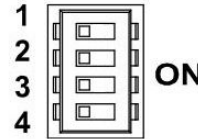INTRODUCTION TO
APM CONFIGURATOR SOFTWARE

FEBRUARY 2023

1. Connect your APM device into the computer via the recommended USB cable.

2. The APM model will show in the APM configurator screen. (Image #1)

Note: When using the APM Configurator software to configure your APM, all DIP switches on the back of the unit need to be set to 0 (off - pointing to the left-hand side).

1 2 3 4 **ON**

The DIP switches are on the back of the unit.

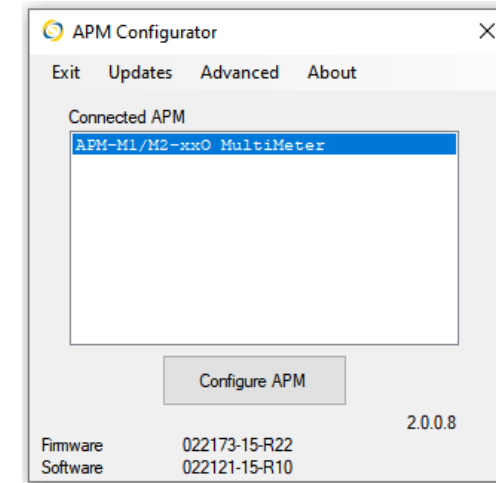
1. Check for updates for your specific model. (Image #2)
   1. Click on *Updates*
   2. Check to see if the Install Updates for Selected Meter is highlighted
      - If highlighted, click on *Install Updates for Selected Meter*.

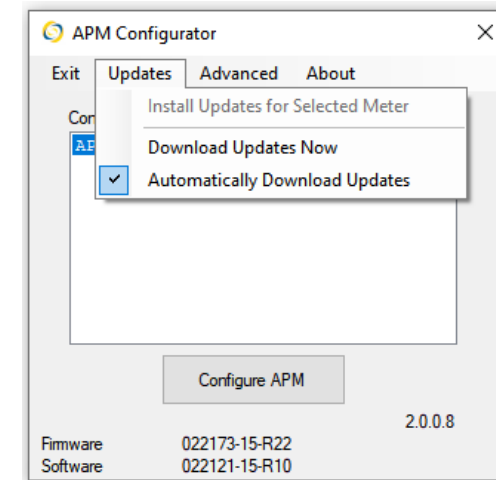2. Let the updates complete and then click on *Configure APM*.

Image #1

APM Configurator

Exit   Updates   Advanced   About

Connected APM

APM-M1/M2-xxO MultiMeter

Configure APM

2.0.0.8

Firmware   022173-15-R22
Software   022121-15-R10

Image #2

APM Configurator

Exit   Updates   Advanced   About

Install Updates for Selected Meter

Download Updates Now

✓ Automatically Download Updates

Configure APM

2.0.0.8

Firmware   022173-15-R22
Software   022121-15-R10

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Image #1

Image #2

Each APM model has its own specific configurator screen. (Image #1)

1. **Displayed Message**
   - Click on *Edit* to change the displayed message on your APM display. (Image #2)

2. **Limit Decimal Places**
   - You can select up to 3 decimal places to show on the display.

3. **Default Color**
   - You can change the default background color of the display (positive display) or the default color of the bar graph, value and displayed message. (negative display)

4. **Display Intensity**
   - Set the brightness of the display when operating under normal conditions and the brightness of the display during a preset Alarm condition.

