

MeterView XL Programming Software

Instruction Manual



MeterView® XL



For use with the following Feet & Inches Meters:

Loop Leader
Series



PD6603 & PD6607
Panel Meters

Loop Leader+
Series



PD4-6603 & PD4-6607
Large Displays

ProtEx+



PD6907-HA
Aluminum &
Stainless Steel

VantageView+



PD6907-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 Variable

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**PRECISION
DIGITAL**

MeterView XL Programming Software



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

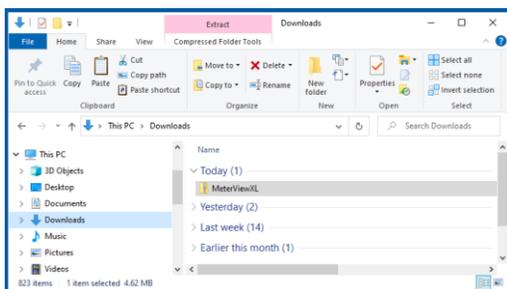
- Free PC-Based USB Programming Software
- Easy Programming of Features-Packed Product
- USB Connection Provides Power to the Meter During Programming
- Save & Print Configuration Files without Meter Connected
- Micro USB Cable Provided with the Meter
- PC Data Logging for One or Multiple Variables

MeterView XL Software Installation

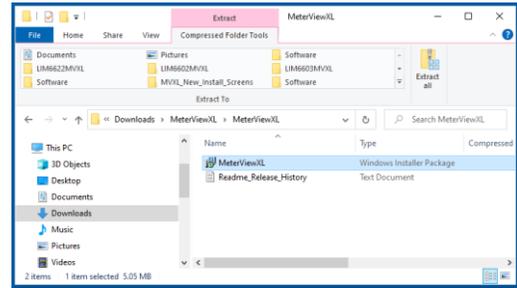
⚠ IMPORTANT

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

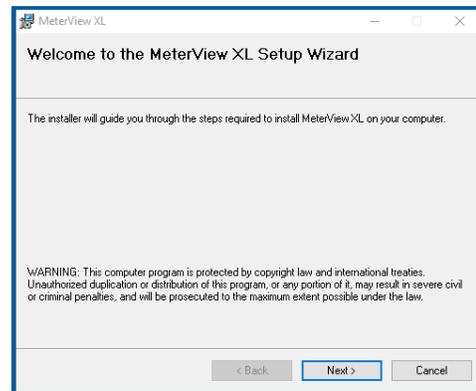
1. Download MeterView XL Installation file to your PC from the included CD or go to www.predig.com/meterviewxl
2. Locate the MeterView XL zipped folder on your PC and double-click to extract and open:



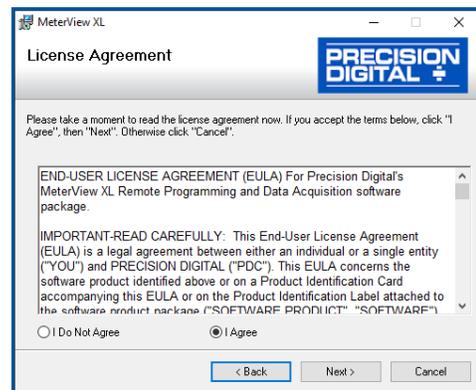
3. Double-click MeterView XL Windows Installer Package file to open:



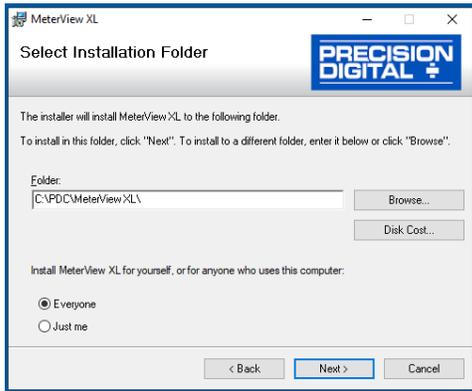
4. The MeterView XL Setup Wizard window will appear. Click "Next" to start the installation process:



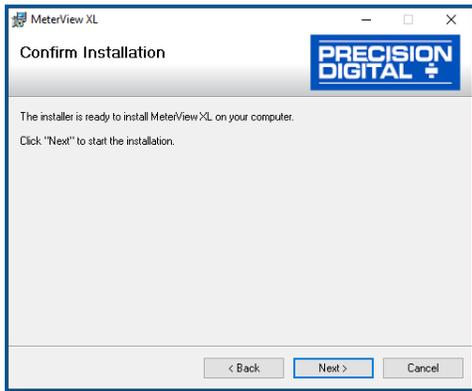
5. The MeterView XL License Agreement window appears next. Select "I agree" and click "Next" to continue the installation process:



