# MeterView EX Programming Software

Instruction Manual


## For use with PD6830 and PD6730 models

---

- Free PC-Based USB Programming Software
- Easily Configure PD6730/PD6830 Flow Rate/Totalizers
- Manage Flow Rate/Totalizer Settings
- Download Data Logs
- Set Up K-Factor, Scaling, Tag, Units, & More
- Scale & Configure 4-20 mA & Pulse Outputs
- Save & Load Flow Rate/Totalizer Configurations
- Easy Connection with the PDA8068 Rate/Totalizer to USB Adapter

**PRECISION DIGITAL CORPORATION**
233 South Street • Hopkinton MA 01748 USA
Tel (800) 343-1001 • Fax (508) 655-8990
www.predig.com

# MeterView EX Programming Software

Free, PC-based, MeterView EX software that connects to the meter with the PDA8068 USB adapter is available for programming and setup of the flow rate/totalizers. This software greatly simplifies the programming process and allows the user to save configuration files for later use. The rate/totalizer will also be powered by the USB connection, so no additional power is needed during programming.

- Free PC-Based USB Programming Software
- Easily Configure PD6730/PD6830 Flow Rate/Totalizers
- Manage Flow Rate/Totalizer Settings
- Download Data Logs
- Set Up K-Factor, Scaling, Tag, Units, & More
- Scale & Configure 4-20 mA & Pulse Outputs
- Save & Load Rate/Totalizer Configurations
- Easy Connection with the PDA8068 Rate/Totalizer to USB Adapter

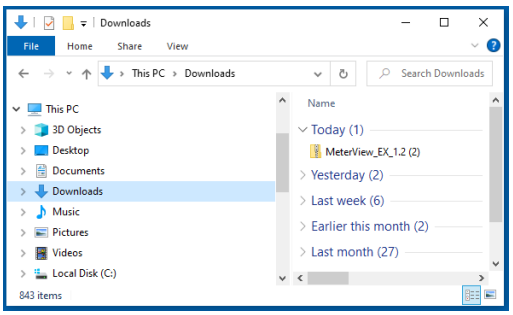
## MeterView EX Software Installation

**⚠ IMPORTANT**

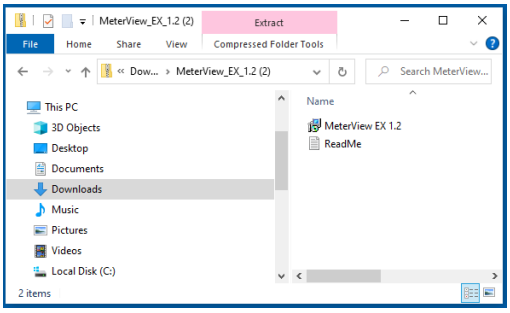
- Please uninstall previous versions of this software prior to downloading, installing, and running the latest version.

---

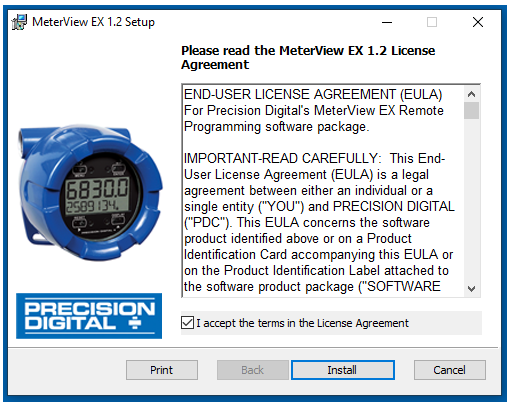
1. Download MeterView EX Installation file to your PC from the included CD or go to www.predig.com/meterview-ex.
2. Locate the MeterView EX zipped folder on your PC and double-click to extract and open:



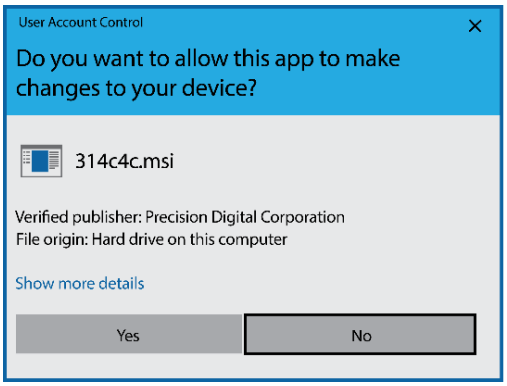

3. Double-click MeterView EX Windows Installer Package file to open:




4. The MeterView EX License Agreement window will appear. Check the "I accept the terms of the License Agreement". Then click on the Install button to start the installation process:




5. The User Account Control message is displayed. Click "Yes" to proceed with the installation:



6. The Installation Complete window will appear. Click the “Finish” button to complete the installation process . Check the “Launch MeterView Ex 1.2 Software” box and then the “Finish” button if you want to immediately open the software:

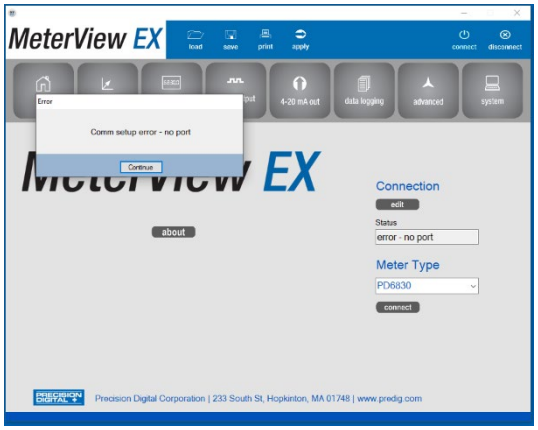

Now you are ready to open the MeterView EX software to begin programming your Rate/Totalizer.

## Connecting to the Computer

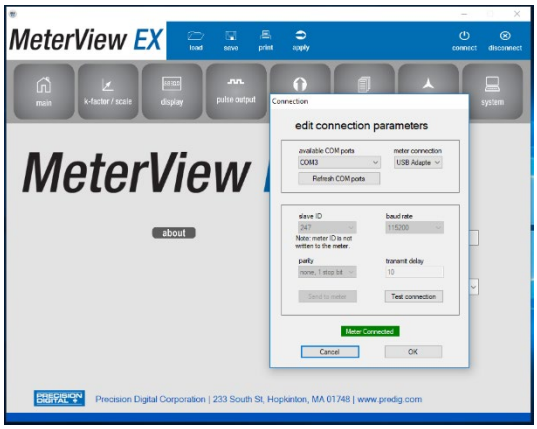
The ProtEX PD6830 or Vantageview PD6730 Rate/Totalizers can be connected to any Windows 7 or Windows 10 PC via the PDA8068 USB Adapter available from Precision Digital.

