

# MeterView XL Programming Software

## Instruction Manual



### MeterView<sup>®</sup> XL



For use with the following Flow Rate/Totalizers:

**Loop Leader**  
Series



PD6622, PD6624,  
PD6626, & PD6628  
Panel Meters

**Loop Leader+**  
Series



PD4-6624 & PD4-6628  
Large Displays

**ProtEx+**



PD6928-HA  
Aluminum &  
Stainless Steel

**VantageView+**



PD6928-GP  
NEMA 4X Plastic

- Free PC-Based USB Programming Software
- Easy Programming of Feature-Packed Product
- USB Connection Provides Power to the Meter During Programming
- Save & Print Configuration Files without Meter Connected
- Micro USB Cable Provided with Meter
- PC Data Logging for One or Multiple Variables

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**PRECISION  
DIGITAL**

# MeterView XL Programming Software



The easiest and quickest way to program your loop-powered rate/totalizers is with the free, PC-based, MeterView XL software. The rate/totalizer connects to the PC with a USB cable that also provides the power to the rate/totalizer during programming. Programming files can be saved for later use.

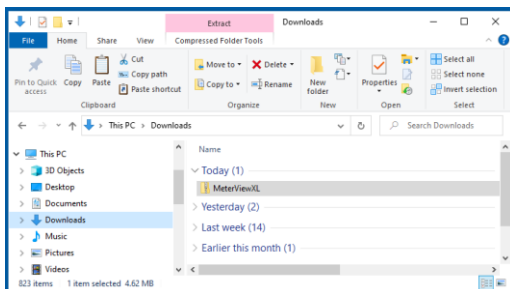
- Free PC-Based USB Programming Software
- Easy Programming of Feature-Packed Product
- USB Connection Provides Power to the Meter During Programming
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## MeterView XL Software Installation

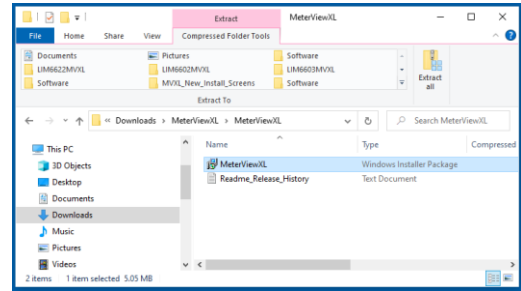
### ⚠ IMPORTANT

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

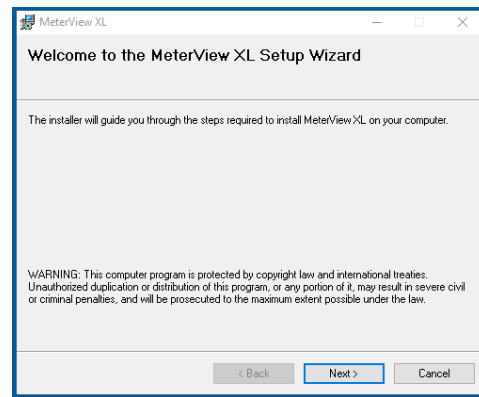
1. Download MeterView XL Installation file to your PC from the included CD or go to [www.predig.com/meterviewxl](http://www.predig.com/meterviewxl)
2. Locate the MeterView XL zipped folder on your PC and double-click to extract and open:



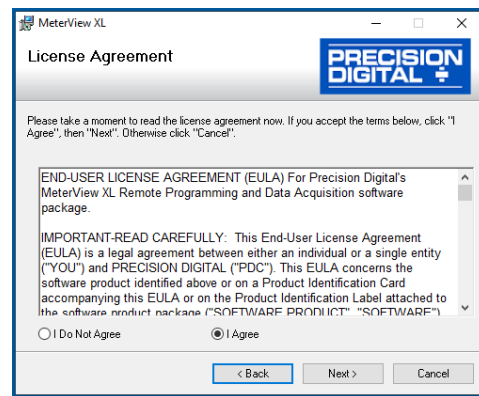
3. Double-click MeterView XL Windows Installer Package file to open:



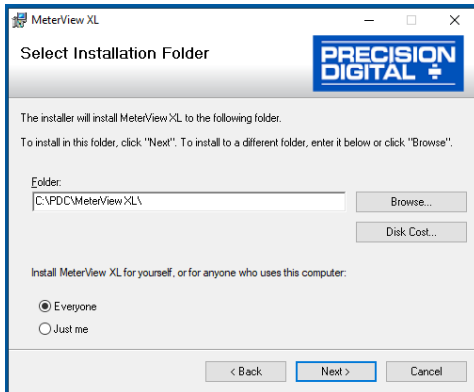
4. The MeterView XL Setup Wizard window will appear. Click "Next" to start the installation process:



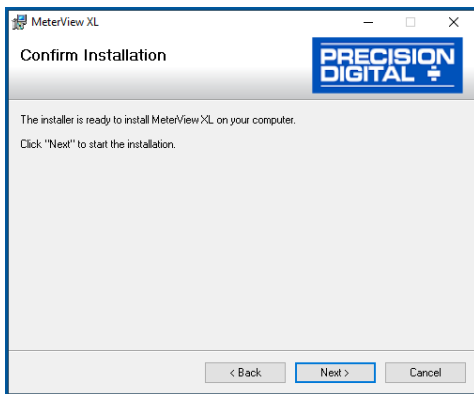
5. The MeterView XL License Agreement window appears next. Select "I agree" and click "Next" to continue the installation process:



