INTRODUCTION TO
SIGNAL CONDITIONER CONFIGURATOR SOFTWARE

INITIAL SIGNAL CONDITIONER CONFIGURATION SCREEN

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

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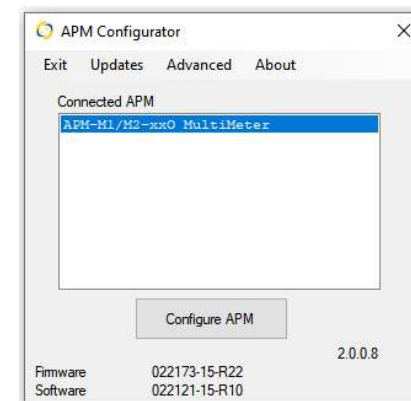

Image #1

3. 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*.

4. Let the updates complete and then click on *Configure Signal Conditioner*.
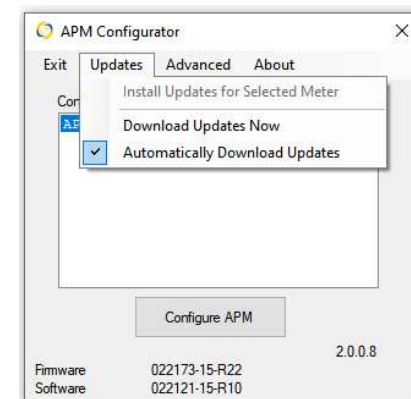

Image #2

SIGNAL CONDITIONER DISPLAY SCREEN

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

1. **Displayed Message**
   - N/A

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

3. **Default Color**
   1. N/A

4. **Display Intensity**
   - N/A

5. **Display Zero**
   - N/A

6. **HOLD**
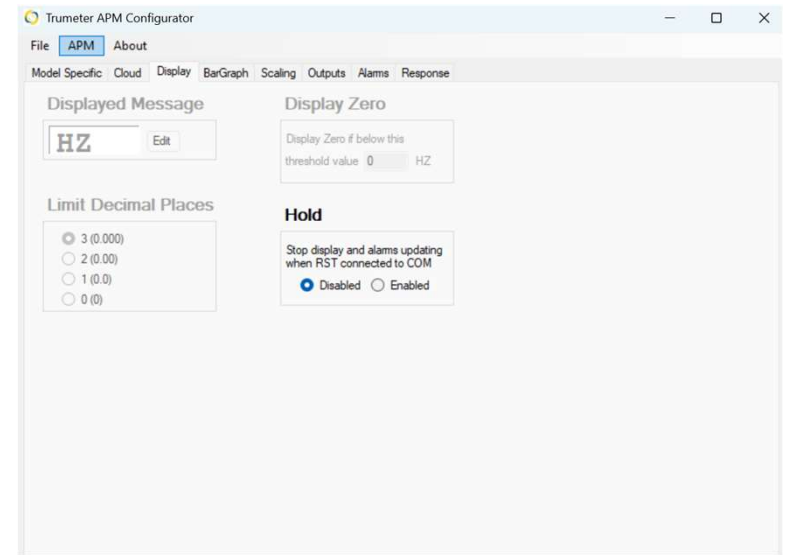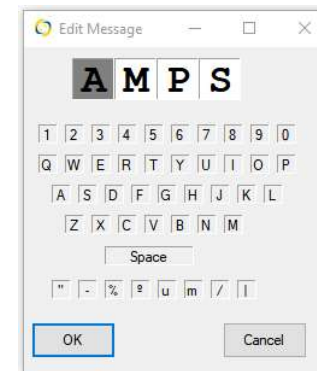   - The hold feature allows users to temporarily stop the alarms.

Image #1

Image #2

SIGNAL CONDITIONER SCALING SCREEN

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

2. **Offset**
    - If you want the 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 meter will show 7 volts.

3. **Scale and Offset**
    - If you set both a Scale and an Offset, then Signal Conditioner 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.

