

interface

FORCE MEASUREMENT SOLUTIONS

INF-USB3 and SI-USB Quick Start Guide

Please go to www.interfaceforce.com and to the appropriate product page and then download the software onto your computer. You will also need to download and install the driver for this product which is also located on the product page. Next, open the driver folder and “Extract All”. The select the appropriate .exe file and allow the driver to install. Now, follow the same steps for the Software.

SOFTWARE QUICK START

Please plug the device into the USB Port. When the software is first started it will search for a connected USB module. If a supported device is not found, please make sure the USB module/cable is connected properly.

SOFTWARE LAYOUT

Navigation Bar

Used for configuring software and saving data. If at any time the Navigation disappears, it can be re-instated in the View menu.

The screenshot shows the INV-USB-VS2 software interface. The top menu bar includes File, Operating Mode, View, Language, and Help. The left sidebar contains a tree view with categories like File, Operating Mode, Adjust. Mode, Sensor Connection, Sensor Information, Measure Adjust., Documentation, Sensor Adjustment, Meas./Diagram Mode, View, Digital Views, Channel A, Channel B, Diagram, Navigation Bar, Status Bar, Reset Views, Language, Deutsch, English, Help, Info, and Advice. The main window is divided into several sections: a central Meas./Diagram Mode section with buttons for Measure Start, Measure Stop, Trigger switch on, Single Measurement, and Control; a right-side Display Area showing a current value of 0.317 lbf and buttons for TARE, MIN Reset, and MAX Reset; and a bottom Diagram Area showing a graph of Channel A [lbf] vs Time [sec].

Measuring Control Area
Used for starting and stopping the measurement. Configuration changes can only be made in “Stopped” mode. Clicking the “Control” box engages the installed shunt resistor.

Meas./Diagram Mode
Click here to enter measuring and diagram mode. This mode is where all measurements are made.

Display Area
Displays current value, as well as Min and Max data, Min and Max Reset, and Tare. Data is “LIVE” only after clicking “Measure Start” button

Diagram Area
Visualization of data. Diagram auto scales to fit data range.

Channel A [lbf]
0.000 lbf 0.312 lbf 8.335 lbf
TARE MIN Reset MAX Reset

Channel A [lbf]
8.500
8.000
7.500
7.000
6.500
6.000
5.500
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000

Time [sec]
0.000 0.500 1.000 1.500 2.000 2.500 3.000 3.500 4.000 4.500 5.000 5.500 6.000 6.500 7.000

