



Modbus Plus Communication Module

MVI46-MBP

The MVI46 Modbus Plus Communication Module allows Rockwell Automation SLC I/O compatible processors to interface easily with other Modbus Plus protocol compatible devices.

The Modbus Plus module is a powerful module designed with both Master and Slave support, enabling easy connection to other Modbus devices (Modicon processors and many others).

Features and Benefits

Compatible devices include not only Modicon PLCs (which all support the Modbus Plus protocol) but also a wide assortment of end devices licensed through the ModConnect Program. The MVI46-MBP module acts as an input/output module between the Modbus Plus network and the SLC backplane. The data transfer from the SLC processor is asynchronous from the actions on the Modbus Plus network. A 4000-word register space in the module exchanges data between the processor and the Modbus Plus network.

These modules allow Rockwell Automation platforms to connect directly on Modbus Plus networks as a peer. In addition, the modules act as slaves to processors that must read/write data from the module's memory.

Crossing all industrial boundaries, potential applications include the connection of Rockwell Automation processors to Modicon processors, and the connection of Modbus Plus speaking devices such as drives, relays, and power monitor hardware to the SLC backplanes.

General Specifications

- Single Slot - 1746 backplane compatible (Local or extended I/O rack only. Remote rack not supported)
- The module is recognized as an Input/Output module and has access to processor memory for data transfer between processor and module using M0/M1 files
- Ladder Logic is used for data transfer between module and processor
- Configuration data obtained through user-defined ladder. Sample ladder file included

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Applications using the Modbus Plus Communication Module can be found in many industrial sectors and in the following applications

- Foreign device data concentrator
- Pipelines and offshore platforms
- Food processing
- Mining
- Pulp and paper

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:

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Hardware Specifications

Specification	Description
Backplane Current Load	800 ma @ 5V (from backplane)
Operating Temperature	0 to 60°C (32 to 140°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Shock	30g operational, 50g non-operational
Relative Humidity	5% to 95% (non-condensing)
Vibration	5 g from 10150 Hz
Processor	Compatible with Rockwell Automation SLC 5/02 M0/M1 capable processors or newer
LED indicators	Module status, Backplane transfer status, Application status, Serial activity and error LED status

Debug/Configuration port (CFG)	
CFG Port (CFG)	RJ45 (DB-9M with supplied cable) RS-232 only
Configuration Connector	RJ45 RS-232 Connector (RJ45 to DB-9 cable shipped with unit)

Application Ports	
Application Serial port (PRT1, PRT2) (Serial Modules)	Two RJ45 RS-232/422/485 Application ports

Functional Specifications

- Communication parameters
 - Baud: 57,600 (fixed)
 - Parity: none (fixed)
 - Stop: 1 (fixed)
- Modbus Plus ports
 - User-definable module memory usage
 - Support for the storage and transfer of up to 4,000 registers across the backplane
 - 100 word reads and writes (max. allowed)
 - Supports all five levels of Modbus Plus routing
 - Software configurable parameters Node address: 1 to 64
 - Global out size: 0 to 32 words
 - Global in size: 0 to 32 words
 - Module data transfer: 0 to 4,000 words
 - Master command count: 0 to 100 commands
- Function codes accepted (as a Slave): 1, 2, 3, 4, 5, 6, 15, 16
- Function codes transmitted (as a Master): 3, 16

Global Data Specifications

The MBP module actively exchanges global in (32 words max. per node) and global out (32 words max.) data on the Modbus Plus network. Priority is given to these data types to provide a high speed mechanism for the transfer of control data.

Modbus Slave Mode Specifications

- Supports broadcast commands from host
- Communication error codes returned to ladder logic

Modbus Master Mode Specifications

- Command list support of up to 100 commands
- Conditional and continuous command list polling
- Each command list entry is fully configurable for function register to/from addressing and word/bit count/word and byte swap
- Event driven bit and register write commands (ladder logic controlled)
- Supports sending of broadcast commands
- Communication status error codes returned to ladder logic on a per command basis

Additional Products

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

Compatible products in the inRAX product line also include:

Modbus Master/Slave Communication Module for SLC (MVI46-MCM)

Modbus TCP/IP Client Server Communication Module for SLC (MVI46-MNET)

Modbus TCP/IP Client Communication Module for SLC (MVI46-MNETC)

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:

MVI46-MBP Modbus Plus
Communication Module

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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