DATASHEET

Modbus TCP/IP Communication Module for CompactLogix®
MVI69-MNET

The inRAx Modbus TCP/IP Communication Module is designed to allow CompactLogix® /MicroLogix® processors to interface with other Modbus TCP/IP protocol-compatible devices, including not only Modicon® processors, but also a wide variety of other Client and server devices.

The MVI69-MNET module is a single-slot solution that provides a powerful connection between Rockwell Automation® CompactLogix processors and Modbus TCP/IP network applications. The Modbus TCP/IP network applications include those networks hosted by Modicon Quantum processors, networks controlled by operator interface software applications, and the growing number of manufactured devices that support this protocol.

The module acts as an input/output module between the Modbus TCP/IP network and the CompactLogix backplane. The data transfer from the processor is asynchronous from the actions on the Modbus TCP/IP network. A 5000 16-bit register data space in the module exchanges data between the processor and the Modbus TCP/IP network.

Features

♦ Support for the storage and transfer of up to 5000 registers to/from the PLC processor using the block transfer interface
♦ User-definable module memory usage
♦ 10/100 Base-T Ethernet-compatible interface
♦ All data mapping begins at Modbus register 40001
♦ Configurable parameters for the Client, including a minimum response delay of 0 to 65535 milliseconds
♦ Floating-point support for Enron, Daniels®, and other floating-point data types
♦ Single-Slot, 1769 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.
♦ Supports all CompactLogix and MicroLogix 1500 LRP Controllers except 1769-QBFC1B, 1769-L16x, and 1769-L18x.

Modbus TCP/IP Server Protocol Specifications

The server driver supports connections to up to five Modbus TCP/IP Clients using Service Port 502 with standard MBAP messaging, and up to five Clients using Modbus RTU/ASCII on Service Port 2000 (and others).

Modbus TCP/IP Client Protocol Specifications

The Client driver supports the active reading and writing of data with Modbus TCP/IP compatible devices.
This one Client supports up to 100 commands, which can be addressed to one or more servers.

Status Data

Communication error codes, success-fail counters, and port states are available, as well as module diagnostic data.

Hardware Specifications

Specification	Description
Dimensions	Standard 1769 single-slot module
Current Load	800 mA max @ 5 VDC Power supply distance rating of 2 (L43 and L45 installations on first 2 slots of 1769 bus)
Operating Temp.	0°C to 60°C (32°F to 140°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Relative Humidity	5% to 95% (with no condensation)
LED Indicators	Power and Module Status Application Status CFG Port Activity Ethernet Port Activity Error Status
CFG Port (CFG)	RJ45 (DB-9M with supplied cable) RS-232 only No hardware handshaking
App Port (Ethernet modules)	10/100 Base-T Ethernet compatible interface Electrical Isolation 1500 Vrms 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