



# BX8 Quickstart Guide

## Introduction

Model BX8 is the newest addition to Interface's family of measurement systems. Easy enough for the inexperienced user but powerful enough for the sophisticated test engineer, with the BX8 anyone can be up and measuring in minutes. Designed specifically for use with mV/V output sensors such as force, torque and pressure along with PT1000 thermocouples, and  $\pm 10V$  output sensors, the BX8 puts graphing, logging and display capabilities at a user's fingertips. The BX8 also includes 1/4 and 1/2 bridge completion for seamless integration of strain gage measurements. Eight independent, user configurable, 16-bit scalable analog outputs can be connected to external devices.

**Caution:** Please read this entire guide before making any connections or powering the BX8. Software and Drivers MUST be installed first. Refer to the Installation Diagram for the correct BX8 model.

## BX8-AS Installation (Terminal or M16 Input)

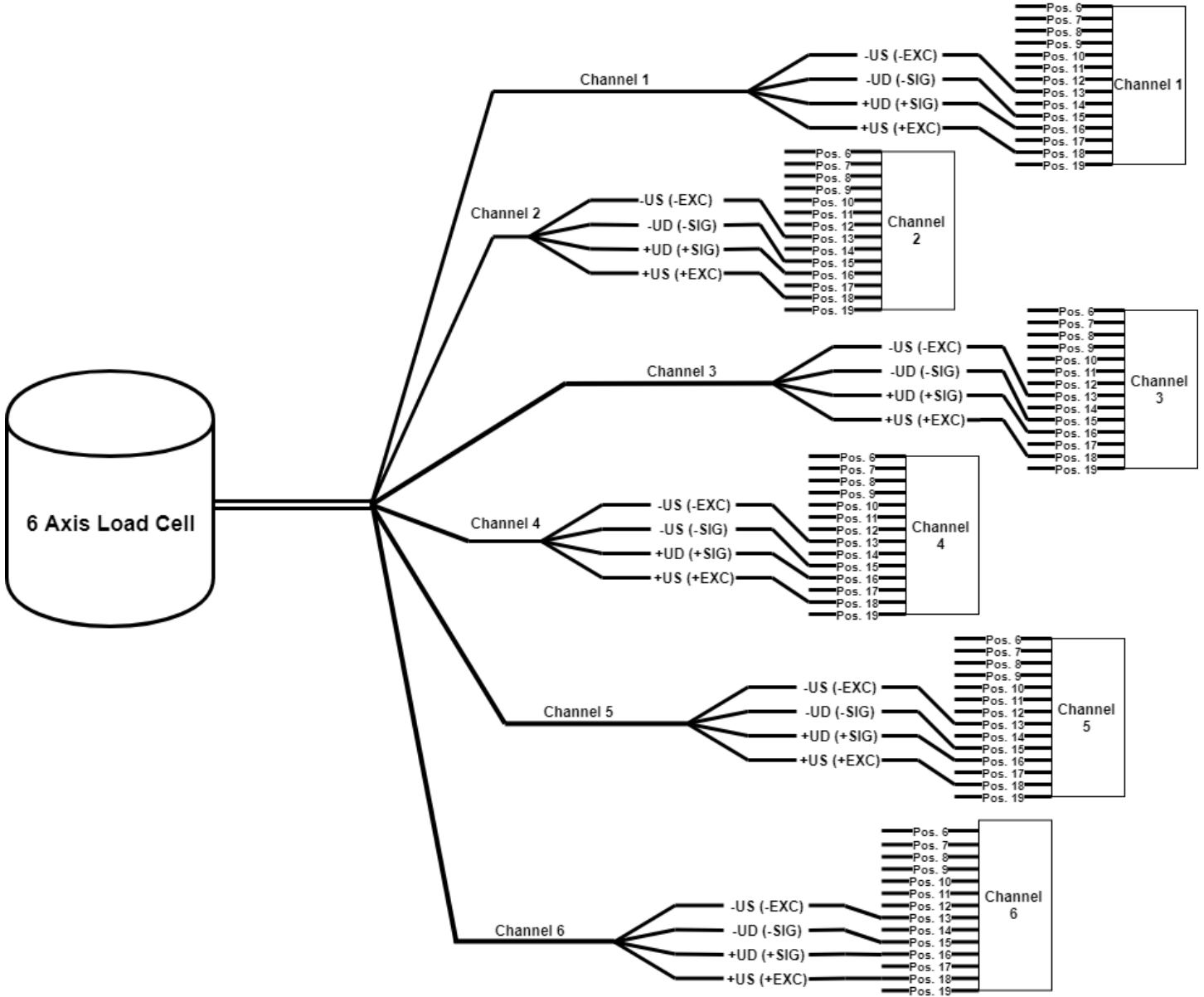


FIGURE 1 – 6 AXIS LOAD CELL TO BX8-AS TERMINAL BLOCK INPUT

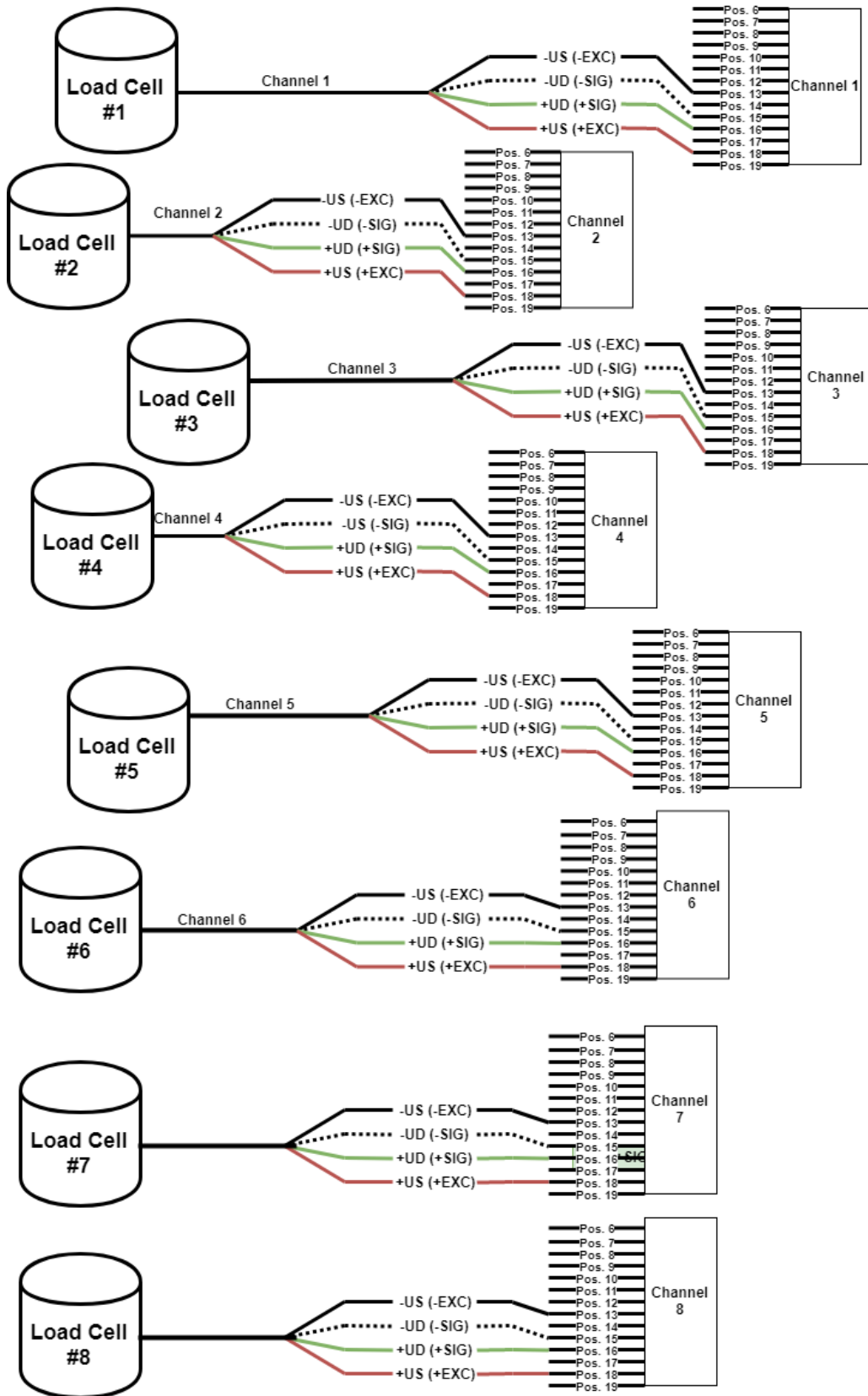


FIGURE 2 - 6 LOAD CELLS TO BX8-AS TERMINAL

**\*\*NOTE – Refer to the Operating Manual for Sense Lines\*\***

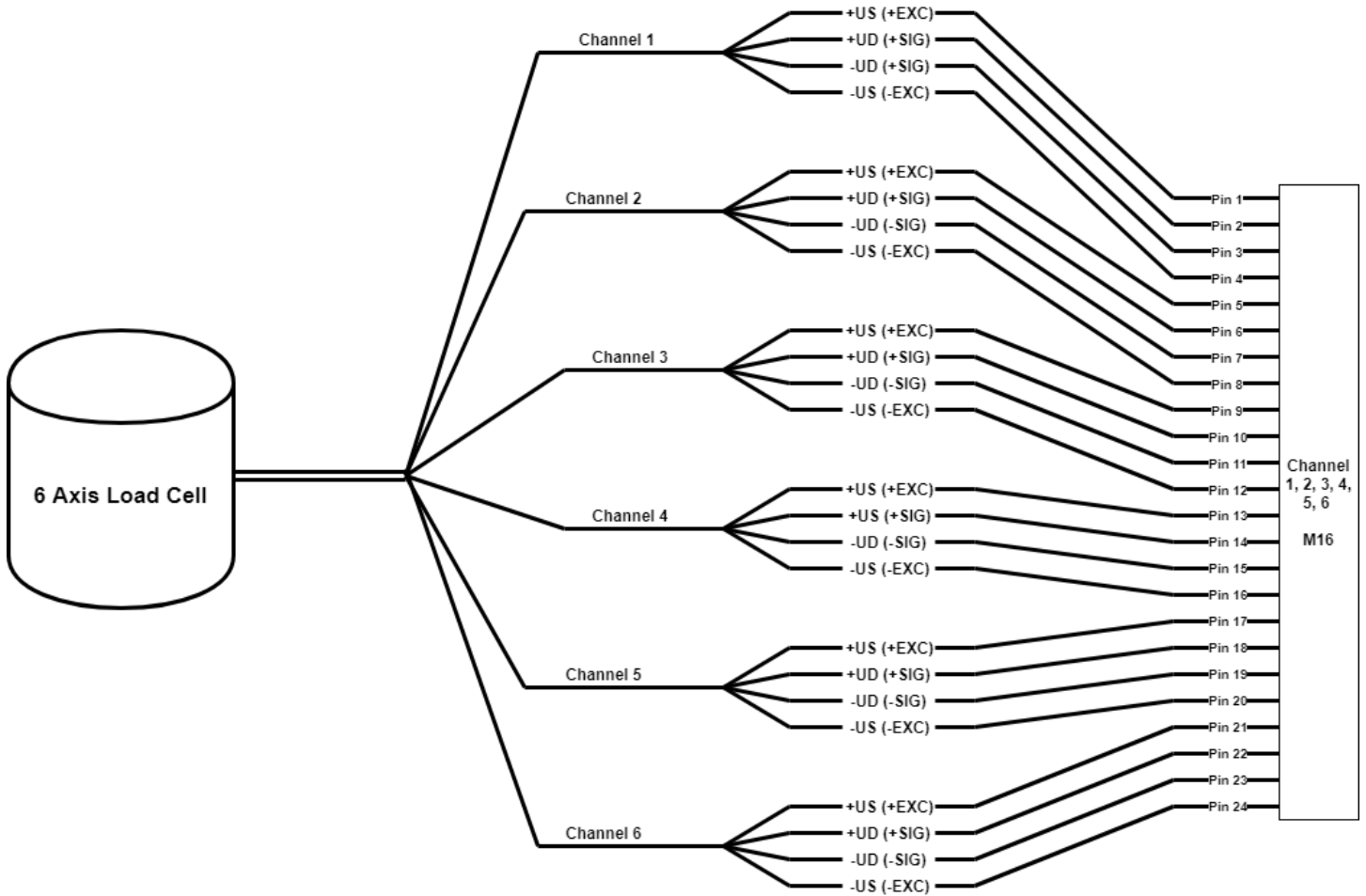


FIGURE 3 - 6 AXIS LOAD CELL TO BX-AS M16 CONNECTOR INPUT

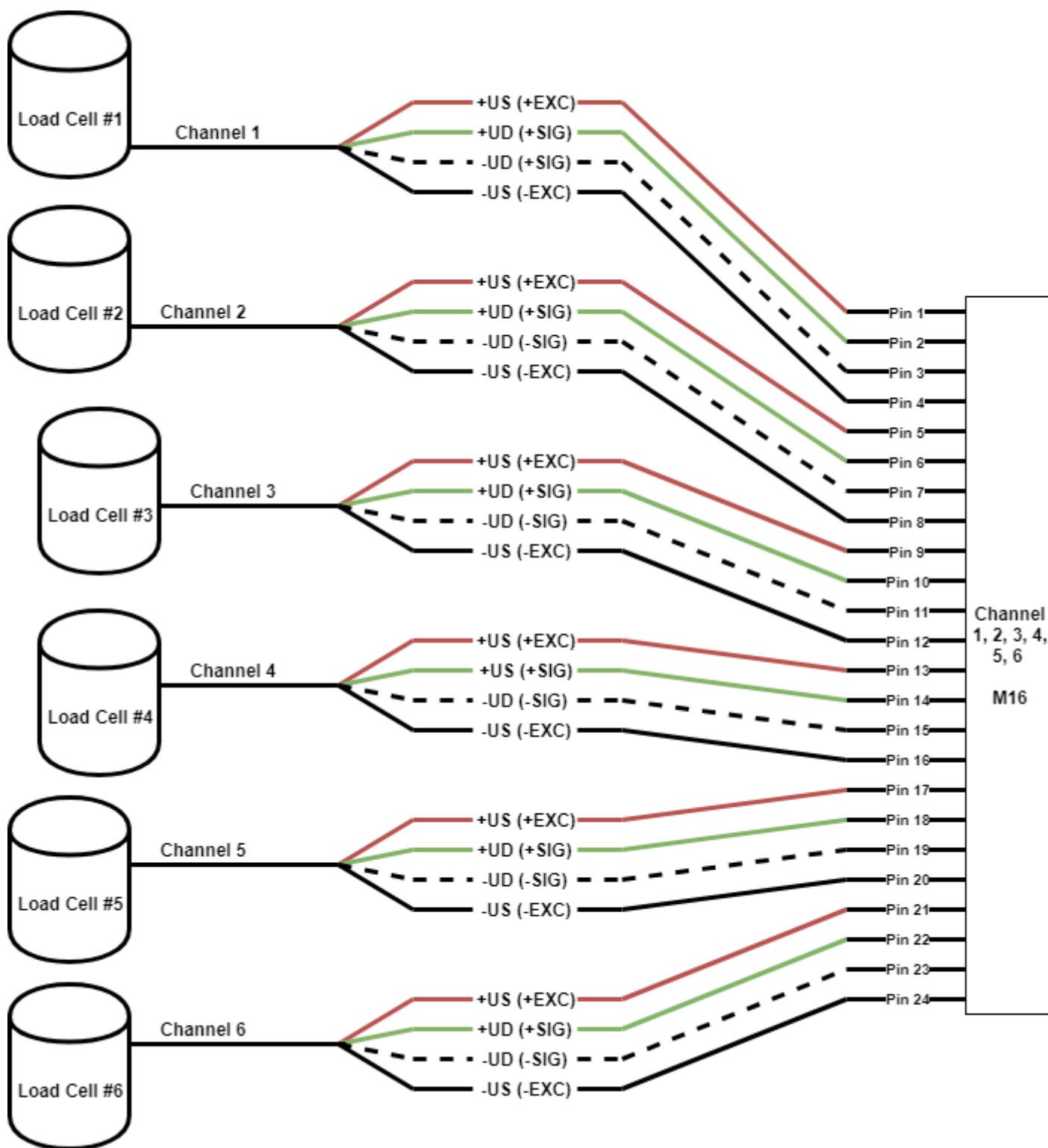


FIGURE 4 - 6 SEPARATE LOAD CELLS TO M16 CONNECTOR

(M16 Wiring Option)

(Optional Wiring)

