



## SIGNAL CONDITIONER

### LVDT/RVDT

### MACRO EAZY-CAL™ LVC-4000

#### Overview

The EAZY-CAL™ LVC-4000 is a standalone signal conditioner, supporting a wide range of AC LVDTs, RVDTs, and VR half-bridges, while providing several choices of voltage, current, and digital RS-485 outputs. Push-button calibration offers intuitive operation as compared to signal conditioners with span and offset trim pots. Fault conditions, such as a wire break on LVDT/RVDT connections, are indicated by blinking LEDs, fault condition error output, and Error Flag Open Collector signal (see manual for details). The LVC-4000 operates from a 9-30V DC power supply and is housed in a polyamide DIN rail-mounted enclosure. Calibration instructions, terminal functions, LVDT connection diagram and DIP switch functions are printed on the side panels for convenience.

Synchronization to other signal conditioners is accomplished by a daisy chain connection to a synchronization bus. One unit will assume the Master function based on DIP switch priority setting. If a fault should occur, the next highest priority unit will take over as Master.

With the use of the RS-485 port, a host computer is able to retrieve measurement data, receive operational status, perform remote calibration, and perform hot swap reconfiguration.

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### Features

- Push-button or RS-485 command auto-calibration
- Analog voltage or current loop output
- Digital RS-485 interface
- Supports standard AC LVDTs, RVDTs, and VR half-bridge sensors
- Master/slave excitation synchronization
- DIN-rail mountable
- Color-coded terminal blocks

### User Selectable Features

- 0-5V DC, 0-10V DC, 0.5-4.5V DC,  $\pm 5V$  DC,  $\pm 10V$  DC or 4-20 mA output
- $1.5V_{rms}$  or  $3.0V_{rms}$  sensor excitation
- 2.5, 5, 7.5, or 10 kHz excitation frequency

### Environmental Data

<b>Operating Temperature</b>	-20 to 75°C (0 to 165°F)
<b>Temperature Sensitivity</b>	<0.02% of FSO/°C (<0.01% of FSO/°F)
<b>EMC Compliance</b>	Emissions: EN55011:2007 Immunity: EN61000-4-2:2009 EN61000-4-4:2004 EN61000-4-6:2009 EN61000-4-3:2010+A2:2010

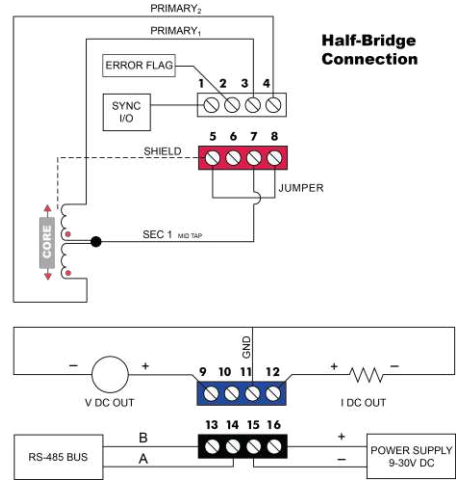
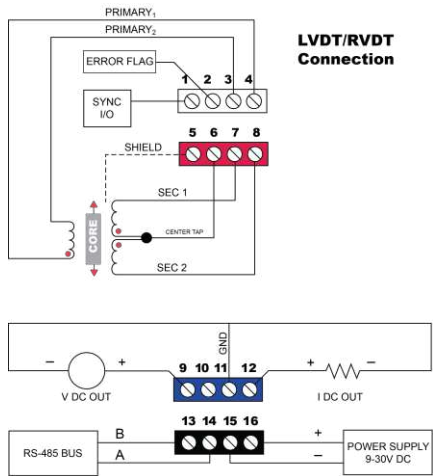
### Electrical Data

<b>Power Input</b>	9-30V DC (90 mA max. @ 24V DC)	<b>Output Non-Linearity</b>	$\leq \pm 0.1\%$ full scale output
<b>Sensor Excitation</b>	$3.0V_{rms}$ ( $1.5V_{rms}$ selectable)	<b>Output Voltage Ripple</b>	1 mV <sub>rms</sub> max. (2.5 kHz excitation, no filter) 2 mV <sub>rms</sub> max. (10 kHz excitation, no filter)
<b>Sensor Excitation Frequency</b>	2.5 kHz, 5 kHz, 7.5 kHz, or 10 kHz	<b>Output Current Ripple</b>	10 $\mu A_{rms}$ max. (2.5 kHz excitation, no filter) 20 $\mu A_{rms}$ max. (10 kHz excitation, no filter)
<b>Input Sensitivity Range</b>	55 mV <sub>rms</sub> to 5.5 V <sub>rms</sub> full scale input produces full scale DC output	<b>Frequency Response (-3dB)</b>	500 Hz max.
<b>Full Scale Outputs</b>	0-5V DC, 0-10V DC, 0.5-4.5V DC, $\pm 5V$ DC, $\pm 10V$ DC or 4-20 mA output		

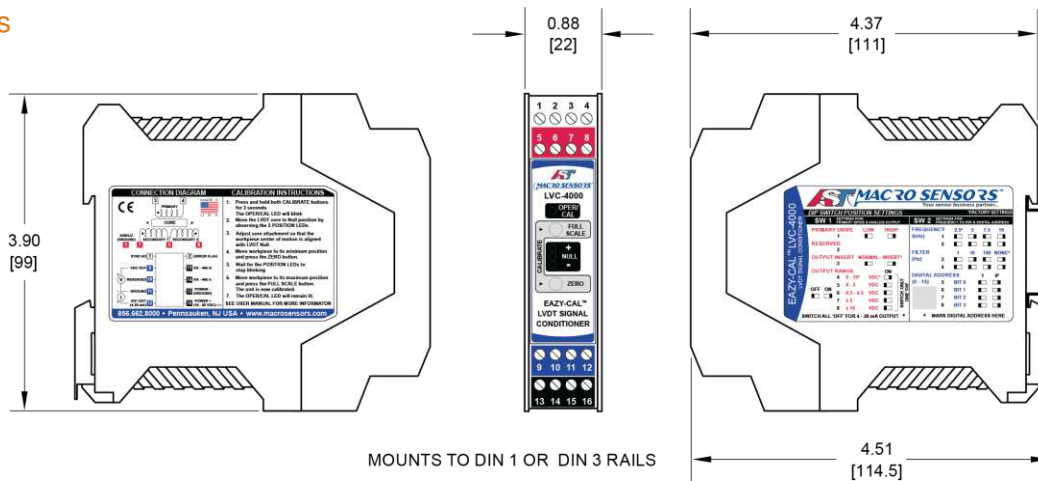
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## Connection Diagrams



## Dimensions



All dimensions in inches [mm].