



MP2000

2-Channel LVDT Readout and Controller

- Supply voltage 100 ... 240 VAC, 47 ... 63 Hz
- Output 0 ... 10 V, ± 5 V, RS232
- ¼ DIN case, lab stand/ bench mount
- Dimensions (HxWxD) 99 x 99 x 180 mm



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 ¼ DIN aluminium case with a EL back-lit, it-mapped LCD display. (Units are splash-proof when mounted with a gasket.)

Features

- Large 10 mm High Display Character
- Software Set-Up Menu
- Industry Standard 9-Pin RS-232 Connector
- Greatly Enhanced Long-Term Reliability
- Rugged DIN Style Power Supply Connector
- Two Channels

Applications

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

Set-point Control

Four user-programmable digital set-points are used to monitor any display parameter. Any combination of high or low set-points 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 push-button auto-zeros (tares) over the \pm full scale range. Auto-calibration eliminates calculation of slope or gain factors. Calibration and setup parameters are stored in non-volatile memory for retention on power down or interruption.

Readings

A large, easy to read, bit-mapped display provides user-friendly, 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 Run-out)

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 baud to 19.2 kbaud.

■ Specifications

LVDT excitation voltage:	1 V _{rms} , 3 V _{rms}
LVDT drive current:	Up to 25 mA _{rms} per LVDT
Excitation frequency:	2.5 / 3.3 / 5 / 10 kHz (±5 %)
Input sensitivity:	0.6 V _{rms} or 1.2 V _{rms} for full scale readout
Input impedance:	>100 kOhm
Linearity:	≤±0.02 % of full scale
Digital display:	5 digit ±99.999 10 mm (0.4") high bitmapped LCD with EL backlight
Analog outputs:	±5 V, 0 ... 10 V
Set-points:	4 user-programmable, high or low with on-board LED indicators
Set-point hysteresis:	user programmable
Set-points outputs:	opto-isolated open collector logic outputs, 5 VDC, 4 mA per set-point
Response:	typically within 20 ms
Operating temperature:	0 ... + 55 °C
Power requirements:	100 ... 240 VAC, 47 ... 63 Hz

■ Connections

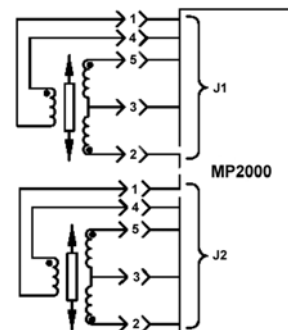
Pin Connections Output J3:

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

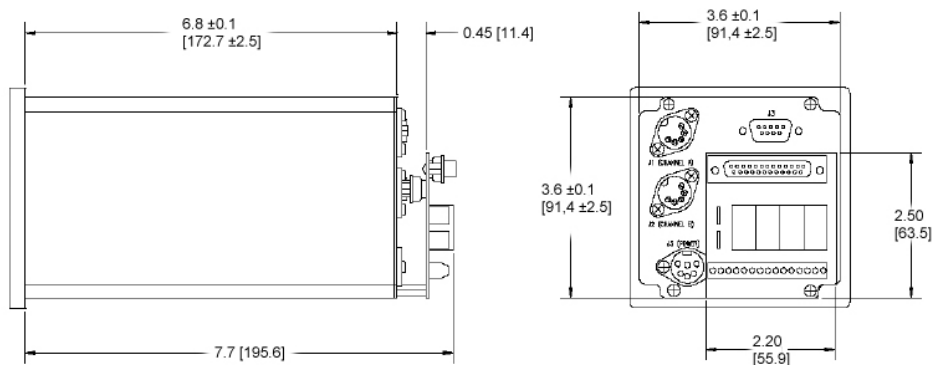
Pin Connections Output J4:

Pin Function	Pin Function
1 Setpoint #4	14 Remote zero
2 DSR	15 Setpoint #3
3 TxD	16 Setpoint #2
4 DTR	17 Setpoint #1
5 TxD	18 Setpoint return
6 --	19 Remote reset
7 Sync input	20 Output channel B
8 Sync output	21 Output channel A
9 --	22 --
10 --	23 Vcc (5 VDC)
11 --	24 Dig. GND
12 --	25 Analog GND
13 --	

Input LVDT J1 and J2:



■ Dimensions



Shown with optional relay card.

Dimensions incl. front, H x W x D: approx. 99 x 99 x 180 mm.

All dimensions in inches, values in brackets in mm, approx. values.

These drawings are for information only and not intended for construction purpose. Please ask for detailed drawings.

■ Accessories

- Relay option board
- Lab stand / bench mount
- 4-up rack adapter

Due to continual product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.