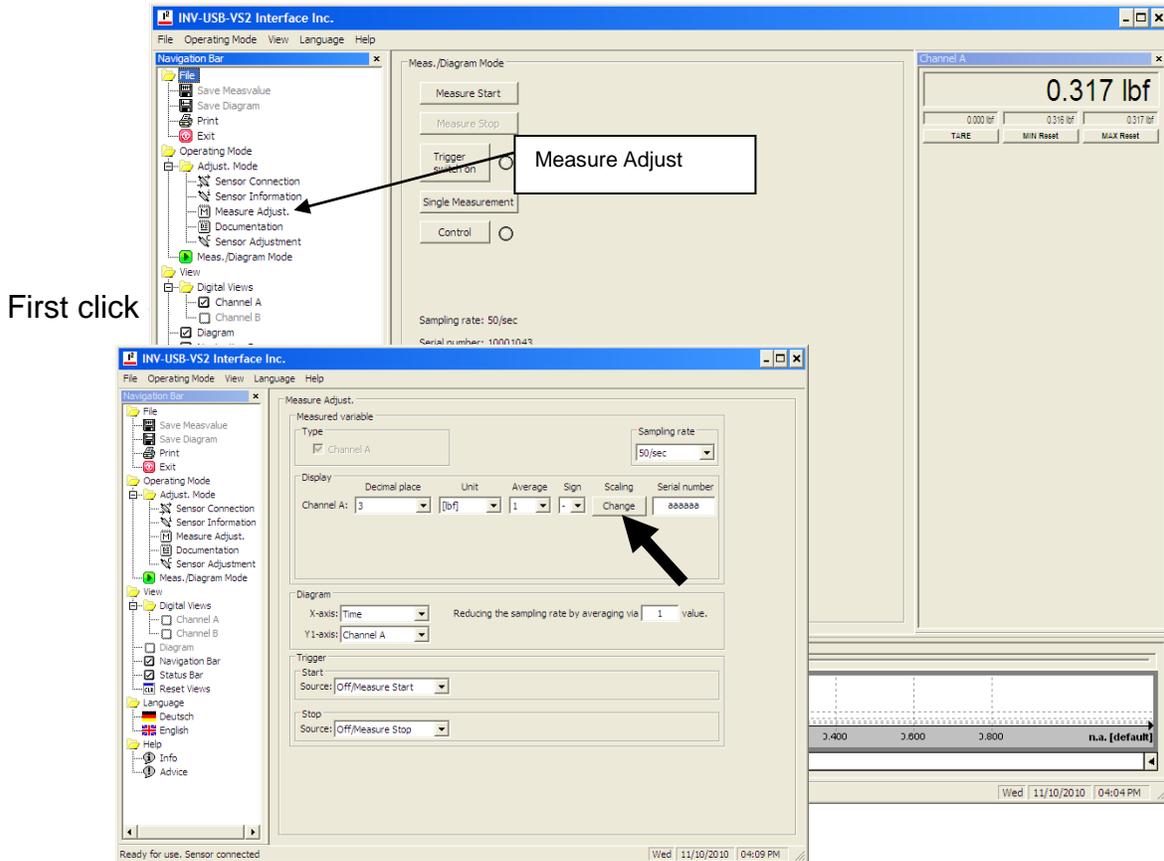
Ready for use. Sensor connected

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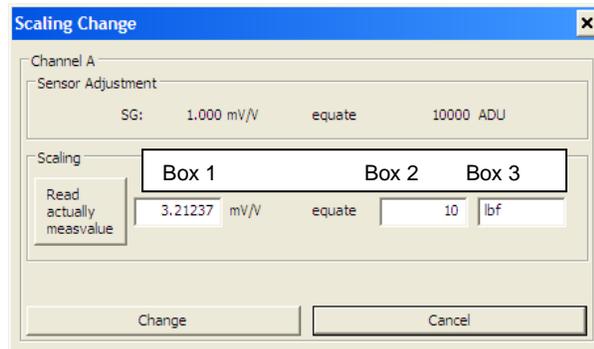
SOFTWARE CONFIGURATION

If the USB Module and Transducer were purchased as a scaled set, the software will automatically recognize the sensor and display in engineering units such as lbf, N, NM or lb-in. Otherwise, the display will read in units of sensor output, such as mV/V or V.

To change the units of measure, click on Measure Adjust folder in the Adjust Mode folder



A Scaling Change dialog box will appear containing 3 input boxes.



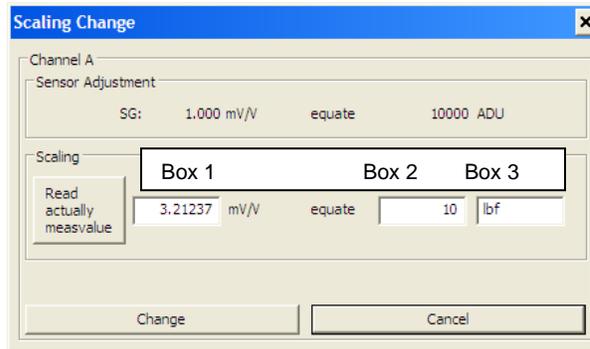
Scaling Using Values from the Sensor's Calibration Certificate

Now enter the Sensor Output in the first box, the Sensor Capacity in the second box, and the Unit of Measure in the 3rd box. These items can be found on your sensor calibration certificate. If the calibration certificate is not available, see the next section, Scaling Using a Known Load. For example, if you have a 10 lbf capacity load cell with 3.21237 mV/V output you would enter the following values:

