

FLXA2- DO Calculated System Set-up


This Tech Note is designed to assist you through the programming of the FLXA21 for calculated measurement set-up.

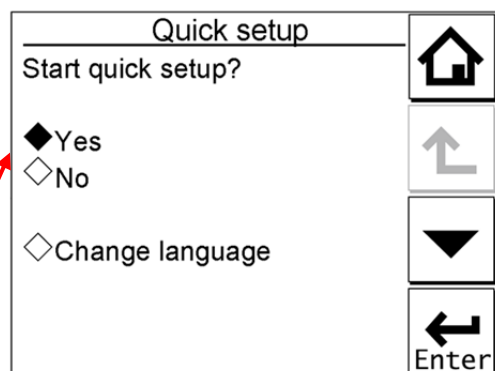
Initial Set-Up

To program a new FLXA21 with 2 DO sensors at initial setup for a calculated output, follow steps 1-11. If you already are using an FLXA21 and now want to set up the instrument for a calculated measurement output please skip to the **After Installation** section, Step 12.

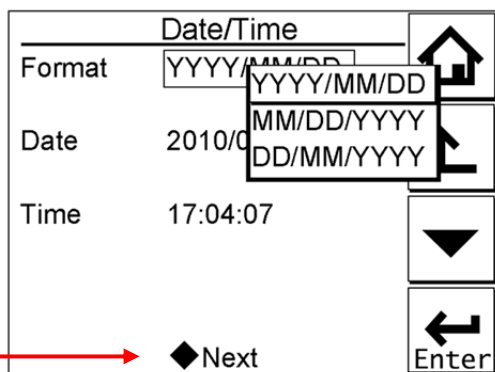
1.) After the transmitter is wired and powered on, during start up the display will show the FLEXA logo.



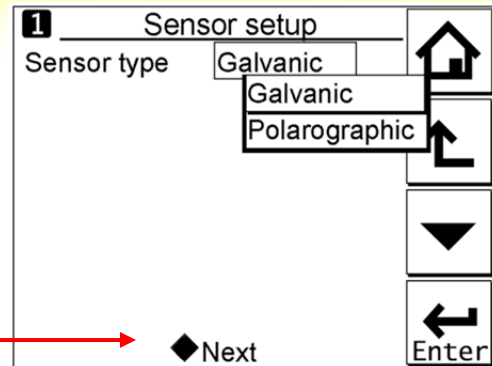
2.) The **Quick setup** screen will appear. Using either the the  scroll key and **Enter** key; or by clicking directly on the diamond next to **YES**, select it.



3.) Set the **Date/Time**, then select the diamond next to **NEXT**.



- 4.) In **Sensor setup**, select the appropriate **Sensor type** from the drop down menu for sensor 1, then select the diamond next to **NEXT**.



1 Sensor setup

Sensor type Galvanic

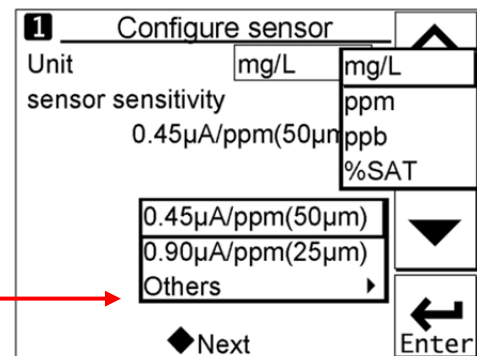
Galvanic

Polarographic

◆ Next

Enter

- 5.) In **Configure setup**, select the appropriate **unit** of measure from the drop down menu for sensor 1, then adjust selected the appropriate sensor sensitivity. Once finished select the diamond next to **NEXT**.



1 Configure sensor

Unit mg/L

mg/L

ppm

ppb

%SAT

0.45µA/ppm(50µm)

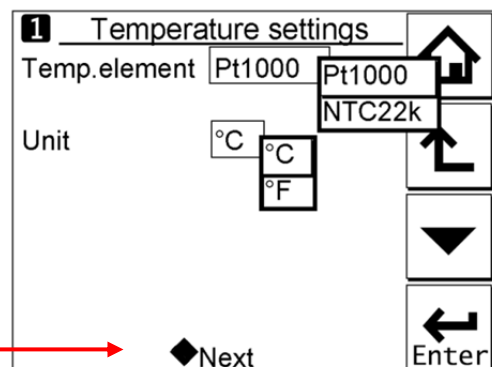
0.90µA/ppm(25µm)

Others

◆ Next

Enter

- 6.) In **Temperature settings**, select appropriate temperature element from the drop down menu for sensor 1, then select the diamond next to **NEXT**.