5. **Display Zero**
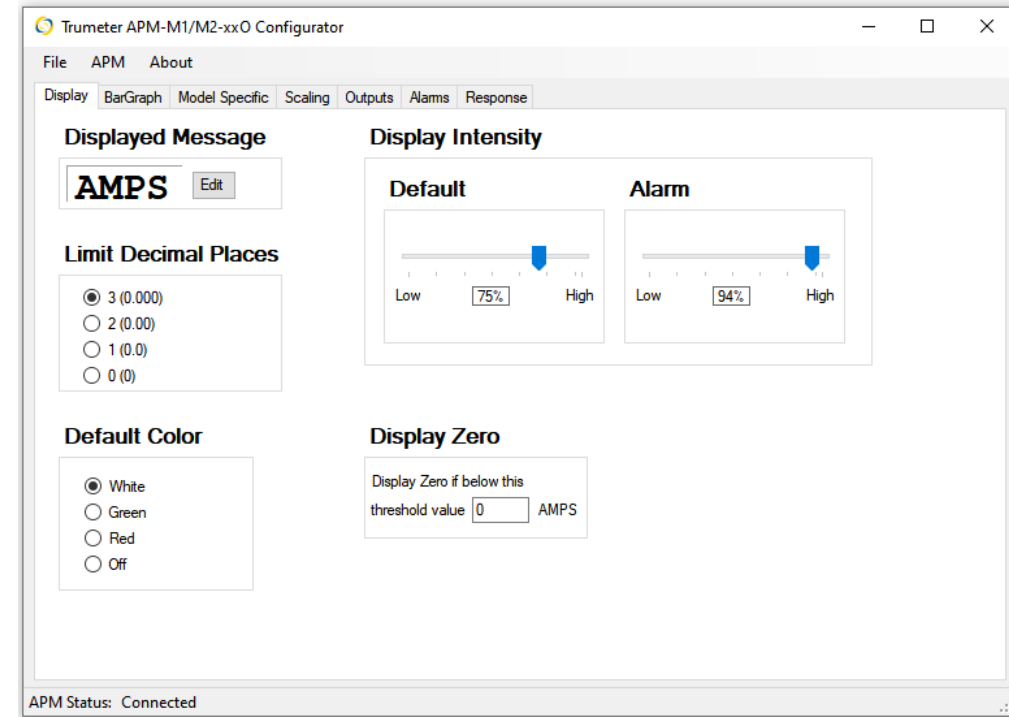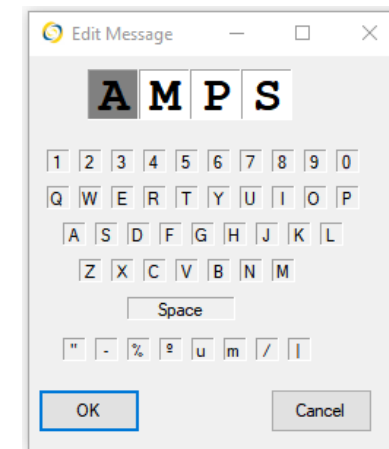   - Use this setting if you have floating values when the device you are monitoring is turned off.

1. **Bar Graph Scale** (Image #1)
   - This is where you configure the minimum and maximum values of your input.

     1. Checking the ***Percentage*** box will give you a percentage of the input value that the APM is reading. (i.e., if you are measuring a maximum of 600V and your input is at 300V, you will see 50% on the display.
     2. Checking the ***Centre Zero*** box will allow the display to show positive and negative values. (Image #2)
        - The Bar Graph Scale is limited to 1999. Values over 2000 will show with a x10 mark.

