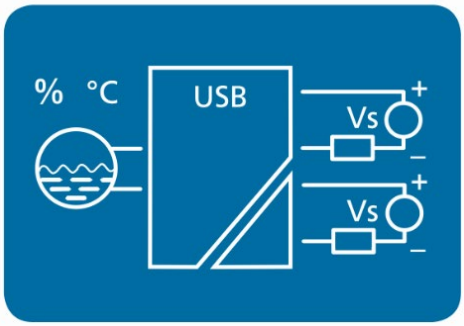
SEM160I HUMIDITY/TEMPERATURE TRANSMITTER

- **HUMIDITY, TEMPERATURE, DEW-POINT, DELTA-TEMPERATURE MEASUREMENT**
- **SINGLE OR DUAL (4 to20) mA OUTPUT**
- **DUCT AND WALL MOUNT VERSIONS**
- **USER-CALIBRATION FACILITY**
- **DIRECT USB CONFIGURATION**





INTRODUCTION

The SEM160I is a low-cost single or dual channel RH and temperature transmitter for industrial and BMS/HVAC applications.
Single point alignment is provided for both temperature and humidity ranges.
The configuration software also provides data readings together with a basic logger function for diagnostics when connected to the USBSpeedLink software.

FEATURE HIGHLIGHTS

WALL/DUCT MOUNT
The SEM160I has wall and duct mount options, with different stem lengths available for duct mount.

INPUT VARIANTS
The SEM160I can be programmed to retransmit a single or dual scaled (4 to 20) mA loop signal based on any of four input variants: relative humidity, temperature, dew-point and delta temperature can all be selected for retransmission.

USER-CALIBRATION/ALIGNMENT
The SEM160i can be user aligned to a reference source or meter for %RH and temperature input readings.

USB CONFIGURATION
The SEM160I is quick and easy to set up using the USBSpeedLink software with direct USB connection to a PC.
The SEM160I can be set to %RH and temperature output options.

SEM160I HUMIDITY/TEMPERATURE TRANSMITTER

INPUT	
Type/Function	**Range/Description**
Sensor type	Humidity/Temperature
Humidity range	(0 to 100) % RH
%RH accuracy	Typically, +/- 3% (+/- 5% Max) between (10 to 90) %RH
Temperature range	(-30 to 70) °C
Temperature accuracy	+/- 0.5 °C between (-20 to 70) °C
Dew-point range	(0 to 50) °C
Delta temperature (Delta T)	Ambient temperature – dew-point temperature
Delta temperature range	(0 to 50) °C
Thermistor (single channel version only)	Optional discrete thermistor to replace second (4 to 20) mA channel. Thermistor to be read directly by user. 10 K NTC, data on request.

OUTPUT Dual channel version x 2 (4 to 20) mA. Single channel 1 x (4 to 20) mA plus thermistor	
Type/Function	**Range/Description**
Output type	(4 to 20) mA control loop
Accuracy	(mA output /2000) or 5 uA, whichever is the greater
Loop Voltage effect	0.2 uA / V
Thermal drift	1 uA / °C
Maximum output	20.5 mA
Minimum output	3.9 mA
Maximum output load	[(Vsupply-10)/20] K Ohms (Example: 700 Ohms @ 24V)
Channel isolation	500 Vdc, 48 Vdc working
Switch setting dual channel only	Four switch selected ranges provided, user-configurable

