

Take a closer look at Precision Digital's updated line of process indicators, alarm annunciators, scanners, and flow rate/totalizers. PD's large display meters let you safely monitor processes in difficult environments, or from a distance! And the PD Trident is so flexible it works with current, voltage, thermocouples, and RTDs!

Honeywell offers an alternative to their line of universal digital controllers, so you only pay for the instrumentation functionality you need. And, Ametek USG offers the tried-and-true DT8310 digital temperature indicator: just as popular today as when it was released, more than 25 years ago!



**Looking for enclosures?
See page 77.
Prices start at \$98.00**

Alarm Annunciators

	Prices Start at	See Page
Precision Digital ConsoliDator® Multichannel Controller	\$1449.00	84
Precision Digital PD138 Minimux® II 8-Channel Process Scanner	\$309.00	83
Precision Digital PD154 and PD158 Vigilante® II Alarm Annunciators	\$309.00	82
Precision Digital PDS178 Temperature Scanner/Alarm System	\$624.00	83



Flow Totalization Indicators

Fluidwell F-Series Digital Flow Rate/Totalizers	\$419.00	79
Precision Digital PD650 Series Large Display Process Meters	\$884.00	74
Precision Digital Loop-Powered Flow Rate Totalizers	\$269.00	79
Precision Digital PD6200/6300 ProVu Dual-Line Flow Rate/Totalizers	\$329.00	78



Process Signal Indicators

Fluidwell F-Series Digital Level Indicators	\$354.00	75
Honeywell UDC2500 1/4 DIN Universal Digital Indicator	\$440.00	80
Honeywell UDI1700 1/8 DIN Universal Digital Indicator	\$310.00	80
Precision Digital ConsoliDator® Multichannel Controller	\$1449.00	84
Precision Digital PD603 Sabre P Low-Cost Process Indicator	\$154.00	71
Precision Digital PD644 Javelin D 0-300 VDC Voltage Meter	\$269.00	73
Precision Digital PD650 Series Large Display Process Meters	\$884.00	74
Precision Digital PD683/688 Loop-Powered Panel Mount Meters	\$194.00	76
Precision Digital Loop-Powered Meters in NEMA 4X Enclosures	\$209.00	76
Precision Digital Explosion-Proof Loop-Powered Process Meters	\$374.00	77
Precision Digital PD765 Trident Universal Input Meter	\$219.00	70
Precision Digital PD865 Snoopier Modbus Serial Input Meter	\$269.00	73
Precision Digital PD6000 ProVu Dual-Line 6-Digit Process Meter	\$299.00	72



Temperature Indicators

Ametek/US Gauge DT-8310 Series Digital Temperature Indicator	\$364.30	80
Fluidwell F-Series Digital Temperature Indicator	\$289.00	81
Honeywell UDC2500 1/4 DIN Universal Digital Indicator	\$440.00	80
Honeywell UDI1700 1/8 DIN Universal Digital Indicator	\$310.00	80
Precision Digital PD743 Sabre T Low-Cost Temperature Indicator	\$154.00	81
Precision Digital PD765 Trident Universal Input Meter	\$219.00	70
Precision Digital PD7000 ProVu Dual-Line 6-Digit Temperature Meter	\$299.00	81
Precision Digital PDS178 Temperature Scanner/Alarm System	\$624.00	83



Prices in this catalog are current at the publication date, and are subject to change without notice.

Universal Input Process and Temperature Meter



Features

- New Trident X2 (above left) has a 1.2" LED — the largest display of any 1/8 DIN meter — easy to read at distances up to 30 feet away
- 4-20 mA, $\pm 10V$, thermocouple and RTD inputs; Factory calibrated for all inputs
- Easy programming and setup with lockout capability
- Four digit display (-1999 to 9999), 0.56" high
- Maximum and minimum display
- Offset temperature adjustment
- Rugged, shallow depth case (only 3.1" behind panel)
- Type 4X, NEMA 4X, IP65 front
- Universal power supply: 85-265 VAC or 90-265 VDC
- Serial communications RS232 and RS422/485
- Current input overload protection
- Meters in NEMA 4 enclosures UL and cUL approved
- Two Form C, 3A relay option
- Pump alternation control
- On/off time display
- Dual 24V transmitter power option
- Sunlight readable display for mounting outdoors and viewing in direct sunlight
- Copy settings to other meters with MeterCopy function

The Trident Does It All!

The Trident is a universal panel meter that handles all the common process display applications with simplicity, reliability, and accuracy. Setup and programming is a snap, using the simple four-button programming method or a PC. And, if you want to program, the Trident's copy function allows one meter's setup to be automatically copied to another meter!

The Trident can be used for data acquisition with a PC by connecting an optional serial communication adapter. Adapters are also available for RS232 or RS422/485 interfaces. MeterView software simplifies data acquisition and helps you program the meter from a PC.

The Trident's shallow-depth case is designed for easy installation and servicing. The large front bezel is approved as Type 4X, NEMA 4X, and IP65 and has plenty of overlap, even for rough, hand-cut, panel cutouts. Locking mounting brackets make it easy to mount a meter in the panel. Removable screw terminal connectors allow easy and convenient wiring.

Universal Process and Temperature Inputs

Trident is factory calibrated to accept 4-20 mA, -10 to 10 VDC, Types J, K, T, E thermocouples and two-, three-, or four-wire 100 Ω platinum RTDs. Process inputs can be scaled with or without applying an input, and for virtually any engineering unit. Temperature inputs can be programmed to display in $^{\circ}$ Fahrenheit or $^{\circ}$ Celsius, and, with the type K thermocouple, can display up to 2300 $^{\circ}$ F.

Current and Voltage Inputs: Setting up the meter to accept a linear input couldn't be easier. All setup is performed through software, and there are no switches or jumpers to deal with. To protect the unit from current overload, the input circuit contains a resettable fuse. The fuse opens when it detects a fault, and resets when the fault is corrected.

Thermocouple and RTD Inputs: To set up the Trident to accept a thermocouple or RTD input, set a switch at the rear of the case and select the input type from the menu.

Easy Setup and Programming

All Trident programming can be performed with the four-button front panel. There is only one switch on the entire meter, no jumpers, and no need to ever open the case.

Set numeric values using the right and up arrow buttons. The digit being changed is displayed more brightly than the other digits shown. Press the enter/back button at any time to accept a setting. Or press the menu button to exit without saving changes.

PD's free MeterView software lets you program the Trident from a PC and collect data. MeterView lets you program setup parameters and save them to a file for reporting or to use when you program other meters.

You can select the logging time interval and the engineering units that will be displayed on the computer screen. Data is written to an ASCII file that you can import into a spreadsheet or other application.



Download MeterView software FREE from Precision Digital's website: www.predig.com

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Specifications

- Display:** 0.56" high, high-efficiency red LED. Four digit (-1999 to 9999, automatic lead zero blanking).
- Display Update Rate:** Process/RTD: 3.7 to 5/sec; T/C: 1.8 to 2.5/sec
- Programming Methods:** Four front-panel buttons, PC and MeterView software, or cloning using Copy function
- Noise Filter:** Programmable from 2 to 199 (to disable filter program 0)
- Re-Calibration:** All ranges are calibrated at the factory. Re-calibration is recommended at least every 12 months.
- Min/Max Display:** Maximum and minimum readings reached are stored until reset by the user or until power to the meter is turned off.
- Password:** Programmable password restricts modification of settings.
- Non-Volatile Memory:** All programmed settings are stored in non-volatile memory for a minimum of ten years if power is lost.
- Power:** 85 to 265 VAC, 50/60 Hz; 90-265 VDC, 4 W; *Optional:* 12-36 VDC, 4 W
- Fuse:** Recommended external fuse: 0.5 Amp, 250 V slow blow
- Normal Mode Rejection:** 64 dB at 50/60 Hz
- Isolation:** 4 kV per high voltage test
- Operating Temperature Range:** 32° to 149°F (0° to 65°C)
- Relative Humidity:** 0 to 90%, noncondensing
- Connections:** Removable terminal blocks accept 12 to 26 AWG wire, RJ11
- Enclosure:** 1/8 DIN, high-impact plastic, UL 94V-0, gray
- Front Panel:** Type 4X, NEMA 4X, IP65. Panel gasket provided.
- Mounting:** 1/8 DIN panel cutout required. Two panel mounting brackets and gasket provided.
- Warranty:** 3 years parts and labor; can be extended 12 months by returning the Product Registration Form within 2 months from date of purchase
- Approvals:** CE, cUL

Process Meter

- Inputs:** Field selectable: ±20 mADC and ±10 VDC
- Accuracy:** +0.05% of calibrated span, ±1 count
- Temperature Drift:** 50 PPM/°C from 0° to 65°C ambient
- Decimal Point:** Up to three decimal places.
- Calibration Range:** An error message appears if input 1 signal and input 2 signal are too close together.
- Input Impedance:** Voltage range: Greater than 1 MΩ; Current range: 50Ω
- Input Overload:** Current input protected by resettable fuse. Fuse resets automatically after fault is removed.