     3. Checking ***Display Peak*** provides a visual indication of the average peak value on the bar graph display.
        - The duration the peak bar is visible is configurable from a few seconds to a few minutes by adjusting the ***Peak Bar*** slider on the Response tab.
        - Alternatively, if you want the Peak Bar to be latched on and show the maximum value since the unit was reset, click ***Peak Hold.***
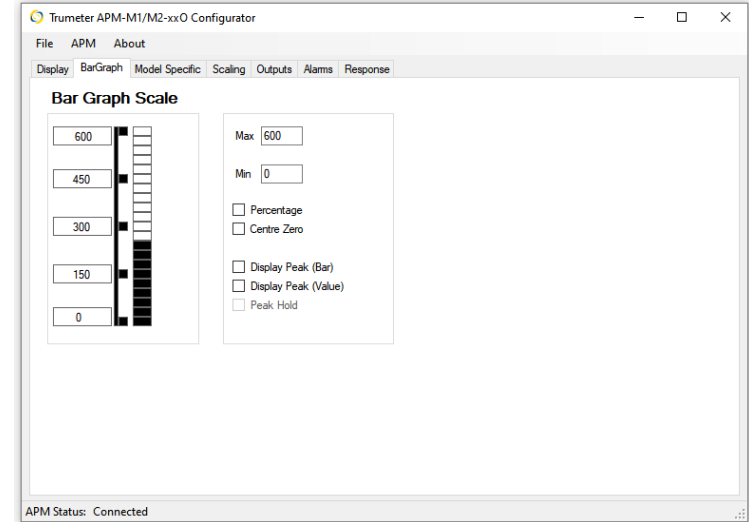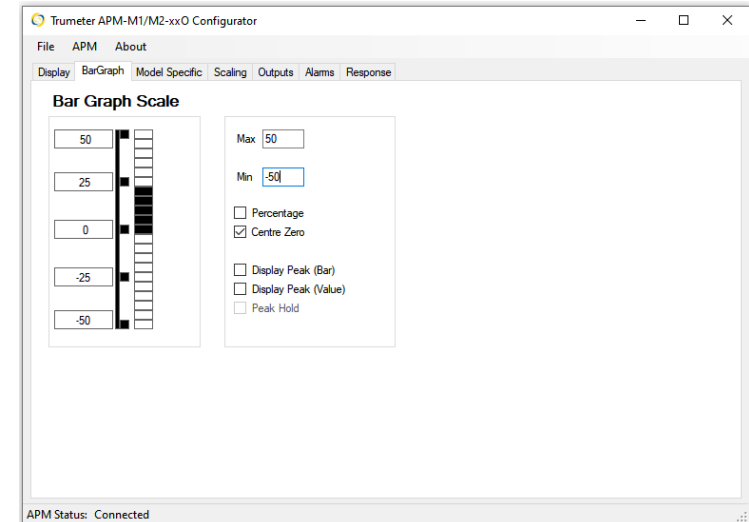

Image #1

Image #2

1. Scale

- In certain applications, you may want to apply a correction factor to the displayed value. As an example, if you want 1 volt of the input to equal 10 volts on the display then all you need to do is select **Scale & Offset** and enter 10 in the Scale box.

2. Offset

- If you want the displayed value to be the input value plus 3 volts, then enter 3 in the **Offset** box. If your input is 4 volts and you add 3 in the **Offset** box, your display will show 7 volts.

3. Scale and Offset

- If you set both a Scale and an Offset, then APM will apply the Offset first followed by the Scale. For example, applying a **Scale** of 0.01 and an **Offset** of 2 will result in the values to the right. (Image #2)
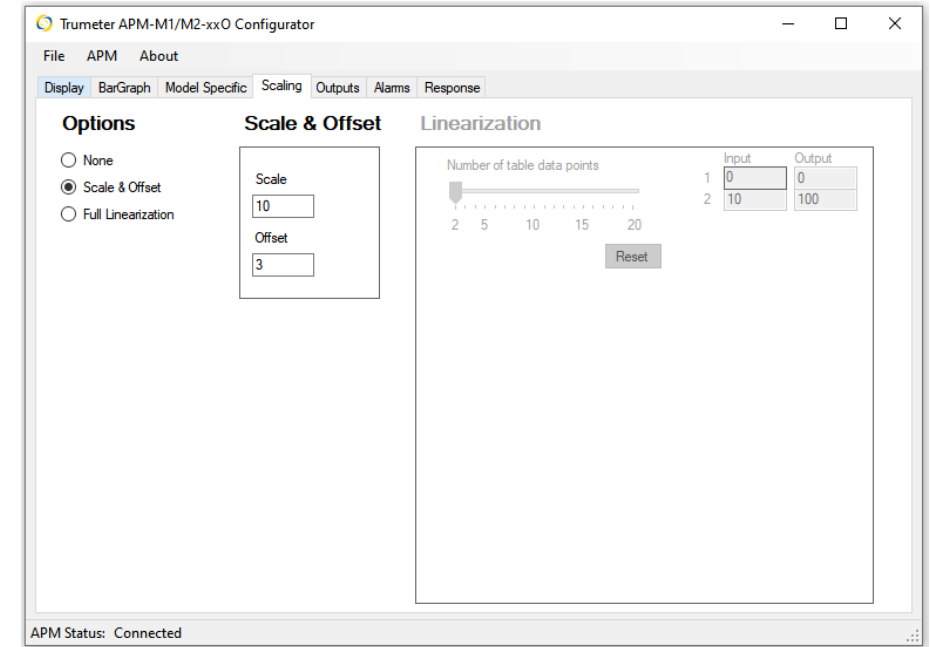- In the example here, applying 20V to the meter the displayed value would be (20V + 2) x 0.01 = 0.22V.