Follow these steps:

1. Open the MeterView EX software.
2. Connect the Rate/Totalizer to the PC with the PDA8068 USB Adapter.
3. The “Comm setup window error – no port” window will appear. Click Continue and then click on the “edit “ button under Connection.




4. Here you can select an available port or click the “Refresh COM ports” button and the software will automatically select the port for you. This window also shows how the meter is connected, either by USB Adapter or RS-485. Click the “Test connection” button; the green button at the bottom signifies that a meter is connected. Other parameters visible in this window are the slave ID, baud rate, parity, and transmit delay. Click “OK” when all the desired parameters are set.




## Specifications

| | |
|---|---|
| **System Requirements** | Windows® 2000/XP/Vista/7/8 (Windows 32-bit or 64-bit operating systems). |
| **Communications** | PDA8068 Meter-to-USB adapter |
| **Meter Address** | 1-247 |
| **Reports** | Data logging: Save as ".csv" file format Configuration: Save as ".mve" file format or print configuration |
| **Baud Rate** | 1200 bps to 115,200 bps |
| **Configuration** | One meter at a time. |
| **Data Logging Report** | Save as CSV file format. |
| **Protocol** | Modbus RTU (Slave) |

# Using MeterView EX Software

## Main Screen

The main screen displays a real-time image of the connected rate/totalizer and includes various information about this rate/totalizer. This information includes flow readings, max and min values, K-factor, status of open collectors and alarms. This screen also shows the model number of the connected rate/totalizer and the Modbus slave ID.

**Main Programming**
Click one of these buttons to navigate to a specific programming screen. The button will turn **blue** signifying the current programming screen.

**Load, Save** or **Print** Meter Configurations

**Apply** Settings to the Rate/Totalizer

**Connect or Disconnect** Rate/Totalizer


**Meter Info**
Shows the current Rate/Totalizer model connected to the PC and Modbus meter ID.

**Flow Readings**
Readings show what the Rate/Totalizer is "reading" in labels set by and meaningful to the user and shows the current value of each label.

**Meter Status**
Shows the status of alarm 1 & 2 condition, open collector 1 & 2, password setting of the programmed settings, and meter time.

**Meter Display**
Shows the current value being displayed on the connected Rate/Totalizer.

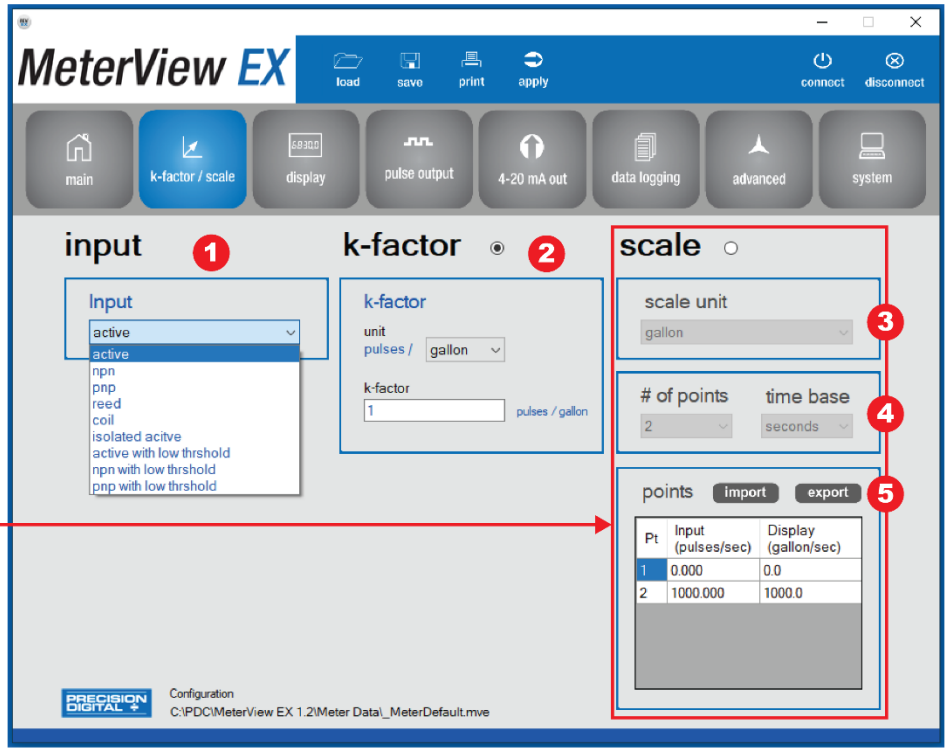
## Input / K-Factor / Scale Screen

The input / K-Factor scale screen is used to configure the input signal, set the K-factor unit and value, and scale it appropriately.

### Scale

This is where you set the parameters for the scale unit, number of scaling points, time base, and importing and exporting scaling points.

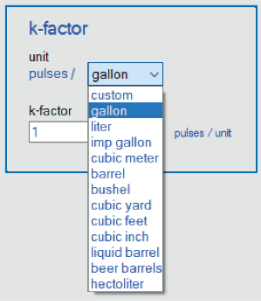
*Note: Selecting Scale will disable all K-factor input programming.*




### 1 Input

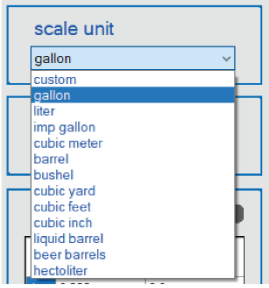
Select the input type for the rate/totalizer in the input menu.

### 2 K-Factor Menu




Select the units for the K-factor. Enter the number of pulses per unit. A value of 0.000001 to 9999999 can be entered.

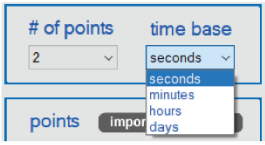
### 3 Scale Unit Menu




Select from a variety of scale units to be scaled for the rate/totalizer.

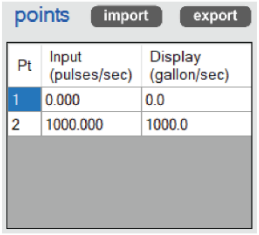
*Note: Scaling the rate/totalizer will disable all K-factor input programming.*

### 4 Number of Points & Time Base Menus




Select the number of scaling points. Up to 32 points can be selected. Select a unit of time in seconds, minutes, hours, or day in the time base menu.