Temperature Meter

- Inputs:** Field selectable type J, K, T, or E thermocouples and 100Ω platinum RTD (0.00385 or 0.00392 curve)
- Accuracy:** Thermocouples: ±2°F; 100Ω RTD: ±1°F
- Cold Junction Reference:** Automatic, fixed, no user-calibration needed
- Temperature Drift:** ±2°C maximum; 0° to 65°C ambient temperature
- Offset Adjustment:** Programmable to ±19.9°
- Input Impedance:** Greater than 100 kΩ
- Sensor Break Detection:** Open sensor circuit indicated by flashing OPEN.

Download full specs and the Trident operations manuals at www.lesman.com



Model Selection Guide

Description	Catalog Number	Price
Trident Process and Temperature Meter, 85-265 VAC Power		
Options	None	PD765-6R0-00 \$219.00
	24 VDC Supply	PD765-6R0-10 259.00
	2 Relays	PD765-6R2-00 279.00
	2 Relays + 24 VDC Supply	PD765-6R2-10 319.00
	4-20 mA Output	PD765-6R3-00 319.00
	4-20 mA Output + 24 VDC Supply	PD765-6R3-10 364.00
	4-20 mA Output, Dual 24 VDC Supply	PD765-6R3-20 414.00
Trident X2 Large LED Process and Temperature Meter, 85-265 VAC Power		
Options	None	PD765-6X0-00 319.00
	24 VDC Supply	PD765-6X0-10 364.00
	2 Relays	PD765-6X2-00 384.00
	2 Relays + 24 VDC Supply	PD765-6X2-10 424.00
	4-20 mA Output	PD765-6X3-00 424.00
	4-20 mA Output + 24 VDC Supply	PD765-6X3-10 469.00
	4-20 mA Output, Dual 24 VDC Supply	PD765-6X3-20 519.00
Accessories and Enclosures	RS232 Serial Adapter	PDA7232 82.00
	RS422/485 Serial Adapter	PDA7422 82.00
	NEMA 4X Thermoplastic (1 Meter)	PD2801 98.00
	NEMA 4X Clear Plastic (1 Meter)	PD2407 209.00
	NEMA 4X Polycarbonate (1 Meter)	PDA2501 164.00
	NEMA 4X Polycarbonate (2 Meters)	PDA2502 209.00
	NEMA 4 Steel (4 Meters)	PDA2704 434.00
	NEMA 4X Stainless Steel (1 Meter)	PDA2601 469.00

PD765 Trident are also available with 12-36 VDC power. Prices start at \$269.00.

PD603 Sabre P Process Indicator

Features

- 0-20, 4-20 mA, 0-5, 1-5, 0-10, ±10V inputs
- Input current overload protection
- 4 digit display with 0.56" high red LEDs
- Easy front-panel programming
- Calibrate with a signal source ; Scale with no signal source;
- Universal power supply 85-265 VAC, 12-36 VDC/12-24 VAC power optional
- 24VDC transmitter power option on AC-powered units
- NEMA 4X, IP65 front panel; Panel gasket provided; Shallow depth 1/8 DIN case
- UL file number E160849; 508 Industrial Control Equipment



Model Selection Guide

5-piece minimum quantity.

Description	Catalog Number	Price
PD603 1/8 DIN Sabre P Low Cost Digital Temperature Indicator		
PD603 Process Meter, 85-265 VAC Power	PD603-6R0-0	\$154.00
PD603 Process Meter, 24 VDC Output	PD603-6R0-1	194.00
PD603 Process Meter, 12-36 VDC Power	PD603-7R0-0	209.00
NEMA 4X Enclosure for One Unit	PDA2407	209.00

See page 77 for more enclosure options.

ProVu PD6000 Dual-Line 6-Digit Process Meter



Features

- Dual-line six-digit sunlight-readable display, 0.6" and 0.46", with programmable displays and function keys
- 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, and ± 10 V inputs
- NEMA 4X, IP65 front face
- Isolated 24 VDC @ 200 mA transmitter power supply
- Math functions for flow and round horizontal tanks, 32-point, square root, or exponential linearization
- Multi-pump alternation control
- 2 or 4 relays + isolated 4-20 mA output options
- External 4-relay and digital I/O expansion modules
- RS-232, RS-422/485 serial communication options

Feature-Rich and Flexible

Precision Digital's ProVu meter's dual-line 6-digit display (999,999), advanced math functions, function keys, and expansion modules help make it one of the most advanced process meters available today.

ProVu's large 0.6" main display gives you a highly accurate, precise view of your process. The main display can be programmed to indicate PV, maximum (peak), minimum (valley), alternating min/max, or one of eight alarm setpoints. The secondary display can be configured to display engineering units, user defined legends, or turned off.

All ProVu programming is done via the front panel and dual-line display. No jumpers to set or potentiometers to adjust. Three levels of password protection help maintain program reliability and security.

Three function keys can be set to acknowledge alarms, reset max/min, disable/enable output relays, or hold current relay states, provide direct menu access points, and more.

Add functionality to the ProVu in the field with easy-to-install expansion modules. Menu items for these modules are hidden until the module is installed.

ProVu accepts up to two I/O modules, with four digital inputs and four digital outputs each; a module with four 3-Amp Form A SPST relays; or a serial card with RS-232 or RS-422/485 communication adapters.

Math Functions

Non-linear input signals can be linearized through built-in math functions, including: square-root extractor, weirs and flumes exponential linearizer, horizontal round tank linearizer, or PD's powerful general purpose 32-point linearizer.

ProVu multipoint linearization utility software is FREE to download from the Lesman website. Makes it easy to enter linearization points to configure your meter or save for future reference.

Meter Copy

The Copy feature is used to copy (or clone) all the settings from one ProVu to other ProVu meters in about 20 seconds! The Copy function is a standard feature on all meters. It does not require a communications adapter, only an optional cable assembly, P/N PDA1200. See the ordering information for complete details.

Relay Outputs

The ProVu has up to four 3-Amp Form C SPDT relays, giving you more fail-safe options at power loss. Relay action can be configured for input loop break protection. Set ON and OFF delay times when needed. Up to eight front panel indicators show alarm or relay state.

Relay Operation/Configuration

- Powerful relay functions can be configured in the ProVu, including:
- Automatic reset only (non-latching); Automatic + manual reset at any time (non-latching)
 - Latching (manual reset only); Latching with Clear (manual reset only after alarm condition has cleared)
 - Pump alternation control (automatic reset only)
 - Sampling (activated for a user-specified time)
 - User selectable fail-safe operation
 - Relay action for loss (break) of 4-20 mA input signal
 - Time delay (on and off), independent for each relay

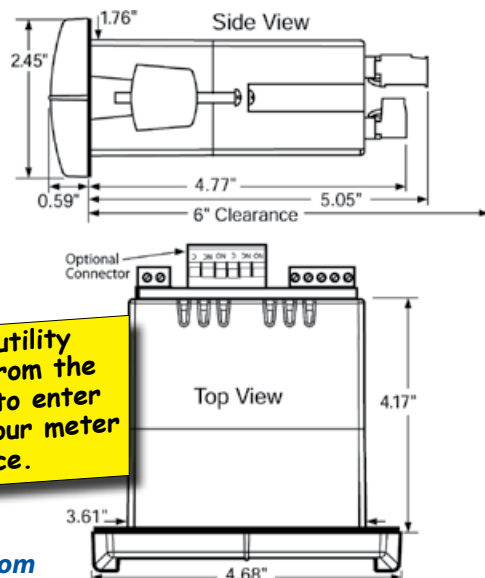
Analog Output

The isolated analog retransmission signal can be configured to represent the process variable (PV), maximum (peak), minimum (valley), or the value for any of the relay setpoints. While the output is nominally 4-20 mA, the signal will accurately accommodate under- and over-ranges from 1 to 23 mA.

Auto/Manual control function takes control of any output. All relays can be forced ON or OFF, and the 4-20 mA output signal can be set to any value within its range.

Isolated Transmitter Power Supplies

A powerful 24V @ 200 mA power supply is standard on the ProVu. It can be configured for 5, 10, or 24 V via an internal jumper. An additional 24V power supply is standard with the 4-20 mA output option.



Full specifications, wiring diagrams, user manual available online at [Lesman.com](http://www.lesman.com)

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Condensed Specifications

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

Accuracy: ±0.03% FS ±1 count, square root and programmable exponent accuracy range: 10-100% FS

Display: Upper: 0.6" - high red LED. Lower: 0.46" - high red LED 6 digits (-99999 to 999999), lead zero blanking. *Intensity:* Eight levels; *Update Rate:* 5/second; *Over/Underrange:* Display flashes 999999 or -99999

Programming Methods: Four front panel buttons, PC-based linearization utility, cloning using Copy function, or via digital inputs. *Password:* Three programmable passwords restrict modification of programmed settings. **Note:** Digital inputs are not password protected.

