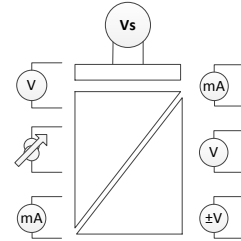




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Product Datasheet

GEN1600VI Signal Isolator / Conditioner



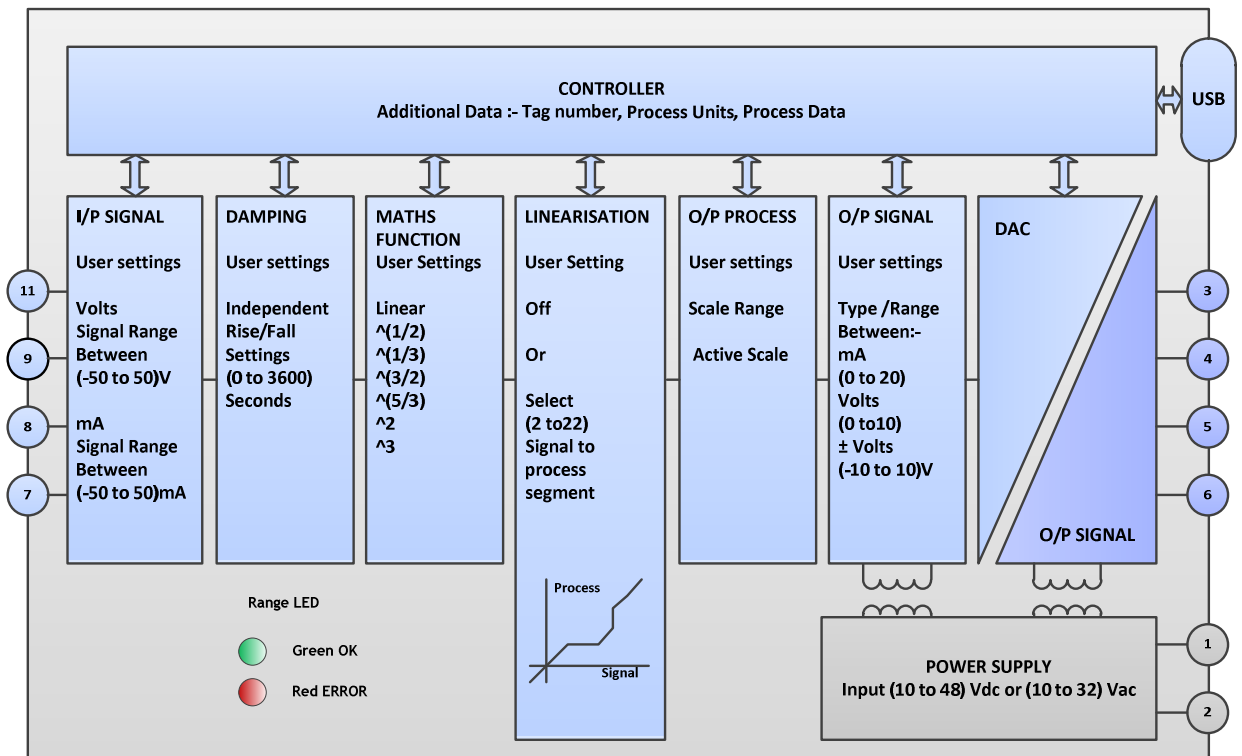
INTRODUCTION

The GEN1600VI is a “smart” powered isolator/conditioner that accepts any voltage signal between (-50 and 50) V dc or any current signal between (-50 and 50) mA. 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.

There are a number of free software tools available including 22 segment user linearisation / profiling, maths functions and input signal damping. These enable you to configure the product exactly to your requirements.

