STATUS
INSTRUMENTS

SEM710PM SERIES USER GUIDE
DUAL (4 to 20) mA OUTPUT PRESSURE and TEMPERATURE TRANSMITTER
WITH DATA LOGGING FUNCTION + DISPLAY OPTION (DP)

Important - Please read this document before installing.
Every effort has been taken to ensure the accuracy of this document; 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.

IMPORTANT – CE, UKCA & SAFETY REQUIREMENTS ⚠

The instrument is designed to be directly attached to the sensor probe assembly. The user must ensure all cable entries maintain environmental protection to at least IP65 rating.

The product contains no serviceable parts, or internal adjustments. No attempt must be made to repair this product. Faulty units must be returned to supplier for repair. This product must be installed by a qualified person. All electrical wiring must be carried out in accordance with the appropriate regulations for the place of installation. Before attempting any electrical connection work, please ensure the battery is removed.

ABSOLUTE MAXIMUM CONDITIONS (To exceed may cause damage to the unit).	
Supply Voltage	± 30.0 VDC (Protected for over-voltage and reverse connection)
Supply Current	± 100.0 mADC (Protected for over-voltage and reverse connection)
Ambient	Temperature (-30 to 70) °C, Humidity (10 to 95) % RH (Non-condensing)

UK CA CE ⚠ **Important – Read this document before installing.**

1~DESCRIPTION.
The SEM710PM and SEM710PM/DP are dual channel loop powered transmitters with sealed gauge pressure ranges up to 100 bar, plus temperature.
A datalogging feature is provided via either USB or NFC (suitable Android device) connectivity.
The logging function can record pressure or a scaled process value with the temperature of the medium.
The SEM710PM/DP version can display pressure in various units, a scaled process value (custom units) and temperature (°C or °F) on a 6-digit LCD display.

2~RECEIVING AND UNPACKING.
Please inspect the packaging and instrument thoroughly for any signs of transit damage. If the instrument has been damaged, please notify your supplier immediately.

3~SPECIFICATION.
Refer to data sheet for full specification.

Factory default	(4 to 20) mA Outputs: CH1 full sensor range in bar, CH2 (0 to 50) °C :Display option, bar
	Both CH1 + CH2 high burnout

4~INSTALLATION AND ELECTRICAL WIRING

⚠ **Note: If only a single output channel is to be connected, it MUST be Channel one. Channel two will not function if Channel one is not powered.**

4.1~MECHANICAL.

In order to ensure correct operation, the following must be observed:
The product must be stored in a dry clean environment and remain in original packaging prior to installation.
The instrument must not be installed adjacent to electro-mechanical starters, controllers, thyristor power units or electrical switch gear.
Any cleaning of the instrument must be done using a mild detergent and soft cloth. No solvents or abrasive cleaners should be used.
Stated ambient operating conditions must not be exceeded.

ALERT LED
The Alert LED will flash if the input signal is lost.

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4.2~ELECTRICAL.
For a wiring diagram please refer to the rear panel of the SEM710PM inside the case housing.
Connections: CH1 + / - and CH2 +/-
Two-part connectors are used allowing the unit to be easily removed from the housing for reprogramming or data download if this is not possible in situ.

IMPORTANT: Always turn off the power supply before any wiring takes place. Gain access to the connectors by unscrewing the cap ring to release front panel assembly from case.

OUTPUT CONNECTION: Two two-part connectors are used for the (4 to 20) mA output channels.

If only single channel is to be connected for use it must be channel one. ⚠

INPUT CONNECTION: The input sensor is pre-wired using a two-part connector.
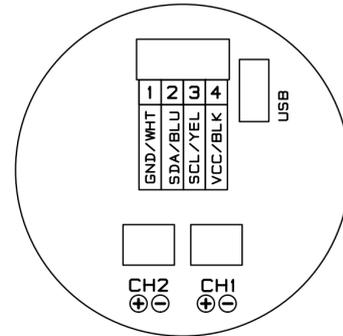
5~USER-CONFIGURATION. ⚠ IMPORTANT
READ COMPLETE SECTION BEFORE ATTEMPTING CONFIGURATION.

The instrument is provided with a USB interface for direct connection to a PC. Free software USBSpeedLink is available. Please refer to the USBSpeedLink software for further information on configuration. The software can be downloaded from www.status.co.uk.