1 Temperature settings

Temp.element Pt1000

Pt1000

NTC22k

Unit °C

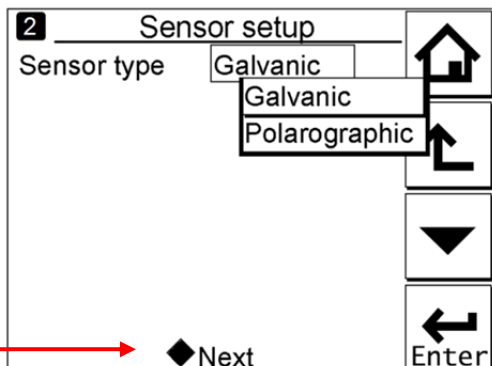
°C

°F

◆ Next

Enter

- 7.) In **Sensor setup**, select the appropriate sensor type from the drop down menu for sensor 2, then select the diamond next to **NEXT**.



2 Sensor setup

Sensor type Galvanic

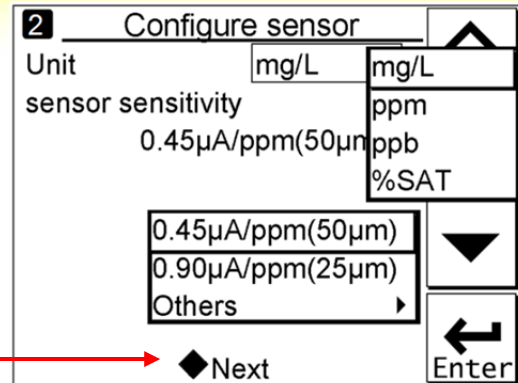
Galvanic

Polarographic

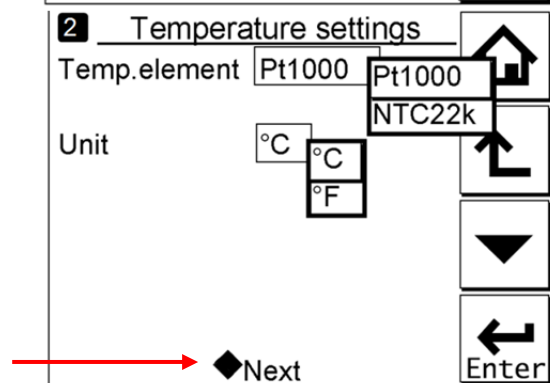
◆ Next

Enter

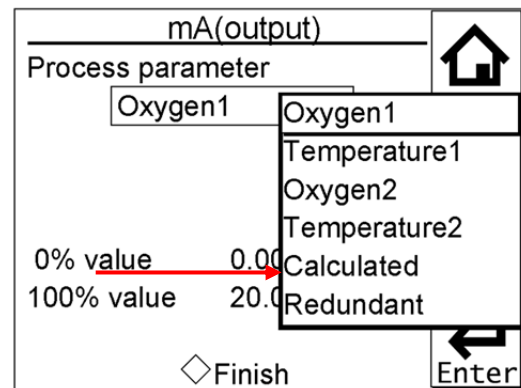
8.) In **Configure setup**, select the appropriate **unit** of measure from the drop down menu for sensor 2, then adjust selected the appropriate sensor sensitivity. Once finished select the diamond next to **NEXT**.



9.) In **Temperature settings**, select appropriate temperature element from the drop down menu for sensor 2, then select the diamond next to **NEXT**.

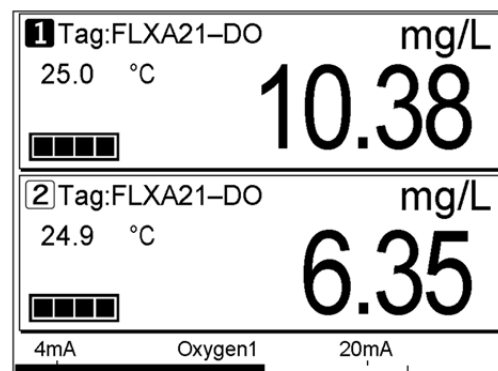


10.) In **mA(output)**, select **Calculated** for the desired process parameter for the 4-20 mA signal, and set the 0% (4mA) and 100% (20mA) values. Once complete select the diamond next to **Finish**.



