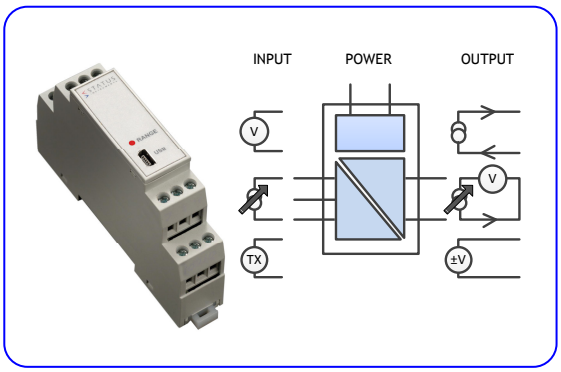
SMART POWERED PROCESS SIGNAL ISOLATOR/CONDITIONER

SEM1600VI

- (-50 to 50) V or (-50 to 50) mA INPUT
- CURRENT, VOLTAGE OR BIPOLAR VOLTAGE OUTPUT
- CURRENT SINK AND SOURCE ON INPUT AND OUTPUT
- POWERED (10 to 32) V AC / (10 to 48) V DC SUPPLY
- 22 SEGMENT LINEARISATION
- CONFIGURATION USING USB PORT



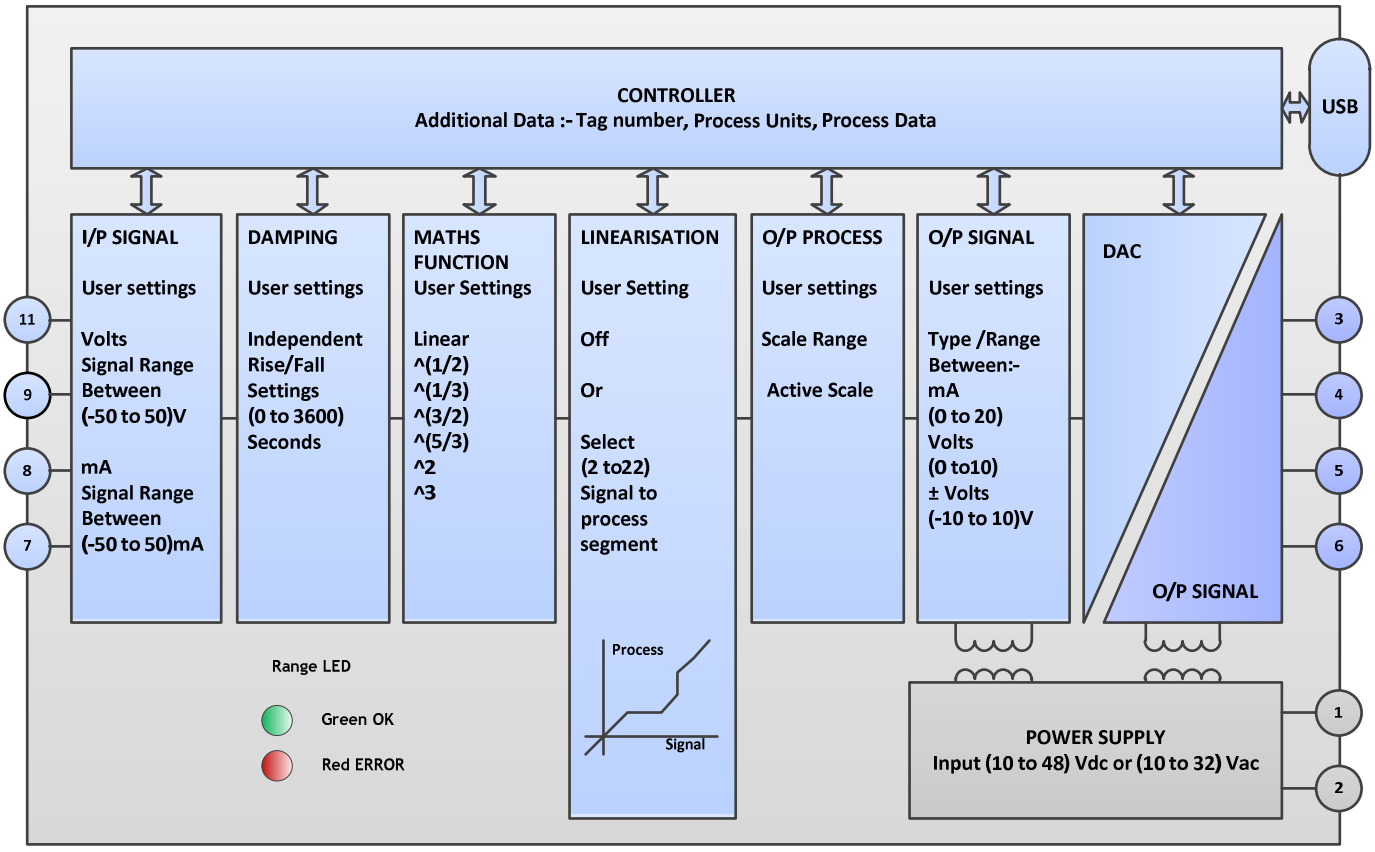
INTRODUCTION

The SEM1600VI 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

Our USB interface is fitted for quick and easy configuration. Just connect a standard USB cable between the SEM1600VI and your PC. Using our free 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 SEM1600VI does not need to be wired to a power supply during the configuration process, it is powered via the USB interface from your PC.



SMART POWERED PROCESS SIGNAL ISOLATOR/CONDITIONER

SPECIFICATION @20 °C

CURRENT INPUT

