DATAFORTH®

Corporate Capabilities

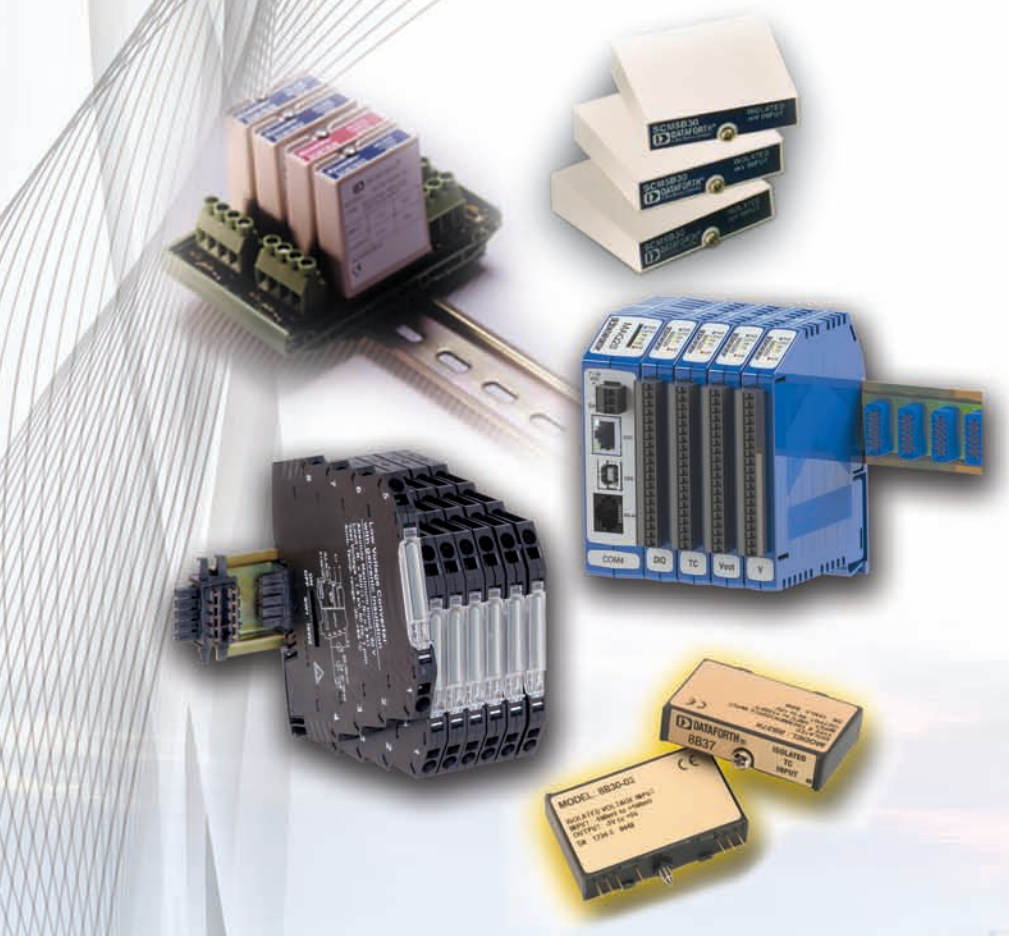
Instrument Class®

Industrial Electronics

Data Acquisition & Control

Signal Conditioning

Data Communications





Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

The Company

"Our passion at Dataforth Corporation is designing, manufacturing, and marketing the best possible data acquisition and control, signal conditioning, and data communication products. Our mission is to set new standards of product quality, performance, and customer service." Dataforth Corporation, with 30+ years of experience, is the worldwide leader in Instrument Class® Industrial Electronics – rugged, high-performance data acquisition and control, signal conditioning, and data communication products that play a vital role in maintaining the integrity of industrial automation, data acquisition, and quality assurance systems. Our products directly connect to most industrial sensors and protect valuable measurement and control signals and equipment from the dangerous and degrading effects of noise, transient power surges, internal ground loops, and other hazards present in industrial environments.

Global Service and Support

Dataforth spans the globe with more than 50 International Distributors and US Representative Companies. Our customers benefit from a team of over 130 sales people highly trained in the application of precision products for industrial markets. In addition, we have a team of application engineers in our Tucson factory ready to solve any in-depth application questions. Upon receipt of a quote or order, our Customer Service Department provides fast one-day delivery information turnaround. We maintain an ample inventory that allows small quantity orders to be shipped from stock.

Research and Development Team

A professional staff of engineering and marketing personnel identify and develop products to satisfy our customers' most stringent requirements. Dataforth's design department is composed of advanced degree engineers specializing in innovative analog and isolation circuit development, high performance mixed signal design, and software development, ensuring our customers of the highest performance products at the lowest price.

Automated Manufacturing and Test

Automated manufacturing techniques and machines are employed to produce our state-of-the-art SMT designs in optimum time and at minimum cost. All products are tested multiple times in automated test fixtures, and many undergo a 48-hour burn-in at elevated temperatures.

Quality Control

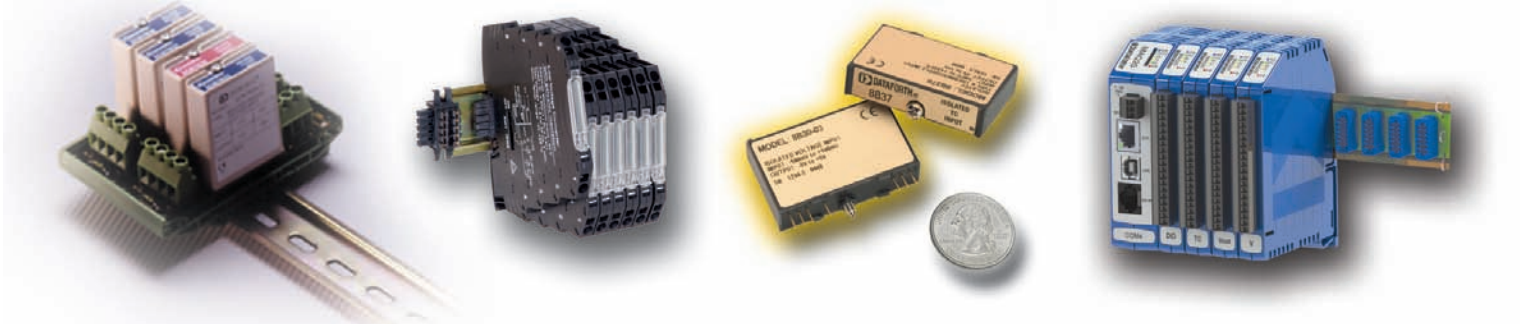
Dataforth operates under an ISO9001:2008 quality management system. Since our products are used in critical industrial data acquisition, control, and test and measurement applications, we strive to produce the highest quality, premier performance products available on the market. Zero defects and complete customer satisfaction are our goals. To further strengthen our commitment to quality, Dataforth secures certifications such as UL, CSA, ATEX, and CE.

www.dataforth.com

Utilizing the latest web development technology, our website presents visitors with an intuitive, informative layout that quickly leads them to their areas of interest. A parametric search engine efficiently locates products by model number or functional description, while an e-commerce section provides pricing information and order entry. Fully detailed product data sheets and application notes are available for download in PDF format. Visitors also can request literature, view new product release data, read our bi-monthly newsletters, get answers to technical questions, and quickly locate Distributors and Sales Representatives.