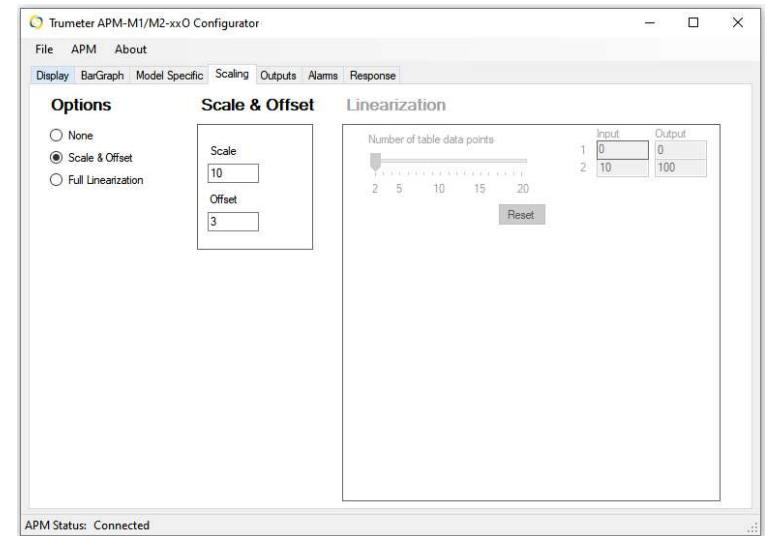**Image #1**

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

Image #2

trumeter
innovation by design

4. Full Linearization

- Most of the Signal Conditioner 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. High or low setpoints can be set, and the Signal Conditioner can be integrated into other systems for process control.
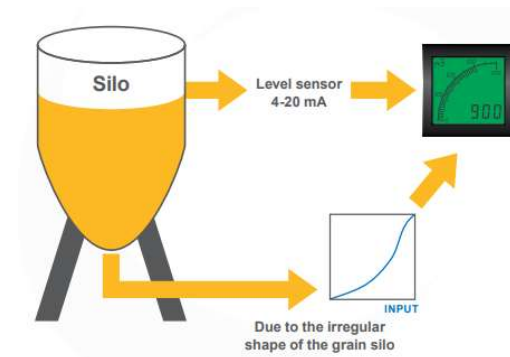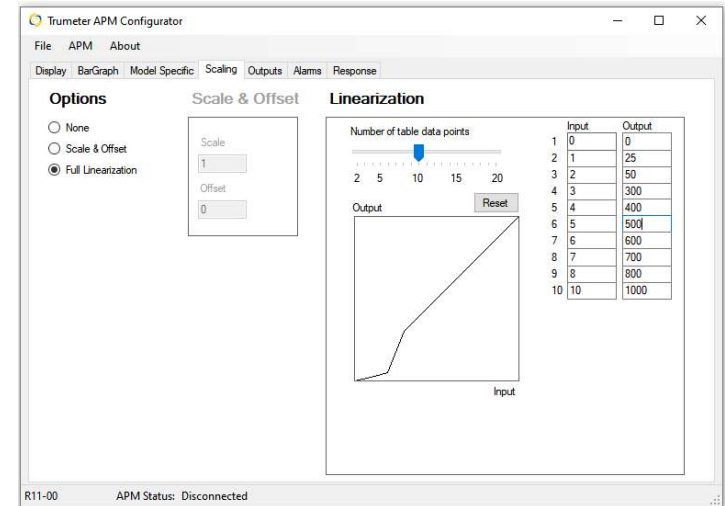
Output 1 & Output 2 (You can choose either *Digital* or *Analogue*)

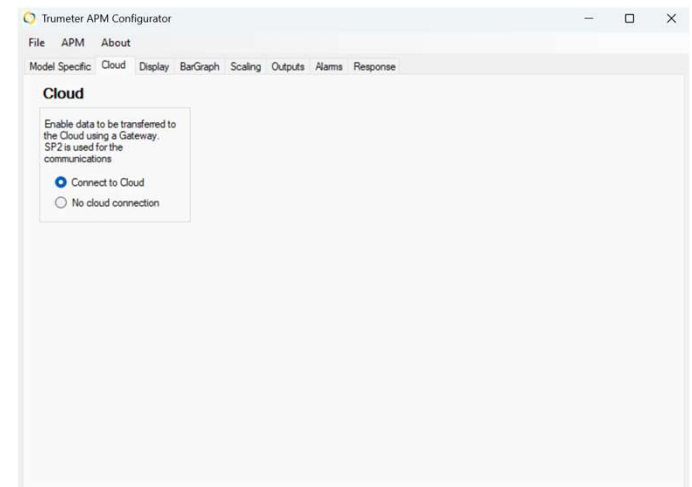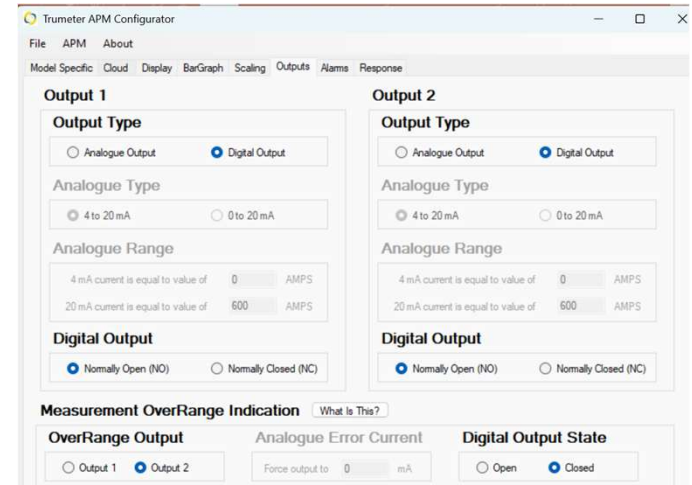1. **Digital Output** (Output #1)
   - Open Collector Transistor
   - The maximum current that the Signal Conditioner can sink is 500mA. The Signal Conditioner can therefore be connected to a load of up to 12W. Please note that the maximum voltage that can connected to the outputs is 24VDC.
   - Can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

