



Modbus Master/Slave Communication Module MVI46-MCM

Applications using the Modbus Master/Slave 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
- SCADA communications

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North America

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Languages spoken include: Spanish, English

Brasil

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

Modbus Master/Slave Communication Module

MVI46-MCM

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

Compatible devices include not only Modicon PLCs (which all support the Modbus protocol) but also a wide assortment of end devices. The module acts as an input/output module between the Modbus network and the Rockwell Automation backplane. The data transfer from the processor is asynchronous from the actions on the Modbus network.

Features and Benefits

The inRAx Modbus Master/Slave Communications module is designed to allow SLC processors to interface easily with Modbus protocol-compatible devices and hosts.

The MVI46-MCM module acts as an input/output module between the Modbus network and the Rockwell Automation backplane. The data transfer from the SLC processor is asynchronous from the actions on the Modbus network. A 5000-word register space in the module exchanges data between the processor and the Modbus network.

Many host SCADA packages support the Modbus protocol, while devices commonly supporting the protocol include several PLCs, as well as many other third party devices in the marketplace. (For a partial list of devices that speak Modbus, please visit the ProSoft Tested section of the ProSoft Technology web site).

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

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
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)	(2) RJ45 RS-232/422/485 Application ports

Functional Specifications

Some of the general specifications include:

- Support for the storage and transfer of up to 5000 registers to/from the SLC processor's data files
- Module memory usage that is completely user definable
- Two ports to emulate any combination of Modbus master or slave device
- Supports Enron version of Modbus protocol for floating point data transactions.

Slave Specifications

The MVI46-MCM module accepts Modbus function code commands of 1, 2, 3, 4, 5, 6, 8, 15, 16, 17, 22 and 23 from an attached Modbus master unit. A port configured as a Modbus slave permits a remote master to interact with all data contained in the module. This data can be derived from other Modbus slave devices on the network, through a master port, or from the SLC processor.

Master Specifications

A port configured as a virtual Modbus master device on the MVI46-MCM module actively issues Modbus commands to other nodes on the Modbus network. One hundred (100) commands are supported on each port. Additionally, the master ports have an optimized polling characteristic that polls slaves with communication problems less frequently. The SLC processor can be programmed to control the activity on the port by actively selecting commands from the command list to execute or issuing commands directly from the ladder logic.

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:

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Communication Module

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Europe

europe@prosoft-technology.com,
fax to +33 (0) 5.61.78.40.52

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