

ProtEX PDD6800 Series Demonstrators

Instruction Manual



Getting in front of a customer is expensive and hard to do. The ProtEX Demonstrator will help you make the most of this precious time. The ProtEX Demo allows you to quickly demonstrate Precision Digital's ProtEX series of meters.

The ProtEX Demo can be used as a stand-alone demo that will make the last five minutes of your sales call more productive. When you are done with the primary focus of the call, take five minutes for the ProtEX Demo. All you have to do with most models is plug them in and adjust the potentiometer that simulates the 4-20 mA current input. The PDD6830 makes it even easier; being battery powered, it is ready to go right out of the box!

The ProtEX Series of meters are equipped with four SafeTouch® through-glass buttons which allow it to be programmed and operated without removing the cover. To activate a button, press one finger to the glass directly over the marked button area. SafeTouch® is a unique feature of Precision Digital's ProtEX Series and is sure to draw attention!

The next time you make a sales call, make sure to use the ProtEX Demonstrator to create the conversation that will help generate not only sales, but also a lasting impression.



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Analog Signal Input Meter (PDD6800, 6801, & 6820)**① ProtEX Explosion-Proof Meter**

Perhaps the most important component of the ProtEX Demonstrator is, of course, the ProtEX explosion-proof meter itself. The analog input model meters include the PDD6800 loop-powered process meter, the PDD6801 feet-and-inches display process meter, and the PDD6820 rate/totalizer. All of these meters are powered by the same power source as the one providing the 4-20 mA analog input signal, so they only require the included power connection in order to operate at full capacity. The ProtEX meter's simple operation and rugged design are sure to make a lasting impression!

② PDA20-PD Signal Generator

The PDA20-PD 4-20 mA analog signal generator is what creates the 4-20 mA signal that controls what is shown on the meter display. The signal generator come prewired to the ProtEX meter and only needs to be plugged into a wall outlet in order to function. When powered, simply turn the knob to the left or right to increase or decrease the amperage. This simulates the 4-20 mA analog output that a level transmitter or flow meter would output to the ProtEX meter in a real world application.

③ Power Cord

The included power cord is designed for a USA standard 115 VAC power outlet and supplies all of the power necessary to run the meter and power the 4-20 mA analog signal. To power the Demonstrator from another power source, such as 230 VAC, the user must provide the necessary plug adapter. Refer to the instruction manual for your particular model ProtEX meter for power specifications.

Pulse Signal Input Meter (PDD6830)



① ProtEX Explosion-Proof Meter

Perhaps the most important component of the ProtEX Demonstrator is, of course, the ProtEX explosion-proof meter itself. The PDD6830 is a battery powered rate/totalizer which receives process information via a pulse input. Because this meter is battery powered, it is ready to go right out of the box! There is no need to search for wall outlets with this demonstrator. The ProtEX meter's simple operation and rugged design are sure to make a lasting impression!

② Momentary Trigger Switch for Pulse Generation

The push button momentary trigger switch is what provides the pulse input to the meter. Press the button repeatedly in order to display a number (the rate) on the upper display; press the button more rapidly in order to increase the rate. This simulates the pulses that the ProtEX meter would receive from a pulse output flow meter in a real world application.


③ PDA8068 PD6830 to Computer USB Adapter

The PDA8068 connects the electronics module of a PD6830 directly to the USB port on any PC computer. Using the free MeterView EX for PD6830, available at www.predig.com, you can program all of the meter settings from your computer through an easy to understand interface.

Preparing the PD6800, 6801, & 6820 for Demo


Before performing a demonstration of the ProtEX meter, it is best practice to reset the meter to its factory default settings. This will guarantee a smooth demonstration every time because there will be no confusion about previously changed settings. The below steps show how to reset the PDD6800, 6801, and 6820 ProtEX meters to their factory default settings.

1

Press your finger over  for five (5) seconds or until the meter enters the ADVANCE menu.




2

Press your finger over  until the word INFO displays on the lower display.




3

Press your finger over  for five (5) seconds or until the meter displays either RESET DEFAULT or simply DEFAULT.



4


Immediately press your finger over  and the meter will reset to its factory default settings.



Preparing the PD6830 for Demo



Before performing a demonstration of the ProtEX meter, it is best practice to reset the meter to its factory default settings. This will guarantee a smooth demonstration every time because there will be no confusion about previously changed settings. The below steps show how to reset the PDD6830 ProtEX meter to its factory default settings.

1

Press your finger over  for five (5) seconds or until the word ADVANCE displays on the lower display.





2


Press your finger over  until the word SYSTEM displays on the lower display and then press .




3 (prepping 6830 cont.)

Press your finger over  until the word **BACKUP** displays on the lower display and then press .



**4**

Press your finger over  until the meter displays **dEFLt** **BACKUP**.


**5**

Press your finger over  twice in succession. The meter will display **rESEt** **DFALTS** after the first press and then will reset to its factory default settings after the second.




**6**

Once the meter has reset to its factory defaults, you will need to wait for the Safe-Touch® through-glass buttons to initialize. This is indicated by  flashing on the display. Once this symbol disappears, press your finger over .

**7**



Press your finger over  twice in succession in order to enter the **SETUP** menu and then the **INPUt** menu.

**8**


Press your finger over  until **nPn** is displayed in the upper display and then press your finger over . Press and hold your finger over  until the meter returns to *Run Mode*.




