

MVI56-MCM

ControlLogix Modbus Master/Slave Communication Module

INSTALLATION, INTERFACE AND VALIDATION WORKBOOK

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.

STEP	GATE	ENGINEERING PURPOSE
01	IDENTIFY	Confirm article, host and hardware
02	ISOLATE	Secure power and stored energy
03	CONNECT	Restore documented interfaces
04	VALIDATE	Prove diagnostics and function

WORKBOOK PURPOSE

Field-ready identity, isolation, connection, commissioning and closeout records for this exact ProSoft article.

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Installation Readiness Gate

Complete the identity, host-system and isolation checks before disturbing the installed hardware.

- 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.

Pre-Work Evidence

EVIDENCE ITEM	RECORDED VALUE
Complete article marking	MVI56-MCM
Host / carrier	Rockwell Automation ControlLogix 1756 platform
Primary system role	Bridges the ControlLogix backplane to Modbus serial networks
Acceptance boundary	Prove requested Modbus reads and writes on both ports without unintended controller-data changes.
Source record	MVI56-MCM Datasheet and User Manual

WORK AUTHORIZATION RECORD

Work order: _____ Drawing / revision: _____
 Checked by: _____ Date: _____

Isolation and Access Register

CONTROL POINT	ENGINEER RECORD
Incoming supply	Isolated / proved
Stored energy	Discharged / proved
Field connections	Identified / protected
ESD control	Established / recorded

Pre-Work Documentation

DOCUMENT	ENGINEER RECORD
Connection photograph	Reference / file
Configuration backup	Reference / revision
Diagnostic baseline	Reference / result

Connection and Installation Sequence

INSTALLATION PRINCIPLE

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.

- 1 Record jumper positions, RJ45/DB9 adapters, serial standards, node addresses and cable shields.
- 2 Install the module in the documented slot and restore the approved generic-module definition and ladder logic.
- 3 Review module, backplane, application and serial-activity LEDs plus command and slave status data.
- 4 Prove requested Modbus reads and writes on both ports without unintended controller-data changes.

Connection Record

CONNECTION GROUP	AS-FOUND / AS-LEFT RECORD	STATUS
Power / field connection	Reference / terminal	Checked
Signal / interface	Reference / connector	Checked
Ground / shield	Reference / point	Checked
Accessory / carrier	Reference / part	Checked

MODEL-SPECIFIC RELEASE LIMIT

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.

Interface Acceptance Criteria

ACCEPTANCE ITEM	REQUIRED EVIDENCE
Identity	MVI56-MCM
Host match	Rockwell Automation ControlLogix 1756 platform
Connection proof	Install the module in the documented slot and restore the approved generic-module definition and ladder logic.
Configuration proof	Review module, backplane, application and serial-activity LEDs plus command and slave status data.

Commissioning and Acceptance Record

Record each controlled verification step before the equipment returns to automatic operation.

NO.	ACCEPTANCE CHECK	RESULT	RECORD
1	Article and host identity	PASS / FAIL	Initial / date
2	Mechanical installation	PASS / FAIL	Initial / date
3	Power and field wiring	PASS / FAIL	Initial / date
4	Grounding and shielding	PASS / FAIL	Initial / date
5	Configuration restoration	PASS / FAIL	Initial / date
6	Signal or power-path response	PASS / FAIL	Initial / date
7	Diagnostics and alarms	PASS / FAIL	Initial / date
8	Final functional release	PASS / FAIL	Initial / date

Engineering Notes

RECORD AREA	ENGINEER ENTRY
As-found condition	
Corrective action	
As-left configuration	
Outstanding restriction	
Release authorization	

CONTROLLED COMMISSIONING

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

Diagnostics and Release Log

EVENT	ENGINEERING RECORD
Initial energization	Result / observation
Interface or signal response	Result / observation
Alarm and diagnostic review	Result / observation
Functional release	Name / date

ACCEPTANCE AND RELEASE EVIDENCE

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.

Maintenance Verification and Closeout

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.

Related Engineering Pages

MODEL	ENGINEERING ROLE	APTER POWER PAGE
MVI69E-MBTCP	Modbus TCP module	View MVI69E-MBTCP 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

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

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