Modbus Master/Slave Communication Module

MVI56-MCM

Applications using the Modbus 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*

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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Modbus Master/Slave Communication Module

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The MVI56 Modbus Master/Slave Communication Module allows Rockwell Automation ControlLogix 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. A 5000-word register space in the module exchanges data between the processor and the Modbus network.

Features and Benefits

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

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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 – 1756 backplane compatible
- Local or remote rack
- The module is recognized as an Input/Output module and has access to processor memory for data transfer between processor and module
- 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 @ 5 V
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 Vibration: 5 g from 10 to 150 Hz
Relative Humidity	5 to 95% (non-condensing)
LED Indicators:	Module Status Backplane Transfer Status Application Status Serial Activity
Debug/Configuration port (CFG)	
CFG Port (CFG)	RJ45 (DB-9M with supplied cable) RS-232 only
Application ports (PRT1 & PRT2) Full hardware handshaking control, providing radio, modem and Multi-drop support	
Software configurable communication parameters	Baud rate: 110 to 115,200 baud, depending on protocol RS-232, 485 and 422 Parity: none, odd or even Data bits: 5, 6, 7, or 8 Stop bits: 1 or 2 RTS on/off delay: 0 to 65535 ms
App Ports (P1,P2) (Serial modules)	RJ45 (DB-9M with supplied cable) RS-232 handshaking configurable 500V Optical isolation from backplane
Shipped with Unit	RJ45 to DB-9M cables for each port 6-foot RS-232 configuration cable

Functional Specifications

Some of the general specifications include:

- Support for the storage and transfer of up to 5000 registers to/from the ControlLogix 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 MVI56-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 ControlLogix processor.

Master Specifications

A port configured as a virtual Modbus master device on the MVI56-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 ControlLogix 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. Compatible products in the inRAx product line also include:

Modbus Communication Module with Reduced Data Block (MVI56-MCMR)

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:

MVI56-MCM	Modbus Master/Slave 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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