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## Signal Isolation Card

Model C10209-000

The Model C10209-000 Signal Isolation Card is designed for applications in which signal conditioning is required in a single channel while electrical isolation between the input and output signals is maintained.

Designed for a wide variety of input signals, Model C10209-000 can accept five types of inputs:

- Potentiometer
- D.C. Voltage
- D.C. Current
- Sine Wave Frequency
- Square Wave Frequency

Each input signal is conditioned by scaling circuits that can be modified via multi-turn OFFSET, BIAS and GAIN potentiometer adjustments on the Signal Isolation Card. Terminal strip connections are provided for an external Trim pot. and an external Summing Input. A single turn TRIM RANGE adjustment is supplied on the Signal Isolation Card to limit the range of the external Trim pot. The output circuit can be configured to source either a voltage or a current. Typical output ranges are 0 to +10 VDC, 0 to 20 mADC or 4 to 20 mADC.

### Standard Features

- Input to output isolation: 480 VRMS
- Linearity:  $\pm 0.5\%$  of 10 Volt Span
- Voltage input: 4 Ranges, 200 VDC max.
- Current input: 3 ranges, 50 mADC max.
- Frequency input: sine or square wave
- Source for pot. input: + 15 VDC
- Adjustable Trim Range for External trim pot
- Operates from 115/230 VAC power source
- Selectable output source: voltage or current
- 20 turn pots. for critical calibration adjustments
- + or - summing input to modify output level
- Self retaining standoffs to simplify mounting
- Clamp type terminals for all customer connections
- Test points for ease of circuit access



### Specifications

#### A.C. INPUT

- 115/230 VAC,  $\pm 10\%$ , 50/60 Hz, 6.8 VA Max.

#### CURRENT INPUT

3 selectable ranges with input impedance as shown below. Maximum output is 12 VDC or 24 mADC. Typical output range with max. input is 5 to 10 VDC or 10 to 20 mADC.

Input Range	Input Impedance
1 to 5 mADC	1000 Ohms
4 to 20 mADC	270 Ohms
10 to 50 mADC	100 Ohms

#### FREQUENCY INPUT

A sine or square wave input is acceptable with a peak of 1 to 20 V. Input impedance is 100K Ohms. Maximum input frequency is 2000 Hz. GAIN Range ( $V_{out}/F_{in}$ ) = 0.0028 to 0.014. Minimum frequency to give 10 VDC output is approximately 750 Hz. Max. output is limited to 12 VDC or 24 mADC.

**POT. INPUT**

+ 15 VDC,  $\pm 5\%$  available to source a 2 to 10 k Ohm external pot. Use 0 to 25 VDC voltage input range.

**SUMMING INPUT**

This input is not isolated from output.  
Input:  $\pm 10$ VDC max.

**VOLTAGE INPUT**

4 selectable ranges with greater than 1 Meg Ohm input impedance. Max. output is approximately 12 VDC or 24 mADC.

**Input Range**

0 to 25 VDC  
0 to 50 VDC  
0 to 100 VDC  
0 to 200 VDC

**Gain Range**

0.25 to 1.25  
0.10 to 0.50  
0.05 to 0.25  
0.025 to 0.125

**TRIM RANGE**

(Trim Pot = 10 K Ohms, Bias = 0 VDC)

Min. Range: 80 to 100% of output  
Max. Range: 0 to 100% of output

**ISOLATION VOLTAGE**

2000 V peak for 1 second, 480 VRMS Max. continuous

**LINEARITY**

$\pm 0.5\%$  of 10 VDC span

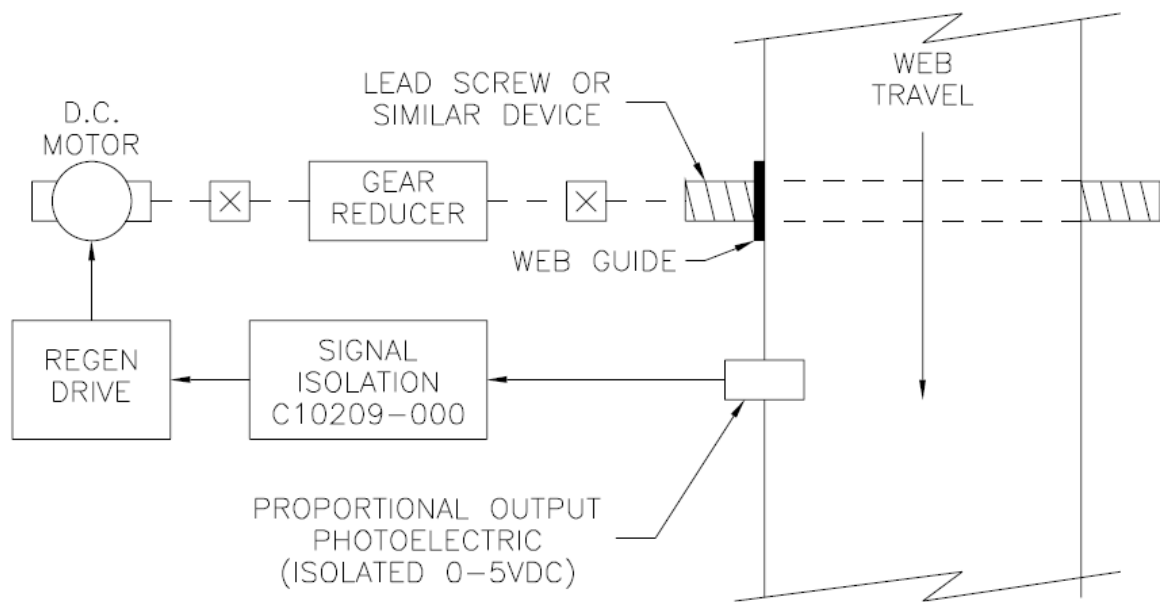
**Application Example****Edge Guide Control**