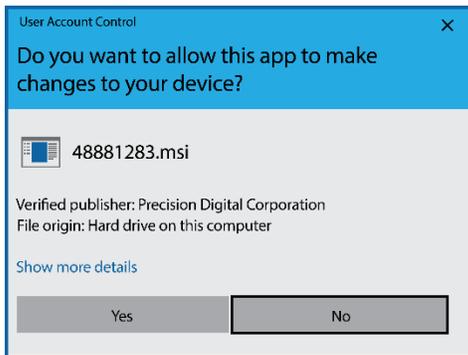
- Choose the folder location where you would like the software to be installed to and select options for use. Then click “Next” to continue:



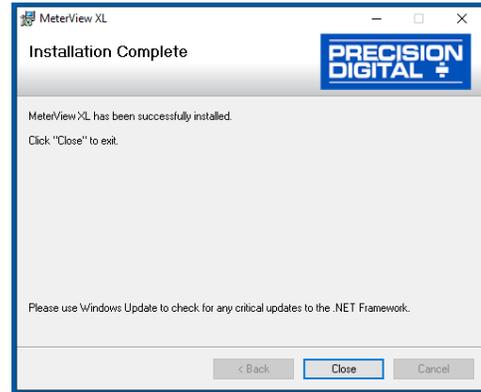
- Confirmation window will appear. Click “Next” to confirm the installation:



- 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 feet & inches level meter.

Connecting to the Computer

The feet & inches meters 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 feet & inches meter to the PC with the provided USB cable.
- The software will ask if you would like to read the meter. Click OK.



Specifications

Availability	Free download from www.prediq.com
System Requirements	Microsoft® Windows® 7 & 10
Communications	USB 2.0 (Standard USB A to Micro USB B)
Configuration	Configure all parameters on the meter. Configure meters one at a time.
Configuration Files	Generate with or without meter connected; Save to file for later use.
USB Power Connection	Meter is powered by USB connection during programming, if 4-20 mA loop is not connected.
Compatibility	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

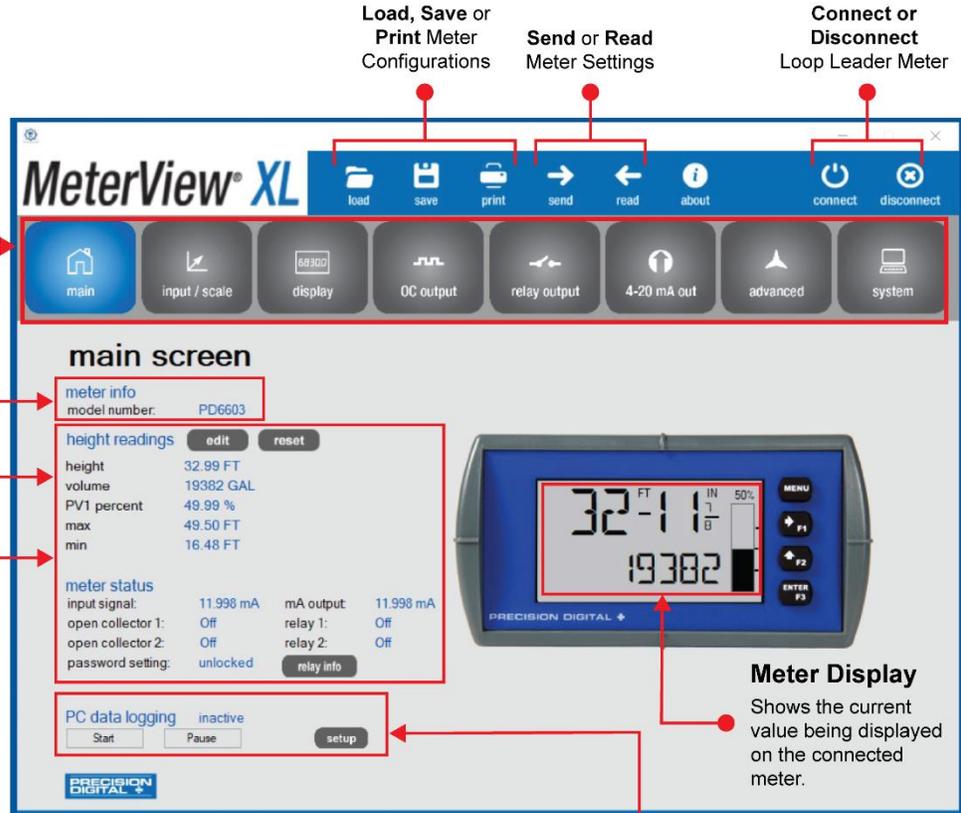
Click one of these buttons to navigate to a specific programming screen. The button will turn **blue** signifying the current programming screen.

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.

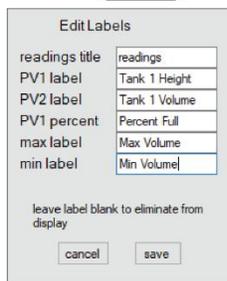


Load, Save or Print Meter Configurations

Send or Read Meter Settings

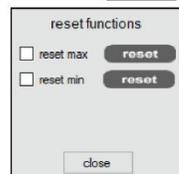
Connect or Disconnect Loop Leader Meter

Edit Labels Button



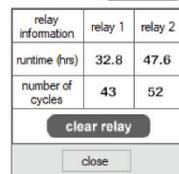
Click the **Edit** button to enter or edit labels on the Main SW screen for readings, PV1, PV2, etc.