For ease of use, a high efficiency switch mode power supply is fitted as standard and does not require any adjustment between ac or dc applications. Operating voltages are (10 to 48) V dc and (10 to 32) V ac

A USB interface is fitted for quick and easy configuration. Just connect a standard USB cable between the GEN1600VI and your PC. Using the configuration software, your PC will automatically upload the existing configuration data and guide you through any changes you wish to make. To further help save time, the GEN1600VI does not need to be wired to a power supply during the configuration process, it is powered via the USB interface from your PC



SPECIFICATION @20 °C

CURRENT INPUT

Range (-50.0 to 50) mA, Accuracy (-22 to 22) mA ± 5 uA, (-50 to 50) mA ± 10 uA
 Impedance < 30 Ω
 Drift < ±0.01 (% of FSD)/°C

VOLTAGE INPUT

Range (-50.0 to 50.0) V, Accuracy (-22 to 22) V ± 5 mV, (-50 to 50) V ± 10 mV
 Impedance 1 MΩ
 Drift < ±0.01 (% of FSD)/°C

OUTPUT CURRENT

Current Source Range (0 to 21.5) mA , Max Load 750 Ω
 Current Sink Range (0 to 21.5) mA , Supply (10 to 30) V dc, Voltage effect 0.2 uA/V
 Accuracy (mA Out/ 2000) or ± 5 uA which ever is the greater, Drift 1 uA/°C

OUTPUT VOLTAGE

Range (0 to 10.1) V or (-10.1 to 10.1) V, Accuracy ± 5 mV
 Current Drive ± 2 mA, Min load 5000 Ω @ 10V

SUPPLY

Range (10 to 48) VDC, (10 to 32) VAC Protected by internal 500mA resettable fuse.
 Power < 1 W Full Power

GENERAL

Response time Start up 5 seconds, Update 300 mS, Response 400 mS, Warm up 2 minutes.
 Isolation Supply to input to output 500 V dc.
 Indication LED, Green when output (-0.1 to 100.1) %, else red

USER INTERFACE

Type USB 2.0
 Baud rate 19,200 baud
 Equipment PC running windows XP or later, USB cable.

USER INTERFACE FUNCTIONS

Scaling User signal to process value scaling, for simplified setup.
 Damping Independent rise and fall damping. Range (0 to 3600) Seconds
 Math Functions Linear, ^ (1/2), ^ (1/3), ^ (3/2), ^ (5/2), ^2, ^3.
 User Linearisation (Profile) (2 to 22) segments Ω (slide wire) to process.
 Process Units 4 Characters (signal input only)
 Tag Number 20 Characters
 Process Output Range in process units
 Signal Output Select type, signal range and (temperature only) error signal
 Active scaling Set output process range against active sensor input

ENVIRONMENT

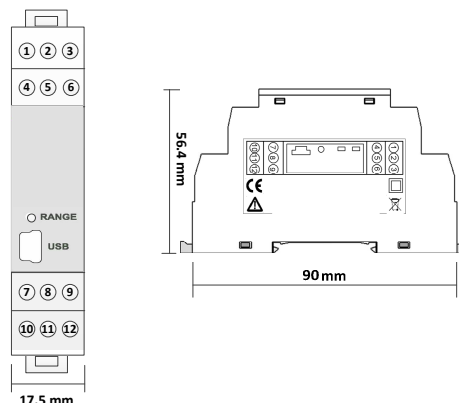
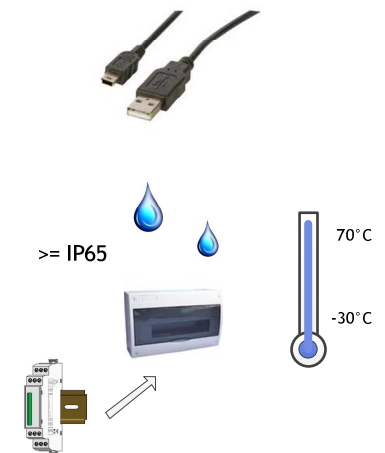
Operating Ambient (-30 to 70) °C; (10 to 90) %RH (non condensing)
 Storage Ambient (-30 to 70) °C; (10 to 90) %RH (non condensing)
 Configuration Ambient (10 to 30) °C
 Installation Enclosure DIN Rail enclosure offering Protection >= IP65.