The Future

We fully understand that our ongoing success depends on satisfying our customers' requirements. Building upon our position as marketplace leader, Dataforth continues to seek out the most cost-effective emerging technologies in design and manufacturing in order to provide the highest performance quality products at the lowest price. Our expansion into a second building adds thousands of square feet to our manufacturing and test facilities and provides the flexibility and space for continued process-oriented growth. By intelligently observing and responding to constantly changing market forces, we ensure the continuation of our critical customer partnerships.



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Visit Dataforth's Full-Service Website: www.dataforth.com

Dataforth's full-service website is an easy-to-use, comprehensive source for sales, product, and applications information. The site includes:

- Fast, accurate parametric search capabilities for all Dataforth industrial signal conditioning, data acquisition, and data communication products
- Online product quote and purchase
- Online product data sheets, application notes, and user manuals
- Direct applications assistance, sales, and customer service help lines readily available
- Latest news on company operations and new products
- Comprehensive signal conditioning, data acquisition, and control tutorial
- Worldwide corporate and sales contact information
- Literature ordering center

Online Help

Online Ordering

Data Sheets

Application Notes

Product Information

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Instrument Class® Field and Control Room Products for Data Acquisition, Analog and Digital Signal Conditioning, and Data Communications

Analog Signals—Thermocouple • RTD • Strain Gage • Volts • Milli Amps

Digital Signals—Contact Closures • Relays • Limit Switches • Indicator Lamps • Motor Starters

°C PSI mV mA GPM Freq °F AC BTU

On Off

SensorLex® 8B

DSCA

DSCL, DSCP

SCMD

SCM7B

SCM5B

Analog Signal Conditioning

Digital Signal Conditioning

LDM30

LDM485

A/D

TTL I/O

Serial I/O

RS-232

DCP485 RS-232/-485 Converter

Twisted Pair, 4-20mA Loop

Data Acquisition Systems

MAQ®20
isoLynx® SLX300
isoLynx® SLX200

RS-485 Data up to 4000 Ft.

Control Room

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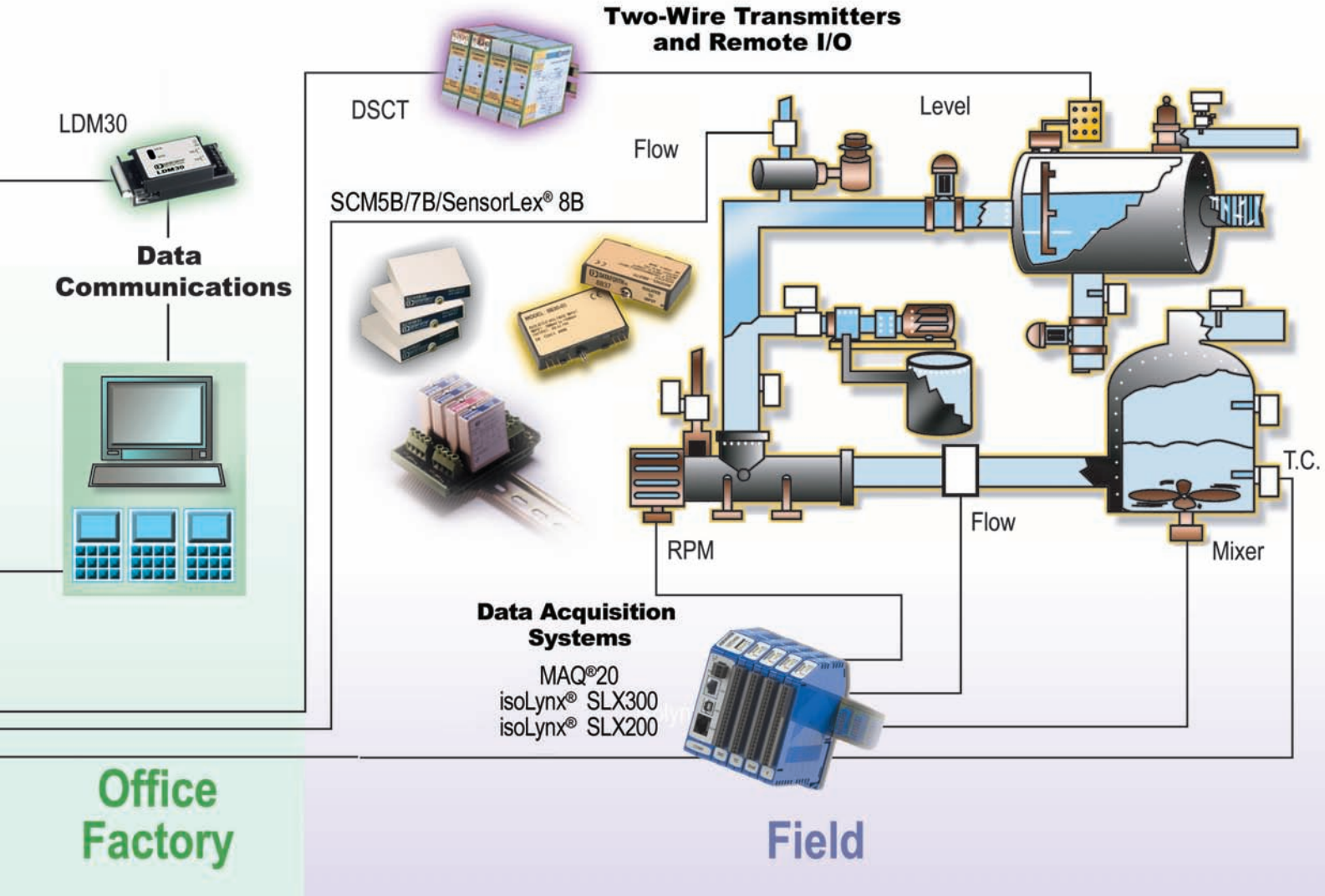
Protecting Valuable Industrial Signals and Data

Dataforth's dedication to ensuring the highest reliability and performance of customers' industrial automation systems is evidenced by the extensive range and unmatched versatility of our Instrument Class data acquisition and control, signal conditioning, and data communication products. From broad-based families of isolated analog and digital signal conditioning modules to two-wire transmitters, a wide variety of data communication products, and our flexible, leading-edge data acquisition systems, Dataforth products provide efficient, cost-effective protection for industrial signals and data in the control room, field, factory, laboratory, and office.

