CAROTRON
Driven by Excellence
3204 Rocky River Road, Heath Springs, SC 29058
Phone: 803-286-8614 Fax: 803-286-6063

Precision Bipolar Isolation Card

Model D10562-000

Model D10562-000 Precision Bipolar Isolation card is designed for applications where signal conditioning is required in a single channel, while maintaining electrical isolation between input and output signals.

Designed for a wide variety of input signals, model D10562-000 can accept the following types of inputs:

- Potentiometer
- D.C. voltage
- Load cell

Each input signal is conditioned by scaling circuits which can be modified via on board multi-turn OFFSET, GAIN and BIAS potentiometers. A multi-turn TARE potentiometer is also provided to zero out initial inputs when the card used as a load cell amplifier.

Terminal strip connections are provided for a trim potentiometer. Also a METER RANGE adjustment is provided to limit the range of the meter output. The output circuit can be configured to source either a voltage or a current. Typical output ranges are -10 to +10VDC, 0 to 20mADC.

Standard Features

- Operates from 115 VAC
- Summing input ports on both input and output sections
- Right angle mounting to limit panel space requirements
- Voltage input: 10mV to 250VDC
- Adjustable trim range for external trim pot
- Selectable output source: Voltage or Current ±5 VDC available for load cell excitation
- Precision amplifier to amplify load cell signal
- Scalable meter output
- 20 turn pots for critical calibration adjustments
- Depluggable terminals
- Test points for ease of circuit access

Specifications

A.C. INPUT
- 115VAC ±10%, 50/60 Hz, internally fused at .3 Amps

ISOLATION VOLTAGE
- 2400V peak at 1 second or 1500VRMS

LINEARITY
- ±0.1% of 10VDC span

SIGNAL INPUTS
- **Potentiometer input**

±5VDC available to source a 500 to 10,000 Ohm potentiometer. The 10VDC range should be selected for this type of input.
- **Voltage input**

7 selectable ranges with 100K to 10M Ohm input impedance.

Input range Input impedance
-100mVDC to +100mVDC 100K
-1VDC to +1VDC 1M
-2.5VDC to +2.5VDC 100K

-10VDC to +10VDC 10M
-25VDC to +25VDC 1M
-100VDC to +100VDC 10M
-250VDC to +250VDC 10M

• Load cell input
4 selectable multiplier ranges with 10G Ohm input impedance. ±5VDC available for excitation voltage capable of sourcing 75mA.

• Trim potentiometer input
Allows connection of an external 10,000 Ohm potentiometer to trim the output. The trim range may be as wide as 0 to 100% or limited to 80 to 100%.

• Auxiliary input
This allows a fixed or variable signal (-10VDC to +10VDC) to be summed directly with the scaled input signal. The polarity may be inverted by selecting (-) on J6. Isolation is maintained between the auxiliary input and the output.

• Summing input
This input allows a fixed or variable signal (-10VDC to +10VDC) to be summed directly (gain of 1) with the output. The polarity may be inverted by selecting (-) on J7. Isolation is not maintained between the summing input and the output.

OUTPUT TYPES

• Voltage output
Selected by position V on jumper J8. This circuit allows the output the source a ±10VDC voltage level into a minimum resistance of 500 Ohms. If the resistance is too low, output linearity may be affected.

• Current output
Selected by position I on jumper J8. This circuit allows the output to source a regulated current of up to 20mAmps into a maximum resistance of 500 Ohms. Using the BIAS potentiometer, the output can source a 4 to 20mAmp signal.

