

HM-USB-ISO User Manual

Introduction

The HM-USB-ISO HART Modem, USB is designed to connect PC's to HART networks. Application software can then configure, monitor, and document HART based instrumentation.

Software Drivers

Before use, a USB Virtual Serial Port must be installed on the PC. Simply connect the HM-USB-ISO USB cable to the PC and follow the Windows "Found New Hardware Wizard" prompts. Insert the driver CD when prompted for the driver location. Note that two drivers are installed: the USBMOD3 USB Serial Converter, and the USB Serial Port. This means the Found New Hardware Wizard will run 2 times.

Found New Hardware Wizard for Windows XP

Here is a detailed description of the Wizard prompts and the required responses:

1. Welcome to the Found New Hardware Wizard



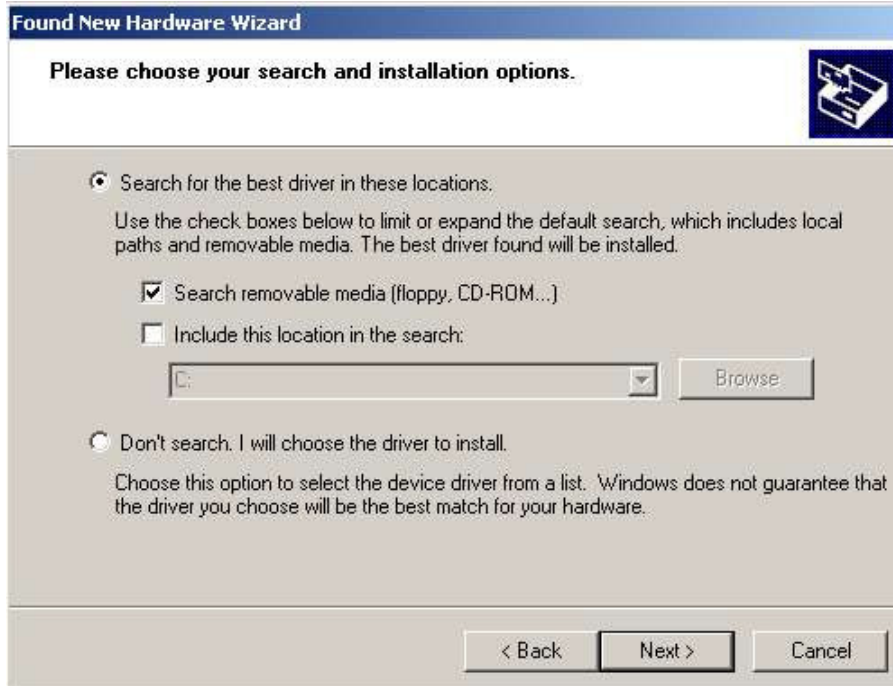
Select No, not this time.

2. This wizard helps you install software for USBMOD3.



Select Install from a list or specific location (Advanced)

3. Choose search and installation options



Select Best driver at these locations.
Select Search removable media (floppy, CD-ROM...)