11.) The instrument will then bring you to the **Home** display.

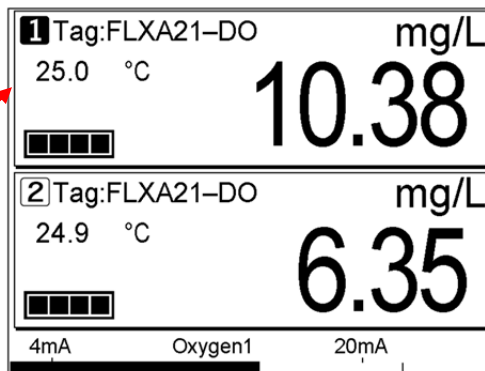
The instrument is Defaulted for Differential as the calculated data. To change to something else go to the commissioning screen and skip to step 20 otherwise skip to step 22.



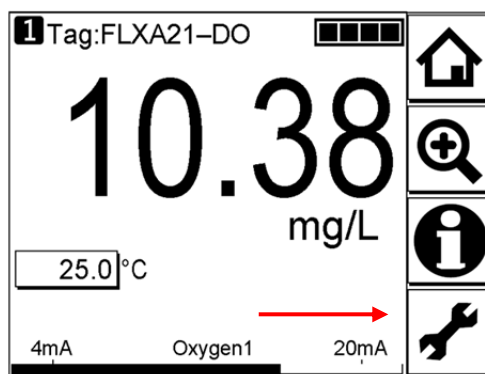
After Installation

If your instrument only has 1 sensor input module please refer to *TechNote TNA1201* for installing a second sensor module; if your instrument already has 2 sensor input modules please proceed with Step 10.

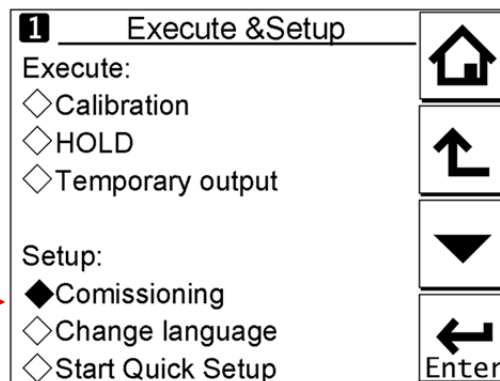
12.) Select sensor Input 1 (top section) information to go to Sensor 1 Main display.



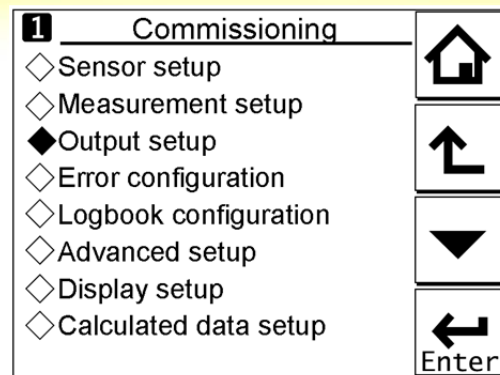
13.) Select Execute & setup, **Wrench** icon.



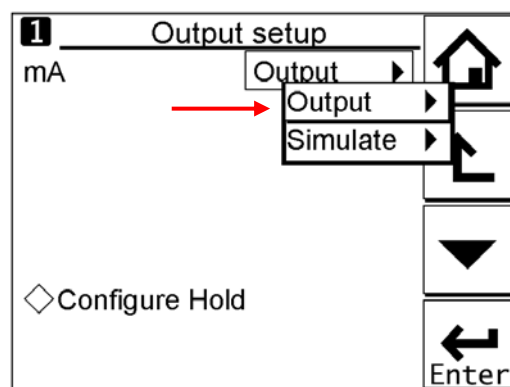
14.) Select the diamond next to **Commissioning**.



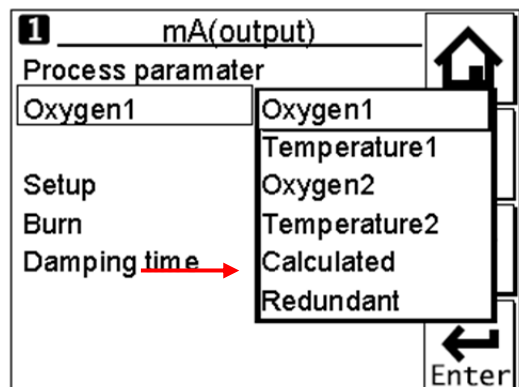
15.) Select the diamond next to **Output setup**.



