1) Connections to the MAP4000

    a. Connect the Potentiometer to the MAP4000 process monitor.

        a.i. Connect PIN 1 of the POT to PIN 23 on the MAP

        a.ii. Connect PIN 2 of the POT to PIN 22 on the MAP

        a.iii. Connect PIN 3 on the POT to PIN 20 on the MAP

    b. Connect power cord to MAP4000

        b.i. Connect BLUE to PIN 1

        b.ii. Connect BROWN to PIN 2

        b.iii. Connect GREEN to PIN 3

2) Input button definitions:

    a. HOME key = The left most key on the MAP4000 process monitor.

    b. LEFT ARROW key = The left arrow key on the MAP4000 process monitor.

    c. DOWN ARROW key = The down arrow key on the MAP4000 process monitor.

    d. UP ARROW key = The up arrow key on the MAP4000 process monitor.

    e. ENTER key = The right most key on the MAP4000 process monitor.

3) Select Potentiometer TYPE on MAP4000

    a. Hold down the HOME key and ENTER key together to enter programing mode.

        a.i. PASSW then TYPE will be displayed

        a.ii. Press the ENTER key again to select type of input you want for this device. In this case we want to select DU (for potentiometers). If DU is not flashing on the screen at this point in the process, use the UP ARROW or DOWN ARROW keys until DU is displayed.

a.iii. Press the ENTER key once DU is displayed on the screen.   Dashes may appear on the screen as a unit resets.

4) Set the display format

   a. The MAP does have a programming mode time out….so if numbers are displayed on the unit, you will need to hold down the HOME key and ENTER key together to enter programing mode again.

   b. Use the UP ARROW key until FORM A. is displayed, then press the ENTER key.

   c. The MAP4000 will display and flash the current format (i.e. OOO.ooo). You can press the UP ARROW to change the decimal point display setting here. Press the ENTER key when the desired format is displayed on the screen.

5) Set MIN and MAX display values. In this example we want to display values from 0 to 180 degrees on the MAP4000.

   a. The MAP does have a programming mode time out….so if numbers are displayed on the unit, you will need to hold down the HOME key and ENTER key together to enter programing mode again.

   b. Use the UP ARROW key to display MIN A and then press the ENTER key.

      b.i. You can set this value to what you want the MAP4000 to display in your first calibration position. In this case we will set it to 0.

      b.ii. You can adjust this value to whatever you would like by pressing and/or hold down the UP ARROW or DOWN ARROW key.

      b.iii. Once you are happy with your selected value, press the ENTER key.

   c. Use the UP ARROW or DOWN ARROW keys to display MAX A on the screen, and press the ENTER key to select.

     c.i.   You can set this value to what you want the MAP4000 to display in your end calibration position. In this example we will set it to 180.

     c.ii.   You can adjust this value to whatever you would like by pressing and/or hold down the UP ARROW or DOWN ARROW keys.

     c.iii.   Once you are happy with your selected value, press the ENTER key.

6) Calibration of the Sensor with the MAP4000 process monitor.

    a.   In this example we assume that we have two physically attainable points on the machine that will be monitored. One is a 0 position and the other is 180 degrees. These display value were defined in step 5 above.

    b.   Rotate the shaft on the potentiometer to what will be your "0" position.

    c.   The MAP does have a programming mode time out….so if numbers are displayed on the unit, you will need to hold down the HOME key and ENTER key together to enter programing mode again.

    d.   Press the UP ARROW or DOWN ARROW until C MIN is displayed on the screen. Select this feature by pressing the ENTER key. "YES ?" will be displayed.

     d.i.   If the potentiometer is in the "0" position you want …..press the ENTER key.

    e.   Press the UP ARROW or DOWN ARROW until C MAX is displayed on the screen. Select C MAX by pressing the ENTER key. "YES ?" will be displayed.

     e.i.   If the potentiometer is in the "180" position…..press the ENTER key.

    f.   At this point when you turn the potentiometer between to two mechanical points you physically went to in this calibration step, the MAP4000 should be displaying values from 0 to 180.

7) Setting up a TARE function & CLEAR TARE function

    a. In the event that you want to redefine the "0" position on your display you can define the input keys on the MAP4000 panel display to do this for you. The following instructions will program the LEFT ARROW key to be the TARE key and the DOWN ARROW key to be the CLEAR TARE.

    b. Program and define TARE key:

        b.i. The first step is to get into the Profi menu on the MAP4000. This is done by pressing the HOME key and the DOWN ARROW key at the same time. "INPUTS" will display on the MAP4000 unit.

        b.ii. Press the ENTER key on the MAP4000. "CLEAR" will be displayed on the screen.

        b.iii. Press the UP ARROW key until "KEYS" is displayed on the screen. Press the ENTER key.

        b.iv. "LEFT" will be displayed on the screen. Press the ENTER key.

        b.v. "FN. LE." Will briefly display on the screen. Using the UP/DOWN arrows move through the options until "TARE" is displayed. Press the ENTER key.

        b.vi. Press the HOME key to get out of the menu mode. The LEFT ARROW key is now defined as a TARE key. Test this by moving to a position and pressing the LEFT ARROW key. The displayed value should change to "O".

    c. Program and define CLEAR TARE key:

        c.i. The first step is to get into the Profi menu on the MAP4000. This is done by pressing the HOME key and the DOWN ARROW key at the same time. "INPUTS" will display on the MAP4000 unit.

        c.ii. Press the ENTER key on the MAP4000. "CLEAR" will be displayed on the screen.

        c.iii. Press the UP ARROW until "KEYS" is displayed on the screen. Press the ENTER key.

        c.iv. "LEFT" will be displayed on the screen. Press the UP ARROW key until "DOWN" is displayed on the screen. Press the ENTER key.

c.v. "FN. DO." Will briefly display on the screen. Using the UP/DOWN arrows move through the options until "CL.TARE." is displayed. Press the ENTER key.

c.vi. Press the HOME key to get out of the menu mode. The DOWN ARROW key is now defined as a CLEAR TARE key. Test this by pressing the DOWN ARROW key. The MAP4000 should now display the original set up points from step 6 above.