



DESCRIPTION The PRD1000 is a multi-purpose, easy to use digital process meter ideal for level, flow rate, temperature, or pressure transmitter applications. It accepts current and voltage signals (e.g. 4-20 mA, 0-10 V). Its has a dual-line 6-digit display, advanced signal input conditioning, function keys, and Modbus RTU serial communications. The basic model includes an isolated 24 VDC transmitter power supply that can be used to power the input transmitter or other devices.

HOW IT WORKS The analog input can be scaled to display the process in up to two different scales; for example the main display could indicate level in feet and the second display could indicate the volume in gallons. The two relays can be used for alarm indication or process control applications, such as pump alternation control. The upper display can be programmed to indicate PV, maximum (peak), minimum (valley), alternating maximum/minimum, one of two alarm set points, or Modbus input. The lower display can also be configured to display engineering units, set points, user defined legends, or simply turned off. There are three function keys available to the user. These keys can be programmed to trigger certain events (i.e. acknowledge alarms, reset max and/or min, disable/enable output relays, or hold current relay states), provide direct menu access points, and more.

FEATURES AND BENEFITS

- For use with Bindicator Model TDR-2000
- 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, and ± 10 V Inputs
- NEMA 4X, IP65 Front
- Universal 85-265 VAC, or 12/24 VDC Input Power Models
- Large Dual-Line 6-Digit Display, 0.60" & 0.46"
- Dual-Scale for some Level Applications – Single Input
- Sunlight Readable Display Models
- Isolated 24 VDC Transmitter Power Supply
- Signal Input Conditioning for Flow & Round Horizontal Tanks
- Programmable Display & Function Keys
- 32-Point, Square Root, or Exponential Linearization
- Multi-Pump Alternation Control
- 2 Relays Option
- RS-485 Serial Communication Options
- Tare Function
- Modbus[®] RTU Communication Protocol Standard
- Custom configuration available from Bindicator

HOW TO ORDER

PD6000 - _____ - _____ - _____

Serial Adapter
N = No Adapter
Y = RS-485 Adapter

Enclosure
N = No Enclosure
E = Plastic Enclosure

Display Type
6R0 = 85-265 VAC with no relays
6R2 = 85-265 VAC with two (2) relays
6H0 = 85-265 VAC with no relays, sunbright display
6H2 = 85-265 VAC with two (2) relays, sunbright display
7R0 = 12/24 VDC with no relays
7R2 = 12/24 VDC with two (2) relays
7H0 = 12/24 VDC with no relays, sunbright display
7H2 = 12/24 VDC with two (2) relays, sunbright display

Model PRD1000

SPECIFICATIONS

General

Display: Upper display: 0.60" (15 mm) high. Lower display: 0.46" (12 mm) high. Both are 6 digits (-99999 to 999999), red LEDs.

Display Intensity: Eight intensity levels

Display Assignment: The upper and lower displays may be assigned to PV1, PV2, PCT (percent), d r-u, d gross, d nt-g, max/min, alternate max & min, set points, units (lower display only), or Modbus input.

Programming Methods: Four front panel buttons, digital inputs, PC and Bindicator PRD1000 Display software, or Modbus registers.

Password: Three programmable passwords restrict modification of programmed settings.

Power Options: 85-265 VAC 50/60 Hz, 90-265 VDC, 20 W max, or jumper selectable 12/24 VDC $\pm 10\%$, 15 W max.

Isolated Transmitter Power Supply: Terminals P+ & P-: 24 VDC $\pm 10\%$. 12/24 VDC powered models selectable for 24, 10, or 5 VDC supply (internal jumper J4).

85-265 VAC models rated @ 200 mA max, 12/24 VDC powered models rated @ 100 mA max, @ 50 mA max for 5 or 10 VDC supply.

Environmental:

Operating temperature range: -40 to 65°C

Storage temperature range: -40 to 85°C

Relative humidity: 0 to 90% non-condensing

Dimensions: 4.68" x 2.45" x 5.64" (119 mm x 62 mm x 143 mm) (W x H x D)

Weight: 9.5 oz (269 g)

UL File Number: UL & c-UL Listed. E160849; 508 Industrial Control Equipment.

