SMART THERMISTOR TO (4 to 20) mA TWO WIRE TRANSMITTERS

SEM206TH

- ACCEPTS MULTIPLE THERMISTOR TYPES
- PC CONFIGURATION AND DIAGNOSTICS
- SENSOR OFFSET CORRECTION
- MANUAL PUSH BUTTON RANGE CONFIGURATION
- CUSTOM THERMISTORS AVAILABLE

INTRODUCTION

The SEM206/TH is a “smart” in head transmitter that accepts thermistor temperature sensors and converts the sensor output over a configured range to a standard industrial (4 to 20) mA transmission signal. The output signal is linear to temperature. A variety of thermistor types are available when using USBSpeedLink configuration software. Please consult your supplier for custom thermistors.

In addition to the PC configuration feature, simple push button operation allows the user to select the desired temperature range manually, by either simulating the thermistor temperature with a resistance box or setting the thermistor sensor to the required calibration point and pressing button to store at both 4 mA and 20 mA points.

The SEM206TH in head transmitter incorporates the latest digital technology to ensure accurate drift free performance.

PUSH BUTTON CONFIGURATION

A single push button and LED indicator allows the user to configure transmitter range against a manually set input condition. A red LED is included to help guide the user. The LED also operates as a sensor error indicator.

PC CONFIGURATION

PC configuration requires USBSpeedLink software together with a USB configuration kit. The software allows the operator to select from a variety of thermistor types, then set the required temperature range for a (4 to 20) mA output.
For diagnostic purposes the software is capable of reading or logging live data information.

SPECIFICATIONS @ 20 °C

INPUT

Sensor Type	Thermistor
Sensor Connection	Screw terminal
Minimum span	5 °C
Accuracy (typical)	± 0.2 °C ±0.2 % of reading
Thermal Drift	± 0.02 % / °C

OUTPUT

Output Type	2 wire (4 to 20) mA current loop
Output range	(4.0 to 20.0) mA
Output Connection	Screw Terminal
Maximum output	21.5 mA
Minimum output	<3.75 mA
Accuracy	(mA output /2000) or 5 uA (Which ever is the greater)
Loop Voltage effect	0.2 uA / V
Thermal drift	±2 uA / °C
Maximum output load	[(Vsupply-10)/21]K Ohms (Example: 666 Ohms @ 24 V)

THERMISTOR TYPES

Please refer to USBSpeedLink for complete up to date list

3KB (44005, 44030), 5KB (44007, 44034), 10KB (44016,44036)
10KH (44006, 44031), 30KH (44008), 2252KB (44004, 44033)

GENERAL SPECIFICATION

Response time	1 second
Start up time	2 seconds (I out < 4 mA during start up)
Warm-up time	1 minute to full accuracy
Power Supply	(10 to 30) Volts dc

ENVIRONMENTAL

Ambient operating range	(-40 to +85) °C
Ambient storage temperature	(-50 to +90) °C
Ambient humidity range	(10 to 90) % RH non condensing

PHYSICAL

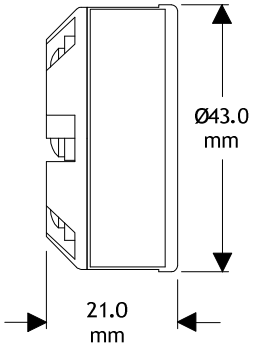
Dimensions	43 mm diameter; 21 mm height
Weight	31 g (encapsulated)

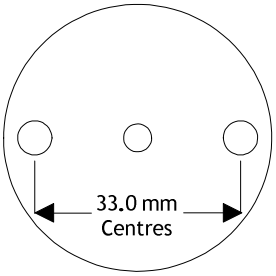
APPROVALS

EMC - BS EN 61326	Electrical equipment for measurement control and laboratory use.
ANNEX A	Immunity test requirements for equipment intended for use in industrial locations
ANNEX F	Test configurations, operational conditions and performance criteria for transducers with integrated or remote signal conditioning.
IEC 61000-4-2	Electrostatic discharge
IEC 61000-4-3	EM Field
IEC 61000-4-4	Transient Burst (output)
IEC 61000-4-5	Surge (output)

Note - Sensor input wires to be less than 3 metres to comply

MECHANICAL

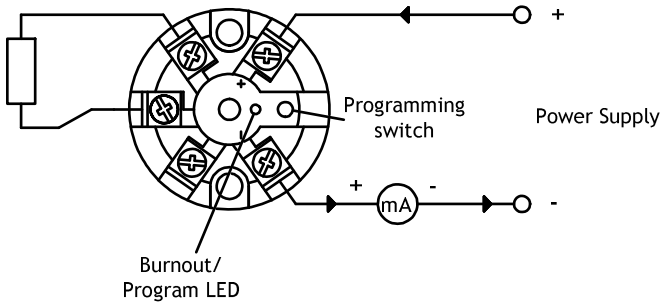




Fixing holes 2 x Ø5.5 mm

Centre hole Ø4.0 mm

ELECTRICAL



Order code: SEM206TH.

Accessories
USB CONFIGURATOR MODULE