I ~ V Converter

USER'S MANUAL

Bridging Gaps

SeethaRam Mechatronics Pvt. Ltd.

Bridging Gaps in Technology

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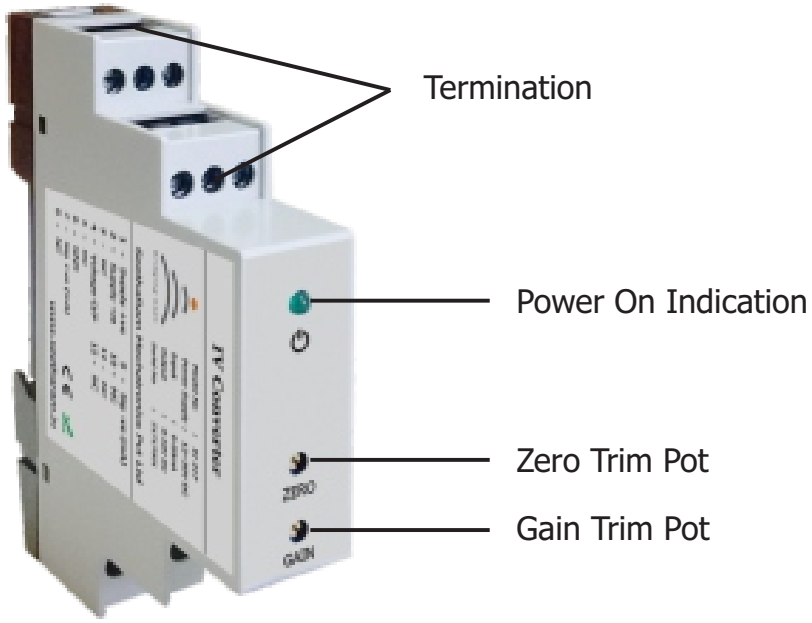
01. Technical Specification

Model	IV
Operating Voltage	24V DC
Input	0 to 20mA
Output	0 to 10V DC
Maximum Current Required	<60 mA
Input Output Linearity	0.002%
Signal Accuracy %	0.05%
Input Impendence	>100K Ω
Output Impendence	<70K Ω
Operating Temperature	-20°C to 85°C
Operating Humidity	35% upto 80% RH (No dew Condensation)
Case material	PC - GF, light grey RAL 7035
	Base plate: dark black RAL 9005
Mounting	Rail DIN EN 60715
Grade of protection	IP40

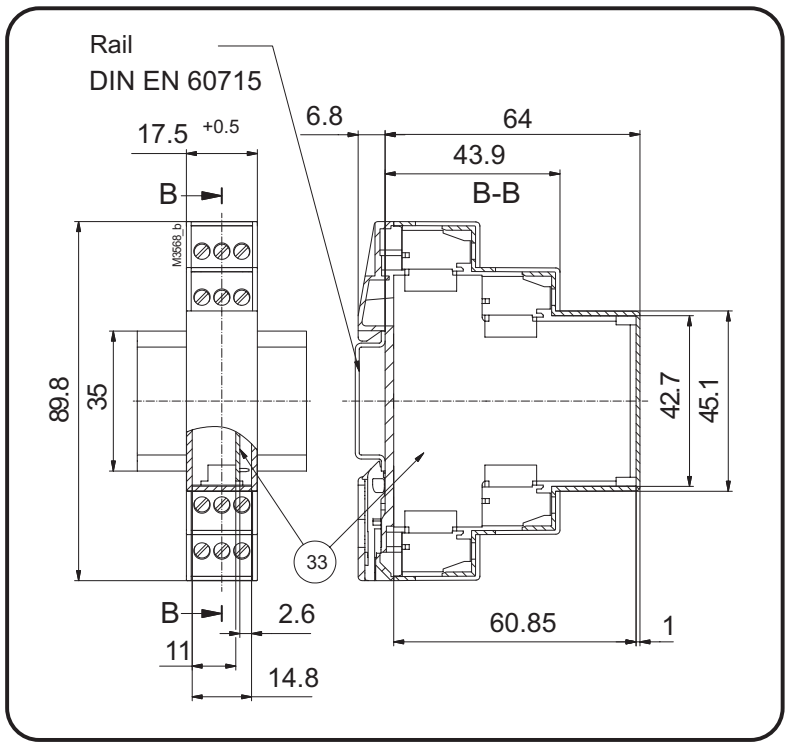
02. Electrical Connections

1 - Supply +ve	4 - Voltage O/P	7 - Sig +ve (mA)	10 - NC
2 - Supply -ve	5 - NC	8 - NC	11 - NC
3 - NC	6 - GND	9 - Sig -ve (-mA)	12 - NC

03. Product Description



Dimension Details



04. Precautions

- Please keep it out of wet places.
- Do not set it up near vibration & impulse, high temperature and humidity.
- Keep it out of the direct rays of the sun. Set it up where there is less dust, and Keep it out of direct air including salt and ion.
- Do not use when there is inflammable gas or heavy machinery, and smog.
- Use insulated tuner.

06. ⚠ Warning

“ It is strictly forbidden to use this product for any other purpose of use or to attempt to make any alteration on this product. ”

07. Procedure

- Connect according to terminal configuration (Refer electrical connection Pg-4)
- Power the equipment with 24VDC supply. (Ensure working with power led on)
- Calibration procedure for sensor explained below with example of load cell calibration.

Quick Start

- At no load condition tune zero pot to make analog output as zero for input 4mA.
- At rated load condition tune gain pot to desired analog output 20mA.

Actual Calibration

1.Connect calibrated current source.

2.Inject 4mA and adjust the zero pot in converter to 0 Vdc.

3.Inject 20mA and adjust the gain pot in converter to 10 Vdc.

4.Switch between 4mA and 20mA and check the output.

5.Repeat the steps 4 for two or three times.

08. DO’S

- Visual inspection of product.
- Use stable power supply to prevent high voltage surges.
- Ensure LED indication upon power on.
- Check zero and gain trim pot working.
- Ensure electrical connection as specified in manual

DON'T’S

- Interchange polarity connection at input (or) output terminal.
- Tuning of zero and gain pot at respective scale movement.
- Over tune of pot beyond its end point. (End point – stuck while tuning).
- Pull or yank on the sensor cable.
- Pinching and flexing the cable may cause damage, especially if it's left in such a position for extended periods.

09. EMC Protection

- Electrical and magnetic fields can often induce interference voltages in the measuring circuit.
- Please comply with the measuring circuit. Please comply with the following points:
- Use shielded low-capacitance measurement cables only.
- Do not route the measurement cable parallel to power lines and control circuits. If this is not possible, protect the measurement cable with metal tubing.
- Avoid stray fields from transformers, motors and contact switches
- Please note that compensating currents flowing across the cable shield can cause significant interferences. If the sensor and its evaluation unit have different electrical potentials, an electrical connection with very low resistance must be provided.
- Connect all devices in the measurement chain to the same grounded conductor.
- Always connect the cable shield extensively on the amplifier side, to create the best possible faraday cage.