DISPLAY: The display provides six 14-segment characters for display of %RH, temperature, dew point and delta T, together with an 8-segment bar graph and six icons. The display can operate in an ambient temperature range of (-30 to 70) °C, but at temperatures lower than -5 °C (due to the slow LCD speed), scrolled/toggling between different process is not practical.
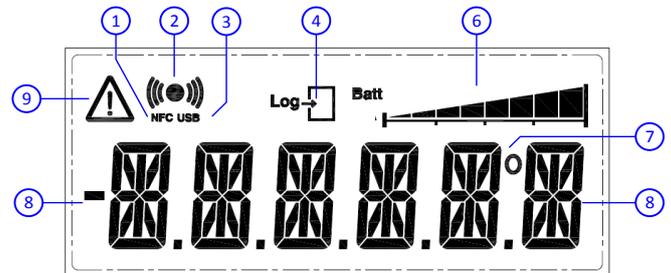
1. NFC - The Symbol is on when a NFC field is detected. When a detected field is lost the symbol will turn off after a few seconds.
2. TRANSMIT/RECEIVE: Symbol on when either NFC or USB communication is active.
3. USB: Symbol on when USB port is connected to a PC.
4. LOG: Not used
5. Not used
6. BAR GRAPH: Indicates the state of the logger. The condition is dependent on the selected logger mode, either Single or Rolling mode.

Single Mode (Log to the maximum number of logs then stop)

Start of Log	Mid Log	End of Log (alternating)

Rolling Mode (Log to the maximum number of logs then as each new log is taken the oldest log is discarded)

Start of Log	Mid Log	Rolled over Log (max bar toggles)

7. DEG: Degree symbol "°" used to indicate either °C or °F on the last digit.
8. DIGITS: Six-digit 14 segment display with – sign, range 9999.9 to -9999.9.
9. WARNING ICON: This symbol will toggle on and off to indicate a warning. The warning symbol will be active either when the sensor signal is out of range or not connected.

Batt Symbol: Not Used

5.1~USB CONFIGURATION

Using the USBSpeedLink software to program a new configuration into the device ,work from left to right through the option tabs.
The USB port is located inside the housing on the rear panel.

Configuration steps
Install and run the USBSpeedLink software
Select the correct programming page in the software (follow any on-screen safety precaution warnings)
Connect the USB lead to the PC, connect the USB lead to the device
Read the unit configuration into the software
Re-configure or adjust configuration options as required
Send the new configuration to the unit

5.1.1~Transducer tab
Use this tab to confirm the range of the transducer (sensor in bar).
This tab can also be used to apply sensor calibration data at up to 5 points in bar
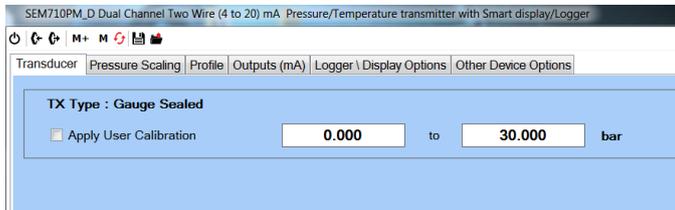
5.1.2~Pressure Scaling tab
Use this tab to select the preferred pressure variable units from a drop-down list. A user custom option is also available for non-standard engineering units to be used.
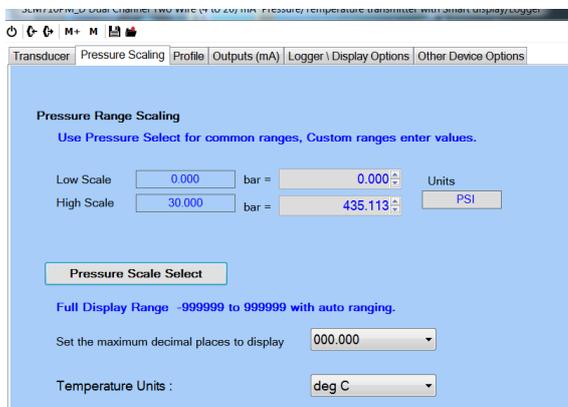
5.1.3~Profile tab
Use this tab to enter any profile to the input value, such as converting level to volume.
Up to 22 x,y conversion points can be added for nonlinear relationships.
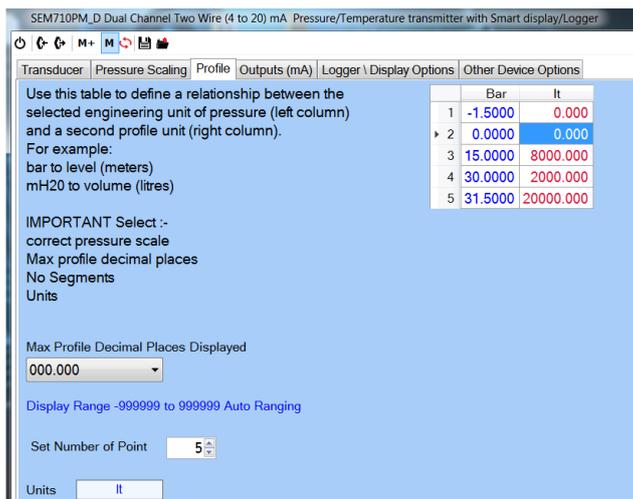
5.1.4~Outputs (mA) tab
Use this tab to select the input source for each channel. Pressure, Profile or Temperature can be selected for either or both channels.
This tab is also used to enter the retransmission range and burnout value for each channel.

