INTERFACE
FORCE MEASUREMENT SOLUTIONS.

BSC4D Quickstart Guide

Introduction

- The BSC4D Amplifier takes up to 4 Independent Inputs and turns those signals into a digital output.
- 4 independent channels
- For use with model 3AXX series 3-axis load cells or multiple load cells
- Can be used with up to any 4 standard load cells (with mV/V output)
- Inputs for Strain gage / 0–10 V /PT1000
- Measurement ranges 2 mV/V / 10 mV/V
- 8 digital inputs / outputs
- Data rate 0 Hz–500Hz

Description

This 4-channel measuring amplifier for sensors with strain gauges is equipped with a USB interface. The voltage is supplied via the USB port at the back of the measuring amplifier. The measuring amplifier can be delivered with a SUB-D37 connection or with 4x M12 ports. The measuring amplifier has eight digital inputs and outputs.

On the backside SubD25 socket, strain gauge full-bridges and half-bridges 120 Ohm up to 1 Khom as well as PT1000 temperature sensors and 1000 Ohm single grid strain gages or voltages 0-5V can be connected.

Options

USB output, up to 10 mV/V input, 37-pin input connector or 4 each M12

connectors and is USB powered. Includes graphing and logging software

Caution: <u>Please read this entire guide before making any connections or powering the BSC4D. Software and Drivers MUST be installed first. Refer to the Installation Diagram for the correct BSC4D model.</u>

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Load Cell

Input

(37 Pin Input Shown, 5-Pin M12 Optional)

BSC4D

USB INPUT
(Power Supplied by USB)

Analog Output 25-Pin
(±10V and 4-20mA)

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

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. BSC4D drivers were installed with the BlueDAQ software and Windows will automatically load them. BSC4 drivers must be installed as described below and are located on the USB Drive or www.interfaceforce.com website.
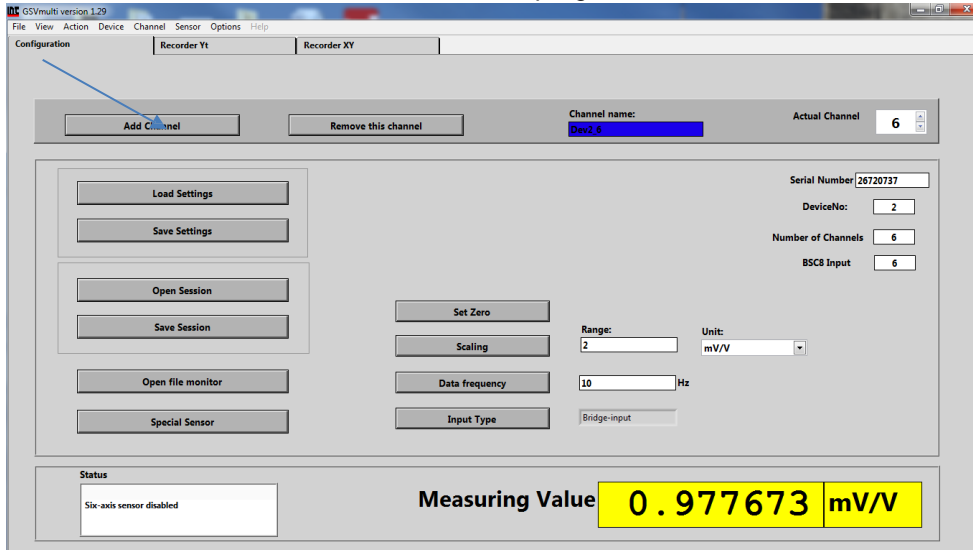
COM Ports

1. 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.
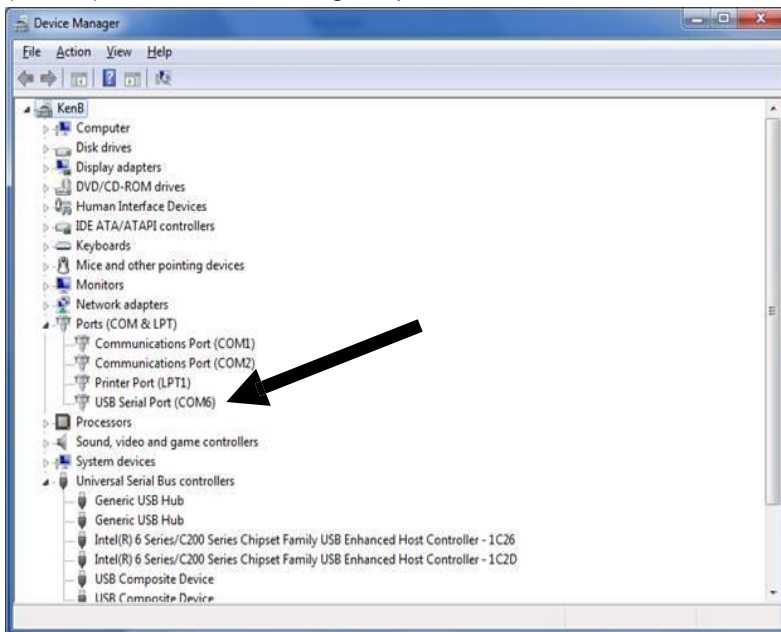
Adding a Single Channel

