

- RTD INPUT BS EN 60751
- 2, 3, OR 4 WIRE INPUT
- HIGH PERFORMANCE
- FULLY LINEARIZED
- SMALL SIZE
- 4-20 mA OUTPUT



## RTD TRANSMITTERS, 2, 3 AND 4 WIRE SEM1500/P Series

### INTRODUCTION

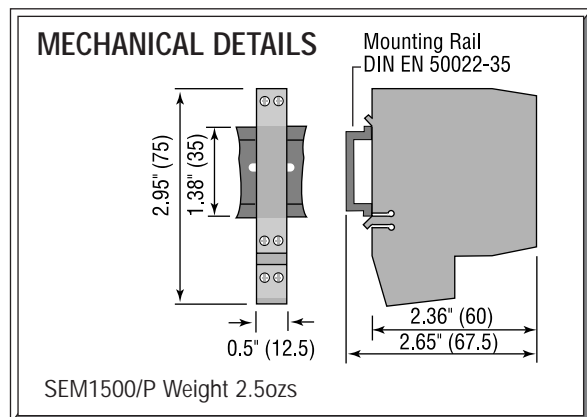
The **SEM1500/P** is a series of DIN rail mounted transmitters designed to accept RTD temperature sensors and to convert them to the industry standard 4-20 mA transmission signal. Units are supplied factory set to any one of six standard ranges or can be easily user calibrated to provide virtually any range from -292 to 1112°F, minimum range is 50°F. Non standard ranges can be supplied, factory set, at a nominal extra cost.

High accuracy is achieved by using active two, three or four wire bridge arrangements which effectively remove any errors associated with the sensor connecting cables.

The small size of the unit enables many more units to be installed in a smaller space than was previously possible.

### APPROVALS

**EMC** Emissions BS EN 50081  
Susceptibility BS EN 50082



### SPECIFICATIONS @ 68°F

<b>INPUT</b>	Pt-100 Platinum Resistor* BS EN 60751 (IEC751) BS 1904 (DIN43760) others available on request*
<b>SEM1503/P</b>	2 or 3 wire
<b>SEM1504/P</b>	2 or 4 wire
<b>Accuracy</b>	±0.27°F ± % reading as follows
Accuracy % rdg	0.4   0.2   0.1   0.2   0.4
Temperature °F	-292   -148   32   392   932 1112
<b>Burn Out</b>	UP scale standard
<b>Excitation Current</b>	SEM1503/P 2mA nominal SEM1504/P 1mA nominal
<b>OUTPUT</b>	
Type	Passive 2 wire current output
Range	4-20 mA (30 mA MAX.)
Protection	Reverse connection plus over voltage
<b>GENERAL</b>	
Supply	10-30 V DC
Load	700 ohms @24V
Thermal Stability	50ppm / °F
Ripple Refection	<40µA/V (measured at 1V ripple 60Hz)
Response time	100 mSecs to reach 70% of final value
Temperature	Ambient 32 to 158°F
Relative Humidity	Ambient 10-95% Non-condensing
<b>ENCLOSURE</b>	
Case Material	Polyamide (Grey)
Case Flammability	To UL94-VO VDE 0304 Part 3 Level IIIA
Mounting	Top Hat rail to DIN EN 50022-35
Protection	IP20
Connections	Captive screw connections
Cable Size	12 AWG solid/14 AWG stranded

SEM1500/P 6-02/PDF



## STATUS INSTRUMENTS INC.

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BS EN ISO 9001:1994  
Certificate No. Q06257

**STANDARD RANGES**

The SEM1500/P Series may be purchased pre-ranged to any of the following standard ranges.

**NON STANDARD RANGES**

Units can be supplied set up to other non-standard ranges for a small extra charge or alternatively the unit can easily be re-ranged as follows;

RANGE °F	
from	to
-22	+95
-12	+167
32	122
32	212
32	392
32	752

RANGE °C	
from	to
-30	+35
-25	+75
0	50
0	100
0	200
0	400

**ADJUSTMENTS** (Range selection)

Range selection GAIN and OFFSET Coarse settings are made by two 16 position rotary screw adjustment switches on the side of the unit.

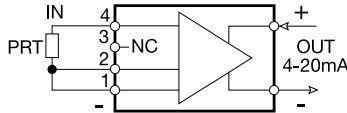
Fine adjustment is by front access potentiometers. Full re-calibration details are supplied with each transmitter.

INPUT type	OFFSET RANGE °F	GAIN RANGE °F	OFFSET RANGE °C	GAIN RANGE °C
100ohm platinum	4mA	4-20mA	4mA	4-20mA
Pt-100	-148 to +428°F	75 to 1112°F full accuracy	-100 to +220°C	25 to 600°C full accuracy

**CONNECTION DIAGRAM**

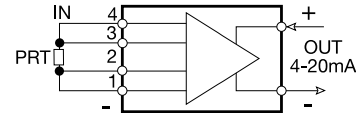
**SEM1503/P**

TEMPERATURE TRANSMITTER  
IN: 2 or 3 WIRE RTD (Pt100)  
OUT: 4-20mA PASSIVE



**SEM1504/P**

TEMPERATURE TRANSMITTER  
IN: 2 or 4 WIRE RTD (Pt100)  
OUT: 4-20mA PASSIVE



**ORDER CODE**

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Example: SEM1503 / P / 32 / 212 / F For Pt-100 Temperature sensor range 32 to 212°F 3 wire sensor

LOCAL REPRESENTATION



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