### 5 Import and Export Scaling Points





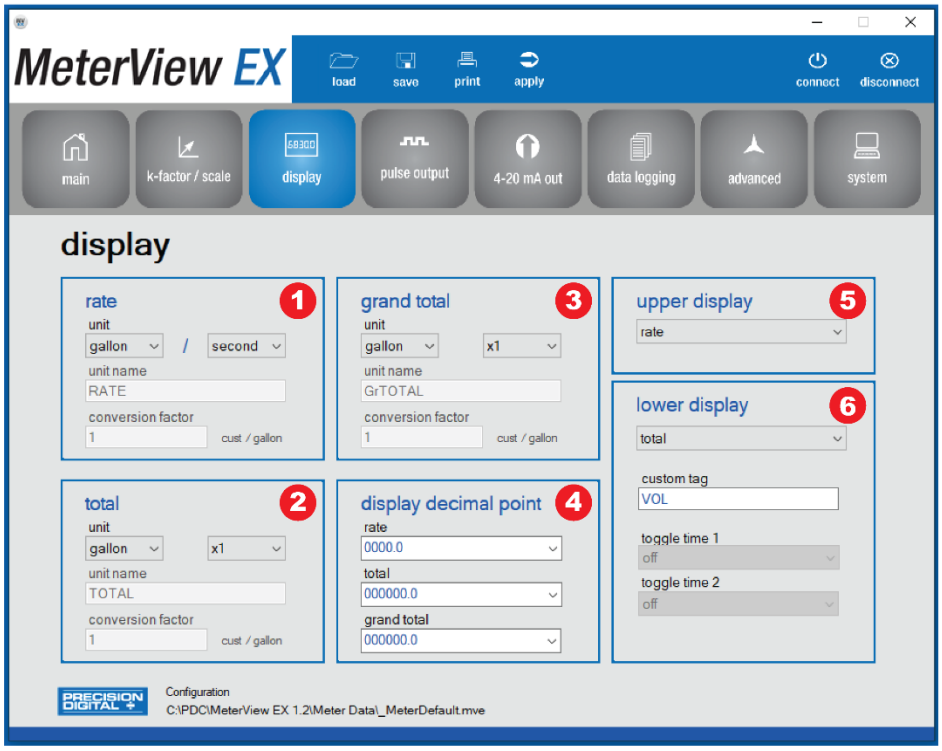
The scaling points can be entered directly into the software or imported from a .csv file. They can also be exported to a .csv file. This area also shows the input and display value for each point.

Click the 

button on the top of the MeterView EX window to apply new settings to the rate/totalizer.

## Display Screen

The display screen is used to select the desired unit, unit name, and conversion factor for **rate**, **total**, and the **grand total**. This screen is also used for changing what is shown on the **top** and **bottom** display lines and selecting the display decimal point. If the bottom display lines are set to show units or tag, or to alternate between units, tags, and some other parameter, the tag shown, and a display time can be selected in the **toggle time 1 & 2** menus. A custom tag can be entered on the bottom display.



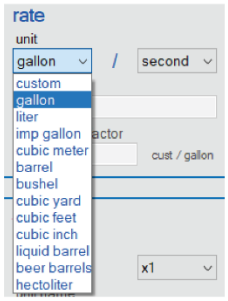

### Toggle Display

The meter's dual-line display can be setup in multiple ways to provide an extremely informative view of the process variable being monitored. See the following example:

**Top Line:** Flow Rate
**Bottom Line:** Toggle Total Flow and Total Units

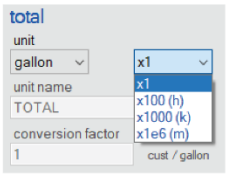

### 1 Rate

Select the unit / second, minute, hour, day for rate. This also shows the unit name and conversion factor.



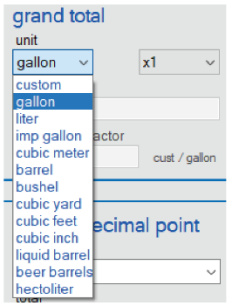

### 2 Total

Select the unit and x1, x100 (h), x1000 (k), or x1e6 (m) for total. This also shows the unit name and conversion factor.



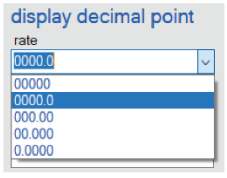

### 3 Grand Total

Select the unit and x1, x100 (h), x1000 (k), or x1e6 (m) for grand total. This also shows the unit name and conversion factor.



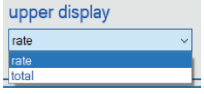

### 4 Display Decimal Point

Select the the decimal point location for rate, total, or grand total.



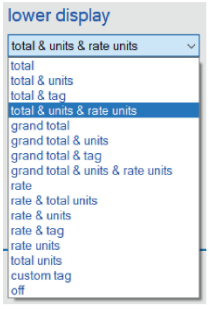

### 5 Upper Display

Select to have the upper display show either rate or total.




### 6 Lower Display

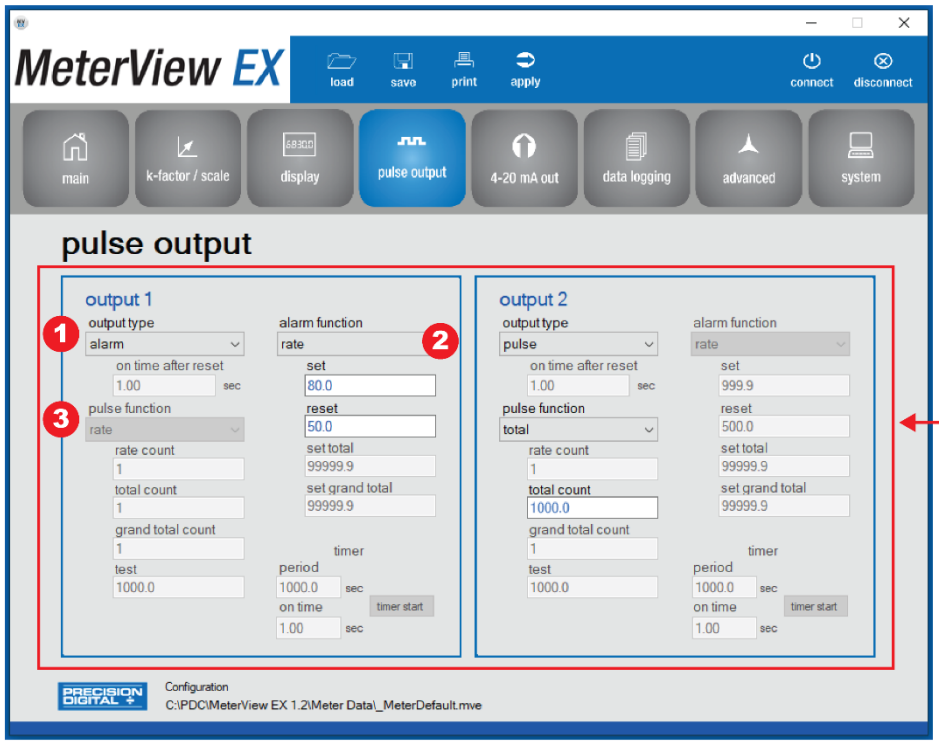
Select what will be shown on the lower display, enter a custom tag, and select toggle time of 1-5 seconds. Note: Toggle time is only active when a selection has more than one item such as *total & units.*




Click the apply button on the top of the MeterView EX window to apply new settings to the rate/totalizer.