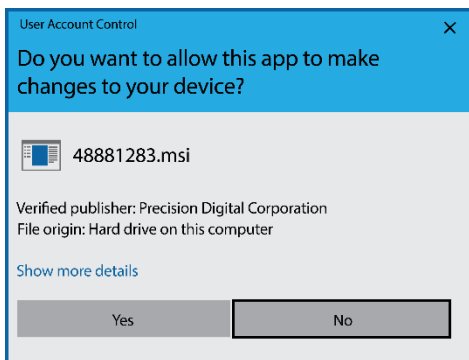
- Choose the folder location where you would like the software to be installed to and select options for use. Then click “Next” to continue:



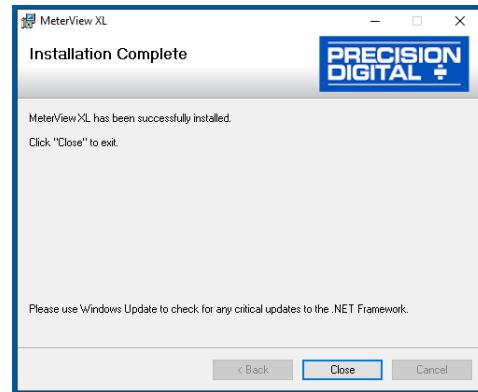
- Confirmation window will appear. Click “Next” to confirm the installation:



- The User Account Control message is displayed. Click “Yes” to proceed with the installation:



- Finally, the Installation Complete window will appear. Click “Close” to exit:

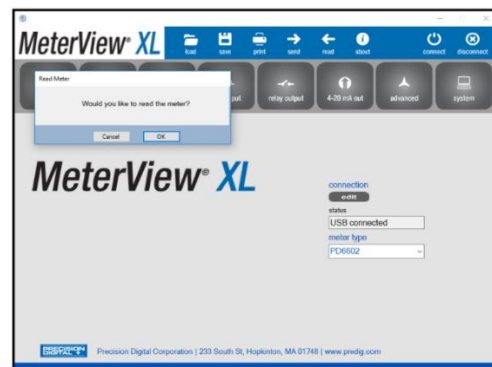


Now you are ready to open the MeterView XL software to begin programming your loop-powered rate/totalizer.

## Connecting to the Computer

The rate/totalizer may be connected to any Windows 7 or Windows 10 PC via the provided USB cable by following these steps:

- Open the MeterView XL software.
- Connect the rate/totalizer to the PC with the provided USB cable.
- The software will ask if you would like to read the meter. Click OK.



## Specifications

<b>Availability</b>	Free download from <a href="http://www.predig.com">www.predig.com</a>
<b>System Requirements</b>	Microsoft® Windows® 7 & 10
<b>Communications</b>	USB 2.0 (Standard USB A to Micro USB B)
<b>Configuration</b>	Configure all parameters on the meter. Configure meters one at a time.
<b>Configuration Files</b>	Generate with or without meter connected; Save to file for later use.
<b>USB Power Connection</b>	Meter is powered by USB connection during programming, if 4-20 mA loop is not connected.
<b>Compatibility</b>	Programs created for Loop Leader and Loop Leader+ may be run on either meter. Programs created for VantageView+ and ProtEX+ can be run on either meter. No other program sharing is permissible.

# Using MeterView XL Software

## Main Screen

The main screen displays a real-time image of the connected meter and includes various information about this meter. This information includes max and min values, status of open collectors and relays (if option installed), and value of the input signal and output signal (if option installed). From the main screen the user can also operate the data logging feature and reset the max and min values.

## Main Programming

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

## Meter Info

Shows the current Loop Leader model connected to the PC.

## Readings and Meter Status

Readings show what the meter is "reading" in labels set by and meaningful to the user. Meter status shows the input and output (if any) signal values, the status of the open collectors and relays (if any), and password setting.

## Edit Labels Button

**Edit Labels**

readings title	flow readings
reading label	flow rate
total label	flow total
GT label	grand total
max label	max
min label	min

leave label blank to eliminate from display

cancel save

Click the **Edit** button to enter or edit labels on the Main SW screen for readings, PV1, PV2, etc.

## Reset Button

**resetfunctions**

reset max **reset**

reset min **reset**

reset total **reset**

reset GT **reset**

close

Click the **Reset** button to reset the maximum, minimum, total, or grand total values to zero.

## Relay Info Button

relay information	relay 1	relay 2
runtime (hrs)	32.8	47.6
number of cycles	43	52

clear relay

close

Click the **Relay Info** button to see the accumulated run time and cycle count of the relays (if relays installed).

## PC Data Logging Buttons

**PC data logging setup**

interval 00:00:00 hh:mm:ss

Save Log As

PCLogDefault

Rate

Total

grand total

max & min

OC1-2, Rly1-2 state

Rly1-2 runtime cycles

cancel save

Click the **Setup** button to set the interval time and select 1 or more of the PVs shown. Then save the log file. Click the **Start** or **Pause** button to control the data logging.