APPROVALS

CE BS EN 61326

MECHANICAL

Style DIN 43880, Colour grey, material Polyimide 6.6, weight < 70 grams
 Terminals 2.5 mm Maximum

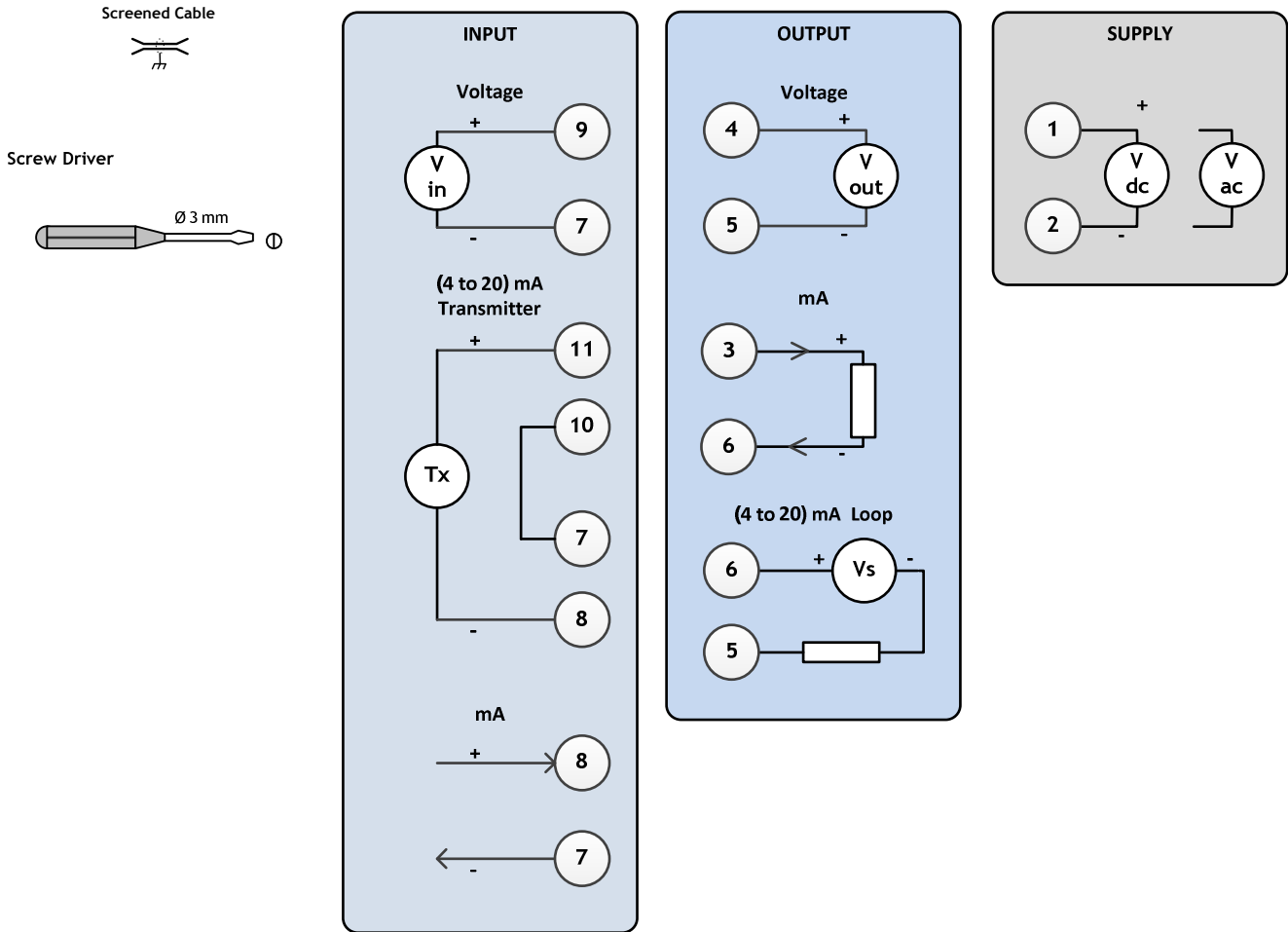


ELECTRICAL INSTALLATION

- 1.0 TURN OFF SUPPLY BEFORE WORKING ON ANY ELECTRICAL CONNECTION.
- 2.0 SUPPLY IS OVER VOLTAGE PROTECTED AND FUSED WITH AN INTERNAL RESETTABLE FUSE.

