



Table of Contents

Quick Product Selection Guide	9-1
High-accuracy, Rugged, <i>Instrument Class</i> ®, 85 – 265VAC, 50/60Hz Input:	9-4
High-accuracy, Rugged, Instrument Class, 85 – 525VAC, 50/60Hz Input: PWRM20-01	9-7
Online Technical Library	9-10
Discontinued Parts	



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 40 years of experience, is a 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.

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 at our Tucson factory ready to solve any in-depth application questions, and we maintain 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 specializes in innovative analog and isolation circuit development, high-performance mixed signal design, and software development, to ensure that our customers receive the highest performance products at an affordable price.

Automated Manufacturing and Test

Our products are manufactured in the USA on our state-of-the-art SMT systems to optimize time-to-ship and control costs. All products are tested multiple times, and many undergo a 48-hour burn-in at elevated temperatures to ensure performance and reliability.

Quality Control

Dataforth operates under the ISO9001:2015 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

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, and the ability to quickly access pricing information and place online orders. Fully detailed product data sheets and application and tech notes are available for download. Visitors can also view new product release data, sign up to receive our newsletters, get answers to technical questions, and quickly locate Distributors and Sales Representatives worldwide.

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 an affordable price. By intelligently observing and responding to changing market needs, we ensure continuation of our critical customer partnerships.

The information in this catalog has been checked carefully and is believed to be accurate; however, Dataforth assumes no responsibility for possible inaccuracies or omissions. Specifications are subject to change without notice.

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Dataforth

- 2000+ Products for Industrial Data Acquisition and Control, Signal Conditioning, and Data Communications
- · Energy Monitoring
- 40 Years of Experience
- Better than 6σ Reliability
- · Products Manufactured and Designed in the USA per RoHS III Directive (EU) 2015/863
- · Quality Management System is ISO9001:2015 Registered

Additional Resources

- Application Notes
- Tech Notes
- · Press and Product Releases

Our Track Record Proves We are Dedicated to Your Success!

For Product Information, Certifications, System Builders, and Online Ordering, go to: www.dataforth.com



SCM5B Isolated Analog Signal Conditioning Modules

True 3-way Isolation, 5V Supply Voltage, Unparalleled Performance

20 family groups of 300+ different modules: a wide selection of input and output functions

Each SCM5B module provides a single channel of isolated analog input or output. Input modules interface to all types of industrial sensors. Analog inputs include voltage and current in narrow and wide bandwidths, thermocouple, RTD, accelerometer, potentiometer, strain gauge, frequency, and 2-wire and 3-wire, as well as 4-wire transmitter. Output modules accept a high-level analog voltage signal from a host system and provide process current or voltage output to field devices.

SCM5B Key Features

- ±0.03% Accuracy (typ)
- ±0.005% Linearity
- 1500Vrms Transformer Isolation and 240Vrms Field-side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- 5V Power Supply Voltage (30mA (typ))
- 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
- Manufactured per RoHS III Directive 2015/863



SCM7B Isolated Process Control Signal Conditioning Modules

2-way Isolation, 14-35VDC Supply Voltage, Industrial Performance

15 family groups of 200+ different modules: a compact, low-cost solution for industrial data acquisition and process control applications

Each SCM7B module provides a single channel of isolated analog input or output. Various input modules accept analog voltage or current signals from all types of field sensors and sources; they provide high-level analog outputs suitable for use in a process control system. Output modules accept high-level analog voltage signals from a process control system and provide current or voltage output to a field device.



SCM7B Key Features

- ±0.03% Accuracy (typ)
- ±0.01% Linearity
- 1500Vrms Transformer Isolation and 120Vrms Field-side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- 14-35VDC Wide Supply Voltage
- 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
- Manufactured per RoHS III Directive 2015/863

The SCM5B, SCM7B product lines include a complete selection of backpanels, DIN-rail mounting options, cables, racks, power supplies, and other accessory items.

Custom SCM5B, SCM7B modules are available: consult factory for minimum quantity and pricing details on custom input ranges, output ranges, bandwidth, and other key parameters.



SensorLex® 8B Isolated Analog Signal Conditioning Modules

Miniature Size, 2-way Isolation, 5V Supply Voltage, Instrument Class® Performance

19 family groups of 130+ modules: an optimal solution for monitoring real-world process signals and providing high-level signals for data acquisition

Developed in response to customer requests for a smaller, isolated signal conditioner, SensorLex 8B modules are housed in a miniature package that is ideal for embedded and portable applications. All 8B modules are fully functional and provide *Instrument Class* analog voltage output. They interface to a wide variety of voltage, current, temperature, position, frequency, and strain measuring devices.

8B SensorLex Key Features

- ±0.05% Accuracy (typ)
- ±0.02% Linearity
- 1500Vrms Transformer Isolation and 240Vrms Field-side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- 5V Power Supply Voltage (30mA (typ))
- 3- to 5-pole Low-pass Filtering

- Low Output Noise
- -40°C to +85°C Operating Temperature
- UL/cUL Listed (Class I, Division 2, Groups A, B, C, D)
- CE Compliant
- ATEX Compliance Pending
- Manufactured per RoHS III Directive 2015/863



SCMD Isolated Digital I/O Modules

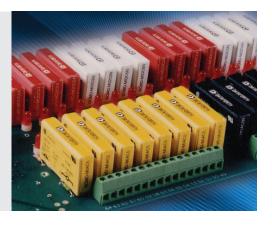
Miniature Digital I/O Modules with 4kV Isolation

A rugged, protective isolation barrier, effective to 4kV, between the field and computer system

SCMD miniature digital I/O modules are solid-state devices that send "On" and "Off" electrical signals to and from a computer. Input modules convert AC or DC voltages to DC logic signals and send them to the computer system. Output modules work in the opposite direction, switching either AC or DC circuits On or Off in response to logic-level voltage commands from the computer.

Key SCMD Features

- 4000Vrms Optical Isolation
- · Industry Standard Packaging
- Input Modules Incorporate Input Filtering for Transient-free Switching
- Complete Selection of Backpanels and Accessories
- · Optional Low-noise, Fast-switching Models
- UL Listed, CSA Certified, CE Compliant
- Manufactured per RoHS III Directive 2015/863



The SensorLex 8B and SCMD product lines include a complete selection of backpanels, DIN-rail mounting options, cables, racks, power supplies, and other accessory items.

Custom SensorLex 8B modules are available: consult factory for minimum quantity and pricing details on custom input ranges, output ranges, bandwidth, and other key parameters.



DSCA High-Performance, DIN-rail Mount, Isolated Signal Conditioners

True 3-way Isolation, High Accuracy, Instrument Class® Performance

16 family groups of 375+ different modules: a wide selection of input and output functions

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.

DSCA Key Features

- ±0.03% Accuracy (typ)
- ±0.01% Linearity
- 1500Vrms Transformer Isolation and 240Vrms Field-side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- 15-30VDC Wide Supply Range
- Industry Standard Outputs of 0-10V, ±10V, 0-20mA, or 4-20mA

- 4- to 6-pole Low-pass Filtering
- Low Output Noise
- -40°C to +80°C Operating Temperature
- Plug-in Terminal Blocks Simplify Wiring
- UL/cUL Listed (Class I, Division 2, Groups A, B, C, D)
- · CE and ATEX Compliant
- Manufactured per RoHS III Directive 2015/863



SCM9B Isolated Analog Signal Conditioning Modules

Isolated, Intelligent Signal Conditioning Products

11 family groups of 200+ different modules: a wide selection of input and output functions

High-quality 9B modules provide cost-effective protection and conditioning for a wide range of distributed data acquisition and control applications including but not limited to process monitoring and control, remote data logging, product testing, and motion and motor speed control.

