



Modbus Plus to IEC 60870-5-101 Slave Gateway

5301-MBP-101S

The MBP-101S modules are the ideal solution for the many applications where Modbus Plus connectivity can be used to integrate an IEC 101 master 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 101 Slave support, the module provides a very powerful interface to the many IEC 101 master 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.

How to Contact Us: Sales and Support

All ProSoft Technology® products are backed with unlimited technical support. Contact our worldwide Technical Support team directly by phone or email:

Asia Pacific

+603.7724.2080, asiapc@prosoft-technology.com
Languages spoken include: Chinese, Japanese, English

Europe – Middle East – Africa

+33 (0) 5.34.36.87.20, support.EMEA@prosoft-technology.com
Languages spoken include: French, English

North America

+1.661.716.5100, support@prosoft-technology.com
Languages spoken include: English, Spanish

Latin America (Sales only)

+1.281.298.9109, latinam@prosoft-technology.com
Languages spoken include: Spanish, English

Brasil

+55-11.5084.5178, eduardo@prosoft-technology.com
Languages spoken include: Portuguese, English

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The ProLinx Modbus Plus to IEC 60870-5-101 Slave Gateway creates a powerful connection between devices on a Modbus Plus network and an IEC 101 master device. This stand-alone DIN-rail mounted protocol gateway provides one Modbus Plus configurable DB9F port and one IEC 101 Slave 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 60870-5-101 Slave protocol driver supports Slave implementations of the protocol. 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
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IEC 60870-5-101 Slave

The 101S module acts as an input/output module between the IEC 60870-5-101 and other protocols and networks, as well as several proprietary interfaces.

General specifications include:

- User-definable module memory usage
- Storage of IEC time used in module is available in the database
- Protocol implementation conforms to the IEC 60870-5-101 specification with fully configurable parameters
- Priority Queues
- Invalid Bit Monitoring
- Supports Balanced and Unbalanced Mode
- Supports CP24 and CP56 time formats for events
- Event generation configurable per point or data type

General Parameters

Communication parameters	Baud Rate: 110 to 19,200 baud Stop Bits: 1 or 2 Data Size: 5 or 8 bits Parity: None, Even, Odd RTS Timing Delays: 0 to 65535 ms
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IEC 60870-5-101 Slave

Configurable Parameters	Data link address length Common Address of ASDU length Inform. Object Address length Select/Operate Timeout Event Scan delay Use Balanced Mode Short Pulse Time Long Pulse Time Time DB Offset
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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)

Specification	Description
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.