Our customers invest significant resources in their industrial automation operations; our commitment is to anticipate customer needs and respond with products that will enhance their operations' reliability, security, and productivity.

Dataforth Industrial Electronics

- Analog-to-Analog Products—Isolated SCM5B, SCM7B, SensorLex® 8B, and DSCA I/O modules provide complete solutions for interfacing, conditioning, and distributing critical industrial signals.
- Two-Wire Transmitters—Rugged, low cost DSCT, DSCL, and DSCP transmitters link remote "field" sensors to computers and control rooms.
- Distributed Data Acquisition & Control Systems—Versatile MAQ®20, 8B isoLynx® SLX300, and SCM5B isoLynx® SLX200 data acquisition systems are specifically designed for a wide variety of rugged plant and laboratory applications.
- Data Communication Products—A wide selection of LDM line drivers and converters, DIN rail mount DCP485 RS-232/RS-485 converters, and DIN rail DCP35 RS-232 line drivers ensure secure, reliable data communication systems.



MAQ®20 Industrial Data Acquisition & Control System

Flexible, Powerful, High Performance



The MAQ20 Industrial Data Acquisition and Control System encompasses more than 30 years of design excellence and quality in the process control industry. This high performance, highly flexible system consists of a family of DIN rail mounted, programmable, multi-channel, industrially rugged signal conditioning input and output modules and communications modules.

Key MAQ20 Features

- Operating Temp -40°C to +85°C
- 1500Vrms Channel-to-Bus Isolation
- 240Vrms Continuous Input Protection
- ANSI/IEEE C37.90.1 Transient Protection
- CE Compliant

Module Offerings

- **Communications Modules:** Ethernet, RS-232, RS-485, and USB with host software interfaces to the system using Modbus TCP or Modbus RTU protocol
- **Analog Input Modules:**
  - **Process Voltage, Process Current & Thermocouple Input Modules** offer 8-channel differential input or 16-channel single-ended input for precise measurement of voltage and current signals; they also offer 8-channel measurement of five thermocouple types. All channels are individually configurable for range, alarm limits, and averaging.
  - **RTD Input Modules** interface to 2-wire, 3-wire, and 4-wire sensors including five RTD types and potentiometers. Modules offer five or six channels, each configurable for range, alarm limits, and averaging.
  - **Strain Gage Input Module** connects to full, half, and quarter bridge sensors and offers four channels; each channel is configurable for range, alarm limits, averaging, bandwidth, excitation, and gain. Additional features are autozero, shunt cal, and 6-wire connection.
  - **Frequency Input Module** accepts zero-crossing and TTL signals with frequencies from 1Hz to 1MHz plus State Change and provides a DC stimulus for contact sensors. This module has eight channels, each configurable for range and alarm limits.
- **Analog Output Modules: Process Voltage & Process Current Output Modules** drive valves, perform other crucial process operations, and provide up to eight channels of isolated output which can be independently configured.
- **Discrete Input/Output Modules:** Provide multiple channels of isolated input and output per module and offer advanced special functions as well as alarm capability.

The **System Backbone** resides within the DIN rail used for module mounting and provides power to and interface between the communications module and the I/O modules. Modules mount on industry standard 35x7.5mm gull-wing DIN rails.

PID Loop Control

PID controllers run in real time in the communications module and feature faceplates within ReDAQ® Shape software through which an engineer or operator can interact with the controller.

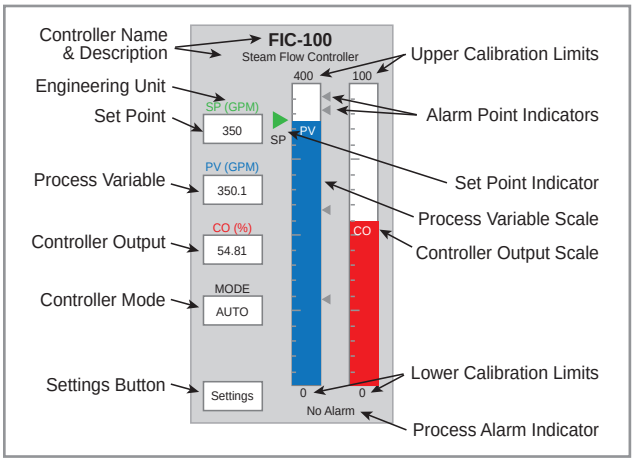
Key Features

- Separate panels for setting Basic, Advanced, and Alarm items
- Noninteracting and parallel PID control algorithms
- Proportional and derivative modes that can act on error or a process variable to eliminate process bumps from set point changes
- Gap control to improve control loop stability near set point
- Built-in process variable filtering
- Bumpless manual to automatic transfer
- Ability to change tuning settings with controller in automatic mode without disturbing process
- Optional set point tracking of process variable during manual operation to facilitate smooth transition to automatic control mode
- Limiting of controller output range to protect sensitive equipment
- Anti-reset windup to minimize overshoot and improve stability
- Four process alarms
- Integrated auto tuner

Typical Applications

- Steam, water, and chemical flow control
- Tank level control
- Heat-exchanger / reactor temperature control
- Pressure control

Many types of processes in a wide variety of applications can be managed using the Dataforth PID controller in the MAQ20 system. Its high level of performance and broad range of features are paralleled only by much larger state-of-the-art distributed control systems.



PID Faceplate in ReDAQ Shape Software

ReDAQ® Shape Software for MAQ®20: Data Acquisition & Control

User Friendly, Fast Learning Curve, Create Custom HMIs

Dataforth offers ReDAQ Shape software for MAQ20 as an easy and efficient development tool for use with the MAQ20 Industrial Data Acquisition and Control System. This out-of-the-box software enables users to create, save, and open graphical user interface projects for test, process, data collection and data analysis applications. Built-in functions in the software are pre-configured and can be used as is. Just three easy steps are required to create data acquisition and control projects using 65 high quality tools and powerful MAQ20 functions.

ReDAQ Shape for MAQ20 enables users to interact with the Dataforth PID loop controller. In addition, the software provides an effective way to configure and customize MAQ20 functions for specific application requirements. The toolbox tools are easily moved, re-sized, cut, copied, pasted, and deleted.