Dataforth's extensive line includes fixed and programmable sensor-to-computer and computer-to-analog output interface modules, RS-232/RS-485 converters, RS-485 repeaters, and applications software. Accessories include a complete selection of backpanels, DIN-rail mounting options, interface cables, mounting racks, power supplies, and other accessory items.

SCM9B Key Features

SCM9B Sensor-to-Computer Modules

- 500Vrms Input Isolation
- Programmable Scaling and Linearization
- ASCII Command/Response Protocol
- 15-bit Measurement Resolution
- Continuous Self-calibration
- Analog Readback
- DIN-rail Mountable D100 Series

SCM9B Computer-to-Analog Output Modules

- 0-1V, ±1V, 0-5V, ±5V, 0-10V, ±10V, 0-20mA, 4-20mA Output Ranges
- 500Vrms Output Isolation
- 12-bit Output Resolution
- Programmable 0.01V/s (mA/s) to 10,000V/s (mA/s) Output Slopes
- Analog Readback
- Data Scaling

SCM9B Converters and Repeaters

- Transparent to Host
- · Optically Isolated Bidirectional Data Flows
- Automatic Internal RS-485 Bus Supervision
- DIN-rail Mountable D192 Model



Custom DSCA modules are available: consult factory for minimum quantity and pricing details on custom input ranges, output ranges, bandwidth, and other key parameters.



DSCL Industrial Loop Isolators and Transmitters

Passive, Active. Programmable 4-20mA Loop Products

Loop and universal AC/DC-powered isolators and transmitters in DIN-rail, component, and head-mount packages

This 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 voltage, current, thermocouple, and RTD-input signals and provide high-level analog outputs for data acquisition, test and measurement, and control system applications.

Key DSCL Features

- Full Family of Loop Isolators and Transmitters
- Signal-powered Passive Loop Isolator Models
- Wide Range 24-60V or 85-230V AC/DC Powered Models
- Jumper and Software Configurable Models
- 4000Vrms Isolation
- PCB, DIN-rail, Panel Mount, or Instrument Head Mounting
- Multiple Channels per Package Available
- No Recalibration or Maintenance Required

- Fault Detection of Input Signal Available
- CE Compliant
- Manufactured per RoHS III Directive 2015/863

Compact 6.2mm Signal Converters

- Ideal for Applications in Limited Space
- Dip-switch Configuration
- 3 Power Supply Options
- 3.67" x 0.24" x 4.04" (93.1mm x 6.2mm x 102.5mm) casing
- 1.6 oz (45g) Per Module



DSCP User-Programmable Transmitters

Passive, Active, Programmable 4-20mA Loop Products

Loop and universal AC/DC-powered isolators and transmitters in DIN-rail, component, and head-mount packages

This 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 voltage, current, thermocouple, and RTD-input signals and provide high-level analog outputs for data acquisition, test and measurement, and control system applications. The compact 6.2mm DSCP dip-switch configurable signal converters are ideal when space is limited.

Key DSCP Features

- Full Family of Loop Isolators and Transmitters
- Signal-powered Passive Loop Isolator Models
- Wide Range 24-60V or 85-230V AC/DC Powered Models
- Jumper and Software Configurable Models
- 4000Vrms Isolation
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- Multiple Channels per Package Available
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- Manufactured per RoHS III Directive 2015/863

Compact 6.2mm Signal Converters

- · Ideal for Applications in Limited Space
- Dip-switch Configuration
- 3 Power Supply Options
- 3.67" x 0.24" x 4.04" (93.1mm x 6.2mm x 102.5mm) casing
- 1.6 oz (45g) Per Module





DSCT Loop-Powered Isolated Two-wire Transmitters

Instrument Class® Performance in a Low-Cost DIN-rail Mount Package

7 family groups of 45+ transmitter models: economical connections between sensors and control rooms

DSCT 2-wire transmitters 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 2-wire signal loop and modulate the supply current to represent the input signal within a 4-20mA range.

Key DSCT Features

- ±0.03% Accuracy (typ)
- ±0.01% Linearity
- 1500Vrms Transformer Isolation and 240Vrms Field-side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- 10.8-60V Wide Loop Supply Voltage
- 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
- Manufactured per RoHS III Directive 2015/863



DCP and LDM Industrial Data Communication Products

Line Drivers and Converters for RS-232, RS-422, and RS-485 Systems

9 family groups of 40+ transmitter models: economical connections between sensors and control rooms

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. Our heavy duty products "harden" and protect these systems.

Key Data Communication Features

- Protects Equipment from Damage due to Power Surges, Transients, Lightning
- 1500Vrms Isolation with Optocouplers and Power DC-to-DC Converter (3000Vp, 1 min)
- Extends RS-232 Communication Distances without Expensive Low-capacitance Cabling
- 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
- Manufactured per RoHS III Directive 2015/863





SCM5B isoLynx® SLX200 Data Acquisition System

Fast, Intelligent, Modular, Fully Isolated

Implements industry-standard Modbus® RTU and TCP protocols, enabling communication with existing third-party software drivers and HMI/SCADA packages

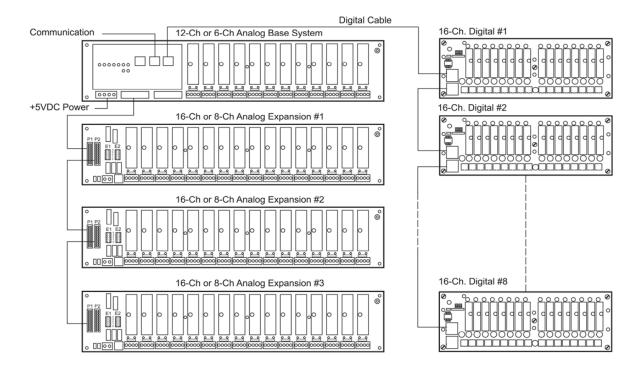
Fully certified by Modbus-IDA and OPC compatible, the SCM5B isoLynx SLX200 provides superior reliability, accuracy, and isolation for a wide range of rugged industrial applications. The system offers maximum flexibility of analog and digital I/O selection; the modular design combines a 6- or 12-channel I/O Controller base system and optional 8- or 16-channel expansion backplanes, which can be panel or DIN-rail mounted. One I/O controller unit can operate up to 60 channels of differential analog I/O and 128 channels of digital I/O, using Dataforth's SCM5B analog and SCMD digital modules. All I/O is channel-to-channel and input-to-output isolated.

SCM5B isoLynx SLX200 Key Features

- Modbus RTU Support on RS-232 and RS-485
- Modbus TCP Support (optional)
- 1500Vrms Input-to-Output and Channel-to-Channel Isolation
- 240Vrms Field-side Protection
- Dual Ethernet for Redundancy
- System Expansion to 60 Analog Channels and 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
- Manufactured per RoHS III Directive 2015/863







8B isoLynx® SLX300 Data Acquisition System

Flexible, Compact, Modular, Reliable

Configure with up to 12 isolated analog-input channels, 4 isolated analog-output channels, and 8 isolated digital I/O channels

Building on the proven reliability and outstanding performance of the SCM5B isoLynx SLX200 and miniature-sized SensorLex® 8B isolated signal conditioning modules, the 8B isoLynx SLX300 is a compact, low-cost solution for wide ranging rugged industrial applications. The system enables the mix and match of analog and digital I/Os at sustained rates of up to 3.0kS/s (100kS/s burst) and supports Modbus® RTU and TCP protocols. The SLX300 also offers 7 advanced special functions and 4 alarm states. The system can be panel or DIN-rail mounted.