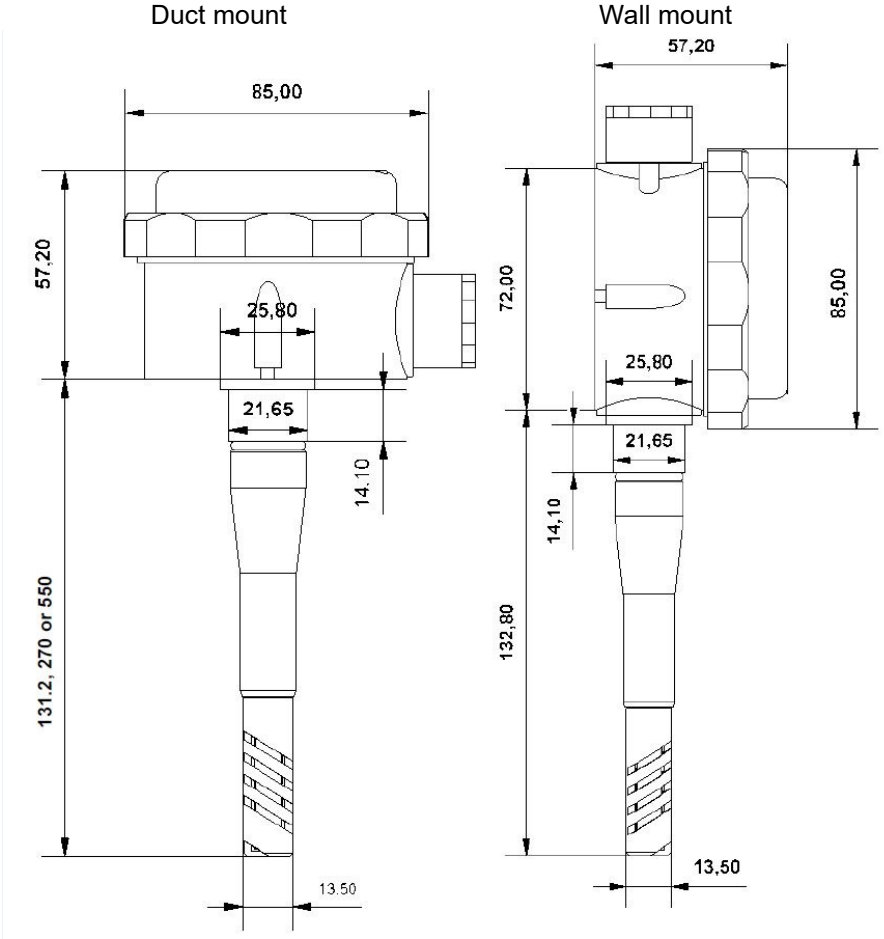
USB USER-INTERFACE		
Type/Function	**Range/Description**	**Notes**
Configuration hardware	USB Lead	A to mini B
Configuration software	USBSpeedLink	Download www.status.co.uk
Channel 1 Single and Dual Channel 2 Dual only 4 x pre-set dip switch	Source	RH, Temperature, Dew-point, Delta T
	Range:	(0 to 100) %RH, (0 to 100) °C Temperature (0 to 50) ° Dew-point, Delta T
	Sensor offset/alignment	(-10 to 10) %RH, (-10 to 10) °C
	Sensor pre-set	Any within type range
	Error signal	(3.8 to 21.5) mA
Tag number	User-defined	20 character
Read live-data	%RH Temperatures Dew-point Delta T Output channel value	% °C °C °C mA
Save/load configuration		To file on PC
Defaults	Ch1 (0 to 100) %RH, CH2 (0 to 50)°C, 21.5 mA signal error, no offsets	

GENERAL	
Function	**Description**
mA output response time	3 s
Supply voltage	(10 to 30) Vdc SELV
Start-up time	<10 s, mA out <4 mA during start-up
Note: for channel 2 to give a (4 to 20) mA output, channel 1 must also be powered	

SEM160I HUMIDITY/TEMPERATURE TRANSMITTER

ENVIRONMENTAL	
Function	**Description**
Ambient temperature	Operating/Storage (-30 to 70) °C
Probe temperature	(-30 to 70) °C
Ambient humidity	Operating/Storage (0 to 100) %RH non-condensing
Protection	IP65 main housing, IP40 probe sensing tip
USB configuration ambient	(10 to 30) °C

MECHANICAL	
Function	**Description**
Dimensions	See below
Enclosure	Wall, duct mount
Material	ABS plastic with UV, UL rating HB: Grey
Connections	Screw terminals 2.5 mm wire maximum
Weight	130 g approximate



In mm

APPROVALS	
EMC	BS EN 61326
Ingress protection	BS EN 60529
RoHS	Directive 2011/65/EU

SEM160I SERIES ORDER CODE

	Mounting	Channels	Duct only stem option	
SEM160I				
	D = Duct W = Wall	H = Single HP = Dual	01 = 120 mm 02 = 250 mm	
Example 2 channel wall mount				
SEM160I	W	HP	-	

ACCESSORIES	
Configuration software	USBSpeedLink (free of charge from www.status.co.uk)
Calibration	Contact sales@status.co.uk

To maintain full accuracy annual calibration is required. Contact support@status.co.uk for details.
The data in this document is subject to change. Status Instruments assumes no responsibility for errors.

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