The main screen of ReDAQ Shape shows a representation of the system inclusive of the communications module and any installed I/O modules. This graphic is updated as I/O modules are added to or removed from the system. In addition, modules can be given unique identifiers, and I/O module channels can be assigned tag names to represent process variables they control.

Based on programming tools incorporated from Microsoft Visual Studio® and National Instruments Measurement Studio™, ReDAQ Shape software for MAQ20 has a very short user-learning curve and offers integrated, across-the-board applicability for data acquisition and control applications.

Configure

Display



IPEmotion Software: The Next Step for Test & Measurement

Advanced Features, Multi-Language, Multi-Vendor

IPEmotion is a very advanced, intuitive, high performance data acquisition / test and measurement software designed specifically for industrial and R&D applications. Now available with an interface to the MAQ20, this powerful new generation software provides synchronized data acquisition and is easily adaptable to all customer specific requirements.

These requirements may include device configuration, data acquisition measurement, visualization, and analysis; to meet them, IPEmotion provides automatic recognition of connected devices, automatic configuration of all channels, automatic start of measuring, and instant visualization of all measurement values.

MAQ20 and IPEmotion measurements include temperature, current and voltage, strain, pressure, frequencies and rotational speeds, and logging and diagnostic data.

To enhance ease of use and increase productivity, the versatile IPEmotion software is available in seven languages: English, German, French, Italian, Chinese (traditional and simplified), Korean, and Japanese.

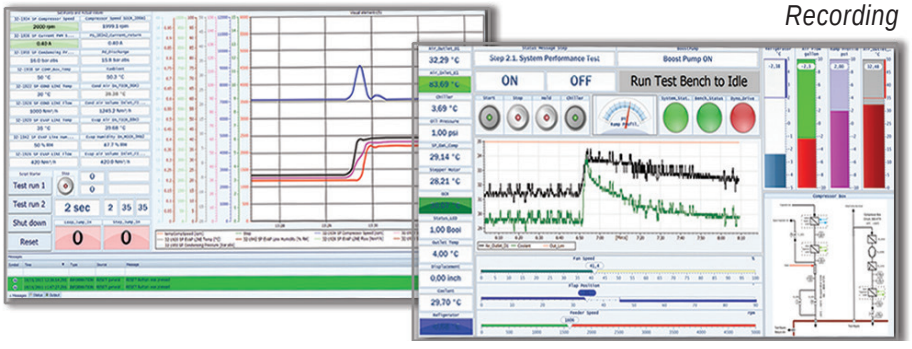
IPEmotion communicates with the MAQ20 via a Plug-In driver. The software enables many functions to be integrated by linking external .dll and Visual Basic Script (.VBS) files to the application. Script is a powerful tool which enables users to automate the measurement process and to change menus, settings, analyzing procedures, and other aspects of the software.

Key MAQ20 and IPEmotion Features

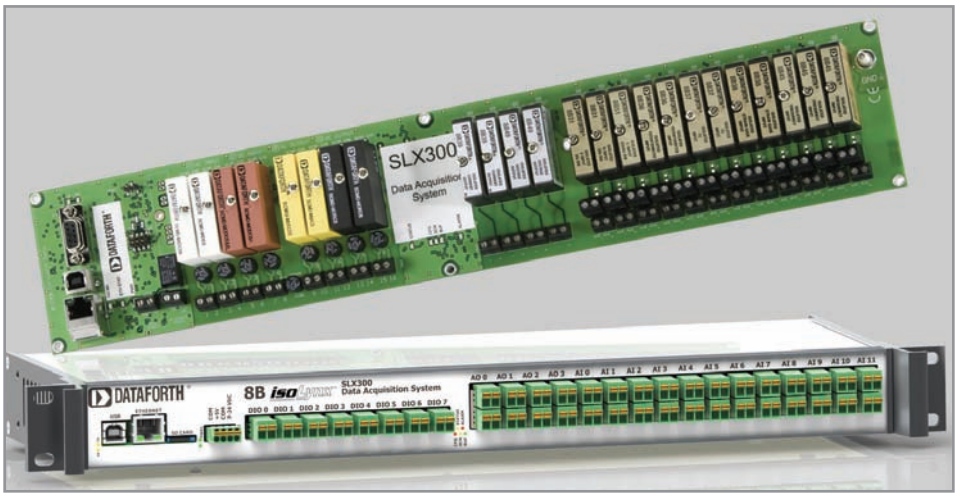
- Live Data Display, Recording, Online & Offline Math and Logic Functions
- One-Click Acquisition
  - Direct hardware detection, data display & recording
- Live Adjustment
  - Analyze and verify measurements during active data acquisition
  - GUI adaptation during active measurement & storage
- Data Analysis
- Post Processing & Report Generation
- Easy Drag & Drop
- High Speed Recording
- Plug-In Synchronization
- Import and Export Recorded Data to Standard File Formats
- Scripting Option
- Multilingual

Control

Recording



8B isoLynx® SLX300 Data Acquisition System



Key SLX300 Features and Specifications

- Modbus RTU and TCP Support
- 1500Vrms Input-to-Output & Channel-to-Channel Isolation
- 240Vrms Field-Side Protection
- Wide I/O Selection
  - Analog – 20 Product Families, 89 Models
  - Discrete – 5 Product Families, 14 Models
- Advanced Features Including Alarms, Counters, Timers, PWMs, and more
- -40°C to +85°C Operating Temperature
- Free Configuration Software
- C-UL-US Listed (Class I, Division 2, Groups A, B, C, D)
- CE Compliant
- ATEX Compliance Pending

The 8B isoLynx SLX300 builds on the proven reliability and outstanding performance of the SCM5B isoLynx® SLX200 and miniature-sized SensorLex® 8B isolated signal conditioning modules to provide a compact, low cost solution for wide ranging rugged industrial applications.

Using industry standard Modbus RTU or TCP protocols, the 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 discrete I/O channel configuration, making it ideal for factory automation, process control, test and measurement, machine control, and data acquisition applications.

The SLX300 system enables mix and match analog and discrete I/O at sustained rates of up to 3.0kS/s (100kS/s burst).

Modular design allows configuration with up to twelve channels of isolated analog input, four channels of isolated analog output, and eight channels of isolated discrete I/O.

The SLX300 interfaces to a host system through a choice of communication links and can be panel or DIN rail mounted. The system is available in a rack-mounted or bench top 1U enclosure.

