

M12 Stainless Steel RTD Temperature Transmitters



M12TXSS Series



- ✓ Programmable Transmitter
- ✓ M12 Connection
- ✓ 4 to 20 mA Output
- ✓ -50 to 120°C (-58 to 248°F)

RTD 100 Ω sensor with built-in transmitter is programmable by a computer. The configuration kit required for programming is M12TX-CONFIG-SET. This unique probe is ideal for areas with space limitations where traditional head connections are too large to fit. The M12 thread design offers a secure industrial connection.

Specifications

Body: Stainless steel AISI 316L

Probe Length: 13 mm (0.51") and 24 mm (0.94")

Diameter: \varnothing 3 mm (0.1")

Probe Type: Thermowell AISI 316L SS

Probe Minimum Bending Radius: Three-times the outer diameter [except the sensing tip which length is 30 mm (1.2")]

Connection: 1/8 NPT male thread

Sensor: RTD PT100 class A up to 300°C in accordance to IEC751

Range: -50 to 120°C (-58 to 248°F)

Tmax. Electronic: 80°C (176°F)

Sensor Break Monitoring:

Selectable: Upscale (>21.0 mA) or downscale (<3.6 mA) action

Sensor Short-Circuit: Fixed to downscale (<3.6 mA) action

Output:

Signal: 4 to 20 mA

Factory Default: 4 to 20 mA = 0 to 100°C (32 to 212°F)

Permissible Load: 700 Ω @ 24 Vdc
[$R_{Lo} = (V_{supply} - 8.5) / 0.020$]

Response Time (90%): <50 ms

Isolation In-Out: Non-isolated

Power Supply: 8.5 to 32 Vdc (polarity protected)

Environment Conditions:

Temperature: -40 to 80°C (-40 to 176°F) for plastic body

Relative Humidity: 0 to 100%

EMC: In accordance to EN 61326



M12TXSS-PT100-13MM-1/8NPT



M12TXSS-PT100-24MM-1/8NPT

Degree of Protection: IP65 and IP67 in accordance to IEC60529

Accuracy:

Transmitter: Maximum of $\pm 0.2^\circ\text{C}$ or $\pm 0.2\%$ of span

Sensor: Class A in accordance to IEC751

Temperature Influence [Deviation from 20°C (68°F)]: Maximum of $\pm 0.3^\circ\text{C}/25^\circ\text{C}$ (77°F) or $\pm 0.3\%$ of span/25°C (77°F)

Supply Voltage Influence: Negligible

Range Configurations: It is possible set the input temperature range (span) by the M12TX-CONFIG-SET configuration kit (PC with OS Windows required)

Zero Adjustments: Any value between -50 to 50°C

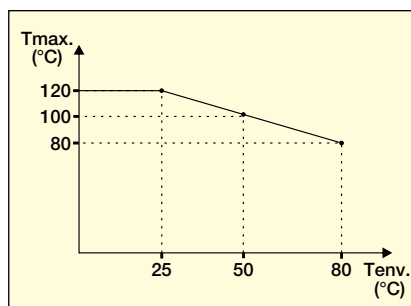
Minimum Span: 50°C (122°F) [if the zero value is set between one of these values: -40°C (-40°F), -20°C (-4°F), 0°C (32°F), 20°C (68°F), 40°C (104°F), the minimum span is 20°C (68°F) rather than 50°C (122°F)]

Sensor Error Compensation:

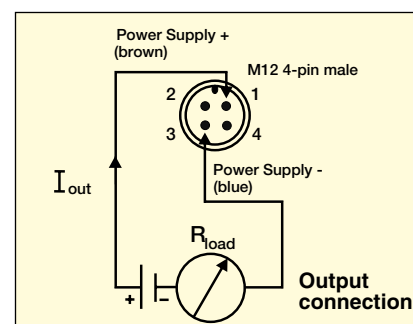
Over 2 points (maximum 1% of span)

Factory Setting: 0 to 100°C/sensor break >21 mA (upscale)

Response Time: Diameter 3 mm <3.5 seconds, diameter 6 mm <13 seconds (test in water to IEC751- time for reaching 63.2% of instantaneous temperature change)



Both models shown actual size.



M12TX-CONFIG-SET Specifications

Interface: PC connection through the USB port with connection cable included in the kit

M12TX + Connection: Through extension cable with M12 female connector included in the kit

Note: The transmitter is powered from the USB interface

Programming Software:

M12TX + Configurator for Windows® 10.0 or higher.