## Pulse Output Screen

The meter comes with two open collectors as a standard feature. The pulse output screen is used to program the open collector outputs for a specific output type **(pulse**, **alarm**, **timer**, **total reset**, **grand total reset)** or set to be **off**. The two open collectors may be programmed independently using the **output 1** and **output 2** sections.



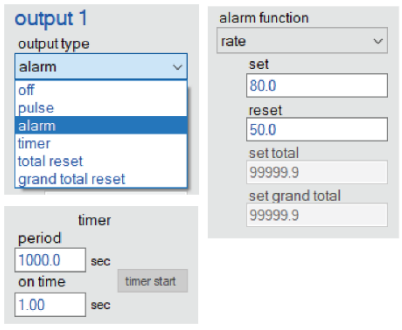

### Output 1 and 2

Choose an output type, assign a function, and set other parameters for the selected function.

1

### Output Type Menu

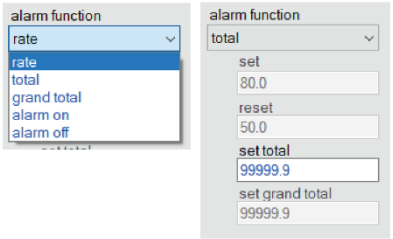
Certain parameters will only become active depending on what is selected in the output type menu. The available output types are off, pulse, alarm, timer, total reset, and grand total reset. In this case, alarm is selected and the alarm function parameters become active including the set and reset fields. If timer were selected as an output type the timer parameters would become active.




2

### Alarm Function Menu

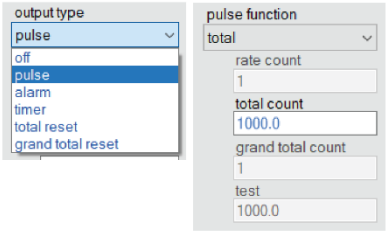
Several functions can be assigned to the alarm including rate, total, grand total, alarm on, and alarm off. In the following example, total is selected and the set total field becomes active to enter the desired set point for the total.




3

### Pulse Function Menu

Selecting pulse in the output type menu will activate the pulse function parameters. Rate, total, grand total, retransmit, quadrature, and test can be selected under this menu. In the example below rate has been selected and the rate count



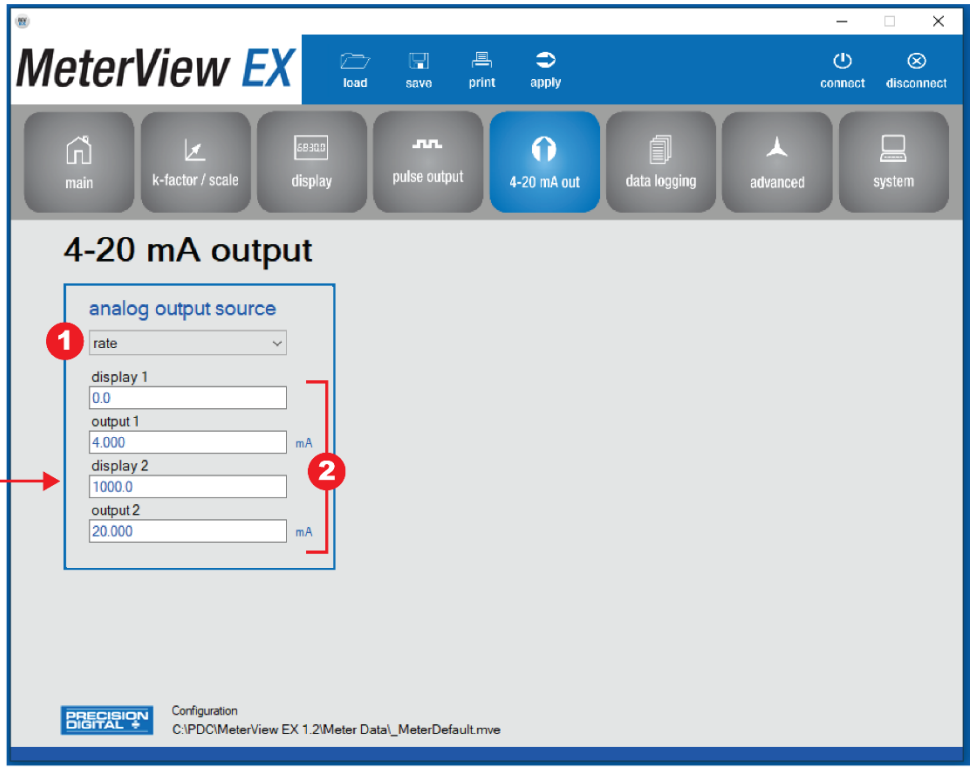

Click the apply button on the top of the MeterView EX window to apply new settings to the rate/totalizer.

## 4-20 mA Output Screen

The 4-20 mA output screen is used to program the 4-20 mA output based on display values. The output can be scaled to provide a 4-20 mA signal for any display range selected for either the rate, total, grand total, or the output may be disabled.

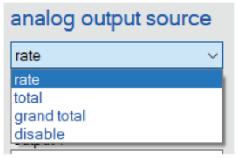
### 4-20 mA Output

This section is used for selecting the source for the output and programming the two display values and corresponding mA output signals.



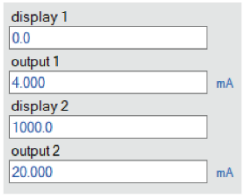

### 1 Analog Output Source Menu

Select a source for the 4-20 mA output: rate, total, grand total, or disable.




### 2 Scale Values

Enter the scale values for display 1, output 1, display 2, and output 2.



