



- THERMISTOR INPUT
- TEMPERATURE LINEAR OUTPUT
- PUSH BUTTON CALIBRATION
- SMALL SPANS 10°F
- LOW COST



PUSH BUTTON THERMISTOR TEMPERATURE TRANSMITTER SEM203TH

INTRODUCTION

The SEM203TH Transmitter connects to a standard thermistor and produces a 4-20 mA signal that is linear with temperature. Two models are available. One accepts a 2252Ω thermistor, the other a 10K Ω thermistor. The transmitter can be mounted in a junction box for attaching directly to the temperature sensor or for surface mounting to a wall or duct. A digital indicator can be incorporated. An optional DIN rail adaptor is available.

The simple push of a button ranges and calibrates the SEM203TH transmitter. There is no need for jumpers or pot adjustments.

The high accuracy, stability, flexibility and low cost of the SEM203TH make it feasible to use a thermistor in many more applications.

Typical Set-up

Picture shows SEM203TH, DM3420 Indicator, and Thermistor simulator

1. Connect a thermistor simulator or resistance decade box to the input and between 8 and 30 V DC to the output of the SEM203TH.
2. Set the simulator to the temperature or decade box to the resistance corresponding to the temperature at 4 mA. Press and hold the calibration button down until the LED starts to blink and then release.
3. Set the simulator to the temperature or decade box to the resistance corresponding to the temperature at 20 mA. Press the calibration button and release. The LED continues blinking and then shuts off confirming that the transmitter is calibrated.



STATUS INSTRUMENTS INC.

PO Box 548, 456 Park Ave., Scotch Plains, NJ 07076
 Phone: (800) 700-3272 Fax: (800) 700-5468 (US & CA only)
 Phone: (908) 490-0232
 Email: rc@statinst.com Internet Address: www.statinst.com



SEM203TH 2.03/PDF

SPECIFICATION @ 68°F INPUT / OUTPUT SENSORS AND RANGES

INPUT

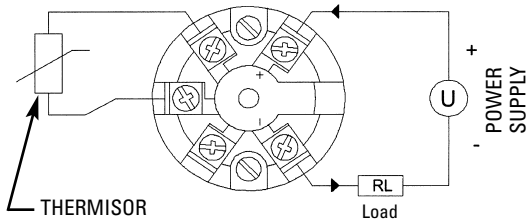
| | |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Input Types Available | 2252Ω - SEM203TH-1 10KΩ - SEM203TH - 2 common thermistor resistance curve having a ratio of 9.07 between 0-50°C |
| Max Excitation Current | 2252Ω 240μA 10kΩ 100μA |
| Range | -13 to 257°F |
| Minimum Span | 10°F |
| Burnout | Upscale 22 mA (Downscale preset current to order) |
| Sensor Lead Length | <18' to 710' to maintain CE compliance |
| Sample Rate | 500mS per Reading |
| Accuracy | ±0.25°F within 32 to 212°F ±0.35°F within -13 to 257°F |
| Thermal Drift | Zero ±0.01°F/°F Span 50 ppm |
| Connections | Screw Terminals |

OUTPUT

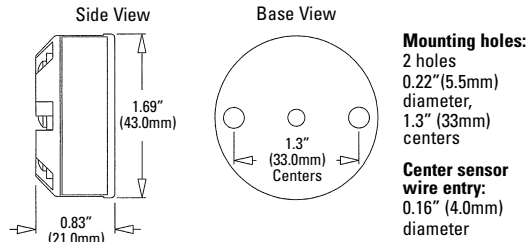
| | |
|-------------------------------|-----------------------------------------------------------------------------------|
| Output | 4 to 20 mA, 2 wire loop powered |
| Maximum Output Range | 3.8 to 22 mA |
| Operating Voltage | 8 to 30V DC |
| Accuracy | ± 5μA |
| Thermal Drift | ± 1μA/°F |
| Response Time | 500mS to reach 70% of final value |
| Loop Resistance | 800R @ 24V DC |
| Loop Sensitivity | 0.4μA/volt |
| Loop Noise | ±0.001μA |
| Protection | Reverse Polarity Protected |
| Connectors | Screw Terminals |
| Input/Output Isolation | Not Isolated |
| Warm-up Time | 2 Minutes to full accuracy |
| EMC | Emissions BS EN61326 Susceptibility BS EN61326 |
| Ambient Temp. Range | -4 to 176°F |
| Ambient Storage | -40 to 176°F |
| Ambient Humidity | 0 to 95% (Non condensing) |
| Dimension | 1.9" [43mm] Diameter 0.83" [21mm] Height |
| Weight | 25 grams |
| Default Range | 0-100°C. Contact sales office for factory configuration to any other range. |

SEM203TH CONNECTIONS

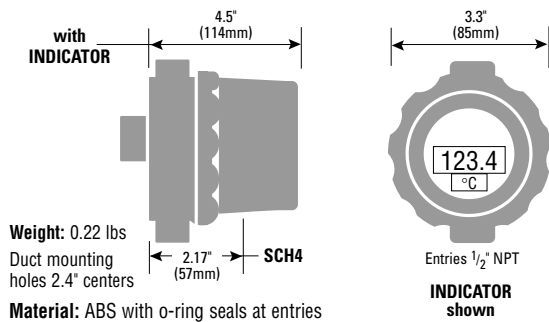
(See side label for full connection details)



MECHANICAL DETAILS - SEM203TH



MECHANICAL DETAILS - SCH4H



ORDER CODE

| | |
|--------------|--------------------------------------|
| MODEL | SEM203TH-1 225Ω Thermistor |
| | SEM203TH-2 10KΩ Thermistor |

CUSTOMER SPECIFIED RANGE: CONFIG 203TH

| | |
|-------------------|------------------------------------------------------|
| Accessory: | Din Rail Adapter RMK-2 |
| | Junction Box SCH4-A 1 side port |
| | SCH4-B 2 side ports (shown) |
| | SCH4-C 1 side & 1 base port |
| | SCH4-D 2 side & 1 base port |
| | Digital Indicator DM400 (See Bulletin 6.01/5M) |

Every effort has been taken to ensure the accuracy of this specification, 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.