Configurable Parameters:

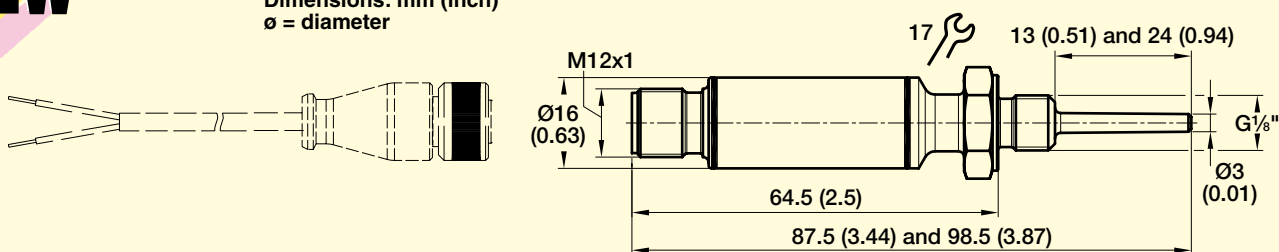
Temperature range (-50 to 800°C), measurement unit (°C/°F/°K), sensor break monitoring (upscale/downscale), identifying name of the transmitter (16 alphanumeric characters), input sensor error compensation over one or two points

Supported Languages: Italian, English, French, German, Swedish

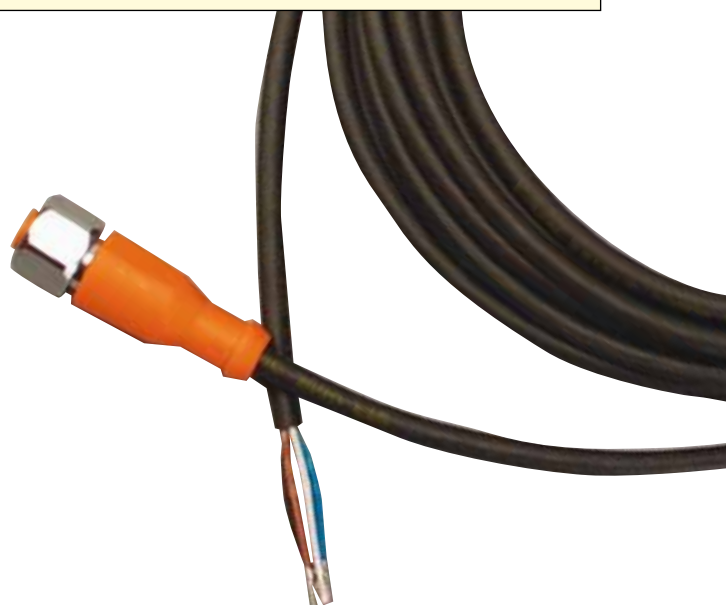
Included in the Kit: Interface USB, connection cable between USB port and interface, connection cable between interface and M12TX + transmitter, memory-stick USB with installation software, introductory manual for software installation and USB



Dimensions: mm (inch)
 Ø = diameter



M12TX-CONFIG-SET shown smaller than actual size.



M12C-PUR-4-S-F-5 shown smaller than actual size.

Standard

To Order	
Model No.	Description
M12TXSS-PT100-13MM-1/8NPT	Temperature transmitter with M12 input connector for Pt100, output 4 to 20 mA standard, 3 mm (0.118") diameter, 13 mm (0.51") long, 1/8 NPT
M12TXSS-PT100-24MM-1/8NPT	Temperature transmitter with M12 input connector for Pt100, output 4 to 20 mA standard, 3 mm (0.118") diameter, 24 mm (0.94") long, 1/8 NPT

Metric

Model No.	Description
M12TXSS-PT100-13MM-G1/8	Temperature transmitter with M12 input connector for Pt100, output 4 to 20 mA standard, 3 mm (0.118") diameter, 13 mm (0.51") long, G1/8 thread
M12TXSS-PT100-24MM-G1/8	Temperature transmitter with M12 input connector for Pt100, output 4 to 20 mA standard, 3 mm (0.118") diameter, 24 mm (0.94") long, G1/8 thread

Comes complete with operator's manual.

Accessories

Model No.	Description
M12C-PUR-4-S-F-10	Polyurethane cable, straight 4-pin M12 female connector one end, flying leads one end, 10 m (32.8') long
M12TX-CONFIG-SET	Configuration kit for M12TXSS, USB serial interface, connection cables, programming software for Windows®