5.1.5~Logger/ Display Options tab (display versions only)
Use this tab to select the values that will appear on the display. If more than one option is selected, the display will toggle the values.
If data logging is to be utilised, use this tab to select between Pressure and Profile values for recording.

5.1.6~Other Device Options tab
Use this tab to set the "Tag" and "Contact" free-type fields stored to the device. A passcode to protect the device log from being overwritten by an Android device can be added.
Longitude and latitude data can be entered. This will show in the log files and can help identify data logs recorded from multiple devices.
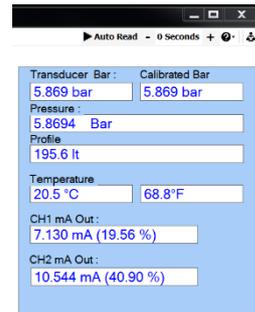
5.1.3~Live data reading: Process Data
The section on the right-hand side of the software can be used to view live readings of process values and the output mA signal(s).
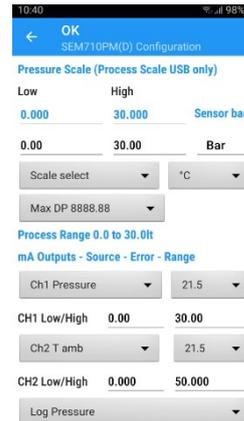
5.2~NFC CONFIGURATION
It is possible to configure the SEM710PM series using NFCLink software. A suitable NFC enabled Android device is required.
NFCLink software is available from the manufacturer or supplier

6~DATA LOGGING
USB and Android NFC software allows the user to read existing logs, change the log manifest, start a new log, synchronise the instrument clock and reset the maximum/minimum readings.
Logs can run to a fixed number and stop or continually roll over. Up to 5000 log points can be recorded. The start of the log can be delayed up to one month.
Data from can be viewed on screen as a graph or table and can also be saved to a csv file.

6~1 USB LOGGING
USB LOGGER INTERFACE (connector inside housing)
The USB interface allows the instrument to communicate with a PC running the USBLogLink software
The prime function of the interface is to read logged data from the device using free software available to download.
The software allows the user to read existing logs, change the log manifest, start a new log, synchronise the instrument clock.
USBLogLink is available from the manufacturer or supplier.

6~2 NFC LOGGING
NFC LOGGER INTERFACE
The NFC interface allows the instrument to communicate with an Android device using NFC connectivity.
The prime function of the interface is to read logged data from the device using a free app, which is available for downloading to Android devices.
The app allows the user to read existing logs, change the log manifest, start a new log, synchronise the instrument clock. Logs can run to a fixed number and stop or continually roll over. The start of the log can be delayed up to one month.

Note: For larger logs the data may take over a minute to fully download via the NFC interface.
Note: Not all Android devices fully implement the near field communication (NFC) standard and may not hold the full number of log points.
Software is available from the manufacturer or supplier.