### Input / Scale Screen

The input / scale screen is used to configure the input signal and scale it appropriately. The meter can be programmed to display input as two different values when dual-scale is enabled or just one value when total is enabled as the example below illustrates:

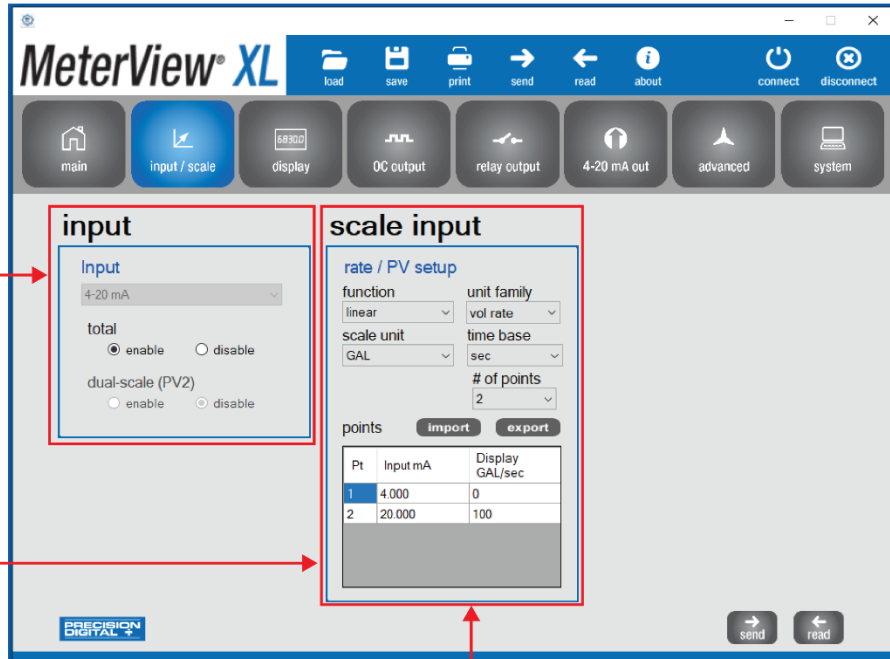
Function	This Meter
Set the input	4-20 mA
Total	Enabled
Scale the input	PV: Linear 2-Point, unit is gallons, 0-100 gal/sec

#### Input

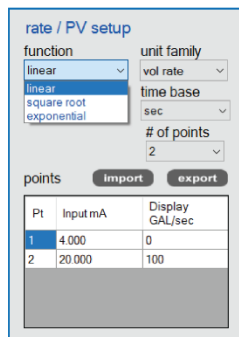
Indicates the input to the meter is 4-20 mA. Enable or disable total or dual-scale (PV2) features.

#### Scale Input

These fields are used to select function, scale unit, unit family, and scaling points for the rate/PV setup. (If dual-scale is enabled setup windows for scale PV1 and scale PV2 will appear).

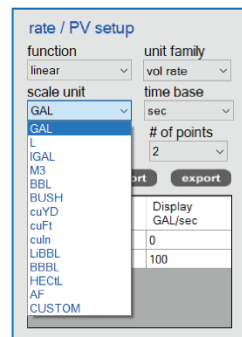


#### Scale Input Function Menu



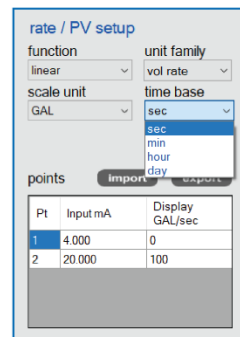
Select linear, square root, or exponential.

#### Unit Family & Scale Unit Menus



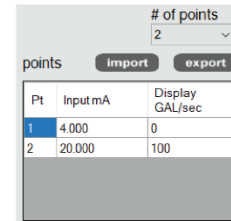
Select from a variety of scale units. The unit family can only be set for volume rate when total is enabled. Other unit families are available when dual-scale is enabled.

#### Time Base Menu




Select seconds, minutes, hours, or day for the PV.

#### Scaling Points / Import and Export



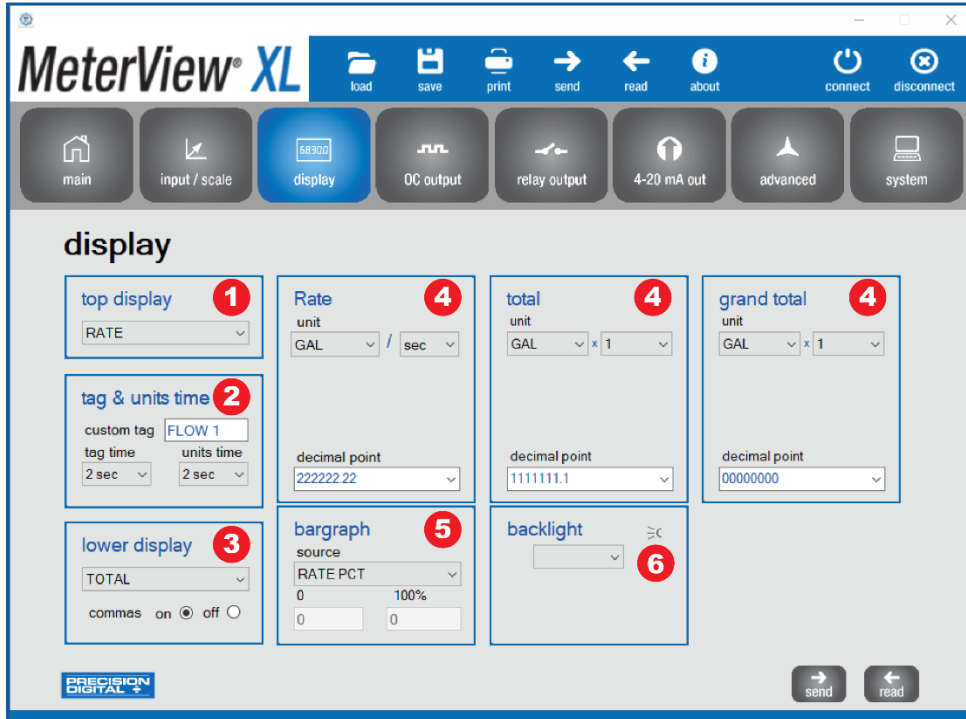
Select the number of scaling points. Up to 32 points can be entered.