1. Run BlueDAQ from the start menu. After the program launches click "ADD CHANNEL"

2. In the Add Channel dialog box

   2.1. Click Devicetype drop-down and select BSC4

   2.2. 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).

   2.3. Click Connect

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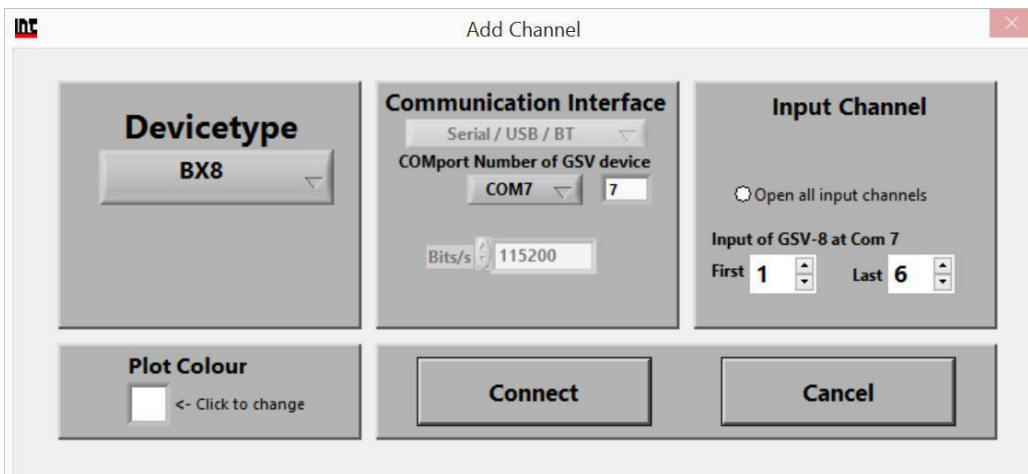
3. Each channel must now be scaled using the "SCALING" dialog box. Each channel must be scaled independently. If the BSC4D was purchased with Interface load cells and a System Setup and Scaling then the scaling values will be taken from the "Load Cell / BSC4D Multi-Channel Digital PC Interface And Data Acquisition Instrument Calibration Certificate"
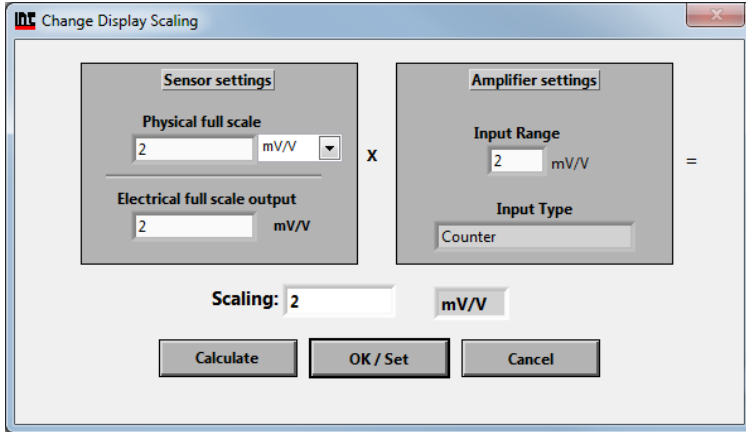
  3.1. Physical full scale is typically the capacity of the sensor.