Warranty: 3 years parts & labor

Process Input

Inputs: Field selectable: 0-20, 4-20 mA, ± 10 VDC (0-5, 1-5, 0-10 V), Modbus PV (Slave)

Accuracy: $\pm 0.03\%$ of calibrated span ± 1 count, square root & programmable exponent accuracy range: 10-100% of calibrated span

Temperature Drift: 0.005% of calibrated span/ $^{\circ}$ C max from 0 to 65°C ambient, 0.01% of calibrated span/ $^{\circ}$ C max from -40 to 0°C ambient

Signal Input Conditioning: Linear, square root, programmable exponent, or round horizontal tank volume calculation.

Multi-Point Linearization: 2 to 32 points for PV or PV1. 2 to 8 points for PV2 (Dual-Scale Level feature)

Decimal Point: Up to five decimal places or none

Relays

Rating: 2 SPDT (Form C) internal rated 3 A @ 30 VDC and 125/250 VAC resistive load; 1/14 HP (≈ 50 watts) @ 125/250 VAC for inductive loads such as contactors, solenoids, etc.

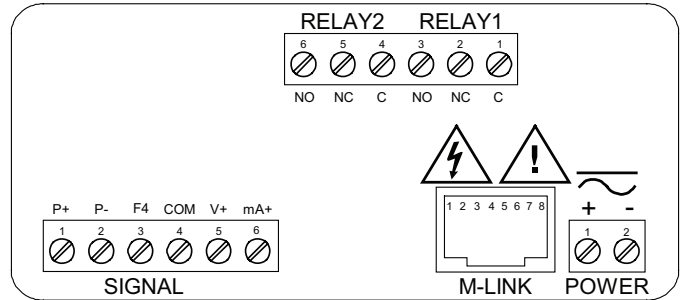
Relay Operation: automatic (non-latching), latching (requires manual acknowledge), sampling (based on time), pump alternation control (2 to 8 relays), Off (disable unused relays and enable interlock feature, manual on/off control mode).

Serial Communications

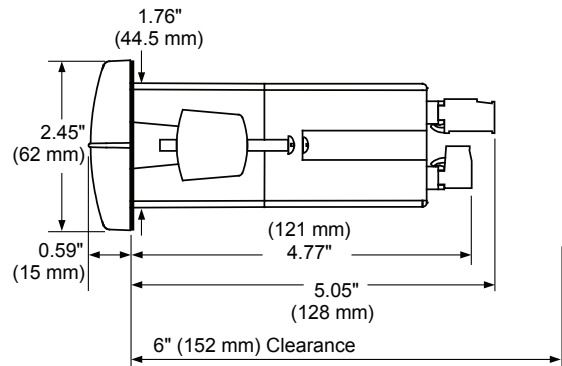
Protocol: Modbus[®] RTU

Note: Refer to the Register Tables located at www.bindicator.com for details.

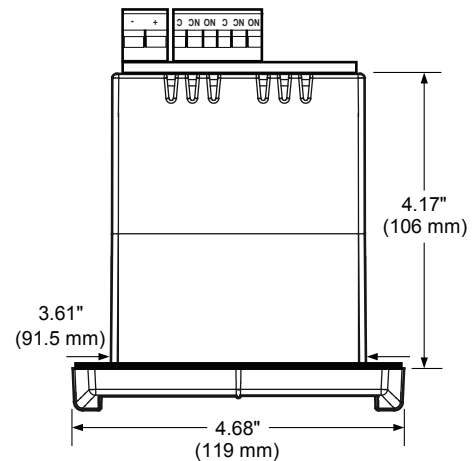
CONNECTIONS



DIMENSIONS



Side View



Top View



150 Venture Boulevard · Spartanburg, SC 29306
 Tel: (800) 778-9242 · (864) 574-8060
 Fax: (864) 574-8063
 Email: sales@bindicator.com
www.bindicator.com



PRD180113 Rev. A
 2013 All rights reserved.
 All data subject to change without notice.