Noise Filter: Programmable from 2 to 199 (0 will disable filter); *Bypass:* Programmable from 0.1 to 99.9% FS

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

Transmitter Power Supply: 5, 10, or 24 VDC selectable by internal jumper. 24 VDC ± 5% supply rated @ 200 mA max (100 mA max for 12/24 VDC powered models). 5 or 10 VDC supplies rated @ 50 mA max.

Math Function: Linear, square root, programmable exponent, or round horizontal tank volume calculation. *Multipoint Linearization:* 2 to 32 points; *Programmable Exponent:* 1.0001 to 2.9999; *Low-Flow Cutoff:* 0-999999

Relays: 2 or 4 SPDT Form C internal or 4 SPST Form A external; *Time Delay:* 0 to 999.9 seconds, on/off relay time delays. Programmable, independent for each relay. *Fail-Safe Operation:* Programmable, independent for each relay.

Auto Initialization: When power is applied to the meter, relays will reflect the state of the input.

Output: *Source:* PV, max, min, or setpoints 1-8; *Scaling Range:* 1.000 to 23.000 mA for any display range; *Accuracy:* ± 0.1% FS ± 0.004 mA

Isolated Transmitter Power Supply: Terminals I+ and R: 24 VDC ± 5% @ 40 mA max, may be used to power 4-20 mA output or other devices.

Power Supply Loop Resistance: 24 VDC: 10Ω to 800Ω; 35 VDC (External): 100Ω to 1200Ω

Serial Communications: *Address:* 1-247; 8 bit (1 start bit, 1 stop bit), no parity, 300-19,200 bps; Less than 2 ms (fixed) turnaround delay; *Transmit Time Delay:* Programmable 0-199 ms or always on for RS-422

Digital I/O Expansion: Up to two modules; 4 DI + 4 DO channels each; *Current Source:* 10 mA max; *Sink:* 1.5 mA min; *5V Terminal:* Pull-up for DI only.

Relay Expansion: Four Form A SPST rated 3 A @ 30 VDC and 125/250 VAC resistive load; 1/4 HP @ 125/250 VAC for inductive loads.

Operating Range: -40° to 149°F; 0 to 90% rH non-condensing.

Construction: 1/8 DIN, high impact black plastic enclosure, UL 94V-0; NEMA 4X/IP65 front panel; 1/8 DIN panel mount cutout required.

Approvals: UL and c-UL Listed. E160849; 508 Industrial Control Equipment.

Model Selection Guide

Description	Catalog Number	Price
PD6000 ProVu Analog Input Process Meter		
ProVu Process Meter, No Options	PD6000-6R0	\$299.00
ProVu Process Meter, 2 Relay Outputs	PD6000-6R2	344.00
ProVu Process Meter, 4-20 mA Output	PD6000-6R3	364.00
ProVu Process Meter, 4 Relay Outputs	UL PD6000-6R4	384.00
ProVu Process Meter, 2 Relays + 4-20 mA Output	UL PD6000-6R5	404.00
ProVu Process Meter, 4 Relays + 4-20 mA Output	PD6000-6R7	444.00
DIN Rail Mount Kit for Two Expansion Modules	PDA1002	10.00
4-Relay Expansion Module	PDA1004	83.00
Digital I/O Expansion Module	PDA1044	36.00
RS-422/485 Serial Adapter	PDA1485	82.00

Models also available with 12-24 VDC power. Call Lesman.

PD644 Javelin D High-Voltage DC Panel Meter

Search www.lesman.com for PD644 Javelin D



Features

- 0-300 VDC input
- 4-20 mA analog output
- Two Form C 3-Amp relay options
- Sunlight-readable LED display
- Data acquisition with MeterView® software
- RS485 serial communications, Modbus® RTU option
- NEMA 4X, IP65 front panel, shallow depth 1/8 DIN enclosure

Model Selection Guide

Description	Catalog Number	Price
PD644 Javelin D High Voltage DC Panel Meter, 85-265 VAC Power		
PD644 Meter, No Options	UL PD644-6R3-14	\$269.00
PD644 Meter, 2 Relays, 24 VDC Transmitter Power	PD644-6R5-14	319.00
NEMA 4X Enclosure for One Unit	UL PDA2407	209.00

Models also available with 12-36 VDC power. Call Lesman.

PD865 Snooper Modbus® Serial Input Meter

Search www.lesman.com for PD865 Snooper



Features

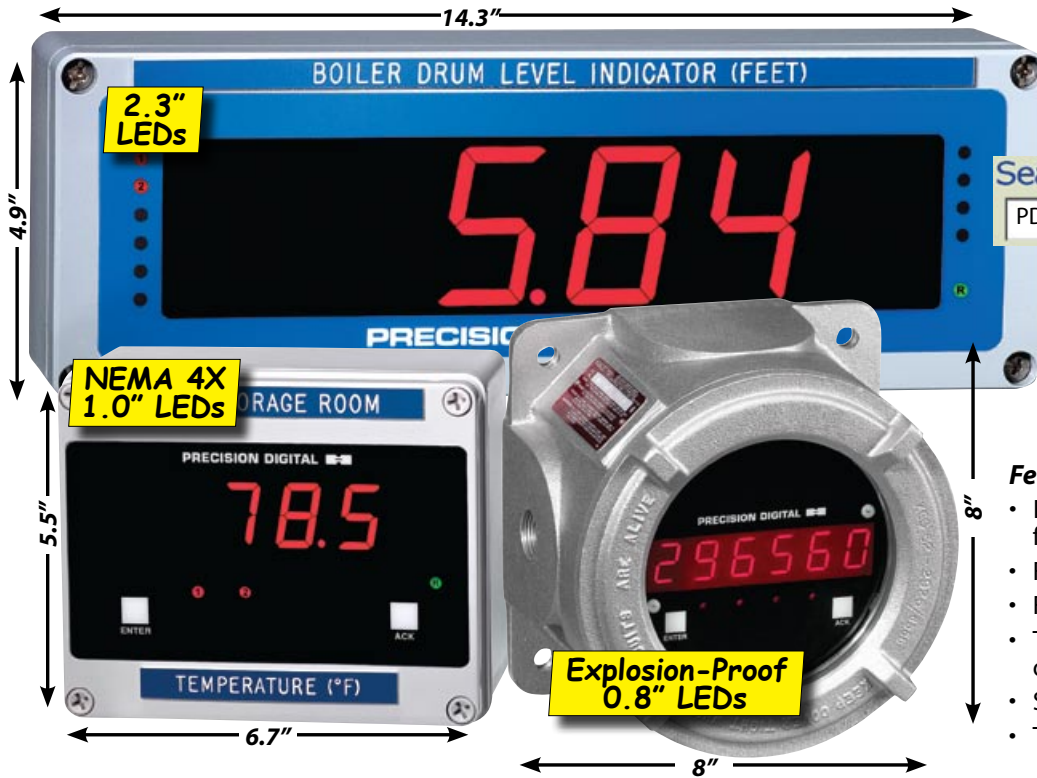
- Modbus® RTU input
- Can be used as a master, slave, or snooper device
- Up to four pump alternation controls
- 4-20 mA analog output option
- 16-point linearization, square root, and programmable exponent functions
- Six full digits on a sunlight-readable LED display
- 1/8 DIN shallow depth high-impact plastic enclosure
- Two Form A 3-Amp relays; Two Form C 3-Amp relays optional

Model Selection Guide

Description	Catalog Number	Price
PD856 Snooper Modbus® RTU RS-485 Serial Input Meter, 85-265 VAC Power		
PD856 Meter, No Options	PD865-6R2-06	\$269.00
PD856, 4-20 mA Output, Transmitter Power	PD865-6R5-16	364.00
PD856, 4-20 mA, 2 Relays + Transmitter Power	PD865-6R7-16	424.00
NEMA 4X Enclosure for One Unit	UL PDA2407	209.00

Models also available with 12-36 VDC power. Call Lesman.

Large Display Digital Process Meters



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Search www.lesman.com for

PD "large display"

Go

See more PD flow indicators and flow rate/totalizers on pages 78 and 79.

