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SEM206TH – SMART THERMISTOR INPUT - TWO WIRE (4 to 20) mA OUTPUT TRANSMITTER USER MANUAL

IMPORTANT - CE & SAFETY REQUIREMENTS

This product must be mounted inside a suitable enclosure providing environmental protection to IP65 or greater.
To maintain CE compliance all input wires must be less than 3 meters long.
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 and regulations.
Before attempting electrical connection ensure all supplies are switched off.
ABSOLUTE MAXIMUM OPERATING CONDITIONS :-

Supply	30 VDC (reverse protected to -30 VDC)
Supply Current on over voltage	+ 100 mA (when supply exceeds 30 VDC protection device will conduct)
Input voltage	± 3.0 V
Ambient	-40 to 185 °F

PLEASE REFER TO THE PRODUCT LABEL FOR MANUFACTURERS CONTACT DETAILS.

RECEIVE AND UNPACKING

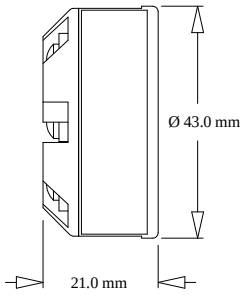
Please inspect the packaging and instrument thoroughly for any signs of transit damage. If the instrument has been damaged, please notify your supplier immediately.

SPECIFICATION (please refer to data sheet for full technical specification.)

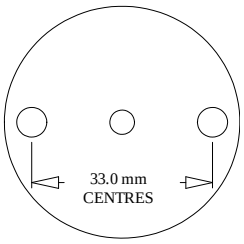
MECHANICAL INSTALLATION

MOUNTING

SIDE VIEW



BASE VIEW



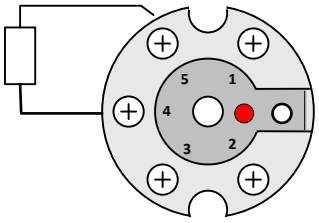
The device is mounted using two 5.5 mm holes, on standard 33 mm fixing centers and will fit a DIN standard termination head. The device must be installed with adequate protection from moisture and corrosive atmospheres.
Care must be taken to ensure the device is located to ensure the ambient temperature does not exceed the specified operating temperature.

ELECTRICAL INSTALLATION

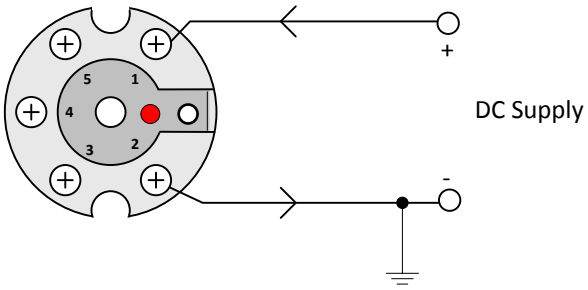
Wire sensor.

Sensor connections are as follows, to maintain BS EN61326 compliance sensor wires must be less than 3 meters long. All sensor connections must be isolated from ground. Shielded or twisted pair cable recommended for 4 to 20 mA loop.

Thermistor



Wire 4 to 20 mA Loop



PC SENSOR AND RANGE CONFIGURATION

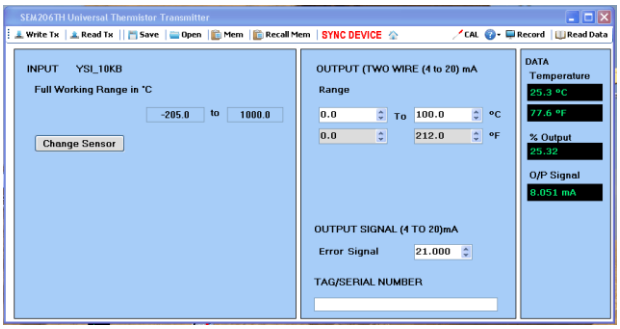
USB Configuration Kit required to change sensor type.