8B isoLynx SLX300 Key Features

- Modbus RTU and TCP Support
- 1500Vrms Input-to-Output and Channel-to-Channel Isolation
- 240Vrms Field-side Protection
- Wide I/O Selection
- Analog 19 product families, 130+ models
- Digital 6 product families, 20+ models
- Mix and Match Analog and Digital I/O
- Advanced Features Including Alarms, Counters, Timers, PWMs, and more

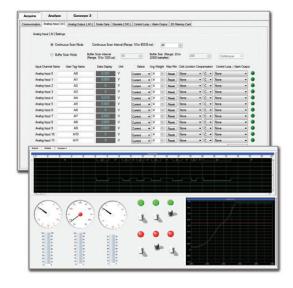
- -40°C to +85°C Operating Temperature
- Free Configuration Software
- UL/cUL Listed (Class I, Division 2, Groups A, B, C, D)
- CE Compliant
- ATEX Compliance Pending
- Manufactured per RoHS III Directive 2015/863



ReDAQ® Shape Software for SLX300

Out-of-the-box DAQ software for the 8B isoLynx SLX300 data acquisition system

ReDAQ Shape software for 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.



ReDAQ Shape for SLX300 Key Features

- 64 High-quality Toolbox Tools
- 3 Easy Steps to Create Data Acquisition and Control Projects
- Pre-configured Built-in Software Functions
- Supports Any Graphical File Format
- Integrated, Across-the-Board Applicability
- Most Effective Way to Set Up and Configure 8B isoLynx SLX300

Functions:

- Continuous and Burst Scan Modes for 12 Analog Input and 4 Analog Output Channels
- Automatically Scales Data from Counts to Engineering Units

- 8 Discrete I/O with 7 Special Functions Pulse/Frequency Counter, Pulse/ Frequency Counter with De-Bounce, Waveform Measurement, Time Between Events, Frequency Generator, PWM Generator, One-shot Pulse Generator
- 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/ay, Day/Time) with 10
 Programmable Events



MAQ®20 Industrial Data Acquisition and Control System

High Performance, Powerful, Flexible, Industrial, Rugged Design

The industry's lowest cost-per-channel Data Acquisition and Control System offering, integral PID loop control, ±0.035% system accuracy; ideal for test and measurement, factory, process, and machine automation, military and aerospace, power and energy, environmental monitoring, and oil and gas applications

Encompassing more than 35 years of design excellence and quality in the industrial test and measurement and control industry, the MAQ20 family consists of DIN-rail mounted, programmable, multi-channel, rugged industrial signal conditioning input and output modules and communication modules. Each I/O module has a 1500Vrms isolation barrier between field-side and system-side wiring, and many models offer per-channel isolation. The MAQ20 is supported by both ReDAQ® Shape software for MAQ20 and your own ModBus® compatible data acquisition/test and measurement software.

MAQ20 Key Features

- Industry's Lowest Cost per Channel
- ±0.035% Accuracy (typ)
- 1500Vrms Channel-to-Bus Isolation
- Up to 240Vrms, Continuous Field I/O Protection
- ANSI/IEEE C37.90.1 Transient Protection
- Graphical Control Software
- ReDAQ Shape for MAQ20 Software
- Customer own ModBus® compatible DAQ Software

- Advanced Features Including Integral PID Control, Alarms, Counters, Timers, PWMs
- 7-34VDC Wide-range Input Power
- –40°C to +85°C Industrial Operating Temperature
- · Heavy Industrial CE Compliant
- UL/cUL Listed (Class I, Division 2, Groups A, B, C, D)
- ATEX Compliance Pending
- Manufactured per RoHS III Directive 2015/863

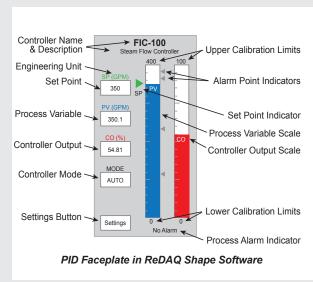


PID Loop Control

This highly effective controller operates in ReDAQ Shape for MAQ20 software

With ReDAQ Shape software, the MAQ20 Data Acquisition System runs in real time and provides up to 8 loops of PID control; faceplates within the software enable an engineer or operator to interact with the MAQ20 Data Acquisition System. Typical PID applications include steam, water, and chemical flow control; tank level control, heat-exchanger/reactor temperature control, and pressure control.

Key PID Controller Features... with ReDAQ Shape Software



- Separate Panels for Setting Basic, Advanced, and Alarm Items
- Noninteracting and Parallel PID Control Algorithms
- Proportional and Derivative Modes Can Act on Error or Process Variable
- Gap Control
- Built-in Process Variable Filtering
- Bumpless Transfer

- Change Tuning Settings Easily
- Process Variable Set Point Tracking
- Limit Controller Output Range
- Anti-reset Windup
- Four Process Alarms
- Full-featured Faceplate for Numeric and Visual Feedback
- Integrated Auto Tuner



ReDAQ® Shape Software for MAQ®20

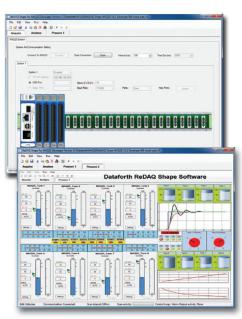
Ideal for data acquisition, monitoring and control; enables users to easily interact with the Dataforth MAQ20 Data Acquisition System

ReDAQ Shape software for MAQ20 is an easy and efficient development tool as well as an effective way to configure and customize MAQ20 functions for specific application requirements. Faceplates within the software enable an engineer or operator to interact with the MAQ20 Data Acquisition System and its features, for example PID Loop Control.

ReDAQ Shape for MAQ20 Key Features

- 3 Easy Steps to Create Customized Presentation Panels
- No Setup or Configuration Required to Acquire and Analyze Data
- Faceplates for PID Loop Control
- 65 High-quality Toolbox Tools
- Supports Any Graphical File Format
- · Integrated, Across-the-board Applicability

- Most Efficient Way to Configure and Run MAQ20 Systems:
- Continuous Acquisition and Burst Scan Modes
- Automatically Scales Data from Counts to Engineering Units
- Discrete I/O Offers 7 Special Functions:
 Pulse/Frequency Counter, Pulse/Frequency
 Counter with De-Bounce, Waveform
 Measurement, Time Between Events,
 Frequency Generator, PWM Generator,
 One-Shot Pulse Generator
- Assign Tag Names for Any Input and Output
- Configure Control Loops and Alarm Outputs
- Three Function Timer (Count-Down, 24hr/ Day, Day/Time) with 10 Programmable Events





The Dataforth System Builder

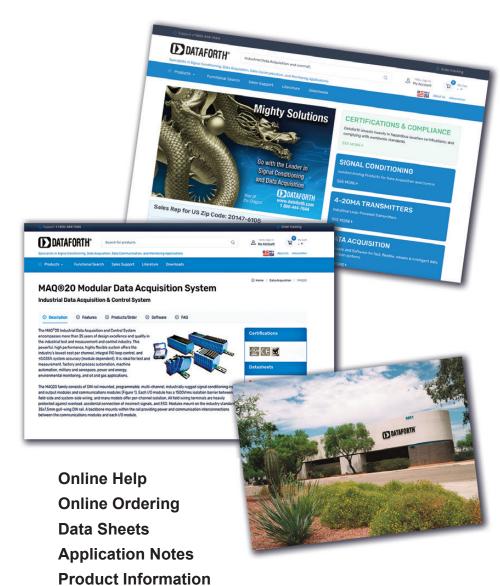
Dataforth's System Builder is an innovative, interactive online tool that allows you to create your own system, module by module. Based on your stated requirements and parameters, suggestions are automatically given on which products to choose to build the most effective system. Pricing information is continuously updated, thereby enabling you to obtain the best system for your needs at the most cost-effective price.