  3.2. Electrical full-scale output is the output of the sensor at the Physical full scale.

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

4. Example scaling using Load Cell / BSC4D Multi-Channel Digital PC Interface And Data Acquisition Instrument Calibration Certificate"
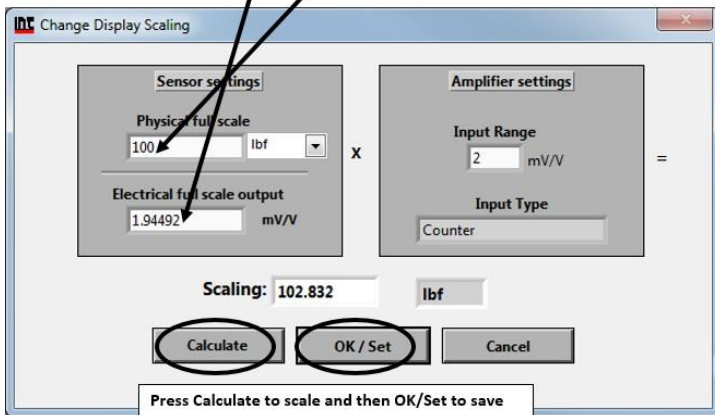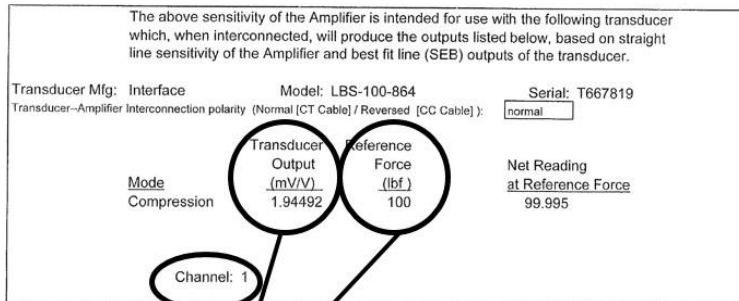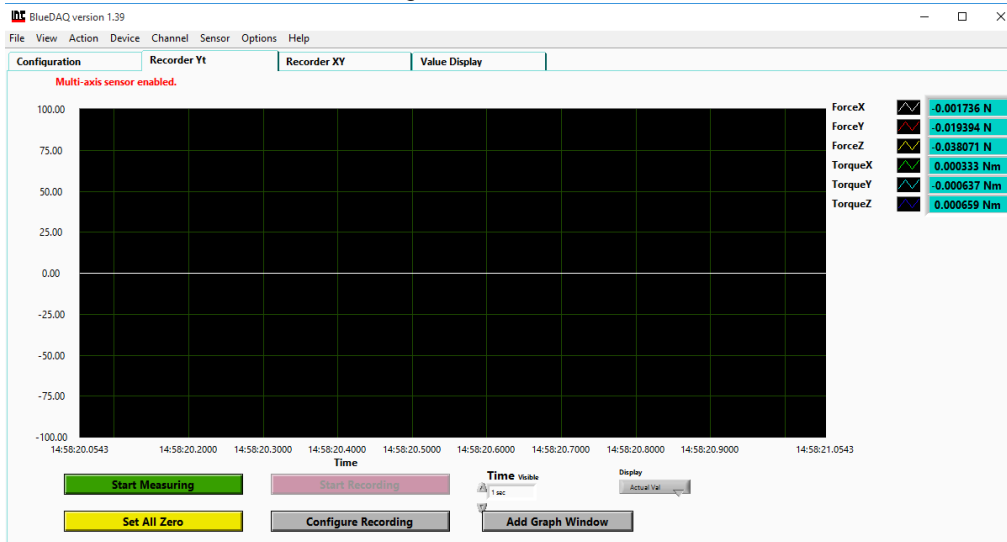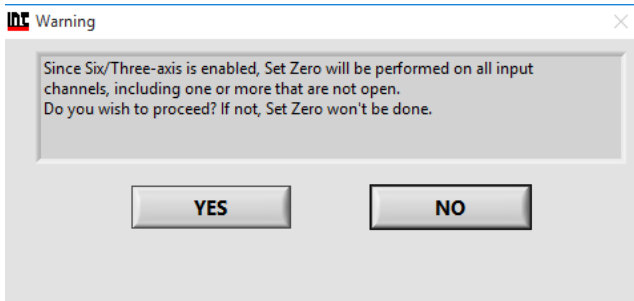
5   Example scaling a channel using model WMC-100 load cell with 100 lbf capacity and 1.9587 mV/V output. After entering the values into the dialog box you must click "Calculate" and then "OK/Set".
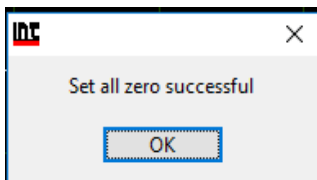
Measurement and Recording

1. Click Set All Zero before measuring

2. Click YES

3. Click OK to Start Measuring

4. Click Start Measuring

Recording Options are available.

5. Recorder Tab, measurements of all Axis.

6. Value Display shows values in each Axis.

Warranty

All instrument 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	B	10/6/2023