Image #1

Input	Displayed Value
0	0.02
10	0.12
20	0.22
30	0.32
40	0.42
50	0.52

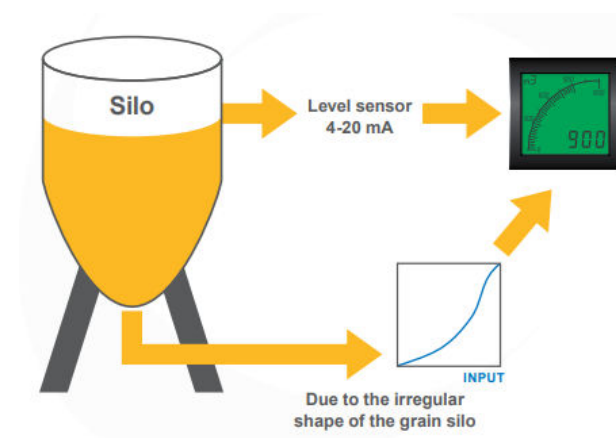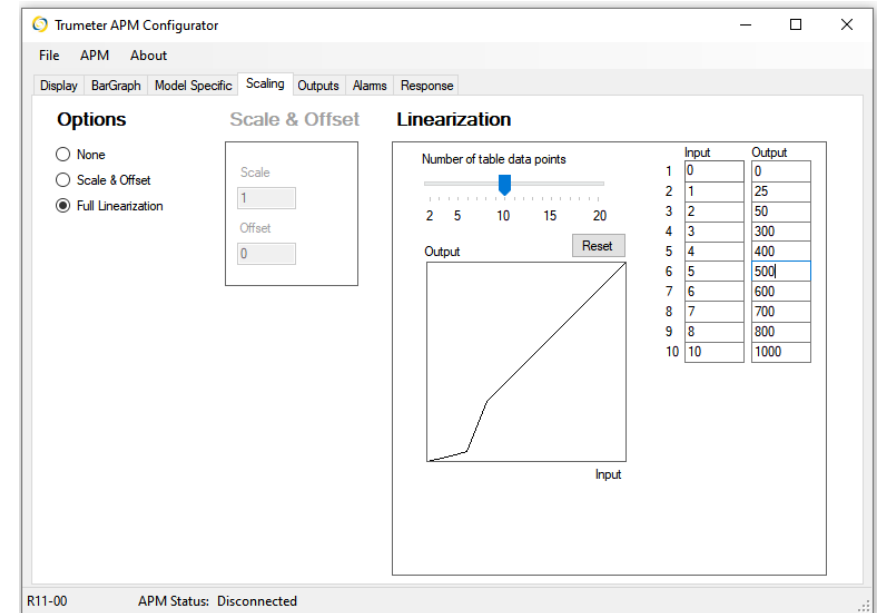**Image #2**

4. **Full Linearization**
   - Most of the APM meters include a 20-point linearization table that can be used to correct for non-linear sensors such as thermocouples and pressure transducers. Select *Full Linearization* to open the table.

Example
Due to the irregular shape of the silo, the 20-point linearization table is used to correct the non-linear signal from the sensor. The displayed value accurately shows the volume in the silo. High or low setpoints can be set, and the APM can be integrated into other systems for process control.