Reset Button



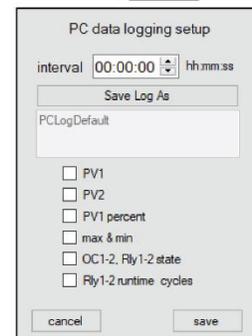
Click the **Reset** button to reset the Maximum or Minimum values to zero.

Relay Info Button



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

PC Data Logging Buttons



Click the **Setup** button to set the interval time for a PV and 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 either one value or two different values (dual-scale) as the example below illustrates:

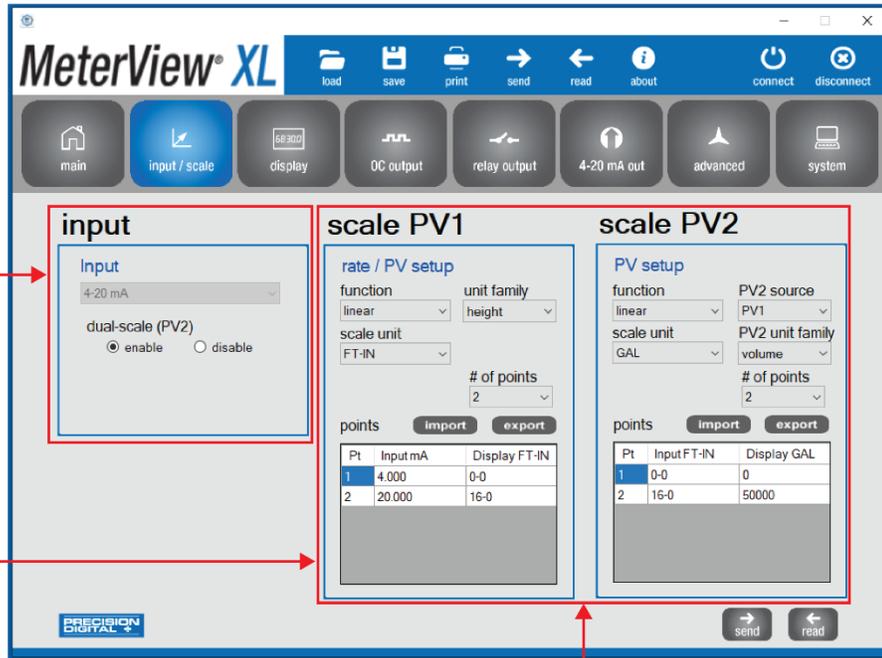
Function	This Meter
Set the input	4-20 mA
Enable/disable the dual-scale feature	Dual-scale enabled
Scale the input	PV1: Linear 2-Point, unit is feet, 0-16 Feet PV2: Linear 2-Point, unit is gallons, 0-50,000 GAL

Input

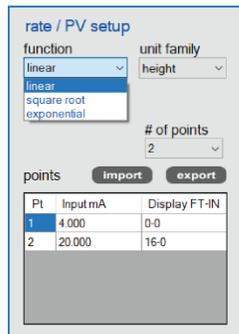
Indicates the input to the meter is 4-20 mA. Dual-Scale feature enable / disable selection.

Scale PV1 and PV2

These fields are used to select function, scale unit, unit family, and scaling points for PV1 and PV2. (PV2 window will not appear if the dual-scale feature is disabled).

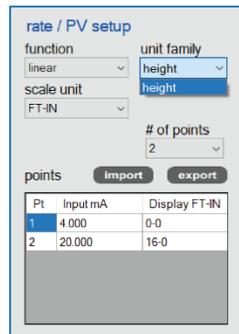


Function Menu (PV1)



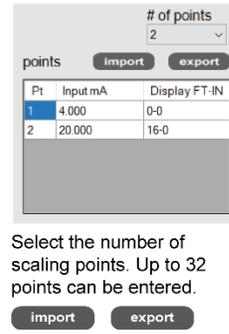
Select linear, square root, or exponential.

Unit Family & Scale Unit Menus



For the PD6603/07 Feet and Inches level meter the unit family can only be set for height and the scale unit can only be set for FT-IN.

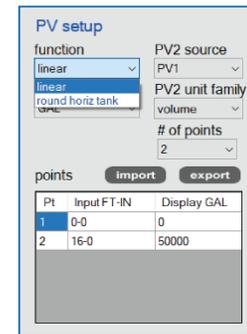
Scaling Points / Import and Export



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.