4. USB Serial Converter installation finished.

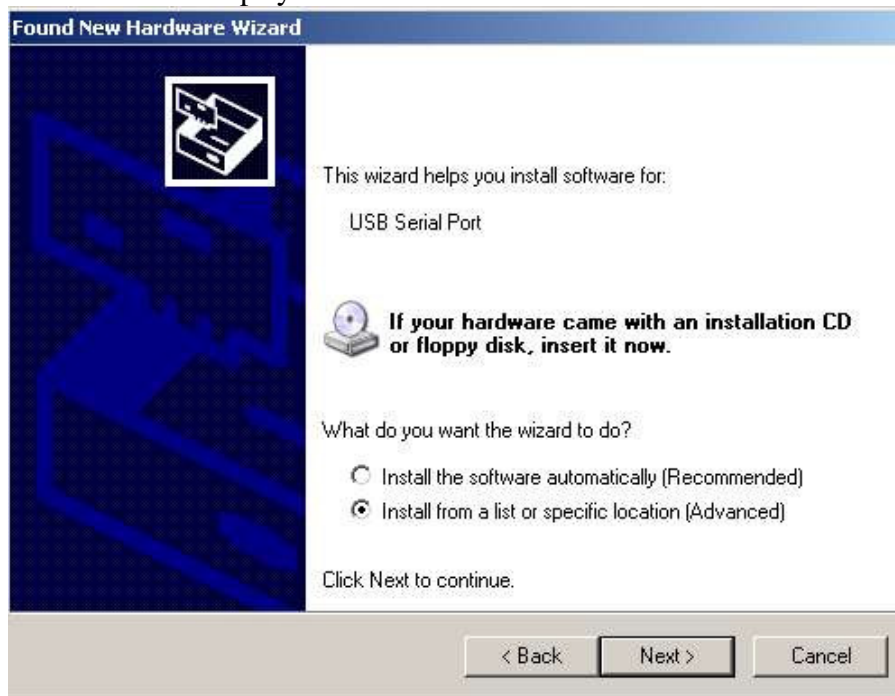


5. This process now repeats for the USB Serial Port. Welcome to the Found New Hardware Wizard.



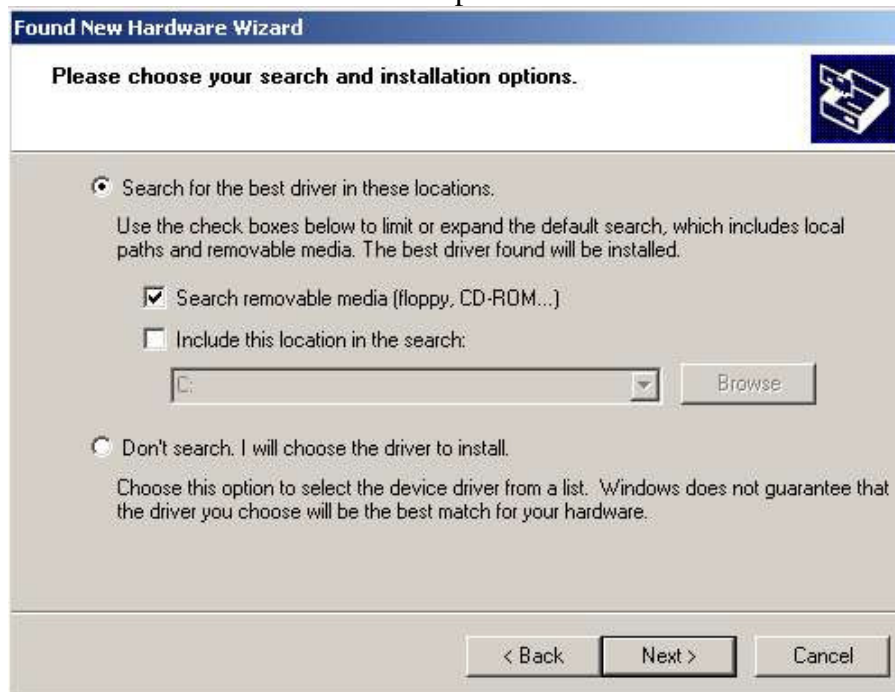
Select No, not this time.

6. This wizard helps you install software for USB Serial Port.



Select Install from a list or specific location (Advanced)

7. Choose search and installation options



Select Best driver at these locations.

Select Search removable media (floppy, CD-ROM...)

