

Dataforth's New DAQ System + Application Software Ensure Superior Reliability, Accuracy, Isolation & Ease of Use

October 26, 2010 —The 8B isoLynx® SLX300 – Dataforth's newly introduced data acquisition system - builds on the proven reliability and outstanding performance of the SCM5B isoLynx® SLX200 and the miniature-sized SensorLex® 8B isolated signal conditioning modules to provide a compact, low cost solution for wide ranging rugged industrial applications. ReDAQ® Shape is Dataforth's new out-of-the-box DAQ software designed specifically for the 8B isoLynx® SLX300 system; it provides the easiest and most efficient development tool to create, save, and open graphical user interface projects as well as to test, process, and analyze acquired data.

Dataforth's new isoLynx® SLX300



Using industry standard Modbus RTU or TCP protocols, the 8B isoLynx® SLX300 enables communication with a broad range of existing third-party software tools and HMI/SCADA packages. Pluggable modules provide the system with maximum flexibility of analog and digital channel configuration (choose from 70 analog and 14 digital I/O modules), making it ideal for factory automation, process control, test and measurement, machine control, and data acquisition applications.

The SLX300 also offers advanced features including high-speed acquisition (to 100kS/s burst), alarms, counters, and timers.

The SLX300's modular design can be configured with up to twelve channels of isolated analog input, four channels of isolated analog output, and eight channels of isolated digital I/O using Dataforth's SensorLex® 8B analog and SCMD digital modules. Multiple powerful, high-speed microcontrollers and high performance data converters at the heart of the SLX300 system enable simultaneous analog and digital I/O at sustained rates of up to 3.0kS/s.

Ensuring powerful functionality, the eight digital I/O channels can be configured to perform seven different advanced special functions: pulse/frequency counter, pulse/frequency counter with de-bounce, waveform measurement, time between events, frequency generator, pulse width modulation (PWM) generator, and one-shot pulse generator. The 8B isoLynx® SLX300 also enables four alarm states - high, high-high, low, and low-low - to be set on the analog input and digital I/O special function channels with alarm output mapped to a user selectable analog or digital output channel.

Key 8B isoLynx® SLX300 Features:

- Modbus RTU and TCP Support
- 1500Vrms Input-to-Output & Channel-to-Channel Isolation
- 240Vrms Field-Side Protection
- Wide I/O Selection
 - Analog: 15 Product Families, 70 Models
 - Digital : 5 Product Families, 14 Models
- Mix & Match Analog & Digital I/O

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- Advanced Features Including Alarms, Counters, Timers, PWMs, and more
- -40°C to +85°C Operating Temperature
- Free Configuration Software
- CE Compliant
- UL/CUL Listing and ATEX Compliance Pending
- Manufactured per RoHS Directive 2002/95/EC

Additional SLX300 features and special purpose functions specifically for data acquisition and control include:

- Current sampled data from analog input channels is stored to a 192k sample buffer; data is available as minimum, maximum, and average readings with selectable averaging weight
- A burst mode of operation allows up to 100kS/s sampling rate on analog input channels and also provides a waveform generator function using the analog output channels
- Burst sampling mode can be set up with a single shot or repetitive 48 entry scan list to specify scan sequence, scan rate, and scan count; continuous scan mode scans up to 16 input channels

ReDAQ® Shape

This new application software for the 8B isoLynx® SLX300 system includes built-in functions in the Acquire and Analyze panels that can be used without setup and configuration, while just three easy steps are required to create customized Presentation panels using 18 high quality controls and powerful isoLynx® SLX300 functions.

ReDAQ® Shape also provides the most effective way to set up and configure these SLX300 functions. The software controls are easily used to create, move, re-size, cut, copy, paste, and delete; they also support any graphical file format so presentations made with other software can be loaded into ReDAQ® Shape.

In contrast to other graphical software environments, ReDAQ® Shape SLX300 software has a very short user-learning curve. It was created using programming tools incorporated from Microsoft Visual Studio® and National Instruments Measurement Studio(TM) ensuring its integrated, across-the-board applicability.

ReDAQ® Shape Controls & 8B isoLynx® SLX300 Functions:

- Button - Switch - Meter
- Picture Box - Numeric Edit - Knob
- Text Box - Thermometer - Chart Recorder
- Group Box - Slide - Oscilloscope
- Label - Tank - XY Plot
- LED - Gage - Discrete Waveform

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- Continuous and burst scan modes for 12 analog input channels and 4 analog output channels
- Data automatically scaled from counts to engineering units
- Eight discrete I/O with seven special functions
- Customer user tag name for any input and output
- Cold Junction Compensation and linearization for thermocouple input modules
- Control loop and alarm output
- Three function timer (count-down, 24hr/day, day/time) with 10 programmable events

The isoLynx® SLX300 interfaces to a host system through a choice of communication links. RS-232 or RS-485 serial links operate from 2.4kbps to 921.6kbps, use true fail-safe transceivers, and have software controlled termination networks, eliminating the need for DIP switches. A USB Virtual Communications Port provides a common connection to modern computers and a 10/100 Base-T Ethernet connection is also available. Up to 32 systems can be multidropped on the RS-485 serial link and up to 4 sockets are supported on Ethernet.

The Modbus RTU protocol used on serial and USB interfaces and the Modbus TCP protocol used on the Ethernet interface are open, industry standard protocols, ensuring the system can be integrated seamlessly onto existing Modbus networks using common Modbus function codes.

Free configuration software is provided for quick and easy system setup. Channel I/O setup, communication, default output, and other parameters are stored in non-volatile memory. A LabVIEW VI library enables fast application development using industry standard tools. The SLX300 system can be either panel or DIN rail mounted. It is also available in a rack-mounted or bench top 1U enclosure.

About Dataforth

Dataforth was established in 1984 and is the world leader in data acquisition, signal conditioning and data communication products for industrial applications. Worldwide, our products provide rugged signal and data integrity and wide spectrum accuracy. All Dataforth products are manufactured in the USA and have been RoHS Compliant since 2006. The Dataforth Quality Management System is ISO9001:2008 registered.

For additional information and complete specifications for the 8B isoLynx® SLX300 data acquisition system, call 800-444-7644 toll-free, email sales@dataforth.com, or visit our website at www.dataforth.com and request the new 8B isoLynx® SLX300 brochure.

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