Function Menu (PV2)

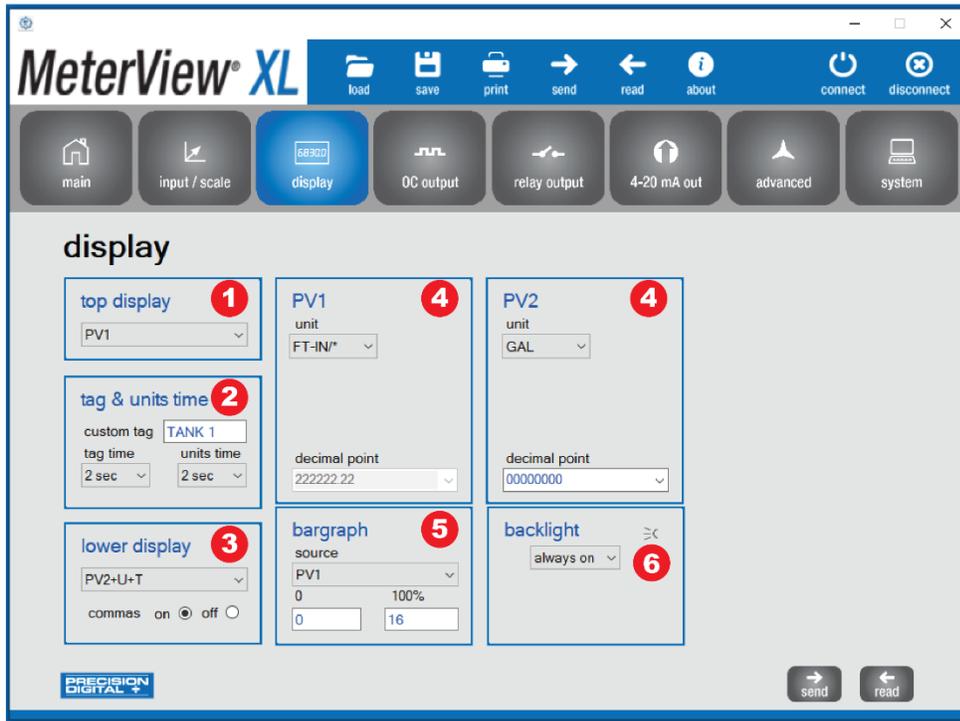


Select linear or round horizontal tank. For Round Horizontal Tank all the user has to do is enter the Diameter and Length of the tank and the meter will automatically calculate the volume.

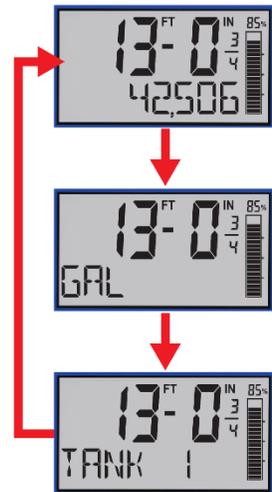
Press the  button at the bottom right of the window to send the new settings to the meter.

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. The **scale PV1** and **scale PV2** sections are used for setting the units and decimal points. If the dual-scale function is disabled, only one **PV** section (**scale input**) 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.

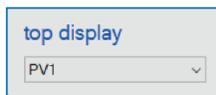


Scrolling Display

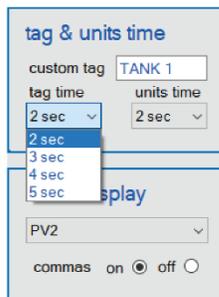


The meter is programmed to cycle between the volume, units, and the tag.

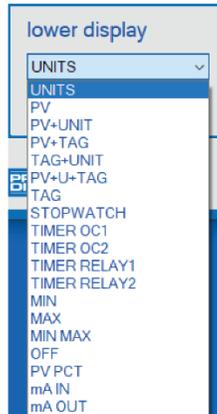
1
Top Display
Do not change the default selection; other settings are not valid.



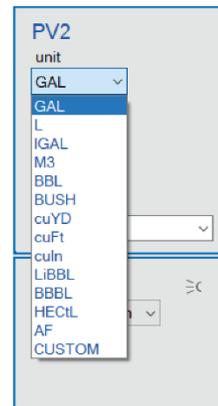
2
Tag & Units Time
Enter name for custom tag and set display time for tag and units.



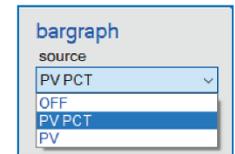
3
Bottom Display
Select what will be shown on the bottom line of the meter's display. Activate "commas" to make it easier to read large numbers like 78,765,249.



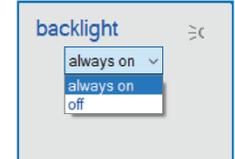
4
PV2
Set units and decimal point for PV2. Only PV will appear if dual-scale is disabled.



