



isoLynx[®]

**8B SLX300
Data Acquisition System
Quick Start Guide**



8B isoLynx[®] SLX300 Data Acquisition System Quick Start Guide
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Contacting Dataforth Corporation

Contact Method	Contact Information
E-Mail: Technical Support	techinfo@dataforth.com
Website:	www.dataforth.com
Phone:	520-741-1404 and toll free 800-444-7644
Fax:	520-741-0762
Mail:	Dataforth Corporation 3331 E. Hemisphere Loop Tucson, AZ 85706 USA

Errata Sheets

Refer to the Technical Support area of Dataforth’s website (www.dataforth.com) for any errata information on this product.

8B isoLynx® SLX300 Data Acquisition System: Quick Start Guide

1.0 Unpacking

Each 8B isoLynx® SLX300 Data Acquisition System is shipped in electro-static discharge (ESD) protective packaging. Use appropriate ESD protection measures while unpacking. Check visually for physical damage. If physical damage is noted, file a claim with the shipping carrier.

2.0 Package Contents and Physical Description

- 8B isoLynx® SLX300, p/n SLX300-10, -10D, -20, -20D, -30, -30D, -40, or -40D
- SLX147-01 USB Cable, Type A to Type B, 1m (included with SLC300-30, -30D only)
- CD-ROM which contains
 - SLX370 Software Tools
 - Configuration Sample
 - LabVIEW VIs
 - Programming Samples in Visual Basic, VB.NET, C++ and C#
 - Windows Driver for USB Interface
 - SLX380 Documentation Set
 - MA1029 SLX300 Configuration Software Tool User Manual
 - MA1030 SLX300 Quick Start Guide (this manual)
 - MA1031 SLX300 Hardware User Manual
 - MA1032 SLX300 Software User Manual
 - MA1033 SLX300 LabVIEW VI Examples User Manual

For detailed installation and configuration instructions, reference the *8B isoLynx® SLX300 Hardware User Manual* and the *8B isoLynx® SLX300 Software User Manual* on the CD-ROM.

For rapid verification of basic functionality, continue with the next section.

3.0 Verifying Basic Operation

The steps required to verify basic operation are:

1. Choose an SCMD, 8B Analog Input Module or 8B Analog Output Module.
2. Connect an input signal or output measuring instrument.
3. Apply power to the SLX300 Data Acquisition System.

