



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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EAZY-CAL™ LVC-4000

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

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

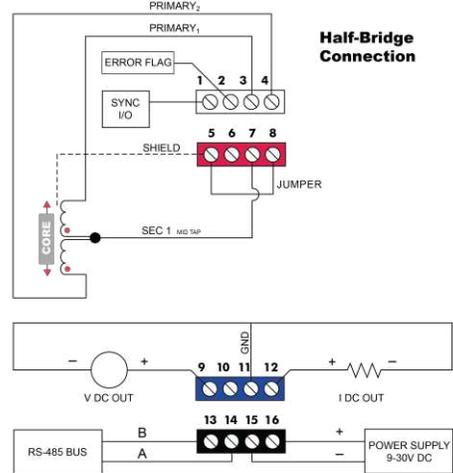
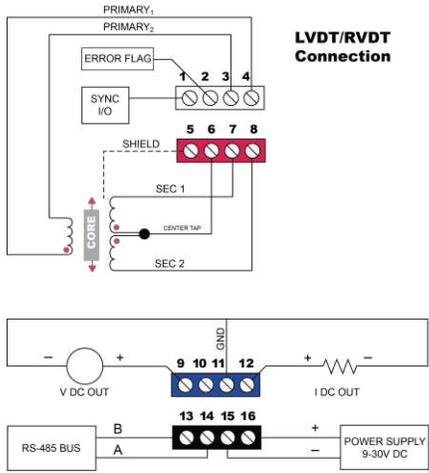
Electrical Data

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

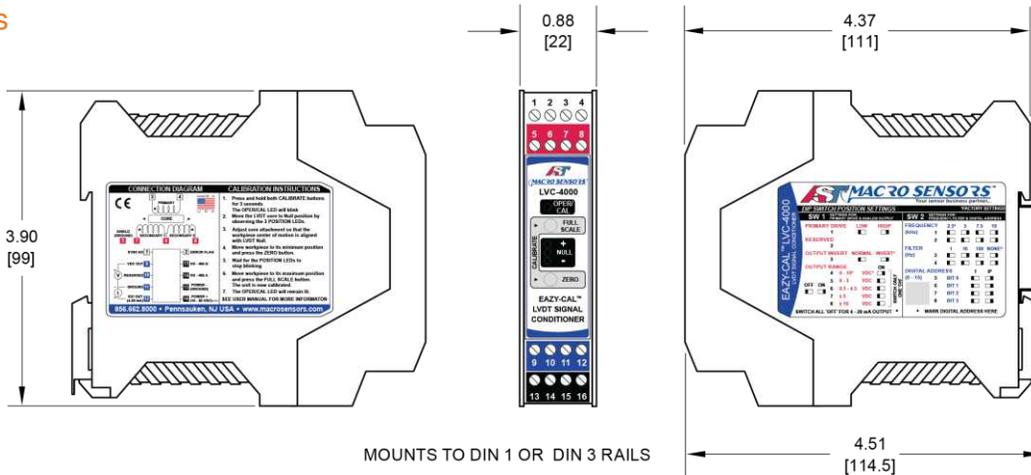
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Connection Diagrams



Dimensions



All dimensions in inches [mm].

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