



# IEC 60870-5-103 Master Communication Module

## MVI71-103M

The MVI71 IEC 60870-5-103 Master Communication Module allows PLC backplane I/O compatible processors to interface easily with IEC 60870-5-103 compatible devices. Devices commonly supporting the protocol include relays, breakers, sub-station Communication Modules and other serial communication devices used in power monitoring.

## Features and Benefits

The MVI71-103M supports up to 32 total field devices between the module's two IEC 60870-5-103 Master ports. The module's communication ports can each be independently configured, allowing two separate field networks to be implemented. The field device data is exchanged between the MVI module and the PLC processor over the backplane.

The MVI71-103M module is a powerful communication interface for PLC platform processors. Developed under license from Rockwell Automation, the module incorporates proprietary backplane technology that enables powerful data access to the PLC processor.

## 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.
- Configuration data obtained through user-defined ladder. Sample ladder file included

## 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	0 to 60°C (32 to 140°F)
Storage temperature	-40 to 85°C (-40 to 185°F)
Shock	30g operational 50g non-operational

## IEC 60870-5-103 Master Communication Module MVI71-103M

*The MVI71-103M module is the ideal solution for many applications where IEC protocol connectivity must be added to a PLC system. The IEC solution is designed to address the expanding interest in the IEC protocol and the use of IEC compatible devices in industrial applications such as those in the water/wastewater, power, and oil & gas industries.*

*Compatible devices include relays, breakers, sub-station Communication Modules and other serial communication devices.*

## How to Contact Us: Sales and Support

All ProSoft Technology® products are backed with unlimited technical support. Contact our worldwide Technical Support team directly by phone or email:

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Specification	Description
Vibration	5 g from 10150 Hz
Relative humidity	5% to 95% (non-condensing)
LED Indicators	Module status Backplane transfer status Application status Serial activity and error LED status
Debug/Configuration port (CFG)	
CFG Port (P1)	RJ45 (DB-9M with supplied cable) RS-232 only
Configuration Connector	RJ45 RS-232 Connector (RJ45 to DB-9 cable shipped with unit)
Application Ports	
Application Serial port (P2, P3) (Serial Modules)	Two RJ45 RS-232/422/485 Application ports

## Functional Specifications

The MVI71-103M module supports the IEC 60870-5-103 protocol to the following specifications:

- The IEC 60870-5-103 communication driver is built in accordance to the approved IEC specification
- User-definable module memory usage
- The module has two independent master ports, each configurable via a simple configuration file
- Supports up to 32 sessions (controlled devices) between the two ports
- Supports up to five sectors (separate databases) for each session, with individual database definition for each sector
- Total of 1000 user configurable commands to control data transfer to/from devices (controlled devices)
- Supports clock synchronization from/to the processor
- Event data received from the Control Devices updates the module database (Date and Time stamping is not stored or used by module)
- Class 1 and Class 2 delay parameters are configurable for each session
- An IEC Interoperability Document for the module is available from the web site, which fully documents data types supported by the module

## Additional Products

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

Compatible products in the inRAX product line also include:

### DNP 3.0 Master/Slave Communication Module for PLC (MVI71-DNP)

Visit our web site at <http://www.prosoft-technology.com> for a complete list of products.

## Ordering Information

To order this product, please use the following:

**MVI71-103M** IEC 60870-5-103 Master Communication Module

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft distributors near you, go to <http://www.prosoft-technology.com>

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