Range	(-50.0 to 50) mA, Accuracy (-22 to 22) mA ± 2.5 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 ± 2.5 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 360) 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

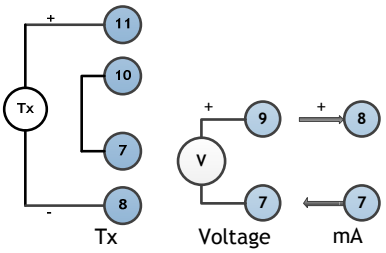
Operating Ambient	(-30 to 70) °C; (10 to 90) %RH (non condensing)
Storage Ambient	(-30 to 70) °C; (10 to 90) %RH (non condensing)
Configuration Ambient	(10 to 30) °C
Installation Enclosure	DIN Rail enclosure offering Protection >= IP65.

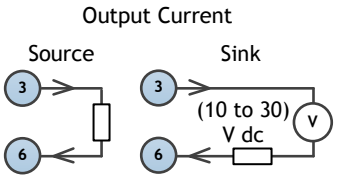
APPROVALS

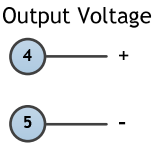
CE	BS EN 61326

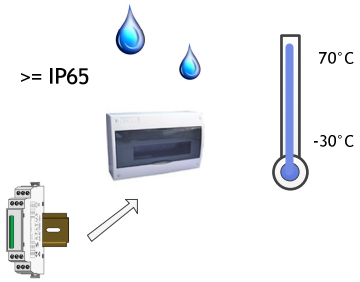
MECHANICAL

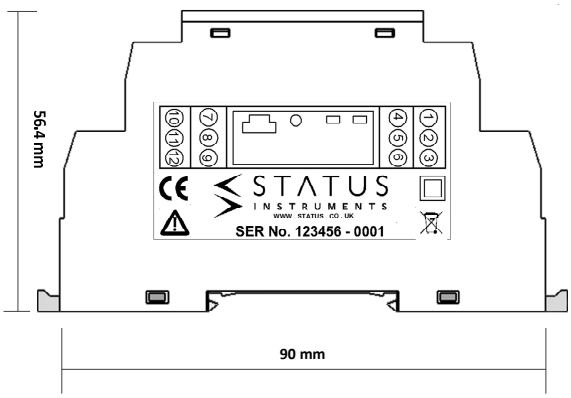
Style	DIN 43880, Colour grey, material Polyimide 6.6, weight < 70 grams
Terminals	2.5 mm Maximum

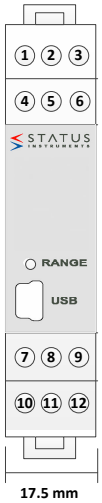












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STATUS INSTRUMENTS