8. USB Serial Port installation finished.



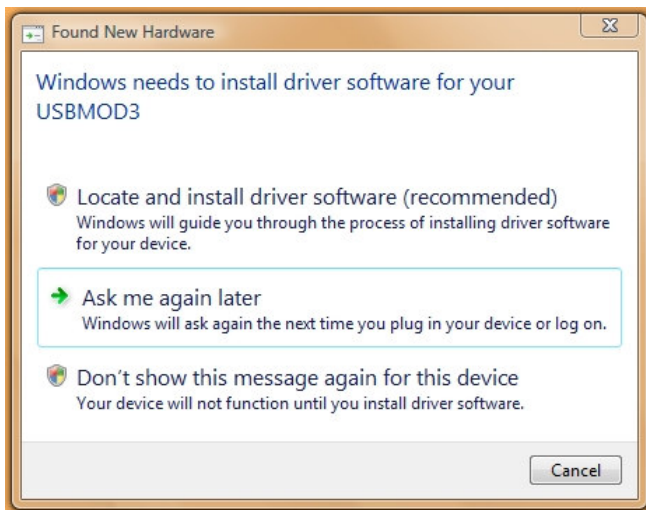
When completed successfully, the following will appear at the bottom of the screen:



Found New Hardware Wizard for Windows Vista

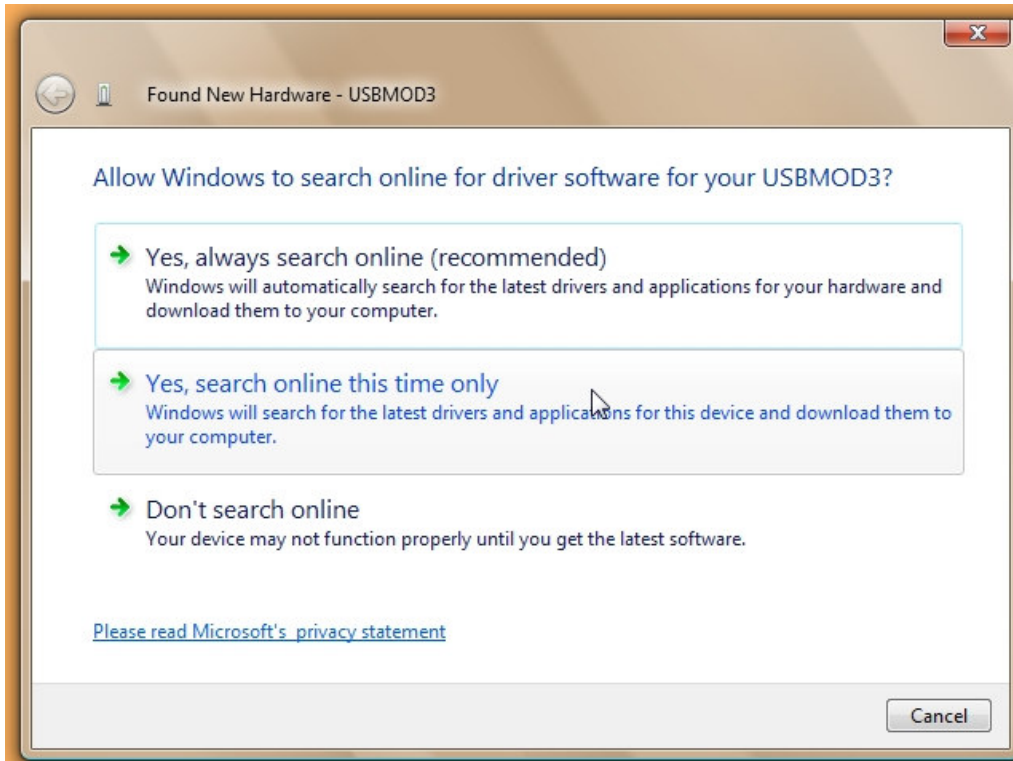
Here is a detailed description of the Wizard prompts and the required responses:

