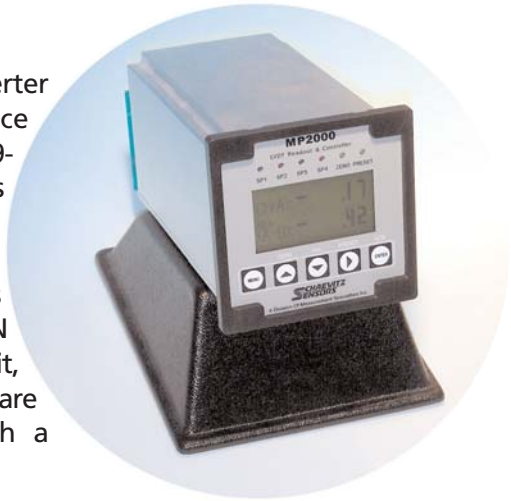
MP2000 Series

Dual Channel LVDT Readout/Controller

The Schaevitz® microprocessor-based LVDT indicator and set-point controller is designed for industrial and process control applications utilizing any LVDT/RVDT-based measurement device. In addition to displaying real-time readings of LVDTs, RVDTs and gage heads, the MP2000 also displays MIN, MAX, TIR, A+B and A-B values. Programmable, opto-isolated, open collector set-points may be assigned to any of the above functions.

A 17-bit analog-to-digital converter provides excellent performance and resolution. A new standard 9-pin RS-232 pin- out provides serial data output to a PLC or PC com port.

MP Series readout/ controllers are packaged in a 1/4 DIN aluminum case with a EL back-lit, bit-mapped LCD display. (Units are splash-proof when mounted with a gasket.)



FEATURES

- New Larger 10 mm High Display Characters
- New Software Set-Up Menu (no dip switches)
- New Standard 9-Pin RS-232 Connector
- Greatly Enhanced Long-Term Reliability
- More Rugged Power Supply Connector
- Two Channels for the Price of One

APPLICATIONS

- LVDT-Based Weighing Systems
- Pass / Fail Part Sorting
- Roller Gap Control
- Concentricity Gaging
- Press Cycle Control
- Part Classification

ACCESSORIES

- Relay Option Board
- Lab Stand / Bench Mount
- Rack Adapter, holds Up to Four MP Series Readout/Controllers

Setpoint Control
Four user-programmable digital setpoints are used to monitor any display parameter. Any combination of high or low setpoints may be selected. User programmable, high and low hysteresis values may be used to create set-point dead band, for prevention of control relay chatter. Each channel decimal point is individually programmable, via the set-up menu.

Auto-Calibration
A front panel pushbutton auto-zeros (tares) over the ± full scale range. Auto-calibration eliminates calculation of slope or gain factors. Calibration and setup parameters are stored in nonvolatile memory for retention on power down or interruption.

Readings
A large, easy to read, bit-mapped display provides userfriendly, menu driven prompts for simple push-button system setup, calibration and monitoring of in-process measurement parameters.

- Current value
- Min/max
- A+B (sum of two channels)
- A-B (difference between two channels)
- TIR (Total Indicated Runout)

Outputs
A real-time scaled analog output, proportional to the digital readout is provided for each LVDT channel. An RS-232 output is provided for data transfer to a computer at 1200 to 19.2K baud.

measurement SPECIALTIES

Measurement Specialties, Inc. • 1000 Lucas Way Hampton, VA 23666 USA • www.meas-spec.com • 757-766-1500 • 800-745-8008 • Fax 757-766-4297

LVDT Excitation

Voltage..... 1 and 3 V rms (±10%) (software selectable)
Current ..... Up to 25 mA rms per LVDT
Frequency ..... 2.5, 3.3, 5 and 10 kHz (±5%) (software selectable)
Input Sensitivity ..... 0.6 or 1.2 V rms for full scale readout (software selectable)
Input Impedance ..... >100k ohms
Linearity..... <±0.02% of full scale
Digital Display ..... 5 digit (±99.999) 10 mm (0.4") high bitmapped LCD with EL backlight
Analog-to-Digital Converter 17-bit plus, Delta Sigma
Conversion Rate..... 180 conversions per second per channel (min)
Digital Output ..... Serial RS-232, full duplex 1200 to 19.2K Baud (software selectable)
Analog Outputs .....(1 per channel) +/- 5 or 0 to 10 Vdc
Setpoints ..... 4 user-programmable, high or low
Hysteresis..... User programmable
Outputs ..... Opto-isolated open collector logic outputs, 5 VDC, 4 mA per setpoint (Relay outputs optional)
Response ..... Typically within 20 mS
Operating Temperature ..... 0° to 55°C
Power Requirements ..... 100 to 240 VAC, 47-63 Hz

pin out connections (J3)

Pin	Pin
1 -	5 - Dig. Gnd.
2 - TxD	6 - DTR
3 - RxD	7 -
4 - DSR	8 -
	9 -

pin out connections (J4)

Pin	Pin
1 - Setpoint #4	14 - Remote Zero
2 - DSR	15 - Setpoint #3
3 - TxD	16 - Setpoint #2
4 - DTR	17 - Setpoint #1
5 - RxD	18 - Setpoint Retrn.
6 -	19 - Remote Reset
7- Sync. Input	20 - Analog Ch. B
8 - Sync. Output	21 - Analog Ch. A
9 -	22 -
10 -	23 - Vcc (5.0 Vdc)
11 -	24 - Digital Gnd.
12 -	25 - Analog Gnd.
13 -	

Each MP2000 is supplied with:

2 transducer connectors for J1 and J2, (Switchcraft 05BL5M), 115/240 Volt ac power supply and 2-wire, U.S. line cord
25-pin subminiature D mating connector with backshell for J4, comprehensive operation and programming manual

mechanical dimensions

relay board, as shown is optional