

PROVu PD6000 Process Meter

Quick Start Guide




Thank you for your purchase of the PROVu PD6000 process meter.

This quick start guide will briefly describe some of the common setup procedures for this meter.


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For additional information about the PROVu PD6000 meter not covered in this quick start guide, please consult the instruction manual included on the CD or available at www.predig.com.

 **Menu Button** – Use this button to access *Programming Mode* and to return to *Run Mode*.

Note: If you think you have made a mistake while programming the meter, use this button to return the meter to *Run Mode* without saving.

 **Right/F1 Button** – Use this button to change the selected digit while inputting a numeric value in *Programming Mode*.

 **Up/F2 Button** – Use this button to increment the selected digit while inputting a numeric value in *Programming Mode*.

 **Enter/F3 Button** – Use this button to access or accept a menu item while in *Programming Mode*.

PROVu[®]

SERIES

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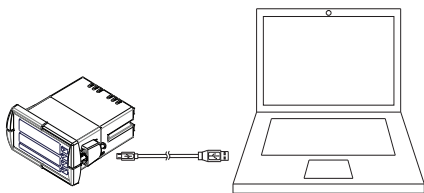
Installing MeterView® Pro

The meter can be programmed using MeterView Pro. This software can be installed on any Microsoft® Windows® (2000/XP/Vista/7/8/10) computer by connecting to the meter's onboard USB. The meter is powered by the USB connection, so there is no need to wire anything prior to programming the meter.

1

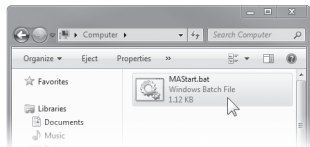
Connect the provided USB cable to the meter and the computer as shown. The computer will automatically install the driver software it needs to talk to the meter.

Note: Only one meter may be connected at a time. Attaching multiple meters will cause a conflict with the meter software.



3

Double-click on the file named "MASStart."

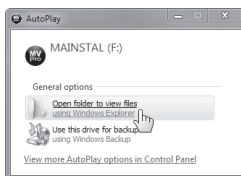


The program will open a few windows and install two programs on your computer. Simply follow the onscreen instructions until you see one of the dialogs in step 4.

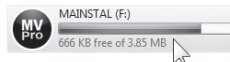
Note: If you receive a *User Account Control* warning, click "Yes."

2

Once the driver is installed, an AutoPlay dialog should appear for the drive "MAINSTAL." Click "Open folder to view files."

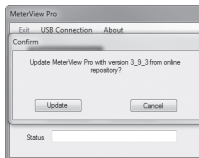


If the computer does not display an AutoPlay dialog for the drive "MAINSTAL," you should open *My Computer* and double-click on the drive labeled "MAINSTAL."



4

If there is an update available, click the "Update" button to install the new version. Otherwise, click "Configure" to begin programming your meter.



Note: When you update your MeterView Pro software, you will be asked if you want to update the setup files located on the meter itself. This way, you will always have the most current version on the meter for future installs.

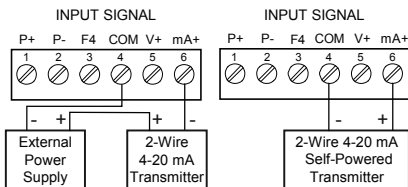
Note: The remainder of this guide will explain how to configure your meter using either the MeterView Pro software or the configuration menus in the meter itself. It is only necessary to perform one of these operations in order to configure the meter for a desired setting.

Basic Wiring for ProVu Meter

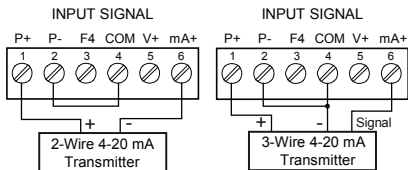
The connectors label, affixed to the top of the meter, shows the location of all available connectors. Connect your wires to the provided connectors and plug into the meter as indicated.

4-20 mA Input Wiring

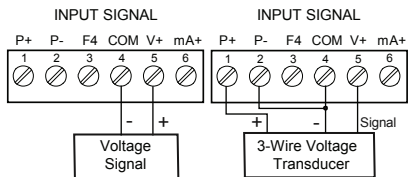
Wiring for a 4-20 mA input using either an external power supply or self powered transmitter.



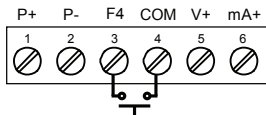
Wiring for a 4-20 mA input using internal power supply.



