

MTS05 II

Miniature IR Temperature Sensor MTS05 II

- Rugged stainless steel housing, IP65
- Wide temperature range from -40 °C to 700 °C
- Very fast response times ≥ 180 ms (programmable)
- Fields-of-view as small as 2 mm
- Interchangeable calibrated sensor heads
- Cable length 3 m or 15 m
- Type H up to 180 °C ambient temperature
- Ambient temperature up to 200 °C (with air cooling)



GENERAL SPECIFICATIONS

Temperature range:	-40 °C ... 700 °C
Temperature resolution (NETD):	Depends on measuring temperature and response time, typical value 0.1 °C, (at 180 ms, 23 °C, $\epsilon = 1$)
Accuracy (uncertainty):	± 1 °C plus 0.8% of the difference between target and sensor head temperature
Reproducibility:	± 0.5 % of measured temperature or 0.5 °C
Signal processor	<p>Functions: Programmable via serial interface and keyboard Temperature range, emissivity, ambient temperature, analog output, analog output function, response time, temperature unit, valley/peak picker, clear time, alarm relay (temperature and hysteresis, bus address)</p> <p>Emissivity: 0.100 ... 1.000 (1.200) in 0.001-steps</p> <p>Response time: From 180 ms to 30 s (0.5; 1; 2; 5; 10; 30 s)</p> <p>Temperature unit: °C or °F</p> <p>Analog output (Hardware): 4 scalable output signals, temperature linear 0 - 5 V, 0 - 20 mA, 4 - 20 mA Thermocouple Typ K or J</p> <p>Analog output (Function): Actual value, max-value or min-value, temperature span 51 K programmable</p> <p>Valley/peak picker programmable: ON/OFF Reset: auto, external or reset time (0.1; 0.25; 0.5; 1; 5; 25 s)</p> <p>Output sensor head temperature: 10 mV/°C or 10 mV/°F</p> <p>Serial interface: RS232-interface, bi-directional, 1.200 to 19.200 bps, for programming and data transfer</p> <p>Bus Interface: RS485-interface, addressable up to 32 sensors, 1.200 to 19.200 bps, for programming and data transfer</p> <p>Alarm relay: Programmable with hysteresis (50 VDC, 0.2 A)</p> <p>Operating voltage: 10 to 30 VDC</p> <p>Power consumption: < 60 mA</p> <p>Permissible ambient temperature: 0 to 65 °C</p> <p>Storage temperature: -20 to 70 °C</p> <p>Protective class: IP65</p> <p>Housing: Varnished aluminium</p>
Integrated Display	Display indicates temperature/ -unit, emissivity, four-figure, LCD, illuminated
Sensor head	<p>Spectral range: 8 to 14 μm</p> <p>Field-of-view-diameter: From \varnothing 2 mm, with close-up-lens, distance-to-target-ratio 10:1 (Ge-lens) or 2:1</p> <p>Permissible ambient temperature: 0 to 85 °C, with air cooling 0 to 200 °C, Type H: 0 to 180 °C</p> <p>Storage temperature: -20 to 85 °C</p> <p>Protective class: IP65 (distance-to-target-ratio 10:1); IP20 (distance-to-target-ratio 2:1)</p> <p>Housing: Stainless steel</p>
EASYSensor	Software for parameter setting, data-record, -memory and -evaluation

MINIATUR IR Temperature Sensor MTS05 II

Functions

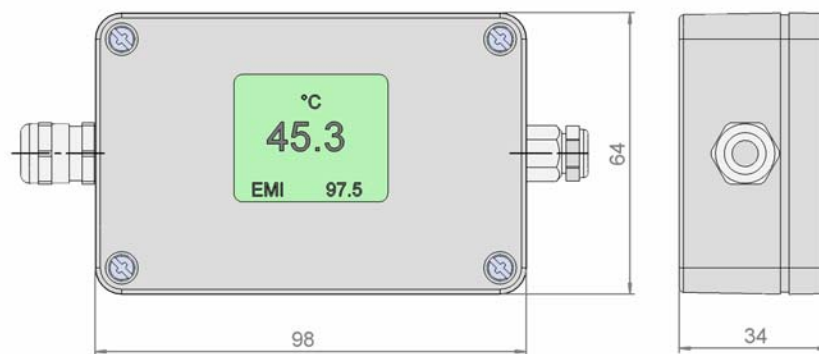
- All parameters configurable via serial interface:
- Temperature range for analog output
 - Analog output 0/4 - 20 mA, 0 - 5 V, thermocouple Type J and K, actual value or min/max-value
 - Integrated valley/peak picker with clear function
 - Emissivity setting
 - Reflected environmental temperature
 - Alarm relay with hysteresis

Applications

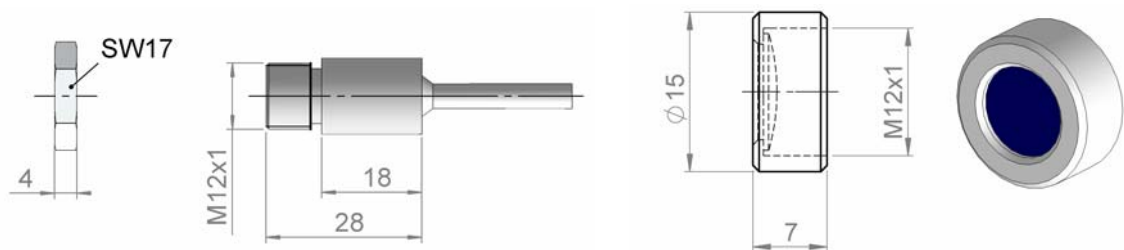
- Metal oxides / ceramics -40 to 700 °C
- Plastic > 1 mm 0 to 400 °C
- Glass / quartz-surface 0 to 700 °C
- Natural materials, varnish, chemicals -40 to 700 °C (Paper, textiles, asphalt, building materials, food)

DIMENSIONS (in mm)

SIGNAL PROCESSOR with display



SENSOR HEAD

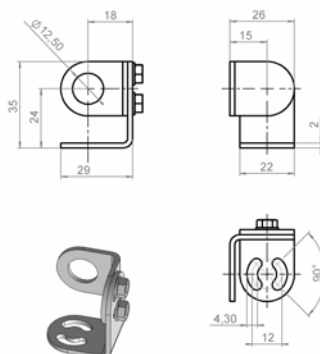
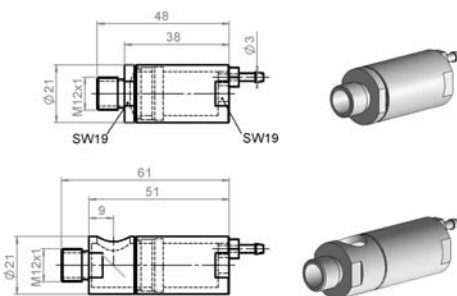


Close-up-lens

Air purge for sensor head 10:1 and 2:1

Adjustable mounting angle

ACCESSORIES and mounting device



Air purge with 90°-deflection for sensor head 10:1