

THERMOCOUPLE DIN RAIL TRANSMITTER



SEM1605TC

- COST EFFECTIVE THERMOCOUPLE TRANSMITTER
- THERMOCOUPLE TYPES K, J, E, N, T, R, S, L, U, B, C, D, G
- ISOLATED 4 to 20mA LOOP POWERED OUTPUT
- CALIBRATE AGAINST LIVE INPUT VALUE
- SIMPLE CONFIGURATION VIA USB PORT



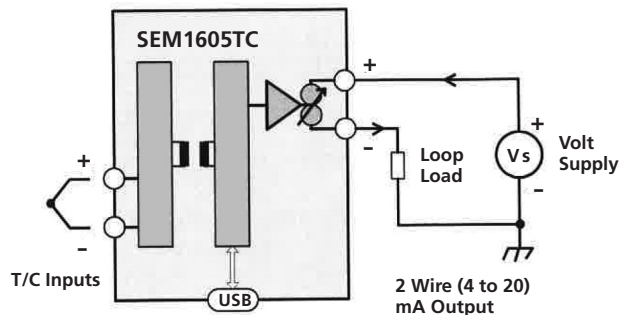
INTRODUCTION

The SEM1605TC is the next generation DIN rail mounted temperature transmitter from Status Instruments. It has been designed to accept most common thermocouple sensor inputs and provide the user with a standard two-wire 4 to 20mA output signal. Galvanic isolation is provided between input and output and all temperature ranges are linear to temperature.

Designed for ease of use, our latest USB interface is fitted for quick and easy configuration. Just connect a standard USB cable between the SEM1605TC and your PC. Our FREE configuration software, will guide you through any changes you wish to make. To further help save time, the SEM1605TC does not need to be wired to a power supply during the configuration process, it is powered via the USB interface from your PC. The following parameters are configurable:

| INPUT TYPE | LOW RANGE | HIGH RANGE | UNITS | BURNOUT | PUSH BUTTON |
|--|-------------|--------------|--------|------------------------|--------------|
| THERMOCOUPLES K, J, E, N, T, R, S, L, U, B, C, D, G, | Input @ 4mA | Input @ 20mA | °F, °C | Up/Scale Down/Scale | Range or Off |

The SEM1605TC is also provided with user push button ranging, allowing adjustments at both 4mA and 20mA for a live value. The user adjust function can be locked during configuration if not required. The state LED indicates out of range input during normal operation, during user adjust it is also used to indicate the stage of adjustment.



SPECIFICATIONS @ 68°F

| INPUT TYPE | RANGE (°F) | RANGE (°C) | ACCURACY/STABILITY |
|-------------------|---------------|---------------|---|
| K | -328 to 2,498 | -200 to 1,370 | ± 0.1% of full scale ± 0.5°C (plus sensor Error) |
| J | -148 to 2,192 | -100 to 1,200 | |
| N | -328 to 2,372 | -200 to 1,300 | |
| E | -328 to 1,832 | -200 to 1,000 | ± 0.2% of full scale ± 0.5°C (plus sensor Error) |
| T | -328 to 752 | -200 to 400 | |
| R | 32 to 3,200 | 0 to 1,760 | ± 0.1% of full scale ± 0.5°C (plus sensor Error) over range (1,472 to 3,200°F) |
| S | 32 to 3,200 | 0 to 1,760 | |
| L | -148 to 1,112 | -100 to 600 | ± 0.1% of full scale ± 0.5°C (plus sensor Error) |
| U | 32 to 1,112 | 0 to 600 | |
| B | -328 to 2,372 | -200 to 1,300 | |
| C | 32 to 4,172 | 0 to 2,300 | |
| D | 32 to 4,172 | 0 to 2,300 | |
| G | 32 to 4,172 | 0 to 2,300 | |
| Thermal Stability | | | |

| AMBIENT SENSOR (Cold Junction Compensation Sensor) | | |
|--|--------------|----------------------|
| Type | Range | Accuracy / Stability |
| Thermistor 10K Beta | -40 to 185°F | ± 0.5°C ± 0.05°C/°C |

| OUTPUT TWO WIRE 4 to 20mA LOOP | |
|--------------------------------|---|
| Range | 4 to 20mA |
| Range Extremes | 3.8 to 21.5mA |
| Accuracy | (mA output / 2000) or 5µA (Whichever is greater) |
| Supply Voltage | 12 to 30VDC |
| Loop Effect | ± 0.2µA / V |
| Thermal Stability | ± 2µA / °C |
| Max Load | [(Vsupply-10)/20] K ohms (Example 700 Ohms @ 24V) |

| USB USER INTERFACE | |
|-----------------------|--|
| Type\options\function | Description |
| USB 2.0 | Mico B |
| Baud Rate | 19.2 Kbaud |
| Sensor Configuration | Select Sensor Type = Thermocouple Type Trim Sensor Offset = ±10°C (± 18°F) Preset sensor value (Diagnostics) |
| Loop | Set Range Active Range Set Burnout Preset output loop current (Diagnostics) |
| Live Data | Read Sensor Temperature Percentage output Read Loop Current Read Cold Junction |

| LED STATE | |
|----------------|---|
| Type | Red LED |
| ActionAccuracy | If mA output < -0.1% or > 100.1% LED ON |

| AMBIENT | |
|---------|--------------|
| Ambient | -22 to 158°F |

| BUTTONS OUTPUT ADJUST / ACTIVE RANGE | |
|--------------------------------------|--|
| Off | Locked |
| Adjust Output | Adjust 4mA when in range 3.8 to 6.0mA, 20mA when in range 18 to 21.5mA |
| Active Range | Range 4mA and 20mA points against live input |

| MECHANICAL | |
|------------|------------------------------|
| Connection | Screw Terminals |
| Enclosure | DIN RAIL Mounted 6 terminals |
| Weight | Approximately |

| APPROVALS | |
|-----------|----------------------------------|
| EMC | EN BS 61326 Industrial Emissions |

| GENERAL | |
|-----------------------|---|
| Isolation | Flash Test 250VDC Working 48VDC |
| Update Response Times | 0.5 Second Update 1 Second Response |
| Warm Up Time | 1 Minute |
| Start-Up Time | 8 Seconds |
| Protection | Reverse Connection |
| Enclosure | Device must be installed in an enclosure offering > IP65 Protection |

| AMBIENT | |
|---------|--------------|
| Ambient | -22 to 158°F |
| Storage | -40 to 185°F |

MECHANICAL DETAILS

Material Polymide 6.6 self extinguishing

Terminals Screw terminal

Cable 2.5 mm Max

Color Gray

REFER TO INSTRUCTION MANUAL BEFORE USE

CE

ORDER CODES:
**SEM1605TC Thermocouple
 DIN RAIL
 Transmitter**

Local Representation



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