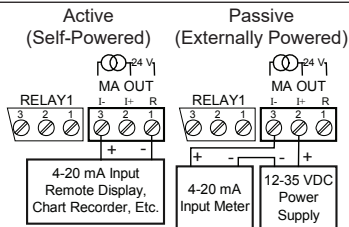
0-10 V Input Wiring



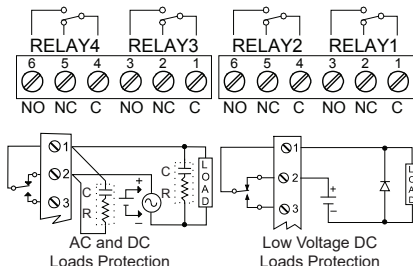
F4 Digital Input Connection



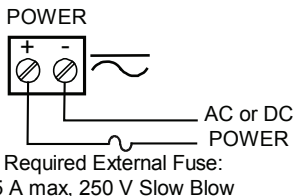
4-20 mA Output Wiring¹



Relay Connections²



Power Connection



Consult the PD6000 instruction manual located on the included CD or available online at www.predig.com for additional wiring diagrams.

¹ ProVu models with 4-20 mA output option (PD6000-XX3/5/7)
² ProVu models with relay option (PD6000-XX2/4/5/7)

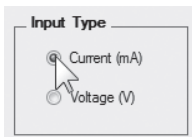
Program and Scale the Input

Program the PROVU meter to accept a 4-20 mA or 0-10 V input and display a value associated with that range. When the meter is receiving a 4 mA or 0 V input, it will display the low end of the display range; when receiving a 20 mA or 10 V input, it will display the high end of the display range. The input values ($I_{nP 1}$ & $I_{nP 2}$) can be changed if needed, but the steps to do this have been omitted for this quick start guide.

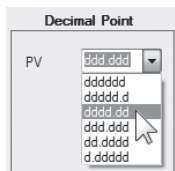
For example: If the meter were used to display the level of a 100 ft tall tank, the transmitter should send a 4 mA signal when the tank is empty and a 20 mA signal when the tank is full. The meter should be programmed to interpret these inputs on a display range of 0-100, so that at 4 mA the meter will display 0.00 and at 20 mA the meter will display 100.00.

MeterView Pro Software

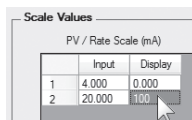
1
On the *Setup* tab, under *Input Type*, select the desired input.



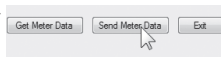
2
On the *Programming* tab, select the desired decimal point location.



3
Under *Scale Values*, enter the desired low and high display values in the *Display* column.



4
Click the *Send Meter Data* button to send your programmed settings to the meter.



Meter Configuration Menus

1
Press **MENU** to enter *Programming Mode*, press **F1** to access the *SETUP* (Setup) menu.



2
Press **F1** to access the *INPUT* (Input) menu.



3
Press **F1** to select either mA or Voltage (*mA* or *volt*) and press **F2** to accept the input type.



4
Press **F1** to access the *d-SCALE* (Dual Scale) menu, press **F2** to select *YES* or *NO*, then press **F1**.
Note: Most applications only require one scaling point (select *NO*).




5
Press **F1** multiple times, until the *dEc Pt* (Decimal Point) menu is displayed and press **F1** to access.




6
Press **F1** until the desired decimal point location is displayed and press **F1** to accept.




7
Press  to access the *ProG* (Program) menu.








8
Press  to access the *SCALE* (Scale) menu.



9
Press  three times, until *d 15 1* (Low Display Value) is displayed. Use  to change which digit is selected and  to increment the selected digit. Press  when done.



10
Press  three times, until *d 15 2* (High Display Value) is displayed. Use  to change which digit is selected and  to increment the selected digit. Press  when done. Press  to return to *Run Mode*.



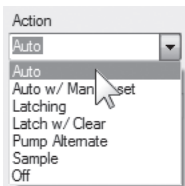
Program Relays for Automatic Reset

Program the PROVU meter on the relays at programmable set points and turn off the relays at reset points.

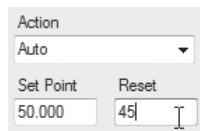
Note: If the *set point* is **higher** than the *reset point*, the relay will be a **high alarm**. If the *set point* is **lower** than the *reset point*, the relay will be a **low alarm**.

MeterView Pro Software

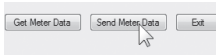
1
On the *Relays* tab, in the desired relay section, select "Auto" from the *Action* drop down list.



2
Enter the set and reset point values in the provided fields.



3
Click the *Send Meter Data* button to send your programmed settings to the meter.



Note: All four relays (if installed) are programmed in this manner. It is not necessary to send your programmed settings to the meter after each relay is programmed, simply repeat steps 1 & 2 for each relay then send to the meter.