Fig. A.4

## Dimensions

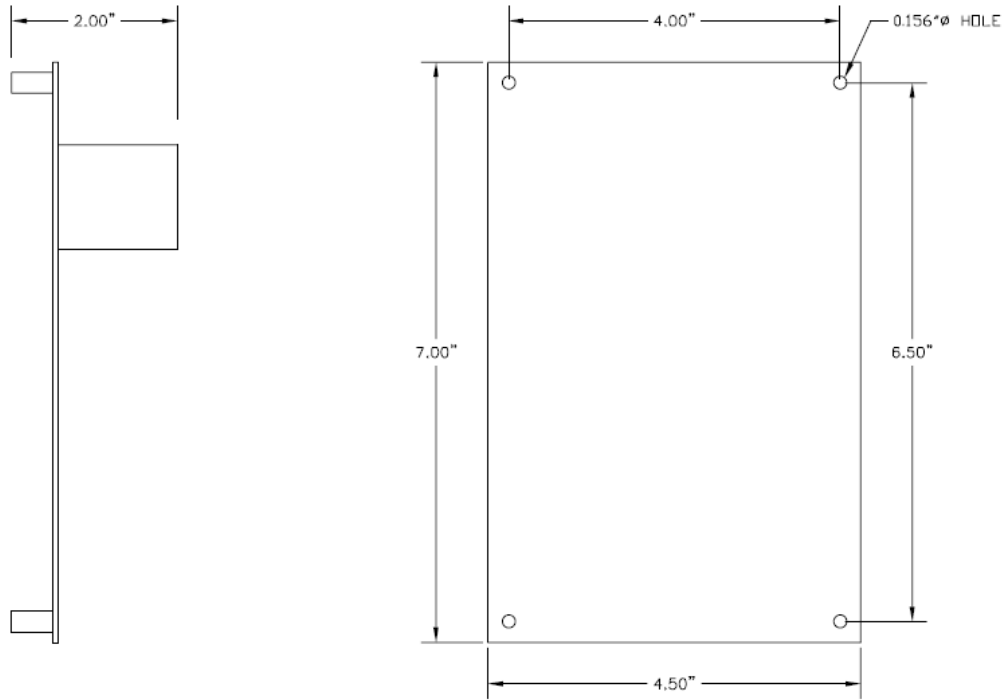


Fig. A.5

## Connections

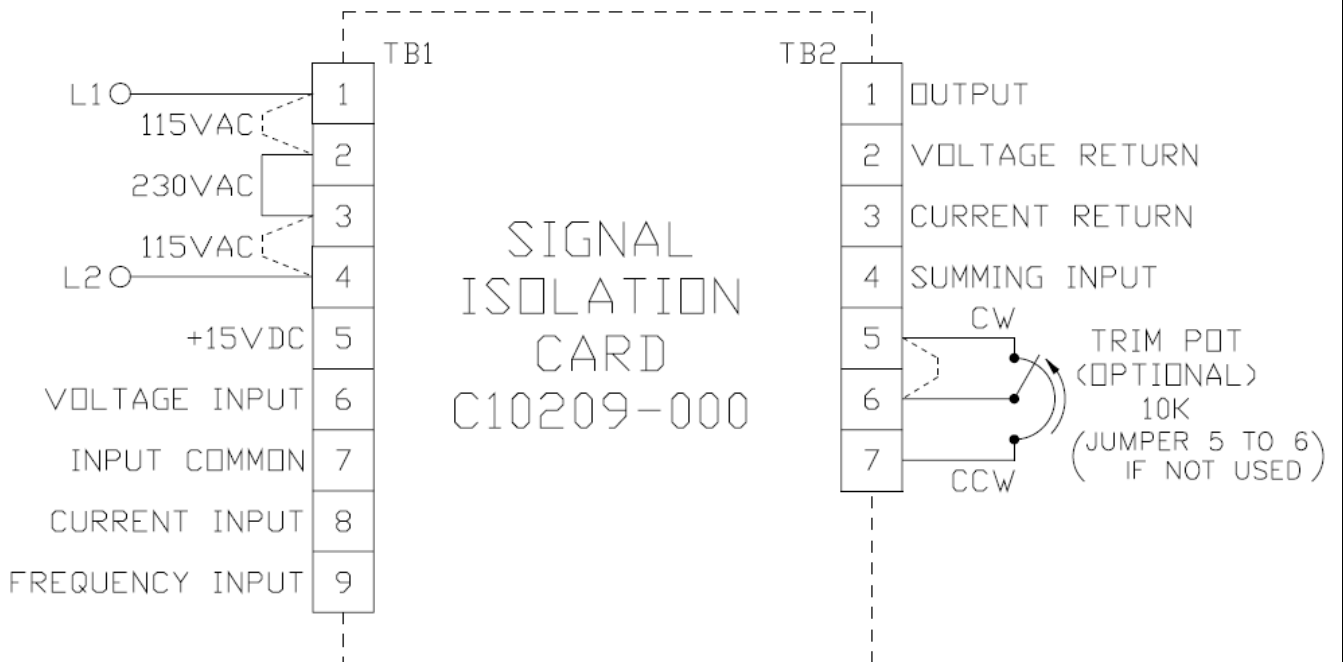


Fig. A.6

## ***Signal Isolation Card*** **Model C10209-000**

View or download the complete C10209-000 Instruction Manual (MAN 1014-00) from [www.carotron.com](http://www.carotron.com) .



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FLY1043-0A Issued 05-30-2012