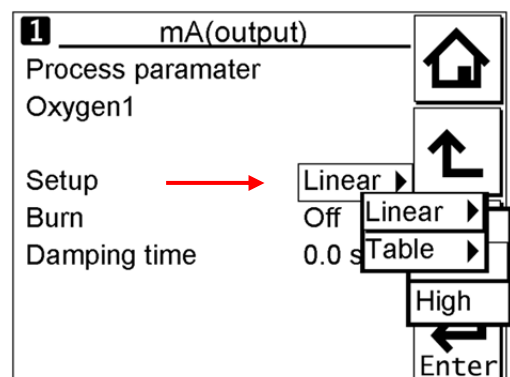
16.) Select **Output** form the drop down menu.




17.) Select **Calculated** from the drop down menu.







18.) Select desired Setup, Linear or Table. Most common is **Linear**.















19.) Set the **0%** and the **100%** values.


Select the **return key**, , to return to the Commissioning screen.



1 Linear mA		
0% value	0.00 mg/L	
100% value	20.00 mg/L	
		
		

20.) Select the diamond next to **Calculated data setup**.











1 Commissioning		
	Sensor setup	
	Measurement setup	
	Output setup	
	Error configuration	
	Logbook configuration	
	Advanced setup	
	Display setup	
	Calculated data setup	

21.) The instrument is defaulted for Differential, select the desired calculated measurement from the drop down menu. Now you need to set up the dual display,

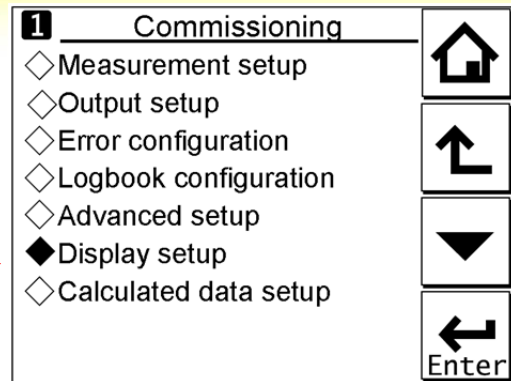
Select the **Return key**, , to return to the commissioning screen.

Calculated data setup									
Function	Differential	<table border="1"> <tr><td>Differential</td></tr> <tr><td>Average</td></tr> <tr><td>Ratio</td></tr> <tr><td>Passage(%)</td></tr> <tr><td>Rejection(%)</td></tr> <tr><td>Deviation(%)</td></tr> <tr><td>pH cal.(VGB)</td></tr> </table>	Differential	Average	Ratio	Passage(%)	Rejection(%)	Deviation(%)	pH cal.(VGB)
Differential									
Average									
Ratio									
Passage(%)									
Rejection(%)									
Deviation(%)									
pH cal.(VGB)									
									

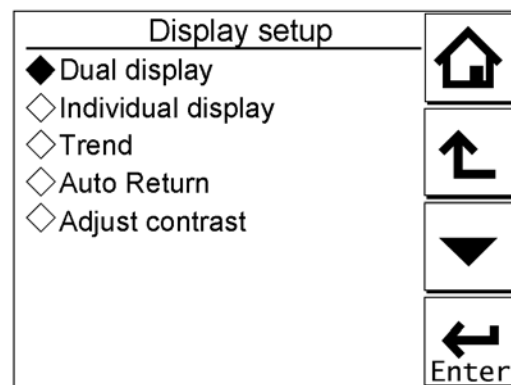
22.) Select the diamond next to **Commissioning**.


1 Execute & Setup		
Execute:		
	Calibration	
	Hold	
	Temporary output	
Setup:		
	Commissioning	
	Change language	
	Start Quick Setup	

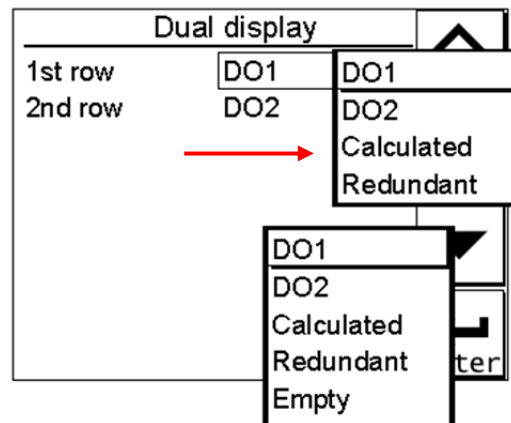
23.) Select the diamond next to **Display Setup**.