ReDAQ® Shape Software for SLX300

ReDAQ Shape, Dataforth's out-of-the-box DAQ software for the SLX300, provides the easiest and most efficient development tool to create, save, and open graphical user interface projects for test, process, data collection and data analysis applications. Built-in functions in the software are pre-configured and can be used without setup. Just three easy steps are required to create data acquisition and control projects using 64 high quality tools and powerful isoLynx SLX300 functions.

ReDAQ Shape also provides the most effective way to configure and customize SLX300 functions for specific application requirements. The toolbox tools are easily moved, re-sized, cut, copied, pasted, and deleted.

In contrast to other graphical software environments, ReDAQ Shape software for SLX300 has a very short user-learning curve. It is based on programming tools incorporated from Microsoft Visual Studio® and National Instruments Measurement Studio™, ensuring its ease of use and integrated, across-the-board applicability for data acquisition and control applications.

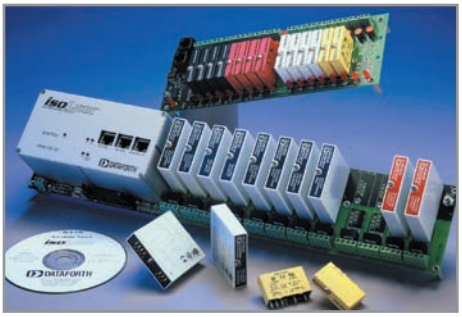
Configure



Display



SCM5B isoLynx® SLX200 Data Acquisition System



The SCM5B isoLynx SLX200 is a fast, intelligent, fully isolated data acquisition system providing superior reliability, accuracy, and isolation for a wide range of rugged factory automation, process control, test and measurement, machine control, and data acquisition applications. The system offers maximum flexibility of analog and discrete I/O selection; the modular design combines a 6- or 12-channel I/O Controller base system and optional 8- or 16-channel panel or DIN rail mounted expansion backplanes.

One I/O Controller unit can operate up to 60 channels of differential analog I/O and 128 channels of discrete I/O, using Dataforth's SCM5B analog and SCMD digital modules. All I/O is input-to-output and channel-to-channel isolated.

The SLX200 implements industry standard Modbus RTU and TCP protocols, enabling communication with existing third-party software tools and HMI/SCADA packages. It is fully certified by Modbus-IDA and OPC-compatible.

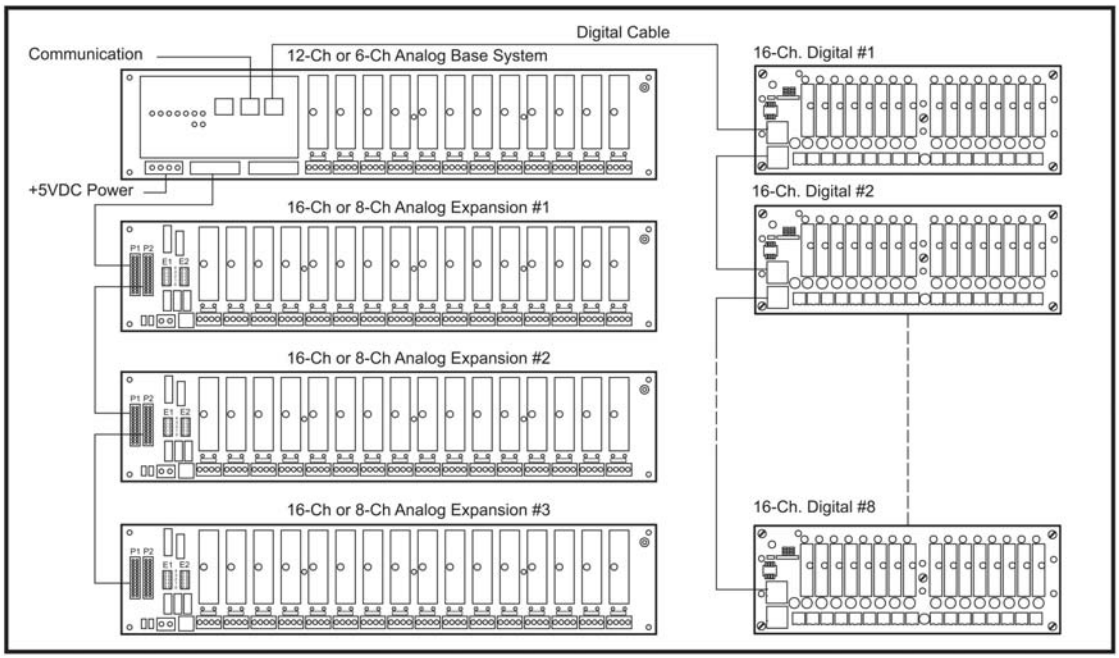
Key SLX200 Features and Specifications

- Modbus RTU Support on RS-232 and RS-485
- Modbus TCP Support (optional)
- 1500Vrms Channel-to-Channel & Channel-to-Bus Isolation
- 240Vrms Field-Side Protection
- Dual Ethernet for Redundancy
- System Expansion to 60 Analog Channels & 128 Discrete Channels
- All I/O Mix and Match Isolated
- Fast 16-Bit A/D, D/A
- Best I/O Selection with 250+ Different I/O Modules
- Drop-in Data Acquisition for Existing Installations
- Two Analog Scan Modes
- -40°C to +85°C Operating Temperature
- Free Configuration Software
- CSA C/US Certified (Class I, Division 2, Groups A, B, C, D)
- CE Compliant

Powerful SLX200 Firmware Features

The SCM5B isoLynx SLX200 offers many powerful firmware features. To ensure system accuracy and protection, the SLX200 includes dual Ethernet for redundancy. The system also offers drop in data acquisition for existing SCM5B installations.

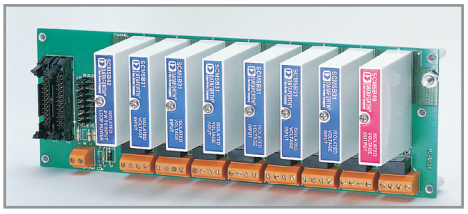
Two analog scan modes are supported: one for general purpose signal monitoring with running average, maximum, and minimum values available for each analog input; the other with user-configurable scan parameters such as scan list, scan rate, and scan count, used to obtain data with highly accurate time correlation between samples. Configurable default output values ensure output signals are set at safe values when unexpected power outages or brownouts occur. Power-on self-test results can be obtained visually by glancing at a status LED or programmatically by reading the appropriate register on the device. A section of memory is set aside for general purpose user data, some of which is stored in non-volatile memory.