1. Found New Hardware USBMOD3



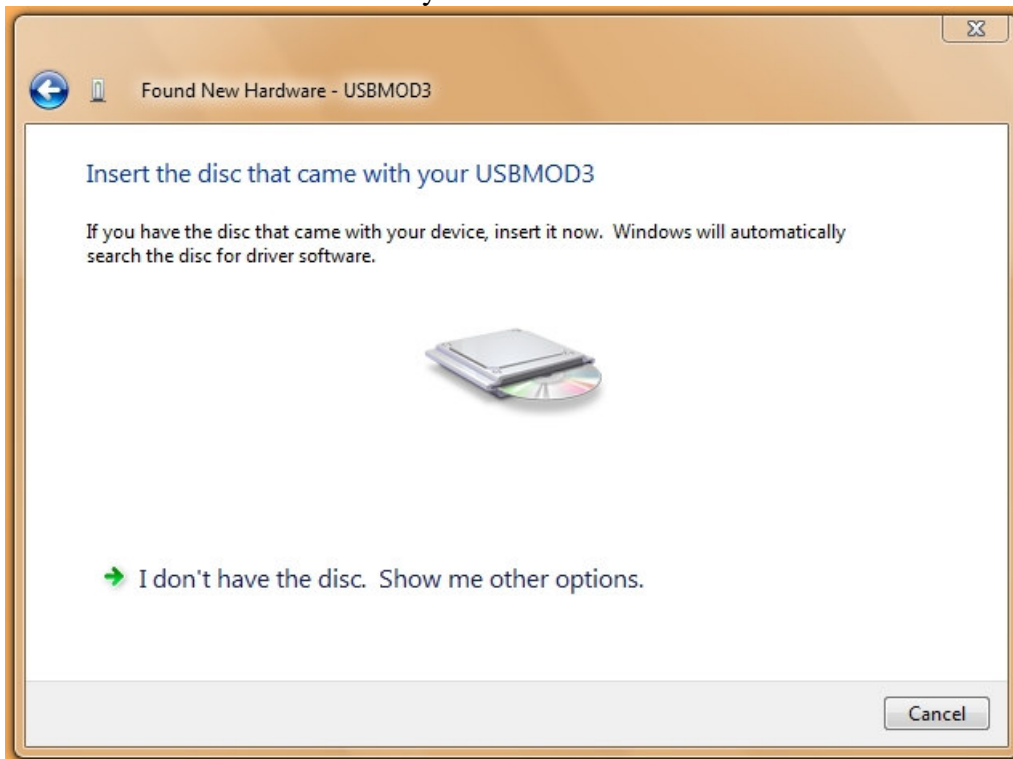
Select Locate and install driver software (recommended).