Features

- Enhanced 4 1/2 digit plus extra zero for process rate
- Full six-digit display for total
- Field-selectable mA and V inputs
- Two or four relays and 4-20 mA output options
- Switchable 115 or 230 VAC power
- Two 24 VDC isolated power supplies

Specifications for Large Display Process Meters

- Inputs:** Field selectable: 4-20 mA, 0-20 mA, 0-5 V, 1-5 V, 0-10 V
- Decimal Point:** 4 1/2 digit plus extra zero display for rate.
- Calibration Range:** 4 mA (1V) can be set anywhere in meter's range. 20 mA (5V) can be set anywhere in meter's range, above or below 4 mA.
- Input Impedance:** Voltage ranges, >300 KΩ; Current ranges, 100Ω
- Loop Power:** Two isolated power supplies, 24 VDC ±5% at 20 mA each, regulated. Max. loop resistance 1200Ω.
- Linear Input Accuracy:** ±0.1% of calibrated span, ±1 count
- Pump Alternation Control:** A pair of relays can be set up to alternate every time an on/off pump cycle is completed. Setpoints and reset points can be programmed, so that first pump on is the first pump off.
- Alarms:** Four points, any combination of high or low alarms. Deadband: 0-100% of full scale, user selectable. Status indication: Front panel LED.
- External Programming:** Enter button functions can be controlled externally by wiring a switch across terminals EN and CM.
- Non-volatile Memory:** Programming values stored for minimum of 10 years if power is lost.
- Normal Mode Rejection:** 64 dB at 60 Hz
- Power:** AC power: 115 or 230 VAC (field select) ±10%, 50/60 Hz, 12 VA; DC power: 24 VDC, 12 watts max.
- Environmental:** Ambient temperature: -20° to 65° C; Relative humidity: 0 to 90% noncondensing.
- Connections:** Removable screw terminal blocks (provided), accept 22 to 12 AWG wire.

PD650

- Display:** 2.3" red LED, six digit
- Enclosure:** Diecast aluminum, NEMA 4X
- Dimensions:** 4.9" x 14.3" x 3.2"

PD655

- Display:** 1.0" red LED, six digit
- Enclosure:** Impact-resistant, glass-filled polycarbonate, NEMA 4X
- Dimensions:** 6.7" x 5.5" x 3.7"

PD656

- Display:** 0.8" red LED, six digit
- Enclosure:** Explosion-proof, sand-cast aluminum, NEMA 3, 4, 7, 9; hazardous locations Class I Groups C and D, Class II Groups E, F, and G.
- Dimensions:** 8.0" x 8.0" x 5.7"



See page 70 for PD's new Trident X2 with 1.2" LED!

Model Selection Guide

Description	Catalog Number	Price
Process Meters, Field-Selectable Inputs		
Large Display (2.3" LED) Meter	PD650-N	\$884.00
Large Display (2.3" LED) Meter, 4-20 mA Output	PD650-35	1039.00
NEMA 4X (1.0" LED) Meter	PD655-N	559.00
NEMA 4X (1.0" LED) Meter, 2 Relay Outputs	PD655-44	664.00
Explosion-Proof (0.8" LED) Meter	PD656-N	1089.00
Explosion-Proof (0.8" LED) Meter, 2 Relay Outputs	PD656-44	1194.00
Accessories	Panel Mounting Kit (PD655)	PDA6554 61.00
	Panel Mounting Kit (PD650)	PDA6504 103.00
	Magnet Assembly (PD656)	PDA-MAG 25.00

Other output options and 24 VDC powered units available. Call for pricing.




Looking for a large display temperature meter? See the Trident PD765 series. Call Lesman for additional help.

Upgrading Your Precision Digital Panel Meters

Retirement Notice

Precision Digital PD690, PD692, and PD693 1/8 DIN panel meters have been retired. Please use this table to find a suitable replacement model in the new Trident or ProVu meter series. Lesman now stocks popular ProVu and Trident models, so they're available to ship to you quickly.



Upgrade from...	Description	Retired Model	Upgrade to a ProVu (24 VDC, With Power Supply)	Upgrade to a Trident (24 VDC, No Power Supply)
 PD690 Process Meter	Meter with No Options Meter with 2 Relay Output Meter with 4-20 mA Output Meter with 2 Relays, 4-20 mA Output Meter with 4 Relays Meter with 4 Relays, 4-20 mA Output	PD690-3-N PD690-3-14 PD690-3-15 PD690-3-16 PD690-3-17 PD690-3-18	PD6000-6R0 PD6000-6R2 PD6000-6R3 PD6000-6R5 PD6000-6R4 PD6000-6R7 See page 72	PD765-6R0-00 PD765-6R2-00 PD765-6R3-00 See page 70
 PD692 Analog Rate/Totalizer	Meter with No Options Meter with 2 Relay Output Meter with 4-20 mA Output Meter with 2 Relays, 4-20 mA Output Meter with 4 Relays Meter with 4 Relays, 4-20 mA Output	PD692-3-N PD692-3-14 PD692-3-15 PD692-3-16 PD692-3-17 PD692-3-18	PD6200-6R0 PD6200-6R2 PD6200-6R3 PD6200-6R5 PD6200-6R4 PD6200-6R7 See page 78	
 PD693 Pulse Rate/Totalizer	Meter with No Options Meter with 2 Relay Output Meter with 4-20 mA Output Meter with 2 Relays, 4-20 mA Output Meter with 4 Relays Meter with 4 Relays, 4-20 mA Output	PD693-3-N PD693-3-14 PD693-3-15 PD693-3-16 PD693-3-17 PD693-3-18	PD6300-6R0 PD6300-6R2 PD6300-6R3 PD6300-6R5 PD6300-6R4 PD6300-6R7 See page 78	

Fluidwell F-Series Digital Level Indicators

Features

- Full seven 0.67" tall digits, selectable on-screen units, volumetric or mass — no more stickers to remind you to multiply by 100 for a real reading!
- Displays volume, height, and percentage filled
- F070 is a basic indicator; F170 model adds high and low alarms plus analog outputs and communication option
- Battery powered unit available for installations without a readily available power supply
- Plastic or aluminum IP65/NEMA 4 panel mount or rugged IP67/NEMA 4X field-mount enclosures
- All configuration done through pushbutton menu with automatic backup of all settings
- Operational temperature range: -40° to 178°F



Model Selection Guide

Description	Catalog Number	Availability	Price
Fluidwell Basic Digital Level Indicator	F070	↓	\$354.00
Fluidwell Digital Level Indicator with Outputs	F170	↓	414.00
Input Type	0-20 or 4-20 mA 0-10V	A U	• • 0.00 • • 0.00
Input	No External Input	IX	• 0.00
Analog Output	Passive 4-20 mA Output Active 0-20 mA Output	AP AB	• 0.00 a 62.00
Transistor Output	Passive Transistor Output Active Transistor Output	OT OA	• 0.00 a 39.00
Communications	None RS485 Two-Wire, Modbus Protocol	CX CH	• 0.00 • 81.00
Enclosure	Plastic Panel Mount IP65/NEMA 4 Aluminum Panel Mount IP65/NEMA 4 Plastic Field Enclosure IP67/NEMA 4X	HC HB HD	• • 0.00 • • 52.00 • • 53.00
Power Supply	8-30 VDC, No Sensor Supply Lithium Battery, Safe Area Apps Only 8-24 VAC/VDC 24 VAC/VDC + 24 VDC Sensor Supply 80-240 VAC) + 24 VDC Sensor Supply	PX PB PD PF PM	• • 0.00 • • 49.00 • • a 52.00 • • a 154.00 • • a 97.00
Use	Safe Area Application	XX	• • 0.00
Options	None Backlight	ZX ZB	• • 0.00 • • 42.00

Note a: Analog output AB requires active transistor output OA and power option PD, PF, or PM.

Learn more about Fluidwell digital indicators online. Brochures, spec sheets, and feature comparisons available: www.Lesman.com/get/fluidwell.php

Wireless Sensing and Communications
Controllers and Programmers
Digital Indicators
Recorders and Data Acquisition
Temperature Sensors and Transmitters
Analytical Instruments and Systems

Loop-Powered Meters and Process Indicators



Search www.lesman.com for
PD688 Loop Leader



PD683/PD688 Panel Mount Models

- 4-20 mA input
- Custom engineering units and bargraph, trend arrow, and Min/Max display
- 1/8 DIN high impact plastic, shallow depth enclosure with Type 4X, IP65 front panel
- LCD display with five 0.6" tall digits
- 2.0 Volt drop, 5.7 V with backlight
- Square root or programmable exponent

Model Selection Guide

Description	Catalog Number	Price
Loop Leader™ Panel Mount Loop-Powered Indicators, NEMA 4X Front Panels		
Backlit 5 Digit LCD, 1/8 DIN	<input type="checkbox"/> PD683-0K0	\$194.00
Backlit 5 Digit LCD, 1/8 DIN, FM/CSA Approved	<input type="checkbox"/> PD688-0K0	319.00

NEMA 4X Enclosure Models

PD662

- 4-20 mA input
- 3-1/2 digit 0.6" tall display (-1999 to 2999) with Min/Max
- 1.7 Volt drop
- Four-button programming
- Loop-powered backlight
- Operates from -40° to 185°F (-7° to 185°F with DC-powered heater option)
- HART® protocol transparent — PD662 doesn't interfere with your ability to program HART devices on the same loop
- Replaces the retired Precision Digital PD660



