

## SEM1600VI USER INSTRUCTIONS

### 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

Product must be DIN rail mounted, inside a suitable enclosure providing environmental protection to IP65 or greater.

To maintain CE UKCA requirements, input and supply wires must be less than 30 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. 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 (SELV)	± 50 Vdc Protected for over-voltage and reverse connection
Current with over-voltage	± 200 mA
Input voltage	± 75 VDC between any terminals
Input current	± 75 mA between any terminals
Environmental protection	IP65 or greater required
Ambient	Temperature (-30 to 75) °C RH (10 to 95)% non-condensing



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### 1-DESCRIPTION.

The SEM1600VI is a powered isolator/conditioner that accepts any voltage signal between (-50 and 50) VDC or any current signal between (-50 and 50) mADC. The output stage offers either voltage, bipolar voltage or current re-transmission signals. The retransmission signal can be ranged to a scale anywhere within the input process range. A transmitter power supply is provided on both input and output meaning the products can accept sink or source applications.

To configure: connect a standard USB cable between the SEM1600VI and a PC. The free configuration software will guide you through any changes you wish to make. The SEM1600VI does not need to be wired to a power supply for configuration.

### 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 the datasheet for full specification. Download at [www.status.co.uk](http://www.status.co.uk)

Factory defaults	I/P (4 to 20) mA Damping Rise 0 s, Fall 0 s O/P (4 to 20) mA
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### 4-INSTALLATION AND WIRING.

#### Important safety requirements

This equipment is suitable for Environment Installation BS EN61010-1 Pollution Degree 2; Installation CAT II; CLASS I and is classed as "PERMANENTLY CONNECTED EQUIPMENT". The equipment is intended for industrial and commercial application only and is not suitable for domestic or medical use.

The equipment must be mounted inside an enclosure that provides protection  $\geq$  IP65. In NORMAL USE, the equipment will only be accessed for maintenance by qualified personnel.

Please ensure the equipment is mounted vertically with terminals (10, 11 and 12) at the bottom. This will provide maximum ventilation.

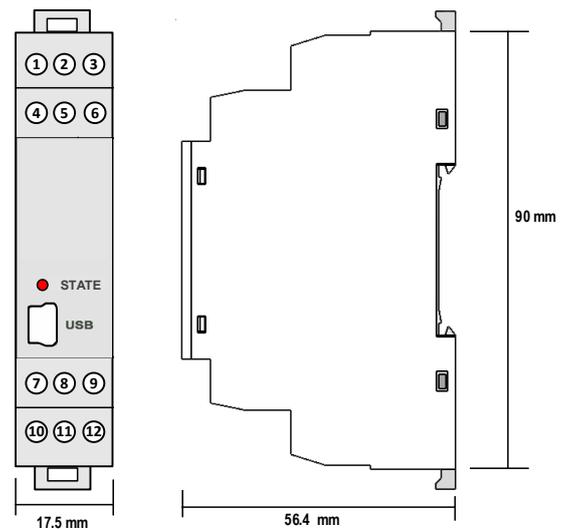
This equipment may generate heat. Ensure the enclosure size is adequate to dissipate heat. Be sure to consider any other equipment inside the enclosure.

The equipment surfaces may be cleaned with a damp cloth. Use a mild detergent/water. Ensure the supply is off before cleaning and, on completion of cleaning, the equipment is completely dry before the supply is turned back ON.

This equipment 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.

### 4.1-MECHANICAL.

Dimensions in mm



The equipment must be mounted on a DIN rail style DIN EN50022 inside a plastic or metal enclosure with a protection level  $\geq$  IP65. All wiring must be secured. Maximum cable sizes 2.5 mm<sup>2</sup>. Connection is via screw clamp terminals.

### 4.2-ELECTRICAL CONNECTIONS

For wiring connections refer to the side label on the SEM1600VI and this document.

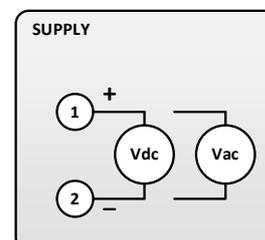
Supply (10 to 48) Vdc, (10 to 32) Vac

To maintain CE EMC requirements, input and supply wires must be less than 30 metres.

Input cable lengths > 3 m it is recommended to use screened or twisted pair.

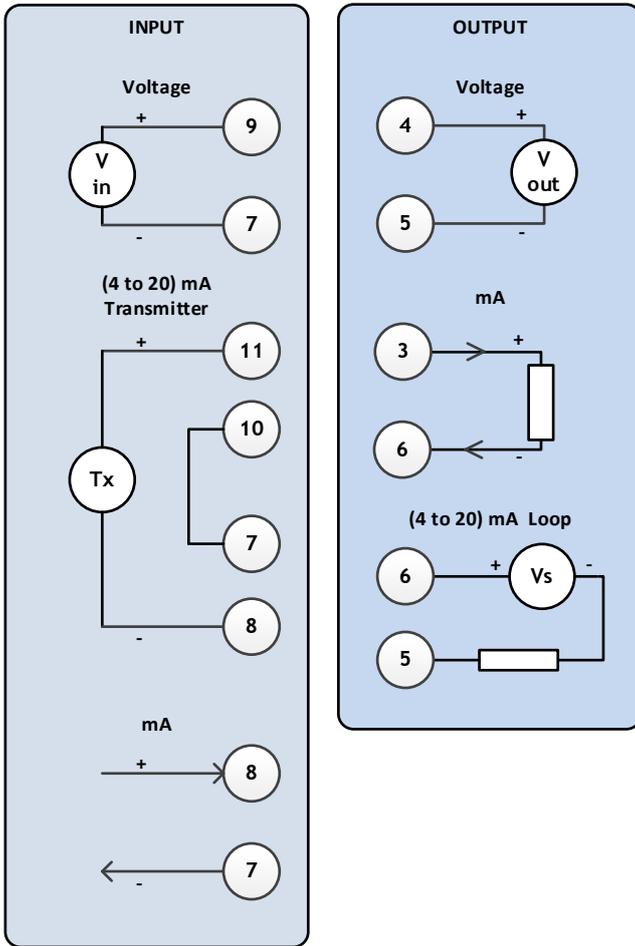
Maximum mA output cable run = 1000 metres. The output loop should be grounded at a single point.

