



DATASHEET

Modbus TCP/IP Communication Module MVI56-MNET



The MVI56 Modbus TCP/IP Client/Server Communication Module allows Rockwell Automation ControlLogix processors to interface easily with other Modbus compatible devices.

Compatible devices include Modicon Programmable Automation Controllers (PACs), as well as a wide variety of instruments and devices. A 5000-word register space in the module exchanges data between the processor and the Modbus TCP/IP network.

Features	Benefits
Licensed Backplane Technology	<ul style="list-style-type: none"> ◆ Manufactured under license from Rockwell Automation® ◆ High-speed data transfer between MVI56 module and ControlLogix processor ◆ Installs as a Generic 1756 module, sample ladder logic included ◆ View module data and status in RSLogix™ 5000 controller tags
Modbus TCP/IP protocol interface	<ul style="list-style-type: none"> ◆ Modbus TCP/IP adds Ethernet capability to one of the most widely used industrial protocols ◆ Suitable for SCADA and "foreign device" interface applications ◆ Floating-point data movement supported, including configurable support for Enron and Daniel® floating-point applications ◆ Communicate with programmable controllers, intelligent devices, sensors and instruments ◆ Allows PCs and HMIs to monitor field devices
ProSoft Configuration Builder software included	<ul style="list-style-type: none"> ◆ Graphical drag-and-drop configuration tool for simple module configuration ◆ Easy-to-use diagnostics window with menu-driven hardware and protocol diagnostics ◆ View module database contents through serial connection to a desktop PC
Backed by ProSoft Technology	<ul style="list-style-type: none"> ◆ 20-year history of delivering high-quality, reliable solutions designed with you in mind ◆ Free, unlimited, worldwide Technical Support by phone for pre-sale, set-up, or troubleshooting support helps you get going sooner and stay running longer ◆ Three-Year Warranty ensures reliability and protects against equipment failures ◆ Free ProSoft Software tools tightly integrate with our hardware...a simple and quick, total solution to help you make our products fit your applications

Configuration

ProSoft Configuration Builder (PCB) provides a PC-based software configuration solution for quick and easy management of module configuration files, as well as viewing communication and network diagnostics.

PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations into new projects.



General Specifications

- Single Slot - 1756 backplane compatible
- 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. Sample ladder file included.
- Configuration data obtained from configuration text file downloaded to module. Sample configuration file included
- Local or remote rack

Modbus TCP/IP Specifications

- ProSoft Technology's Modbus TCP/IP implementation (MNET) includes both Client (Master) and server (slave) capabilities
- Modbus data types overlap in the module's memory database, so the same data can be conveniently read or written as bit-level or register-level data
- Configurable floating-point data movement is possible, including support for Enron or Daniel[®] floating-point formats

Modbus TCP/IP Server (Slave)

- Supports ten independent server connections for Service Port 502 (MBAP)
- Supports ten independent server connections for Service Port 2000 (Encapsulated)
- Accepts Modbus Function Codes 1, 2, 3, 4, 5, 6, 8, 15, 16, 17, 22 and 23
- Module data can be derived from other Modbus server devices on the network through the Client or from the ControlLogix processor

Modbus TCP/IP Client (Master)

- Actively reads data from and writes data to Modbus TCP/IP devices, using MBAP or Encapsulated Modbus message formats
- Transmit Modbus Function Codes 1, 2, 3, 4, 5, 6, 7, 15, and 16
- Offers one Client connection with up to 100 commands to talk to multiple servers
- ControlLogix processor can be programmed to use special functions to control the activity on the Client by actively selecting commands to execute from the command list (Command Control) or by issuing commands directly from the ladder logic (Event Commands)

Status Data

- Error codes, counters, and module status available from module memory through the server, through the Client, or through the ladder logic and controller tags in RSLogix[™] 5000

Functional Specifications

- 10/100 MB Ethernet Application port
- PCB includes a powerful Modbus network analyzer
- Special functions (command control, event commands, status, etc.) are supported by message transfer (unscheduled) using the MSG instruction
- Configurable parameters for the Client including a minimum response delay of 0 to 65535 ms and floating-point support
- All data mapping begins at Modbus register 40001
- Error codes, network error counters, and port status data available in user data memory



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Hardware Specifications

Specification	Description
Backplane Current Load	800 mA @ 5 Vdc 3 mA @ 24 Vdc
Operating Temperature	32°F to 140°F (0° C to 60°C)
Storage Temperature	-40°F to 185°F (-40° C to 85°C)
Shock	30 g operational 50 g non-operational Vibration: 5 g from 10 Hz to 150 Hz
Relative Humidity	5% to 95% (with no condensation)
LED Indicators	Module Status Backplane Transfer Status Application Status Serial Activity

Application port (Ethernet)

Ethernet Port (Ethernet modules)	10/100 Base-T RJ45 Connector Link and activity LED indicators Electrical Isolation 1500 V rms at 50 Hz to 60 Hz for 60 s, applied as specified in section 5.3.2 of IEC 60950: 1991 Ethernet Broadcast Storm Resiliency = less than or equal to 5000 [ARP] frames-per-second and less than or equal to 5 minutes duration
Shipped with Unit	RJ45 to DB-9M cables for each port 6-foot RS-232 configuration cable

Debug/Configuration port (CFG)

CFG Port (CFG)	RJ45 (DB-9M with supplied cable) No hardware handshaking
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Agency Approvals and Certifications

CE	EMC-EN61326-1:2006; EN61000-6-4:2007
CSA CB Certified	IEC61010
ATEX	EN60079-15:2003
cULus	UL508, UL1604, CSA 22.2 No. 142 & 213
CSA CB Safety	CA/10533/CSA IEC 61010-1 Ed. 2 CB 243333-2056722 (2090408)
GOST-R	EN61010
RoHS	
DNV	DET NORSKE VERITAS Test 2.4
RINA Marine Certification	RINA Rules 2010 Ch. 3, Section 6, Table 1
Lloyds	Lloyds Register Test Specification Number 1,2002



RoHS

243333

ME06

E183151



Additional Products

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

Compatible products in this product line include:

Modbus TCP/IP Client
Communication Module for ControlLogix (MVI56-MNETC)
Modbus TCP/IP Client
Communication Module for Remote Chassis (MVI56-MNETCR)
Modbus TCP/IP Communication Module for Remote Chassis (MVI56-MNETR)
Modbus Master/Slave
Communication Module for ControlLogix (MVI56-MCM)

For a complete list of products, visit our web site at:
www.prosoft-technology.com

Ordering Information

To order this product, please use the following:

Modbus TCP/IP Communication Module

MVI56-MNET

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft Technology distributors near you, go to:
www.prosoft-technology.com
and select Distributors from the menu.

Place your order by email or fax to:

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