

Mini Temperature Transmitter With M12 Connectors



TEMPERATURE

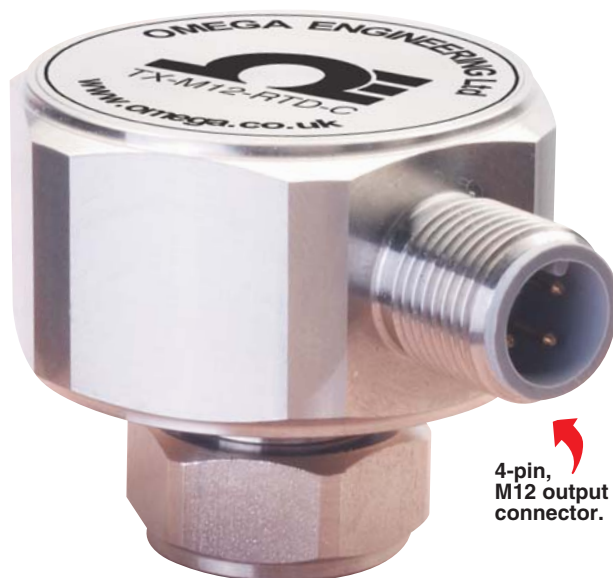
TX-M12-RTD



- ✓ M12 Connectors for Fast Connection of Sensors and Instrumentation
- ✓ Use with 2 or 3-Wire Pt100, Pt500 or Pt1000 Sensors
- ✓ -40 to 85°C Ambient Operating Temperature
- ✓ -200 to 850°C 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 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, 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.

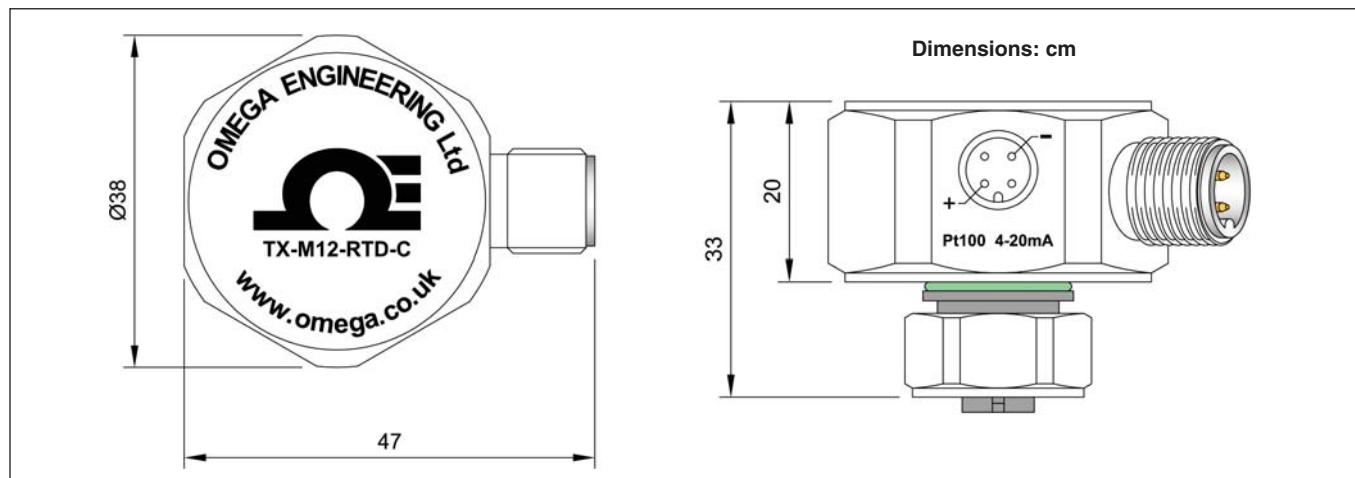
The TX-M12 transmitter is ideal for use with Omega's PR-21 and PR-22 Series RTD probes which connect directly to the TX-M12 sensor input. Other RTD probes may be easily connected using the M12-R-M-FM plug, which has screw terminals for convenient wire connection.



4-pin, M12 output connector.



TX-M12-RTD-C,
actual size





Specifications

General

Update Time: 200 mS

Response Time: 0.5 seconds

Warm-up Time: 1 minute to full accuracy

Sensor Connection: 2 or 3 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] K Ω

Start Up Time 4 Seconds:

I out < 4 mA during start up

Power Supply: 8 to 30 Vdc

TX-M12-RTD-C, shown with
M12C-SIL-4-S-F-3 cable,
(see omega.co.uk/m12c)



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

PR-22-3-100-A-M3-150-M12 probe,
(see omega.co.uk/pr-22)

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

AVAILABLE FOR FAST DELIVERY!

To Order (Specify Model Number)

Model No.	Description
TX-M12-RTD-C	Mini transmitter with M12 connectors and current output, scaled for Pt100Ω 0 to 100°C input = 4 to 20 mA output.
TX-M12-RTD-V	Mini transmitter with M12 connectors and voltage output, scaled for Pt100Ω 0 to 100°C input = 0 to 10 Vdc output.

Accessories

Model No.	Description
PR-21G-3-100-A-M6-0150-M12	Pt100 probe, 150 mm long, 6 mm Dia with G½ process mounting thread and M12 connector.
PR-22-3-100-A-M3-150-M12	Pt100 probe, 150 mm long, 3 mm Dia with moulded M12 connector.
M12C-SIL-4-S-F-3	3 m long cable with female M12 connector one end. For signal output.
M12-R-M-FM	Right-angled M12 plug with screw terminals. For RTD input.
M12-R-F-FM	Right-angled M12 socket with screw terminals. For signal output.
USB-CONFIG-UNIT	Software and interface/cable, to allow scaling of transmitters with a PC.
FS20	Factory scaling charge for ranges other than 0 to 100°C, please specify range required.

Ordering Example: TX-M12-RTD-C, RTD temperature transmitter, set for Pt100 0 to 100°C input = 4 to 20 mA output, PR-22-3-100-A-M3-150-M12, Pt100 probe, 150 mm long, 3 mm Dia, M12C-SIL-4-S-F-3, 3 m of 4-core silicon insulated cable with M12 female connector on one end and stripped leads at the other end.

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