

USB DATA LOGGER FOR EXAIR DIGITAL FLOWMETERS
INSTALLATION & MAINTENANCE



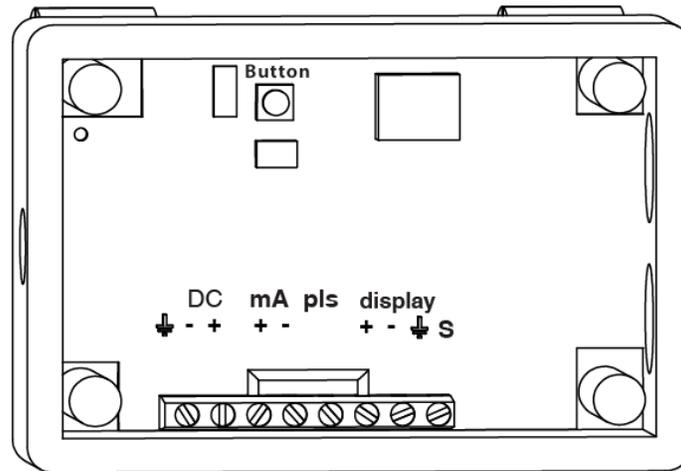
Part 1 – Removing the data logger from the data logging harness and inserting the battery.

- 1) Pull the data logger out of the data logging harness.
- 2) Remove the back half cover of the data logger by pressing down on the tab located near the LEDs and pulling the case apart.
- 3) Install the battery making sure that the positive and negative ends are aligned correctly.
- 4) Install the back half cover of the data logger. Do not reconnect it to the data logging harness at this time.

Part 2 – Connecting the data logging harness to the meter –

NOTE: Make sure power is disconnected from meter at this time.

- 1) Remove the 4 screws that hold the cover of the Digital Flowmeter in place. Remove one of the rubber plugs on the side of the meter housing. Gently lift the top circuit board out of the way, but do not disconnect it.
- 2) Slip the wires for the harness through the wiring gland that was provided with the meter. Route the wires through the open port of the meter.
- 3) Attach the red wire to the terminal block labeled 'mA-'. Attach the black wire to the terminal marked 'display-'. On older Digital Flowmeters, this might be labeled 'DC-'.
NOTE: There may be existing wires already connected to these connections. If so, make sure and reconnect all wires to their original terminals. Longer wires can be used to make this connection if needed. See figure.



**Shown with top circuit board
Removed for clarity
(Digital Flowmeter shown - sold separately)**

- 4) Tighten the gland in place, making sure to tighten both the nut that secures the gland to the Digital Flowmeter and the nut that secures the gland to the wires.
- 5) Connect the power to the Digital Flowmeter. **Use caution to only touch the button listed in the next step.**
- 6) To properly configure the software later, you will need to determine the CALIBRATION POINT of your meter. This method varies depending on the type of meter you have. On the lower circuit board (same board as the connections were made) there will be a small button next to a single LED.
 - a. On Rev 3.0 meters (indicated on side of meter), press the button one time. Record the number displayed on the meter below.
 - b. On all other meters, press the button twice. Record the number below.

CALIBRATION POINT _____

 - c. Press the button twice to return the display to normal.
- 7) Disconnect the power.
- 8) Place the circuit board and cover back into position and secure with the 4 screws. The power may now be reconnected.

