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.meas-spec.com/datasheets.aspx

MEAS acquired Schaevitz Sensors and the ***Schaevitz™*** *trademark in 2000.* MEAS is owned by TE Connectivity Ltd. (www.te.com - NYSE TEL) as part of TE Connectivity Sensor Solutions.

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

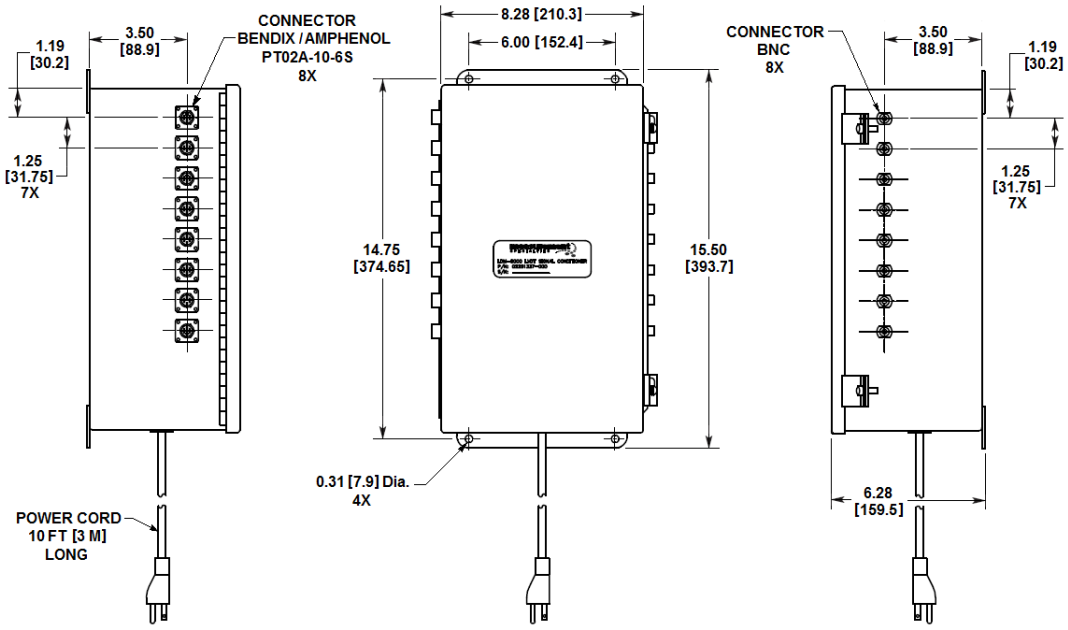
LDM-8000 – 8 Channel LVDT/RVDT Signal Conditioner

PERFORMANCE SPECIFICATIONS

SPECIFICATIONS	
Supply voltage and current	85 to 264 VAC, 45 to 65 Hertz, 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]
IEC 60529 & ratings	IP65; NEMA 13
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 ±5VDC outputs *(contact factory for other outputs)*	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.

Download the PSD 40-15 power supply datasheet at: http://www.meas-spec.com/product/t_product.aspx?id=9726
Download the LDM-1000 signal conditioner datasheet at: http://www.meas-spec.com/product/t_product.aspx?id=2588
Download the LDM-1000 Operation Manual at: http://www.meas-spec.com/manuals.aspx

TECHNICAL CONTACT INFORMATION

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