Search www.lesman.com for
PD662 Hatchet

PD686

- 4-20 mA input
- 3-1/2 digit 1" tall display
- 1 Volt drop
- Two non-interacting potentiometers for quick two-step calibration
- FM, CSA approvals
- Intrinsically Safe Class I, II, III, Div. 1, Groups A-G
- Non-Incendive Class I, II, III, Div. 2, Groups A-D, F, G
- Impact-resistant glass-filled polycarbonate body



Search www.lesman.com for
PD687 loop-power



PD675

- 4-20 mA input
- 4-1/2 digit 0.7" tall display (19999)
- 5.2 Volt drop
- Operates from -40° to 185°F
- Impact-resistant polycarbonate body
- FM/CSA Approval: Non-Incendive Class I, II, III, Div. 2, Groups A-D, F, G



Search www.lesman.com for
PD675 and PD677

Model Selection Guide

Description	Catalog Number	Price
Loop-Powered Indicators in NEMA 4X Enclosures		
3-1/2 Digit, 0.6" LCD, No Options	PD662-0L0-00	\$209.00
3-1/2 Digit, 0.6" LCD, Backlight	PD662-0K0-00	259.00
3-1/2 Digit, 0.6" LCD, DC-Powered Heater	PD662-0L0-A0	289.00
3-1/2 Digit, 0.6" LCD, Heater Option + Backlight	PD662-0K0-A0	339.00
3-1/2 Digit, 1" LCD, FM/CSA Approval	<input type="checkbox"/> PD686	319.00
4-1/2 Digit 0.7" Tall LCD	PD675-N	384.00
Accessories		
Panel Mount Kit for PD662	PDA6624	51.00
Panel Mount Kit for PD675, 685, 686, and 697	PDA6844	51.00
Zinc-Plated Pipe Mount Kit with 2 Holes	PDA6845	51.00
Stainless Steel Pipe Mount Kit, 2 Holes	PDA6845-SS	82.00
Stainless Steel Tag	PDA-SSTAG	25.00

Looking for loop-powered flow rate meters and totalizers? See page 79.

Explosion-Proof Models

PD663 (Replaces PD661)

- 4-20 mA input
- 3-1/2 digit 0.6" tall display (-1999 to 2999) with Min/Max
- 1.7 Volt drop
- Four-button programming
- Loop-powered backlight
- HART® protocol transparent — PD663 doesn't interfere with your ability to program HART devices on the same loop
- FM/CSA Approval: Class I, Div 1, Groups B–D, Class II/III, Div 1, Groups E–G, Class III Hazardous Outdoor (Type 4X/IP66) Locations; ATEX and IEC EX Approval



Search www.lesman.com for
PD661 loop

PD687

- 4-20 mA input
- 3-1/2 digit 1" tall display (1999)
- 1 Volt drop
- Operates from -40° to 185°F
- Cast aluminum with glass window NEMA 4X, 7, and 9/IP66
- FM/CSA Approval (-EX): Class I, Div 1, Groups B–D, Class II, Groups E–G, Class III Hazardous Outdoor (Type 4) Locations



Search www.lesman.com for
PD687 loop

PD677

- 4-20 mA input
- 4-1/2 digit 0.7" tall display (19999)
- 5.2 Volt drop
- Operates from -4° to 149°F
- Cast aluminum with glass window NEMA 4X, 7, and 9/IP66
- FM/CSA Approval (-EX): Explosion-Proof Class I, Div 1, Groups B–D; Dust-Ignition-Proof Class II, Div 1, Groups E–G, Class III Hazardous (Type 4X) Locations



Search www.lesman.com for
PD675 and PD677

Model Selection Guide

Description	Catalog Number	Price
Explosion-Proof Loop-Powered Indicators		
3-1/2 Digit, 0.6" LCD, FM/CSA/ATEX	PD663-0L0-00	\$379.00
3-1/2 Digit, 0.6" LCD, FM/CSA/ATEX, Backlit	PD663-0K0-00	429.00
3-1/2 Digit, 0.6" LCD, FM/CSA/ATEX, Reed Switches	PD663-0LA-00	419.00
3-1/2 Digit, 0.6" LCD, FM/CSA/ATEX, Backlit, with Reed Switches	PD663-0KA-00	469.00
Magnet Assembly for Reed Switches	PDA-MAG	25.00
3-1/2 Digit, 1" Tall LCD	PD687	589.00
3-1/2 Digit, 1" Tall LCD, FM/CSA Approved	PD687-EX	704.00
4-1/2 Digit, 0.7" Tall LCD	PD677-N	589.00
4-1/2 Digit, 0.7" Tall LCD, FM/CSA Approved	PD677-N-EX	644.00

Precision Digital Meter Enclosures

PDA2801-2821

- Gray plastic NEMA 4X/IP66 enclosure
- No agency approvals available
- Mounts horizontal or vertical

PDA2501-2506

- Plastic NEMA 4X enclosures
- UL and CSA approved
- Mounts horizontal or vertical
- Gray thermoplastic
- Meter panel-mounts in cover

PDA2701-2706

- Steel NEMA 4 enclosure
- UL and CSA approved
- Mounts horizontal or vertical
- Gray 14-gauge steel

PDA2446

- Explosion-proof aluminum enclosure
- UL and cUL approvals
- NEMA 7 and 9, NEC Class I, Groups C-D, Class II, Groups E-G, Class III

PDA2407-2415

- Plastic NEMA 4X enclosures
- UL and CSA approved
- Mounts horizontal or vertical
- Gray thermoplastic with clear polycarbonate cover

Key to Meter Types

- A 1/8 DIN PD690-style meter
- C 1/8 DIN PD765 Trident-style meter
- D 1/8 DIN PD158 Vigilante (vertical)
- E ProVu series meters



Model Selection Guide

Description	Catalog Number	Price
Enclosures for Mounting Meters Inside (Meter Fully Inside Enclosure)		
Plastic NEMA 4X, One Meter Any Type	PDA2407	\$209.00
Plastic NEMA 4X, Two Meters Any Type	PDA2411	284.00
Enclosures for Panel-Type Mounting (Meter Mounts Onto Cover)		
Plastic NEMA 4X, One Type C Meter	PDA2801	98.00
Plastic NEMA 4X, One Type A, C, or E Meter	PDA2811	139.00
Plastic NEMA 4X, One Type C Meter	PDA2501	164.00
Plastic NEMA 4X, Two Type C Meters	PDA2502	209.00
Steel NEMA 4, Three Type C Meters	PDA2703	384.00
Steel NEMA 4, Four Type A, C, or E Meters	PDA2704	434.00
Explosion-Proof Enclosures (Fit Any Type Meters), 3/4" NPT Holes		
NEMA 7/9, Two Meters, Two Holes in Bottom	PDA2446-0002	804.00
NEMA 7/9, One Meter, One Hole on Left	PDA2446-1000	724.00

Need a different enclosure style or size? Call Lesman.

Universal Digital Flow Rate/Totalizers



Visit lesman.com for full specifications on Precision Digital ProVu flow rate/totalizers.

See page 38 for more information on ProVu series dual-line process indicators.

Standard Features

- Dual-line six-digit sunlight-readable display, 0.6" and 0.46", with programmable displays and function keys
- NEMA 4X, IP65 front
- Universal 85-265 VAC or 12/24 VDC input power
- 2 or 4 relays + isolated 4-20 mA output options
- External 4-relay and digital I/O expansion modules
- RS-232, RS-422/485 serial communications options
- -40° to 149°F operating temperature range
- Displays rate and total at the same time; Rates in units per second, minute, hour, or day
- Total, grand total or non-resettable grand total; Password protection for total reset
- Nine-digit totalizer with total overflow feature
- 4-20 mA output or any relay for rate or total

PD620 Analog Input Features

- 0-20 or 4-20 mA, 0-5V, 1-5V, or ±10V inputs
- Isolated 24 VDC @ 200 mA transmitter power supply
- Open channel flow with programmable exponent
- Square root extraction and 32-point linearization

PD6300 Pulse Input Model Features

- Pulse, open collector, NPN, PNP, TTL, switch, contact sine wave (Coil) or square wave inputs
- 5, 10, or 24 VDC flowmeter power supply
- Gate function for rate display of slow pulse rates
- K-Factor, internal scaling, or external calibration

Model Selection Guide

Description	Catalog Number	Price
PD6200 ProVu Analog Input Dual-Line Flow Rate/Totalizer, 85-265 VAC Power		
ProVu Analog Input, No Options	PD6200-6R0	\$329.00
ProVu Analog Input, 2 Relays	PD6200-6R2	374.00
ProVu Analog Input, 4-20 mA Out	PD6200-6R3	394.00
ProVu Analog Input, 4 Relays	PD6200-6R4	414.00
ProVu Analog Input, 2 Relays + mA Out	PD6200-6R5	434.00
ProVu Analog Input, 4 Relays + mA Out	PD6200-6R7	479.00
PD6300 ProVu Pulse Input Dual-Line Flow Rate/Totalizer, 85-265 VAC Power		
ProVu Pulse Input, No Options	PD6300-6R0	329.00
ProVu Pulse Input, 2 Relay	PD6300-6R2	374.00
ProVu Pulse Input, 4-20 mA Out	PD6300-6R3	394.00
ProVu Pulse Input, 4 Relay	PD6300-6R4	414.00
ProVu Pulse Input, 2 Relay + mA Out	PD6300-6R5	434.00
ProVu Pulse Input, 4 Relay + mA Out	PD6300-6R7	479.00
DIN Rail Mount Kit for Two Expansion Modules	PDA1002	10.00
4-Relay Expansion Module	PDA1004	83.00
Digital I/O Expansion Module	PDA1044	36.00
RS-422/485 Serial Adapter	PDA1485	82.00

Models also available with 12-24 VDC power. Call Lesman.





