SEM206PV USER GUIDE

SMART HEAD MOUNT Pt100 TRANSMITTER
THREE WIRE (0 to 10) V OUTPUT

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.

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IMPORTANT – CE, UKCA & SAFETY REQUIREMENTS

Product must be mounted inside a suitable enclosure providing environmental protection, IP65 or higher is recommended.
To maintain CE, UKCA EMC requirements, input wires are recommended to be less than 3 metres.
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 all supplies are switched off.

ABSOLUTE MAXIMUM CONDITIONS (To exceed may cause damage to the unit).	
Supply Voltage	± 30 V dc (Protected for over voltage and reverse connection) SELV
Current with overvoltage	± 200 mA
Input Voltage	± 3 V between any terminals
Ambient	Temperature (- 30 to 70) °C RH (10 to 95) % non-condensing

Important – Read this document before installing.

1~DESCRIPTION.

The SEM206PV is a cost-effective digital in-head transmitter that accepts Pt100 temperature sensors and converts sensor output over a configured range to a standard industrial (0 to 10) V transmission signal.

2~RECEIVING AND UNPACKING.

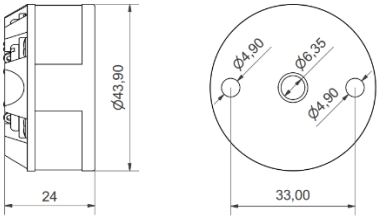
Please inspect the packaging and instrument thoroughly for any signs of transit damage. If the instrument has been damaged, please notify your supplier immediately.

3~SPECIFICATION.

Refer to data sheet for full specification. Download at www.status.co.uk

Configuration	
Factory default	(0 to 100) °C, upscale burnout, 0.0°C offset

4~INSTALLATION AND WIRING



Mounting holes: two holes 4.9 mm diameter, 33 mm centres.

Typical installation sequence (reference guide only) If the SEM206PV is part of an assembly, steps 1 to 3 may have been completed	
1	Configuration (see section 5)
2	Mount transmitter to head (see section 4.1)
3	Wire sensor (see section 4.2 and 4.2.1)
4	Install assembly (see section 4.1)
5	Wire (4 to 20) mA loop (see section 4.2.2)

4.1~MECHANICAL.

The transmitter has been specifically designed to fit inside a DIN standard probe head enclosure, which provides adequate protection from moisture, dust, corrosive atmospheres etc. All cable entries must be sealed using the correct size gland. Likewise, any probe assembly fitted must be sealed.
The device body has a centre hole allowing the sensor wire to enter screw terminals from the transmitter centre; this is applicable when the sensor is mounted directly below the transmitter.
Care must be taken when locating the transmitter/assembly to ensure the working ambient temperature range of (-30 to 70) °C is not exceeded.

4.2~ELECTRICAL.

Electrical connections to the transmitter are made to the screw terminals provided on the top face.

Note: For Pt100 sensors, wires must be of equal length and type for the lead compensation to work correctly.

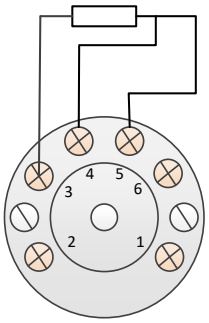
The screw terminals allow for wires to enter either from the inner or outer direction.
The transmitter is protected against reverse connection and over voltage. If no sensor (input) connection is made the transmitter will go into either up-down scale output current, depending on configuration.
The transmitter conforms with EC directive BS EN 61326 when correctly installed in a termination head providing at least IP54 protection.

4.2.1~Pt100 Input connections.

Note: Tested with 3-metre input sensor wires to meet BS EN 61326, keeping cable within this length is recommended.

The diagram below shows input connection wiring.

3 Wire Pt100

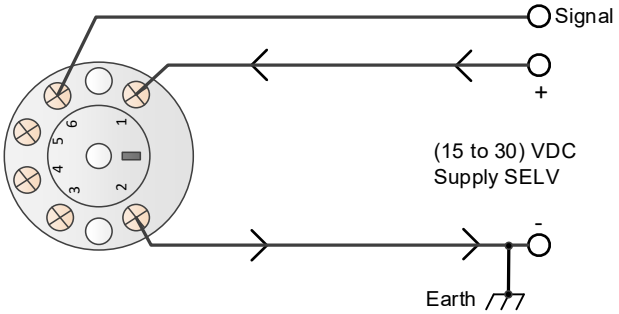


4.2.2~Three wire (0 to 10) V Output connection.

