

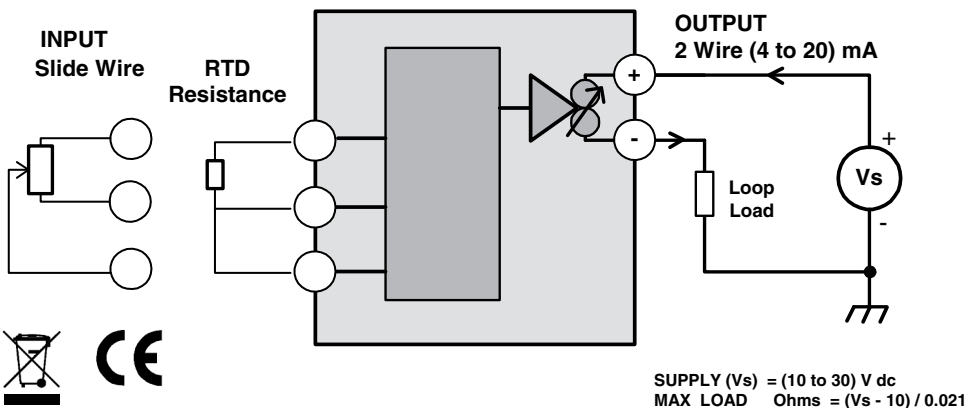
## TX-M12-RTD-C

RTD / Resistance or Slide Wire Input : Two Wire (4 to 20) mA Output

INSTRUCTION  
SHEET

MUK002/0611

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### 1.0 Description

The product is a cost effective "smart" transmitter that accepts resistance signals including RTD sensors and converts them to a standard industrial (4 to 20) mA transmission signal over a user programmed range.

PC configuration allows the user to select Sensor Type, Range, Units and Error Signal without requiring calibration equipment. Configuration is performed quickly using our new USB port driven configurator by simply connecting to the units loop and following the software instructions. Configuration set up may be saved as a file on the PC for later use. Additionally, the user may read live process data when connected to the PC, allowing for sensor calibration, where the user can enter an offset value to correct any sensor deviation.

### 2.0 Important safety Information

To maintain CE compliance all input wires must be less than 3 metres. The product contains no user serviceable parts, or internal adjustments. No attempt should be made to repair this device. Faulty units must be returned to supplier or manufacturer for repair or replacement. This product must be installed by competent qualified personnel. All electrical wiring must be installed to comply with the area standards, regulations. Before attempting electrical connection ensure all supplies are switched off.

ABSOLUTE MAXIMUM OPERATING CONDITIONS :-

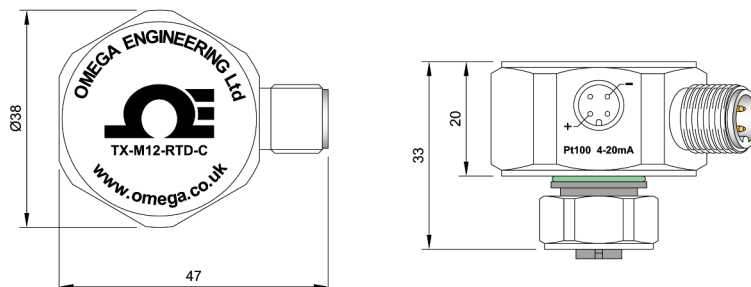
Supply 30 V dc ( reverse protected to -30 V dc)

Supply Current on over voltage + 100 mA (when supply exceeds 30 V dc protection the device will conduct)

Ambient -40 to + 85 °C

### 3.0 Mechanical Details

The unit must be installed with adequate protection from corrosive atmospheres. The correct type of M12 mating connectors should be used to maintain IP67 protection. Care must be taken with device location to ensure the ambient temperature does not exceed the specified operating temperature.



Every effort has been taken to ensure the accuracy of this document, however we do not accept responsibility for damage, injury, loss or expense resulting from errors and omissions and we reserve the right of amendment without notice.