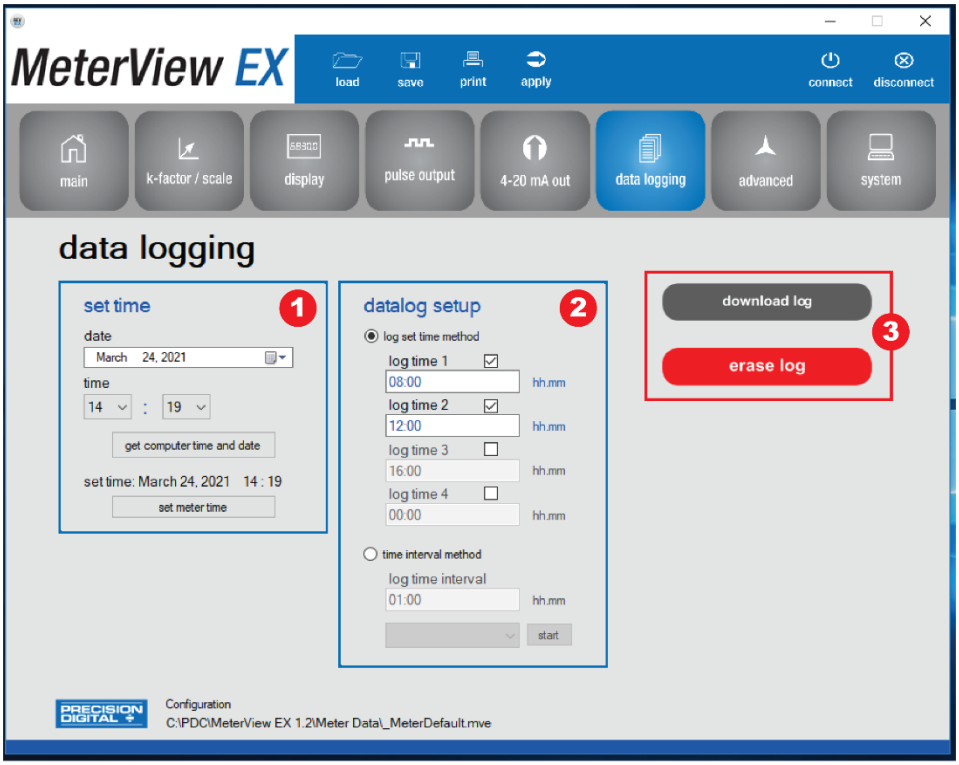

Click the apply button on the top of the MeterView EX window to apply new settings to the rate/totalizer.

## Data Logging Screen

The Data Logging screen is used for setting the date and time, selecting a datalog method, and downloading the datalog files generated from the connected rate/totalizer to a PC. The data log files can also be erased from the rate/totalizer.

### Data Logging

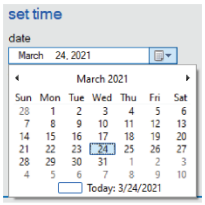
This screen is used for setting the date and time of the rate/totalizer and setting up the log set time method or time interval method.

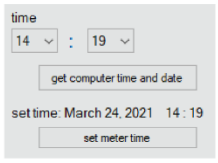



1

### Set Time

Click on the calendar icon to select the date. Select hours and minutes in the time menus or you can click on the button that says “get computer time and date”. Once the time is set in the software, click on the “set meter time” button to apply it to the rate/totalizer.

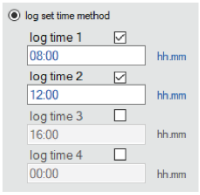


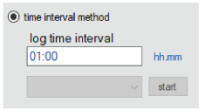




2

### Data Log Setup

Select the time method for the datalogging, either log set time or log time interval. For the log set time method up to 4 times can be set by checking the box and entering the time on hours and minutes. For the time interval method enter the time in hours and minutes. Press the “start’ button to begin datalogging.




3

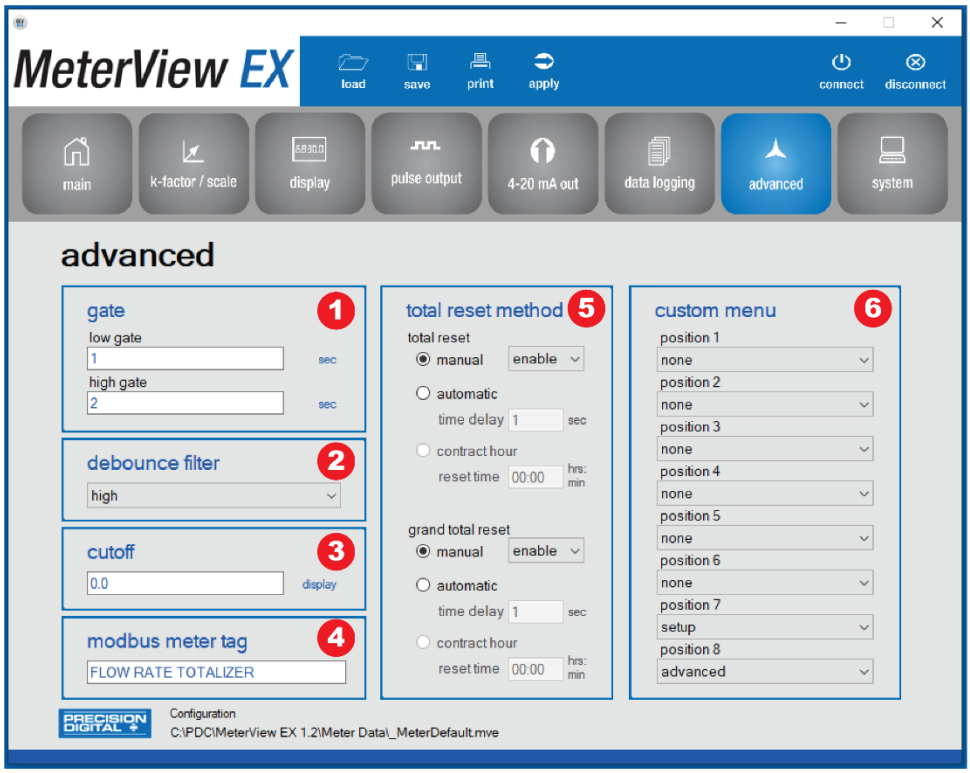
### Download / Erase Log

Click on the “download log” button to download the log file in a .csv format. Click on the “erase log” button to erase the data log.

Click the apply button on the top of the MeterView EX window to apply new settings to the rate/totalizer.