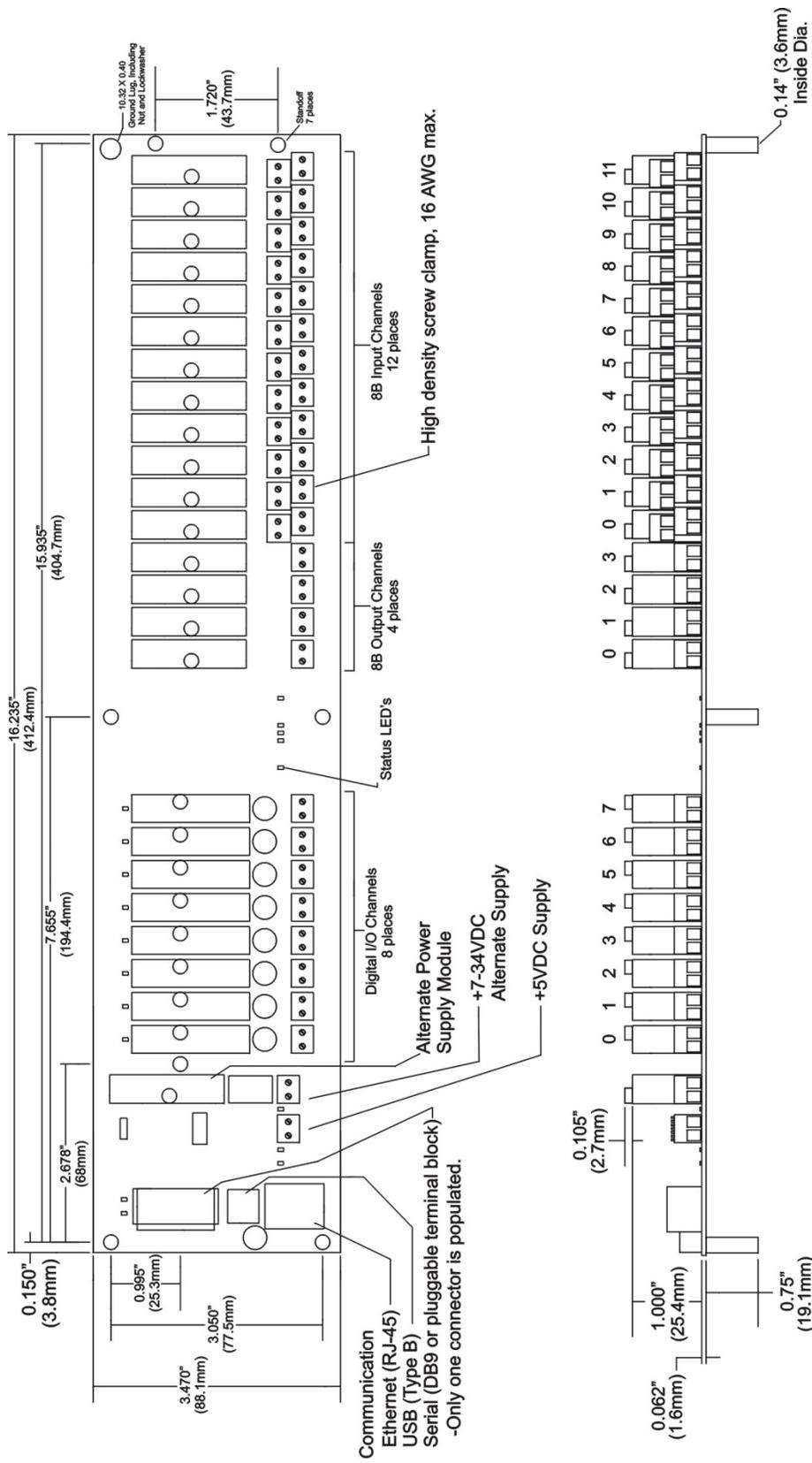


Figure 1: 8B isoLynx® SLX300 Block Diagram

3.1 Hardware Configuration

Install an 8B input module into any of the twelve 8B input channels. Connect an appropriate sensor or calibration signal source to the field I/O connectors on the backpanel in front of the module (refer to the module datasheets in the Product Catalog or on the Dataforth website for I/O connection diagrams).

For SLX300-10, -10D, -20, -20D, -30 or -30D Modbus RTU 8B isoLynx® systems, the following applies:

- SLX300-10 or -10D: Install an SLX146-xx cable (Null Modem Serial Cable, Female DB-9 to Female DB-9) between the SLX300 and the host computer RS-232 port. The SLX300-10x factory default configuration is 115.2kbps, 8 data bits, 1 stop bit, even parity, Slave ID 16.
- SLX300-20 or -20D: Wire the 5-position pluggable connector provided on the board to an available RS-485 4-wire port on the host computer. The SLX300-20x factory default configuration is 115.2kbps, 8 data bits, 1 stop bit, even parity, Slave ID 16.
- SLX300-30 or -30D: Install an SLX147-xx cable (USB type A to type B) between the SLX300 and the host computer USB type A port. The SLX300-30x factory default configuration is 115.2kbps, 8 data bits, 1 stop bit, even parity, Slave ID 16.

For SLX300-40 or -40D Modbus TCP (Ethernet) 8B isoLynx® systems, choose one of the following:

- a. Install an SLX141-Xxx crossover CAT5 cable or an SLX141-xx straight through CAT5 cable between the SLX300 and the host computer Ethernet port.
- b. Obtain an Ethernet switch or hub, which is not connected to the enterprise Ethernet, and two SLX141-xx straight through or SLX141-Xxx crossover CAT5 cables. Connect one CAT5 cable between the host computer Ethernet port and the Ethernet switch or hub. Connect the other CAT5 cable between the SLX300 and the Ethernet switch or hub.

