

Mini Temperature Transmitter With M12 Connectors

TX-M12-RTD Series



- ✓ M12 Connectors for Fast Connection of Sensors and Instrumentation
- ✓ Use with 2, 3 or 4-Wire Pt100, Pt500 or Pt1000 Sensors
- ✓ -40 to 85°C (-40 to 185°F) Ambient Operating Temperature
- ✓ -200 to 850°C (-328 to 1862°F) Measurement Range
- ✓ Small, 38 mm Diameter Housing; Weighing Just 100 Grams
- ✓ 4 to 20 mA or 0 to 10 Vdc Output Models
- ✓ IP67 Stainless Steel Enclosure

OMEGA's TX-M12-RTD Series transmitters offer improved performance over conventional in-head transmitters yet are a fraction of their size and weight. Integral M12 connectors maintain IP67 protection and connection integrity whilst allowing for a quick and simple change of sensor. Two models are available with either 4 to 20 mA or 0 to 10 Vdc output. Default scaling for the full output is 0 to 100°C (32 to 212°F), other ranges can be scaled at time of purchase for an additional charge; or the optional USB programming module (USB-CONFIG-UNIT) will allow the end user to perform scaling.

The TX-M12-RTD transmitter is ideal for use with OMEGA's PR-21 and PR-22 Series RTD probes, or any RTD probes with an M12 "A" coded Pin style connector which connects directly to the TX-M12-RTD sensor input. Other RTD probes may be easily connected using the M12-R-M-FM or M12-S-M-FM plug style field mountable connectors which have screw terminals connections

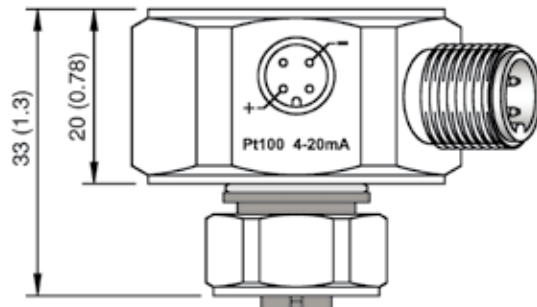
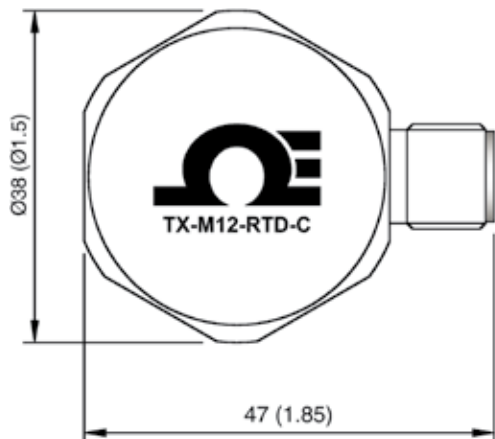


TX-M12-RTD-C transmitter shown larger than actual size.



TX-M12-RTD-C.

Dimensions: mm (in) Ø = diameter



Specifications

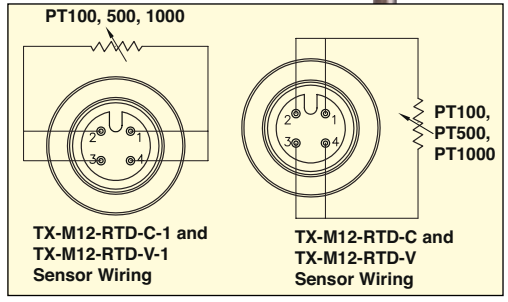
Update Time: 200 mS
Response Time: 0.5 seconds
Warm-up Time: 1 minute to full accuracy
Sensor Connection: 2, 3 or 4-wire M12
Minimum Span: 25°C
Thermal Drift
 Pt100: 0.013 Ω/°C
 Pt500/Pt1000: 0.063 Ω/°C
Accuracy: ±0.2°C + (0.05%) + output accuracy
Excitation Current: <200 uA
Lead Resistance Effect: 0.002°C/Ω
Maximum Lead Resistance: 20 Ω per leg
Operating Ambient: -40 to 85°C; 10 to 90% RH (non condensing)
Configuration Ambient: 10 to 30°C
Weight: Approx 100 g
4 to 20 mA Output Model
Output Type: 2-wire, 4 to 20 mA current loop
Output Range: 4.0 to 20.0 mA
Output Connection: M12 connector
Output Limits: 3.8 to 21.5 mA
Accuracy: mA output/2000 or 5 uA (whichever is the greater)
Loop Voltage Effect: 0.2 uA/V
Thermal Drift: 1 uA/°C
Maximum Output Load: [(Vsupply-10)/20] KΩ

TX-M12-RTD-C, shown with M12C-SIL-4-S-F-3 cable.



USB-CONFIG-UNIT, allows re-scaling using a PC

Start Up Time 4 Seconds: I out < 4 mA during start up
Power Supply: 8 to 30 Vdc
0 to 10 Vdc Output Model
Output Type: 3-wire voltage
Output Range: Selectable within 0 to 10V
Current Drive: 2 mA max
Output Connection: M12 connector
Output Limits: -0.1 to 10.5V
Accuracy: Voltage output/1000 or 5 mV (whichever is the greater)
Thermal Drift: 1 mV/°C
Minimum Output: Load 5000 Ω
Power Supply: 12 to 30 Vdc



To Order	
Model Number	Description
TX-M12-RTD-C	4 to 20 mA output, connect to PR-21, -2 wiring, PR-22 and P-L-M12 sensors
TX-M12-RTD-C-1	4 to 20 mA output, connect to PR-21, -1 wiring, PRS-M12 and PR-25AP sensors
TX-M12-RTD-V	0 to 10 Vdc output, connect to PR-21, -2 wiring, PR-22 and P-L-M12 sensors
TX-M12-RTD-V-1	0 to 10 Vdc output, connect to PR-21, -1 wiring, PRS-M12 and PR-25AP sensors
M12C-SIL-4-S-F-3	Extension cable with straight socket M12 connector and 3 meters of silicone insulation cable
PR-22-3-100-A-1/8-0600-M12	Pt100 RTD probe, 1/8" diameter x 6" L with overmolded M12 plug connector
Accessories	
Model Number	Description
USB-CONFIG-UNIT	Software and interface/cable to allow scaling of transmitters with a PC
FS20	Factory scaling chargefor ranges other than the 0 to 100°C, please specify range required

Comes complete with transmitter and operator's manual (USB-CONFIG-UNIT interface cable sold separately).
Ordering Examples: TX-M12-RTD-C, RTD transmitter set for a Pt100 sensor input, and 4 to 20 mA output over the range of 0 to 100°C (32 to 212°F).
 TX-M12-RTD-V, RTD transmitter set for a Pt100 sensor input, with a 0 to 10 Vdc output over the temperature range of 0 to 100°C (32 to 212°F) and M12C-SIL-4-S-F-3, M12 extension cable with 4-conductor #24 AWG stranded, silicone insulated and jacketed wire, straight socket style A-coded M12 connector one end, stripped leads the other, 3 meters long.