2. **Analogue Output** (Output #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.)

3. **Cloud Tab**
   - Select Connect to Cloud to use SP2 (output 2) to connect to the Gateway and the Trumeter Cloud.

1. **The Signal Conditioner 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.
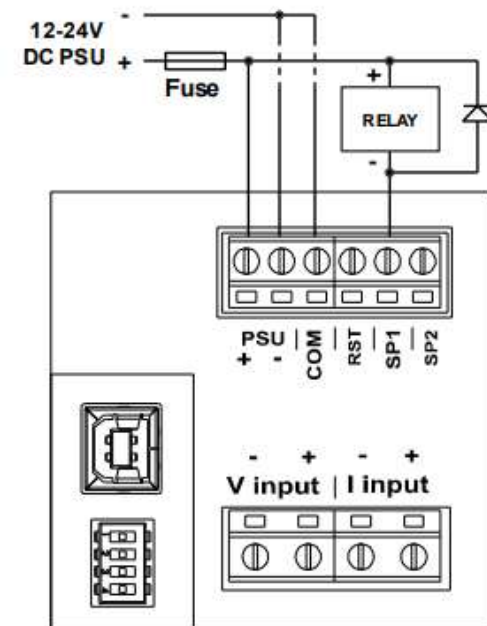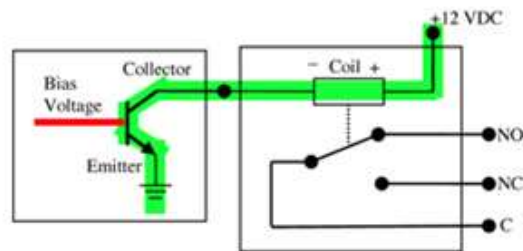
SIGNAL CONDITIONER ALARMS SCREEN

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.
     - o Above the value in the Active box
     - o Below the value in the Active box
     - o Between the value in the Active box
     - o Outside the value in the Active box
     - o 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**
   - o Control the Digital Output
     - Switch from default setting (NO or NC).

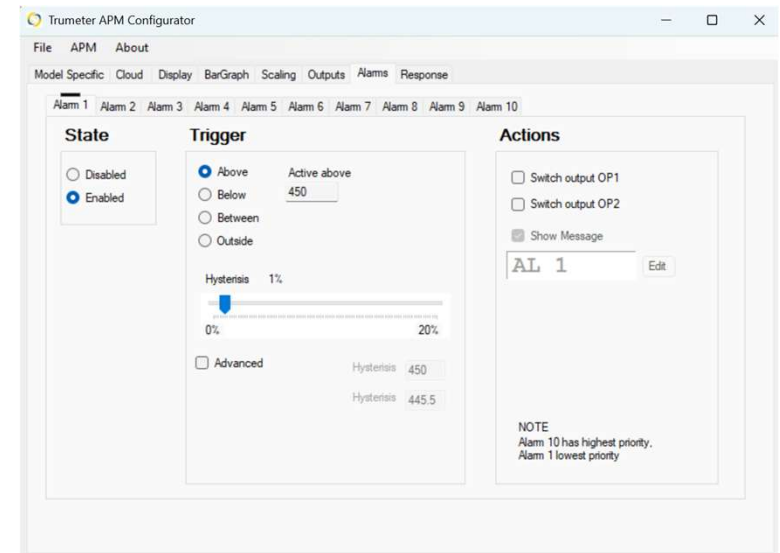**Note: Alarm 10 has the highest priority and Alarm 1 has the lowest priority**
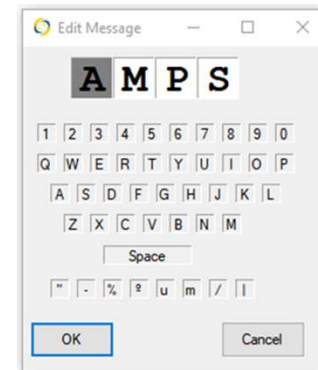