Visit Dataforth's Website:

dataforth.com

Dataforth's website is an easy-to-use, comprehensive source for sales, products, 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 tutorials
- Worldwide corporate and sales contact information







	BB, SCM9B			
Characteristic	SCM5B	SCM7B	8B	SCM9B
Mechanical Format	Modular Plug-in-board	Modular Plug-in-board	Modular Plug-in-board	Plug-in or Hockey Puck
Isolation: Voltage type	1500Vrms Transformer 3-way	1500Vrms Transformer 2-way	1500Vrms Transformer 2-way	500Vrms Transformer/Optical 2-way
CMR	160dB	110dB	100dB	100dB
NMR (60Hz) Rejection	95dB (4Hz Modules)	85dB (3Hz Modules)	70dB	Software Configurable
Bandwidth	4Hz to 10kHz	3Hz to 10kHz	3Hz to 20kHz	Software Configurable
Filter	6-pole	5-pole	3- to 5-pole	Digital
Input Voltage Withstand	240Vrms	120Vrms	240Vrms	120Vrms or 250Vrms
Input Signals	(1)	(2)	(1)	(3)
Output Range to System	0-5VDC, 0-10VDC, ±5VDC, ±10VDC, 0-1mA, 0-20mA, 4-20mA	1-5VDC, 0-5VDC, 0-10VDC, ±10VDC	0-5VDC, ±5VDC	RS-232 or RS-485
Output Range to Field	4-20mA, 0-20mA, ±20mA, ±5VDC, ±10VDC, 0-5VDC, 0-10VDC	±10VDC, 4-20mA, 0-20mA	4-20mA, 0-20mA, ±20mA, ±5VDC, ±10VDC, 0-5VDC, 0-10VDC	4-20mA, 0-20mA, 0-1VDC, ±1VDC, 0-5VDC, ±5VDC, 0-10VDC, ±10VDC
Gain/Offset Adjust	Fixed	Fixed	Fixed	Auto Zero, Auto Cal
Accuracy	0.03% (typ)	0.03% (typ)	0.05% (typ)	0.02% (typ)
Output Control	Enable/Disable	Always Enabled	Always Enabled	RS-232 or RS-485
Supply Voltage	+5VDC ±5% at 30-350mA	14-35VDC (+24V Nom) at 12-70mA	+5VDC ±5% at 25-225mA	12-30VDC at 0.75W Max
Dimensions h)x(w)x(d)	2.28" x 2.26" x 0.6" (58mm x 57mm x 15mm)	2.13" x 1.7" x 0.6" (54.1mm x 43.3mm x 15.4mm)	1.11" x 1.65" x 0.4" (28.1mm x 41.9mm x 10.2mm)	3.60" x 2.45" x 1.10" (91.4mm x 62.2mm x 27.9mm
nterface	14-pin	5- or 6-pin	5-, 6- or 7-pin	10- or 20-pos Term Block
Customization	Yes	Yes	Yes	No
DIN-rail, Head-mo	unt Products - DSCA,	DSCT, DSCL, DSCP		
Characteristic	DSCA	DSCT	DSCL	DSCP
Mechanical Format	DIN-rail Mount	DIN-rail Mount	DIN-rail, Component, Panel	DIN-rail, Head Mount
Isolation: Voltage type	1500Vrms Transformer 3-way	1500Vrms Transformer 3-way	500Vrms to 4000Vrms Transformer/Optical	Non/1500Vrms/2300Vrms Transformer/Optical 3-way
CMR	160dB	160dB	70-110dB	Consult Data Sheet
NMR (60Hz) Rejection	85dB (3Hz Modules)	85dB (3Hz XMTRs)	20dB/Decade	SW or Dip-switch Config
Bandwidth	3Hz to 3kHz	3Hz	5Hz to 750Hz	SW or Dip-switch Config
Filter	6-pole	6-pole	2-pole	SW or Dip-switch Config
nput Voltage Withstand	240Vrms	240Vrms	N/A	N/A
nput Signals	(1)	(5)	4-20mA, 0-20mA	(4)
Output Range to System	0-10VDC, ±10VDC, 0-1mA, 4-20mA, 0-20mA	4-20mA	4-20mA, 0-20mA, V, and Selectable	SW or Dip-switch Config
Output Range to Field	4-20mA, 0-20mA, ± 20mA, ±10VDC, 0-10VDC	N/A	N/A	N/A
Gain/Offset Adjust	±5%	±10%	±10% on Some Models	Software Configurable
Accuracy	0.03% (typ)	0.03% (typ)	0.05% to 0.1% (typ)	0.1% (typ)
Output Control	Always Enabled	Always Enabled	Always Enabled	Always Enabled
Supply Voltage	15-30VDC (+24V Nom) at 25-80mA	10.8-100VDC Loop at 4-20mA	24VDC Loop at 4-20mA	24VDC Loop, or 24-230VDC/VAC
Dimensions (h)x(w)x(d)	2.95" x 0.89" x 4.13" (75mm x 22.5mm x 105mm)	2.95" x 0.89" x 4.13" (75mm x 22.5mm x 105mm)	Consult Data Sheet	Consult Data Sheet
Interface	8-pos Term Block	6-pos Term Block	Terminal Block	Terminal Block
Customization	Yes	Yes	No	SW or Dip-switch Config

NOTES:
(1) V, I, RTD, TC, Potentiometer, Strain, True RMS, 2-wire, Frequency
(2) V, I, RTD, TC, Potentiometer, 2-wire
(3) V, I, RTD, TC, Frequency, Digital I/O
(5) V, I, RTD, TC, Potentiometer
(4) V, I, RTD, TC



High-accuracy Energy Monitoring Module

Module	PWRM10-01	PWRM20-01
Phase Voltage Range	85-265VAC	85-525VAC
Phase Frequency	50/60Hz Input	
Electrical System		
	Single-pha	se (2-wire)
Voltage Measurement	Two-phas	se (3-wire)
(Direct Connection or VT)	Three-phase Wye	e or Delta (3-wire)
	Three-phase Wye	e or Delta (4-wire)
Current Measurement	Shunt, Ct, R	ogowski Coil
Measured Parameters and Accur	acy	
RMS Voltage	±0.1% of Full	l-scale Range
RMS Current	±0.1% of Full	l-scale Range
Active Power	±0.	2%
Apparent Power	±0.	2%
Reactive Power	±0.	2%
Power Factor	±0.2%	
Frequency Range	45-65Hz	
Active Energy	±0.25%	
Apparent Energy	±0.25%	
Fundamental Active and Reactive Energy	±0.25%	
Phase Angles	±0.1%	
Line Periods	±0.1%	
Measurement Bandwidth		
RMS Voltage and Current (-3dB)		
Total Active Energy (–3dB)	3.3	kHz
Fundamental Reactive Energy (–3dB)	3.3	kHz
Harmonic (-3dB)		o Attenuation Pass nd)
Temperature Drift	±100p	opm°C
Events	Over-voltage, O	ver-current, Sag
Security	Password to A	Access Control
Data Logging		natic Download and rage
Connectivity	Ethernet	, TCP/IP
Mounting	DIN	-rail
Dimensions (h)x(w)x(d)		39" x 5.04" 3mm x 128mm)