## Advanced Screen

The advanced screen provides a way to change the meter settings that are rarely changed for most applications. This screen allows for programming of the gate, debounce filter, cutoff, and a Modbus meter tag. Reset methods for total and grand total can be programmed on this screen, and the ability to set up customized menus.



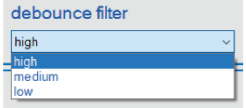

### 1 Gate

Enter a value in seconds for the high and low gate. A value of 1 to 99 seconds can be entered for low gate and a value of 2 to 9999 seconds can be entered for high gate. The low gate value determines the rate display update.

### 2 Debounce Filter

In this menu, select high, medium, or low for the debounce filter.

Set the debounce filter to "low" to filter noise generated by switches or relay contacts.




### 3 Cutoff

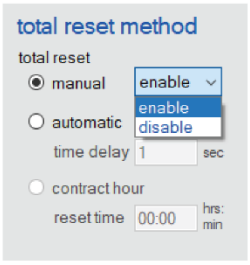
Enter a value for the cutoff display. A value of 0.0 (disabled) to 9999.9 can be entered.

### 4 Modbus Meter Tag

A custom name can be entered in the text field for the Modbus meter tag.

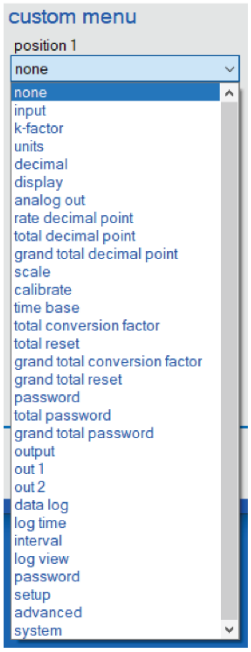
### 5 Total Reset Method

Select a reset method for the total and grand total. Select from manual, automatic, or contract hour methods. Enter a time delay value of 0 to 99999 seconds for automatic total reset, after a preset value has been reached. For contract hour enter a value from 00:00 to 23:59 (hrs:min).




### 6 Custom Menu

The software offers eight positions available for customizing all your paremeters in many different ways. See the menu below for all the selections available.




Click the apply button on the top of the MeterView EX window to apply new settings to the rate/totalizer.

## System Screen

The system screen shows basic meter information such as software number and revision level, the ability to turn the backlight on or off, and select to have the battery indicator shown on the display. It also provides a means to set a password, save and load backup program settings, and reset the rate/totalizer to factory defaults. Serial settings parameters can be programmed from this screen.

### 1 Backlight

To activate the backlight click in the check box.

### 2 Save to Backup

Save your rate/totalizer setting to restore settings in the future. The backup is saved in the meter's memory.

### 3 Password Status

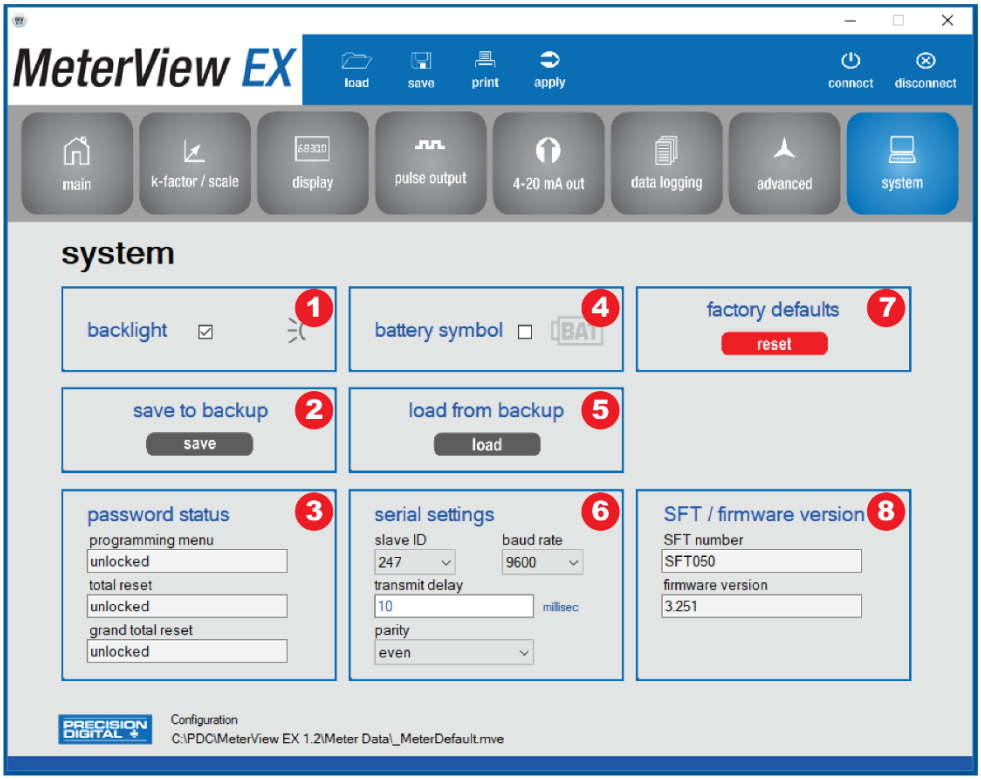
Use this section to apply passwords for the programming menu, total reset, and the grand total reset. Enter the passwords in the available text fields.

### 4 Battery Symbol

Click in the check box to show the battery indicator symbol on the display of the rate/totalizer.

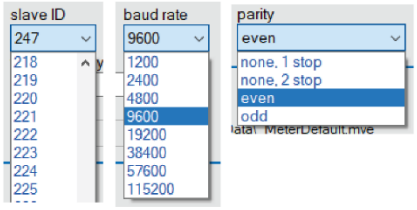
### 5 Load from Backup

Load previous programmed setting to the connected rate/totalizer.




### 6 Serial Settings

Program the slave ID, baud rate, tramsmit delay, and parity for the connected rate / totalizer. Select a slave ID from 1 to 247. The transmit delay time can be set from 0 to 199 milliseconds. See available menu selections for baud rate and parity below.




### 7 Factory Defaults

Click the red reset button to restore all rate/totalizer settings to their factory defaults.