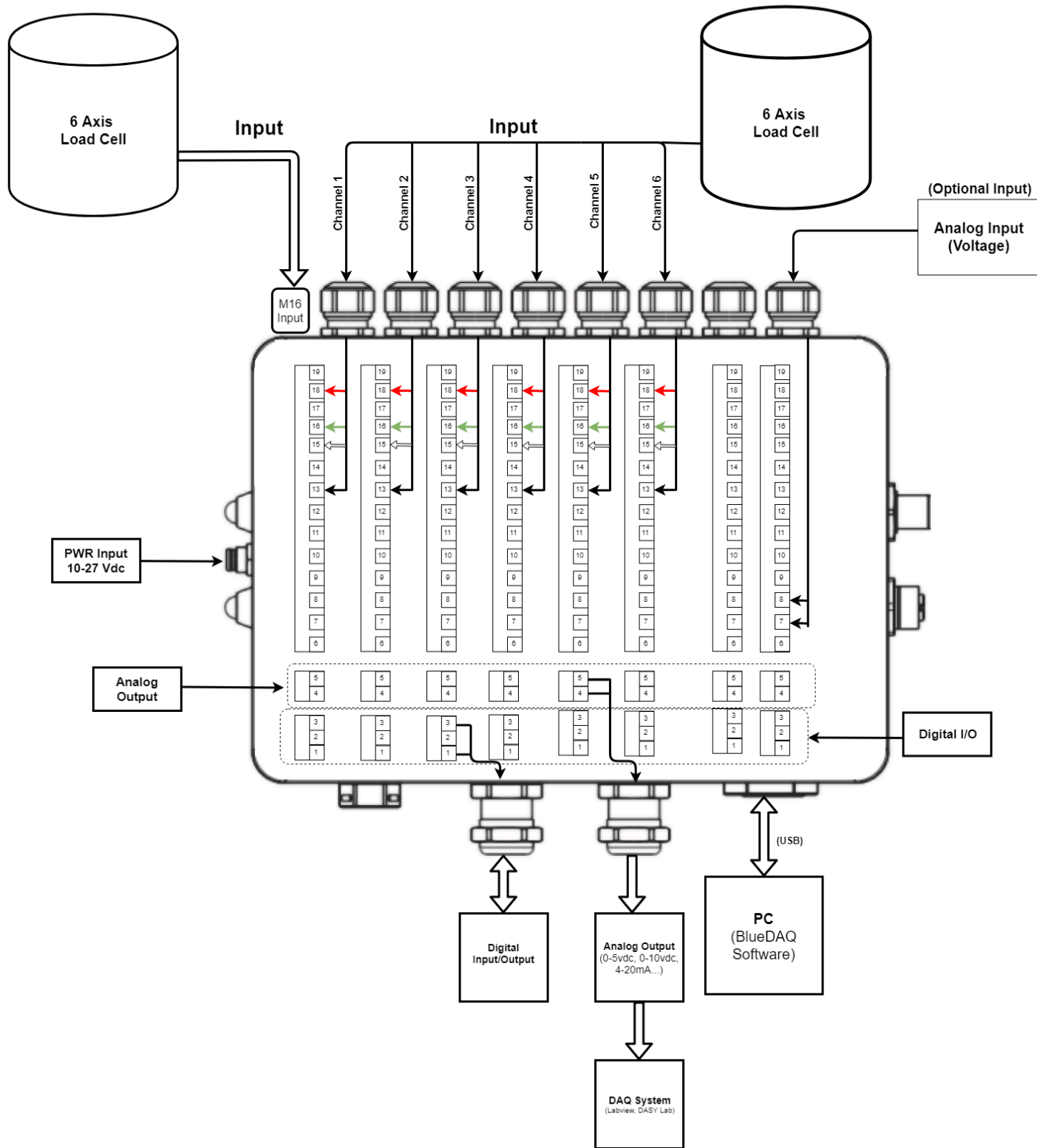


FIGURE 5 - DIAGRAM OF BX8-AS

## BX8-HD44 Installation

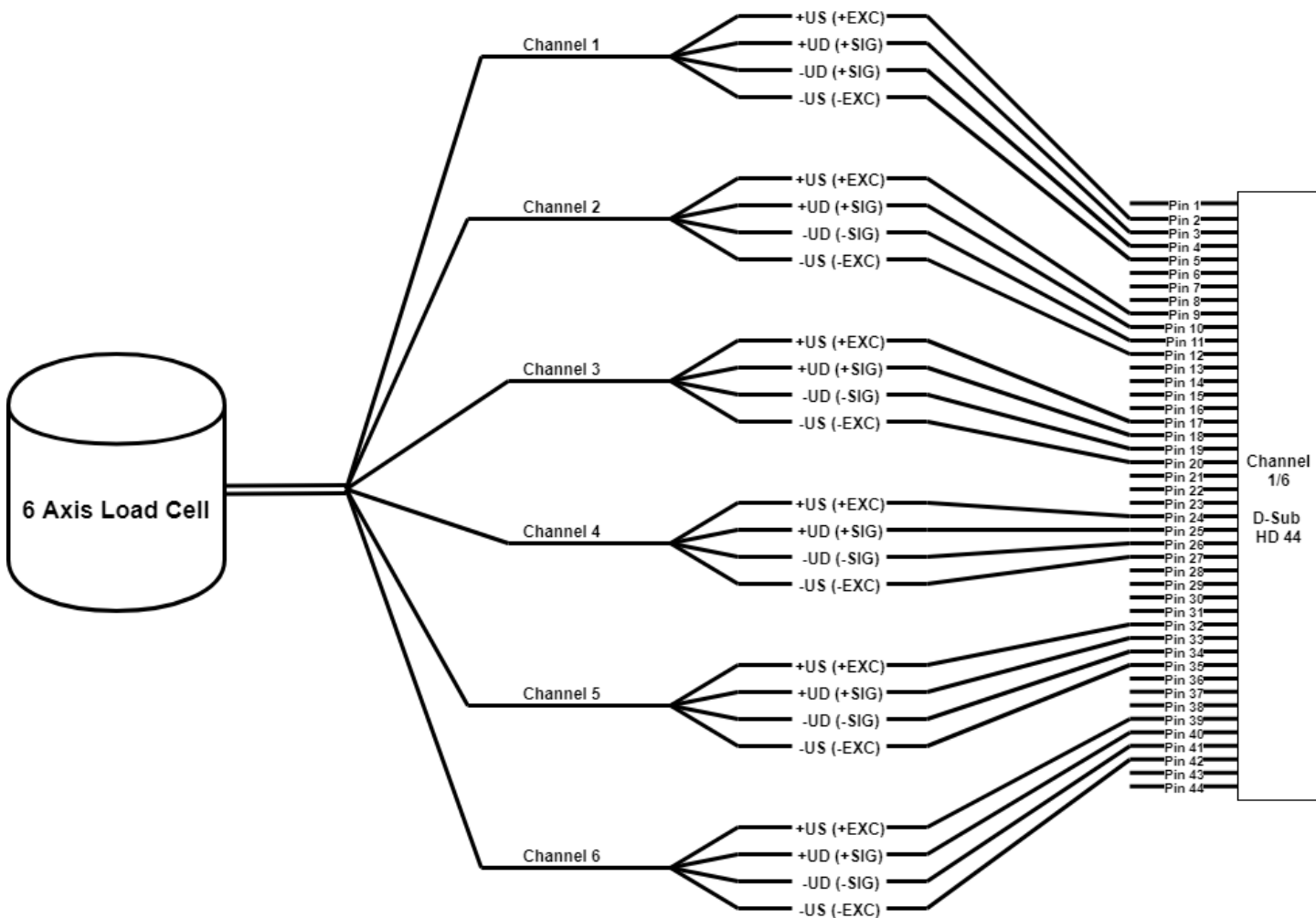


FIGURE 6 - 6 AXIS LOAD CELL TO BX8-HD44 INPUT

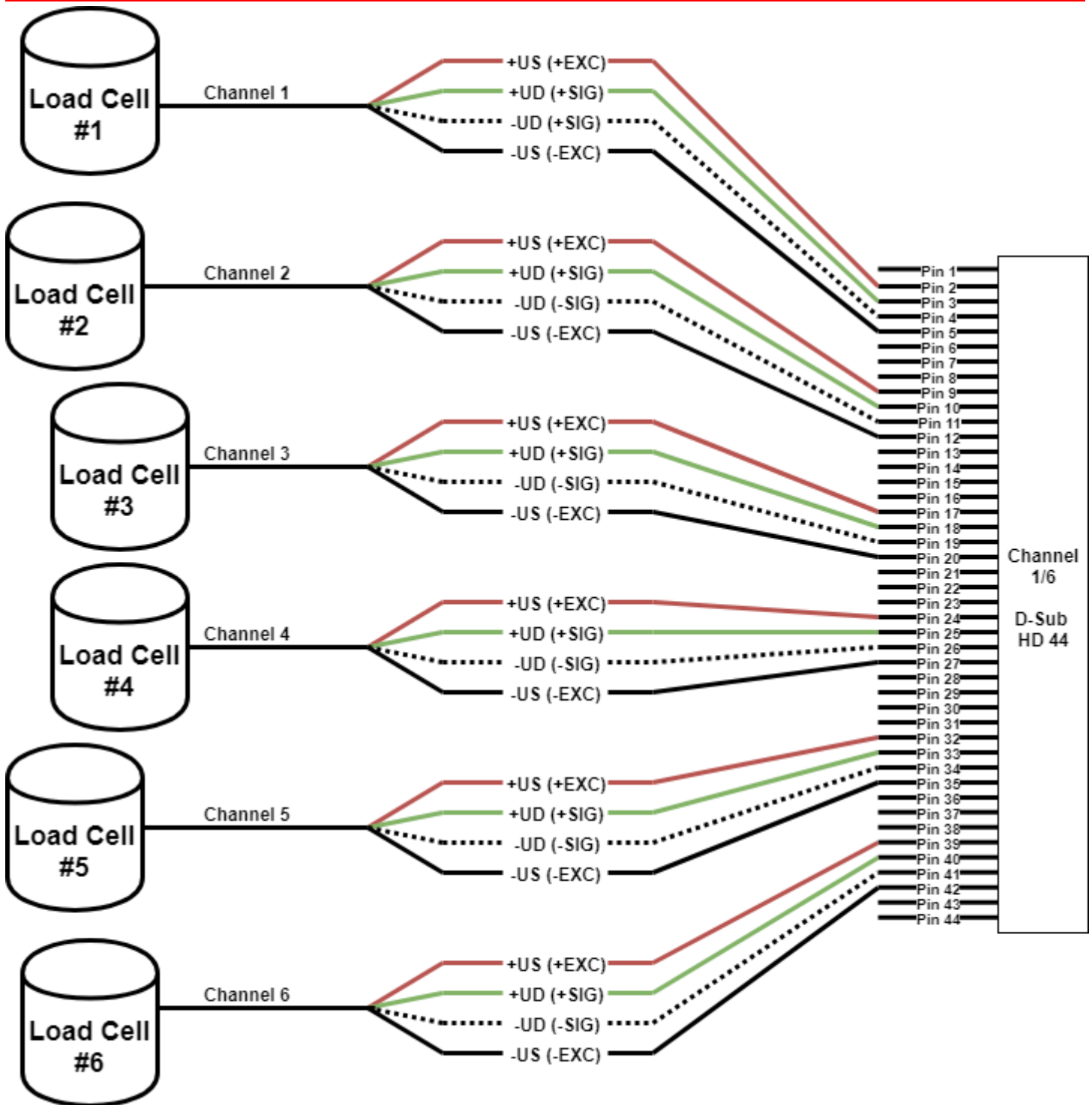


FIGURE 7 - 6 LOAD CELLS TO BXD-HD44 INPUT

**\*\*NOTE – Refer to the Operating Manual for Sense Lines\*\***



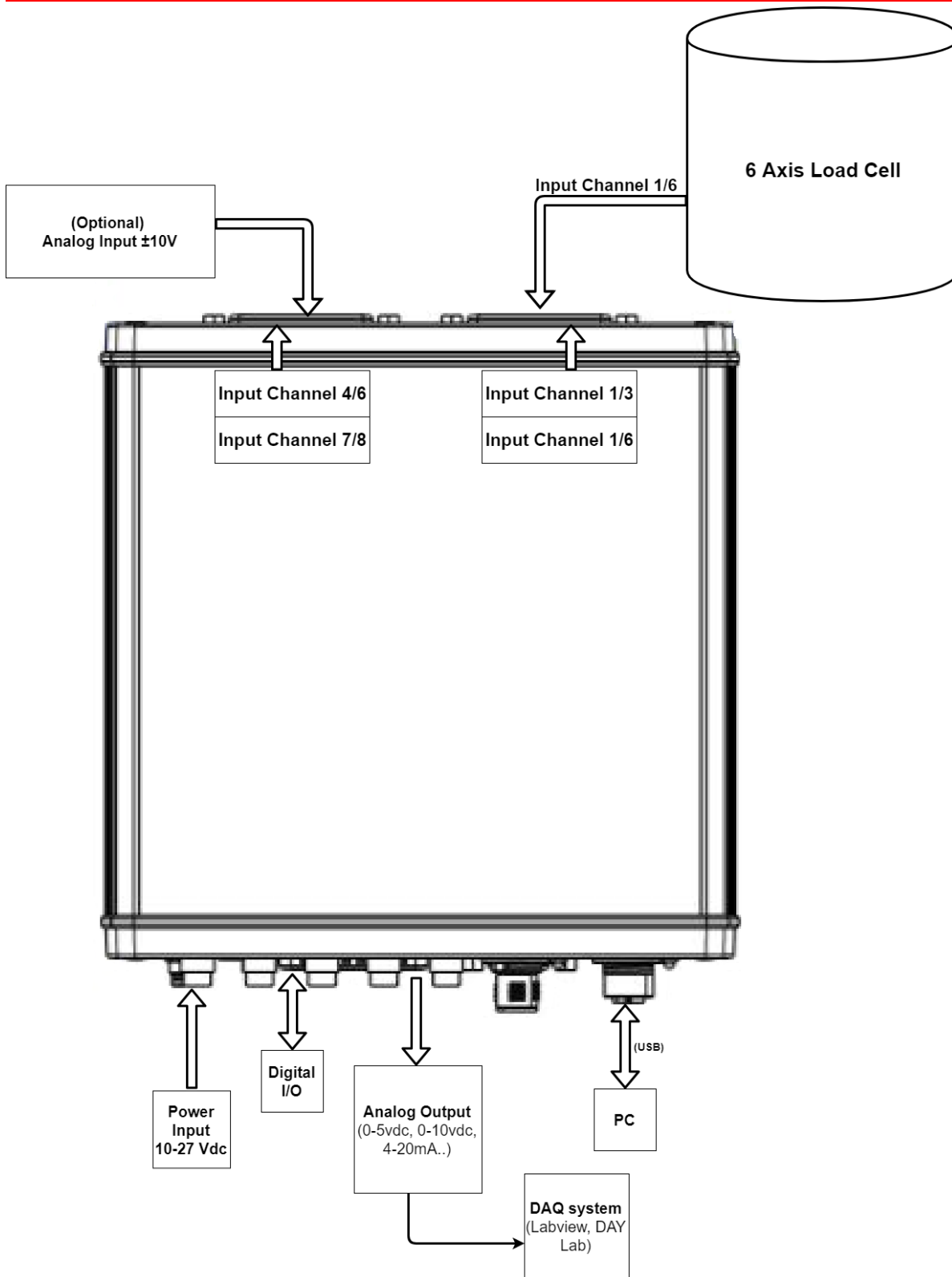


FIGURE 8 – BX8-HD44 DIAGRAM

## BX8-HD15 Installation

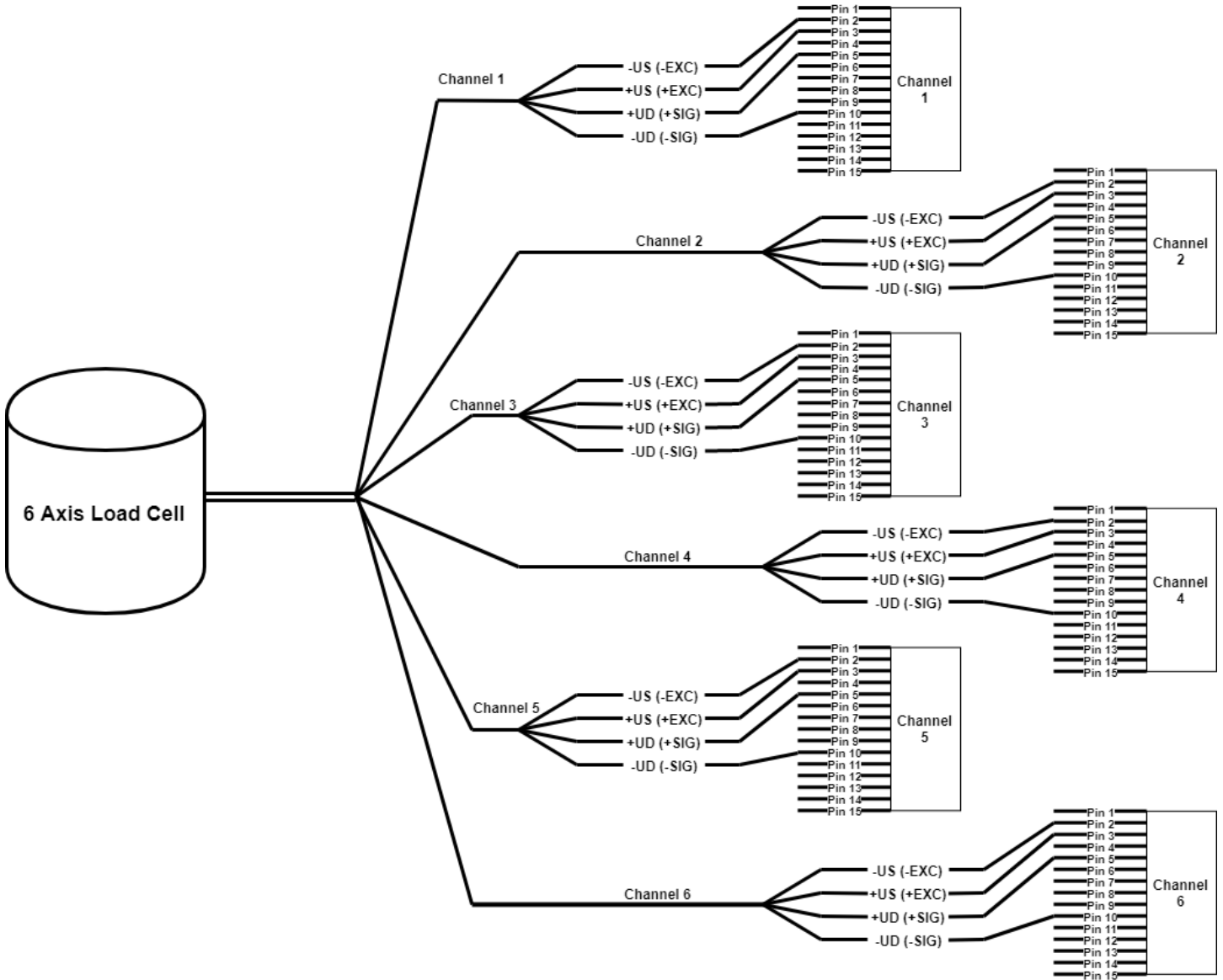


FIGURE 9 - 6 AXIS LOAD CELL TO BX8-HD15

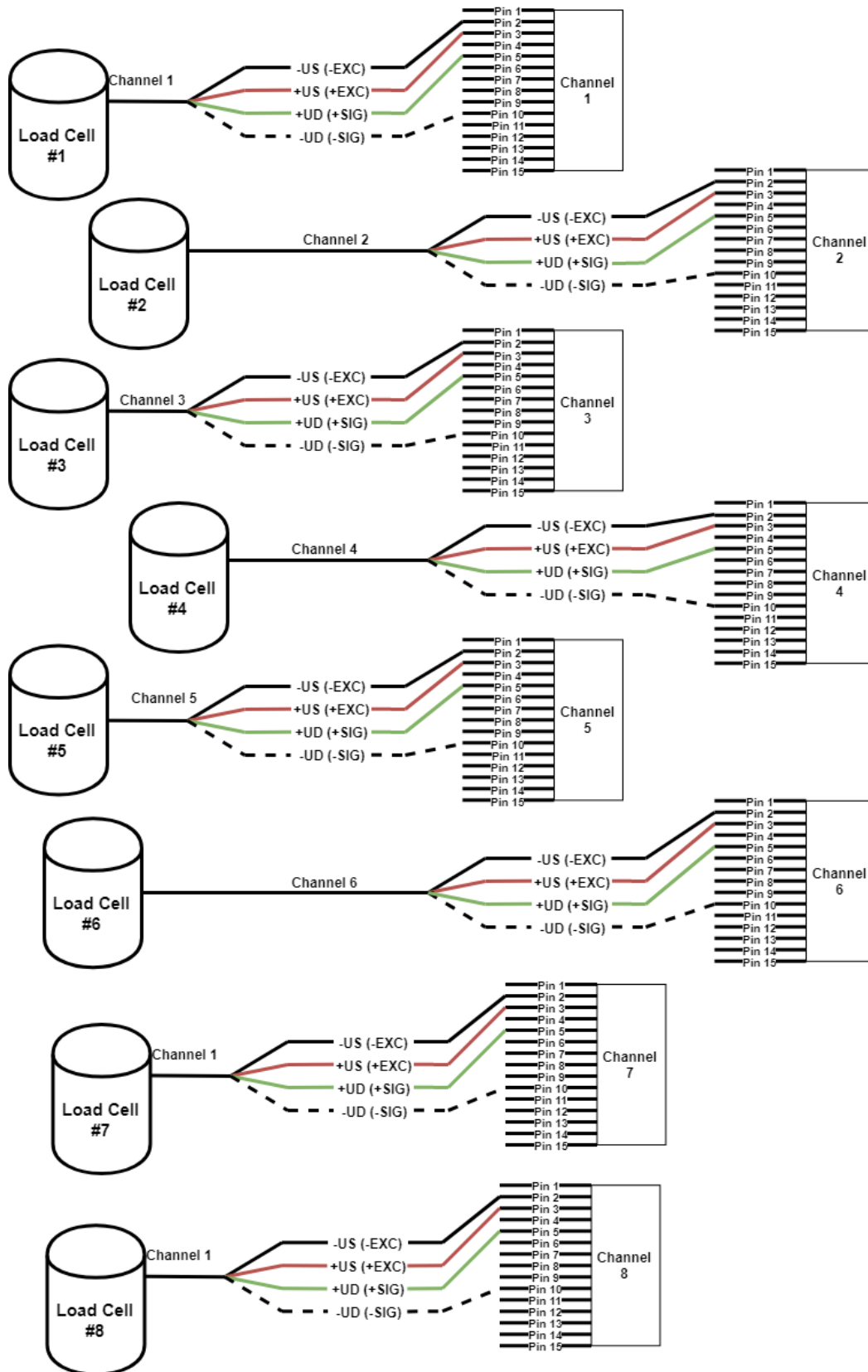


FIGURE 10 – 8 SEPARATE LOAD CELLS TO BX8HD15

**\*\*NOTE – Refer to the Operating Manual for Sense Lines\*\***

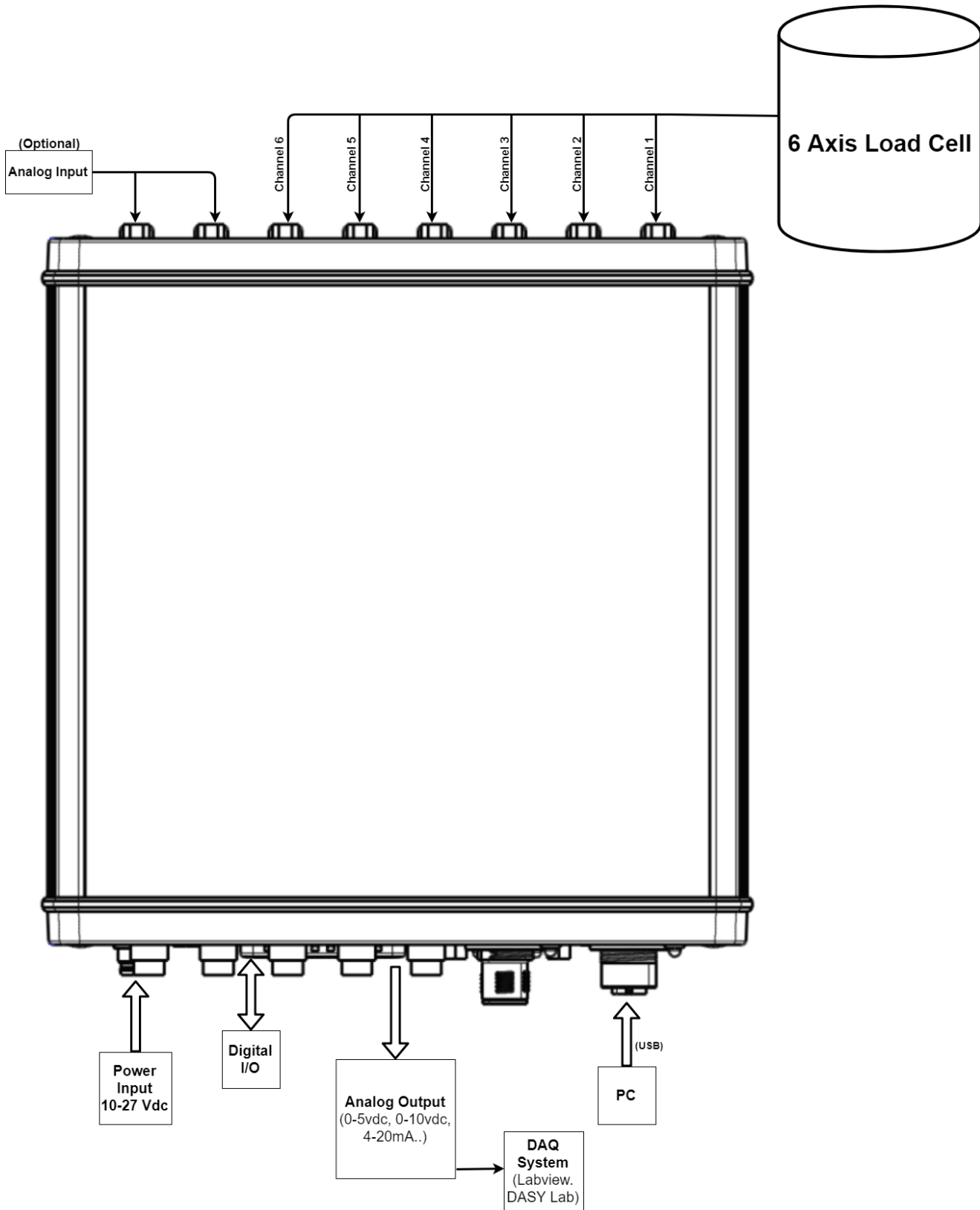


FIGURE 11 - BX8-HD15 DIAGRAM

## BlueDAQ Software Installation

1. **Please follow these instructions carefully. DO NOT** connect the amplifier to the PC until instructed to do so. The BlueDAQ PC software is included on a USB Flash Drive with the amplifier or can be downloaded from [www.interfaceforce.com](http://www.interfaceforce.com)