2. Allow Windows to search online for driver software



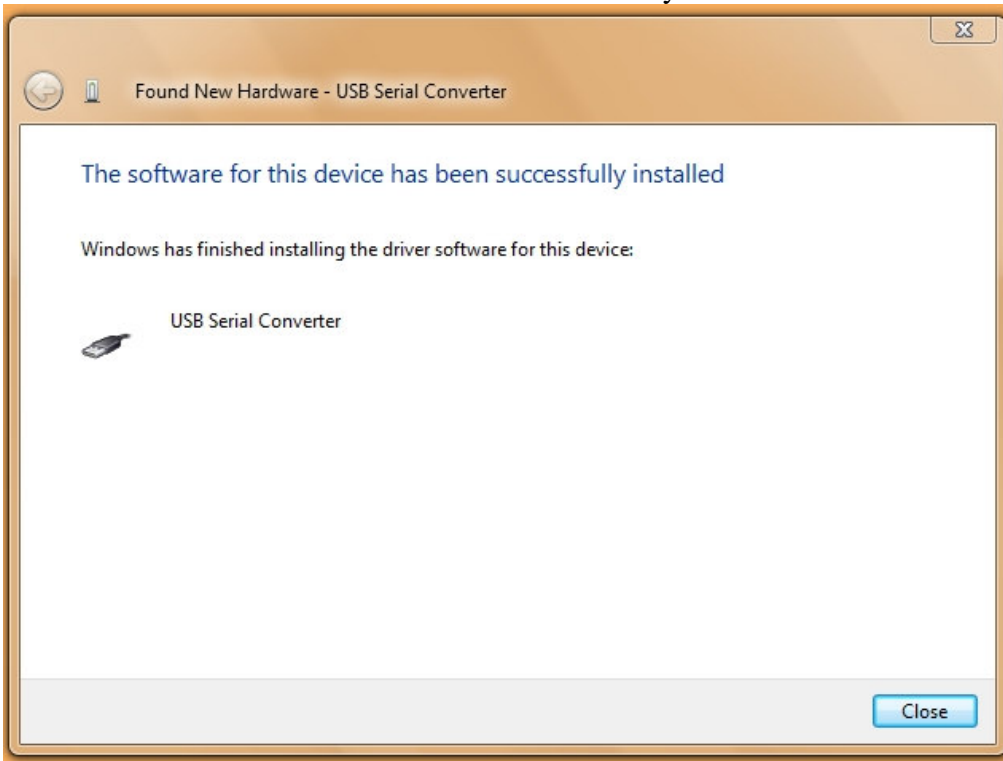
Select Don't search online

3. Insert the disc that came with your USBMOD3



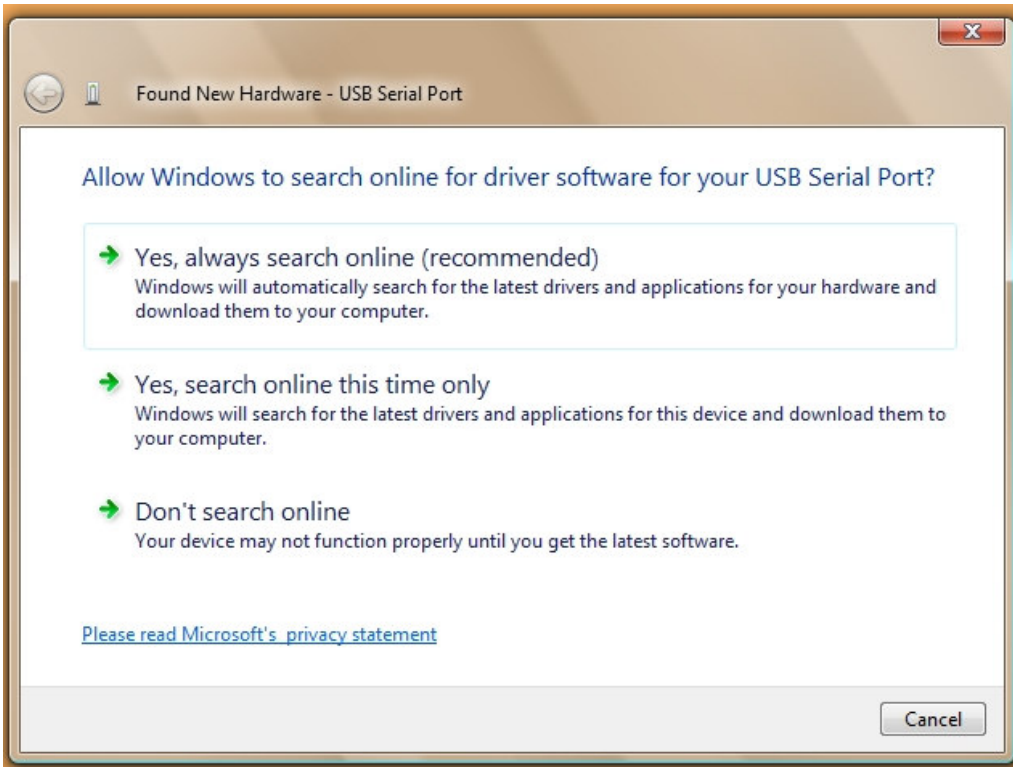
Insert the disk. If disk already in, select Next.