3.2 Using the Configuration Software Tool

To install the 8B isoLynx® SLX300 Configuration Software Tool, use the install utility in the SLX370 folder on the CD-ROM. This utility transfers the appropriate files to the host computer in a user specified directory and creates a shortcut to the 8B isoLynx® Configuration Software Tool application called 'SLX300' on the desktop. It also creates a folder titled '8B isoLynx® SLX300' under the Start menu, All Programs, and places an SLX300 shortcut in the folder.

3.2.1 Minimum Host Computer Requirements

The host computer must be running the Windows 2000, Windows XP, Windows Vista or Windows 7 operating system and must have the minimum hardware to support the operating system.

3.2.2 Establishing a Communication Connection

From the **Start** menu, click on the **8B isoLynx® SLX300 shortcut** created in Section 3.2 above to start the SLX300 Configuration Software Tool. Once started, the initial screen displays with the View Pane disabled, indicating that the application is not yet connected to the attached 8B isoLynx® SLX300 system. Reference Figure 2.

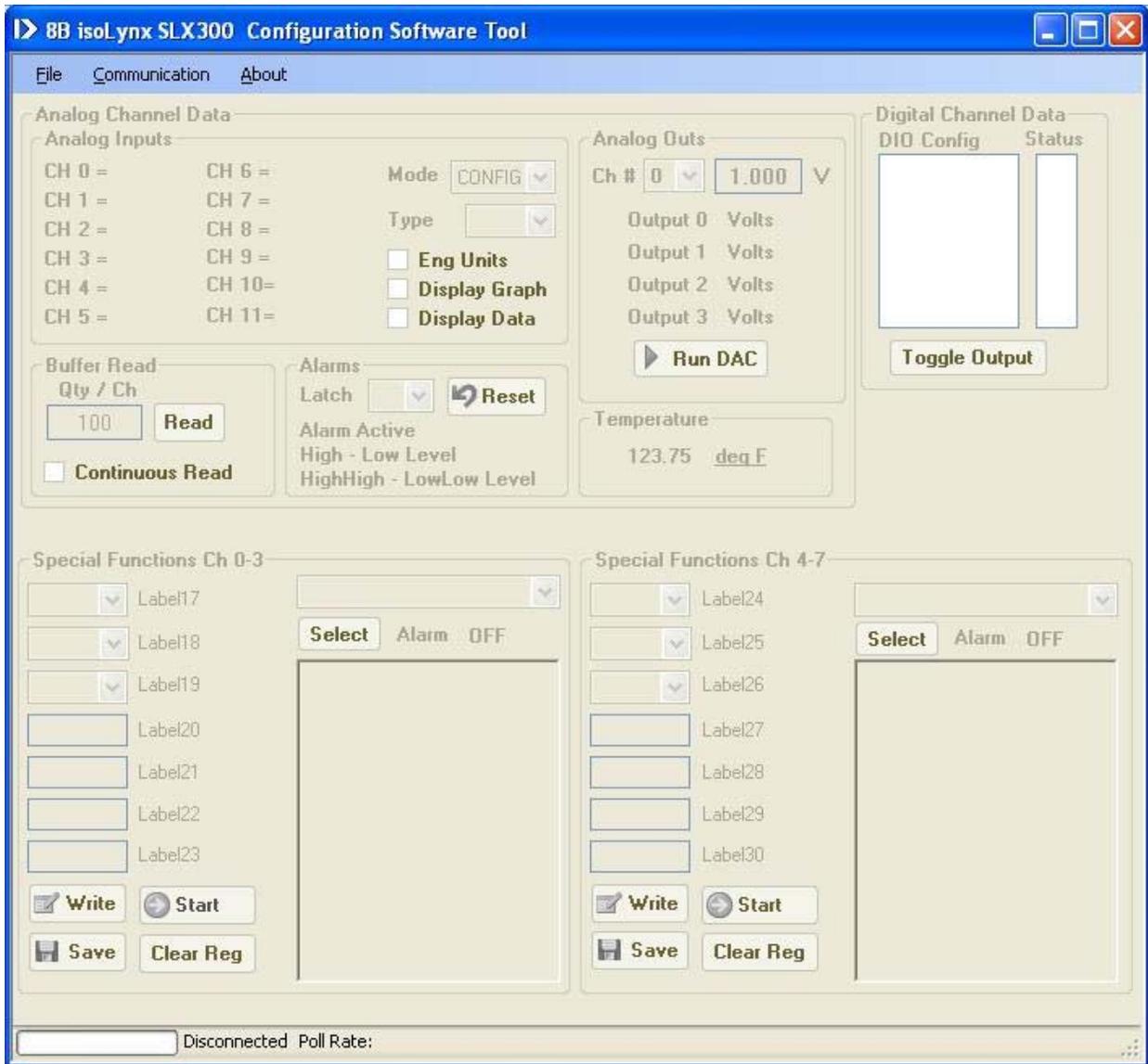


Figure 2: SLX300 Configuration Software Tool Window, View Pane Disabled

From the **Communication** pull-down menu, select **Configure**. The **Communication Setup** window will appear giving the user the ability to configure the communication port. Reference Figure 3.

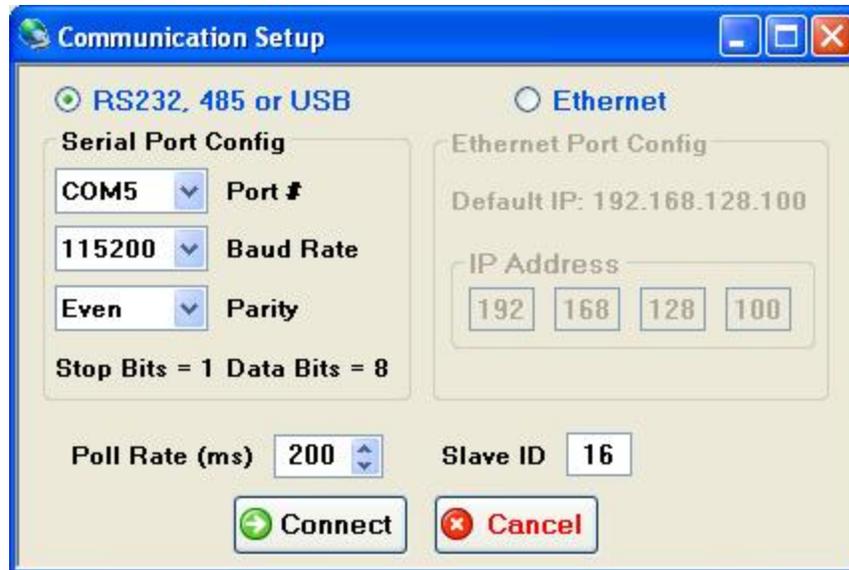


Figure 3: Communication Setup Window

- For SLX300-10, -10D, -20, -20D, -30 or -30D make sure the **RS232, 485 or USB** radio button is selected. Select the appropriate Communication Port number from the **Port #** drop-down menu. For the initial connection leave the **Baud Rate**, **Parity** and **Slave ID** unchanged.
- For SLX300-40 or -40D make sure the **Ethernet** radio button is selected. For initial connection leave the **IP Address** unchanged. The host computer Ethernet port must be configured with a fixed IP Address of 192.168.xxx.xxx, which does not match the static IP Address of the SLX300, and Subnet Mask of 255.255.0.0 when the 8B isoLynx® SLX300 Ethernet port is used.

