

# Helios PD2-6300 Pulse Input Rate/Totalizer

## Quick Start Guide



Thank you for your purchase of the Helios PD2-6300 large display meter!

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

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Additional information about the Helios PD2-6300 meter can be found in the instruction manual included on the CD or available at [www.predig.com](http://www.predig.com).



Menu Button – 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/Reset Button – Change the selected digit while inputting numeric values in *Programming Mode*.



Up/Max Button – Increment the selected digit while inputting numeric values in *Programming Mode*.



Enter Button – Access a menu or accept an option while in *Programming Mode*.

Programming buttons are located under the bottom door panel. They can be accessed by loosening the securing screw and lifting the door panel.



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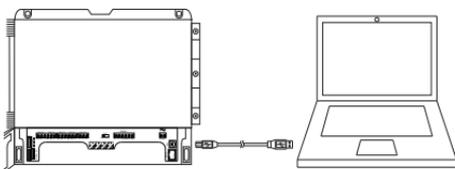
# Installing MeterView® Pro

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

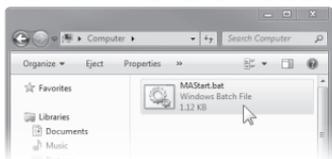
Connect the provided USB cable to the meter and the computer as shown. The computer will automatically install the driver software it needs to talk to the meter.

**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 "MAStart."

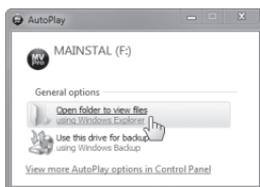


The program will open a few windows and install two programs on your computer. Simply follow the onscreen instructions until you see one of the dialogs below.

**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."

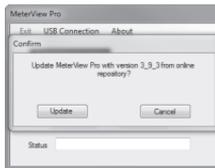


If the computer does not display an AutoPlay dialog for the drive "MAINSTAL," you should open *My Computer* and double-click on the drive labeled "MAINSTAL."



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.

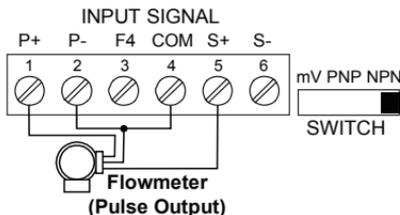
**Note:** The remainder of this guide will explain how to configure your meter using either the MeterView Pro software or the configuration menus in the meter itself. It is only necessary to perform one of these options in order to configure the meter for a desired setting.

## Basic Wiring for Helios Meter

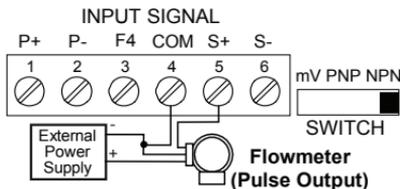
The connectors label, affixed to the inside of the front door panel, shows the location of all available connectors. Run wires through conduit holes at the base of the meter, connect to the provided screw terminals, and plug into the meter as indicated.

### Pulse Input Wiring

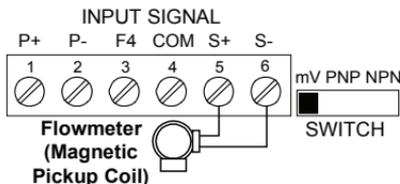
Wiring for a flowmeter powered by an internal power supply.



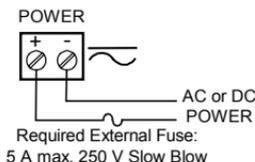
Wiring for a flowmeter powered by an external power supply.



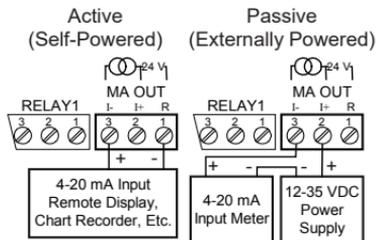
Wiring for a self-powered magnetic pickup coil flowmeter.