Data Acquisition (DAQ) System - MAQ20

Data Addustion (DAG) Oystem - MAG20			
Components - Communicati	on - MAQ20-COM2, -COM4		
Standard Industrial Buses	Ethernet, RS-232, RS-485		
USB Software Interfaces	Modbus TPC/IP or RTU		
Components - Analog Input - MAQ20-MVDN, -VDN, -VSN, -IDN, -ISN, -FREQ, -BRDG1, -JTC, -KTC, -RSTC, -TTC, -RTD31, -RTD41, -ISOI1, -ISOMV1, ISOV2, -ISOV2, -ISOV3, -ISOV4, -ISOV5			
Channel Count	Up To 16 Channels, Independently Configurable		
Voltage and Current Inputs	8 Differential or 16 Single-ended		
Thermocouple	8-channel Measurement, 5 Thermocouple Types		
RTD Inputs	2-, 3-wire Sensors, Including 6 RTD Types and Potentiometers		
Strain Gauge Input	Connect to Full-Bridge Sensors, Narrow/Wide BW Filtering		
Frequency Input	Zero Crossing and TTL Signals of 500Hz-100kHz Frequencies		
Components - Analog Output	it - MAQ20-VO, -IO		
Voltage and Current Outputs	Up to 8 Channels of 300vrms Ch-to-Ch Isolated Output		
Components - Discrete Inpu -DIOH, -DODC20SK, -DORLY	t/Output - MAQ20-DIV20, -DIVC20, -DIOL, 20		
Channel Count	5 Input/5 Output Channels per Module		
Inputs	3-60VDC Input; or, 90-280VAC/VDS at 3A		
Outputs	3-60VDC Output; or, 24-280VAC at 3A		
Overall System Specification	ns		
Accuracy	±0.035% (typ)		
Voltage and Current Outputs	Up to 8 Channels of 300Vrms Ch-to-Ch Isolated Output		
Field I/O Protection	Up to 240Vrms, Continuous		
Transient Protection	ANSI/IEEE C.37.90.1		
Wide-range Input Power	7-34VDC		
ReDAQ Shape Software	Up to 8 PID Loops		
Operating Temperature	-40°C to +85°C		
Advanced PID Control	Alarms, Counters, Timers		
Operating Temperature	-40°C to +85°C		



High-voltage Attenuator Modules - SCMHVAS-Mxxxx

Module	SCMHVAS-Mxxx
Input Range	±100V _{PEAK} to ±2000V _{PEAK} (70VAC to 1414VAC)
Input Voltage (max)	±2000V _{PEAK}
Input Resistance	>10MΩ
Accuracy	±0.03%
Stability	±50ppm/°C
Output Range	±1V
Output Resistance	<100kΩ
Mechanical Dimensions	2.13" x 1.705" x 0.605"
(h)x(w)x(d)	(54.1mm x 43.3mm x 15.4mm)
Environmental	
Operating Temp. Range	-40°C to +85°C
Storage Temp. Range	-40°C to +85°C
Relative Humidity	0 to 95% Noncondensing

^{*}Contact factory or you local Dataforth sales office for maximum values.

See Discontinued Devices at the End of the Document.



PWRM10-01: IoT Energy Monitoring Module

High-accuracy, Rugged, Instrument Class®, Energy Monitoring Module

DESCRIPTION

The PWRM10-01 energy monitoring module is an IoT universal, high-accuracy, compact, self-powered, electrical energy measurement device that interfaces to three-phase and single-phase systems. Specifically designed for industrial and commercial heavy-duty new and retrofit applications, the module provides a wide range of highly accurate power and energy measurement values over an operating temperature range of –40°C to +85°C.

The DIN-rail mounted enclosures have pluggable terminal blocks for connecting to phase voltages and phase currents which simplifies setup and maintenance, and the small format requires little space in control cabinets. The PWRM10-01 module interfaces to phase voltages of 85–265VAC, 50/60Hz, and is self-powered from any of the lines. Higher voltages can be interfaced to with the use of voltage transformers (VT) and appropriate scaling factors in the module.

Phase current inputs have an industry-standard range of 0.333VAC full-scale. An external shunt, current transformer, or Rogowski Coil is required to measure currents directly or non-contact.

The PWRM10-01 module measures and reports a wide range of electrical energy parameters.

Real-time data from the module is accessed via an Ethernet TCP/IP port using the HTTP API and a standard web browser on a host computer, smartphone, or tablet. Data logging is user-configurable and once parameters and ranges are selected, the data is automatically downloaded and stored.

FEATURES

- · RMS Voltages and Currents
- · Phase Angles
- · Line Periods
- Instantaneous Total Active Power
- Instantaneous Total Apparent Power
- · Fundamental Active Power
- Power Factors

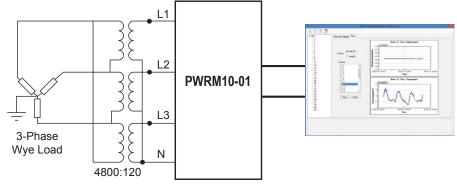
- Total Active Energy
- · Fundamental Active Energy
- Fundamental Reactive Energy
- Total Apparent Energy
- Harmonics
- · Power Quality
- Over-voltage
- Over-current
- Sag

BENEFITS

- · Power Quality Measurement
- · Energy Consumption Monitoring
- · Machine Health Monitoring
- Powerful Data Analysis
- User-friendly and Feature-rich IoT Module
- Withstands Harsh Environments
- High-level Noise Immunity

APPLICATIONS

- · Energy Metering Systems
- Power Quality Monitoring
- · Solar Monitoring
- Process Monitoring
- · Health of Machine
- Predictive Maintenance
- Retrofit Applications in Energy Distribution and Industry



A PT with secondary Line-to-Neutal voltage of 120VAC and a step-down ratio of 4800:120 = 40 is used to connect the PWRM10-01 or PWRM20-01 to a utility voltage of 4800VAC. 120VAC is compatible with both modules.

Example shown, for more connectivity options, see PWRM User Manual MA1068

PWRM10-01 Block Diagram



Electrical Specifications Typical* at T_A = +25°C

Module	PWRM10-01
Phase Voltage Range	85-265VAC
Phase Frequency	50/60Hz Input
Dimensions (h)(w)(d)	4.01" x 0.89" x 5.04"
Material	(102mm x 22.6mm x 128mm) Polyamide
Mounting	DIN-rail
Weight	0.3lb (0.14kg)
Electrical System	
Voltage Measurement (Direct Connection or VT)	Single-phase (2-wire) Two-phase (3-wire) Three-phase Wye (3-wire) Three-phase Delta (3-wire) Three-phase Wye (4-wire) Three-phase Delta (4-wire)
Current Measurement	Shunt, CT, or Rogowski Coil
Measured Parameters and Accuracy	
RMS Voltage	±0.1% of Full-scale Range
RMS Current	±0.1% of Full-scale Range
Active Power	±0.2%
Apparent Power Reactive Power	±0.2% ±0.2%
Power Factor	±0.2%
Frequency Range	45 – 65Hz
Active Energy	±0.25%
Apparent Energy	±0.25%
Fundamental Active & Reactive	±0.25%
Energy	±0.1%
Phase Angles	±0.1%
Line Periods	
Measurement Bandwidth	2.2111
RMS Voltage and Current (–3dB)	3.3kHz 3.3kHz
Total Active Energy (–3dB) Fundamental Reactive Energy (–3dB)	3.3kHz 3.3kHz
Harmonic (–3dB)	3.3kHz (2.8kHz No Attenuation Pass Band)



ATTENTION

Read, understand, and follow all instructions in the Quick Start Guide and Hardware User Manual, including all warnings, cautions, and precautions before installing and using.

