Modbus Plus to IEC 60870-5-103 Master Gateway
5301-MBP-103M

The MBP-103M modules are the ideal solution for the many applications where Modbus Plus connectivity can be used to integrate an IEC 103 slave device into a system. The Modbus Plus gateway is a powerful module designed with both Master and Slave support, enabling easy connection to other Modbus devices (Modicon processors and many others). In combination with the IEC 103 Master support, the module provides a very powerful interface to the many IEC 103 slave devices which are in use in the industrial marketplace today. Applications for the module are found in most industries, especially Manufacturing, Oil and Gas, Electrical Power and Food Processing.

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Modbus Plus to IEC 60870-5-103 Master Gateway

5301-MBP-103M
The ProLinx Modbus Plus to IEC60870-5-103 Master Gateway creates a powerful connection between devices on a Modbus Plus network and an IEC 103 slave device. This stand-alone DIN-rail mounted protocol gateway provides one Modbus Plus configurable DB9F port and one IEC 103 Master configurable serial port.

The Modbus Plus protocol driver supports both Master and Slave implementations of the protocol on the DB9 Female Modbus Plus port. The Modbus Plus port is fully configurable.

The IEC 60870-5-103 Master protocol driver works as a master to monitor and control up to 16 slaves. The serial port is user-configurable, providing a very powerful and flexible host or device interface solution.

Modbus Plus
The Modbus Plus protocol driver exists in a single Modbus Plus Port (MBP). The driver can be configured on an individual port basis as either a master or a slave to interface with other Modbus Plus devices.

General Parameters	
Modbus Function Codes	3: Read Multiple Data Registers (MSTR 2) 16: Write Multiple Data Register (MSTR 1) Global data read (32 words max.) Global data write (32 words max.)
Address Scope	1 to 64

Modbus Plus Functioning as a Master	
Command List	Up to 200 commands on the master port, fully configurable for function, slave address, register to/from addressing and word count
Polling of command list	Configurable polling of command list, including continuous and on change of data

Modbus Plus Functioning as a Slave	
Node address	1 to 64 – software selectable

IEC 60870-5-103 Master
The IEC 60870-5-103 Master driver provides extensive support for Master implementations of the protocol. The serial port on the gateway is user-configurable to support the IEC protocol (Master, Error Checking, Baud rate, etc).

The module supports:

- 16 slaves (sessions with distinct Data Link Addresses)
- Each slave (session) supports up to 3 sectors (with distinct Common ASDU Addresses)
- Configurable Time Sync and General Interrogation messages during initialization
- Supports General Interrogation, General Command and Time Synchronization Commands.

General Parameters	
Communication parameters	Baud Rate: 110 to 19200 baud
	Stop Bits: 1 or 2
	Data Size: 5 or 8 bits
	Parity: None, Even, Odd
	RTS Timing delays: 0 to 65535 ms

IEC 60870-5-103 Master	
Configurable Parameters	Baud Rate
	Parity
	RTS On
	RTS Off
	Minimum Delay
	Receive Timeout
	Data Link Address
	Common ASDU Address

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

Specification	Description
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.