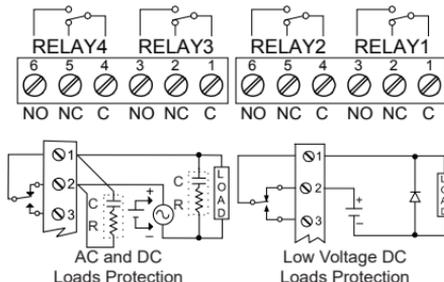
### Power Connection



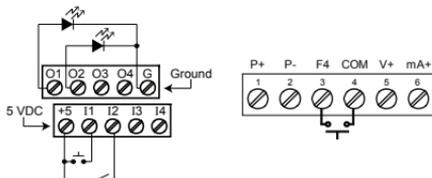
### 4-20 mA Output Wiring<sup>1</sup>



### Relay Connections<sup>2</sup>



### Digital Inputs and Outputs<sup>3</sup>



Consult the PD2-6300 instruction manual located on the included CD or available online at [www.predig.com](http://www.predig.com) for additional wiring diagrams.

<sup>1</sup> Helios models with 4-20 mA output option (PD2-6300-xH7)

<sup>2</sup> Helios models with relay option (PD2-6300-xH7)

<sup>3</sup> If accessible pushbuttons are required once initial programming is complete, the use of digital inputs is recommended.

## Program Pulse Input and Totalizer

Program the Helios meter to accept a pulse input and display a value. The flowmeter you are using in your facility will have a K-Factor assigned to it by the manufacturer. This is either notated on the flowmeter itself or somewhere in the instruction manual included with the flowmeter. This number is necessary in order to tell the Helios meter how many pulses it will receive depending on the flow rate.

**For example:** If the K-Factor of your flowmeter is 210, meaning that for every U.S. gallon of flow per second it will transmit 210 pulses, then you should enter the value 210.000 at the *F*Factor (K-Factor) menu during this setup procedure.

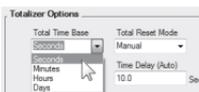
**Note:** K-Factors are almost always given in U.S. gallons. Make certain that you take the unit of measure used by the flowmeter manufacturer into account when programming the Helios meter.

### MeterView Pro Software

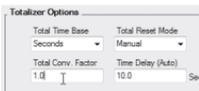
1  
On the *Programming* tab, under *Input Calibration*, select “K Factor” and enter the flowmeter’s K-Factor.



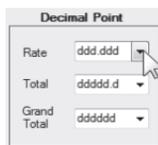
3  
Under *Totalizer Options*, select the appropriate time base for your rate measurement (such as gallons per **second**).



5  
In the field labeled *Total Conv. Factor*, you may enter a multiplier by which the rate will be factored before being added to the total.



2  
Select the desired decimal point location for Rate, Total and Grand Total.



4  
Select whether the total should reset *automatically* or *manually*. If *Auto* is selected, use the *Time Delay* field below to input the amount of time (in seconds) until it resets.



6  
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.



3  
Press  to access the *dEc Pt* (Decimal Point) menu for the *rATE* (Rate) parameter.



2  
Press  to display the *dEc Pt* (Decimal Point) menu and press  to access.



4  
Press  until the desired decimal point location is displayed and press . Continue to press  to assign decimal point locations to the total and grand total.



5

Press  to access the *Prog* (Program) menu.



7

Press  to access the *FActor* (K-Factor) menu. This is where you will enter the K-Factor provided by the flowmeter manufacturer.



9

Using  to select the next digit and  to increment the selected digit, enter your K-Factor. When done, press .



11

Press  to select the appropriate time base and press  to accept.



13

Press  until an appropriate decimal point location for your conversion factor is displayed and press .



15

Press  three times, until *t rSt* (Total Reset) is displayed. Press  to access.



6

Press  to access the *InCAL* (Input Cal) menu.



8

Press  until the desired decimal point location for your K-Factor is displayed and press .



10

Press  to access the *t t b* (Total Time Base) menu.



**Note:** This menu will allow you to set the time base for rate measurement (i.e. units per second, per minute, per hour, or per day).

12

Press  to access the *t CF* (Total Conversion Factor) menu.



**Note:** This menu will allow you to set the conversion factor for total calculation. This is the number by which the rate will be multiplied before being added to the total.

14

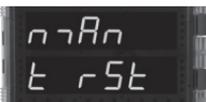
Using  and , enter the conversion factor. Press  when done.



**Note:** The default conversion factor is 1.0, which means that the rate will be multiplied by 1.0 before being added to the total.

