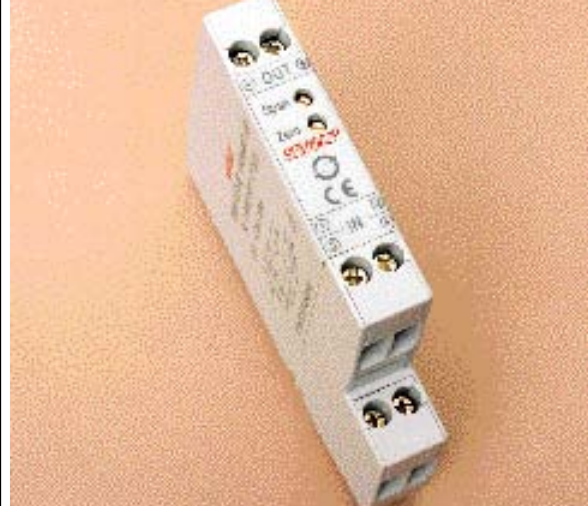


- Pt100 INPUT BS EN 60751
- 2, 3, OR 4 WIRE INPUT
- HIGH PERFORMANCE
- FULLY LINEARISED
- SMALL SIZE
- 4-20 mA OUTPUT



Pt100 TRANSMITTERS, 2, 3 AND 4 WIRE SEM1500/P Series

INTRODUCTION

The SEM1500/P series are DIN rail mounted transmitter designed to accept Pt-100 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 -100°C to +600°C, minimum range is 25°C. Non standard ranges can be supplied, factory set, at a nominal extra cost.

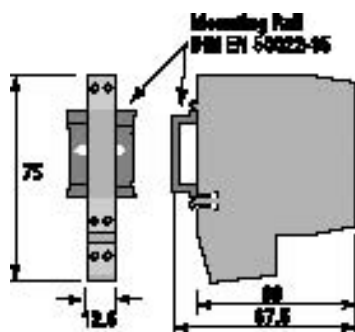
High accuracy is achieved by using active two, three or four wire bridge arrangements which effectively removes any errors associated with the sensor connecting cables.

The small size of the unit (only 12.5mm wide) enables many more units to be fitted in a smaller space than was previously possible.

APPROVALS

EMC Emissions BS EN 50081
Susceptibility BS EN 50082

MECHANICAL DETAILS



SEM1500/P Weight 45 g

SPECIFICATIONS @ 20°C

INPUT	Pt-100 Platinum Resistor* BS EN 60751, DIN 43760 others available on request					
SEM1503/P	2 or 3 wire					
SEM1504/P	2 or 4 wire					
Accuracy	±0.15°C ± % reading as follows					
Accuracy % rdg	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">0.4</td> <td style="width: 20px; text-align: center;">0.2</td> <td style="width: 20px; text-align: center;">0.1</td> <td style="width: 20px; text-align: center;">0.2</td> <td style="width: 20px; text-align: center;">0.4</td> </tr> </table>	0.4	0.2	0.1	0.2	0.4
0.4	0.2	0.1	0.2	0.4		
Temperature °C	-180 -100 0 200 500 600					
Burn Out	UP scale standard					
Excitation Current	SEM1503/P 2mA nominal SEM1504/P 1mA nominal					
OUTPUT						
Type	Passive 2 wire current output					
Range	4-20 mA (30 mA MAX.)					
Protection	Reverse connection plus over voltage					
GENERAL						
Supply	10-30 V DC					
Load	700 ohms @24V					
Thermal Stability	100ppm / °C					
Ripple	<40µA/V (measured at 1V ripple 50Hz)					
Response time	100 mSecs to reach 70% of final value					
Temperature	Ambient 0 -50°C					
Relative Humidity	Ambient 10-95% Non-condensing					
ENCLOSURE						
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	4mm sq solid/2.5mm sq stranded					

* Consult Sales Office for Pt1000 version

STANDARD RANGES

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

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

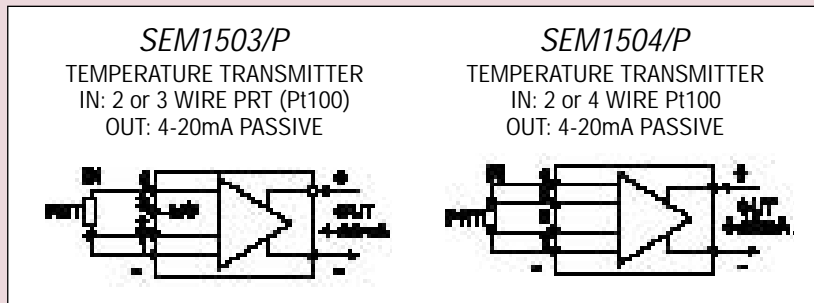
NON STANDARD RANGES

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;

ADJUSTMENTS 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 °C 4mA	GAIN RANGE °C 4-20mA
Pt-100	-100 to +220	25 to 600 full accuracy

CONNECTION DIAGRAM



ORDER CODE

SEM1503 / P	/	value @ 4 mA	/	value @ 20 mA
SEM1504 / P	/	value @ 4 mA	/	value @ 20 mA

Example: SEM1503 / P / 0 / 100 For Pt-100 Temperature sensor range 0-100°C 3 wire sensor
 Also available in packs of 10 pre-calibrated to the default range of 0-100°C
 ORDER CODE 10 PACK = SEM1503 / P / 0 / 100-PK10 (SEM1504 not available in 10 pack)

Also available:-

SEM1500/TC	ISOLATING THERMOCOUPLE TRANSMITTER
SEM1400 series	TRIP AMPLIFIERS/ALARMS
SEM1300	POWER SUPPLY
SEM1100	POWERED ISOLATING CONVERTER
SEM1000 series	ISOLATORS

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.