

MVI56-MCM

ControlLogix Modbus Master/Slave Communication Module

ProSoft MVI56-MCM is a single-slot ControlLogix Modbus Master/Slave communication module. Its two configurable serial application ports connect a ControlLogix processor with Modbus RTU or ASCII devices.

BRAND	ProSoft	FAMILY	Rockwell Automation ControlLogix 1756 platform
PART	MVI56-MCM	SYSTEM ROLE	Bridges the ControlLogix backplane to Modbus serial networks

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MVI56-MCM

MANUFACTURER SOURCE RECORD

MVI56-MCM Datasheet and User Manual
ProSoft MVI56_MCM_DS001 dated 2019-03-22; MVI56-MCM User Manual dated 2011-10-27

Product Overview

SYSTEM FUNCTION

ProSoft MVI56-MCM is a single-slot ControlLogix Modbus Master/Slave communication module. Its two configurable serial application ports connect a ControlLogix processor with Modbus RTU or ASCII devices.

FUNCTION 1

Bridges the ControlLogix backplane to Modbus serial networks

FUNCTION 2

Runs each application port as a Modbus master or slave

FUNCTION 3

Supports RTU binary and ASCII message formats

FUNCTION 4

Exposes module status and database information for diagnostics

System Components

COMPONENT	DOCUMENTED ROLE
Host / carrier	Rockwell Automation ControlLogix 1756 platform
Primary interface	Bridges the ControlLogix backplane to Modbus serial networks
Engineering context	The module occupies one local or remote 1756 slot and exchanges data with the ControlLogix processor through ladder logic and controller tags. Each serial application port is configured for the required electrical standard, RTU or ASCII mode, node addressing, commands and timing.
Commissioning duty	Prove requested Modbus reads and writes on both ports without unintended controller-data changes.

TECHNICAL NOTE

Install MVI56-MCM as the documented generic 1756 module and preserve the sample-ladder, controller-tag, port-mode and Modbus database configuration. Verify jumpers, serial standard, node addressing and both application ports before enabling production data exchange.

Technical Data

PARAMETER	VALUE	PARAMETER	VALUE
Module type	Modbus Master/Slave communication module	Baud rate	110 to 115200 baud
Backplane	ControlLogix 1756, single slot	Slave node address	1 to 247
Installation	Local or remote rack	Master commands	Up to 100 per master port
Protocol modes	Modbus RTU and ASCII	Backplane load	800 mA at 5 V DC; 3 mA at 24 V DC
Application ports	2 x RJ45 serial ports	Operating temperature	0 to 60 deg C
Serial standards	RS-232, RS-422 or RS-485	Optical isolation	500 V from backplane

Related Products on Apter Power

MODEL	SYSTEM ROLE	APTER POWER PAGE
PLX32-EIP-MBTCP	EtherNet/IP to Modbus TCP gateway	View PLX32-EIP-MBTCP page
MVI56E-MNETCR	ControlLogix interface module	View MVI56E-MNETCR page
3100-INUSA	industrial communication interface	View 3100-INUSA page
MVI46-GSC	generic ASCII serial module	View MVI46-GSC page
RLX2-IHW	industrial wireless hotspot	View RLX2-IHW page
MVI46-MNETC	Ethernet communication module	View MVI46-MNETC page
MVI56-MBP	Modbus Plus module	View MVI56-MBP page
MVI69E-MBTCP	Modbus TCP module	View MVI69E-MBTCP page

ENGINEERING BOUNDARY

Confirm MVI56-MCM, ControlLogix chassis and slot, module hardware, port jumpers, RS-232/422/485 wiring, RTU/ASCII mode, baud/parity/data/stop-bit settings, node addresses, ladder and tag mapping, grounding and controlled message tests before commissioning.

Applications and Precautions

Common Applications

ControlLogix to Modbus instrumentation

Exchanges register and coil data with approved serial process devices.

SCADA serial gateway station

Presents controller data to a configured Modbus supervisory master.

Dual-network master polling

Runs separate command lists on two serial application ports for field-device acquisition.

Legacy Modbus device integration

Adds serial protocol access without replacing the installed ControlLogix processor.

Product Precautions

- 1

Confirm MVI56-MCM on the module label and project bill of materials.
- 2

Place the controlled process and all mapped outputs in the approved maintenance state.
- 3

De-energize the rack or establish the approved non-hazardous condition before disconnecting the module.
- 4

Back up controller tags, sample ladder, module database and both port configurations.
- 5

Record jumper positions, RJ45/DB9 adapters, serial standards, node addresses and cable shields.
- 6

Install the module in the documented slot and restore the approved generic-module definition and ladder logic.
- 7

Review module, backplane, application and serial-activity LEDs plus command and slave status data.
- 8

Prove requested Modbus reads and writes on both ports without unintended controller-data changes.

IMPORTANT NOTICE

Confirm MVI56-MCM, ControlLogix chassis and slot, module hardware, port jumpers, RS-232/422/485 wiring, RTU/ASCII mode, baud/parity/data/stop-bit settings, node addresses, ladder and tag mapping, grounding and controlled message tests before commissioning.

ACCEPTANCE CHECK	REQUIRED EVIDENCE
Identity	MVI56-MCM
Configuration	Review module, backplane, application and serial-activity LEDs plus command and slave status data.
Functional release	Prove requested Modbus reads and writes on both ports without unintended controller-data changes.

Engineer FAQ

Q1 Which official identity detail distinguishes MVI56-MCM during receiving inspection?

For MVI56-MCM, the official source identifies module type as Modbus Master/Slave communication module. Confirm the same value in the installed record before work.

Q3 How does the published installation affect selection of MVI56-MCM?

For MVI56-MCM, the official source identifies installation as Local or remote rack. Confirm the same value in the installed record before work.

Q5 Where does MVI56-MCM fit in the approved installed system arrangement?

For MVI56-MCM, the official source identifies installed system as Rockwell Automation ControlLogix 1756 platform. Confirm the same value in the installed record before work.

Q7 Which diagnostic sequence should follow controlled energization of MVI56-MCM?

Review module, backplane, application and serial-activity LEDs plus command and slave status data.

Q2 What documented backplane must be matched before MVI56-MCM is installed?

For MVI56-MCM, the official source identifies backplane as ControlLogix 1756, single slot. Confirm the same value in the installed record before work.

Q4 Which protocol modes condition must remain unchanged when replacing MVI56-MCM?

For MVI56-MCM, the official source identifies protocol modes as Modbus RTU and ASCII. Confirm the same value in the installed record before work.

Q6 What connection evidence should be retained before disconnecting MVI56-MCM?

Back up controller tags, sample ladder, module database and both port configurations. Record jumper positions, RJ45/DB9 adapters, serial standards, node addresses and cable shields.

Q8 What functional result is required before MVI56-MCM returns to service?

Prove requested Modbus reads and writes on both ports without unintended controller-data changes.

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