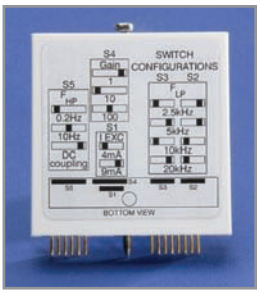
SCM5B isoLynx SLX200 Block Diagram

Instrument Class® Analog-to-Analog Signal Conditioning Modules, Transmitters, and Loop Isolators

Choose from the industry's largest selection of 1200+ high quality, Instrument Class isolated analog I/O modules to condition and protect critical industrial data acquisition and control signals and valuable connected equipment. Dataforth's input modules interface to all types of external sensors and filter, isolate, amplify, and convert the input signals to high-level analog voltage or current outputs. Output modules accept high-level analog voltage signals from the host system, then buffer, isolate, and amplify before providing process current or voltage outputs to field devices.



Custom SCM5B, SCM7B, SensorLex 8B, and DSCA signal conditioning modules as well as DSCT two-wire transmitters are available to meet your unique signal conditioning needs. We also offer a complete line of standard and DIN backpanels, cables, racks, and other accessories.



The SCM5B48 interfaces to piezo-electric sensors. Slide switches enable field-configurable settings of excitation current, signal gain, and high-pass and low-pass cutoff frequencies.

SCM5B
Isolated Analog Signal Conditioning Modules

Twenty family groups including more than 250 different SCM5B modules are available, encompassing a wide selection of isolated analog input and output functions.



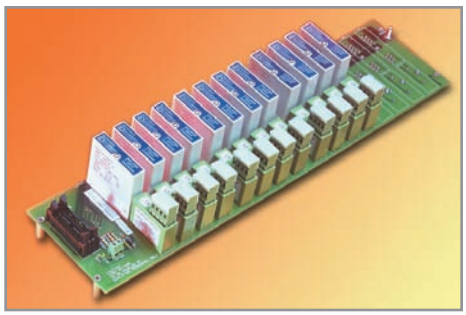
Model	Description
SCM5B30/31	Analog Voltage Input Modules, 4Hz BW
SCM5B32	Current Input Modules, 4Hz BW
SCM5B33	True RMS Input Modules, 45Hz to 20kHz
SCM5B34	Linearized 2- or 3-Wire RTD Input Modules, 4Hz BW
SCM5B35	Linearized 4-Wire RTD Input Modules, 4Hz BW
SCM5B36	Potentiometer Input Modules, 4Hz BW
SCM5B37	Non-Linearized Thermocouple Input Modules, 4Hz BW
SCM5B38-0x	Strain Gage Input Modules, Full, 1/2, or 1/4 Bridge, 10kHz BW
SCM5B38-3x	Strain Gage Input Modules, Full, 1/2, or 1/4 Bridge, 4Hz BW
SCM5B39	Current Output Modules, 400Hz BW
SCM5B392	Matched Pair Servo/Motor Controller Drivers, 1kHz BW
SCM5B40/41	Analog Voltage Input Modules, 10kHz BW
SCM5B42	2-Wire Transmitter Interface Modules, 100Hz BW
SCM5B43	General Purpose Input Modules with Excitation, 1kHz BW
SCM5B45	Frequency Input Modules, up to 100kHz
SCM5B47	Linearized Thermocouple Input Modules, 4Hz BW
SCM5B48	Accelerometer Input Modules, Configurable, 2.5kHz to 20kHz BW
SCM5B49	Voltage Output Modules, 400Hz BW
SCM5B Accessories	1-, 2-, 8-, 16-Channel Standard and DIN Backpanels; Cables, Power Supplies, 19-inch Racks, Jumpers, Resistors, CJC

Key 5B Features and Specifications

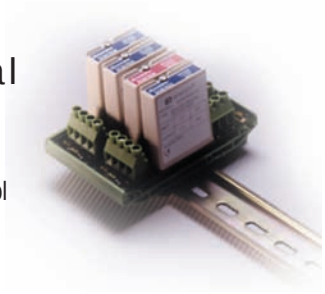
- ±0.03% Accuracy (Typical)
- ±0.005% Linearity
- 1500Vrms Transformer Isolation & 240Vrms Field-Side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- True 3-Way Isolation
- 5V Power (30mA Typical)
- 4- to 6-Pole Low-Pass Filtering
- Low Output Noise
- -40°C to +85°C Operating Temperature
- CSA C/US Certified (Class I, Division 2, Groups A, B, C, D)
- CE and ATEX Compliant

SCMVAS Isolated Voltage Attenuator System

Model	Description
SCMVAS-Mnnn	Attenuator Module, 70 to 495VAC, ±100 to ±700VDC
SCM5B30-07	Voltage Input Module, 4Hz BW
SCM5B40-07	Voltage Input Module, 10kHz BW
SCM5B33-02	True RMS Input Module
SCMVAS-PB8	8-Channel Standard and DIN Backpanel
SCMVAS-PB16	16-Channel Standard and DIN Backpanel



SCM7B
Isolated Process Control Signal Conditioning Modules



Fourteen family groups and 202 different SCM7B process control modules provide a compact, low cost solution for industrial data acquisition and process control applications.

Model	Description
SCM7B21/30/31	Voltage Input Modules, 300/3/3Hz BW
SCM7B22	Voltage Output Modules, 400Hz BW
SCM7B32/33	Process Current/Voltage Input Modules, 100Hz BW
SCM7B34/34N	Linearized 2- or 3-Wire RTD Input Modules, 3Hz BW
SCM7B35	2-Wire Transmitter Interface Modules w/Loop Power, 100Hz BW
SCM7B36	Potentiometer Input Modules, 3Hz BW
SCM7B37	Non-Linearized Thermocouple Input Modules, 3Hz BW
SCM7B39	Current Output Modules, 100Hz BW
SCM7B40/41	Voltage Input Modules, 10kHz BW
SCM7B47	Linearized Thermocouple Input Modules, 3Hz BW
SCM7B Accessories	1-, 2-, 4-, 8-, 16-Channel Standard and DIN Backpanels; Cables, Power Supplies, 19-inch Racks, Resistors

Key 7B Features and Specifications

- ±0.03% Accuracy (Typical)
- ±0.01% Linearity
- 1500Vrms Transformer Isolation & 120Vrms Field-Side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- Wide Supply Voltage, 14V to 35VDC
- 5-Pole Low-Pass Filtering
- Low Output Noise
- -40°C to +85°C Operating Temperature
- CSA C/US Certified (Class I, Division 2, Groups A, B, C, D)
- CE and ATEX Compliant

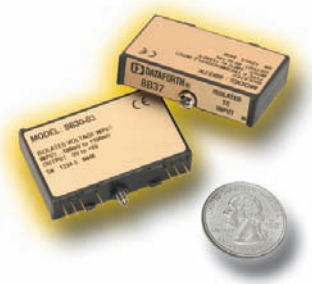
SensorLex® 8B
Isolated Analog Signal Conditioning Modules

Developed in response to customer requests for a smaller isolated signal conditioner, Dataforth's SensorLex 8B is housed in a miniature package ideal for embedded and portable applications. Twenty family groups and a total of 135 models provide fully functional Instrument Class performance and interface to a wide variety of voltage, current, temperature, position, frequency, and strain measuring devices.

