

## Load Cell Amplifier

Model LCA210-000

Model LCA210-000 Load Cell Amplifier Module is designed for applications where signal conditioning of a single channel is required, while maintaining electrical isolation between the input and output signals. Designed for a wide variety of input signals, the LCA210-000 can accept the following types of inputs:

- Potentiometer
- D.C. Voltage
- Load Cell (Strain Gauge & Amplified LVDT type)

The LCA210-000 also provides an adjustable excitation voltage source when using load cells. The input signal is conditioned by scaling circuits which can be modified via multi-turn OFFSET, BIAS, and GAIN potentiometer adjustments. Terminal strip connections are provided for an optional external TRIM pot. The output circuit can be configured to source either a voltage or current. Typical output ranges are 0 to  $\pm 10$  VDC, 0 to 20 mADC, or 4 to 20 mADC.

### Electrical Specifications

#### **D.C. Power Input**

24 VDC  $\pm 10\%$ , 400mA max, internally fused

#### **Isolation Voltage**

500V (DC or AC Peak)

#### **Linearity**

$\pm 0.5\%$  of 10 VDC span

#### **Excitation Voltage**

Voltage adjustable via Volt. Adjust potentiometer from 5 to 12 VDC, 100mA max

#### **Signal Input**

6 selectable gain ranges (via J1) with

Input Range	J1 Gain
$\pm 12$ VDC	1
$\pm 1.2$ VDC	10
$\pm 250$ mVDC	50
$\pm 125$ mVDC	100
$\pm 25$ mVDC	500
$\pm 12.5$ mVDC	1000

**Table 1**



- **Trim Potentiometer Input**

Allows connection of an external 10,000 Ohm pot. to trim the output.

#### **Signal Outputs**

- **Voltage Output**

Selected by position V on J2. This circuit allows the output to source a voltage level of up to  $\pm 12$  VDC into a minimum resistance of 600 Ohms. If resistance is too low, output linearity may be affected.

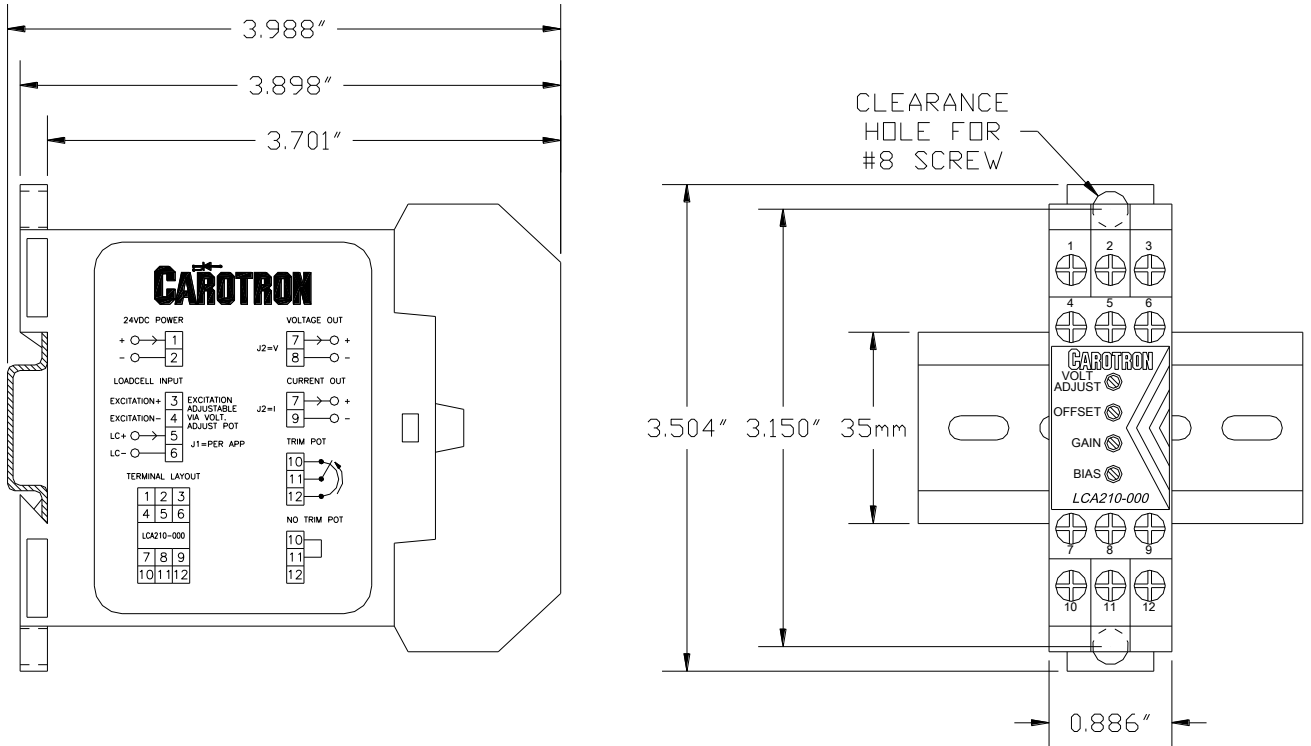
- **Current Output**

Selected by position I on J2. This circuit allows the output to source a regulated current of up to  $\pm 20$ mA into a maximum resistance of 500 Ohms. Using the BIAS pot, the output can source a 4 to 20mA signal.

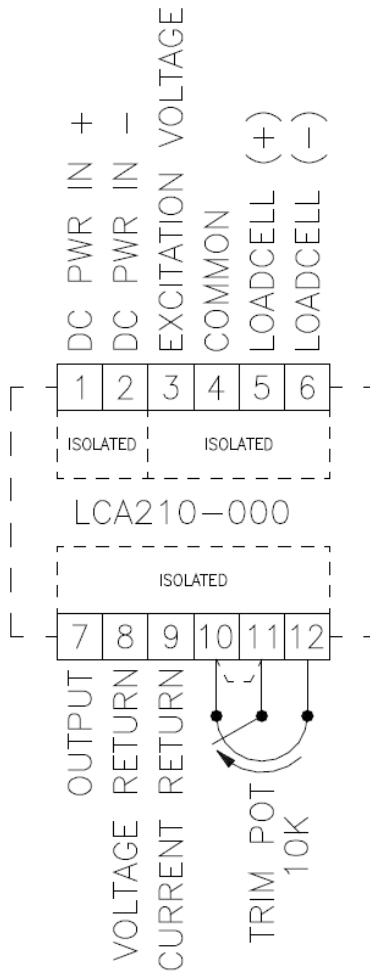
#### **Temperature Range**

Chassis: 0-45° C

# Physical Dimensions



# General Connections



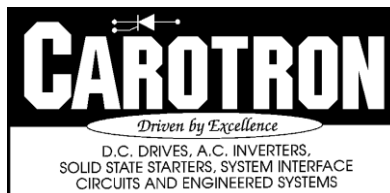
## ***Load Cell Amplifier*** **LCA210-000**

### **Physical Specifications**

3.504" H x 0.886" W x 3.898" D

Shipping Weight: 2 lbs.

View or download the complete LCA210-000 Instruction Manual (MAN1053-0A) from [www.carotron.com](http://www.carotron.com) .



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