APM **OUTPUT SCREEN**

Output 1 & Output 2 (You can choose either *Digital* or *Analogue*)

1. **Digital Output** (Image #1)
   - Open Collector Transistor
   - The maximum current that the APM can sink is 500mA. The APM can therefore be connected to a load of up to 12W. Please note that the maximum voltage that can connected to the outputs is 24VDC.
   - Can be used to control a relay or buzzer.
   - You can select the digital output to be Normally Open (NO) or Normally Closed (NC).

Image #1

2. **Analogue Output** (Image #2)
   - The 4-20mA output is a current source. The output will deliver a current between 4mA and 20mA into a maximum resistance of 250 ohms.
   - Analogue Range
     - The Analogue Range is used to determine what the 4mA and 20mA output values will be. (i.e., 4mA set to 0 volts and 20mA set to 600 volts. The Analogue Output will show 600 volts if the input voltage is at 600 volts.)
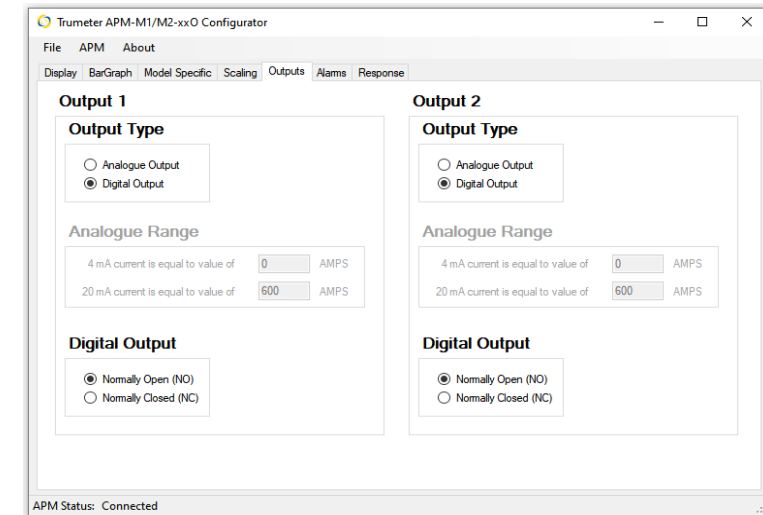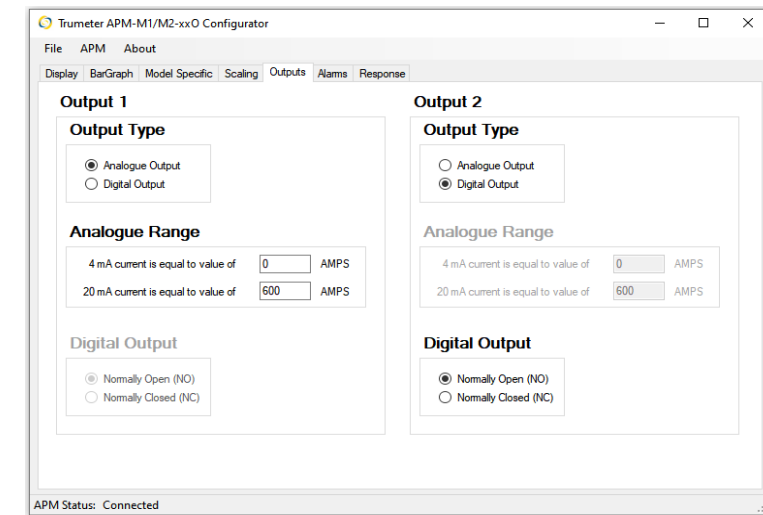