Model	Description
8B30/31	Analog Voltage Input Modules, 3Hz BW
8B32	Current Input Modules, 3Hz BW
8B33	True RMS Input Modules, 45Hz to 10kHz
8B34	Linearized 2- or 3-Wire RTD Input Modules, 3Hz BW
8B35	Linearized 4-Wire RTD Input Modules, 3Hz BW
8B36	Potentiometer Input Modules, 3Hz BW
8B37	Non-Linearized Thermocouple Input Modules, 3Hz BW
8B38-0x	Strain Gage Input Modules, Full Bridge, 8kHz BW
8B38-3x	Strain Gage Input Modules, Full Bridge, 3Hz BW
8B39	Current Output Modules, 100Hz BW
8B40/41	Analog Voltage Input Modules, 1kHz BW
8B42	2-Wire Transmitter Interface Modules, 100Hz BW
8B43	DC LVDT Input Modules, 1kHz BW
8B45	Frequency Input Modules, up to 100kHz
8B47	Linearized Thermocouple Input Modules, 3Hz BW
8B49	Voltage Output Modules, 100Hz BW
8B50/51	Analog Voltage Input Modules, 20kHz BW

Key 8B Features and Specifications

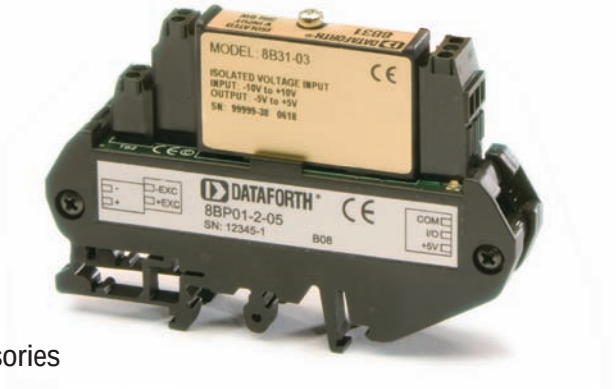
- ±0.05% Accuracy (Typical)
- ±0.02% Linearity
- 1500Vrms Transformer Isolation & up to 240Vrms Field-Side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- 5V Power (30mA Typical)
- 3- to 5-Pole Low-Pass Filtering
- Low Output Noise
- -40°C to +85°C Operating Temperature
- C-UL-US Listed (Class I, Division 2, Groups A, B, C, D)
- CE Compliant
- ATEX Compliance Pending



SensorLex® 8B
Isolated Analog Signal Conditioner Accessories

Single Channel DIN Rail Mounting Accessory

The 8BP01 is offered as a 5VDC powered (8BP01-X05) or 7 to 34VDC powered (8BP01-X24) DIN rail mount carrier suitable for any 8B signal conditioner. The 8B carrier can be mounted on any standard DIN rail (EN 50022-35 and EN 50035-G32). The carrier measures only 2.32" x 3.54" x 0.65" (59mm x 90mm x 16.5mm) making it ideal for use in high-density installations. It has a flammability rating of UL94 V-0.





1-, 2-, 4-, 8-, and 16-channel standard and DIN backpanels are available for SensorLex 8B modules

Design-in Accessories

SensorLex 8B backpanels provide screw-terminal inputs and outputs as well as a DB25 header connector. DB25 cables are available in 1-, 2-, and 7-meter lengths. A power supply module in the same 8B form-factor is offered for input voltages of 7VDC to 34VDC and provides 5VDC output at 3A to power any combination of 8B signal conditioners.

DSCT Loop-Powered, Low Cost, Isolated DIN Rail Mount Two-Wire Transmitters

Two-wire transmission loops are a very economical method for connecting sensors to distant control rooms. Seven family groups and 48 DSCT two-wire transmitter models condition and send analog signals from sensors located in the "field" to monitoring and control equipment, usually computers, located thousands of feet away in central control areas. The transmitters accept a wide range of inputs, including millivolt, volt, milliamp, thermocouple, RTD, potentiometer, and slide wire. They operate on power from a two-wire signal loop and modulate the supply current to represent the input signal within a 4 to 20mA range.

Model	Description
DSCT30	Analog Voltage Input Transmitters
DSCT32	Analog Current Input Transmitters
DSCT34	Linearized 2- or 3-Wire RTD Input Transmitters
DSCT36	Potentiometer Input Transmitters
DSCT37	Thermocouple Input Transmitters
DSCT47	Linearized Thermocouple Input Transmitters

Key DSCT Features and Specifications

- ±0.03% Accuracy (Typical)
- ±0.01% Linearity
- 1500Vrms Transformer Isolation & 240Vrms Field-Side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- Wide Loop Supply Voltage, 10.8V to 60V
- 5-Pole Low-Pass Filtering
- -40°C to +80°C Operating Temperature
- Mounts on DIN Rail EN 50022, 35x7.5 or 35x15
- CSA C/US Certified (Class I, Division 2, Groups A, B, C, D)
- CE Compliant

DSCA High Performance, DIN Rail Mount Isolated Signal Conditioners



Each Instrument Class DSCA module provides a single channel of isolated analog input or output for use in data acquisition, test and measurement, and control system applications. Input modules accept analog voltage or current signals from all types of field sensors and sources, then filter, isolate, amplify, linearize, and convert the signals to high-level analog outputs. Output modules accept high-level analog voltage signals from a system, buffer, isolate, filter, and amplify them, and then provide current or voltage output to a field device.

