

# Compact and Programmable M12 RTD Temperature Transmitters



## M12TXC Series



M12TXC-PT100-3MM-13MM-1/8NPT



M12TXC-PT100-3MM-24MM-1/8NPT

Both models shown smaller than actual size.

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

RTD 100Ω sensor with built-in transmitter and 1/8 NPT 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 and 24 mm (0.51 and 0.94")
- Diameter:** 3 mm (0.12")
- Probe Type:** Thermowell AISI 316L SS
- Process Connection:** 1/8 NPT male thread or G1/8 thread
- Connection:** M12x1 male in accordance to VDE0627 (output connection)
- Sensor:** RTD PT100 class A up to 300°C in accordance to IEC751
- Range:** -50 to 110°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:** 4 to 20 mA
- Factory Default:** 4 to 20 mA = 0 to 100°C (32 to 212°F)
- Permissible Load:** 700 @ 24 Vdc [RLo= (Vsupply-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
- Degree of Protection:** IP65 and IP67 in accordance to IEC60529

### Accuracy:

- Transmitter:** Maximum of ±0.2°C or ±0.2% of span
- Sensor:** class A in accordance to IEC751
- Temperature Influence (Deviation from 20°C):** Maximum of ±0.3°C/25°C or ±0.3% of span/25°C

### 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 (-58 to 122°F)

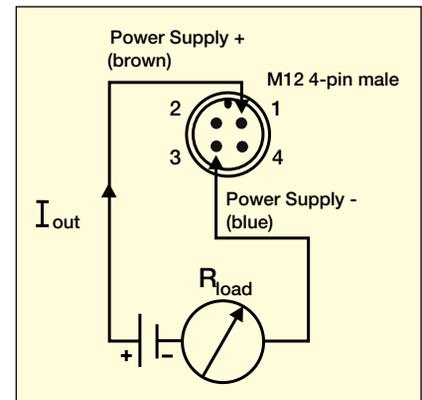
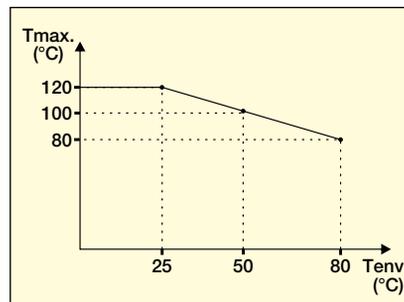
**Minimum Span:** 50°C [if the zero value is set between one of these values: -40°C, -20°C, 0°C, 20°C, 40°C (-40°F, -4°F, 32°F, 68°F, 104°F), the minimum span is 20°C (68°F) rather than 50°C (122°F)]

### 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 (0.12") <3.5 seconds, diameter 6 mm (0.24") <13 seconds (test in water to IEC751- time for reaching 63.2% of instantaneous temperature change)



## 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:

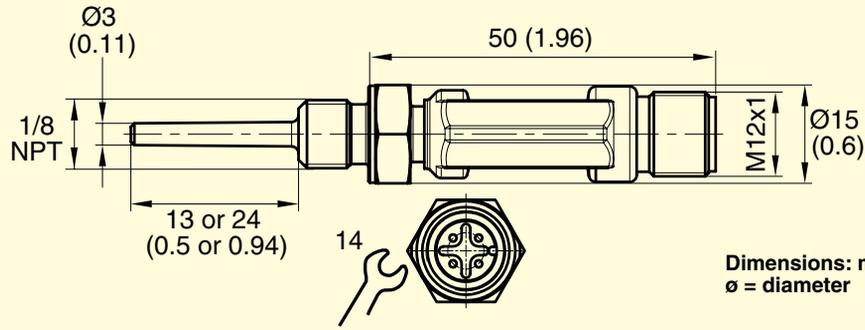
M12TX + Configurator for Windows® 10.0 or higher.

### Configurable Parameters:

Temperature range [-50 to 800°C (-58 to 1472°F)], 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

### Standard

#### To Order

Model No.	Description
M12TXC-PT100-3MM-13MM-1/8NPT	Temperature transmitter, output 4 to 20 mA, 3 mm (0.11") diameter, 13 mm (0.5") long, 1/8 NPT
M12TXC-PT100-3MM-24MM-1/8NPT	Temperature transmitter, output 4 to 20 mA, 3 mm (0.11") diameter, 24 mm (0.94") long, 1/8 NPT

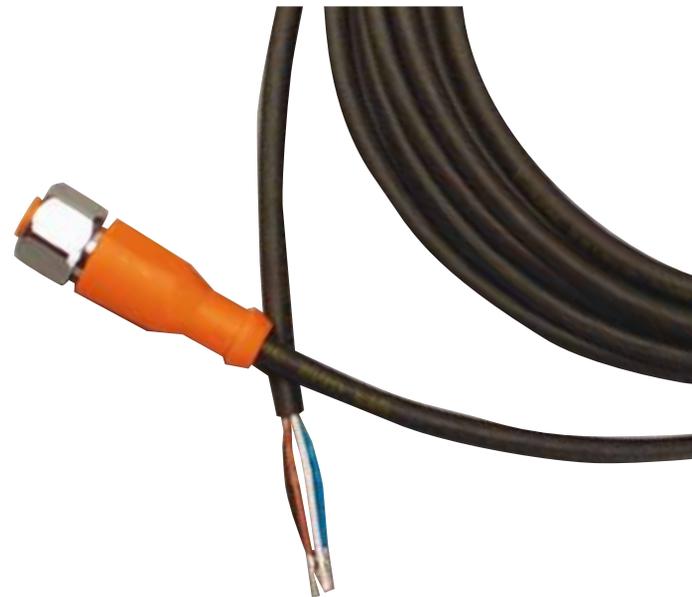
### Metric

Model No.	Description
M12TXC-PT100-3MM-13MM-G1/8	Temperature transmitter, output 4 to 20 mA, 3 mm (0.11") diameter, 13 mm (0.5") long, G1/8 thread
M12TXC-PT100-3MM-24MM-G1/8	Temperature transmitter, output 4 to 20 mA, 3 mm (0.11") diameter, 24 mm (0.94") long, G1/8 thread

Ordering Examples: M12TXC-PT100-3MM-13MM-1/8NPT, temperature transmitter, output 4 to 20 mA, 3 mm diameter, 13 mm long.  
M12TXC-PT100-3MM-24MM-1/8NPT, temperature transmitter, output 4 to 20 mA, 3 mm diameter, 24 mm long.



M12TX-CONFIG-SET  
shown smaller than  
actual size.



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

### 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 M12TXC, USB serial interface, connection cables, programming software for Windows®