Image #2

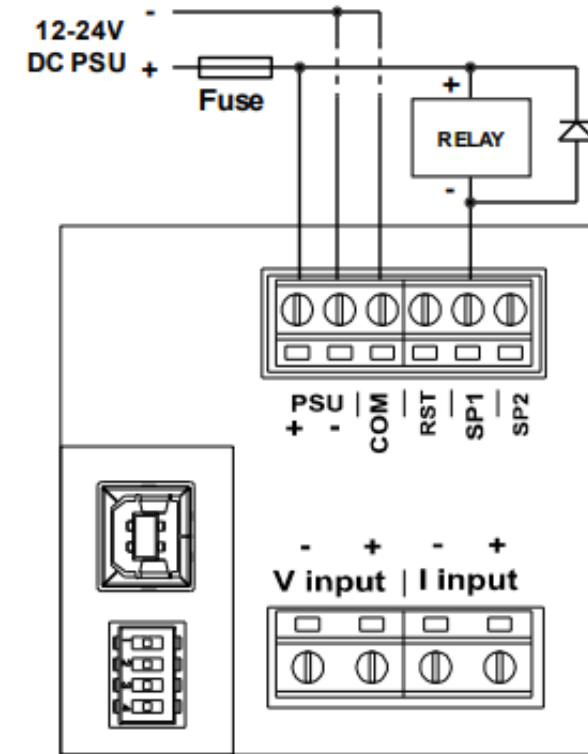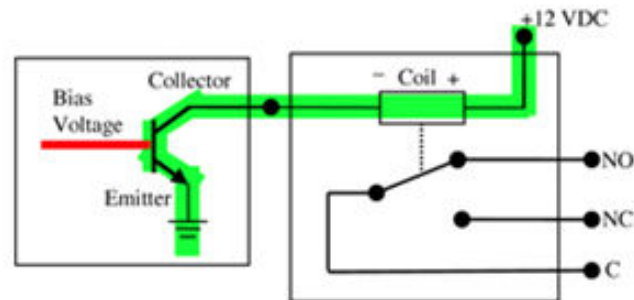1. **The APM SP1, and SP2 are NPN outputs.**
   - Use a 12-24VDC external relay and wire the ***plus*** connection directly to the relay. The (-) of PSU (12-24VDC only) needs to go to the ***common*** terminal. This signal (ground) will come out on SP1 or SP2 to turn on the external relay.

2. **Standard Open Collector Output**
   - The external relay or buzzer needs to be rated for 500mA current draw.

1. **State**
   - Select the *Enable Alarm* box to setup the alarm

2. **Trigger**
   - Use this section to setup the measurement values to trigger the Alarm.
     - Above the value in the Active box
     - Below the value in the Active box
     - Between the value in the Active box
     - Outside the value in the Active box
     - Advanced
       - Gives you better control of the Alarm by providing more specifications by providing inputs for when the Alarm is Active and Inactive.

3. **Actions**
   - Change the backlight of the display on an Alarm
     - Flash or Steady
     - Color
       - White, Red, Green or Off
     - Control the Digital Output
       - Switch from default setting (NO or NC).
     - Edit the Alarm Message (Image #2)
       - This will be the message that shows on the display when the Alarm is active.

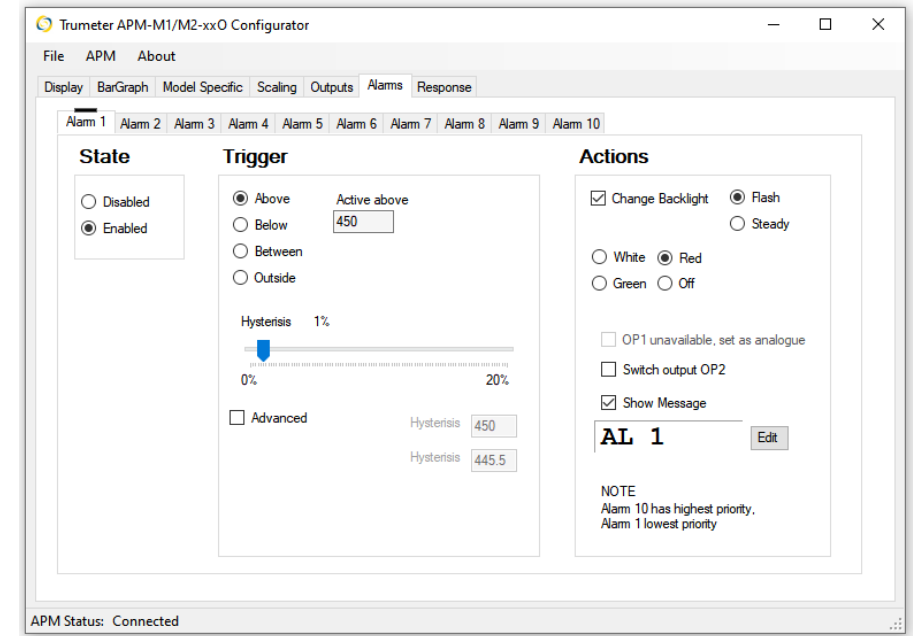   **Note: Alarm 10 has the highest priority and Alarm 1 has the lowest priority**