Application Example

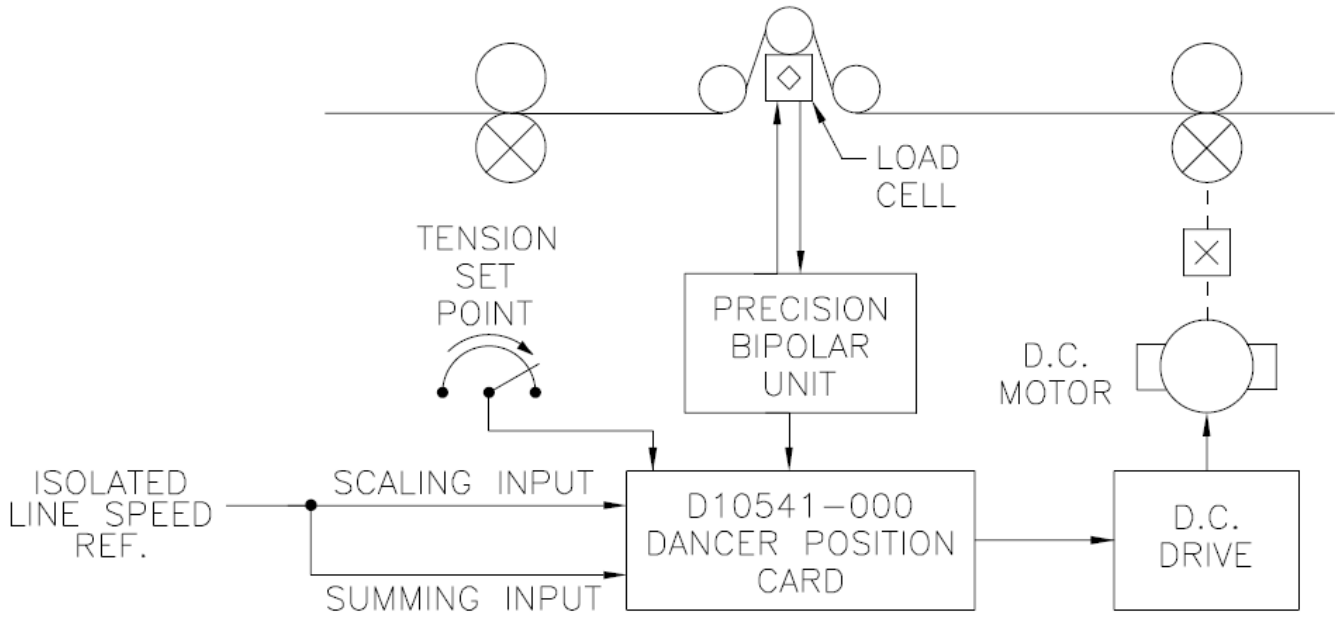

Fig. A.10

Dimensions

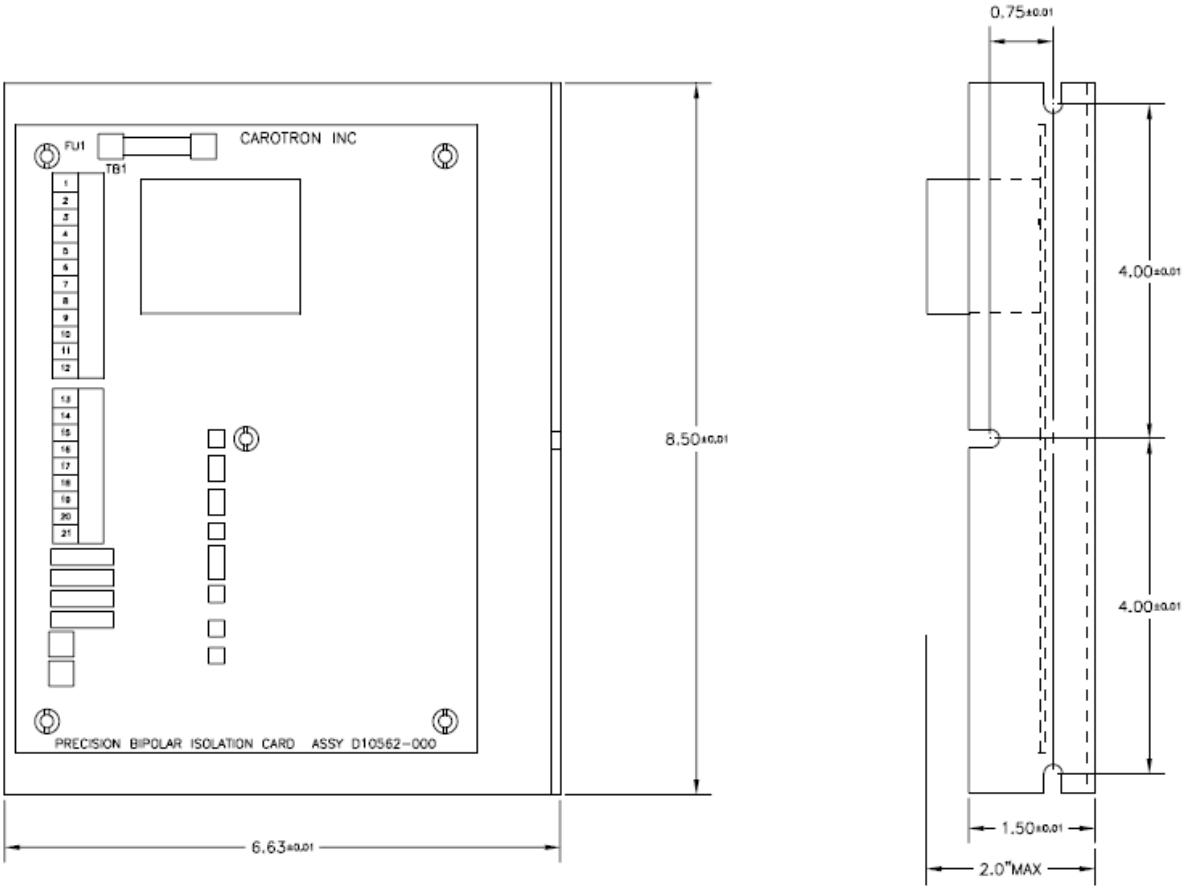

Fig. A.11

Connections

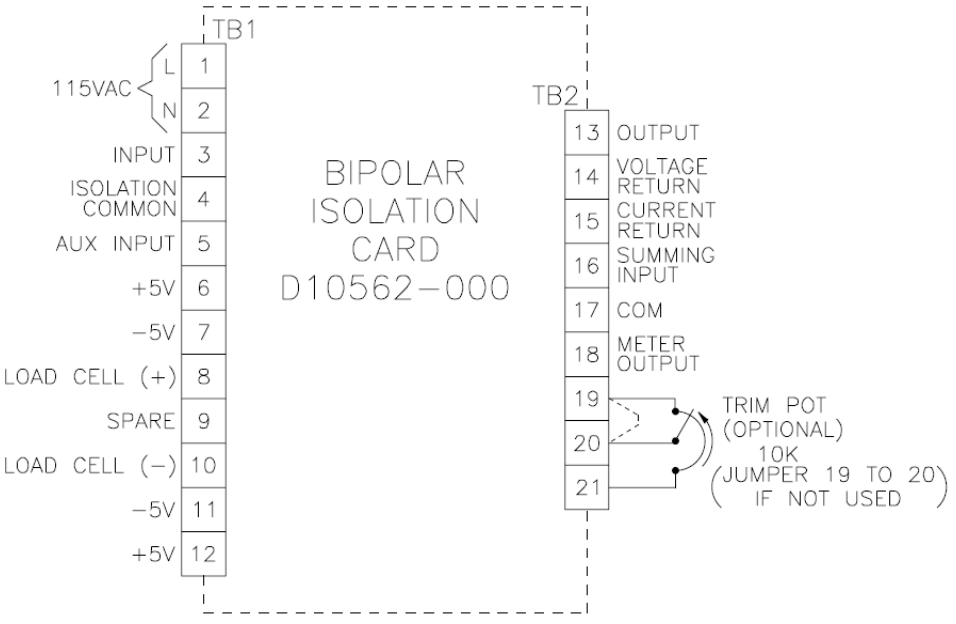

Fig. A.12

Precision Bipolar Isolation Card
Model D10562-000

View or download the complete D10562-000 Instruction Manual (MAN 1016-00) from www.carotron.com .

3204 Rocky River Road Heath Springs, SC 29058
Phone: (803) 286-8614 Fax: (803) 286-6063
Email: saleserv@carotron.com Web: www.carotron.com
FLY1041-0A Issued 05-30-2012