16

Press  to select either *mAn* (Manual) or *Auto* (Automatic) total reset and press  to accept.



**Note:** If *Auto* (Automatic) is chosen, an additional menu will be displayed: *t dLY* (Time Delay). This menu will allow you to set a delay time (in seconds) before the total is reset.

**Note:** Time base, conversion factor, and total reset may also be set for the grand total. These menus are *t t b*, *t CF*, and *t rSt* and are accessible directly following the total menus.

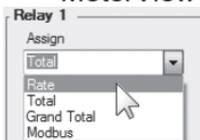
# Program Relays for Automatic Reset

Program the Helios meter to turn the relays on at programmable set points and turn them off at reset points.

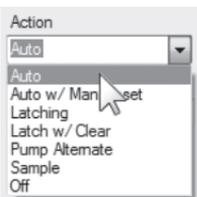
**Note:** Only relays assigned to *rRtE* (Rate) will require a reset point value. If the *set point* is **higher** than the *reset point*, the relay will be a **high alarm**. If the *set point* is **lower** than the *reset point*, the relay will be a **low alarm**.

## MeterView Pro Software

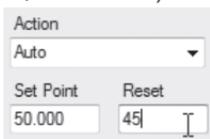
1  
On the *Relays* tab, in the desired relay section, assign the relay to a desired parameter (i.e. rate, total, grand total, or Modbus®).



2  
Select "Auto" from the *Action* drop down list. **Note:** See PD2-6200 Instruction Manual for details on additional relay actions.



3  
Enter the set and reset point values in the provided fields.



4  
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.

3  
Press  to access the *ASSIGN* (Relay Assignment) menu.



5  
Press  until the appropriate parameter is displayed and then press  to accept.



**Note:** Once the assignment has been programmed for relay 1, you can continue to assign relays by accessing the subsequent menus.

7  
Press  to access the *Act* (Relay Action) menu.



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



4  
Press  to select the relay you wish to assign (*ASSIGN 1-4*) and then press  to access.



6  
Press  until the appropriate relay number is displayed (*rLY 1-4*) and then press  to accept.



8  
Press  to accept *Auto* (Automatic Reset).



9

Press  to access the *SEt* (Relay 1 Set Point) menu.



10

Using  to change the selected digit and  to increment that digit, enter the desired set point value. Press  when done.



11

Press  to access the *rSEt* (Relay 1 Reset Point) menu.



12

Using  and  as above, select your desired reset value. Press  when done to accept the new set point value. Press  to return to *Run Mode*.



**Note:** The reset menu will only be displayed if the relay has been assigned to *rREt* (Rate), *tOtAL* (Total) and *GrOtAL* (Grand Total) relays do not have reset points.

**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 PD2-6300 Instruction Manual for information on additional relay action types.

## Program 4-20 mA Analog Output

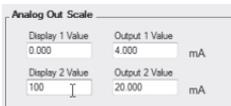
Program the Helios meter to output an analog signal based on its display value. This signal is commonly output to a PLC or chart recorder.

**Note:** By default, the analog output will output the rate value as it is displayed on the meter. It is possible to output the total, grand total or some other value. Please refer to the PD2-6300 Instruction Manual for information on programming the analog output source.

### MeterView Pro Software

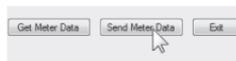
1

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



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 .



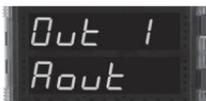
3

Press  to access the *d 15 1* (Display 1) menu. This is the display value at which the low range of the output will be transmitted.



5

Press  to access the *Out 1* (Output 1) menu. This is the output signal which represents the value set for *d 15 1*.



7

Press  twice to access the *d 15 2* (Display 2) menu. Use  and  to enter a value and  when done.



4

Use  to change the selected digit and  to increment that digit. Press  when done to accept the new value.



6

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



8

Press  twice to access the *Out 2* (Display 2) menu. Press  to accept the default value (20 mA).



## Reset 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.

### =====MeterView Pro Software=====

1

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



2

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



### =====Meter Configuration Menus=====

1

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



3

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



2

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



4

The meter will flash all of the LED segments and then display *ProcES* (Process). The meter has been reset to factory defaults.



8