



*Configuration with the  
PUSH OF A BUTTON*



## MODEL: SEM203P

- SIMPLE CONFIGURATION
- RTD SENSOR INPUT
- 4-20 mA OUTPUT
- IN-HEAD MOUNTING
- DRIFT-FREE LINEARISATION
- LED OVER-RANGE INDICATION

### INTRODUCTION

The SEM203P Temperature Transmitter has incorporated the latest digital technology to provide accurate and reproducible conversion of 2 or 3-wire RTD signals to industry standard 4-20 mA output.

This, in-head-mounted transmitter, is unique, because **it does not need a PC, solder linking or a potentiometer for configuration.** By generating the required low and high signals with a calibrator or an RTD simulator and push of the button on the transmitter, configuration is complete.

High accuracy and drift-free linearisation coupled with flexibility of reduced stock holding and quick push button calibration make the SEM203P the ideal choice for converting RTD outputs to 4-20 mA signals.

An on-board LED indicates the successful completion of configuration procedure and also provides instant indication of the sensor's fault.

### SPECIFICATIONS @ 20°C

#### INPUT

<b>Sensor</b>	2- or 3-wire RTD Pt-100 (Pt-500 or Pt-1000 to order)
<b>Sensor Range</b>	-200...850°C
<b>Accuracy</b>	±0.1°C ± 0.1% rdg (100...500°C) ±0.2°C ± 0.2% rdg (-200...800°C)
<b>Minimum Span</b>	20°C
<b>Excitation Current</b>	1 mA maximum
<b>Lead Resistance</b>	10 Ω per leg maximum
<b>Sensor Lead Length</b>	<3m to maintain CE compliance

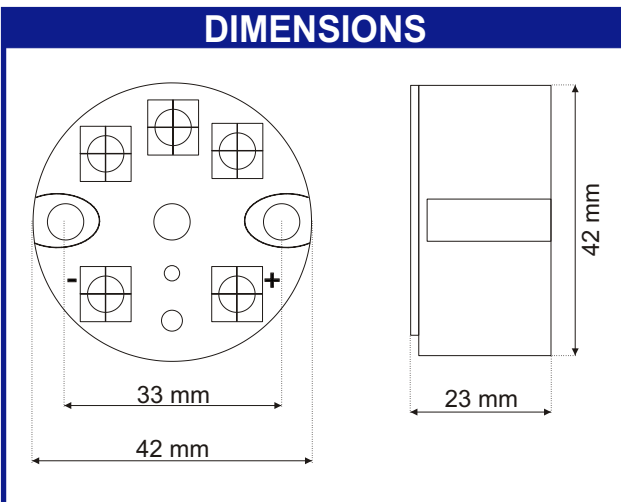
#### OUTPUT

<b>Output Range</b>	4-20 mA, 2-wire loop powered (also can be ranged 20-4 mA)
<b>Supply Voltage</b>	8...30 VDC
<b>Voltage Effect</b>	0.4 µA / Volt
<b>Output Accuracy</b>	±5 µA
<b>Output Thermal Drift</b>	±0.2 µA /°C for zero ±0.5 µA /°C for span
<b>Loop Resistance</b>	Maximum 800 Ω at 24 VDC

#### GENERAL

<b>Enclosure</b>	Molded case; NORYL™
<b>Burn-out</b>	Upscale 22 mA (Downscale to be ordered)
<b>Loop Noise</b>	0.1 µA p-p
<b>Sample Rate</b>	500 ms
<b>Thermal Drift</b>	±0.01°C/°C for zero 50 ppm for span
<b>Operating Temperature</b>	-40...+85°C
<b>Storage Temperature</b>	-50...+100°C
<b>Protection</b>	Reverse polarity protected
<b>Indication</b>	Programming operations and out of range sensor
<b>Programming</b>	Via the on-board push button

### DIMENSIONS



**ORDER  
CODES**

<b>SEM203P</b>	For Pt-100
<b>SEM203P-500</b>	For Pt-500
<b>SEM203P-1000</b>	For Pt-1000

