



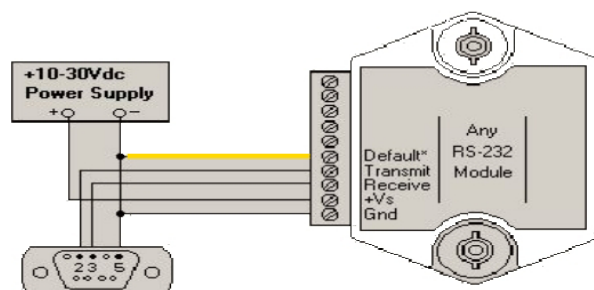
Setting up Pressure Transducer Using a DGH 4-20mA Analog to Digital Converter.

By Bob Glover

INSTALLATION

The diagram below shows the correct setup for a DGH D1251 4-20mA RS232 analog to digital converter. Use this when you are first configuring the DGH board to communicate with the HYPACK® computer.

FIGURE 1. DGH Wiring Diagram



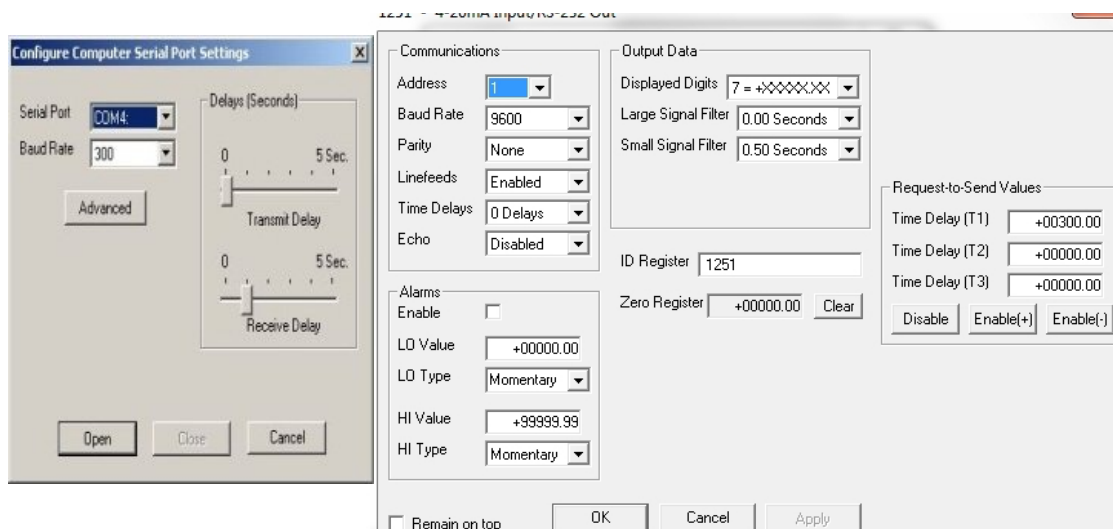
Remove Default strap after setup is completed

Once the board is wired and connected to both a power source and the HYPACK® computer, run the the DGH Utility Software 2000 on the HYPACK® computer. If this is not already installed, it can be found here: <http://www.dghcorp.com/utilitysoftware/>.

The software prompts you to input the connection COM port and the associated parameters.

Note: These values must match the HYPACK® connection settings.

FIGURE 2. DGH Setup Dialogs



So long as the default strap (shown in yellow) is connected and the correct COM port is selected, the DGH board will be accessible. The remaining parameters are set to their default values while the strap is in place. When you set the COM port and click [Open], the software finds the correct module and reads the settings currently stored on the board.

Figure 2 shows the configuration of the DGH board when setup for HYPACK® to correctly read a 4-20mA pressure transducer. Once this dialog box has been closed, any changes will be saved and the DGH board will be ready to connect to the transducer.

FIELD TESTING

The following is a quick field checkout procedure for a typical 4-20mA pressure transducer. If a problem is encountered with a transducer, it is sometimes helpful to test the transducer independently from the rest of the system, to establish where to concentrate the troubleshooting effort.

Figure 3 is a simple hookup for the most common types of electrical output of a 4-20mA transmitter. The power supply can be a common 12 volt lantern battery, or even a 9 volt transistor radio battery, although the lifetime of a 9 volt battery will be limited. The meter should digital and capable of reading at least 2 digits to the right of the decimal point. Use 22 gage or heavier hookup wire or clip leads for jumpers.

Once the transducer is correctly configured, orient the transducer in a vertical position with the pressure port down then read the zero output on your meter.

FIGURE 3. Wiring Diagram for the 4-20A Transmitter

For a 4-20mA unit the output should be between 3.80 and 4.20 mA. If the zero output is within these limits, any problems will more than likely be found elsewhere in the system.

When the transducer has been tested it can be connected to the DGH board. Figure 4 shows the correct wiring with the transducer included.

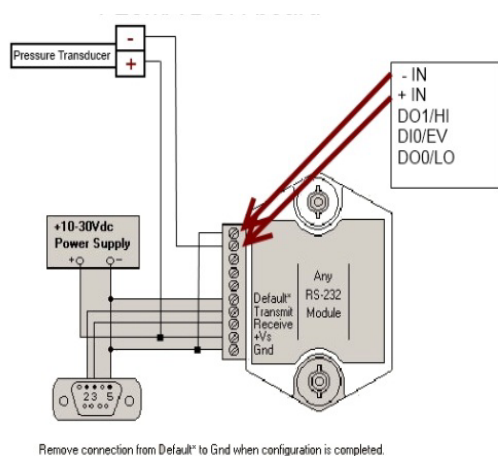
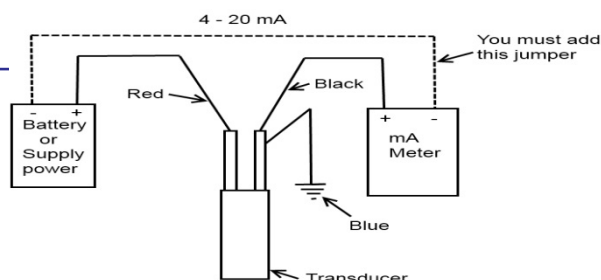


FIGURE 4. DGH Wiring Diagram with Pressure Transducer

With the transducer connected to the DGH board, it is now ready to be used with the HYPACK® computer. We will discuss the HYPACK® HARDWARE setup and the configuration of the driver that reads the output of the DGH board in a future article.

As always should you have any questions, feel free to email Bob@HYPACK.com for further information regarding this procedure.s