



Modbus Serial Port Expander Gateway

5102-MBS3-MBM

The ProLinx Modbus Serial Port Expander module allows you to attach up to three separate Modbus master devices to a single Modbus slave.

The module is designed to act as a multiplexer, allowing simultaneous connections from multiple Modbus masters to a single Modbus slave. A common use for the module is to have an HMI panel and a SCADA package all communicating to the same Modbus slave port of a Modicon processor.

This stand-alone DIN-rail mounted protocol gateway provides a single Modbus Master port and three Modbus Slave ports.

All Modbus serial ports are individually configurable, providing a very powerful and flexible host or device interface solution.

Modbus

The serial port(s) on the gateway can be individually configured to support the Modbus protocol (RTU or ASCII, Baud rate, etc.).

General Parameters – Modbus Protocol

Communication parameters	Baud Rate: 110 to 115K baud Stop Bits: 1 or 2 Data Size: 7 or 8 bits Parity: None, Even, Odd RTS Timing delays: 0 to 65535 ms
Error Checking	RTU mode (binary) with CRC-16 ASCII mode with LRC error checking
Function Codes	1: Read Output Status 2: Read Input Status 3: Read Multiple Data Registers 4: Read Input Registers 5: Write Single Bit 6: Write Single Data Register 15: Write Multiple Bits 16: Write Multiple Data Register
Modbus Slave	
Node address	1 to 247 – software selectable

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The Serial Port Expander adds three additional slave ports for a Modbus based device. This allows users to connect SCADA software, HMI, and modems to processors simultaneously. Commands from the host devices are passed through the module and routed directly to the front port of the processor. This allows a processor's port to be expanded to allow communication with a variety of devices at the same time. Typical applications include SCADA software, local operator interface, and wireless concentrator for remote data collection.

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General Specifications

The ProLinx Communication Modules provide connectivity for two or more dissimilar network types. The modules, encased in sturdy extruded aluminum, are stand-alone DIN-rail mounted protocol gateways, providing communication between many of the most widely used protocols in industrial automation today.

Hardware Specifications

Specification	Description
Power Supply	24 VDC nominal 18 to 36 VDC allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	500 mA max@ 24 VDC
Operating Temperature	-20 to 50°C (-4 to 122°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5 to 95% (non-condensing)
Dimensions	Standard: 5.20H x 2.07W x 4.52D in. (13.2cmH x 5.25cmW x 11.48cmD) Extended: 5.20H x 2.73W x 4.52D in. (13.2cmH x 6.934cmW x 11.48cmD)
LED Indicators	Power and Module Status Application Status Serial Port Activity LED Serial Activity and Error LED Status
Configuration Serial Port	DB-9M RS-232 only No hardware handshaking
Ethernet Port (Ethernet modules only)	RJ45 Connector Link and Activity LED indicators
Application Serial Ports	RS-232/422/485 RS-232 handshaking configurable RS-422/485 screw termination included
Serial Port Isolation	2500V RMS port signal isolation per UL 1577 3000V DC min. port to ground and port to logic power isolation
Shipped with Each Unit	Mini-DIN to DB-9M serial cables 4 ft RS-232 configuration cable 2.5mm screwdriver CD (docs and Configuration utility) RS-422/485 DB-9 to Screw Terminal Adaptor (1 or 4, depending on ports)

ProSoft Configuration Builder

ProSoft Configuration Builder (PCB) provides a quick and easy way to manage module configuration files customized to meet your application needs. PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations to new projects.

Additional Products

ProSoft Technology offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms.

Visit our web site at <http://www.prosoft-technology.com> for a complete list of products.

Ordering Information

To order this product, please use the following:

5102-MBS3-MBM Modbus Serial Port Expander

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft distributors near you, go to <http://www.prosoft-technology.com>

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