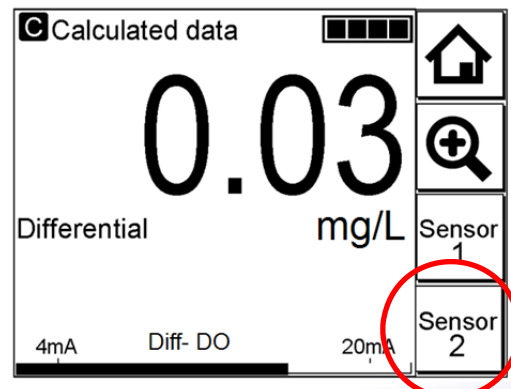
24.) Select the diamond next to **Dual display**.



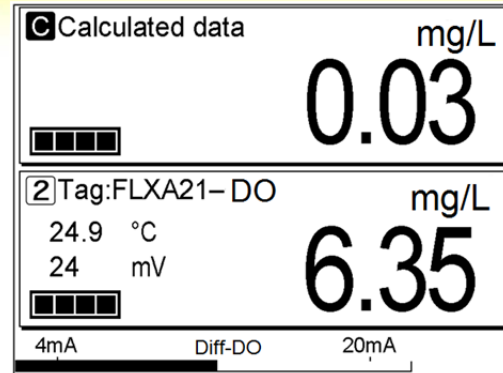
25.) Set the 1st row to **Calculated** and set the 2nd row to **desired parameter**, from the drop down menus. Select the **House icon**,  to return to the Home Display.



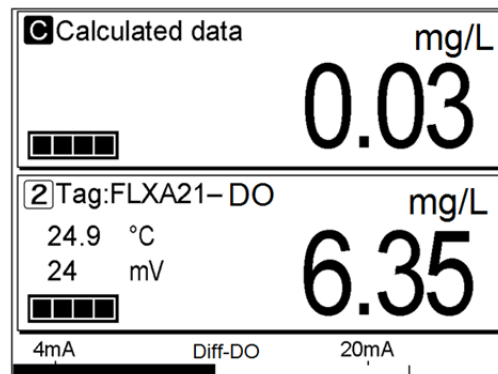
The screen to the right will appear. There are two different ways to view the Home display. This will be what most people will like the analyzer set to. In this viewing screen it allows you to see the current measurement at the same time to see if any faults are present on sensor 2. If a Failure was present the Warn/Fail icon,  would flash in the sensor box.



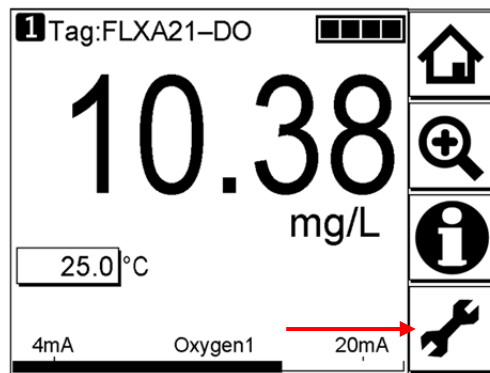
However if you select the House icon again the instrument will return to the normal view showing you the Calculated system and whatever user programed parameter was set for 2nd row in step 25. To return back to the other Home display view, select the **Calculated data** information.



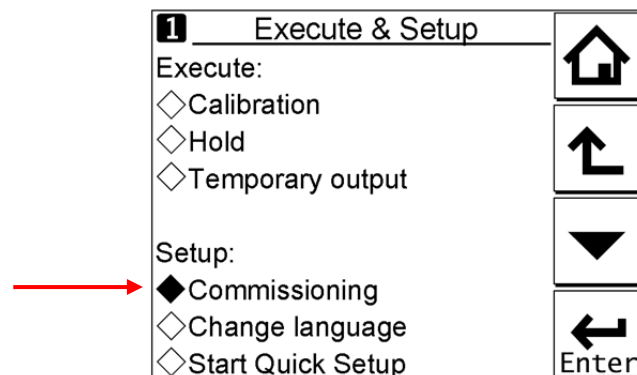
26.) It is good practice to set the Trend display to include the Calculated reading. Select the Sensor box, to view the Sensors Main display.