5
Bargraph
Select the source and scaling for the bargraph.



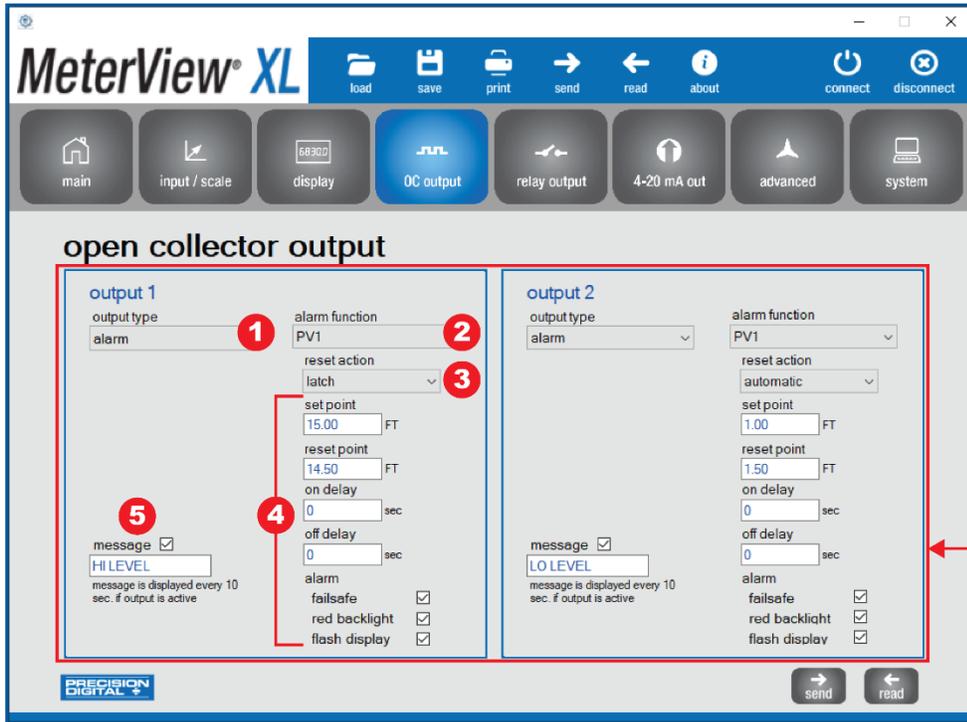
6
Backlight
Set the backlight to be always on or off.



Press 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 high and low 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 LEVEL alarm message.

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

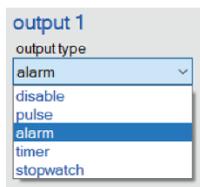
Output 1 and 2

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

1

Output Type Menu

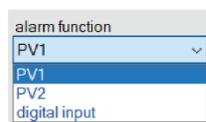
Select an output type for the open collector output. In this case, alarm function.



2

Alarm Function Menu

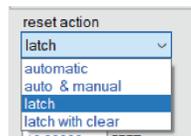
Assign the alarm function to PV1, PV2, or digital input.



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 LEVEL".

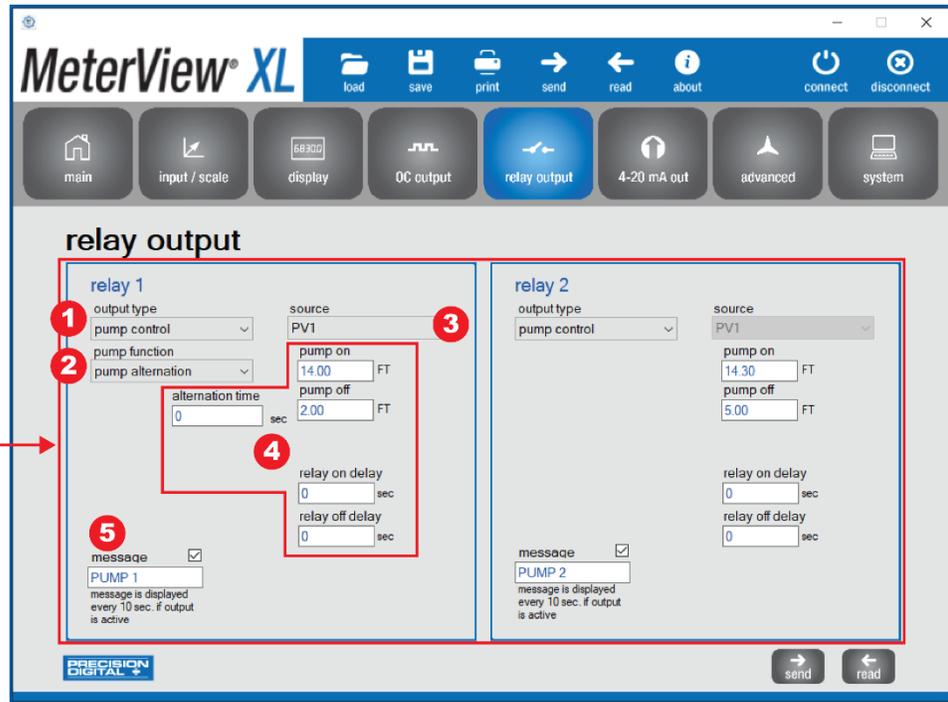


Press the  button at the bottom right of the window to send new settings to the meter.

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 pump alternation:

Relay 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 relay output. In this case, pump control.

2

Pump Function Menu

Program the relays to operate in either "on/off" or "alternation" mode.

3

Source Menu

Select the source for the function.

4

Set Parameters for the Function

Choose the value for when the pump turns on and off. Set on and off delay time. Set alternation time. The alternation time is the time after which the pumps will alternate even if the "pump off" point has not been reached.