Large display digital process meters with flow rate and totalization functions available on page 74.

Looking for a NEMA 4X enclosure for your Precision Digital meter? See page 77.

Upgrading Your Precision Digital PD692 and PD693 Flow Rate Totalizers



Precision Digital PD692, and PD693 1/8 DIN flow rate totalizers have been retired. Please use this table to find a suitable replacement model in the new ProVu meter series. Lesman now stocks popular ProVu models, so they're available to ship to you quickly.

Upgrade from...	Description	Retired Model	Upgrade to a ProVu
 PD692 Analog Rate/Totalizer	Meter with No Options	PD692-3-N	PD6200-6R0
	Meter with 2 Relay Output	PD692-3-14	PD6200-6R2
	Meter with 4-20 mA Output	PD692-3-15	PD6200-6R3
	Meter with 2 Relays, 4-20 mA Output	PD692-3-16	PD6200-6R5
	Meter with 4 Relays	PD692-3-17	PD6200-6R4
	Meter with 4 Relays, 4-20 mA Output	PD692-3-18	PD6200-6R7
 PD693 Pulse Rate/Totalizer	Meter with No Options	PD693-3-N	PD6300-6R0
	Meter with 2 Relay Output	PD693-3-14	PD6300-6R2
	Meter with 4-20 mA Output	PD693-3-15	PD6300-6R3
	Meter with 2 Relays, 4-20 mA Output	PD693-3-16	PD6300-6R5
	Meter with 4 Relays	PD693-3-17	PD6300-6R4
	Meter with 4 Relays, 4-20 mA Output	PD693-3-18	PD6300-6R7

Search www.lesman.com for

Loop Leader PD684



Loop-Powered Flow Rate/Totalizers

- 4-20 mA input
- LCD display with five 0.6" tall digits
- Custom engineering units and bargraph, Min/Max display, programmable alternating rate/total display
- Overflow displays total up to eight digits
- 1/8 DIN high impact plastic, shallow depth enclosure with Type 4X, IP65 front panel
- 2.0 Volt drop, 5.7 V with backlight
- Square root or programmable exponent
- PD689 FM approved, CSA certified intrinsically safe and non-incendive

Model Selection Guide

Description	Catalog Number	Price
Panel Mount Loop-Powered Flow Rate Totalizers with NEMA 4X Front Panels		
Backlit 5 Digit LCD, 1/8 DIN	PD684-0K1	\$269.00
Backlit 5 Digit LCD, 1/8 DIN, FM/CSA Approved	PD689-0K1	404.00

Loop-Powered Flow Rate/Totalizers

PD697 and PD698

- 0.5" LCD with 4-1/2 digits for rate, six digital for total
- Alternating rate/total display
- Field-selectable noise filtering
- 5.6V drop (7V with backlight)
- Operating temperature 32° to 149°F
- Choice of NEMA 4X (PD697) or NEMA 4/7/9 cast aluminum (PD698) enclosure
- PD698 is FM approved and CSA certified Explosion-Proof Class I, Groups B-D, and Class II, Groups E-G
- PD697 prices start at \$329.00; PD698 prices start at \$594.00



Looking for a NEMA 4X enclosure for your Precision Digital meter? See page 77.

Fluidwell F-Series Flow Rate/Totalizers

- Displays instantaneous flow rate, total, and accumulated total
- Full seven 0.67" tall digits — no more stickers to remind you to multiply by 100 for a real reading!
- F012 is a basic model; F110 adds output and communication options plus a terminal input to reset total
- Battery option for areas with no available power source
- Plastic or aluminum IP65/NEMA 4 panel mount or rugged IP67/NEMA 4X field-mount enclosures
- All configuration done through pushbutton menu with automatic backup of all settings
- Operational temperature range: -40° to 178°F



Fluidwell F-Series indicators are ideal for monitoring liquid and gas flow applications. Choose a flow rate indicator, flow totalizer, or a combination rate/totalizer. Then, choose your output type: analog, pulse, alarms, or a combination of those. Need to communicate with remote devices on a Modbus network? There's a Fluidwell F-Series unit that can do that, too.

The large double-line backlit display shows both measuring units and text. The simple menu structure and front-face pushbuttons eliminate the need for dip-switch adjustments.

Learn more about Fluidwell digital indicators:
www.lesman.com/get/fluidwell.php

Model Selection Guide

Description	Catalog Number	Avail-ability	Price
Fluidwell Basic Digital Flow Rate/Totalizer	F012	↓	\$419.00
Fluidwell Digital Flow Rate/Totalizer with Outputs	F110	↓	449.00
Input Type	0-20 or 4-20 mA Pulse, NAMUR, or Coil 0-10V	A P U	• • 0.00 • • 0.00 • • 0.00
External Input	None Terminal Input to Reset Total	IX IB	• 0.00 • 33.00
Analog Output	Passive 4-20 mA Output Active 0-20 mA Output	AP AB	• 0.00 a 62.00
Optional Output	Passive Transistor Output Active Transistor Output Two Form A SPST Relays	OT OA OR	• 0.00 a 39.00 b 39.00
Communi-cations	None RS485 Two-Wire, Modbus Protocol	CX CH	• 0.00 • 81.00
Enclosure	Plastic Panel Mount IP65/NEMA 4 Aluminum Panel Mount IP65/NEMA 4 Plastic Field Enclosure IP67/NEMA 4X	HC HB HD	• • 0.00 • • 52.00 • • 53.00
Power Supply	8-30 VDC, No Sensor Supply Lithium Battery, Safe Area Apps Only 8-24 VAC/VDC 24 VAC/VDC + 24 VDC Sensor Supply 80-240 VAC) + 24 VDC Sensor Supply	PX PB PD PF PM	• • 0.00 • • 49.00 • a 52.00 • a 154.00 • a 97.00
Use	Safe Area Application	XX	• • 0.00
Options	None Backlight	ZX ZB	• • 0.00 • • 42.00

Note a: Analog output AB requires active transistor output OA and power option PD, PF, or PM.

Note b: SPST relay output option OR requires power options PF or PM.

Digital Temperature Indicators

1/8 DIN Universal Digital Indicator

- NEMA 3/IP65 front face
- Universal input, 0.1% accuracy
- Can be configured in the field for T/C, linear mA and linear voltage inputs
- Jumper-free configuration
- Up to 5 alarms, 5 alarm relays
- RS485 Modbus communication or digital input options
- Visit www.lesman.com for full specifications



Honeywell

1/4 DIN Intrinsically Safe Indicator



Specifications

Input: Thermocouple Type J or K (not included); **Ranges:** **Low:** -50° to 450°F (-50°/250°C); **High:** 400° to 1500°F (200° to 800°C) Type K only

Accuracy: ±1% full scale; **Cold Junction Compensation/Zero Drift:** 0.08°/°F or °C; **Resolution:** 1°F (1°C)

Calibration: Screw adjust calibrates to within 1°F/°C at any point.

Operating Temperatures: -13°/160°F (-25°/72°C), varies by power supply.

Power Supply: **Self-Powered:** 8 AA Alkaline batteries; up to 2 years continuous operation. **Externally Powered:** 6-28 VDC (unregulated) at 0.2 to 5 mA

Display: 0.7" high, 3-1/2 digit LCD.

Housing: NEMA 4X; 1/4 DIN; 302 SS; one-piece, Valox bezel and Buna-N gasket. Environmentally sealed with one-way valve for battery venting.

Size: 3.75" X 3.75" X 1.81" HWD

Connections: 1/2" NPT stainless steel half coupling welded to case.

Intrinsically Safe (FM Approved): **Battery-powered:** Intrinsically safe for Class I, II and III, Div. I, Groups A-E, and G hazardous locations using RayOVac 815, Duracell MN1500, Eveready E91, or Panasonic AM3. **External-powered:** Class I, II and III, Div. I, Groups A-E, G hazardous locations when installed to U.S. Gauge instructions.



