Compact and Programmable M12 RTD Temperature Transmitters

M12TXC Series

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

RTD 1000Ω sensor with built-in transmitter and 1/8 NPT is programmable by a computer. The configuration kit required for programming is M12TX-CONFIG. 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 G 1/8" 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 downsacle (<3.6 mA) action
- Sensor Short-Circuit: Fixed to downsacle (<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 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)

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, introductive manual for software installation and USB
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

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.

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