5

Custom Message

A custom message may be displayed on the meter when the relay is active by checking the "message" box. The message, "PUMP 1", in this case, will be displayed every 10 seconds.

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

4-20 mA Output Screen

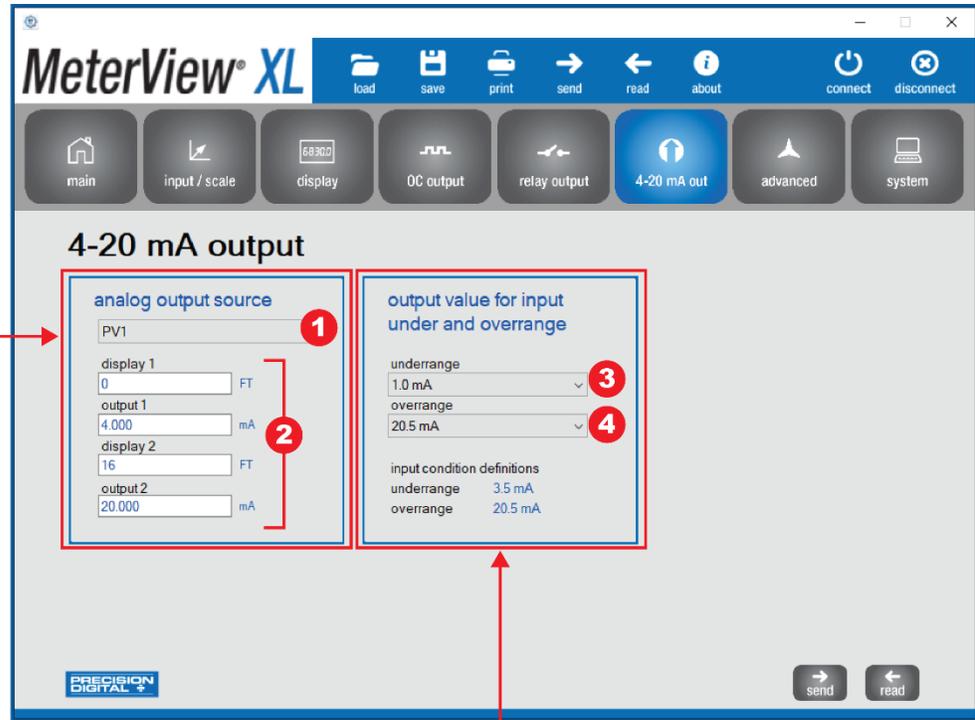
The 4-20 mA out screen allows the optional 4-20 mA analog output to be set up and scaled appropriately. The output may either be scaled independently of the input, or simply retransmitted in the same scale. In addition, analog output values can be set for under and overrange input conditions.

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

Ovrange 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 Menu

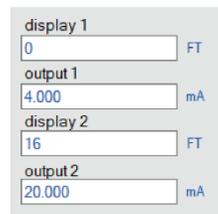
Select a source for the 4-20 mA output: PV1, PV2, retransmit, or disable.



2

Scale Values

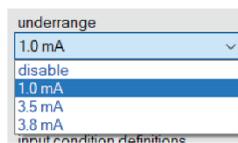
If PV1 or PV2 is selected for the source, enter the scale values for display 1, output 1, display 2, and output 2.



3

Underrange Menu

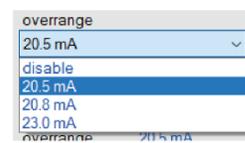
Select the output value for when the display value is below 3.5 mA. This can also be disabled.



4

Ovrange Menu

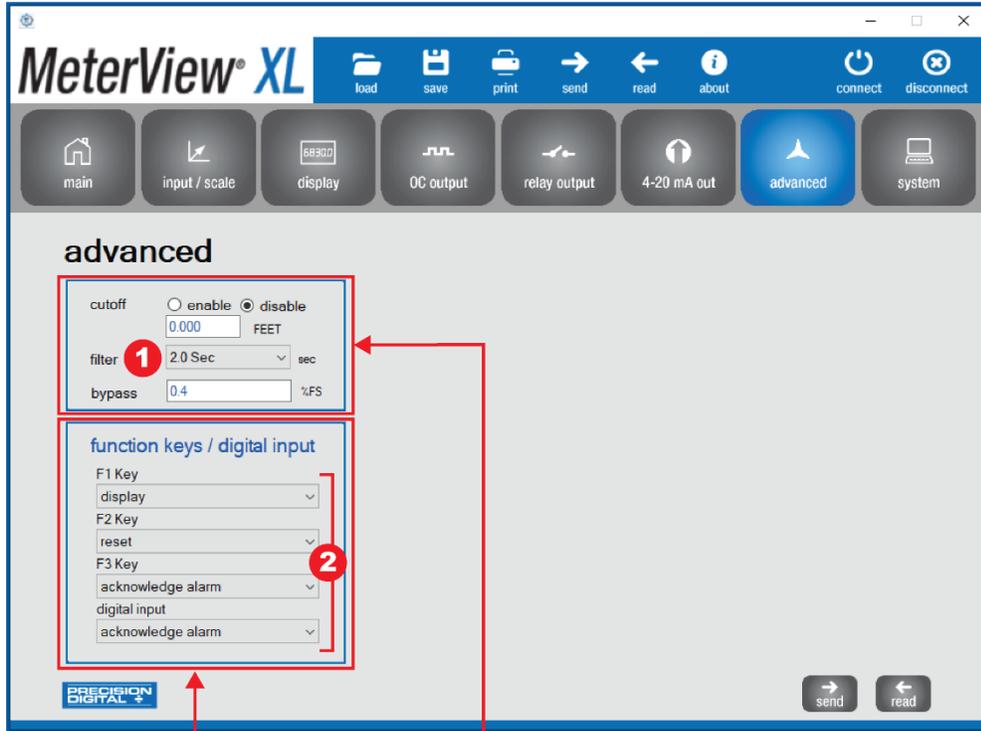
Select the output value for when the display value is above 20.5 mA. This can also be disabled.