Once the communication parameters have been set, click the **Connect** button. The 8B isoLynx® **Communication Setup** window will now disappear and the 8B isoLynx® **Software** window will come to center screen. If the connection and setup are correct, the bar graph on the bottom left corner of the window will start moving, otherwise the connection failed. Verify the communication cable connections and communication setup parameters and try connecting again.

3.2.3 Configuring Input / Output Channels

The analog input and analog output channels can be operated in their factory default configuration of twelve Analog Input channels, four Analog Output channels, and all channels enabled. The digital I/O channels do need to be configured since they are set to Vacant in the factory default configuration. Use Figure 4 and the steps below to configure the digital I/O channels.

1. With communication to the SLX300 active, select **Configure I/O** from the **File** pull-down menu. This will open the **Input / Output Channel Configuration** window shown below.
2. Select the **Digital Input/Output** tab to change the configuration for the digital I/O channels.
3. Choose the channel to configure from the **Ch #** drop-down menu and then select the desired configuration from the **Configure** drop-down menu.
4. Press the **Set** button to send this channel configuration to the SLX300.

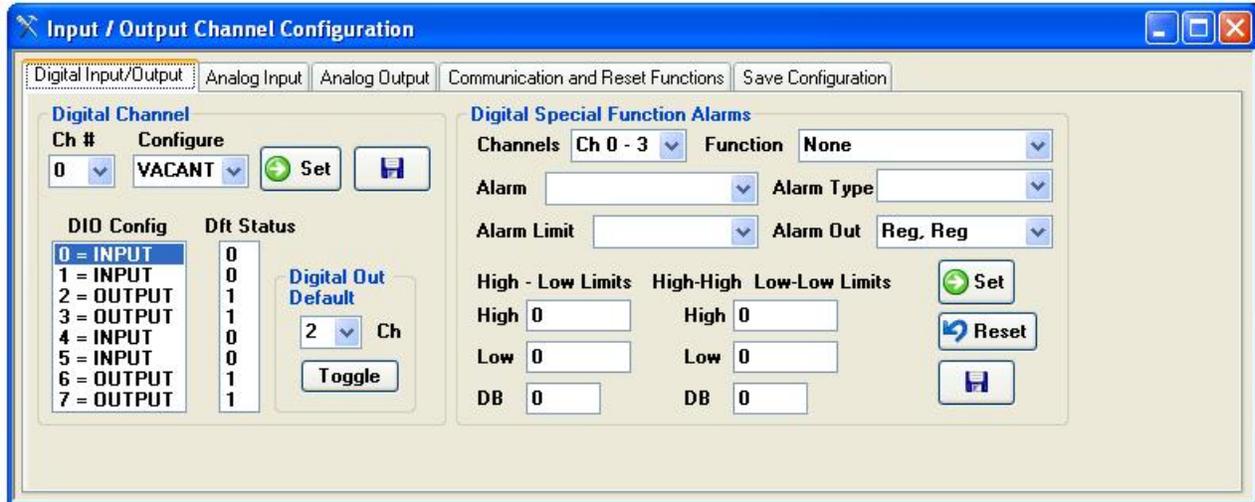


Figure 4: Input / Output Channel Configuration Window

Repeat these steps for any of the eight channels that will be used, then close this window. The main SLX300 Configuration Software window will now display the digital I/O channel configuration in the top right corner.

3.2.4 Reading an Input Channel

Select the **Mode** drop-down menu in the Analog Input section, then select **CONTIN** to operate the system in Continuous Scan mode. Use the **Type** pull-down menu to display the data for all enabled channels as the most recent conversion, running average, maximum, or minimum.

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2. Product serial number.
3. Name, address, and telephone number of person returning product.
4. Special repair instructions.
5. Purchase order number for out-of-warranty repairs.

The product should be carefully packaged, making sure the RMA number appears on the outside of the package, and ship prepaid to:

Dataforth Corporation
3331 E. Hemisphere Loop
Tucson, AZ 85706 USA

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