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.

Click the  button at the bottom right of the window to send the new settings to the meter.

### Display Screen

The display screen is used to change what is displayed on the meter's **top** and **bottom** display lines. If either display lines are set to show units or tag, or to alternate between units, tags, and some other parameter, the tag shown, and the display time may be set in the **tag & units time** section. If total is enabled, the **rate**, **total** and **grand total** sections appear and are used for setting the units and decimal points. If the dual-scale function is enabled, **PV1** and **PV2** sections will appear. The **bargraph** section is used for selecting the source and scaling the bargraph value. The **backlight** section allows the meter backlight to be set to be always on or off.



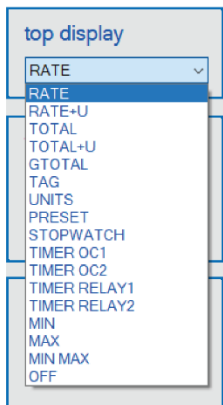
### Toggle Display

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:

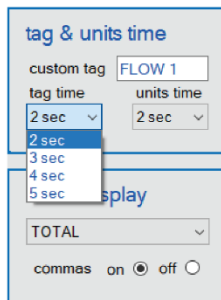
**Top Line:** Toggle Flow Rate and Rate Units  
**Bottom Line:** Toggle Total Flow and Total Units



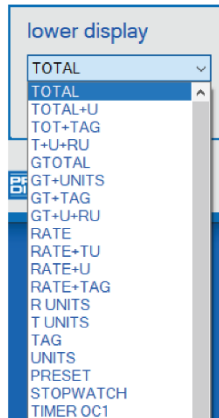
**1**  
**Top Display**  
 Select what will be shown on the top line of the meter's display.



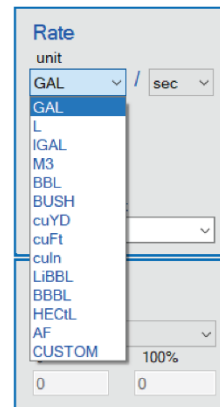
**2**  
**Tag & Units Time**  
 Enter name for custom tag and set display time for tag and units.



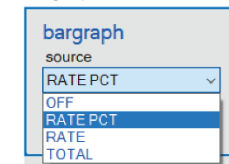
**3**  
**Bottom Display**  
 Select what will be shown on the bottom line of the meter's display. Activate "commas" to make it easier to read large numbers like 78,765,249.



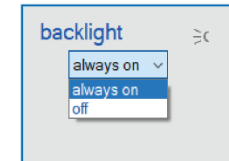
**4**  
**Rate, Total & Grand Total**  
 Set units/sec, minute, hour, or day and set decimal point for rate, total, and grand total.




**5**  
**Bargraph**  
 Select the source and scaling for the bargraph.



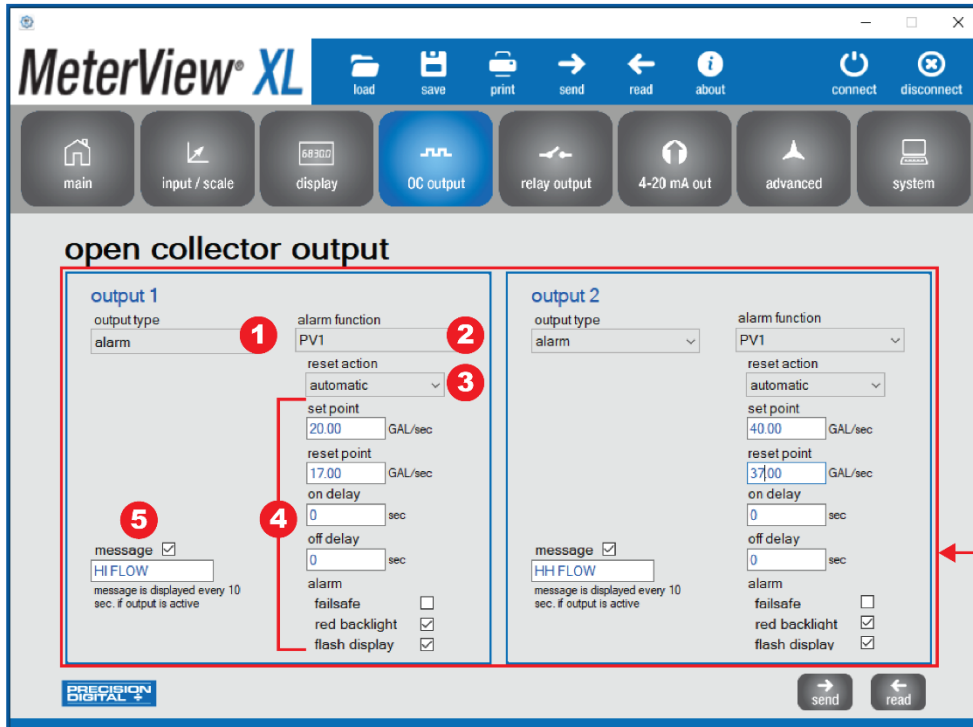
**6**  
**Backlight**  
 Set the backlight to be always on or off.