Resetting Total on PDD6820 & 6830 Rate/Totalizers

The total value is the only setting that is not reset by performing a factory reset as described in the previous steps. In order to reset the total value on the PDD6820 & 6830 to zero, follow the steps below. It may be necessary to press your finger over  first in order to wake up the SafeTouch® through-glass buttons if the display shows .

1

Press your finger over  until the meter displays **rESEt** **TOTAL**.

**2**


Press your finger over  in order to reset the total value to zero.



Operating the Meter



① Menu Button

Use this button to access the meter's *Programming Mode* and to return the meter to *Run Mode*. This button also wakes the SafeTouch® through-glass buttons when they are in sleep mode (indicated by .

③ Reset Button

Use this button to change the selected digit during digit programming while in *Programming Mode*. This button is also used to reset the total on the PDD6820 & 6830 while in *Run Mode*.

⑤ Primary Display

This will display the primary value for your particular application, such as the flow rate or process value.

② Enter Button

Use this button to access a menu or accept a value while the meter is in *Programming Mode*.

④ Display Button

Use this button to go forward in the menu structure or increment the selected digit while inputting numeric values in *Programming Mode*. This button is also used to display additional information in the lower display while the meter is in *Run Mode*.

⑥ Secondary Display

This will display the secondary value for your application, such as the total or unit tag.

Interesting Demonstration Topics

The following shows you some interesting demonstration topics that you can prepare and go over during your sales calls or other demonstration. These are divided into topics for each of the four ProtEX models covered in this Demonstration Guide. The page number in the applicable instruction manual on which you can see the steps necessary to perform these actions are provided. Refer to the instruction manual for your specific ProtEX meter located either on the included documentation CD or online at www.predig.com.

PDD6800

1. Try scaling the meter to display a larger or smaller range of numbers than the default (pg 23).
2. Set some custom unit tags that will display in the lower display (pg 25).
3. Setup password protection to protect the meter from unauthorized use and then disable the password (pg 26-27).
4. Display the maximum and minimum readings that the meter has displayed since the last time these were reset (pg 36).

PDD6820

1. Try scaling the meter to display a larger or smaller range of numbers than the default (pg 27).
2. Set a different time base over which the rate is added to the total. The default is seconds, but this can be changed to minutes, hours, or even days (pg 29).
3. Setup password protection to protect the meter from unauthorized use and then disable the password (pg 33-34).
4. Display the maximum and minimum readings that the meter has displayed since the last time these were reset (pg 44).

PDD6801

1. Try scaling the meter to display a larger or smaller range of numbers than the default (pg 24).
2. Scale the tank height indicator to change how the bar graph behaves (pg 25).
3. Change what is displayed on the lower display and set some custom unit tags (pg 26-27).
4. Program an alarm output to demonstrate the meter's alarm capability (pg 31).

PDD6830

1. Enter a different K-Factor in order to demonstrate how this scales the meter automatically. The K-Factor is the number provided by the manufacturer of the flow meter being used with this meter (pg 38).
2. Set a different time base over which the rate is added to the total. The default is seconds, but this can be changed to minutes, hours, or even days. The units at which the rate is being measured can also be custom set and unit conversions can occur automatically (pg 39-45).
3. Change what is displayed on the upper and lower display and set some custom unit tags (pg 48-51).
4. Program an alarm output to demonstrate the meter's alarm capability (pg 62-63).

Ordering Information

Model	Description
PDD6800	ProtEX-Pro Demo Process Meter
PDD6801	ProtEX-F&I Demo Level Meter
PDD6820	ProtEX-RTA Demo Rate/Totalizer Meter
PDD6830	ProtEX-RTP Demo Pulse Rate/Totalizer

Note: The ProtEX meter in the ProtEX Demo is not intended for resale.

Parts Included

1. PD6800 series meter in convenient hand carry enclosure
2. PDA20-PD signal generator and power cord (PDD6800, 6801 and 6820)
-or-
Momentary trigger switch for pulse generation (PDD6830)
3. Product Documentation CD
4. ProtEX Demonstrator Instruction Manual (This Document)

Safety Information

WARNING

Hazardous voltages exist within enclosure. Service should be performed only by trained service personnel.

While there are some instructions in this manual related to the demonstration of the ProtEX, please refer to the appropriate ProtEX Instruction Manual for more complete details on how to program the meter.

Warranty

2 years parts and labor

Power Connection

The analog input ProtEX Demonstrators (models PDD6800, 6801, & 6820) have a power cord that plugs into a USA standard 115 VAC power outlet.

To power the Demonstrator from other power sources such as 230 VAC, the user must provide the necessary plug adapter. Refer to the instruction manual for your particular model ProtEX meter for power specifications.

SafeTouch® Buttons

The ProtEX meter is equipped with four sensors that operate as through-glass buttons so that it can be programmed and operated without removing the cover (and exposing the electronics) in a hazardous area. To actuate a button, press one finger to the glass directly over the marked button area. When the cover is removed, the four mechanical buttons located next to the sensors can be used. The sensors are disabled when a mechanical button is pressed and will automatically be re-enabled after 60 seconds of inactivity.

The SafeTouch® buttons are designed to filter normal levels of ambient interference and to protect against false triggering, however, it is recommended that the SafeTouch® buttons be disabled (slide switch to LOCK) if there is an infrared interference source in line-of-sight to the display.

