

LDM-8000 – 8 Channel LVDT/RVDT Signal Conditioner



- 115/230 VAC line powered
- NEMA-13 rated enclosure
- 4 to 20mA loop and VDC outputs
- Zero, span and phase adjustable
- 2.5, 5 and 10kHz excitation frequencies
- Low noise, 3-pole Butterworth filter
- Master/slave capability
- Compatible with 4, 5 & 6-wire LVDTs/RVDTs
- Works with very low input impedance LVDTs & RVDTs

DESCRIPTION

The **LDM-8000** is a line-powered, 8-channel LVDT/RVDT signal conditioner consisting of eight LDM-1000 signal conditioner modules and a PSD 40-15 power supply, pre-wired and mounted on a DIN rail inside a rugged NEMA 13 enclosure.

A wide range of gains, excitation voltages and frequencies ensure compatibility with virtually all LVDT and RVDT type transducers. Full-wave synchronous demodulators eliminate quadrature and harmonics to maximize external noise rejection. The amplifiers are capable of providing several different DC output voltage signals as well as 4-20mA current loop. The frequency response is internally selectable for each channel. The master/slave function (setup at the factory by default) allows synchronization of all 8 channels to prevent beat frequencies and cross talk between transducers.

The LDM-8000 provides everything you will need for accurately interfacing AC operated LVDTs or RVDTs to your position measuring system. It is housed in a NEMA 13 enclosure to protect it from dirt, dust, water and other contaminants commonly found in industrial environments. Transducer hookups are completed by mating to the sealed M/S-style bayonet connector, while the DC outputs are available at the BNC connectors.

Also see our other LVDT/RVDT signal conditioner models:

- LVM-110** ±15VDC supply, ±10 and 0 to 10VDC outputs, open circuit board
- LiM-420** 24VDC supply, 4-20mA (3-wire) output, open circuit board
- ATA-2001** Line powered, DC voltage and current outputs, push-button programmable
- IEM-422** Line powered, 4-20mA output, NEMA-13 rated enclosure
- PML-1000** AC or DC supply, DC voltage, current and RS485 outputs, 1/8th DIN panel meter,
- MP-2000** Line-powered, DC & RS232 outputs, ¼ DIN, 2-channel set point controller with LCD display

Measurement Specialties (MEAS) offers many types of sensors and signal conditioners. Data sheets can be downloaded from our web site at: <http://www.sensorway.cn>

FEATURES

- Eight LVDT/RVDT channels
- Very versatile
- Rugged NEMA-13 rated enclosure
- Bolt holes for easy mounting
- BNC connectors for outputs

APPLICATIONS

- Valve position feedback in power turbines
- Valve testing for nuclear power plants
- Materials and structure testing
- Process control systems
- Tests & Measurements

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PERFORMANCE SPECIFICATIONS

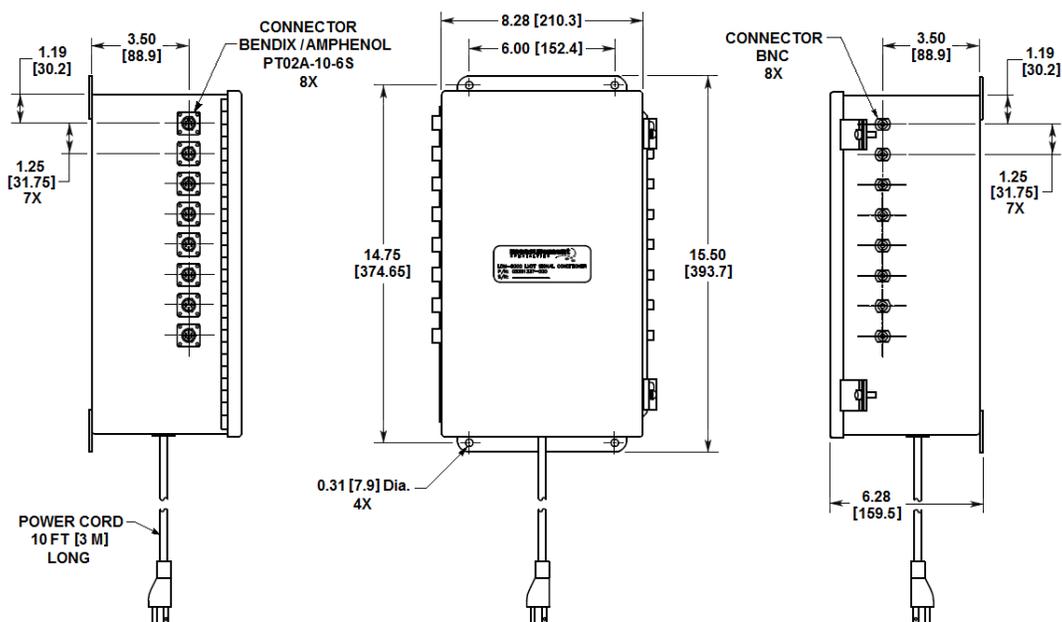
ELECTRICAL SPECIFICATIONS	
Supply voltage	85 to 264 VAC, 45 to 65 Hertz
Supply current	600mA maximum
Output types and ranges	±5VDC, 0 to 5VDC, 0 to 10VDC, and 4 to 20mA (DIP switch selectable, ±5VDC as shipped)
Temp. coefficient of output	±0.02% of FSO per degree F [±0.036% of FSO per degree C] over operating temp. range
Operating temperature	-13°F to +185°F [-25°C to +85°C]
Voltage output noise & ripple	5mV RMS maximum
Current output noise & ripple	25µA RMS maximum
Current loop resistance	700Ω maximum
Frequency response	250 or 1000Hz @ -3 dB (3-pole Butterworth, DIP switch selectable, 250Hz as shipped)
Non-linearity	±0.02% of FSO
Input sensitivity range	0.05 to 2.50 VRMS
Transducer excitation	
Voltage	1 or 3 VRMS (DIP switch selectable; 3VRMS as shipped and with 18 to 30VDC supply voltage only)
Current	25mA RMS
Frequency	2.5, 5 or 10kHz (DIP switch selectable, 2.5kHz as shipped)
Transducer requirements	
Transducer type	LVDT or RVDT with 4, 5 or 6 electrical connections
LVDT/RVDT input impedance	50Ω minimum @ 1 VRMS excitation ; 150Ω minimum @ 3 VRMS
LVDT/RVDT full scale output	0.05 to 2.50 VRMS

Notes:

All values are nominal unless otherwise noted; dimensions are in inch [mm]

FSO (Full Scale Output) is the largest absolute value of the outputs measured at the range ends

DIMENSIONS



Dimensions are in inch [mm]

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WIRING

Transducer connections PT06A-10-6S connectors	
Pin	Function
A	Secondary 1
B	No Connection
C	No connection
D	Secondary 2
E	Primary 2
F	Primary 1

Output connections BNC connectors	
Connection	Function
Center	Signal output
Outer	Signal common

ORDERING INFORMATION

Description	Part Number
LDM-8000 Signal Conditioner with ± 5 VDC outputs (<i>contact factory for other outputs</i>)	02291337-000
Cable assembly to connect HCA/HCI/GCA/R36AS to LDM-8000, PTO6A-10-6S to PTO6A-10-6P (1)	04290133-000
Cable assembly to connect MP Series LVDT to LDM-8000 Stripped & Tinned to PTO6A-10-6P (1)	04290594-000

(1) All cables are shielded, 10 foot long, and rated 80°C [176°F] operating. Consult factory for other lengths.

TECHNICAL CONTACT INFORMATION

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