1. 3.21237
2. 10
3. lbf

In this example you could also configure the software to display in N by entering

1. 3.21237
2. 44.4822
3. N

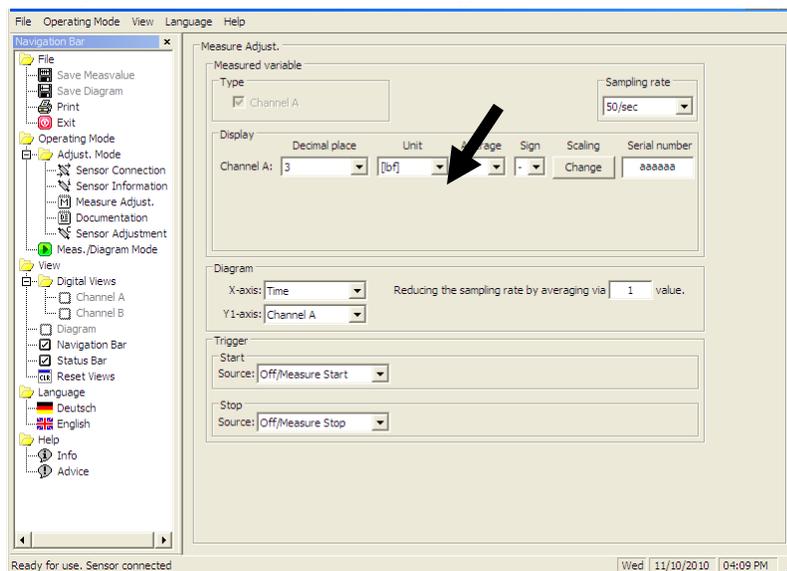


After entering the values, click Change to save. The scaling is stored in non-volatile memory on the USB module.

Scaling Using a Known Load

If the sensor calibration certificate is unavailable, you can use an applied load to scale the software. **CAUTION:** Do not use the “Read actually measvalue” box. Instead, follow the procedure below.

1. Set the software to display in units of mV/V. This can be done by clicking in the Units drop-down menu and selecting mV/V.