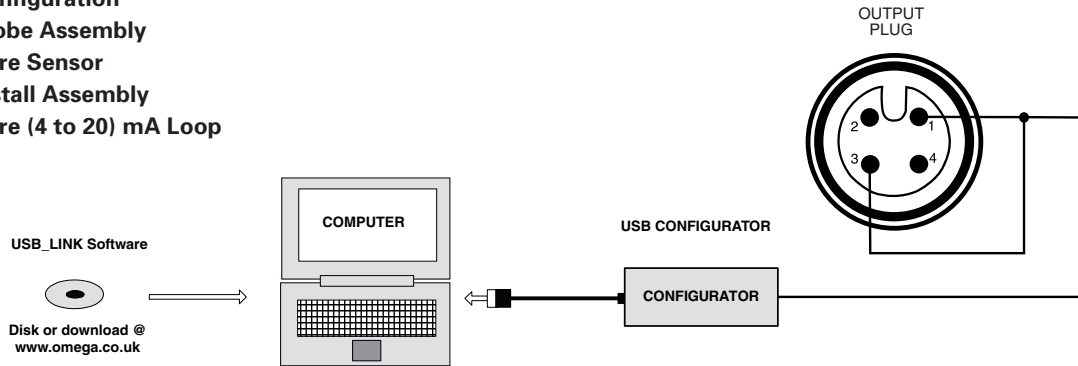
### 3.0 Installation

For the product specification please refer to product data sheet. Installation is normally performed in the following order. If the product has been purchased as part of a probe assembly steps (1 to 3) will have been completed. The user can re-configure the transmitter range on a completed probe assembly by following from step 1.

For advanced user configuration involving custom sensors and user linearisation contact technical support at the address overleaf.

1. Configuration
2. Probe Assembly
3. Wire Sensor
4. Install Assembly
5. Wire (4 to 20) mA Loop

#### 1. Configuration



Follow the instructions provided by software menus, refer to the product data sheet for list of configurable parameters. Factory default PT100 range (0 to 100) °C upscale burnout.

#### 2. Probe assembly

Omega offers two styles of RTD probe assemblies that will connect directly to the sensor input. Please refer to date sheets for PR-21 and PR-22 probes.

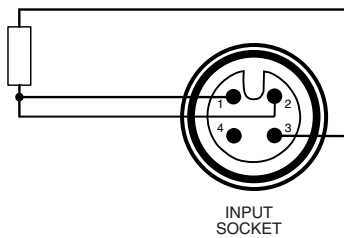
#### 3. Wire sensor

Sensor connections are made by the use of a suitable M12 plug (Omega part No M12-S-M-FM). All sensor connections must be isolated from ground. To maintain BS EN61326 compliance sensor wires must be less than 3 metres.

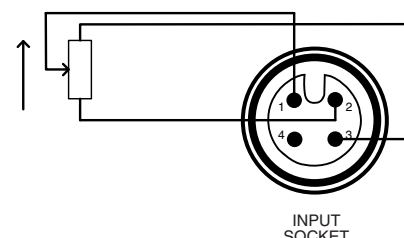
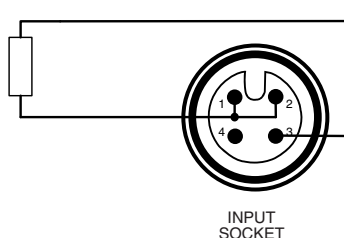
Sensor RTD or Resistance (0 to 10.5) Kohm

Slide Wire (0 to 10.5) Kohm

3 wire



2 wire

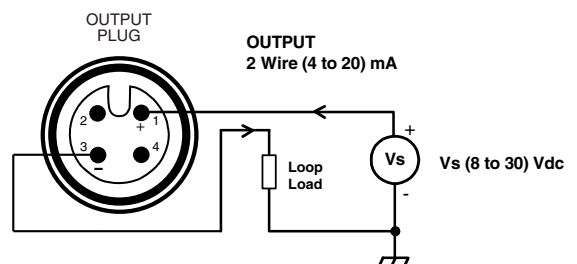


#### 4. Install assembly

Care must be taken as to where the unit is located, so that the ambient temperature of the transmitter does not exceed the specified operating temperature of (-40 to + 85) °C.

#### 5. Wire (4 to 20) mA Loop

A suitable M12 socket is required for output connection (Omega part No. M12-R-F-FM). To comply with CE regulations the (4 to 20) mA loop must be earthed at one point, normally at the power supply. The loop load symbol represents other equipment in the loop such as an indicator, controller or signal conditioner.





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**WARNING:** These products are not designed for use in, and should not be used for, human applications.



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OMEGA ENGINEERING, LTD. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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