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

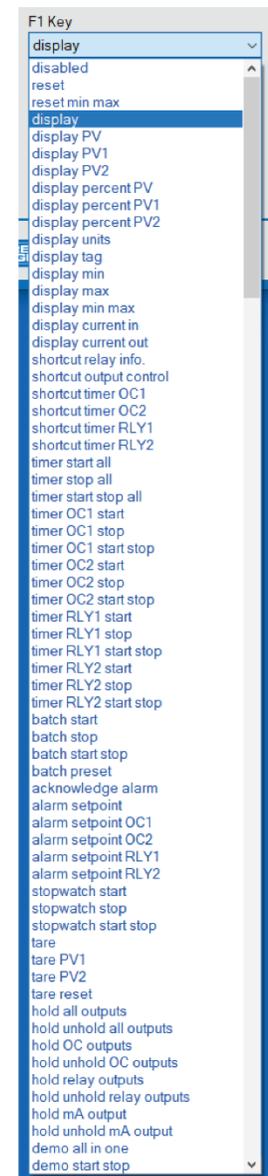
Advanced Screen

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.



Function Keys / Digital Input

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

Cutoff, Filter, and Filter Bypass

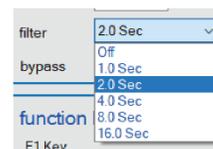
Cutoff: Point below at which display always shows zero. Mostly used for flow rate applications. Not relevant for this level application so it has been disabled.

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.

Filter Menu

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



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

System Screen

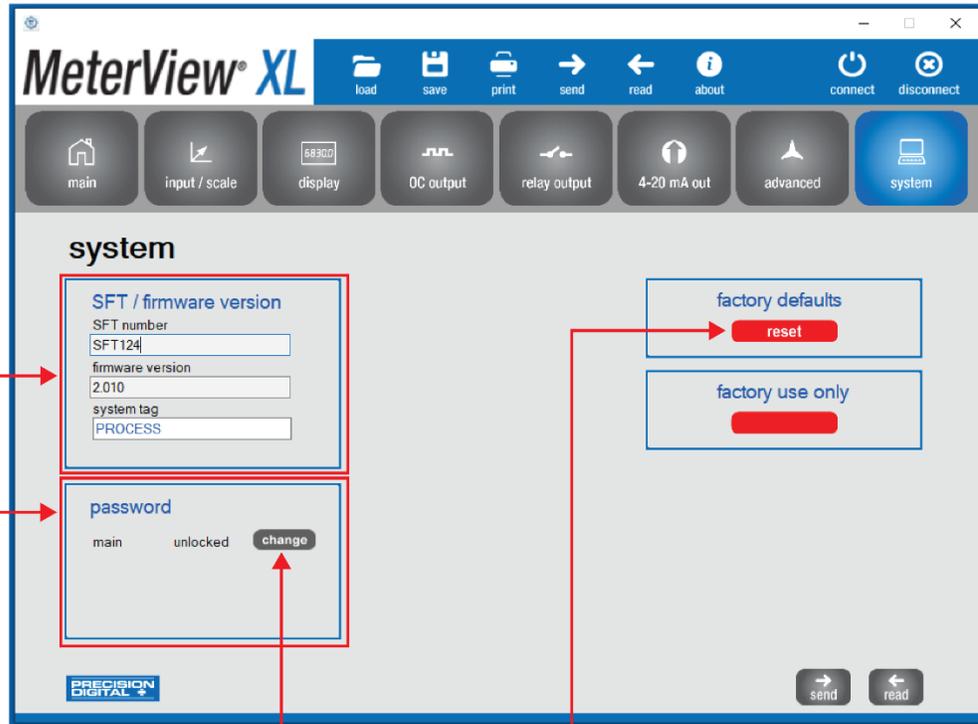
The system screen shows basic meter information such as software number and revision level. It also provides a means to set a password, reset the meter to factory defaults and set a system tag. The system tag is a custom message that appears on meter power up (8 characters max).

