Pt100 or Thermocouple Input DIN Rail Transmitter

SEM1603

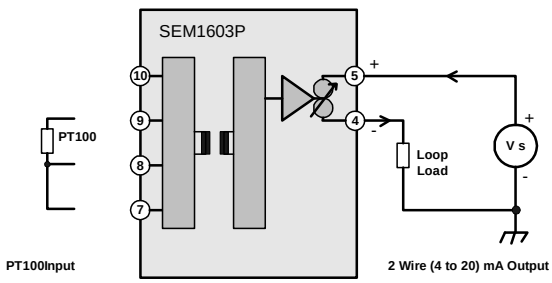
- CONFIGURATION USING USB PORT POWERED CONFIGURATOR
- PT100 or THERMOCOUPLE / mV
- ISOLATED INPUT
- INPUT LINEAR TO TEMPERATURE
- (4 to 20) mA TWO WIRE OUTPUT

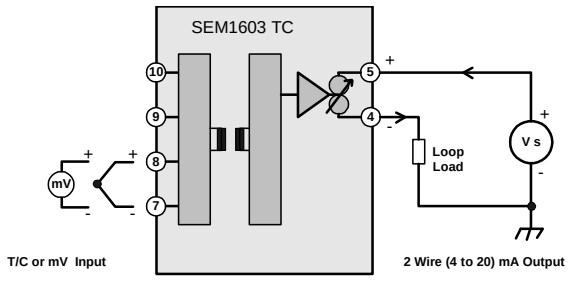
INTRODUCTION

The SEM1603 series is a cost effective DIN rail mounted temperature transmitter from Status Instruments. The range consists of two versions, the SEM1603P accepts PT100 inputs, the SEM1603TC accepts seven common thermocouple types plus mV input.

Designed for ease of use, this range is configured with our USB port powered configuration module. The module interfaces a PC USB port to the SEM1603, using the (4 to 20) mA loop to communicate. Using our free configuration software, you will be able to read the current configuration data, and then perform any changes you wish to make to the configuration. To further help save time, the SEM1603 and configuration module do not need to be wired to a power supply during the configuration process, both are powered by the USB interface on your PC. The following parameters are configurable :-

MODEL	INPUT TYPE	LOW RANGE	HIGH RANGE	UNITS	BURNOUT
SEM1603P	PT100	Input @ 4 mA	Input @ 20 mA	°F, °C	Up/Scale Down/Scale
SEM1603TC	K, J, E, N, T, R, S, mV				





STATUS INSTRUMENTS

Pt100 or Thermocouple Input DIN Rail Transmitter

SPECIFICATION @ 20 °C

INPUTS

INPUT	RANGE	ACCURACY (Note 1)	STABILITY (Note 6)	O/C	CJ (Note 3)	Sensor excitation (Note 4)	IMPEDANCE
K	(-200 to 1370) °C	0.1 % of FSR ±0.5 °C	± 0.01 % of FSR / °C	Yes	Yes	-	1 MΩ **(Note 5)**
J	(-100 to 1200) °C	(type T 0.2 % FSR. ± 0.5 °C)					
E	(-100 to 1000) °C						
N	(-180 to 1300) °C						
T	(-100 to 400) °C						
R	(-10 to 1760) °C	± 0.5 °C ±0.1 % of FSR **(Note 2)**					
S	(-10 to 1760) °C	± 0.5 °C ±0.1 % of FSR **(Note 2)**					
mV	(-40 to 75) mV	± 0.04 mV			-		
P	(-200 to 850) °C	± 0.1 °C / ±0.05 % of rdg	± 0.005 % of FSR / °C		-	<450 uA	-

Key **Rdg = Reading ; FSR = Full Scale Range ; O/C = programmable open circuit sensor detect; CJ = Cold junction error**

Notes

1. Accuracy for PT100 and T/C do not include sensor and cold junction errors.
2. Only over the range (800 to 1600) °C
3. Cold junction range (-20 to 70) °C, Accuracy ± 0.5 °C , Tracking ± 0.05 °C
4. PT100 input Maximum lead resistance 20 R, Lead effect 0.015 °C / Ω.
5. Impedance – not including 0.2 uA open circuit detect bias current effect.
6. Ambient (-10 to 50) °C

OUTPUT

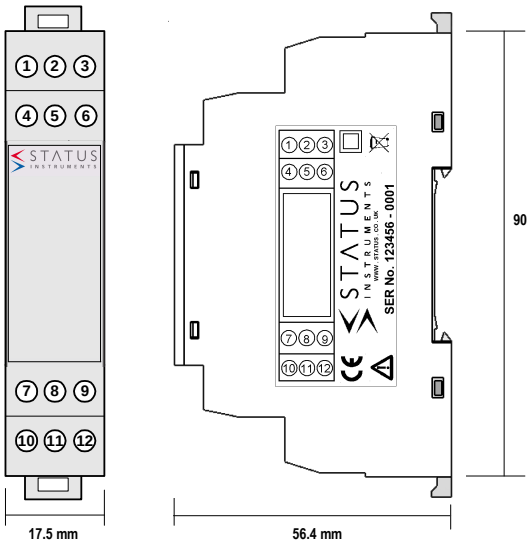
Type Two wire current sink; signal range (4 to 20) mA; full range (3.8 to 24) mA
Supply (11 to 30) V dc , 24 V nominal giving Max loop load of 600 R @ 24 V
Response time < 500 ms to reach 95% of final value ; Start up time < 3 s
Calibration Accuracy ± 5 uA
Loop Effects Loop ripple 0.03 % of FSR; Supply sensitivity 0.05 uA / °C ; supply ripple rejection < ± 5 uA error @ 1 V rms 50 Hz ripple
Protection Reverse connection and over-voltage protection. Max over voltage current 100 mA.
Stability ± 5 uA / °C.

GENERAL

Isolation Input to output tested at 500 V dc.
Ambient operating (-20 to 70) °C (10 to 95) % RH non condensing. Storage (-40 to 85) °C
Approvals CE tested to BS EN 61326

MECHANICAL

Material Polmide 6.6
Self extinguishing
Terminals Screw terminal
Cable 2.5 mm Max.
Colour Grey



REFER TO INSTRUCTION MANUAL BEFORE USE

ORDER CODE : SEM1603 / [ ]

VERSIONS

Pt100 INPUT	Enter P
THERMOCOUPLE	Enter TC

ASSOCIATED PRODUCTS	ORDER CODES
USB CONFIGURATOR SUITE	USB-kit
USB CABLE A/M TO MINI B/M	48-200-0001-01
USB Link Software	F0C @ www.status.co.uk Downloads

SEM1610	UNIVERSAL DIN RAIL TRANSMITTER
SEM1620	UNIVERSAL DIN RAIL TRANSMITTER VOLTAGE OUTPUT
SEM1630	UNIVERSAL DIN RAIL TRIP AMPLIFIER

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STATUS INSTRUMENTS