CONNECTION

For cable length < 3 Metres no screen or twist pair required.
 Use recommended types for cable length (3 to 30) metres.





Professionally approved products.

Instruction Manual

GEN1600VI Signal Isolator / Conditioner



IMPORTANT - CE & SAFETY REQUIREMENTS

Important - Potentially Hazardous situations. Persons responsible for the installation and operation of this equipment must be fully aware of all aspects of this guide. Failure to follow the instructions can cause severe injuries and damage.

This product is suitable for environment Installation category II pollution degree. The product is classed as "PERMANENTLY CONNECTED EQUIPMENT", and must be DIN rail mounted, inside a suitable enclosure providing environmental protection to IP65 or greater.

Dc supply must be derived from a local supply and not a distribution system.

To maintain CE EMC 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. 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):-

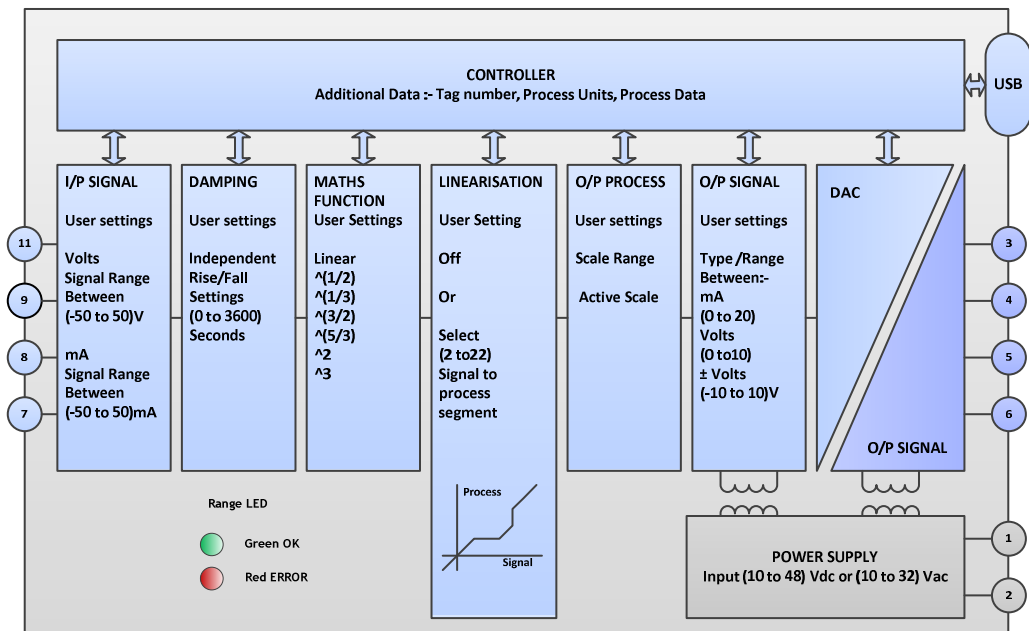
Supply Voltage	± 50 V dc (Protected for over voltage and reverse connection)
Current with over voltage	± 200 mA
Input Voltage	± 75 VDC, 50 V rms between any terminals
Input Current	± 75 mA between terminals
Ambient	Temperature (-30 to 75) °C
Humidity (10 to 95) % RH (Non condensing)	

PLEASE REFER TO THE PRODUCT LABEL FOR MANUFACTURERS CONTACT DETAILS.

RECEIVE 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.

OPERATION (please refer to data sheet for full technical specification.)