2. Install the software by double-clicking the “setup.exe” file located in the BlueDAQ folder. You may need to “Extract” the contents of the folder first if you downloaded it from the website. Follow the instructions for installation. Once the software completes installation you **MUST** restart your computer.
3. Attach the amplifier to the PC using the supplied USB A-B cable. BSC4, BSC8 and BX8 drivers were installed with the BlueDAQ software and Windows will automatically load them. BSC8D/BX8 must be powered ON using supplied power cable and power switch. 9330 drivers must be installed as described below.
4. When the device is connected in **Communication mode** for the first time, Windows will ask for a driver directory. The installation process is described below. The driver is located on the USB Flash drive supplied with the 9330. The Flash drive **MUST** be connected to the PC or the files copied to the PC before connecting the 9330 to the PC.
5. Enable USB Communication mode. To do this, click the MODE button of the measuring amplifier and select USBmode: Comm in the logger menu.
6. Now you can connect your 9330 to the PC via USB cable. Once connected the driver installation window appears. Select “Install software from a list or specific source (advanced users)” and Click “Next >”.

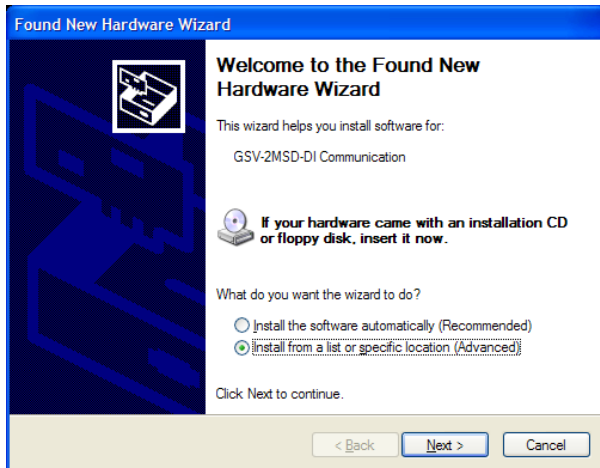


FIGURE 12 - FOUND NEW HARDWARE WIZARD

7. Click “Search for the best driver in these locations”
8. Check the option “Include this location in the search:” and then click “Browse”. Select the folder: 9330\_Com\_Driver from the supplied USB drive and Click “Continue >”

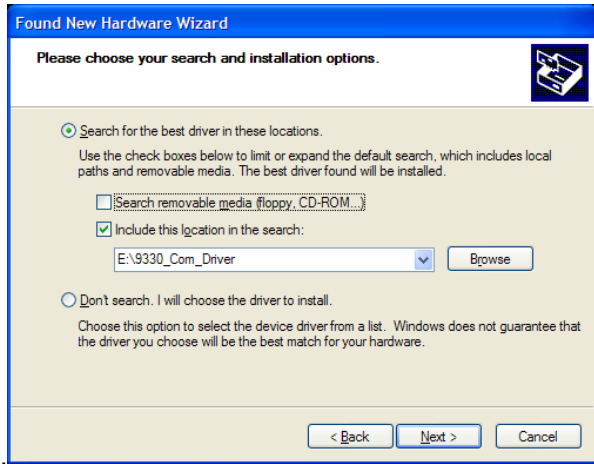


FIGURE 13 - NEW HARDWARE WIZARD

9. In the dialogue window “Hardware installation” click “Continue installation”.



FIGURE 14 - HARDWARE INSTALLATION

10. The driver was installed successfully. Click “Finish”.

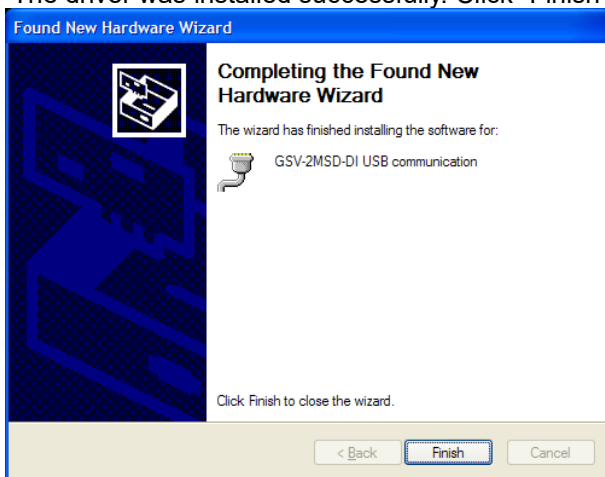


FIGURE 15 - HARDWARE INSTALL FINISH

## COM Ports

Once windows is finished installing the device navigate to Device Manager and check for a new **USB Serial Port (COMX)** where X is the assigned port number. Remember this number. In the examples below it is COM6 or COM28