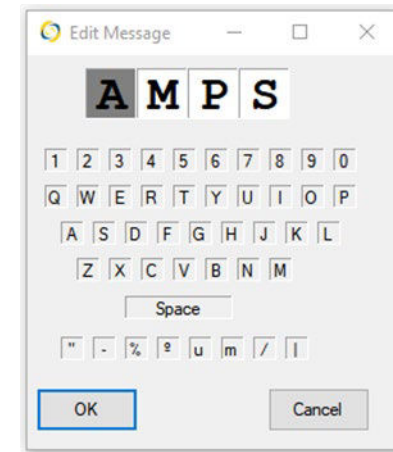

Image #1

Image #2

1. **Response**
    1. **4 Digit**
        - This setting allows to slow down or speed up the refresh rate of the 4-digit readout on the display.
    2. **Bar Graph**
        - This setting allows to slow down or speed up the refresh rate of the bar graph on the display.
    3. **Alarm**
        - This setting allows to slow down or speed up the refresh rate of the displayed Alarm.
    4. **Peak Bar**
        - This setting allows to slow down or speed up the refresh rate of the Peak Bar on the display. This feature is only active when Display Peak Bar box is checked on the Bar Graph screen.

2. **Digital Output 1 & Digital Output 2**
    - These settings allow for you to control the on and off delay of a digital output. Only for use if you have the outputs set to digital on the Outputs screen. Also used within the Alarms screen.
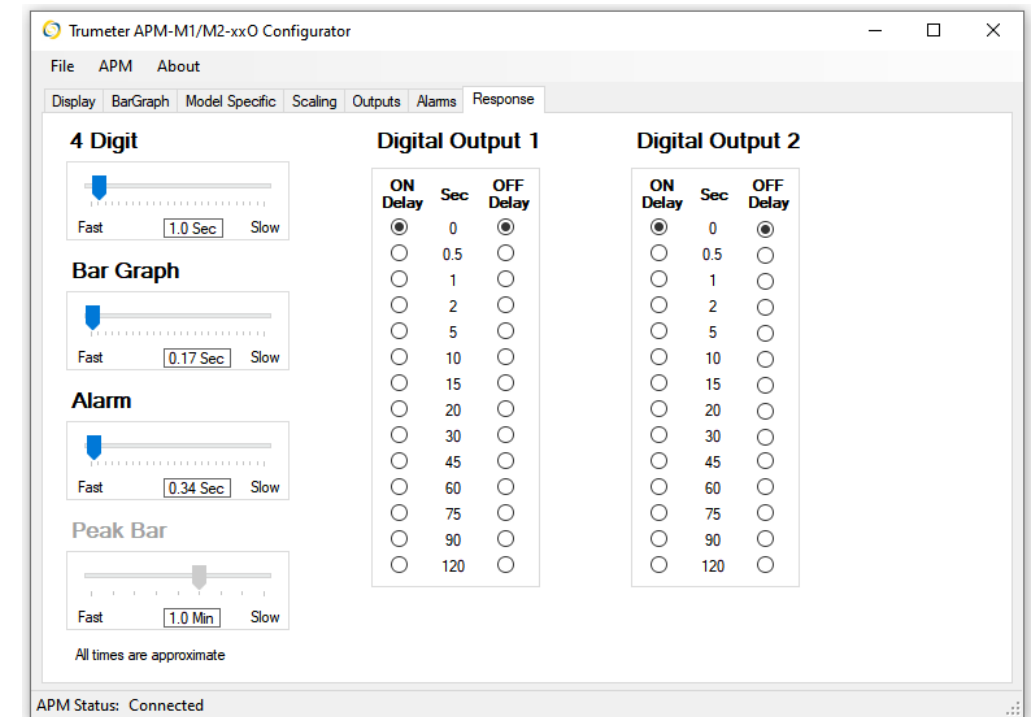