4. The software for this device has been successfully installed



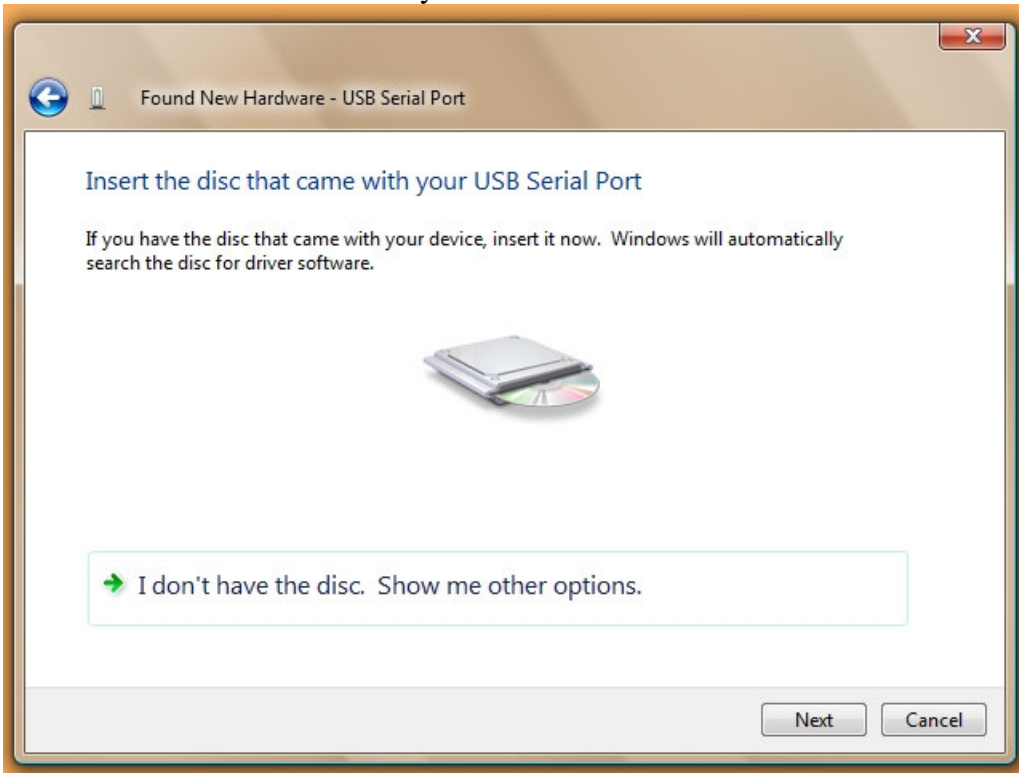
Select Close

5. Found New Hardware USB Serial Port



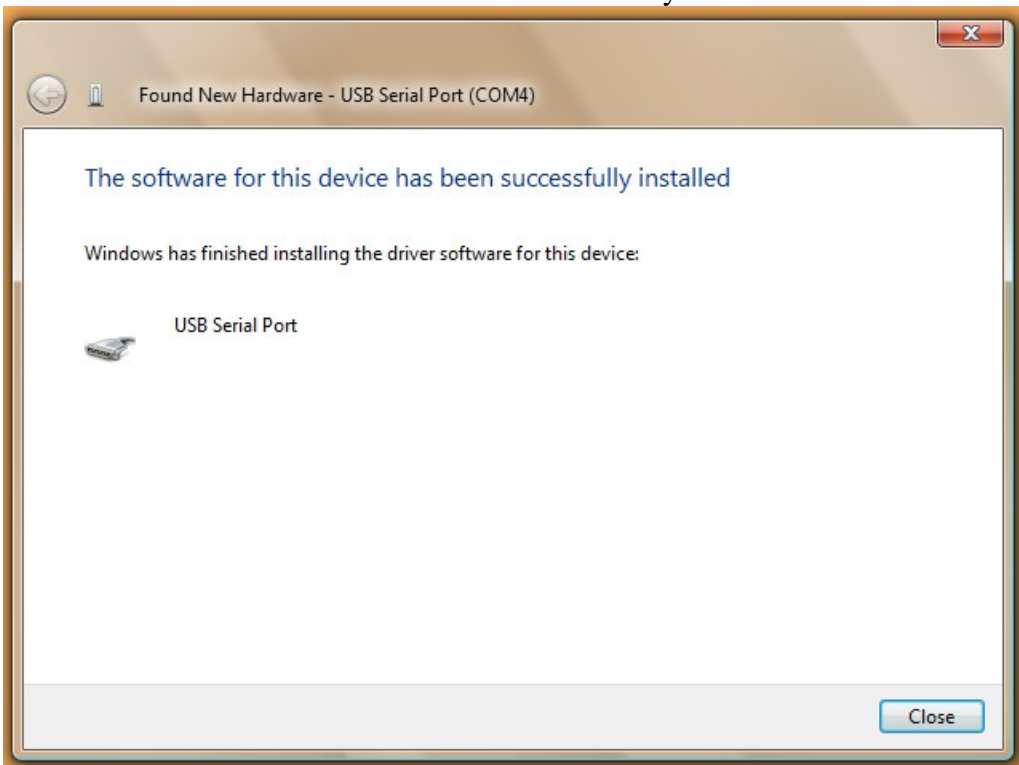
Select Don't search online

6. Insert the disc that came with your USBMOD3



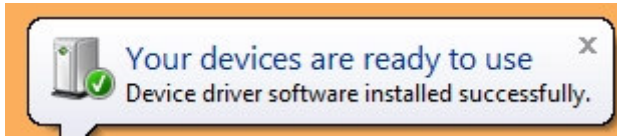
Select Next.

7. The software for this device has been successfully installed



Select Close

8. When completed successfully, the following will appear at the bottom of the screen:



COM Port Assignment

After installing, and with the HM-USB-ISO still connected to the PC, go to Start -> Settings -> Control Panel -> System -> Hardware -> Device Manager -> Ports, to see what com port number was assigned to the modem by the Windows operating system. The port labeled “USB Serial Port” is the assigned port.

In Windows Vista, the COM port is shown on the final install screen (Step 7 above). This port assignment can be changed by the user. From the “Device Manager” menu, select the USB Serial Port you wish to change. From the “Properties” page, select “Port Settings”. Then select “Advanced”. The Com port can be set in the range 1-256.

HART Connections

The modem can be connected in one of two ways: across the loop load resistor (A – B) or across the HART transmitter terminals (C – D). See Figure 1.

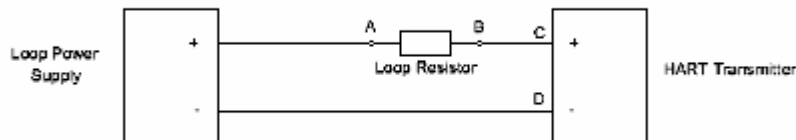


Figure 1. HART Connections

USB Connection