Click the  button at the bottom right of the window to send new settings to the meter.

### Open Collector Output Screen

The meter comes with two open collectors as a standard feature. The open collector output screen is used to program the open collector outputs for a specific output type (**pulse, alarm, timer, stopwatch**) or set to be **disabled**. The two open collectors may be programmed independently using the **output 1** and **output 2** sections. The following example shows the open collectors programmed for two **high alarms**. In addition, when an alarm occurs, the display is programmed to turn red, start to flash and display an alarm message.



Meter in the non-alarm condition.

#### Alarm Indicated by Flashing Red Display



Meter in alarm condition. Display turns red, flashes and shows HI FLOW alarm message.

Note: Flashing red display on alarm feature also available for relay outputs.

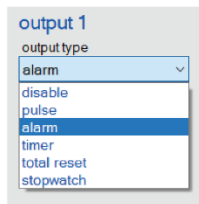
#### Output 1 and 2

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

1

#### Output Type Menu

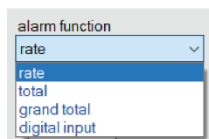
Select an output type for the open collector output. In this case, alarm function.



2

#### Alarm Function Menu

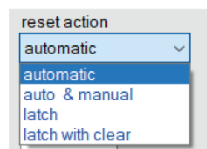
Assign the alarm function to PV1, PV2, or digital input.



3

#### Reset Action Menu

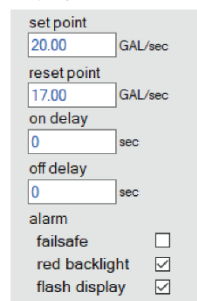
Select the type of reset action.



4

#### Set Parameters for the Function

Program set and reset points. Input a time for on and off delay. Select failsafe action, change the backlight to red upon alarm, and make the display flash.




5

#### Custom Message

Check the box to have a message displayed on the meter. Input a custom message in the text field. The message will be displayed every 10 seconds. In this case, "HI FLOW".



Click the  button at the bottom right of the window to send new settings to the meter.

### Relay Output Screen

The meter can be equipped with two loop-powered solid state relays as an option and these relays can be programmed to satisfy a wide variety of applications. The relay screen is used to program the relay outputs for a specific output type (**alarm, pump control, timer, stopwatch**) or set to be **disabled**. The two relays may be programmed independently using the **relay 1** and **relay 2** sections. The example below shows relays 1 and 2 programmed for batch control:

**1**

#### Output Type Menu

Select an output type for the relay output. In this case, batch.

output type

- batch
- disable
- alarm
- sample
- timer
- batch
- stopwatch

**2**

#### Relay 1 Batch Function

Select auto or manual for the batch control. Select the batch value to count up or to count down. Enter a preset value and max preset value. Enter a time for batch delay, relay on delay, and relay off delay.

**3**


#### Relay 2 Batch Function

Select preclose or preset for the batch control. Enter a preclose/preset value. Enter a time for relay on delay and relay off delay.

**4**

#### Custom Message

A custom message may be displayed on the meter when the relay is active by checking 'message' box. The message, "BATCH ON", in this case, will be displayed every 10 seconds.

Click the  button at the bottom right of the window to send new settings to the meter.



### 4-20 mA Output Screen

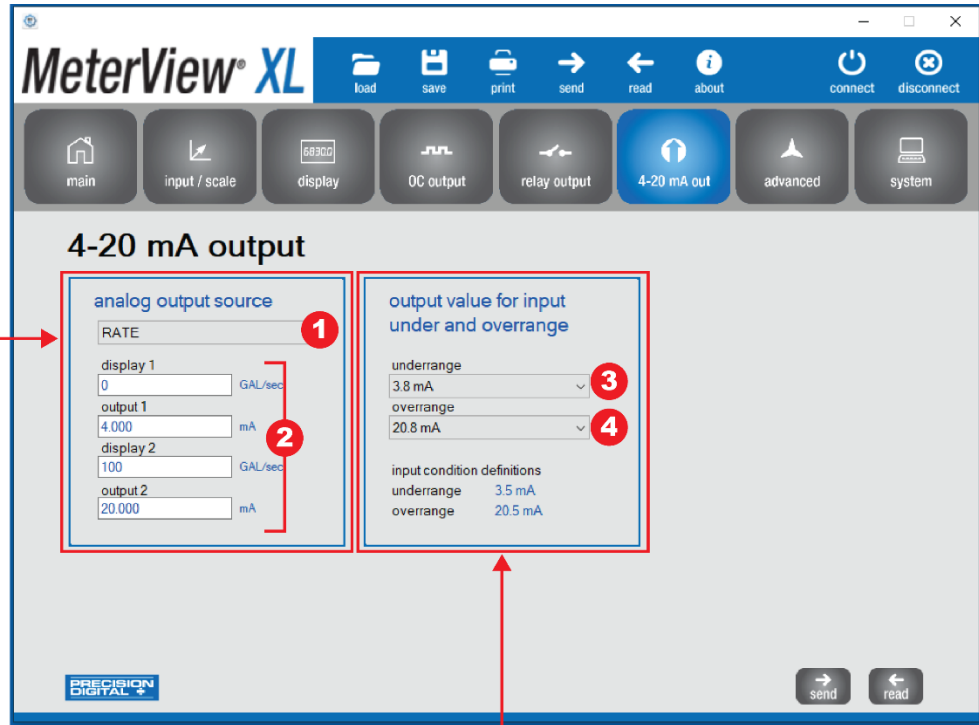
The 4-20 mA out screen allows the optional 4-20 mA analog output to be set up and scaled appropriately. The output may either be scaled independently of the input, or simply retransmitted in the same scale. In addition, analog output values can be set for under and overrange input conditions.