PWRM10-01 module literature and software is available for download from the <u>PWRM10-01 Software & User Download Center</u>.

MA1069 PWRM10-01 & PWRM20-01 Quick Start Guide

MA1068 PWRM10-01 & PWRM20-01 Hardware User Manual

MA1067 PWRM10-01 & PWRM20-01 HTTP API User Manual

±100ppm/°C
Over-voltage, Over-current, Sag
Password for Access Control
Configurable; Automatic Download and Storage
Ethernet, TCP/IP DHCP, Static IP Selectable (Default 80) 6 HTTP API
Self-powered from Any Line 85-265VAC 1.7W 50 / 60Hz
-40°C to +85°C -40°C to +85°C 0 to 95%, Non-Condensing
ISM Group 1 Class A ISM Group 1 Performance A ± 2% Span Error Performance B Heavy Industrial CE

NOTES:

Ordering Information

Model	Description
PWRM10-01	85-265VAC, 50/60Hz Input



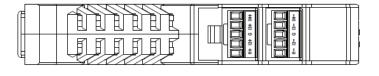
CAUTION - RISK OF ELECTRICAL SHOCK

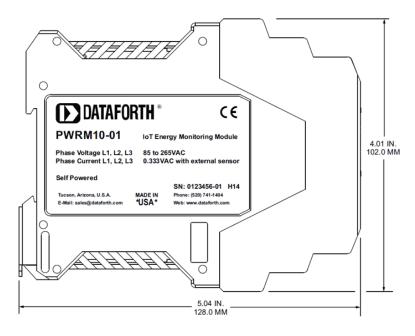
When installing and operating the PWRM10-01 module, there is a potential for shock hazard from dangerous high-voltage. Ensure systems are de-energized before installing or removing the terminal blocks.

^{*} Contact factory for maximum values.

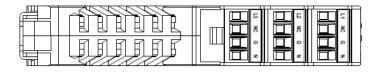


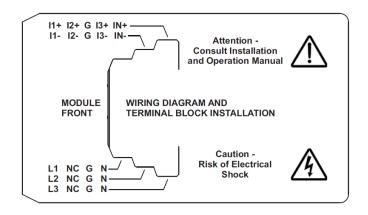
Module Dimensions and Pinouts













PWRM20-01: IoT Energy Monitoring Module

High-accuracy, Rugged, Instrument Class®, Energy Monitoring Module

DESCRIPTION

The PWRM20-01 energy monitoring module is an IoT universal, high-accuracy, compact, self-powered, electrical energy measurement device that interfaces to three-phase and single-phase systems. Specifically designed for industrial and commercial heavy-duty new and retrofit applications, the module provides a wide range of highly accurate power and energy measurement values over an operating temperature range of –40°C to +85°C.

The DIN-rail mounted enclosures have pluggable terminal blocks for connecting to phase voltages and phase currents which simplifies setup and maintenance, and the small format requires little space in control cabinets. The PWRM20-01 module interfaces to phase voltages of 85–525VAC, 50/60Hz, and is self-powered from any of the lines. Higher voltages can be interfaced to with the use of voltage transformers (VT) and appropriate scaling factors in the module.

Phase current inputs have an industry-standard range of 0.333VAC full-scale. An external shunt, current transformer, or Rogowski Coil is required to measure currents directly or non-contact.

The PWRM20-01 module measures and reports a wide range of electrical energy parameters.

Real-time data from the module is accessed via an Ethernet TCP/IP port using the HTTP API and a standard web browser on a host computer, smartphone, or tablet. Data logging is user-configurable and once parameters and ranges are selected, the data is automatically downloaded and stored.

FEATURES

- RMS Voltages and Currents
- · Phase Angles
- · Line Periods
- Instantaneous Total Active Power
- Instantaneous Total Apparent Power
- · Fundamental Active Power
- Power Factors

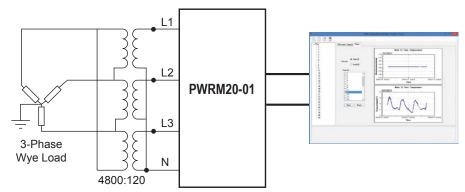
- Total Active Energy
- Fundamental Active Energy
- · Fundamental Reactive Energy
- Total Apparent Energy
- Harmonics
- · Power Quality
- Over-voltage
- Over-current
- Sag

BENEFITS

- · Power Quality Measurement
- · Energy Consumption Monitoring
- Machine Health Monitoring
- Powerful Data Analysis
- User-friendly and Feature-rich IoT Module
- · Withstands Harsh Environments
- · High-level Noise Immunity

APPLICATIONS

- · Energy Metering Systems
- Power Quality Monitoring
- · Solar Monitoring
- Process Monitoring
- · Health of Machine
- · Predictive Maintenance
- Retrofit Applications in Energy Distribution and Industry



A PT with secondary Line-to-Neutal voltage of 120VAC and a step-down ratio of 4800:120 = 40 is used to connect the PWRM10-01 or PWRM20-01 to a utility voltage of 4800VAC. 120VAC is compatible with both modules.

Example shown, for more connectivity options, see PWRM User Manual MA1068

PWRM20-01 Block Diagram



Electrical Specifications Typical* at T₄ = +25°C

Module	PWRM20-01
Phase Voltage Range Phase Frequency Dimensions (h)(w)(d)	85-525VAC 50/60Hz Input 4.24" x 0.89" x 4.48"
Material Mounting	(107.7mm x 22.6mm x 113.7mm) Polyamide DIN-rail
Weight	0.4lb (0.18kg)
Electrical System	
Voltage Measurement (Direct Connection or VT)	Single-phase (2-wire) Two-phase (3-wire) Three-phase Wye (3-wire) Three-phase Delta (3-wire) Three-phase Wye (4-wire) Three-phase Delta (4-wire)
Current Measurement	Shunt, CT, or Rogowski Coil
Measured Parameters and Accuracy	
RMS Voltage RMS Current Active Power Apparent Power Reactive Power Power Factor Frequency Range Active Energy Apparent Energy Fundamental Active and Reactive Energy Phase Angles Line Periods	±0.1% of Full-scale Range ±0.1% of Full-scale Range ±0.2% ±0.2% ±0.2% ±0.2% 45 – 65Hz ±0.25% ±0.25% ±0.25% ±0.1%
Measurement Bandwidth	
RMS Voltage and Current (–3dB) Total Active Energy (–3dB) Fundamental Reactive Energy (–3dB) Harmonic (–3dB)	3.3kHz 3.3kHz 3.3kHz 3.3kHz (2.8kHz No Attenuation Pass Band)

\bigwedge	ATTE
/	

ATTENTION

Read, understand, and follow all instructions in the Quick Start Guide and Hardware User Manual, including all warnings, cautions, and precautions before installing and using.