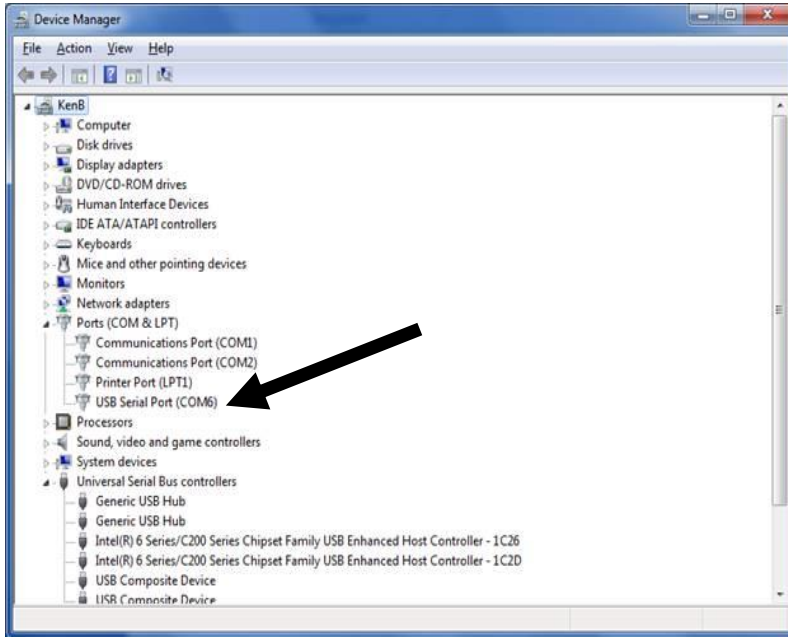


FIGURE 16 - EXAMPLE OF BSC4

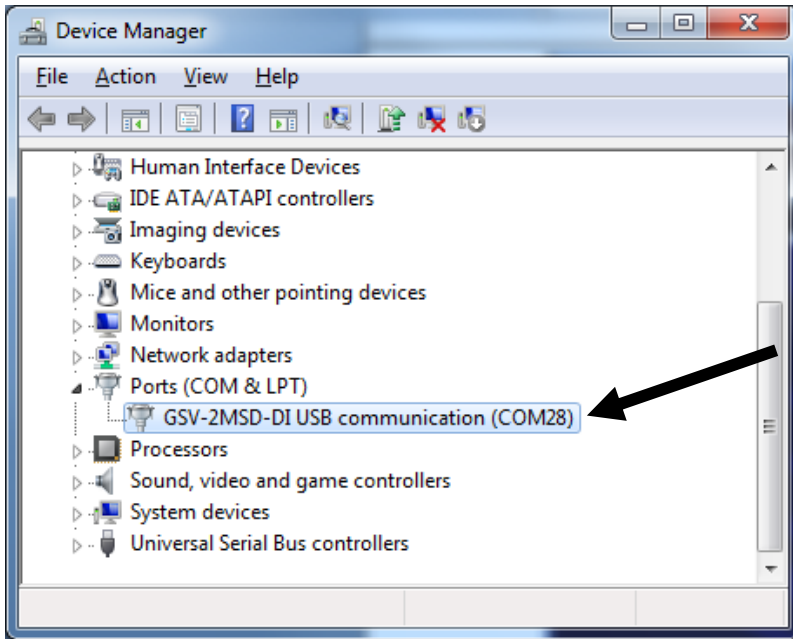


FIGURE 17 - EXAMPLE OF 9330 COMPORT

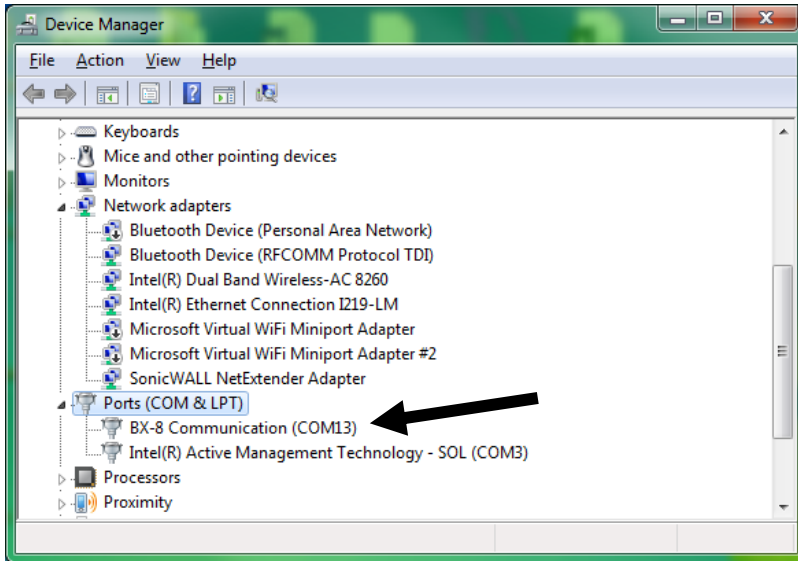


FIGURE 18 - EXAMPLE OF BX8 COMPORT

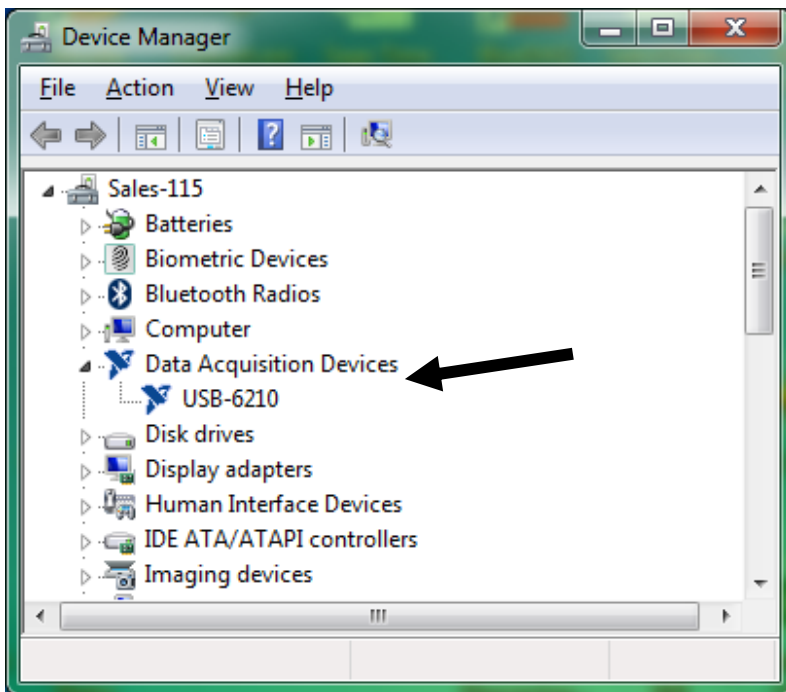


FIGURE 19 - BSC8D INSTALLS AS A DATA ACQUISITION DEVICE



## BlueDAQ – Adding a New Channel

### 1. Adding a New Channel

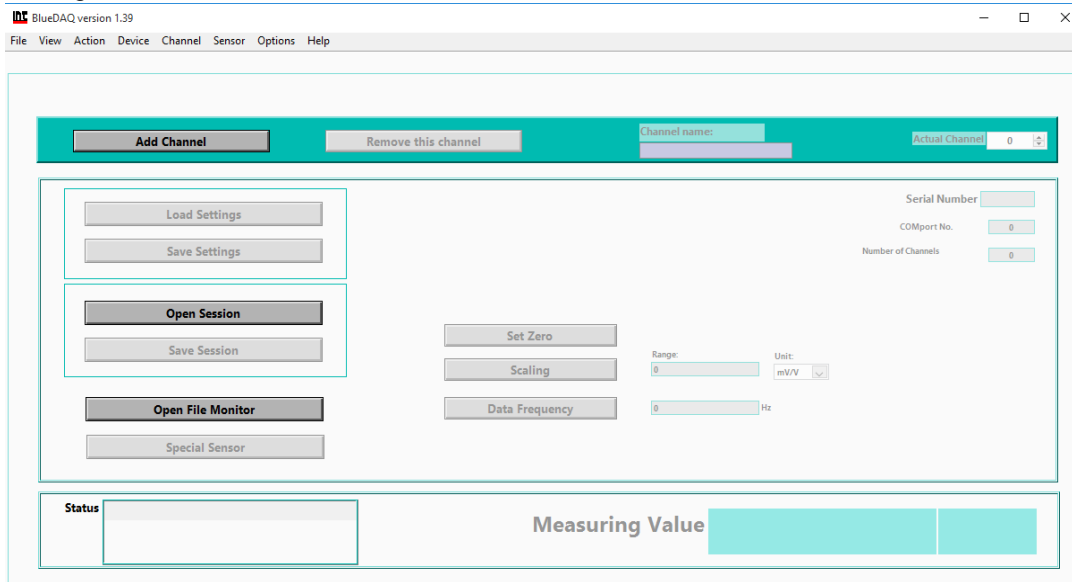


FIGURE 20 - MAIN MENU

### 2. Under Devicetype, select the device. In this example we are using a BX8.

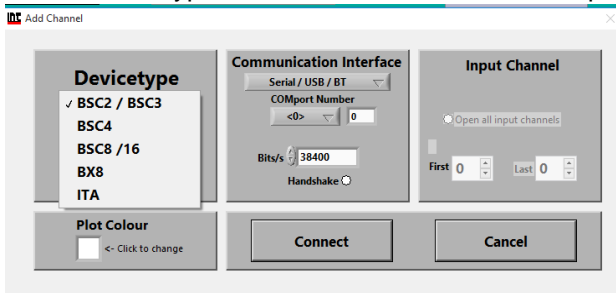


FIGURE 21 - ADD CHANNEL MENU

### 3. Under Communication Interface, select the correct COM port. In this Example our COMport Number is COM9.

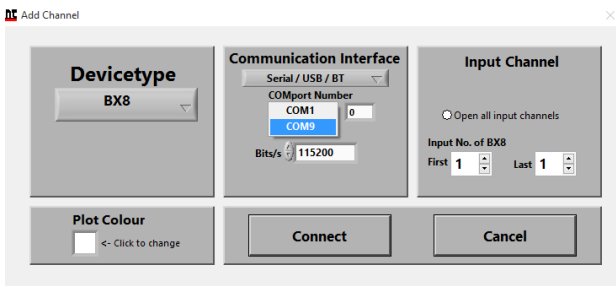


FIGURE 22 - ADD CHANNEL MENU

### 4. Under Input Channel, select how many channels. In this example we are using a 6 Axis Load Cell, so we will select Last 6.