Model Selection Guide

Description		Catalog Number	Price Each
DT-8310 Digital Temperature Indicator, FM-Approved, Battery Powered			
Field Mount	Type K (-50° to 450°F)	DT-8311	\$364.30
	Type K (400° to 1500°F)	DT-8331	364.30
	Type J (-50° to 450°F)	DT-8351	364.30
Panel Mount	Type K (-50° to 450°F)	DT-8312	364.30
	Type J (-50° to 450°F)	DT-8352	364.30
DT-8310 Digital Temperature Indicator, External Power Supply (6-28 VDC)			
Panel Mount	Type K (-50° to 450°F)	DT-8316	376.72
Accessories			
FM-Approved "AA" Alkaline Batteries (8-Pack)		AA	4.33

Other °F and °C temperature ranges available. Call for pricing and delivery.

Ordering Instructions

Make a selection from each table. A complete model number looks like this: DI1701-1-_____-0-0-0

Model Selection Guide

		Catalog Number	Price
UDI1700 1/8 DIN Digital Indicator, RTD or Linear mV Input, Relay Output #1 with Printed English Manual		DI1701-1-	\$310.00
Output #2	None	0	0.00
	Relay	1	34.00
	Linear: 4-20 mA	7	50.00
Output #3	None	0	0.00
	Relay	1	34.00
	24 VDC Transmitter power	8	78.00
Option #1	None	0	0.00
	RS485 Modbus/ASCII Communications Digital Input (1 Remote Reset Input)	1 2	105.00 50.00
Option #2	90-264 VAC Power Supply	1	0.00
	24-48 VAC/VDC Power Supply	2	0.00
Option #3	Red LED Display	0000	0.00
	Green LED Display	1000	0.00

1/4 DIN Universal Digital Indicator

- Universal Input — Accepts 9 thermocouple types, RTDs, mA, mV, or voltage.
- NEMA 4X IP68 front face
- Thermocouple health feature standard!
- Infrared programming and Ethernet communications available. Call Lesman



See page 38 for full specs.

Specifications

Accuracy: ±0.25% full scale, typical (±1 digit for display). Can be field calibrated to ±0.05% full scale, typical 16-bit resolution.

Input Impedance: 4-20 mA; 0-10 V; All other: 10 megΩ

Input Filter: Single pole low-pass filter software with selectable time constants, off to 120 seconds available on both analog inputs.

Model Selection Guide

Description	Catalog Number and Price
Digital Indicator: Universal PV Input, 90-264 VAC Power, CE/UL/CSA Approval	DC2500-00-0000-200-00000-E0-0 \$440.00
Digital Indicator: Universal PV Input, 90-264 VAC Power, Relay Output, Alarm 1, CE/UL/CSA Approval	DC2500-0E-0000-200-00000-E0-0 \$510.00



Precision Digital PDS178 Temperature Scanner/Alarm System

System Includes

- PD765 Trident 1/8 DIN universal input meter with two relays
- PD138 Minimux II 8-channel scanner with independent alarms for each channel
- PD2821 plastic NEMA 4X enclosure

Save nearly \$150 when you buy all three as a single unit!
Temperature Scanning/Alarm System..... PDS178..... \$624.00

PRECISION DIGITAL

PD7000 ProVu Temperature Indicator

- Two-line six-digit display, 0.6" and 0.46", with programmable displays and function keys
- Type J, K, T, E, R, S, B, N, and C thermocouples plus Pt100Ω, Pt1000Ω, Ni120Ω, and Cu10Ω RTDs
- Averages up to 10 RTD sensors
- NEMA 4X, IP65 front face
- Universal 85-265 VAC or 12/24 VDC input power
- 24 VDC @ 200 mA or 5/10 VDC @ 50 mA transmitter power supply standard; 24 VDC @ 40 mA optional
- 2 or 4 relays + isolated 4-20 mA output options
- External 4-relay and digital I/O expansion modules
- RS-232, RS-422/485 serial communication options
- -4° to 149°F operating temperature range



Search www.lesman.com for

"PD7000"

Go

Replaces retired PD750



PD750 1/8 DIN temperature indicators have been retired. Please use this table to find a suitable replacement model in the new ProVu meter series. Lesman now stocks popular ProVu models, so they're available to ship to you quickly.



Upgrading from a PD750 Temperature Indicator

Description	Retired Model	Upgrade to a ProVu	Price
Meter with No Options	PD750-3-N	PD7000-6R0	\$299.00
Meter + 2 Relay Output	PD750-3-14	PD7000-6R2	344.00
Meter + 4-20 mA Output	PD750-3-15	PD7000-6R3	364.00
Meter + 2 Relays, 4-20 mA Output	PD750-3-16	PD7000-6R5	404.00
Meter + 4 Relays	PD750-3-17	PD7000-6R4	384.00
Meter + 4 Relays, 4-20 mA Output	PD750-3-18	PD7000-6R7	444.00



See pages 70 and 71 for details.

Precision Digital PD765 Trident 1/8 DIN Universal Meters

- Accepts J, K, T, E thermocouples and 100Ω platinum RTDs
- Can be programmed to display in °Fahrenheit or °Celsius, and, with the type K thermocouple, can display up to 2300°F.
- Models available from Lesman stock! Prices start at \$219.00

NORMALLY AVAILABLE FROM STOCK

AVAILABLE TO SHIP IN 5 WORKING DAYS OR LESS!

PD743 Sabre T Temperature Indicator

- Field-selectable input: J, K, T, E thermocouple types or Pt100Ω RTD; Pre-calibrated for all types
- NEMA 4X, IP65 front panel; Panel gasket provided
- Shallow depth 1/8 DIN case
- 4 digit display with 0.56" high red LEDs
- Min/max display stores high and low values until user reset or the meter is powered off
- Easy front-panel programming
- Removable screw terminal connectors for easy wiring



Model Selection Guide

5-piece minimum quantity.

Description	Catalog Number	Price
PD743 Sabre T Temperature Meter		
PD743 1/8 DIN Meter, 85-265 VAC Power	PD743-6R0-0	\$154.00
PD743 1/8 DIN Meter, 12-36 VDC Power	PD743-7R0-0	204.00
NEMA 4X Enclosure for One Unit	PDA2407	209.00

Fluidwell F040 Digital Temperature Indicator

Features

- Large 0.67" tall digits, selectable on-screen units °C, °F, or °K
- Panel mount or rugged aluminum field-mount enclosure
- All configuration done through pushbutton menu with automatic backup of all settings
- Operational temperature range: -40° to 178°F



Model Selection Guide

Description		Catalog Number	Price
Fluidwell F-Series Digital Temperature Indicator		F040	\$289.00
Input Type	Two-Wire or Three-Wire Pt100Ω RTD	T	0.00
	0-20 mA, 4-20 mA	A	0.00
	0-10 V	U	0.00
Enclosure	Plastic Panel Mount, IP65/NEMA 4X	HC	0.00
	Aluminum Panel Mount, IP65/NEMA 4X	HB	52.00
	Plastic Field Enclosure, IP67/NEMA 4X	HD	53.00
Power	Lithium Battery	PB	49.00
	8-24 VAC/VDC	PD	52.00
	24 VAC/VDC + 24VDC Sensor Supply	PF	154.00
	8-30 VDC, No Sensor Supply	PX	0.00
Area	Safe Area Application	XX	0.00
Options	None	ZX	0.00
	Backlight	ZB	42.00

Wireless Sensing and Communications

Controllers and Programmers

Digital Indicators

Recorders and Data Acquisition

Temperature Sensors and Transmitters

Analytical Instruments and Systems

Scanners and Alarm Annunciators



Features

- Four- or eight-point monitoring
- Switch, transistor, and logic level inputs
- Eight field-selectable sequences
- All common ISA Sequences including First-Out
- Multiple-unit First-Out indication
- Built-in 85 dB horn
- Two SPDT relays for alarm activated devices
- Silence, acknowledge, and reset functions
- Shallow depth 1/8 DIN case; Type 4X, NEMA 4X, IP65 front
- Universal power supply 85-265 VAC; 12-36/12-24 VAC option
- 24 VDC isolated power supply (AC models)
- Free custom message labels

Condensed Specifications

Input Types: NO or NC switches. No external excitation required.

Open Collector Transistor (NPN): Open circuit voltage approx. 3.3 VDC.
Logic Levels: LOW = 0 to 0.9 VDC, HIGH = 2.4 to 28 VDC

Noise Filter: 40 ms debounce on inputs, including external silence, acknowledge and reset.

Sequences: Input follower, ISA Sequences A, F1A, F2A, F3A, M, F1M, and F3M per ISA Standard ISA-18.1-1979 R2004. *Options:* A, F1A, F2A, F3A, M, F1M, F2M, and input follower with selectable options -1 (silence pushbutton), -4 (no lock-in), and -6 (no horn) per ISA Standard ISA-18.1-1979 R2004.

Shared First-Out Systems: 1 ms unit-to-unit delay. 200 units max.

Fail-Safe Operation: Programmable independent for each relay.