PWRM20-01 module literature and software is available for download from the <u>PWRM10-01 Software & User Download Center</u>.

MA1069 PWRM10-01 & PWRM20-01 Quick Start Guide

MA1068 PWRM10-01 & PWRM20-01 Hardware User Manual

MA1067 PWRM10-01 & PWRM20-01 HTTP API User Manual

Temperature Drift	
	±100ppm/°C
Events	
	Over-voltage, Over-current, Sag
Security	
	Password for Access Control
Data Logging	
	Configurable; Automatic Download and Storage
Communications Interface	
Connectivity Type IP Configuration Port Number of Simultaneous Connections Protocol	Ethernet, TCP/IP DHCP, Static IP Selectable (Default 80) 6 HTTP API
Power Supply	
Source Wide Range Power Supply Power Consumption Frequency	Self-powered from Any Line 85-525VAC 1.7W 50 / 60Hz
Environmental	
Operating Temperature Storage Temperature Relative Humidity	-40°C to +85°C -40°C to +85°C 0 to 95%, Non-Condensing
Compliance and Conformity	
Emissions, EN61000-6-4 Radiated, Conducted Immunity EN61000-6-2 RF ESD, EFT Certifications & Approvals	ISM Group 1 Class A ISM Group 1 Performance A ± 2% Span Error Performance B Heavy Industrial CE
NOTES:	

^{*} Contact factory for maximum values.

Ordering Information

Model	Description
PWRM20-01	85-525VAC, 50/60Hz Input

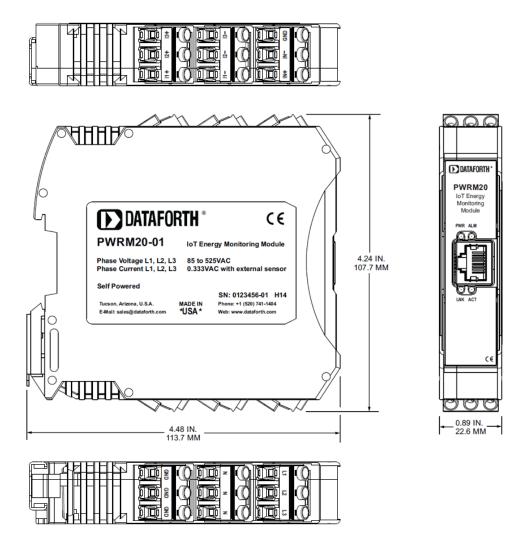


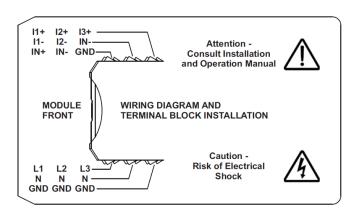
CAUTION - RISK OF ELECTRICAL SHOCK

When installing and operating the PWRM20-01 module, there is a potential for shock hazard from dangerous high-voltage. Ensure systems are de-energized before installing or removing the terminal blocks.



Module Dimensions and Pinouts







Downloads

Corporate Brochure
Full-Line Product Catalog
SCM5B/SCMHVAS Attenuator System Catalog
SCM7B Catalog
8B Catalog
DSCA Catalog
SCM9B/SCMD Catalog
MAQ®20 DAQ System Catalog
isoLYNX DAQ Systems Catalog
Loop Isolators and Transmitters Catalog
Data Communications Catalog
IoT Energy Monitoring Catalog

Press Releases

- <u>Dataforth Introduces Next Generation</u> <u>High-Voltage Attenuator System</u>
- Latest ISO 9001:2015 Quality Standards
- <u>Dataforth's DSCA High-Performance DIN</u>
 <u>Modules Receive Latest ATEX Certification</u>
- <u>Dataforth's DSCT Two-wire Transmitter</u>
 <u>Modules Receive ATEX Certification</u>

See all PRESS RELEASES

Application Notes

ENGINEERING BASICS

- Measuring RMS Values of Voltage and Current (AN101)
- IC Op Amp Errors: What Are They and How Bad Can They Be (AN102)
- Common-Mode Voltage (AN103)
- 4-20mA Transmitters (AN104)
- Practical Thermocouple Temperature Measurements (AN107)
- When Good Grounds Go Bad (AN108)
- Single Phase AC Measurements Revisited (AN109)
- 3-Phase AC Calculations Revisited (AN110)
- Current Modules Measure Power Factor (AN111)
- Filtering in Signal Conditioning Modules, SCMs (AN112)
- Phase Angles and Time Delays (AN113)
- Accuracy versus Resolution (AN114)
- Sampling Law (AN115)
- Why Use Isolated Signal Conditioners? (AN116)
- Basic Bridge Circuits (AN117)
- Strain Gauge Signal Conditioner (AN118)
- Six Sigma: What? Why? How? (AN119)
- Wind Turbines Today (AN120)
- Low-Pass Filter Rise Time vs Bandwidth (AN121)
- Introduction to PID Control (AN122)
- <u>Tuning Control Loops for Fast Response</u> (AN123)
- Tuning Control Loops with the IMC Tuning Method (AN124)
- Tuning Level Control Loops (AN125)
- Tuning Surge Tank Level Control Loop (AN126)
- Op Amp Errors, Another View (AN127)
- RMS Revisited (AN128)
- Harmonics and Utility Costs (AN129)

SCM5B MODULES

- <u>Thermocouple Voltage-to-Temperature</u> Conversion Method (AN501)
- SCM5B Ground Connections and Host System Interfaces (AN502)
- SCM5B Failure Rate Calculation and Prediction (AN503)
- Interpreting Drift Specifications (AN504)
- <u>Hardware Linearization of Non-Linear Signals (AN505)</u>
- ANSI/IEEE C37.90.1-1989 Transient Specification (AN506)
- Shield Grounding (AN507)
- Protecting Signal Lines Against EMI (AN508)
- SCM5B43 DC LVDT Input Module (AN509)

SCM7B MODULES

- SCM7B Thermocouple Modules and CJC (AN701)
- <u>SCM7B Frequency and Time Response</u> (AN702)
- Failure Rate Calculation and Prediction (AN704)

DSCA MODULES

- DSCA Calibration Procedure (AN801)
- DSCA, SCM5B, SCM7B and 8B Failure
 Rate Calculation and Prediction (AN802)

LDM485, RS-485 DEVICES

- SCM9B/LDM422/LDM485 RS-485 Connection (AN201)
- LDM485-to-LDM485 to Other RS-485 Devices Configuration (AN202)

MAO®20 MODULES

- Cross Point Switch Using MAQ20-DORLY Module (AN901)
- MAQ20 PID Control in a Home Heating Application (AN902)