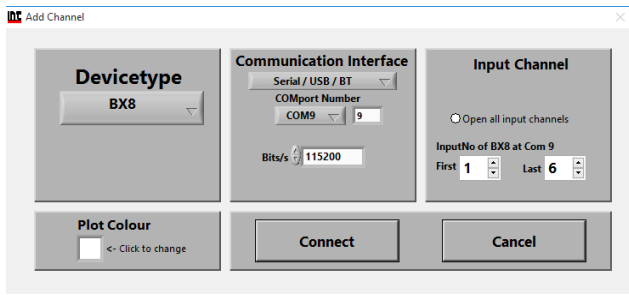


FIGURE 23 - ADD CHANNEL MENU

- Click Connect 

## Adding a Sensor with a .Dat File

- Under the Sensor Option, Click on Multi-axis

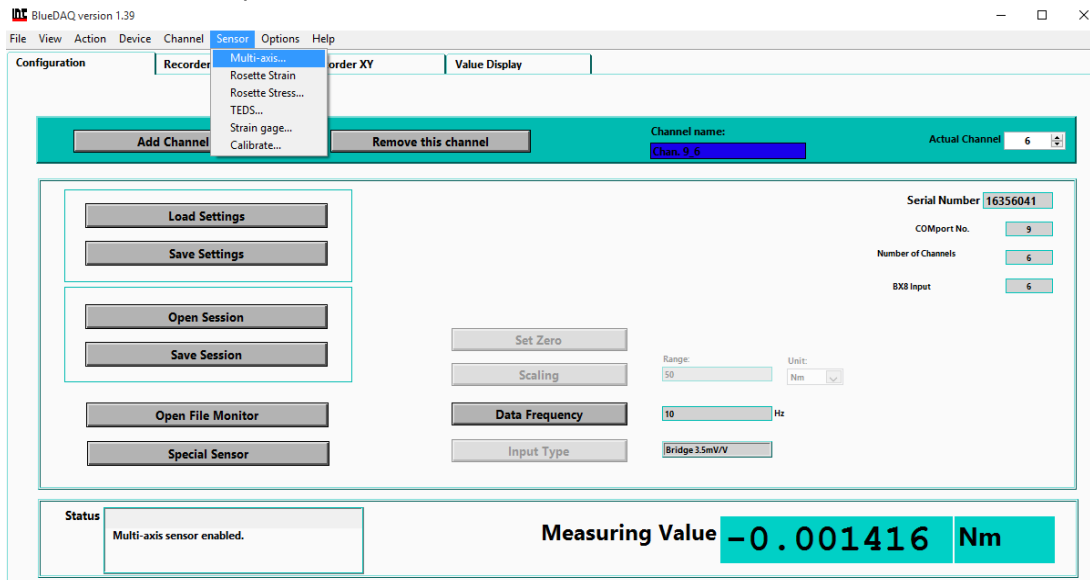


FIGURE 24 -SENSOR DROPDOWN MENU

- If this is a new Sensor, Click on the Remove button to remove the previous sensor.

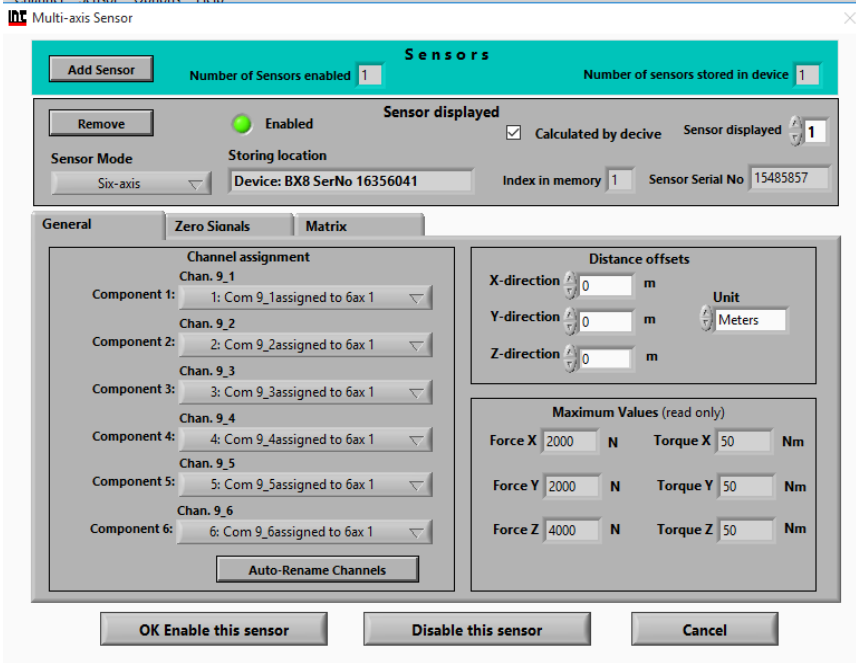


FIGURE 25 - SENSOR MENU

- Once the Remove button has been clicked, the Channel assignment will reset.

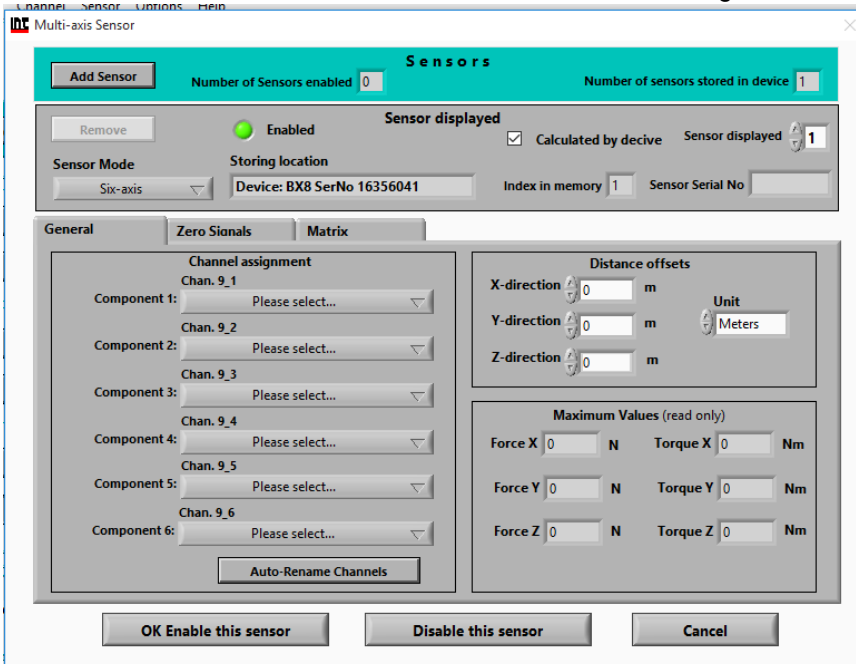


FIGURE 26 - SENSOR MENU, REMOVE BUTTON

4. Click on Add Sensor and Open File / Dir..

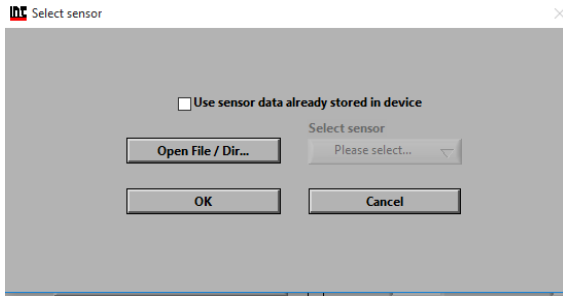


FIGURE 27 - ADD SENSOR MENU

5. In this Example, the Multi-Axis SN is 15485857, so 15485857.dat will be selected.

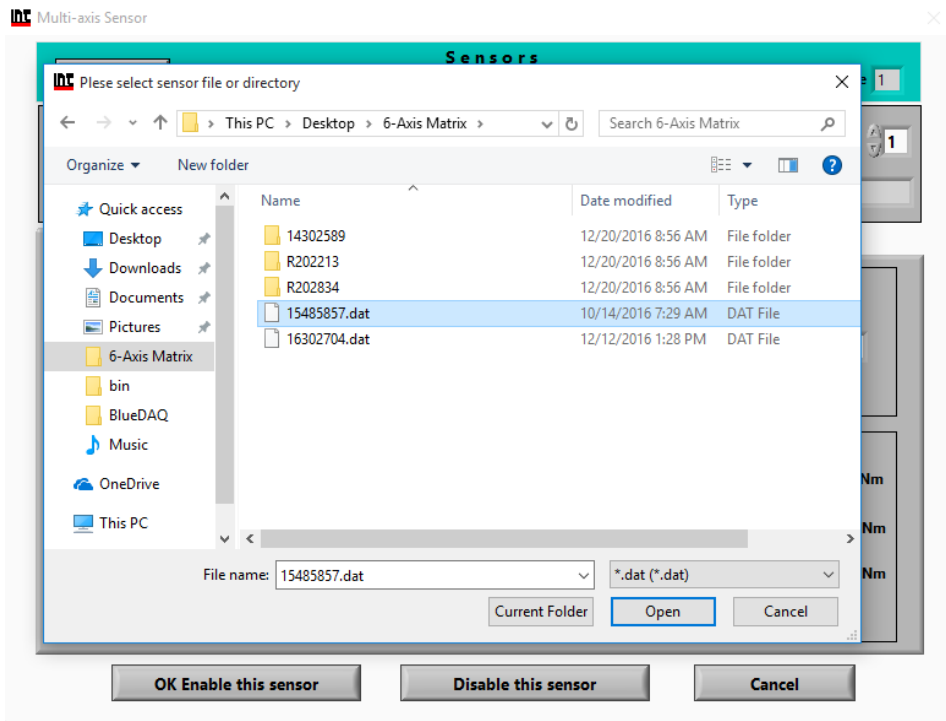


FIGURE 28 - SELECTING THE CORRECT DATA FILE

6. Click OK after selection.

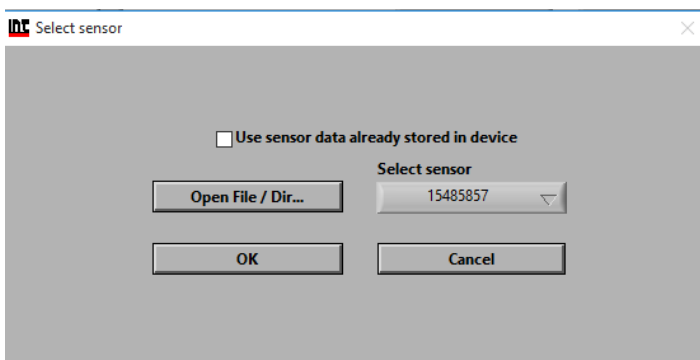


FIGURE 29 - SENSOR DATA SELECTED

7. Verify the Sensor Serial is correct.

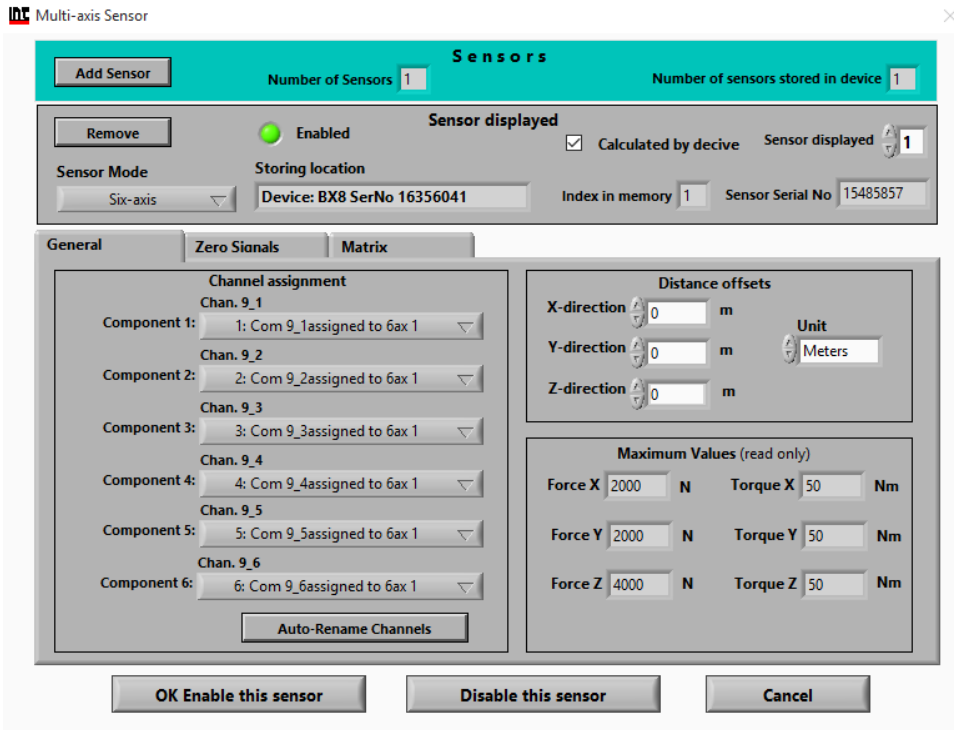
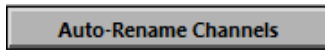


FIGURE 30 - ADD SENSOR MENU - FILE SELECTED

- Click Auto-Rename Channels to properly assign channels.



