

# SEM206THV IN-HEAD, THERMISTOR INPUT (0 to 10) V OUTPUT

- ACCEPTS MULTIPLE THERMISTOR TYPES AND Pt1000, Pt500 SENSORS

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- (0 to 10) V THREE WIRE VOLTAGE OUTPUT

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- PC PROGRAMMABLE

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- FAST RESPONSE TIME

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- CUSTOM THERMISTORS AVAILABLE

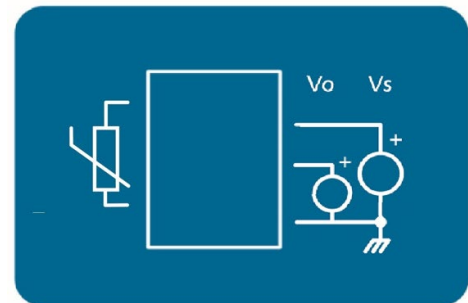
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- INTRODUCTION

The SEM206THV is an in-head transmitter that accepts thermistor temperature sensors as well as Pt1000 and Pt500 RTDs and converts the sensor output over a configured range to a standard industrial (0 to 10) Volt output signal. The output signal is linear to temperature.

PC configuration allows the user to select Range and Burnout direction, without requiring calibration equipment. Configuration is performed quickly using our USB port-driven configurator by simply connecting two clips to the SEM206THV power terminals and following the software instructions. Calibration set up may be saved as a file on the PC for later use.

The output signal is linear to temperature. A variety of thermistor types are available when using USB-SpeedLink configuration software. Please consult your supplier for custom thermistors.



## ➤ FEATURE HIGHLIGHTS

### SENSOR REFERENCING

The SEM206THV sensor referencing, via the Windows based USB-Speedlink software, allows for close matching to a known reference sensor, eliminating possible sensor errors.

### SENSOR BURN-OUT DETECTION

If a sensor wire is broken or becomes disconnected, the SEM206THV output will automatically go to its user-defined level, upscale or downscale.

### STABILITY

The SEM206THV in-head transmitter incorporates the latest digital technology to ensure accurate, low-drift performance.

### THERMISTOR SENSOR LIBRARY

The Thermistor type required is loaded onto the SEM206THV from a software library using the USB-Speedlink software.

The sensor library can be added to as new sensors become available or are requested.

Thermistor sensors with a resistance value up to 100 K Ohms at 25 °C can normally be accommodated.

# SEM206THV IN-HEAD, THERMISTOR INPUT (0 to 10) V OUTPUT

INPUT		SPECIFICATIONS @20°C
Type/ Function	Range/ Description	Accuracy/ Stability
Thermistor	See below *1, *2, *3	Typically, $\pm 0.2\text{ }^{\circ}\text{C} \pm 0.2\%$ of reading
Thermal drift	Zero at 20 °C	$\pm 0.02\%$ of range / °C
Minimum span	5 °C	
*1 Please refer to <a href="http://www.status.co.uk">www.status.co.uk</a> for latest sensor list.		
3KB (44005, 44030), 5KB (44007, 44034), 10KB (44016,44036), 10KH (44006, 44031), 30KH (44008), 2252KB (44004, 44033), YSI_2_25B, YSI_10KB, P222KJ2, PS102J2, PS103G2, PS103J2, PS203J2, PS302J2, PS303J2, PS502J2, PS602J2, NTC10k b3435 Carel Pt1000, Pt500 Silicone sensors (KYT series)		
*2 Custom thermistors available. Please contact <a href="mailto:sales@status.co.uk">sales@status.co.uk</a>		
*3 Basic measurement accuracy includes the effects of calibration, linearisation and repeatability		

OUTPUT		SPECIFICATIONS @20°C
Type/ Function	Range/ Description	Accuracy/ Stability/ Notes
Three wire voltage	(0 to 10) Volts	(V output /2000) or 3 mV (Whichever is the greater)
Thermal drift	Zero at 20°C	1 mV /°C Typical (2 mV /°C Max)
Maximum output voltage	10.5 V	In high-burnout condition
Minimum output voltage	< 0.0 V	In low-burnout condition
Supply voltage effect	0.05 mV / V	
Minimum output load	500 Ohms	2 mA @ 10V
Supply	(15 to 30) V DC	SELV

USB USER INTERFACE		
Type/ Function	Range/ Description	Notes
Configuration hardware	USB configuration module	USB-CONFIG-MK3
Configuration software	USBSpeedLink	Download <a href="http://www.status.co.uk">www.status.co.uk</a>
Sensor configuration	Sensor type Temperature range for (0 to 10) V output Sensor offset Burnout voltage	From library °C or °F °C or °F Upscale or downscale
Read live data	Temperature Output	°C or °F Volts
Save/ Open configuration		To/From file

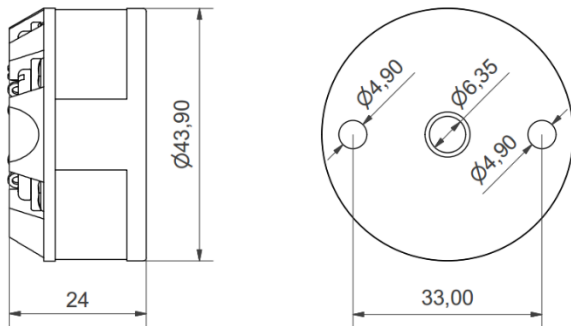
GENERAL	
Function	Description
Update time (Input)	500 ms
Response time (Output)	1 second to 70% of final value
Start-up time	4 seconds (mA out < 4 mA during start up)
Warm-up time	60 s to full accuracy
Default configuration	YSI 10KB (-55 to 205) °C, upscale burnout
Connection terminals	t3,4 input; 1(+),2 (-) supply; terminal 6 (V out)

# SEM206THV IN-HEAD, THERMISTOR INPUT (0 to 10) V OUTPUT

ENVIRONMENTAL	
Function	Description
Temperature	Operating/Storage (-30 to 70) °C / (-40 to 85) °C
Humidity	Operating/Storage (10 to 90) %RH non-condensing
Protection requirement	>= IP65 for housing
USB configuration ambient	To be configured within (10 to 30) °C

MECHANICAL	
Function	Description
Dimensions	43.9 mm diameter; 24 mm height
Fixing centres	2 x 5 mm holes on 33 mm centres
Centre hole	6.35 mm hole for wiring aid
Weight	31 g
Terminals	Screw clamp

Dimensions in mm



Fixing holes 2 x Ø5.5 mm, Centre hole Ø4.5 mm

APPROVALS	
EMC	BS EN 61326: Note - Compliance tested with 3 m input wires
Ingress protection	BS EN 60529
RoHS Directives 2 & 3	2011/65/EU & EU 2015/863, and the UK designated standards

<b>ORDER CODE</b>	<b>SEM206THV</b>
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ACCESSORIES	
Configuration software	USBSpeedLink (free of charge from <a href="http://www.status.co.uk">www.status.co.uk</a> )
Configuration device	USB-CONFIG-MK3
Rail mount clip	RMK/3T
Clip spring mount screws	SMK/3
Head options	Please refer to <a href="http://www.status.co.uk">www.status.co.uk</a>