

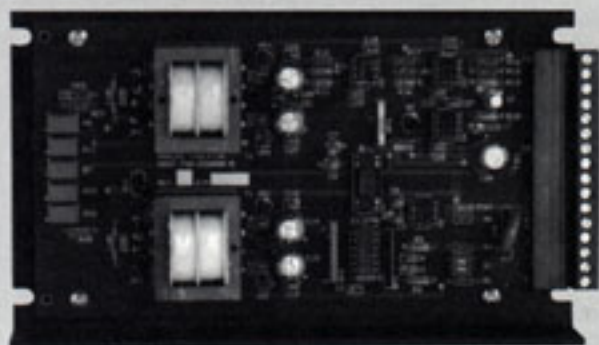
Analog Isolation Module



Model CVI-50

Features:

- 1500 Volt RMS Isolation
- Input/Output – Current or Voltage
- Auxiliary Summing/Trimming input
- Multi-Position Mounting Bracket
- Easy Installation
- 19-Inch Rack Mount Option
- Linear Gain to 240%



Description:

The model CVI-50 is a bipolar analog isolator capable of isolating either the voltage or current between two pieces of equipment that have a difference in ground potential. An example of such is a control device and an A.C. or D.C. variable speed drive. The unit has a main input and an auxiliary input. The auxiliary input, if used, will be summed to the main input to produce one unique output that can be trimmed high or low. An internal +10Vdc supply is provided on the terminal strip for calibration purposes, or as the main input signal. The polarity of the output voltage can be changed using a contact closure. A 4–20mA output is available as an option.

Set Up Procedures:

A. Voltage Input — Voltage Output

1. Connect TB1-4 to TB1-5 (to assure 0Vdc input) and adjust the R11 (Output Offset) potentiometer for 0Vdc Output.
2. Apply the signal to be isolated to TB1-4 (Input High) and TB1-5 (Input Common) and adjust the R8 (Output Gain) potentiometer for the desired output on TB1-11 and TB1-12 Common.
Note: the 10Vdc signal available on TB1-9 can be used as the input signal.
3. For best performance, repeat steps 1 and 2.
Note: If the output is to be an inversion of the input, jumper TB1-14 (Inversion Select) to TB1-13 (Common).

B. Current Input — Voltage Output

1. Connect TB1-4 to TB1-5 (to assure 0Vdc input) and adjust R11 (Output Offset) for 0Vdc output on TB1-11

and TB1-12 Common.

2. Close switches S1-1 and S1-2.
3. Apply 4mA to TB1-4 and TB1-5 (Input High and Input Common) and adjust R2 (4-20mA Input Offset) for 0Vdc output on TB1-11 and TB1-12 Common.
4. Apply the signal to be isolated to TB1-4 and TB1-5 and adjust R8 (Output Gain) for the desired output level.
5. For best performance, repeat steps 3 and 4.
Note: If the output is to be an inversion of the input, jumper TB1-14 (Inversion Select) to TB1-13 (Common).

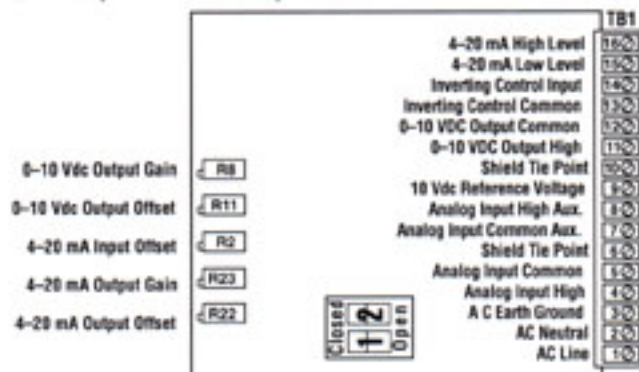
C. Voltage Input — Current Output

1. Connect TB1-4 to TB1-5 and adjust R22 (4-20mA Output Offset) for 4mA on TB1-16 and TB1-15 Low.
2. Apply the signal to be isolated to TB1-4 and TB1-5 and adjust R23 (4-20mA Output Gain) for the desired level on TB1-16 and TB1-15 Low.
3. For best performance, repeat procedure.

