

- PUSH BUTTON TC SELECTION
- PUSH BUTTON RANGING
- GALVANICALLY ISOLATED
- TEMPERATURE LINEAR
- LOW COST
- 8 STANDARD THERMOCOUPLE TYPES

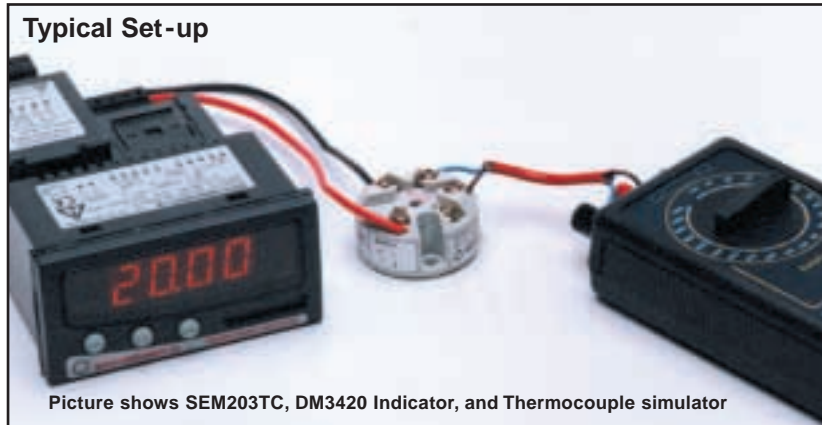


PUSH BUTTON THERMOCOUPLE TEMPERATURE TRANSMITTER SEM203TC

INTRODUCTION

The SEM203TC is the latest in a series of temperature transmitters from Status Instruments that do not require a PC, trim pots, switches or jumpers in order to calibrate. Instead, the SEM203TC uses a simple push button on the unit to both select the thermocouple type and range the transmitter. The SEM203TC incorporates the latest digital technology assuring drift free linearization, not available with analog designs. Galvanic isolation is standard.

The SEM203TC is available in three versions, each accepting a choice of three different thermocouple types. An on board LED indicates the successful completion of ranging, TC selection and provides indication of sensor health.



Picture shows SEM203TC, DM3420 Indicator, and Thermocouple simulator

Thermocouple Selection

1. Depress and hold button down and then apply power to the unit.
2. Release button.
3. Depress button one, two or three times to select specific thermocouple type. (Model dependant. For Model SEM203TC-1: once for "K", twice for "J", three times for "T").

The LED will blink with each depression. After several seconds the LED will flash the number of times corresponding to the TC selected.

Ranging

1. Connect a thermocouple simulator to input and a 24VDC power supply to output.
2. Set the simulator to the temperature desired at 4mA. Press and HOLD the button down until the LED starts to blink.
3. Set the simulator to the temperature desired at 20mA. Press and release the calibration button. The LED blinks and then stops, confirming the unit is calibrated.



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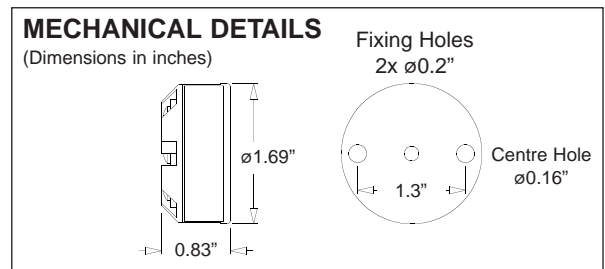
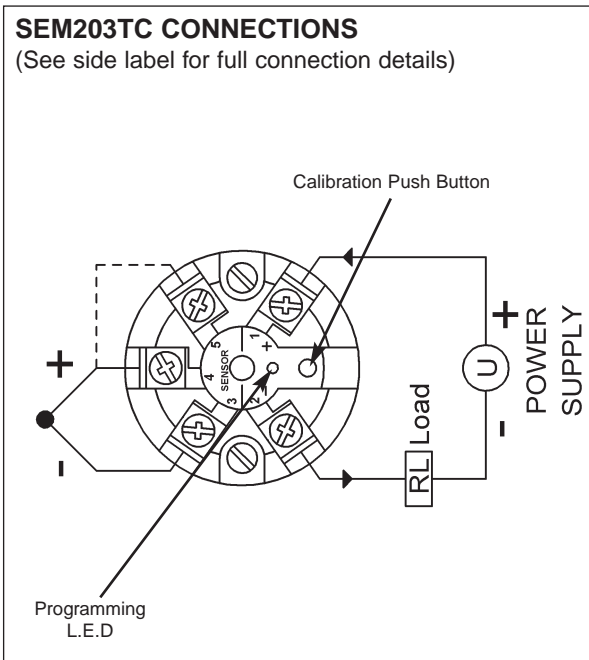
SEM203TC 7-02/PDF

SPECIFICATION @ 68°F

INPUT / OUTPUT SENSORS AND RANGES

INPUT Sensor & Ranges	SEM203TC SEM203TC - 1 K -328 to 2498°F J -328 to 2192°F T -328 to 752°F SEM203TC - 2 R 0 to 3200°F S 0 to 3200°F B 0 to 3308°F SEM203TC - 3 J -328 to 2192°F F -328 to 2192°F E -328 to 1832°F (*Other combinations available to special order)
Default Range	203-1/ K 0 to 1832°F 203-2/ R 0 to 2912°F 203-3/ J 0 to 1832°F
Accuracy	±0.04% FS, ±0.04%rdg or 0.9°F (whichever is greater)
Linearization	BS4937 / IEC 584-1
Input/ Output Isolation	50V DC (tested to 200V)
Cold Junction Error	±0.3°F
Cold Junction Tracking	0.05°F/°F
Cold Junction Range	-4 to 158°F
Thermal Drift	Zero ±2.3uV/°F Typical
Sample Rate	Span 100ppm
Minimum Span	500mS per sample
Sensor Lead Length	20°F
Terminals	Max length 10 feet to maintain CE compliance Screw Terminals

OUTPUT Max Output Range Operating Voltage Accuracy Burnout	4-20mA, 2 wire loop powered 3.8 to 22mA 8 to 30V DC ±5uA Up-scale 22mA (down scale to order) Red programming LED comes on when temperature is outside operating range
Thermal Drift Response Time	0.17uA/°F 500mS to reach 70% of final value
Loop Resistance Loop Sensitivity Protection Terminals Warm-up Time Display	Max. 800R at 24V DC 0.4uA/ volt Reverse connection protected Screw Terminals 2 minutes to full accuracy Slow flash indicates programming mode. Full on indicates out of range sensor.
Switch	Momentary Push Button
APPROVALS EMC	Emmissions BS En50081-1 Susceptibility BS EN50082-2
ENVIRONMENTAL Operating Temp. Range Ambient Humidity Ambient Storage Temp.	-4 to 158°F 0 to 95% (non condensing) -40 to 194°F
ENCLOSURE Material Flammability	ABS UL 94 HB
Calibration Period	12 months to maintain Published Specification
Warranty	5 years to twice specification 5 years



ORDER CODE

MODEL	SENSOR
SEM203TC	SEM 203TC - 1: Thermocouple K, J, & T SEM 203TC - 2: Thermocouple R, S, & B SEM 203TC - 3: Thermocouple J, F, & E

For SEM203TC Special Configuration Ranges, and Downscale Burnout, please contact the Sales Office.

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.