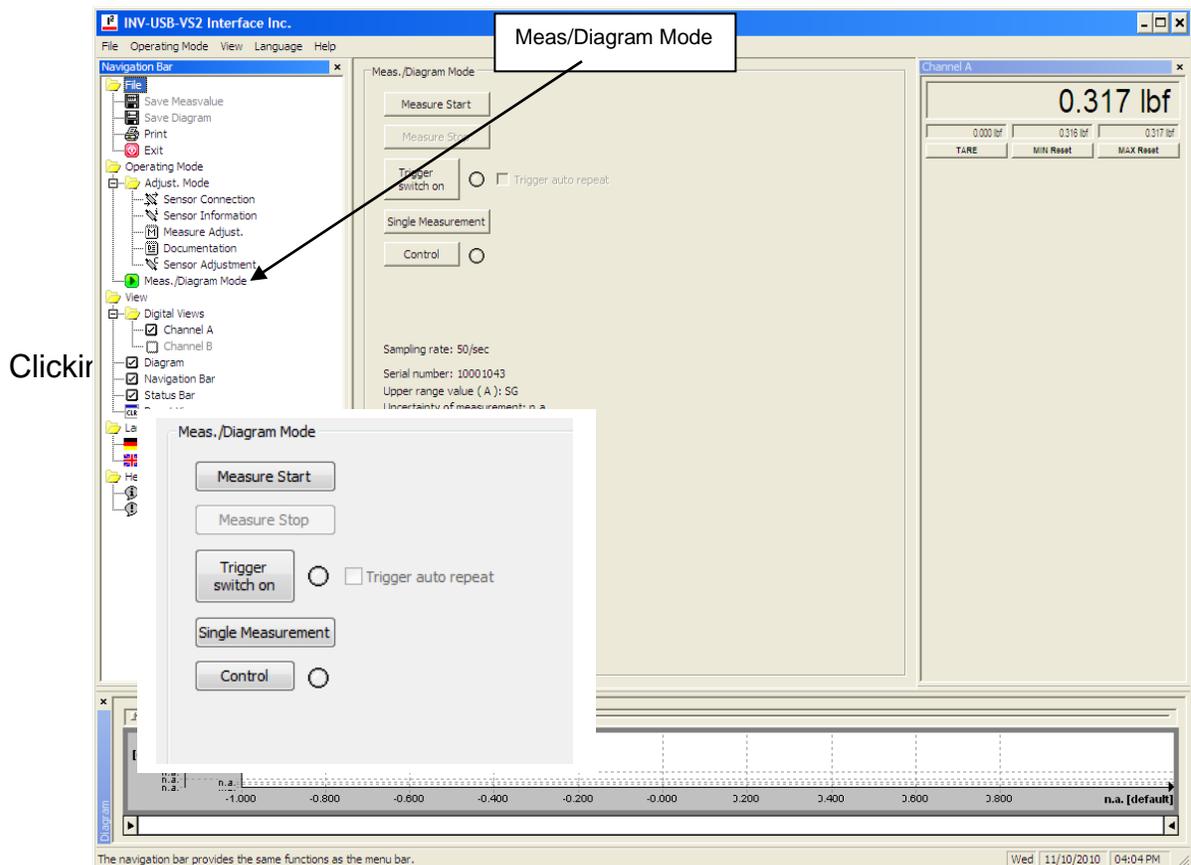
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2. Start with the unloaded transducer. Some tare weight is ok, but do not apply the known load.
3. In measuring mode
 - a. click start measure
 - b. click tare until the display reads 0 mV/V
 - c. apply known load
 - d. record the displayed mV/V value
 - e. remove known load and make sure the display returns to 0 mV/V. If not, repeat steps a thru e.
4. You will now have a recorded mV/V value equal to your known load. Now go to the section above titled Scaling Using Values from the Sensor's Calibration Certificate.
 - a. Enter your recorded mV/V value in Box 1
 - b. Enter the value of the applied load in Box 2
 - c. Enter the unit of measure in Box 3.

MEASURING MODE

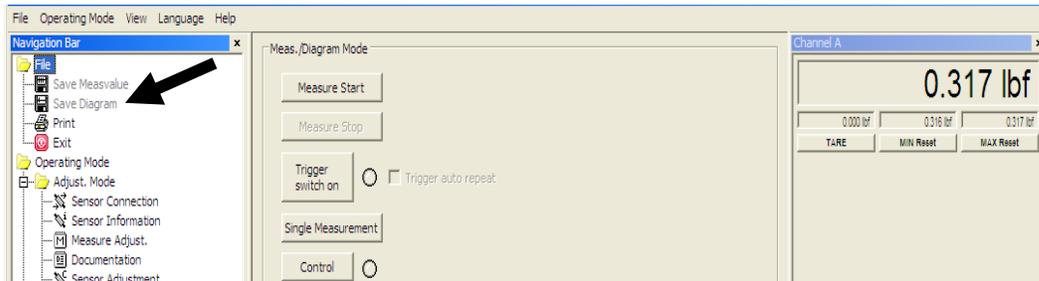
To start a measuring cycle, you must be in Measuring/Diagram Mode. To enter Measuring/Diagram mode, click the green arrow.



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After the measurement is complete, click Measure Stop. You can then save the data to a .csv file by selecting Save Measvalue in the File folder. The Diagram can also be saved as a .jpg file by clicking Save Diagram.



The software can also be configured to save the measured values and diagrams automatically. For further detail, please refer to the full INF-USB3 and SI-USB Operation Manuals, located at www.interfaceforce.com on the product page on under "Support" where the Installation and Operating Manuals are located.