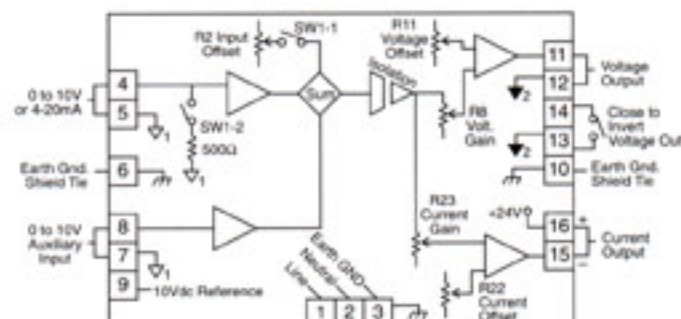
D. Current Input — Current Output

1. Close switches S1-1 and S1-2 and adjust R22 fully counterclockwise.
2. Apply 4mA to TB1-4 and TB1-5 and adjust R2 (4-20mA Input Offset) for 0mA on TB1-16 and TB1-15 Low.
3. With 4mA applied, adjust R22 (4-20mA Output Offset) for 4mA on TB1-16 and TB1-15 Low.
4. Apply 20mA to TB1-4 and TB1-5 and adjust R23 (4-20mA Output Gain) for the desired level on TB1-16 and TB1-15 Low.
5. For best performance, repeat steps 3 and 4.

Terminal, Potentiometer, and Switch Locations:



Block Diagram:



CVI-50 Specifications:

Input Power:

Standard	115 Vac $\pm 10\%$
Optional	230 Vac $\pm 10\%$
Frequency	50—60 Hz
Consumption	4.8 VA

Input Signal:

Maximum Voltage	± 11 Vdc
Current	4—20 mA
Voltage Input Impedance	100K Ohms
Current Input Impedance	500 Ohms
Isolation	1500 V rms

Output Signal:

Voltage	± 12 Vdc Maximum, ± 10 Vdc Nominal at 15 mA
Current — Maximum Load	750 Ohms

Gain	0 to 2.47
Offset	± 500 Vdc
Accuracy1% Linearity
Response Time	22 μ sec
Ripple	20 mV PP at 500 KHz

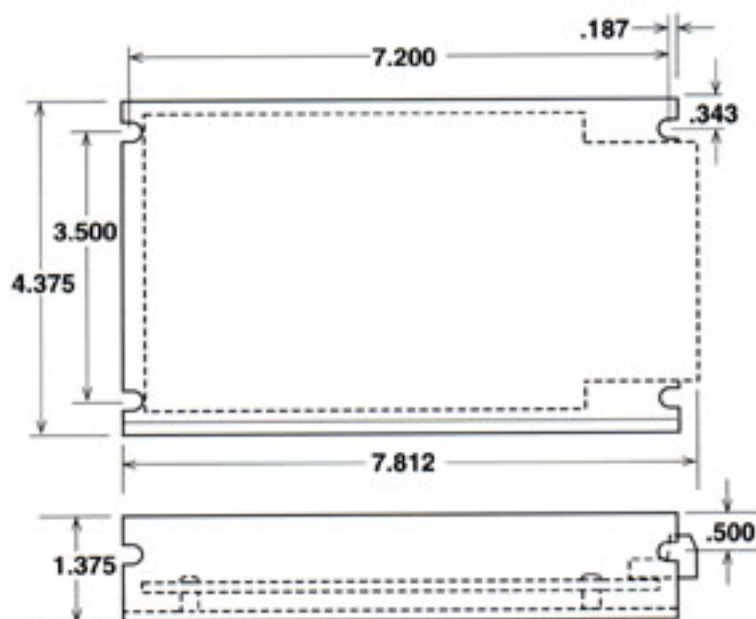
Environment:

Temperature Range	0°C to +70°C
Storage Temperature	-25°C to +85°C

Additional Features: Auxiliary input for trimming or summing two voltages inverted output, switchable by grounding a control pin
Removable Terminal Strip

Specifications Subject to Change Without Notice

**Dimensions:
In Inches**



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