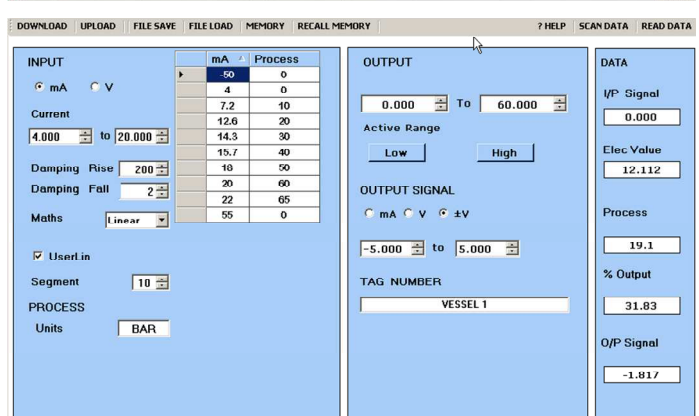
CONFIGURATION

This product is configured using the USB port of a PC running USB_Speed_Link software, available from your suppliers web site. During configuration the product is powered direct from the usb port, removing the need for additional power. If the user wishes to monitor live process data during configuration, then powered must be applied. Note the input and USB port of the device share the same ground, therefore care must be taken to ensure isolation between PC and input circuit. This is best achieved by using a portable laptop or notebook PC. USB_Speed_Link software is provided with detailed help menu to guide the user through the simple configuration procedure. Unless specified at the time of order this product is supplied with the default configuration listed below.

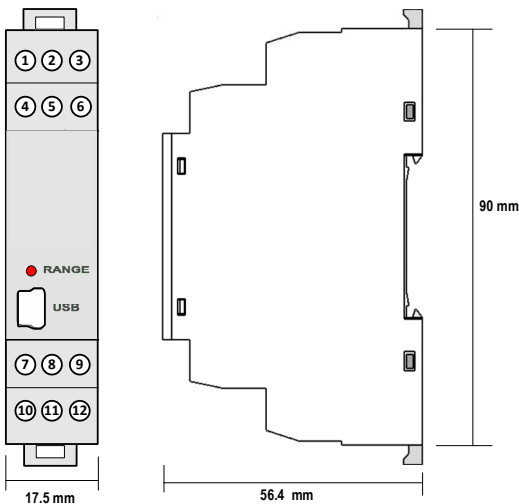


Factory default:

- Input range = (4 to 20) mA
- Process Range = (0 to 100)
- Units = "PV"
- Process Output = (0 to 100)
- Output range = (4 to 20) mA
- Damping(rise & fall)= 0
- Maths = Linear
- Tag = ""

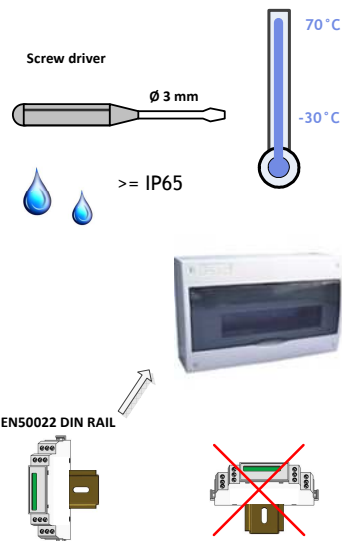


MECHANICAL INSTALLATION

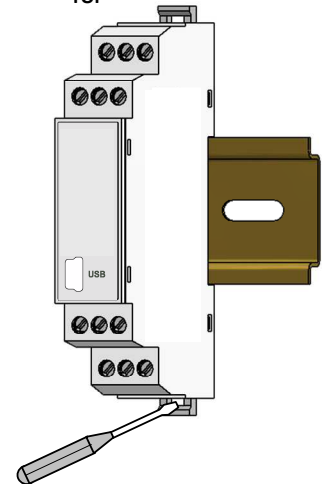


Style DIN 43880 (1 module width)
 Material Polyamide 6.6 self extinguishing
 Terminals Screw terminal
 Cable 2.5 mm Max
 Colour Grey

MOUNTING



TOP



To fit or release module
 Insert screw driver into slot and lever latch away from body

ELECTRICAL INSTALLATION

- 1.0 TURN OFF SUPPLY BEFORE WORKING ON ANY ELECTRICAL CONNECTION.
- 2.0 SUPPLY IS OVER VOLTAGE PROTECTED AND FUSED WITH AN INTERNAL RESETTABLE FUSE.

Screened Cable



CONNECTION

For cable length < 3 Metres no screen or twist pair required.
Use recommended types for cable length (3 to 30) metres.

Screw Driver