- The default Channels will change from Chan X\_X to ForceX or Torque, depending on the .dat file used.

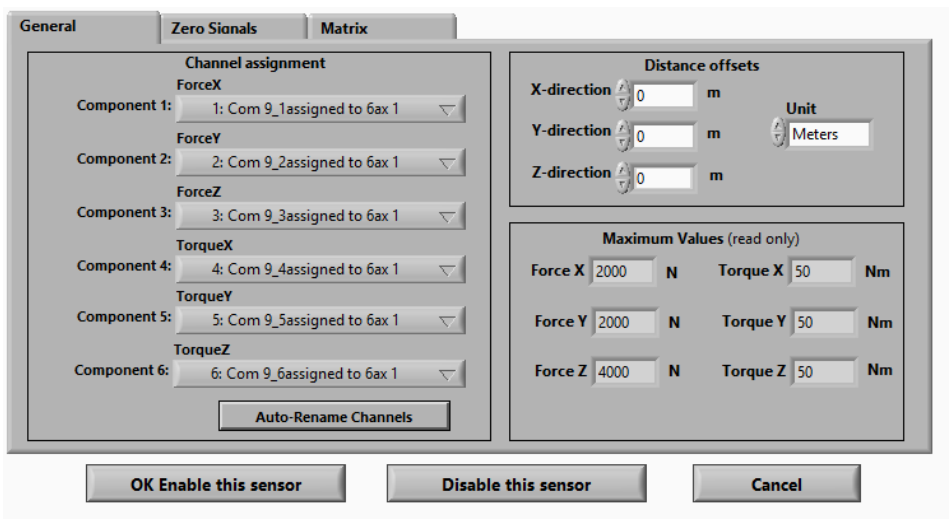


FIGURE 31 - AUTO-RENAME CHANNELS CLICKED

- Click OK Enable this sensor

- Select Overwrite existing and OK.

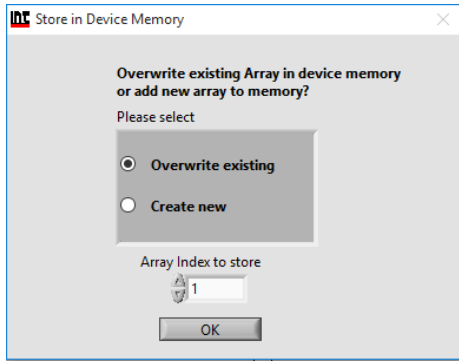


FIGURE 32 - OVERWRITE

- Enter password (if required), enter the correct pass and click OK.

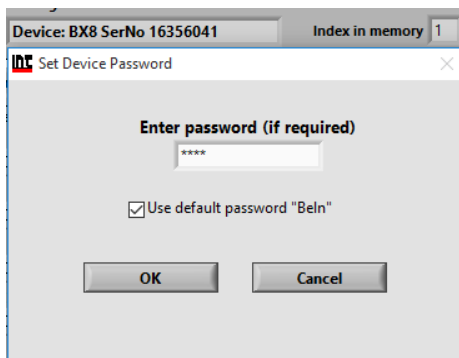


FIGURE 33 – PASSWORD REQUIRED

## Adding a Single Channel - Without a .Dat File

- Run BlueDAQ from the start menu. After the program launches click “ADD CHANNEL”

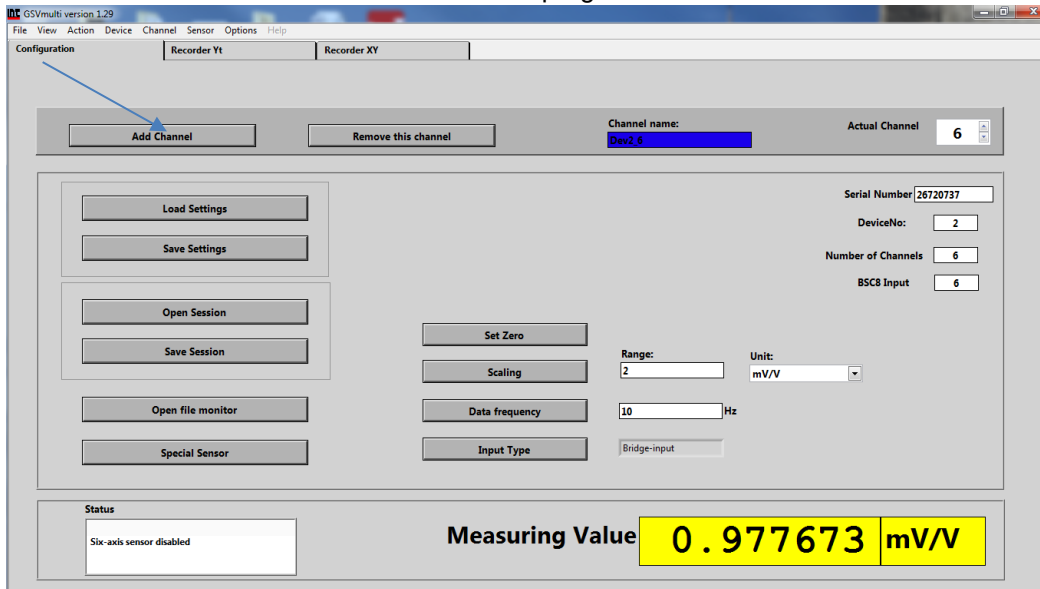
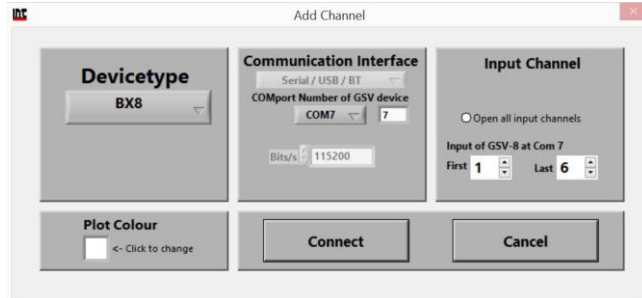


FIGURE 34 - ADD CHANNEL

- In the Add Channel dialog box

2.1. Click Devicetype drop-down and select BSC4, BSC8, BX8, or BSC2 (9330)

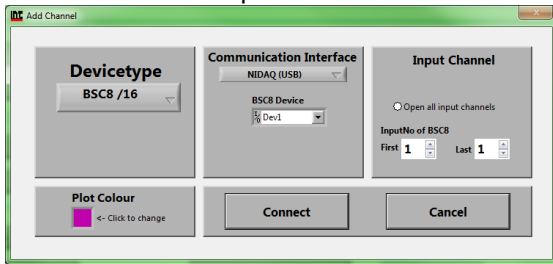
3. Click the Device dropdown box and select the device, select the COM Port (See Device Manager if unknown) and open the correct amount of input channels (First = 1 and Last = total # of channels for device). For Model 9330, you will not be allowed to change the number of channels. Example, if using 3 load cells then Last will be 3.



4. Click Connect

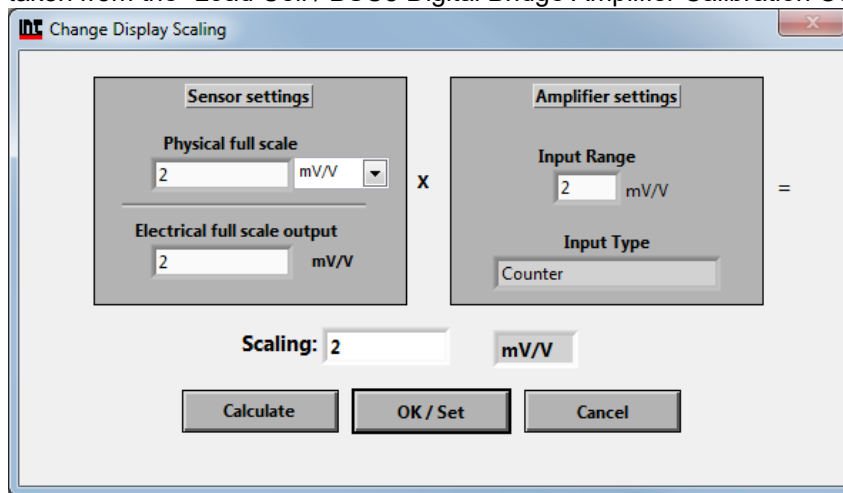
**FIGURE 35 - ADD CHANNEL MENU**

5. BSC8 has a slightly different add channel box. Select Dev1 instead of Com port. Please remember to open the needed amount of input channels.



**FIGURE 36 - EXAMPLE BSC8 DEVICE**

6. Each channel must now be scaled using the “SCALING” dialog box. Each channel must be scaled independently. If the BSC8 was purchased with Interface load cells and a System Setup and Scaling then the scaling values will be taken from the “Load Cell / BSC8 Digital Bridge Amplifier Calibration Certificate”



**FIGURE 37 - EXAMPLE OF SCALING**

6.1. Physical full scale is typically the capacity of the sensor.

6.2. Electrical full scale output is the output of the sensor at the Physical full scale.

6.3. Input Range is always 2 mV/V and should not be changed.

The above sensitivity of the Amplifier is intended for use with the following transducer which, when interconnected, will produce the outputs listed below, based on straight line sensitivity of the Amplifier and best fit line (SEB) outputs of the transducer.

Transducer Mfg: Interface      Model: LBS-100-864      Serial: T667819  
 Transducer--Amplifier Interconnection polarity (Normal [CT Cable] / Reversed [CC Cable]):

Mode	Transducer Output (mV/V)	Reference Force (lbf)	Net Reading at Reference Force
Compression	1.94492	100	99.995

Channel: 1

**Change Display Scaling**

**Sensor settings**

Physical full scale: 100 lbf

Electrical full scale output: 1.94492 mV/V

**Amplifier settings**

Input Range: 2 mV/V

Input Type: Counter

Scaling: 102.832 lbf

Buttons: Calculate, OK / Set, Cancel

Press Calculate to scale and then OK/Set to save

FIGURE 38 - SCALING USING CALIBRATION CERTIFICATE



- Example scaling a channel using model WMC-100 load cell with 100 lbf capacity and 1.9587 mV/V output. After entering the values into the dialog box you must click “Calculate” and then “OK/Set”.

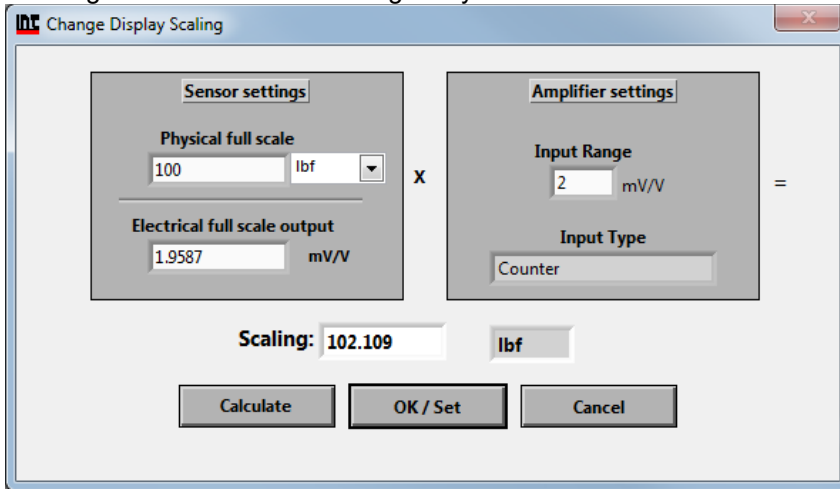


FIGURE 39 - EXAMPLE OF CALIBRATION FOR A WMC-100 LOAD CELL

- Once each channel has been scaled the software is ready to take measurements.

