DATASHEET

Modbus TCP/IP Client Server Communication Module, non-CE

MVI71-MNET

The MVI71-MNET Modbus TCP/IP Client/Server Communication Module allows Rockwell Automation PLC 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.

General Specifications

- Single Slot - 1771 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.

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 PLC 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
- PLC 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
- Supports Enron version of Modbus protocol for floating-point data transactions
- 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
- Supports ten independent server connections for Service Port 502
- Supports ten independent server connections for Service Port 2000
- All data mapping begins at Modbus register 40001
- Error codes, network error counters, and port status data available in user data memory

Hardware Specifications

Specification	Description
Form Factor	Single Slot 1771 chassis compatible BTR/BTW data transfer Local or remote rack
Backplane current load	800 mA @ 5 V
Operating temperature	32 to 140°F (0°C to 60°C)
Storage temperature	-40°F to 185°F (-40°C to 85°C)
Shock	30g operational 50g non-operational
Vibration	5 g from 10150 Hz
Relative Humidity	5% to 95%, RH with no condensation
LED Indicators	Module status Backplane transfer status Application status Serial activity and error LED status
Configuration Serial Port (CFG)	DB-9M PC compatible RS-232 Hardware handshaking
Ethernet Port (Ethernet modules)	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

Agency Approvals and Certifications

cULus	7R16 Class I Div 2 Groups A,B,C,D
CB Certified	IEC61010
ATEX	EN60079-0 Category 3, Zone 2 EN60079-15

Additional Products

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

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

Ordering Information

To order this product, please use the following:

Modbus TCP/IP Client Server Communication Module

MVI71-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 *Where to Buy* from the menu.