Image #1

1. **Write the Configuration to the APM** (Image #1)
   - Once you are finished with your configuration settings, you must write the program to the APM.
     1. Select *APM* and then *Write Configuration to APM*.
     2. You will receive a confirmation notice.
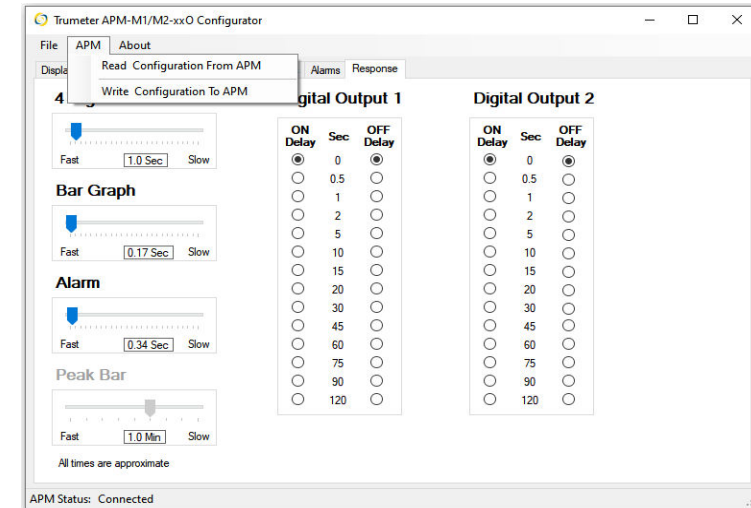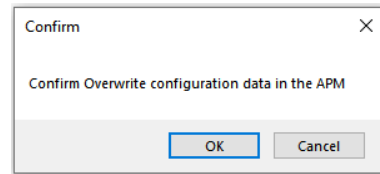   - Select *OK*

Image #1

2. **Read the Configuration of an Already Programmed APM** (Image #1)
   - Useful when you purchase the same type of APM, and you want the load the same configuration as your current APM.
     1. Connect the current APM.
     2. Select *APM* and then *Read Configuration from APM*
        - This will read the configuration of the APM that you have plugged in.
        - Connect the new meter and follow step 1 above.

3. **Open, Save and Load Factory Defaults** (Image #2)
   - The APM configurator allows for the saving and opening of your custom configuration files.
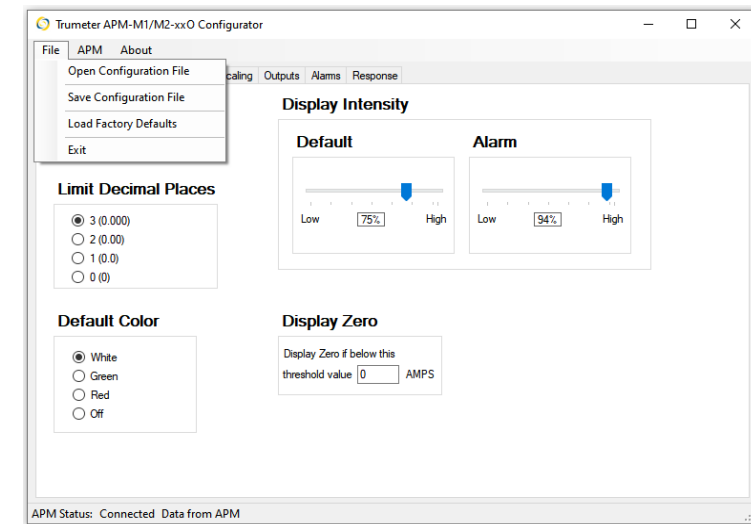   - Load Factory Defaults

Image #2

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