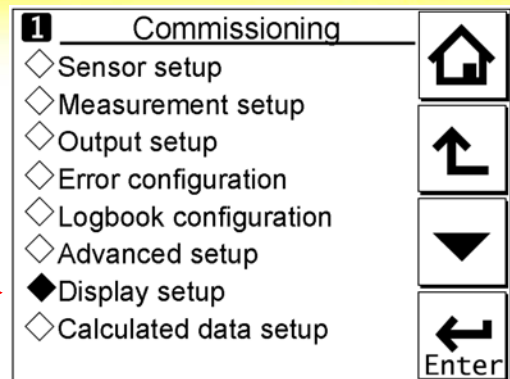
27.) Select Execute & setup, **Wrench** icon.



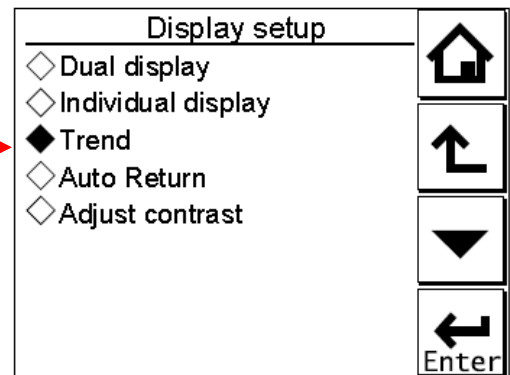
28.) Select the diamond next to **Commissioning**.



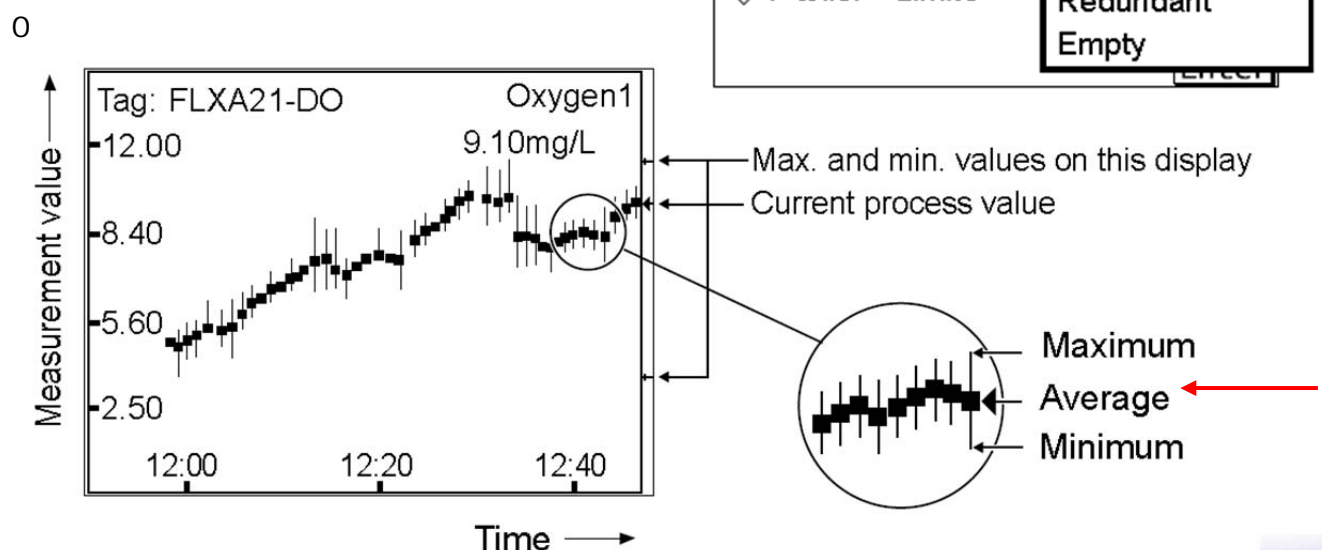
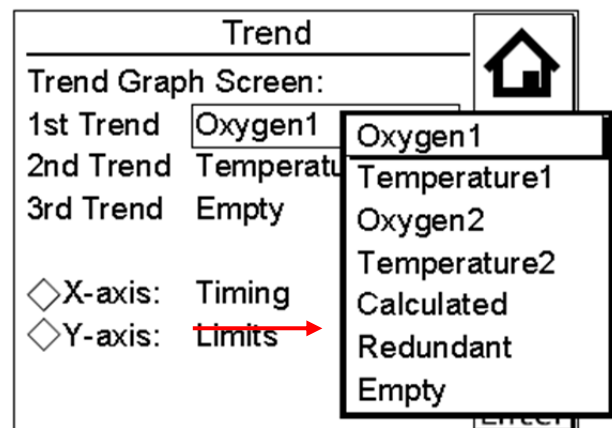
29.) Select the diamond next to **Display Setup**.



