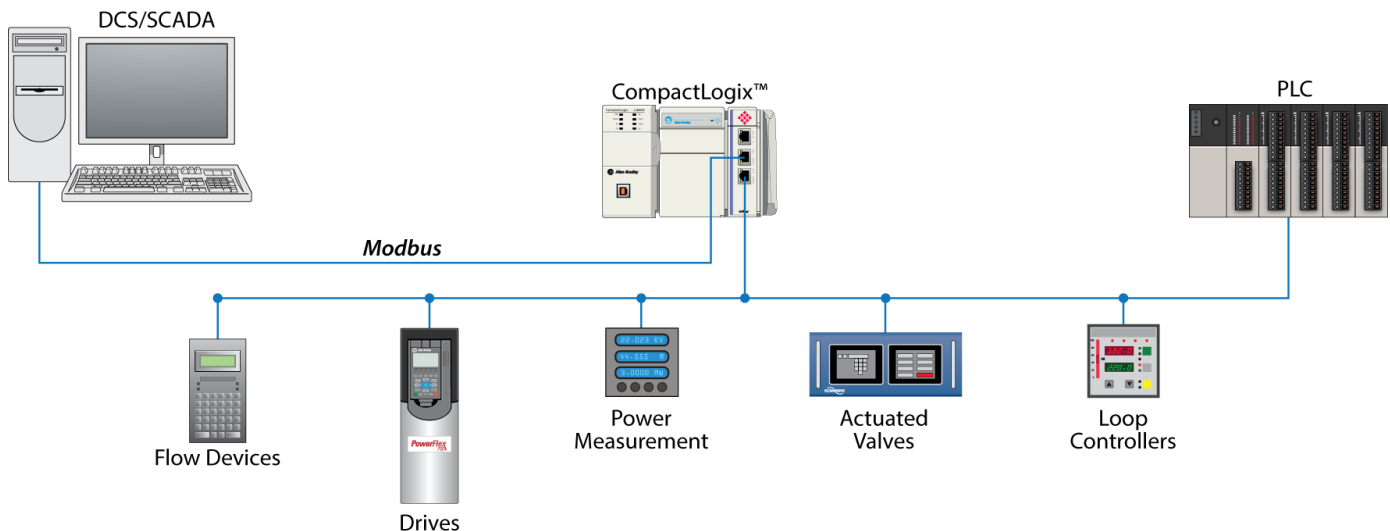# DATASHEET

Modbus Serial Enhanced Communication Module
MVI69E-MBS

The MVI69E-MBS Modbus Serial module for CompactLogix™ is designed for all applications requiring Modbus Serial connectivity. This module comes with an Add-on Profile and an Add-on Instruction to reduce commissioning time. The MVI69E-MBS has two serial ports and can support both Master and/or Slave connectivity to interface with a variety of devices using the Modbus Protocol.

DCS/SCADA

CompactLogix™

PLC

Modbus

Flow Devices

Drives

Power Measurement

Actuated Valves

Loop Controllers

Features

- Supports CompactLogix processors with 1769 I/O bus capability version 16 and greater (MicroLogix 1500 not supported)
- Add-on Instruction creates UDTs, providing logical definitions for I/O, status, and control data
- Add-on Profile support, improving integration in the CompactLogix System
- Diagnostic data available in processor controller tags, enabling decisions to be made based upon node health
- Module configuration backed up in CompactLogix project (ACD file)
- Module acts as a co-processor reducing impact to PLC scan time
- Supports up to 10,000 words of data
- Supports up to 250 Modbus Commands per port
- Each port can be configured individually as a Modbus Master or Modbus Slave device
- Supports Enron and Daniel-style Floating point data implementations
- Suitable for SCADA and field device interface applications

General Specifications

Configuration	ProSoft Configuration Builder
I/O Size	60/120/240 - 16 bit integers
Communication parameters	Baud Rate: 110 to 115K baud Stop Bits: 1 or 2 Data Size: 7 or 8 bits Parity: None, Even, Odd RTS Timing delays: 0 to 65535 milliseconds
Modbus Modes	RTU mode (binary) with CRC-16 ASCII mode with LRC error checking
Floating Point Data	Floating point data movement supported, including configurable support for Enron, Daniel®, and other implementations
Modbus Function Codes Supported	1: Read Coil Status 2: Read Input Status 3: Read Holding Registers 4: Read Input Registers 5: Force (Write) Single Coil 6: Preset (Write) Single Holding Register 8: Diagnostics (Slave Only, Responds to Sub function 00) 15: Force(Write) Multiple Coils 16: Preset (Write) Multiple Holding Registers 17: Report Slave ID (Slave Only) 22: Mask Write Holding Register (Slave Only) 23: Read/Write Holding Registers (Slave Only)

Functional Specifications

Modbus Master

A port configured as a Modbus Master actively issues Modbus commands to other nodes on the Modbus network.

Command List	Up to 250 command per Master port, each fully configurable for function, slave address, register to/from addressing and word/bit count.
Polling of command list	Configurable polling of command list, including continuous and on change of state.
Status Data	Error codes available on an individual command basis. A slave status list is maintained per active Modbus Master port.

Modbus Slave

A port configured as a Modbus Slave acts as a node and permits a remote Master to interact with all data contained in the module.

Node address	1 to 247 (software selectable)
Status Data	Error codes, counters and port status available per configured slave port

Hardware Specifications

Specification	Description
Dimensions	Standard 1769 Single-slot module
Current Load	500 mA max @ 5 VDC
	Power supply distance rating of 4
Operating Temp.	32° F to 140° F (0° C to 60°C)
Storage Temp.	-40° F to 185° F (-40° C to 85° C)
Relative Humidity	5% to 95% (with no condensation)
LED Indicators	OK - Module Status
	ETH - Ethernet Communication
	P1 - Port 1 Serial Communication
	P2 - Port 2 Serial Communication
	BP - Backplane Connectivity
	CFG - Valid Configuration
Debug Port	10/100 Ethernet Port (auto-negotiating)
App Ports (P1,P2)	RS-232, RS-485 or RS-422
	RJ45 (DB-9F with supplied cable)
	RS-232 handshaking configurable
	500V Optical isolation from backplane
Shipped with Unit	2 - RJ45 to DB-9M cables for application ports
	2 - DB-9F breakout boards
	1 - 6 foot Ethernet Cable (straight-through)

Agency Approvals & Certifications

Agency
ATEX; Category 3, Zone 2
CE Mark
CSA; CB Safety
Environmental
KCC
RoHS Compliant
UL/cUL; Class 1, Div. 2 Groups A, B, C, D

Ordering Information

To order this product, please use the following:

Modbus Serial Enhanced Communication Module

MVI69E-MBS

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 *How to Buy* from the menu.