Image #1

Image #2

1. **Response**
    1. **4 Digit**
        • N/A

    2. **Bar Graph**
        • N/A

    3. **Alarm**
        • N/A

    4. **Peak Bar**
        • N/A

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.
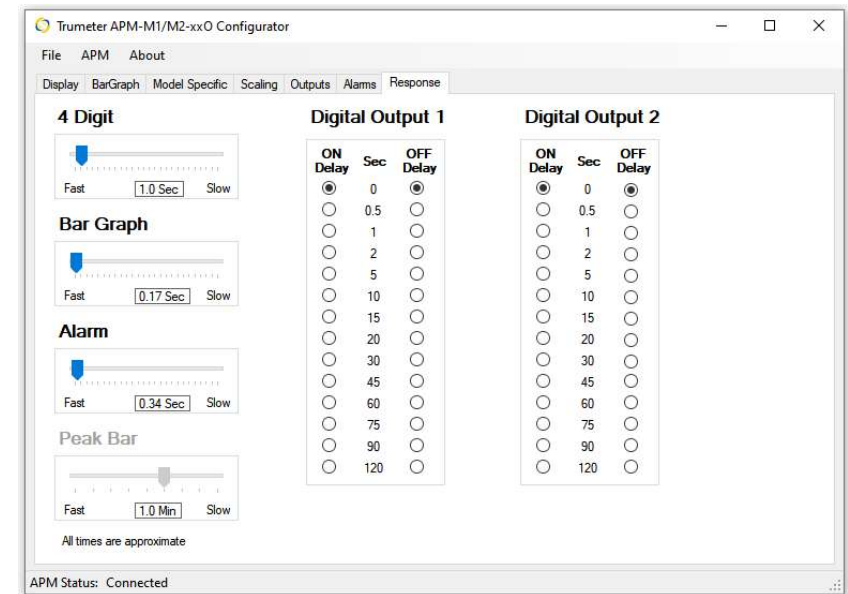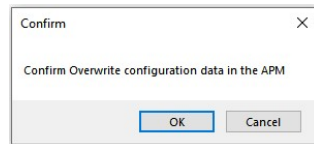

Image #1

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

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

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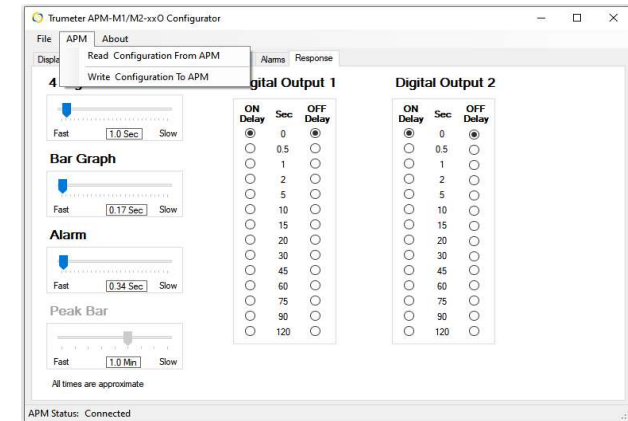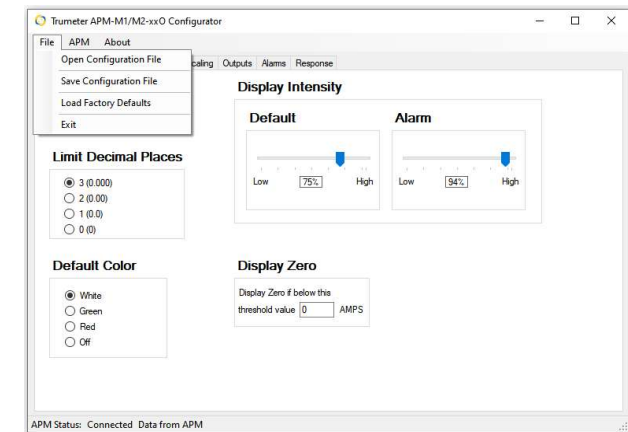   - Load Factory Defaults

Image #1

Image #2

Deerfield Beach, FL USA | Manchester, England | Penang, Malaysia