Model	Description
DSCA30	Analog mV Input Modules, 3Hz BW
DSCA31	Analog V Input Modules, 3Hz BW
DSCA32	Current Input Modules, 100Hz BW
DSCA33	True RMS Input Modules, 45Hz to 20kHz
DSCA34	Linearized 2- or 3-Wire RTD Input Modules, 3Hz BW
DSCA36	Potentiometer Input Modules, 3Hz BW
DSCA37	Non-Linearized Thermocouple Input Modules, 3Hz BW
DSCA38	Strain Gage Input Modules, Full Bridge, 3kHz BW
DSCA39	Current Output Modules, 0 to 20mA, 4 to 20mA, -20mA to +20mA
DSCA40	Analog mV Input Modules, 3kHz BW
DSCA41	Analog V Input Modules, 3kHz BW
DSCA42	2-Wire Transmitter Interface Modules, 100Hz BW
DSCA43	General Purpose Input Modules with Excitation, 3kHz BW
DSCA45	Frequency Input Modules, up to 100kHz
DSCA47	Linearized Thermocouple Input Modules, 3Hz BW
DSCA49	Voltage Output Modules, 1kHz BW

Key DSCA Features and Specifications

- ±0.03% Accuracy (Typical)
- ±0.01% Linearity
- 1500Vrms Transformer Isolation & 240Vrms Field-Side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- True 3-Way Isolation
- Wide Supply Voltage, 15V to 30VDC
- Industry Standard Output of 0 to 10V ±10V, 0 to 20mA, or 4 to 20mA
- 4- to 6-Pole Low-Pass Filtering
- Low Output Noise
- -40°C to +80°C Operating Temperature
- Plug-in Terminal Blocks Simplify Wiring
- C-UL-US Listed (Class I, Division 2, Groups A, B, C, D)
- CE and ATEX Compliant



Wide Selection of Industrial Loop Isolators and Transmitters



DSCL and DSCP products form a complete family of loop and universal AC/DC-powered isolators and transmitters in DIN rail, component, and head-mount packages. The family includes basic loop-powered isolators, wide-range AC/DC-powered isolators and transmitters, and fixed-gain or hardware and software configurable models. They accept a wide range of voltage, current, thermocouple, and RTD input signals, then filter, isolate, amplify, linearize, and convert them to high-level analog outputs for use in data acquisition, test and measurement, and control system applications.

Key DSCL and DSCP Features and Specifications

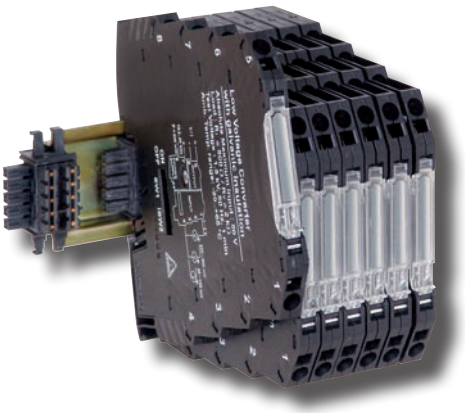
- Full Family of Loop Isolators and Transmitters
- Signal-Powered Passive Loop Isolator Models
- Jumper, Software, and Dip-Switch Configurable Models
- Isolation Protection to 4000Vrms
- Wide Range 24V to 60V or 85V to 230V AC/DC-Powered Models
- Multiple Channels per Package Available
- PCB, DIN Rail, Panel, and Instrument Head Mounting Options
- CE Compliant

DSCL Loop Isolators

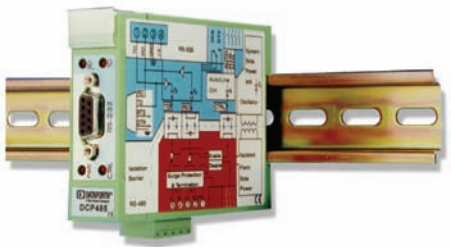
Model	Description
DSCL20	Loop Powered Isolator, Component Module
DSCL21	Loop Powered Isolator, DIN Rail Mount
DSCL22	Loop Powered Isolator, DIN Rail or Panel Mount
DSCL23	4 to 20mA Isolator w/DC Supply, DIN Rail or Panel Mount
DSCL24	Single- or Multi-Channel Isolator, DIN Rail or Panel Mount

DSCP Temperature, Voltage, and Current Transmitters

Model	Description
DSCP20	2-Wire Temperature Transmitter, DIN Rail Mount
DSCP55, 61-65, 70	Compact 6.2mm Signal Converters, Dip-Switch Configurable
DSCP81	Configurable Voltage/Current Input Signal Conditioner, DIN Rail Mount
DSCP Accessories	Module and PC Interface Cables and Configuration Software



Industrial Data Communication Products



Industrial LANs and data communication systems stretch over long distances, inside and outside, with signals exposed to electrical transients, noise, ground loops, power surges, and lightning. Commercial communication equipment often is not designed for use in these environments, which can lead to unreliable signal quality, damage to expensive peripherals, computers and other on-line equipment, and production downtime. Our heavy duty products "harden" and protect these systems, and can extend communications for many miles without expensive low-capacitance cabling.

LDM Series Line Drivers and Converters

Model	Description
LDM30	Low Cost, General Purpose RS-232 Line Driver
LDM35	Signal Powered RS-232 Line Driver
LDM70	Fully Isolated RS-232 Line Driver
LDM422	Fully Isolated RS-232/RS-422 Converter
LDM485	Fully Isolated RS-232/RS-485 Converter
LDM80	Signal Powered Fiber Optic Converter, RS-232
LDM85	Fiber Optic Converter, RS-232/RS-422/RS-423

DCP DIN Rail Mount Industrial Data Products

Model	Description
DCP485	Fully Isolated RS-232/RS-485 Converter/Line Driver
DCP35	Signal Powered RS-232 Line Driver

Key Data Communication Features and Specifications

- Protects Equipment from Damage due to Power Surges, Transients, Lightning
- 1500Vrms Isolation with Optocouplers and Power DC-to-DC Converter (3000Vp, 1 min)
- Connects RS-232 Devices to RS-422 and RS-485 Devices
- Data Rates to 115.2kbps
- Distances to 12 Miles (20km)
- 2- or 4-Wire Simplex/Duplex Connection
- CE Compliant

Dataforth Expands

Dataforth has expanded into a second building, increasing the company's total space to 30,000 square feet. Located in Tucson, this facility houses all manufacturing operations from surface mount to final test, as well as warehousing, shipping and receiving. The original building continues to house engineering and R&D, along with sales and marketing.

The additional space gives Dataforth tremendous flexibility as business continues to grow. Inside space can be reconfigured as needed and with 2+ acres there is also plenty of outside space for additional expansion.

Dataforth's full product line includes 1200+ data acquisition and control, signal conditioning, and data communication products designed specifically to protect measurement and control signals and connected equipment from noise, transient power surges, destructive ground loops, and other industrial hazards.

All Dataforth products are tested 100% multiple times and all are manufactured in the USA.



DATAFORTH®

High Performance Industrial Signal Conditioning, Data Acquisition & Control, and Data Communication Products Since 1984

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All Dataforth Products Manufactured per RoHS Directive 2002/95/EC

The Dataforth Quality Management System is ISO9001:2008 Registered

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