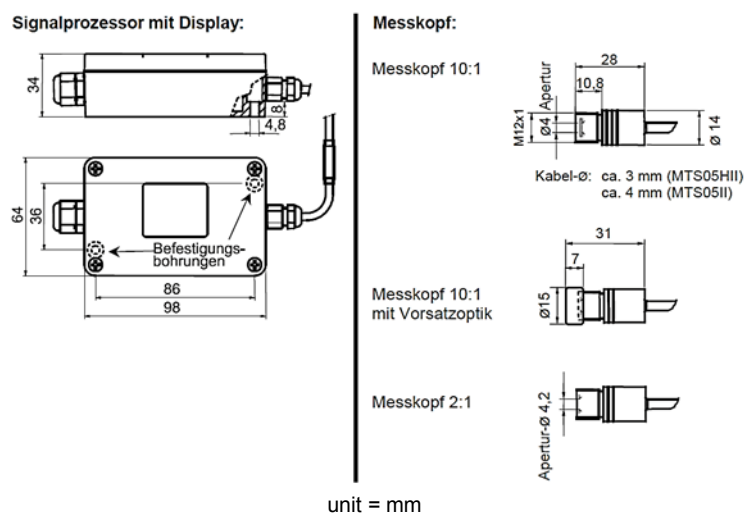


Mounting bracket for sensor head

#### Bus interface:

- RS485 interface, addressable up to 32 sensors, 1.200 ... 19.200 bps, for programming and data transfer

### Dimensions



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

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