The following diagram gives output connection details; the output is connected to a DC SELV supply (15 to 30) Vdc.

Always ensure the (0 to 10) V is grounded at one point; this would normally be at the monitoring equipment or power supply.
Screened wires are recommended for output wires. Avoid running signal wires alongside mains or AC power lines or other sources of electrical interference.

4.2.2~Continiued
Output connection.

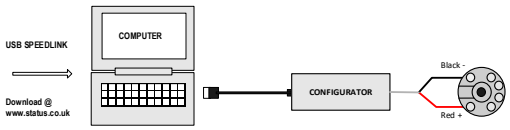


5~USER-CONFIGURATION.

⚠ IMPORTANT
READ COMPLETE SECTION BEFORE ATTEMPTING CONFIGURATION.

IMPORTANT
Do not attempt to configure the unit when connected to a Voltage supply.

A Status Instruments USB configuration module is required for connecting the unit to the PC. Refer to your supplier for details.



Install the software and connect the USB configuration module. Ensure the PC is Web-enabled during software installation.

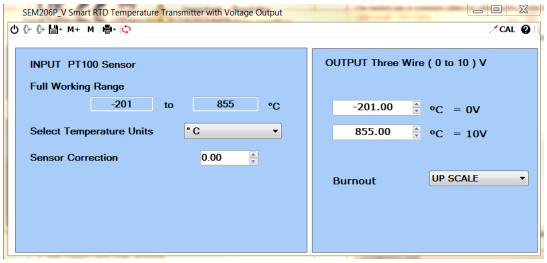
On initially connecting the USB configuration module the software will need to load the drivers; this may take a few minutes. Please leave time for this process to complete before proceeding.

Configuration steps
Install the software and connect the USB configuration module to the PC.
Connect the configuration module to the device (removed from any Voltage supply).
Select the correct programming page in the software.
Read the device configuration into the software using the “Retrieve configuration” menu button.
Re-configure or adjust configuration options as required.
Send the new configuration to the unit. The configuration update is not automatic. The configuration must be sent using the “Send configuration” menu button.

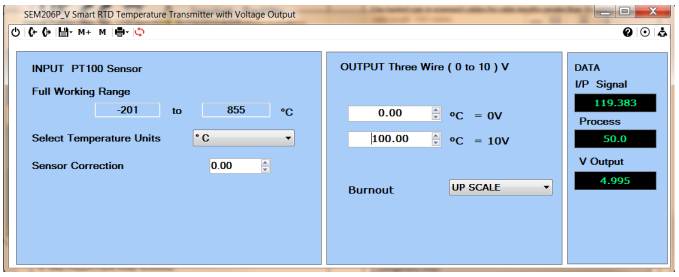
Configuration options in software	
Temperature units	°C or °F
Low range 0 V	Any °C/°F point within range
High range 10 V	Any °C/°F point within range
Burnout	Burnout high or low
Sensor Correction	In °C or °F

5.1~USB-SpeedLink software.

Note: When the unit is correctly connected the “Send configuration” and “Receive configuration” menu buttons will turn black and the “DATA” section of the screen will open to the right.



SEM206PV screen with no USB configuration device connected.



SEM206PV screen with USB configuration device connected correctly.

If the configuration module is connected correctly but the SEM206PV is not, the software will report the message “Upload did not work” when a “Retrieve configuration” is attempted.

Note: the input value and calculated output value can be read using the “Read data” menu button.

6~TECHNICAL SUPPORT.

If you need to contact Status Instruments for technical support, please refer to this page on our website.
https://www.status.co.uk/support/

Status Instruments Ltd, Status Business Park, Gannaway Lane, Tewkesbury, Gloucestershire, UK, GL20 8FD, Web Page: www.status.co.uk,
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