#### Analog Output Source

This section is used for scaling the output to a new range or retransmitting the existing values.

#### Output Values for Input Under and Overrange

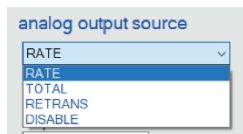
Overrange and underrange values determine what mA signal the meter will output if the mA input is underrange (<3.5 mA) or overrange (>20.5 mA). This value may be set to 1 mA, 3.5 mA, 3.8 mA, 20.5 mA, 20.8 mA, 23 mA, or disabled.



1

#### Analog Output Source Menu

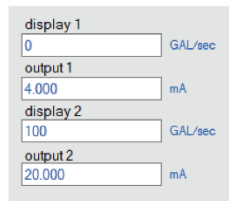
Select a source for the 4-20 mA output: rate, total, retransmit, or disable.



2

#### Scale Values

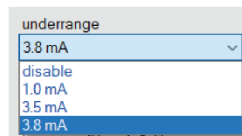
Enter the scale values for display 1, output 1, display 2, and output 2.



3

#### Underrange Menu

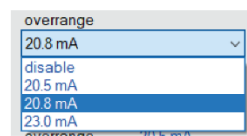
Select the output value for when the display value is below 3.5 mA. This can also be disabled.




4

#### Overrange Menu

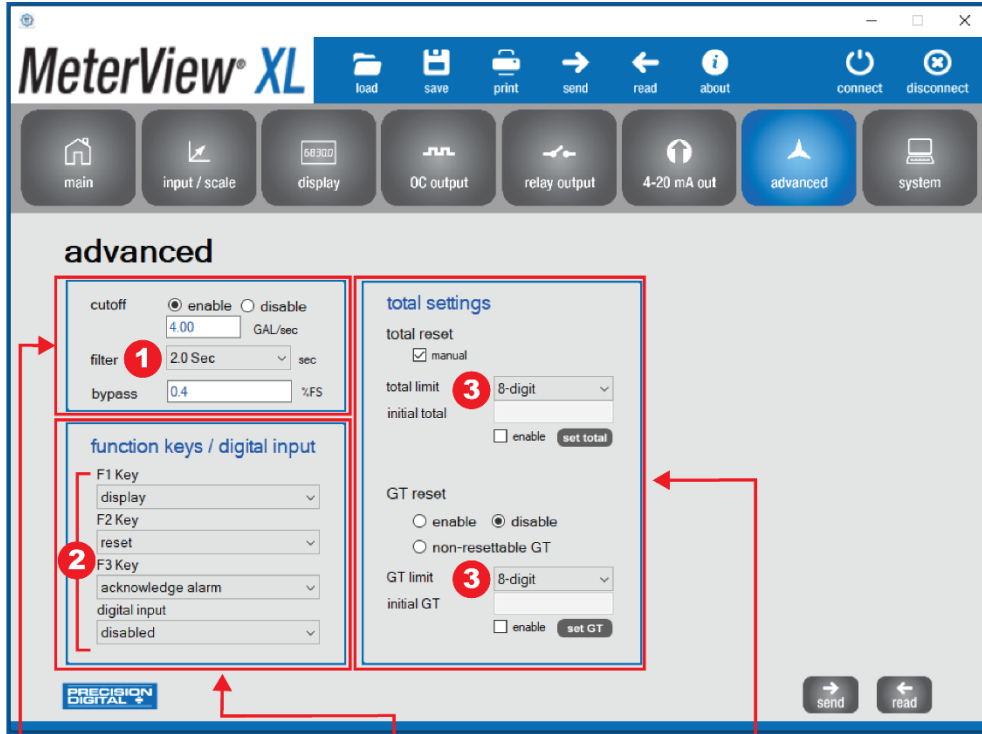
Select the output value for when the display value is above 20.5 mA. This can also be disabled.



Click the  button at the bottom right of the window to send new settings to the meter.

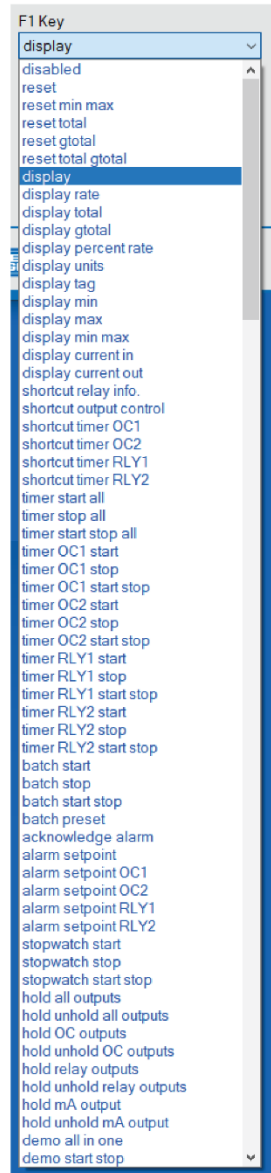
### Advanced Screen

The advanced screen provides a way to change the meter settings that are rarely changed for most applications. The **cutoff**, **filter**, and **filter bypass** values can normally be left alone and should only be changed if there is an unsteady or noisy process signal. The **function keys / digital input** section is used to set the actions that the three front panel function keys and the one digital input will perform.



