



Modbus Plus to IEC 60870-5-104 Server Gateway

5303-MBP-104S

The ProLinx Modbus Plus to IEC60870-5-104 Server Gateway creates a powerful connection between devices on an IEC 104 Server network and a Modbus Plus device. This stand-alone DIN-rail mounted protocol gateway provides one Modbus Plus configurable DB9F port and one Ethernet 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 104S module accepts commands from an attached master unit on the network and generates unsolicited messages.

Modbus Plus

The Modbus Plus protocol driver operates as a single, peer-to-peer Modbus Plus Port with dual media-redundant connectors, which are not configurable as separate ports.

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The MBP-104S modules are the ideal solution for the many applications where IEC 104 Server connectivity can be used to integrate a Modbus Plus device into a system. The IEC60870-5-104 Server gateway is a powerful module designed with Server support, enabling easy connection to other IEC 104 devices. In combination with the Modbus Plus support, the module provides a very powerful interface to the many Modbus Plus 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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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
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IEC 60870-5-104 Server

Operating in the Server mode, the protocol driver accepts commands from an IEC-60870-5-104 Client to read/write data stored in the module's internal registers.

The 104S module acts as an input/output module between the IEC 60870-5-104 Ethernet network and many of the other serial and network protocols, as well as several proprietary interfaces.

General specifications include:

- User-definable module memory usage
- Protocol implementation conforms to the IEC 60870-5-104 specification with fully configurable parameters
- SNTP (Simple Network Time Protocol) timestamping for detailed logging of data transactions.

The 104S module accepts commands from an attached master unit on the network and generates unsolicited messages. These last sets of messages are either spontaneous or cyclic. Data transferred to the host is derived from the module's internal database. The remote master device can control data in the database and hence the devices connected using the other protocol in the module using standard control messages supported in the protocol. The remote master device uses the fully-configured databases in the module to control outputs and monitor inputs.

IEC 60870-5-104 Server

Configurable Parameters	Description
	Override StartDT
	Clear queue on close
	t1 timeout set value
	t2 timeout set value
	t3 timeout set value
	k (maximum queue)
	w (latest ack threshold)
	Time DB Offset

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

Specification	Description
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:

5303-MBP-104S Modbus Plus to IEC 60870-5-104 Server Gateway

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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