Meter Configuration Menus



1
Press  to enter *Programming Mode*, press  to access the *SETUP* (Setup) menu.



2
Press  until the *rELAY* (Relay) menu is displayed and then press  to access.




3

Press  until the appropriate relay number is displayed (*rLY 1-8*) and then press  to access.




4

Press  to access the *Act* (Relay Action) menu.




5

Press  to accept *Auto Act* (Automatic Reset).






6

Press  to access the *SEt* (Relay Set Point) menu.




7

Use  to change which digit is selected and  to increment the selected digit. Press  when done to accept the new set point value.







8


Press  to access the *rSEt* (Relay Reset Point) menu.



9

Use  to change which digit is selected and  to increment the selected digit. Press  when done to accept the new set point value. Press  to return to *Run Mode*.



Note: Use  to select a different relay during step 3. If you need to program more relays, simply repeat steps 3-9 for each additional relay. Consult the PROVU PD6000 Instruction Manual for information on additional relay action types.

Program Custom Unit Tags

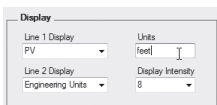
Program the PROVU meter to display custom unit tags for the process value. Display line 2 shows this custom unit tag by default.

Note: The custom unit tag has no bearing on the meter's operation or the process value. Displaying a custom unit tag is simply for ease of reading.

==== MeterView Pro Software ====

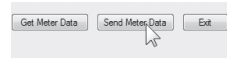
1

On the *Setup* tab, in the *Display* section, enter your desired units designation in the provided field. This field is limited to six characters. The letters 'm' and 'w' count as two because they require two LEDs.



2



Click the *Send Meter Data* button





to send your programmed settings to the meter.

6

Meter Configuration Menus

1
Press  to enter *Programming Mode*, press  to access the *SETUP* (Setup) menu.



2
Press  until the *units* (Units) menu is displayed and then press  to access.



3
The meter will display the default unit tag (mA). Notice here that the letter 'm' uses two 7 segment LEDs. This is true of the letter 'w' as well.



4
Use  to change which letter is selected and  to increment to the next letter. Press  when done to accept the new custom unit tag.



Program 4-20 mA Analog Output

Program the ProVu meter to output an analog signal based on its display value. This signal is commonly output to a PLC or chart recorder.

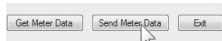
Note: The display values programmed for 4-20 analog output do not need to be the same as those programmed as input scale values, though they most commonly will be.

MeterView Pro Software


1
On the *Setup* tab, under *Analog Out Scale*, enter your desired display values in the provided fields.

Analog Out Scale	
Display 1 Value 0.000	Output 1 Value 4.000 mA
Display 2 Value 100	Output 2 Value 20.000 mA



2
Click the *Send Meter Data* button to send your programmed settings to the meter.



Meter Configuration Menus

1
Press  to enter *Programming Mode*, press  to access the *SETUP* (Setup) menu.



2
Press  until the *Rout* (Analog Out) menu is displayed and then press  to access.




3
Press  to access the *d 5 1* (Display 1) menu. This is the display value at which the low range of the output will be transmitted.



4
Use  to change which digit is selected and  to increment the selected digit. Press  when done to accept the new display value.



5

Press  to access the *Out 1* (Output 1) menu. This is the output signal which represents *d 5 1*.




6

The default value of *04000* (4.000 mA) should work for most applications. Press  to accept.



7

Press  to access the *d 5 2* (Display #1) menu. This is the display value at which the high range of the output will be transmitted.




8

Use  to change which digit is selected and  to increment the digit. Press  when done.




9

Press  to access the *Out 2* (Output 2) menu. This is the output signal which represents *d 5 2*.



10

The default value of *20000* (20.000 mA) should work for most applications. Press  to accept the default value.



Return Meter to Factory Defaults

If a mistake has been made while programming the meter and it is unclear where the error occurred, the best option may be to perform a factory reset of the meter and begin again.

1

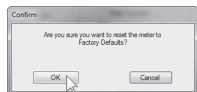
On the *Advanced Features* tab, in the bottom left-hand corner, click the *Reset Meter Factory Defaults* button.

MeterView Pro Software




2

In the confirmation window that appears, click *OK*. The meter will reset to factory defaults.




1

Press and hold  for five seconds to enter the *Advanced Features* menu.





Meter Configuration Menus

2

Press  until the *d ,RG* (diagnostics) menu is displayed.



3

Press and hold  until the meter flashes *rESEt* (reset). Immediately press  to reset the meter.



4

The meter will flash all of the LED segments and then display *ProcES* (Process).



8