PML1000

Single Channel LVDT Panel Meter

DESCRIPTION

The PML1000 is an AC line powered LVDT/RVDT panel meter that is ideal for industrial and test applications. It features a 5 digit variable brightness LED display. For control applications, it has a fast (125 Hz) unscaled analog output, an isolated 0-10 VDC/4-20 mA scaleable output and optional serial 2 or 4 wire RS 422/485 communications. With a user-selectable 1 or 3 V 2.5 and 10 kHz LVDT excitation, the PML-1000 is compatible with all standard Schaevitz® LVDTs and RVDT's.

Two logic control inputs are provided to allow remote control of user pre-programmed functions (zero, hold, display max/min/average, etc.). The unit also has two user pre-programmed function keys (zero, hold, display max/min/average, etc.). The PML1000 meets European safety and EMC requirements for panel mounted equipment.

FEATURES

- 5 Digit Display
- 90 to 265 VAC Operation
- Auto-calibration
- 2 Programmable Logic Inputs
- 2 Programmable Function Keys
- Max, Min, Average, Zero and Hold Functions
- Voltage and Current Outputs
- Compatible with All Schaevitz® Standard LVDTs and RVDTs
- Low Voltage Operation

APPLICATIONS

- Test Stands
- Process Monitoring
- Feedback Control

OPTIONS

- RS422/485 Serial Communications
- Low voltage Operation
- Rack Adpator

Status (Logic) Inputs

One or more of the following functions can be user assigned to either of the two logic inputs: Tare, Auto (Offset) Zero, Display Hold, Analog Output Hold, Display Max, Display Min, Display Average, Display Test, Reset Max/Min & Average (to the current measured value), Enter Button Lock (disables entry to configuration menus), "Fast-Cal" Calibration Enable.
The logic inputs can be switched by external volt free contacts or a TTL signal

Function Keys

One or more of the following functions can be user assigned to either of the two front panel function buttons: Tare, Zero, Display Hold, Display Max, Display Min, Display Average, Display Test, Reset Max/Min & Average (to the current measured value), "Fast-Cal" Calibration Enable

High Speed Analog Output

This is a buffered output giving a fast response from the LVDT demodulator output. The signal amplitude is dependent on the transducer excitation and the amount of sensor travel. Output filter: -3 dB @ 125 Hz.

"Fast-Cal" Calibration

Automatically calibrates and matches the indicator to a connected LVDT transducer. The PML1000 reads the transducer's output at any two sensor positions. The two measured values are stored as the calibration parameters. Calibration can be performed at any time.

PML1000

specifications

Display	5 digit with user-selectable decimal point position
LVDT Input	
Input Voltage Range	0.05V to 5 Vrms
Nonlinearity	<±0.05%
Temperature Drift	<±0.05% FSO/°C
Stability	<±0.01% FSO after 15 minutes
Transducer Supply	Selectable 1 or 3 V rms @ 25mA
Supply Frequency	Selectable 2.5 or 10 kHz
Measurement Resolution	Better than 1 part in 120,000
Measurement Rate	10 readings per second
Measurement Mode	User-selectable 4 wire differential or 5 wire ratiometric
Isolated Analog Output	
Isolation	500 VDC/Peak AC
Output	User-selectable 0-10 V, 0-20 mA or 4-20 mA
Scaling	User-selectable
Accuracy	Better than 0.2%
Temperature Drift	<500 ppm/°C
Response	63% within 132 mS; 99% with 200 mS
Resolution	0.05% (5 mV or 0.01 mA)
Max Voltage Output	11 V @ 22 mA
Max Current Output	22 mA @ 18 V
Max Load	900 Ω
Output Damping Filter	Programmable
Serial Communications	
Type	RS422/485, 2 or 4 wire multidrop
Isolation	500 VDC/Peak AC
Speed	1200,2400, 4800, 9600 baud
Parity	Odd, even or none
Stop Bits	1 or 2
Protocols	User-selectable for MODBUS™ (RTU or ACSII), J-BUS
Math	
Max/Min	Stores maximum and minimum display values
Averaging	Calculates average value over a user-defined period between 1 and 9999 seconds
Power Requirements	Standard: Universal 90 to 265 VAC 50 ~ 60 Hz @ 12 VA nominal; Low Voltage: 24 VAC or VDC ±20%, 50 ~ 60 Hz @ 12 VA nominal
Environmental	
Temperature	10° to 50 °C (operating); -10° to 70°C (storage)
Humidity	0-95% RH non-condensing
Physical	
Panel Mount	1/8th DIN panel mount
Dimensions	H x W x D 1.89" (48 mm) x 3.78" (96 mm) x 6.81" (173 mm)
Panel Cut-Out	H x W 1.73" (44 mm) x 3.62" (92 mm)
Depth Behind Panel	6.65" (166 mm) including terminals
Weight	14.1 oz (0.4 kg); 19.4 oz (0.55 kg) shipping
Safety and EMC	
Safety	EN61010
Susceptibility	EN50082-1 & 2
Emissions	To EN50081-1 & 2; EN50022 Class A for radiated and conducted

ordering information

Order by model number

Model Number	**Description**
PML1000-000	Standard unit
PML1000-040	With RS422/485 serial communications
PML1000-140	Low voltage and communications

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