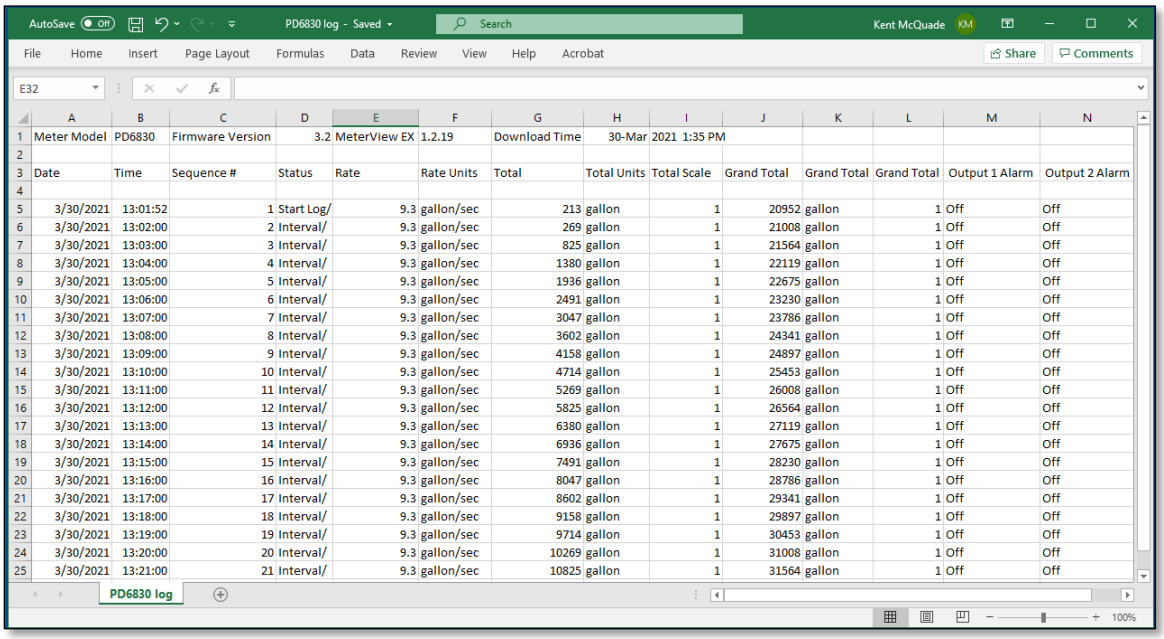
### 8 SFT/ Firmware Version

This section shows the current software (firmware) number and version.

Click the apply button on the top of the MeterView EX window to apply new settings to the rate/totalizer.

## Data Logging File

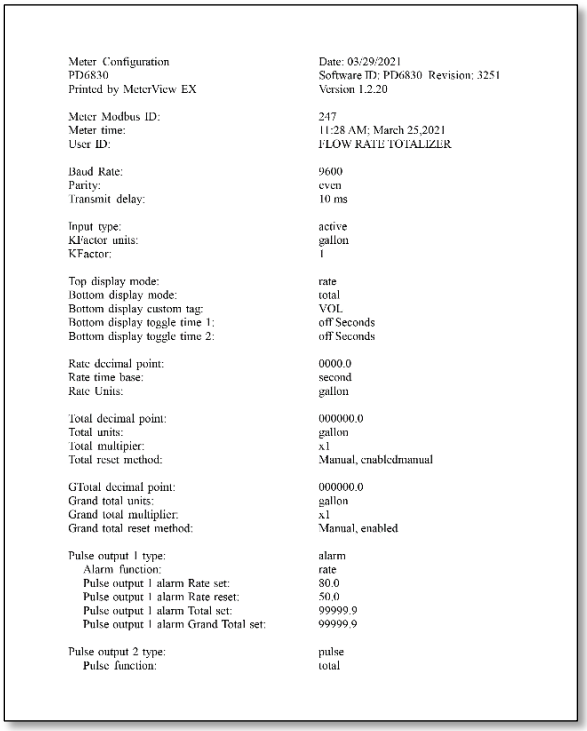
MeterView EX software, when connected to the rate/totalizer, can generate a log file such as the following example:



| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Meter Model | PD6830 | Firmware Version | 3.2 | MeterView EX | 1.2.19 | Download Time | 30-Mar | 2021 1:35 PM | | | | | |
| 2 | | | | | | | | | | | | | | |
| 3 | Date | Time | Sequence # | Status | Rate | Rate Units | Total | Total Units | Total Scale | Grand Total | Grand Total | Grand Total | Output 1 Alarm | Output 2 Alarm |
| 4 | | | | | | | | | | | | | | |
| 5 | 3/30/2021 | 13:01:52 | 1 | Start Log/ | 9.3 | gallon/sec | 213 | gallon | 1 | 20952 | gallon | 1 | Off | Off |
| 6 | 3/30/2021 | 13:02:00 | 2 | Interval/ | 9.3 | gallon/sec | 269 | gallon | 1 | 21008 | gallon | 1 | Off | Off |
| 7 | 3/30/2021 | 13:03:00 | 3 | Interval/ | 9.3 | gallon/sec | 825 | gallon | 1 | 21564 | gallon | 1 | Off | Off |
| 8 | 3/30/2021 | 13:04:00 | 4 | Interval/ | 9.3 | gallon/sec | 1380 | gallon | 1 | 22119 | gallon | 1 | Off | Off |
| 9 | 3/30/2021 | 13:05:00 | 5 | Interval/ | 9.3 | gallon/sec | 1936 | gallon | 1 | 22675 | gallon | 1 | Off | Off |
| 10 | 3/30/2021 | 13:06:00 | 6 | Interval/ | 9.3 | gallon/sec | 2491 | gallon | 1 | 23230 | gallon | 1 | Off | Off |
| 11 | 3/30/2021 | 13:07:00 | 7 | Interval/ | 9.3 | gallon/sec | 3047 | gallon | 1 | 23786 | gallon | 1 | Off | Off |
| 12 | 3/30/2021 | 13:08:00 | 8 | Interval/ | 9.3 | gallon/sec | 3602 | gallon | 1 | 24341 | gallon | 1 | Off | Off |
| 13 | 3/30/2021 | 13:09:00 | 9 | Interval/ | 9.3 | gallon/sec | 4158 | gallon | 1 | 24897 | gallon | 1 | Off | Off |
| 14 | 3/30/2021 | 13:10:00 | 10 | Interval/ | 9.3 | gallon/sec | 4714 | gallon | 1 | 25453 | gallon | 1 | Off | Off |
| 15 | 3/30/2021 | 13:11:00 | 11 | Interval/ | 9.3 | gallon/sec | 5269 | gallon | 1 | 26008 | gallon | 1 | Off | Off |
| 16 | 3/30/2021 | 13:12:00 | 12 | Interval/ | 9.3 | gallon/sec | 5825 | gallon | 1 | 26564 | gallon | 1 | Off | Off |
| 17 | 3/30/2021 | 13:13:00 | 13 | Interval/ | 9.3 | gallon/sec | 6380 | gallon | 1 | 27119 | gallon | 1 | Off | Off |
| 18 | 3/30/2021 | 13:14:00 | 14 | Interval/ | 9.3 | gallon/sec | 6936 | gallon | 1 | 27675 | gallon | 1 | Off | Off |
| 19 | 3/30/2021 | 13:15:00 | 15 | Interval/ | 9.3 | gallon/sec | 7491 | gallon | 1 | 28230 | gallon | 1 | Off | Off |
| 20 | 3/30/2021 | 13:16:00 | 16 | Interval/ | 9.3 | gallon/sec | 8047 | gallon | 1 | 28786 | gallon | 1 | Off | Off |
| 21 | 3/30/2021 | 13:17:00 | 17 | Interval/ | 9.3 | gallon/sec | 8602 | gallon | 1 | 29341 | gallon | 1 | Off | Off |
| 22 | 3/30/2021 | 13:18:00 | 18 | Interval/ | 9.3 | gallon/sec | 9158 | gallon | 1 | 29897 | gallon | 1 | Off | Off |
| 23 | 3/30/2021 | 13:19:00 | 19 | Interval/ | 9.3 | gallon/sec | 9714 | gallon | 1 | 30453 | gallon | 1 | Off | Off |
| 24 | 3/30/2021 | 13:20:00 | 20 | Interval/ | 9.3 | gallon/sec | 10269 | gallon | 1 | 31008 | gallon | 1 | Off | Off |
| 25 | 3/30/2021 | 13:21:00 | 21 | Interval/ | 9.3 | gallon/sec | 10825 | gallon | 1 | 31564 | gallon | 1 | Off | Off |