## Measurement and Recording

- Click Set All Zero before measuring

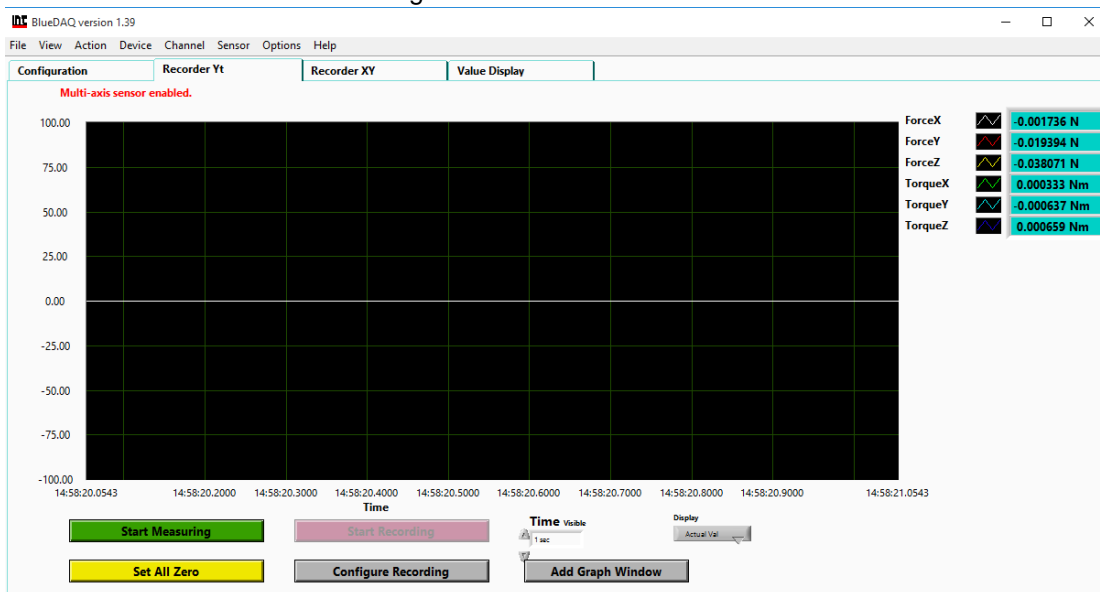


FIGURE 40 - ZERO VALUES

- Click YES

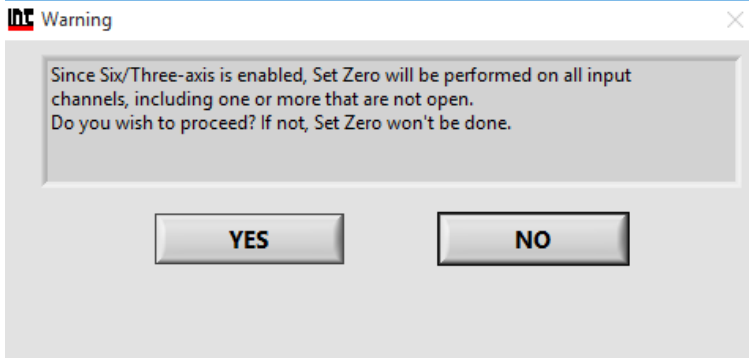


FIGURE 41 – PROCEED WITH ZERO RESET

3. Click OK to Start Measuring

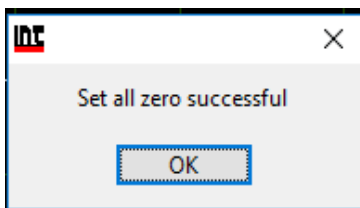


FIGURE 42 - SUCCESSFUL ZERO

4. Click Start Measuring

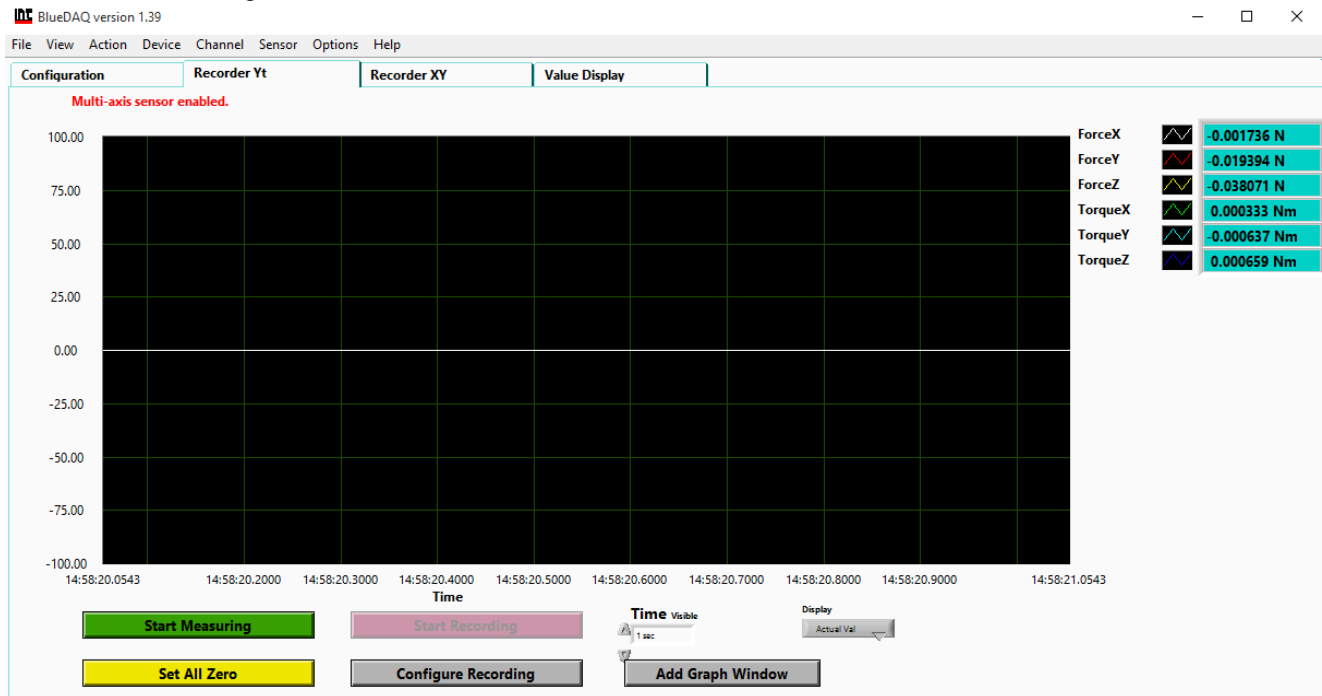


FIGURE 43 - MEASUREMENT

5. Recording Options are available.

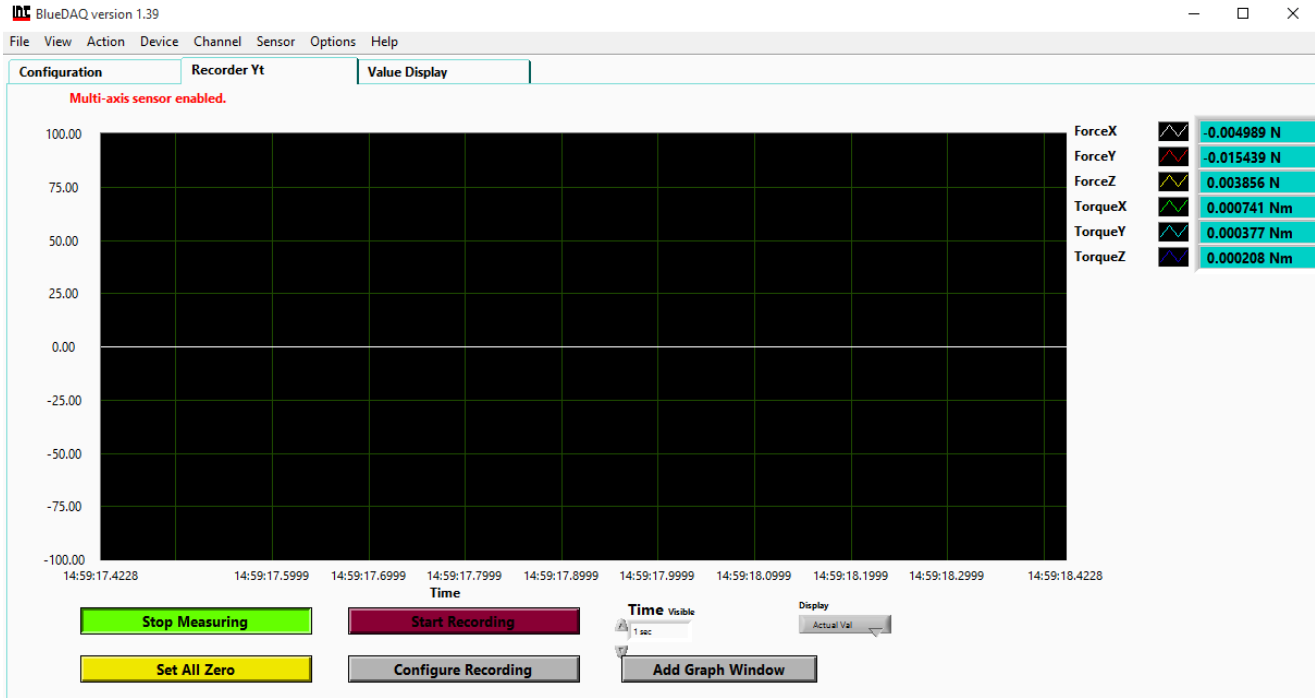


FIGURE 44 - MEASUREMENT INITIATED

6. Recorder Tab, measurements of all Axis.



FIGURE 45 - VALUES MEASURED

7. Value Display shows values in each Axis.

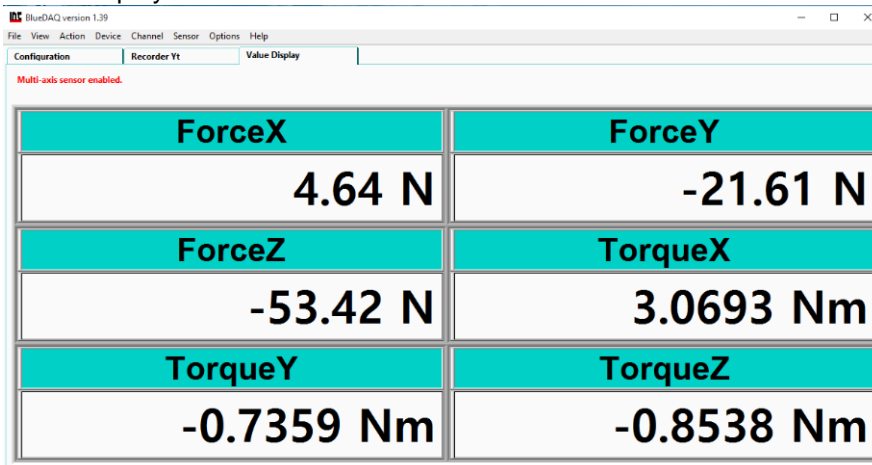


FIGURE 46 - VALUE DISPLAY SCREEN

## Warranty

All Telemetry products from Interface Inc., ('Interface') are warranted against defective material and workmanship for a period of (1) one year from the date of dispatch. If the 'Interface' product you purchase appears to have a defect in material or workmanship or fails during normal use within the period, please contact your Distributor, who will assist you in resolving the problem. If it is necessary to return the product to 'Interface' please include a note stating name, company, address, phone number and a detailed description of the problem. Also, please indicate if it is a warranty repair. The sender is responsible for shipping charges, freight insurance and proper packaging to prevent breakage in transit. 'Interface' warranty does not apply to defects resulting from action of the buyer such as mishandling, improper interfacing, operation outside of design limits, improper repair or unauthorized modification. No other warranties are expressed or implied. 'Interface' specifically disclaims any implied warranties of merchantability or fitness for a specific purpose. The remedies outlined above are the buyer's only remedies. 'Interface' will not be liable for direct, indirect, special, incidental or consequential damages whether based on the contract, tort or other legal theory. Any corrective maintenance required after the warranty period should be performed by 'Interface' approved personnel only.

Revision History		
Author	Revision	Release Date
KB	E	02/22/2018
PB	F	01/16/2019