Tech Notes

- Active, Analog, Elliptic Filter
- Eddy Current Skin, and Proximity Effects
- Could We Actually Achieve "Warp Speed"?
- What is This Crest Factor Thing?
- Coulomb's Law
- Faraday's Law of Induction
- Power Supply Isolation
- When to Use Closed-Loop Control Instead of Open-Loop Control
- Aliasing, Anti-Aliasing What is That Anyway?
- Made in the USA
- MAQ20 Data Acquisition System Features
- Advanced CJC Method
- MAQ20-BRDG1, Strain Gauge Bridge Module
- 3-Year Warranty
- IS09001
- <u>Hazardous Locations in the European</u> Union - ATEX Directive
- Hazardous Locations in North America
- Certifications
- Why Should Sensors Be Isolated
- Signal Conditioning and Alias Filters
- · Low-Pass Filter Rise Time vs Bandwidth
- Strain Gauge Signal Conditioners
- Why Isolate Analog Signals?
- RTD Tutorial
- Six Sigma What? Why? How?
- Windmill Applications
- Introduction to Thermocouples
- RTD, Resistance Temperature Detector
- Shielding and Grounding
- 5B for Piezo-Electric Accelerometers
- Configurable 5B Module
- Hysteresis Specifications
- Miniature Electronics... 8B Modules
- A Question from Dataforth's President
- Unbalanced Voltages Increase Cost

- Dataforth Test Reports
- Normal Mode Rejection, NMR
- Bridge Circuit Measurements
- Signal-to-Noise Ratio, SNR
- Accuracy versus Resolution
- Filtering Phase Angles and Time Delays
- Uncertainty Principle
- Galvanic Isolation
- Quick Reference for RS-323, -422, -423, -485
- It's All About Isolation and Protection
- Serial Data
- Signal Conditioner with Power Supply
- Isolated I/O to Serial Data
- Loop Isolators
- Test Reports
- Measuring True RMS
- 2-wire, 4-20mA Applications
- System Accessories
- Why True RMS?
- Analog-to-Serial
- Transient Protection
- Signal Conditioner Life
- Common-Mode Voltage
- Thermocouples
- 5B or 7B
- DIN or 5B/7B Option
- Signal Conditioning Tutorial
- Programmable Signal Conditioning
- When Good Grounds Go Bad
- Input Resistance
- Drift Specs
- Failure Rates
- Industrial Date Acquisition
- Single Phase Revisited
- 3-phase AC Calculations Revisited
- Using Ethernet for Data Acquisition
- Linearity and Conformity

- Reproducibility Repeatability
- Surge Withstand Capability
- Easy Recalibration Procedure
- System Throughput
- Sampling Rates and THE LAW
- Signal Conditioning Article
- Measured vs Combinational Error
- Power Supply Sensitivity
- Filtering Noise
- Filtering in Signal Conditioning Modules
- Resistor Thermal Noise
- Sampling Law
- Signal Conditioners Buy vs Build
- Confident Strain-Gauge Measurements
- Advanced CJC Method Used in Dataforth Thermocouples Significantly Improves Accuracy



DISCONTINUED DEVICES - Isolator Products

Affected Devices	Replacement Devices	Affected Devices	Replacement Devices
DSCL22-01	None Available	DSCL24-11-1648	None Available
DSCL22-11	None Available	DSCL24-11-1675	None Available
DSCL22-21	None Available	DSCL24-11-1676	None Available
DSCL23-01	None Available	DSCL24-12-1540	None Available
DSCL23-02	None Available	DSCL24-12-1552	None Available
DSCL24-01	DSCP81-01	DSCL24-12-1553	None Available
DSCL24-02	DSCP81-02	DSCA24-12-1559	None Available
DSCL24-11	None Available	DSCL24-12-1617	None Available
DSCL24-12	None Available	DSCL24-12-1618	None Available
DSCL24-11-1575	None Available	DSCL24-12-1626	None Available

DISCONTINUED DEVICES - Backpanels

Affected Devices	Replacement Devices	
SCMD-PB4RD	NONE	
SCMD-JM8	Use To Depletion No Available Replacement	
SCMD-PB8	SCMD-PB4, SCMD-PB16SM, SCMD-PB24SM	
SCMD-PB8H	SCMD-PB4D, SCMD-PB16SMD, SCMD-PB24SMD	
SCMD-PB8SM	SCMD-PB4, SCMD-PB16SM, SCMD-PB24SM	
SCMD-PB8SMD	SCMD-PB4D, SCMD-PB16SMD, SCMD-PB24SMD	
SCMD-PB16	SCMD-PB4, SCMD-PB16SM, SCMD-PB24SM	
SCMD-PB16H	SCMD-PB4D, SCMD-PB16SMD, SCMD-PB24SMD	

DISCONTINUED DEVICES - Power Supply

Affected Devices	Replacement Devices
PWR-4504	Use To Depletion No Available Replacement

DISCONTINUED DEVICES

Affected Devices	Replacement Devices
SLX200-20	None Available
SLX200-30	None Available
SLX200-21	None Available
SLX200-31	None Available
SLX200-20D	None Available
SLX200-30D	None Available
SLX200-21D	None Available
SLX200-31D	None Available

DISCONTINUED DEVICES -

Sensor-to-Computer Products

Affected Devices	Replacement Devices	Affected Devices	Replacement Devices
SCM9B-1212	None Available	SCM9B-2562	None Available
SCM9B-1551	None Available	SCM9B-2611	None Available
SCM9B-1552	None Available	SCM9B-2612	None Available
SCM9B-1561	None Available	SCM9B-2641	None Available
SCM9B-1611	None Available	SCM9B-2642	None Available
SCM9B-1641	None Available	SCM9B-3161	None Available
SCM9B-2151	None Available	SCM9B-3162	None Available
SCM9B-2212	None Available	SCM9B-4121	None Available
SCM9B-2221	None Available	SCM9B-4131	None Available
SCM9B-2222	None Available	SCM9B-4162	None Available
SCM9B-2231	None Available	SCM9B-5311	None Available
SCM9B-2232	None Available	SCM9B-5331	None Available
SCM9B-2241	None Available	SCM9B-5341	None Available
SCM9B-2531	None Available	SCM9B-5342	None Available
SCM9B-2542	None Available	SCM9B-D132	None Available

DISCONTINUED DEVICES -

Line Drivers and Converters

Affected Devices	Replacement Devices
LDM30-PE	None Available
LDM30-SE	None Available
LDM70-P	None Available
LDM70-PE	None Available
LDM70-PT	None Available
LDM70-SE	None Available
LDM80-S-025	None Available
LDM85-P	None Available
LDM85-PE	None Available
LDM85-PE-025	None Available
LDM85-S	None Available
LDM85-S-025	None Available
LDM85-SE-025	None Available
LDM85-ST	None Available
LDM422-PE	None Available
LDM422-SE	None Available
LDM485-PT	None Available
LDM485-ST	None Available
LDM485-PT-025	None Available
LDM485-SE	None Available



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

DATAFORTH WARRANTY

Applying to Products Sold by Dataforth Corporation

To view the current Dataforth Corporation Warranty, please click on the link below for the Dataforth Standard Terms and Conditions of Sale Applying to Products Sold by Dataforth Corporation. The Warranty in its entirety is Section 3. Please check this link periodically for updates.

https://www.dataforth.com/terms-and-conditions-sale

Application Support

Dataforth provides timely, high-quality product support. Call +1-800-444-7644 TOLL-FREE

Returns/Repair Policy

All warranty and repair requests should be directed to the Dataforth Customer Service Department at +1-520-741-1404. If a product return is required, visit dataforth.com, choose Sales Support on the blue bar and you will see the link to "Obtain an RMA". Fill out the online Return Materials Authorization (RMA) form. Be ready to provide the following information:

- 1. Complete product model number.
- 2. Product serial number.
- 3. Name, address, and telephone number of person returning product.
- 4. Special repair instructions or reason for return.
- 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 shipped prepaid to:

Dataforth Corporation ATTN: RMA Coordinator 6230 S. Country Club Tucson, AZ 85706 USA

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