## Configuration File

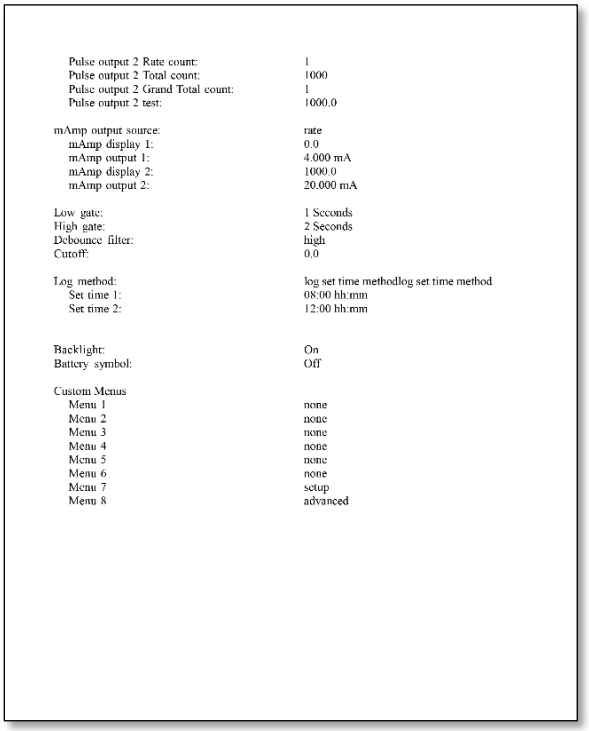
A configuration file can be generated with or without a rate/totalizer connected to the PC. This makes it possible to prepare meter configurations prior to having the meter in hand. Rate/totalize configurations can be saved and re-loaded into other meters. Meter configurations can also be printed:



Meter Configuration
PD6830
Printed by MeterView EX

Date: 03/29/2021
Software ID: PD6830 Revision: 3251
Version 1.2.20

| | |
|---|---|
| Meter Modbus ID: | 247 |
| Meter time: | 11:28 AM; March 25,2021 |
| User ID: | FLOW RATE TOTALIZER |
| Baud Rate: | 9600 |
| Parity: | even |
| Transmit delay: | 10 ms |
| Input type: | active |
| KFactor units: | gallon |
| KFactor: | 1 |
| Top display mode: | rate |
| Bottom display mode: | total |
| Bottom display custom tag: | VOL |
| Bottom display toggle time 1: | off Seconds |
| Bottom display toggle time 2: | off Seconds |
| Rate decimal point: | 0000.0 |
| Rate time base: | second |
| Rate Units: | gallon |
| Total decimal point: | 000000.0 |
| Total units: | gallon |
| Total multipier: | x1 |
| Total reset method: | Manual, cnabledmanual |
| GTotal decimal point: | 000000.0 |
| Grand total units: | gallon |
| Grand total multiplier: | x1 |
| Grand total reset method: | Manual, enabled |
| Pulse output 1 type: | alarm |
| Alarm function: | rate |
| Pulse output 1 alarm Rate set: | 80.0 |
| Pulse output 1 alarm Rate reset: | 50.0 |
| Pulse output 1 alarm Total set: | 99999.9 |
| Pulse output 1 alarm Grand Total set: | 99999.9 |
| Pulse output 2 type: | pulse |
| Pulse function: | total |



| | |
|---|---|
| Pulse output 2 Rate count: | 1 |
| Pulse output 2 Total count: | 1000 |
| Pulse output 2 Grand Total count: | 1 |
| Pulse output 2 test: | 1000.0 |
| mAmp output source: | rate |
| mAmp display 1: | 0.0 |
| mAmp output 1: | 4.000 mA |
| mAmp display 2: | 1000.0 |
| mAmp output 2: | 20.000 mA |
| Low gate: | 1 Seconds |
| High gate: | 2 Seconds |
| Debounce filter: | high |
| Cutoff: | 0.0 |
| Log method: | log set time methodlog set time method |
| Set time 1: | 08:00 hh:mm |
| Set time 2: | 12:00 hh:mm |
| Backlight: | On |
| Battery symbol: | Off |
| Custom Menus | |
| Menu 1 | none |
| Menu 2 | none |
| Menu 3 | none |
| Menu 4 | none |
| Menu 5 | none |
| Menu 6 | none |
| Menu 7 | setup |
| Menu 8 | advanced |

# Contact Precision Digital

## Technical Support

Call: (800) 610-5239 or (508) 655-7300

Fax: (508) 655-8990

Email: support@predig.com

## Sales Support

Call: (800) 343-1001 or (508) 655-7300

Fax: (508) 655-8990

Email: sales@predig.com

## Place Orders

Email: orders@predig.com

## For the latest version of this manual please visit

www.predig.com

**PRECISION DIGITAL CORPORATION**
233 South Street • Hopkinton MA 01748 USA
Tel (800) 343-1001 • Fax (508) 655-8990
www.predig.com

LIM6830MVEX_A
SFT050 Ver 3.200 & up
04/21