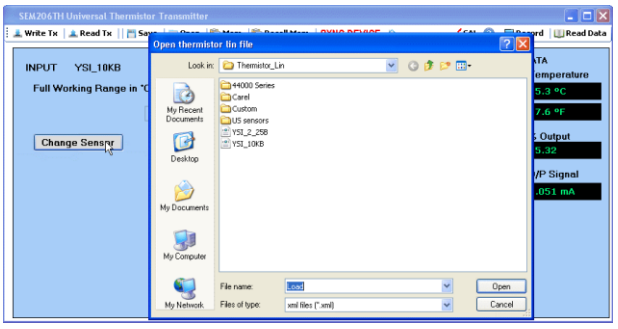
This product is configured using the USB port of a PC running USBSpeedLink software, available from your supplier's web site.
During configuration the product is powered direct from the USB port, removing the need for additional power.
USBSpeedLink software is provided with detailed help menu to guide the user through the simple configuration procedure.
Unless specified at the time of order this product is supplied with the default configuration listed below.

Connect red wire to + terminal, black wire to - terminal of the SEM206TH.

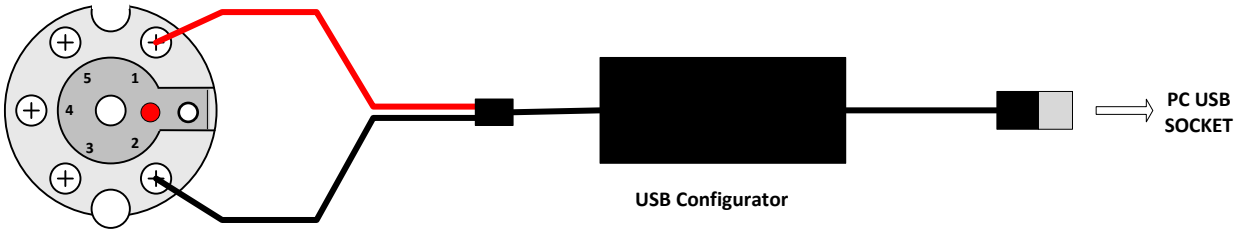
Factory default:

Input range	**= YSI 10K B Curve**
Process Output	**= 0 to 100 °C**
Output range	**= 4 to 20 mA**
Error	**= 21.0 mA**
Tag	**=**





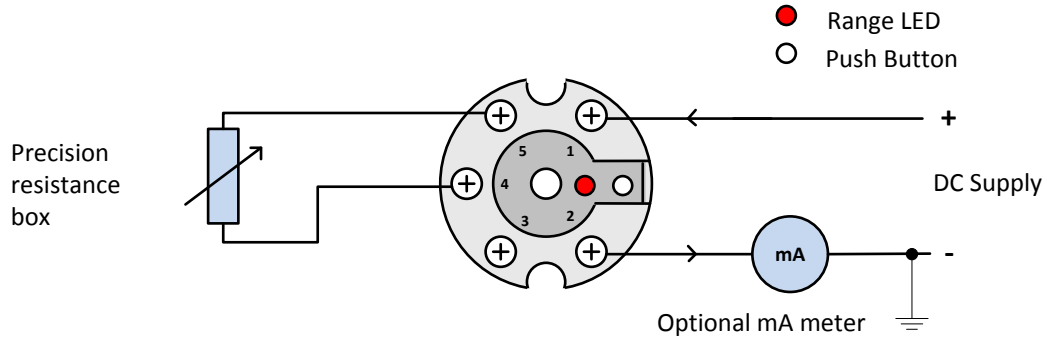
Use clips to connect



MANUAL RANGE (ONLY) CONFIGURATION

Equipment - Precision resistance box, DC power supply (voltage between 10 to 30 VDC), Screwdriver to operate push button and optional mA meter to monitor loop current.

CIRCUIT



(Refer to thermistor tables for correct sensor resistance)

1. Connect the circuit as shown above, mA meter is optional.
2. Set the precision resistance box representative value for low scale 4 mA out sensor resistance. Allow ten seconds settling time. (Refer to thermistor tables for correct sensor resistance)
3. Press and hold push button (for about five seconds) until the range led will start to flash. This indicates the new low range setting has been stored.
4. Set the precision resistance box representative value for high scale (20 mA out) sensor resistance.
5. Press and release push button to store new high range setting. The Range LED will flash at a faster rate to indicate storing new value.
6. Device returns to normal operation.