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.



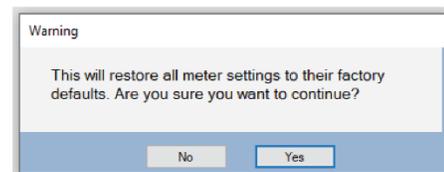
Change Password Button

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	PV1	units	PV1 percent	units
2/22/2021 12:09	0.05	FT-IN	0.29	%
2/22/2021 12:10	0.48	FT-IN	3.02	%
2/22/2021 12:10	0.9	FT-IN	5.63	%
2/22/2021 12:10	1.34	FT-IN	8.36	%
2/22/2021 12:10	1.76	FT-IN	10.97	%
2/22/2021 12:11	2.18	FT-IN	13.64	%
2/22/2021 12:11	2.61	FT-IN	16.29	%
2/22/2021 12:11	3.03	FT-IN	18.95	%
2/22/2021 12:12	3.46	FT-IN	21.63	%
2/22/2021 12:12	3.88	FT-IN	24.23	%
2/22/2021 12:12	4.32	FT-IN	26.97	%
2/22/2021 12:12	4.74	FT-IN	29.65	%
2/22/2021 12:13	5.17	FT-IN	32.31	%
2/22/2021 12:13	5.6	FT-IN	34.98	%
2/22/2021 12:13	6.02	FT-IN	37.6	%
2/22/2021 12:13	6.45	FT-IN	40.33	%
2/22/2021 12:14	6.88	FT-IN	42.97	%
2/22/2021 12:14	7.31	FT-IN	45.69	%
2/22/2021 12:14	7.73	FT-IN	48.33	%
2/22/2021 12:15	8.15	FT-IN	50.96	%
2/22/2021 12:15	8.59	FT-IN	53.71	%
2/22/2021 12:15	9	FT-IN	56.26	%
2/22/2021 12:15	9.43	FT-IN	58.94	%
2/22/2021 12:16	9.87	FT-IN	61.67	%
2/22/2021 12:16	10.29	FT-IN	64.3	%
2/22/2021 12:16	10.71	FT-IN	66.95	%
2/22/2021 12:17	11.14	FT-IN	69.6	%

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: 02/23/2021
PD6603                                           Software ID: SFT124 Revision: 2.010
System tag                                       PROCESS
Printed by MeterView XL                        Version 2.0.0

-- Input --
input                                           4-20 mA
total                                           disable
dual scale                                     enable

PV1 function                                   linear
PV1 units family                             height
PV1 units                                      FT-IN
PV1 scale points                              2
PV1 scale                                     input      display
                                               4.000      0-0
                                               20.000     16-0

PV2 function                                   linear
PV2 source                                    PV1
PV2 units family                             volume
PV2 units                                      G/L
PV2 scale points                              2
PV2 scale                                     input      display
                                               0-0       0
                                               16-0     50000

-- Display --
top display                                    PV1
lower display                                 PV2-U-T
custom tag                                    TANK 1
tag time                                     2 sec
units time                                   2 sec
commas                                       enable

PV1 display units                             FT-IN*
PV1 decimal point                            22222.22

PV2 display units                             G/L
PV2 decimal point                            00000000

bargraph source                               PV1
bargraph 0%                                  0
bargraph 100%                                16
    
```

```

backlight                                     always on
LCD

-- Open Collector --
OC1 output type                               alarm
OC1 source                                    PV1
OC1 reset action                              latch
OC1 set point                                 15.00 FT
OC1 reset point                               14.50 FT
OC1 on delay                                  0 sec
OC1 off delay                                 0 sec
OC1 fail safe                                 enable
OC1 red backlight                             enable
OC1 flash display                             enable
OC1 message enable                            HI LEVEL

OC2 output type                               alarm
OC2 source                                    PV1
OC2 reset action                              automatic
OC2 set point                                 1.00 FT
OC2 reset point                               1.50 FT
OC2 on delay                                  0 sec
OC2 off delay                                 0 sec
OC2 fail safe                                 enable
OC2 red backlight                             enable
OC2 flash display                             enable
OC2 message enable                            LO LEVEL

-- Relay --
relay 1 output type                           pump control
relay 1 pump function                          pump alternation
relay 1 pump alternation time                  0 sec
relay 1 pump source                            PV1
relay 1 pump on                                14.00 FT
relay 1 pump off                               2.00 FT
relay 1 on delay                              0 sec
relay 1 off delay                             0 sec
relay 1 message enable                         enable PUMP 1

relay 2 output type                           disable
relay 2 message enable                         enable PUMP 2

-- mA Output --
analog output source                           PV1
    
```

```

analog output scale                           display      output
                                               0            4.000
                                               16           20.000

analog output underrange                       1.0 mA
analog output overrange                       20.5 mA

-- Advanced --
cutoff enable                                 disable
cutoff                                         0.00
filter                                         2.0 Sec
bypass                                         0.4

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

Contact Precision Digital

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