Before installation, care must be taken to ensure enough voltage is available in any loop to drive the total loop load.



## 4.2-ELECTRICAL (continued)

### SEM1600VI Connections



5.1	Standard configuration mode options. Input Type Input Range Damping time for signal Raise and Fall time. Output Type Output Range Tag
5.2	Advanced configuration will offer extra configuration options. Up to 22-point user linearisation. Maths functions (power and root) Engineering units for process output value
6	Read data: Live data can be displayed showing input and output values. This can only be done if the device is powered as well as connected to the software via the USB lead.* <sup>3</sup>
7	Write/Save the configuration to the device.* <sup>2</sup>
* <sup>1</sup> Once only, on the first time connecting to the SEM1600VI, drivers will install to the PC, allow time for this before proceeding.	
* <sup>2</sup> The configuration is not saved onto the device unless the configuration screen is sent.	
* <sup>3</sup> The SEM1600VI can be configured whilst connected and powered, but a portable battery powered computer or USB isolator must be used to avoid the effects of ground loops.	

## 4.3-STATE LED

The State LED is GREEN under normal run conditions indicating an in-range input signal. If the input signal is out of range or is lost, the State LED will light RED.

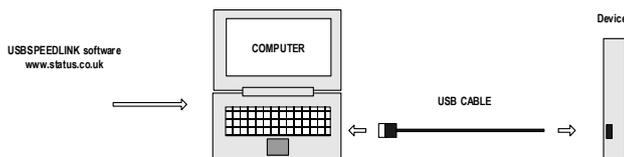
## 5-USER CONFIGURATION.

The SEM1600VI can be configured using a Windows PC. Live input and output values can also be viewed on a PC or a suitable Android device.

### 5.1-PC CONFIGURATION USBSpeedLink Software

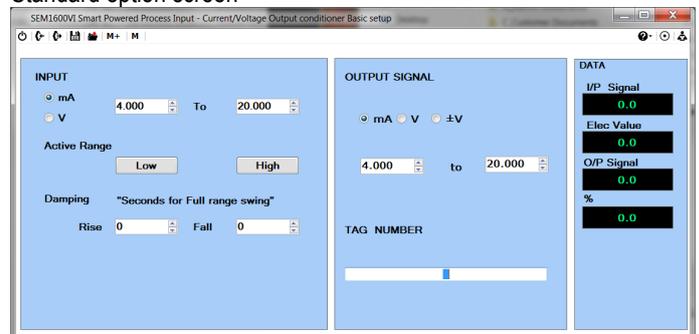
**!** During configuration the equipment takes its power from the USB port, therefore no power connection is required. The equipment can be configured whilst powered but the computer used must be portable battery-powered or a USB isolator should be used to isolate the SEM1600VI from the supply earth to avoid grounded earth loop effects.

Observe any warning information given in the software.

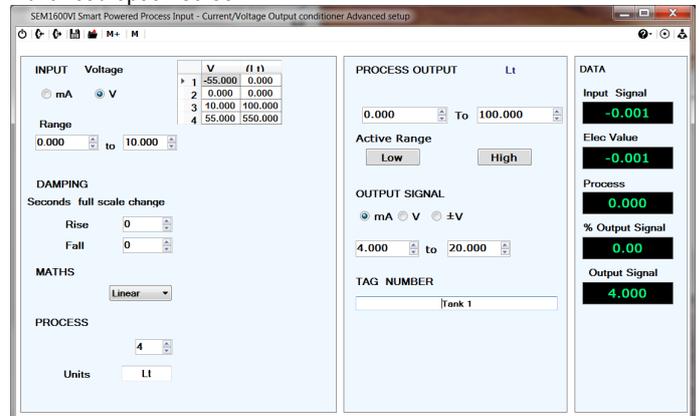


PC Configuration steps	
1	Download and install the USBSpeedLink software from <a href="http://www.status.co.uk">www.status.co.uk</a>
2	Run the software and open to the correct screen for the SEM1600VI
3	Connect to the PC using an A to Mini B USB lead.* <sup>1</sup>
4	Read the SEM1600VI configuration into the software. Two modes are available Standard and Advanced.
5	Configure the device to the required settings for operation.

### Standard option screen



### Advanced option screen



### 5.2-ANDROID MONITORING USBView Software

Using a suitable OTG USB lead to connect the SEM1600VI to an Android device, live data reading can be taken. The USBView app. can display input temperature/value, output mA/V and the Tag information.

USB Software can be downloaded free of charge from [www.status.co.uk](http://www.status.co.uk)

[www.status.co.uk](http://www.status.co.uk)

This guide is also available online at [www.status.co.uk](http://www.status.co.uk)  
 Status Instruments Ltd, Status Business Park, Gannaway Lane, Tewkesbury, Gloucestershire, UK, GL20 8FD,  
 Web Page: [www.status.co.uk](http://www.status.co.uk),  
 Email: [sales@status.co.uk](mailto:sales@status.co.uk)  
 Technical Support: [support@status.co.uk](mailto:support@status.co.uk)  
 Tel: +44 (0) 1684 296818, Fax: +44 (0) 1684 293746