Audible Alarm: 85 dB internal horn.

Relays: Two Form C SPDT relays; rated 3 A @ 30 VDC or 3 A @ 250 VAC resistive load; 1/14 HP @ 125/250 VAC for inductive loads.

Update Rate: 41 ms following alarm state; 1 ms for alarm state clear.

Programming Methods: Rear 4-position switch for sequence selection and horn operation. Three front panel pushbuttons for NO/NC input selection, sequence option, and operation.

Display: PD154: Four red LED channel indicators. PD158: Eight red LED channel indicators. One green LED power indicator.

Alarm Messages: Custom printed adhesive clear labels. User specified size and length, up to 4 lines (PD154) or 2 lines (PD158), 14 characters, 9 pt fonts.

Fuse: Required external fuse: UL Recognized, 5 A max, slow blow. Up to 6 annunciators may share one 5 A fuse

Isolated Power Supply: 24 VDC ± 10% @ 200 mA max. 85-265 VAC powered units only. *Isolation:* 4 kV input/output-to-power line.

Operating Range: -40° to 149°F, 0 to 90% rH non-condensing.

Enclosure: 1/8 DIN, high impact black plastic, UL 94V-0.

UL File Number: E160849; 508 Industrial Control Equipment

Precision Digital's Vigilante® II annunciators are compact, panel-space-saving, four- and eight-channel systems. They're loaded with features found in competitor models three or four times their size. Yet, despite all the traditional annunciator features included, these economical annunciators are ideal for replacing stand-alone lights.

PD154 and PD158 Vigilantes are housed in shallow-depth 1/8 DIN enclosures for easy and convenient mounting. They can be programmed for all the common ISA alarm sequences, and accept switch, transistor, and logic level inputs. Plus, they can be supplied with free custom printed message labels.

Vigilantes' industrial-grade design, NEMA 4X front, wide operating temperature range, and sunlight-readable alarm indicators make them ideally suited for outdoor alarming applications. Front panel buttons and screw terminal connectors located at the rear of the instrument are provided for Silence, Acknowledge, and Reset functions. A built-in horn provides audible indication of alarm condition. Up to two relays can be used to control external devices, like beacons, horns, or buzzers.

Alarm Sequences and First-Out Alarm Annunciation

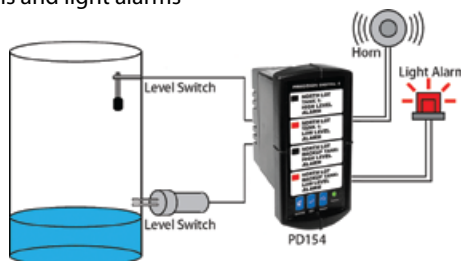
The Vigilante® II can be programmed for multiple sequences with first-out alarm indication. This feature indicates the first point of failure of a system when multiple alarms occur. If multiple Vigilante® II annunciators are connected for multiple unit first-out indication, only one input from all connected devices will display as a first-out alarm.

The PD154 and PD158 can be programmed for all common ISA sequences including A, F1A, F2A, F3A, M, F1M. Selectable ISA-1 (Silence Button), -4 (No Lock-In), and horn disable options.

Using a PD154 for Level Monitoring

The Vigilante® II is ideal for tank level switch monitoring.

- Up to eight individually labeled level switch inputs
- Relays for external horns and light alarms
- 24 VDC level switch power supply
- NEMA 4X mounting enclosures (Not shown)
- Sunlight-readable indication



Model Selection Guide

Description	Catalog No.	Price
Vigilante® II 4-Point Annunciator, 85-265 VAC	PD154-6R2-1	\$309.00
Vigilante® II 4-Point Annunciator, 12-36 VDC	PD154-7R2-0	414.00
Vigilante® II 8-Point Annunciator, 85-265 VAC	PD158-6R2-1	414.00
Vigilante® II 8-Point Annunciator, 12-36 VDC	PD158-7R2-0	519.00
NEMA 4X Enclosure for One Unit	PDA2407	209.00



PD138 Minimux® II Temperature and Process Scanner

Features

- Eight inputs per unit, unlimited numbers of units per system
- Thermocouples, RTDs, process, AC and DC inputs; Non-interruptible 4-20 mA inputs
- Independent alarm input for each channel; Adjustable dwell time for each channel
- First-Out alarm indication
- Alarms indicated by LEDs, built-in horn, and relay, or field-select stop-on-alarmed channel
- Shallow depth 1/8 DIN enclosure, NEMA 4X/IP65 front
- -40° to 149°F operating range
- Free custom message labels



Precision Digital's PD138 Minimux® II is a microprocessor-based eight-channel analog input scanner, multiplexer, and annunciator that provides low-cost automatic switching for multipoint display and alarm systems. Each PD138 can automatically switch up to eight inputs to a digital panel meter, controller, or PLC.

PD138 Minimux II Applications

Automatic Switching: In its basic form, the PD138 is the electrical equivalent of a double-pole, eight position automatic switch. Whatever input is brought into the PD138 is dwelled on for a certain amount of time while being channeled out to another device.

Temperature Scanning: One of the most popular uses for the PD138 is temperature monitoring, especially the monitoring of bearing and stator winding temperatures. Nearly any style thermocouple, RTD, or thermistor can be used with the PD138 — right out of the box.

Automatic or Manual Scan: The PD138 automatically scans through each active channel, stays on that channel for an independently programmed dwell time, and simultaneously switches the signal to an external device. Scanning can be stopped, or scanned manually via the front panel Stop/Go pushbutton.

Alarm Annunciator: A key feature of the PD138 is its ability to indicate and process alarms that have been generated by an external device. Each channel has an independent 'Alarm-In' terminal that allows an external device — like a relay on a panel meter or the digital output from a PLC — to trigger an alarm.

First-Out (Sequence F2A): The PD138 can be configured to recognize first-out alarms: one or more alarms that occur during the first complete scan where an alarm is present on one or more channels.

Model Selection Guide

Description	Catalog No.	Price
Minimux® II Shallow Depth 1/8 DIN Scanner, 115 VAC		
Temperature and Process Scanner	PD138-3	\$309.00
Temperature and Process Scanner, Loop Resistor	PD138-3-CL	339.00
NEMA 4X Enclosure for One Unit	PDA2407	209.00

Looking for NEMA 4X or explosion-proof enclosures? See page 77.

Specifications

Channels: 8 double-pole channels per unit; Unlimited number of channels per system

Signals Switching: DPST reed relays; 0.2Ω max. resistance; *Current Switched:* 0.5 A max.; *Power Switched:* 10 W max.

Input Voltage: 200 V (switched or common mode) max.

Dwell Time: Each channel adjustable from 0.6 to 30 seconds

Scan Method: Internal or manually controlled

Channel Indication: Green LED on front panel

Alarm Input: Independent alarm input for each channel. Input Impedance; 25 KΩ, typical pull-up to 5 V

Alarm Sequence: Sequence A or Sequence F2A (first out)

Alarm Outputs: Alarm condition indicated by: Front panel red LED for each channel; One Form C SPDT relay. For failsafe operation, the relay is energized in non-alarm state. At power failure, relay goes to alarm state, (NC contact is connected to common); Built-in 85 dB Horn; Stop-on-alarmed-channel (user select)

Alarm Acknowledge: Front panel ACK and rear connector terminals

External Switch Functions: The functions of the front panel buttons are available at screw terminals at the rear of the instrument

Message Labels: Free, custom printed, 2 lines per message at 14 characters per line. Factory or field printable.

Power + Relay: 22 to 12 AWG; Alarm Input, Analog Signal, External Switches, I/O: 30 to 16 AWG

Power Options: 115 VAC, ± 10%, 50/60 Hz, 4 VA; 230 VAC, ± 10%, 50/60 Hz, 4 VA; 12-24 VDC (9-18 VAC, 50/60 Hz) 2 W

Enclosure: 1/8 DIN, high impact plastic, UL94V-0; NEMA 4X front panel

Connections: Removable screw terminal connectors provided

LED Test: All LEDs are tested on power-up

Search www.lesman.com for PD138



Precision Digital PDS178 Temperature Scanner/Alarm System

System Includes

- PD765 Trident 1/8 DIN universal input meter with two relays
- PD138 Minimux II 8-channel scanner
- PD2821 plastic NEMA 4X enclosure

Precision Digital noticed that several customers were ordering the Minimux® II and PD765 Trident meter together in a common enclosure, to be used as a temperature or process scanning and alarm system. So, they've combined them into a single kit that we can offer you at a significant savings over buying separate components.

The PDS178 kit includes a PD765-6R2-00 Trident and PD138 Minimux® II in a PDA2821 NEMA 4X enclosure. It comes ready to wire into your application.

Save almost \$150 when you buy all three as a kit!

Temperature Scanning/Alarm System..... PDS178 \$624.00



Learn more about the PD765 Trident universal process meter on page 70.

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