Connect the integral USB-A connector to any available USB port on your PC. The module supports both USB 1.1 and USB 2.0.

Power

No external power sources are required for the HM-USB-ISO. Power is derived from the USB connection to the PC.

Test Software

Program “HM Test” is included on the installation CD to test the operation of the HM-USB-ISO. Launch the program from the CD or from the installed icon. Enter the com port that was assigned to the modem by Windows. Then select “Poll HART Network” to connect to a HART device. The program sends HART Command 0 to determine what transmitters are connected to the loop. The “Status” box will indicate successful operation of the HM-USB-ISO in your system. Consult the “Troubleshooting” section of this manual if test failure.

Troubleshooting

Verify the following:

1. Com port number in application is the HM-USB-ISO com port number.
2. Loop power supply is on.
3. Loop resistance between 250 ohms and 1Kohms.
4. Loop current within HART limits.
5. If multi drop configuration, all transmitters in loop have unique addresses.
6. HM-USB-ISO HART connections across loop resistor or across transmitter terminals.
7. HM-USB-ISO USB connector seated firmly in PC USB connector.

Warranty

The USB-HM is warranted for 1 year for materials and workmanship. Contact Support at ProComSol, Ltd if having trouble. An RMA (Return Material Authorization) number obtained from ProComSol, Ltd is required on all returned items.

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