### F1, F2, F3 Key, & Digital Input Menus

Select an action for each of the front panel keys of the meter; F1, F2, F3, and an action for the digital input, if connected.



### Cutoff, Filter, and Filter Bypass

**Cutoff:** Point below at which display always shows zero. Most commonly used with differential pressure transmitters to zero out the often unsteady reading at low flow rates.

**Filter:** Averages the input signal over a period of time between 1 and 16 seconds to dampen the effects of a noisy signal that causes a jumpy display.

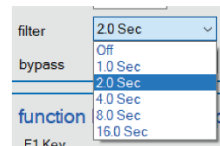
**Bypass:** Input signal changes that are greater than bypass value are displayed immediately.

### Function Keys / Digital Input

This section is used for programming the front panel function keys and digital input, if connected.

### Filter Menu

Select a filter time of 1, 2, 4, 8, 16 seconds or select off.

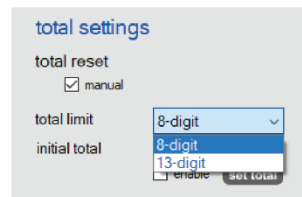



### Total Settings

This section is used for programming the total and grand total reset. Check manual to be able to reset the total manually. Select a total limit and/or grand total limit to 8 digits or 13 digits. If enabled, an initial value can be entered for both the total and grand total. Grand total reset can also be enabled or disabled and a non-resettable GT can be selected.

### Total Limit Menu

Choose either 8 digits or 13 digits for total or GT limit.



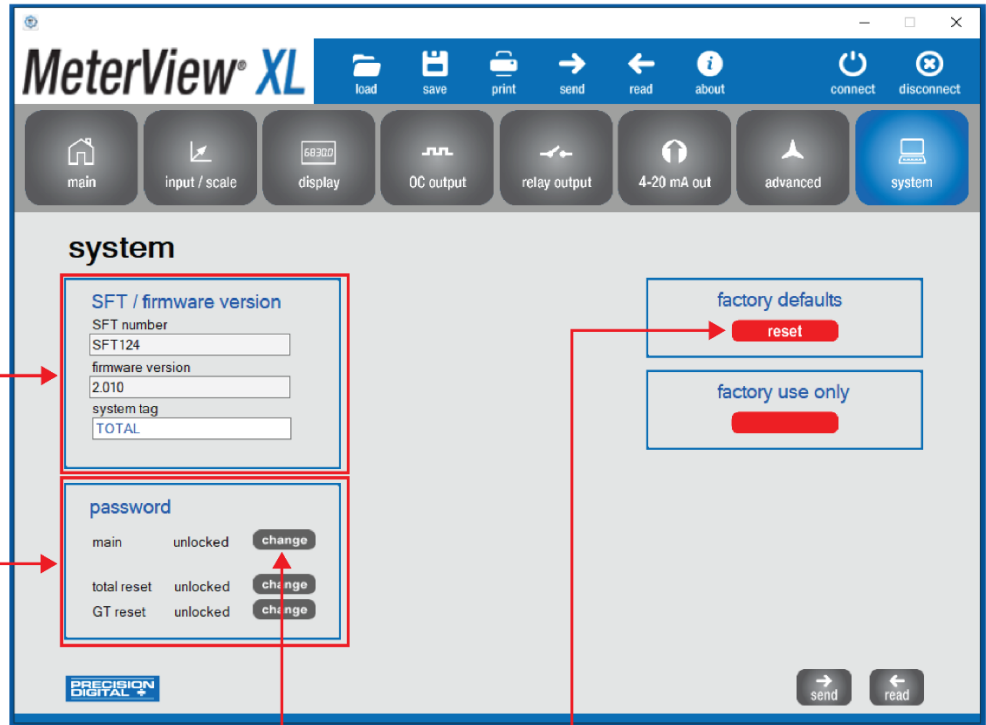
Click the  button at the bottom right of the window to send new settings to the meter.

### System Screen

The system screen shows basic meter information such as software number and revision level. It also provides a means to set a password, reset the meter to factory defaults and set a system tag. The system tag is a custom message that appears on meter power up (8 characters max).

#### SFT/Firmware Version

This section shows the current software (firmware) number and version. The system tag may be changed to display a custom message on power up (8 characters max).



#### Password

This section is used for setting a password which protects the meter from unauthorized changes of the settings. A password can be set for the main software settings and also for the total reset and GT reset settings.

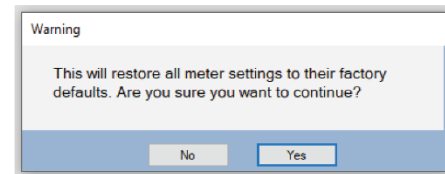
#### Change Password Button

Click the change button to change the password. Enter characters in the text field.