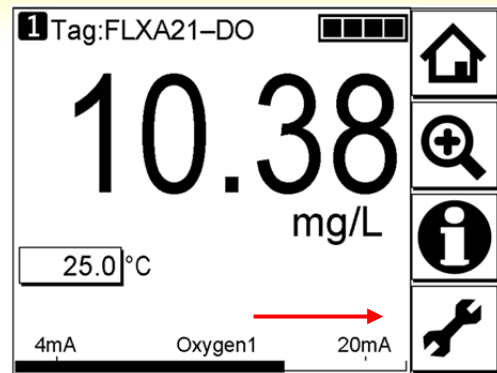
30.) Select the diamond next to **Trend**.



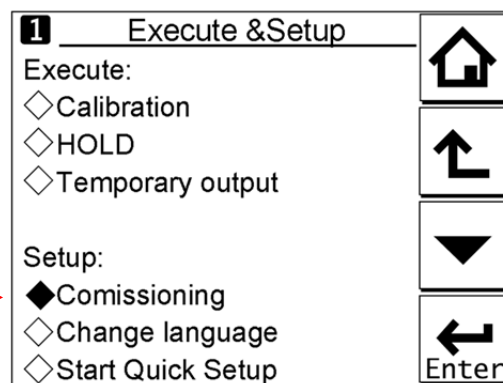
31.) Set one of the lines to show you **Calculated** value on the Trend graph. Select the House icon to return



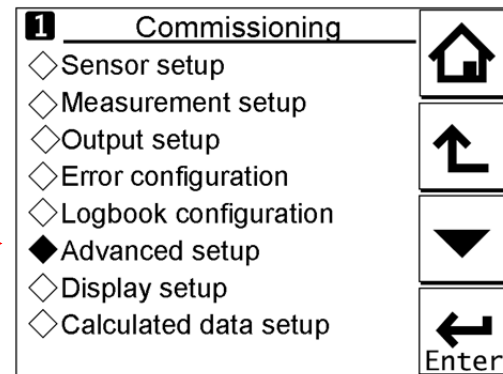
32.) The last thing that has to be done is when using HART communication you have to set the SV, TV and FV level parameter values. From the Sensor 1 Main Display select Execute & setup, **Wrench** icon.



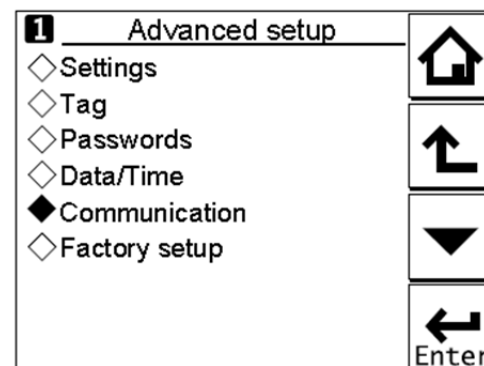
33.) Select the diamond next to **Commissioning**.



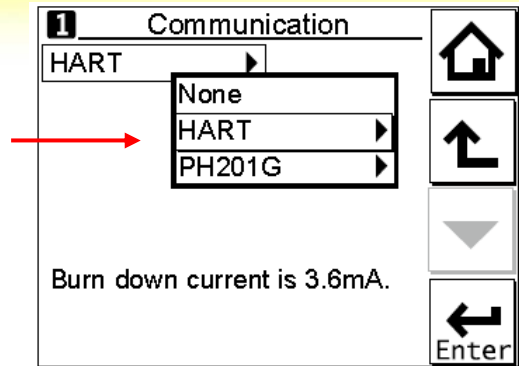
34.) Select the diamond next to **Advanced Setup**.



35.) Select the diamond next to **Communication**.



36.) Select **HART** from the drop down menu.



37.) Set the SV, TV and FV to the desired paramters. PV will automatically be set up for Calculated. Once complete you can select the House Icon to return to the desired Home or Main display.