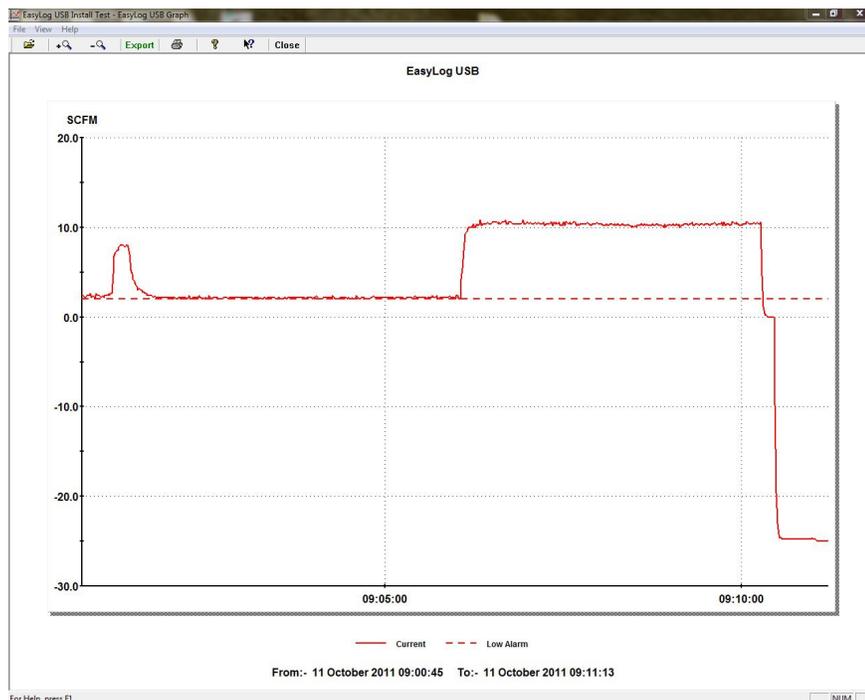
Part 3 – Setting up the Data Logging Software

- 1) Go to <http://www.lascarelectronics.com/data-logger/easylogger-software.php> to download the software.
- 2) Insert USB Data Logger into computer.
- 3) Open 'EasyLog USB.' You will be prompted that previous data will be lost. If this is the first time you are setting up the Data Logger, click Okay. If you wish to retrieve the data, click cancel and go to Part 4.
- 4) Click on 'Set up and start the USB Data Logger'.
 - a. On this screen, you can rename the Data Logger if you wish.
 - b. You can also select the sampling rate. This will directly affect how many hours worth of data that can be collected by the Data Logger.
 - c. Select Custom Calibration, then click 'Next.'
- 5) Choose the units you wish to use for your recording. You can also create a custom unit such as 'SCFM' or 'M3/hr.'
- 6) For input 1, the default should be 4.00 mA. The Graph Output should be set to 0.
- 7) For input 2, the default should be 20.00 mA. The Graph Output should be set to the number recorded in step 6 in Part 2. Click Next when done.
- 8) You can select an alarm feature for either a high or low limit. Under normal operation, the Green LED only will be lit. Once the alarm point is reached, a red LED will light up. The LEDs can be disabled if you prefer. Set the alarm point as desired. Click Next.

- 9) The start time can be set in this screen. If not set, it will begin recording as soon as 'Finish' is clicked. Set the start time and date if desired and click Finish.
- 10) Click OK and then eject the USB Data Logger. It can now be plugged directly into the harness previously installed on the flowmeter.

Part 4 – Retrieving Data

- 1) Disconnect the USB Data Logger from the flowmeter and connect to the PC.
- 2) Launch 'EasyLog USB.'
- 3) Click on 'Stop the USB Data Logger and download data.' You will be asked to confirm the stop.
- 4) You will next be asked if you would like to save the data to your PC. Click OK.
- 5) Select an appropriate filename and location for the data.
- 6) A graph will open showing the data:



- 7) Here you can zoom in, zoom out and study the graph.
- 8) You can also choose to export the file to a spreadsheet. To do so, click on 'Export.' This will immediately export the data to a Microsoft Excel Spreadsheet. The spreadsheet can be saved from here as any other spreadsheet.

NOTES: 1) If the unit will not be in use for a long time (over 1 month), it is advisable to remove the battery. 2) If desired, up to 1,000 foot of wire can be used between the Digital Flowmeter and the data logging harness.

If you have any questions or problems, please contact an EXAIR Application Engineer at:

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