#### Factory Defaults Reset Button

Click the reset button to restore all meter settings to their factory defaults.



### Data Logging File

MeterView XL software, when connected to the meter, can generate a log file such as the following example:

Date & Time	rate	units	grand total	units
2/22/2021 12:51	4.67 GAL/sec		20	GAL
2/22/2021 12:52	7.32 GAL/sec		119	GAL
2/22/2021 12:52	9.94 GAL/sec		262	GAL
2/22/2021 12:52	12.68 GAL/sec		455	GAL
2/22/2021 12:52	15.34 GAL/sec		687	GAL
2/22/2021 12:53	18.01 GAL/sec		963	GAL
2/22/2021 12:53	20.67 GAL/sec		1283	GAL
2/22/2021 12:53	23.3 GAL/sec		1646	GAL
2/22/2021 12:54	25.95 GAL/sec		2053	GAL
2/22/2021 12:54	28.59 GAL/sec		2504	GAL
2/22/2021 12:54	31.37 GAL/sec		3014	GAL
2/22/2021 12:54	34.04 GAL/sec		3555	GAL
2/22/2021 12:55	36.68 GAL/sec		4139	GAL
2/22/2021 12:55	39.3 GAL/sec		4766	GAL
2/22/2021 12:55	42.05 GAL/sec		5458	GAL
2/22/2021 12:56	44.75 GAL/sec		6175	GAL
2/22/2021 12:56	47.4 GAL/sec		6936	GAL
2/22/2021 12:56	50.06 GAL/sec		7740	GAL
2/22/2021 12:56	52.67 GAL/sec		8588	GAL
2/22/2021 12:57	55.39 GAL/sec		9508	GAL
2/22/2021 12:57	58.08 GAL/sec		10445	GAL
2/22/2021 12:57	60.74 GAL/sec		11425	GAL
2/22/2021 12:57	63.38 GAL/sec		12450	GAL
2/22/2021 12:58	66.11 GAL/sec		13551	GAL
2/22/2021 12:58	68.75 GAL/sec		14664	GAL
2/22/2021 12:58	71.4 GAL/sec		15821	GAL
2/22/2021 12:59	74.08 GAL/sec		17022	GAL

### Configuration File

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

```

Meter Configuration                               Date: 02/19/2021
PD6624                                             Software ID: SF1124 Revision: 2.010
System tag                                         TOTAL
Printed by MeterView XL                          Version 2.0.0

-- Input --
input                                              4-20 mA
total                                              enable

PVI function                                       Incar
PVI units family                                 vol rate
PVI units                                         GAL
PVI time base                                    sec
PVI scale points                                 2
PVI scale                                         input      display
                                                4.000      0
                                                20.000     100

-- Display --
top display                                       RATE
lower display                                    TOTAL
custom tag                                       FLOW 1
tag time                                          2 sec
units time                                        2 sec
commas                                           enable

Rate display units                               GAL
Rate time base                                   sec
Rate decimal point                               222222.22

Total display units                              GAL
Total multiplier                                 1
Total decimal point                              1111111.1

GTotal display units                             GAL
GTotal multiplier                               1
GTotal decimal point                             00000000

 bargraph source                                 RATE PCT
 bargraph 0%                                    0
 bargraph 100%                                  0

backlight                                         never
LCD
    
```

```

-- Open Collector --
OC1 output type                                 alarm
OC1 source                                       rate
OC1 reset action                                 automatic
OC1 set point                                   20.00      GAL/sec
OC1 reset point                                 17.00      GAL/sec
OC1 on delay                                    0          sec
OC1 off delay                                   0          sec
OC1 fail safe                                   disable
OC1 red backlight                              enable
OC1 flash display                              enable
OC1 message enable                             enable      HI FLOW

OC2 output type                                 alarm
OC2 source                                       rate
OC2 reset action                                 automatic
OC2 set point                                   40.00      GAL/sec
OC2 reset point                                 37.00      GAL/sec
OC2 on delay                                    0          sec
OC2 off delay                                   0          sec
OC2 fail safe                                   disable
OC2 red backlight                              enable
OC2 flash display                              enable
OC2 message enable                             enable      HI FLOW

-- Relay --
rclay 1 output type                             batch
rclay 1 batch mode                             manual
rclay 1 batch direction                         up
rclay 1 batch preset                            1000.0     GAL
rclay 1 batch max preset                       10000.0    GAL
rclay 1 batch delay                             120        sec
rclay 1 on delay                                0          sec
rclay 1 off delay                               0          sec
rclay 1 message enable                         enable      BATCH ON

rclay 2 output type                             batch
rclay 2 batch mode                             preclose
rclay 2 batch preset                            200.0      GAL
rclay 2 on delay                                0          sec
rclay 2 off delay                               0          sec
rclay 2 message enable                         enable      VAL2 ON

-- mA Output --
    
```

```

analog output source                             RATE
analog output scale                             display    output
                                                0          4.000
                                                100       20.000
analog output underrange                        3.8 mA
analog output overrange                        20.8 mA

-- Advanced --
cutoff enable                                   enable
cutoff                                          4.00
filter                                          2.0 Sec
bypass                                          0.4

total reset enable                              enable
total limit                                    8-digit
grand total reset enable                       disable
grand total limit                              8-digit

function key 1                                  display
function key 2                                  reset
function key 3                                  acknowledge alarm
digital input                                    disabled
    
```

## Contact Precision Digital

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