



HART Multi-drop Master Communication Module

MVI69-HART

The MVI69 HART Multi-drop Master Communication Module is a CompactLogix backplane-compatible module that allows CompactLogix processors to interface easily with HART compatible devices. Devices commonly supporting the protocol include pressure, temperature, flow transmitters, as well as other similar instruments commonly found in the process (and other) industry.

HART® is a registered trademark of the HART Communication Foundation.

Features and Benefits

The MVI69-HART Master Communication Module allows Rockwell Automation CompactLogix I/O compatible processors to easily communicate with HART slave devices. The MVI69-HART module interfaces up to 15 devices on each HART channel with the Rockwell Automation CompactLogix processor. Two channels on the module support master protocol commands to interface with slave devices on their own networks. Each port is individually configurable. Data is exchanged between the HART network and the Rockwell Automation CompactLogix processor backplane using the internal database contained in the module and direct control by the controller's ladder logic and pre-defined data objects (4000 registers maximum).

The MVI69-HART module is the perfect solution for industrial applications in chemical and refining operations, to gas and liquid distribution systems, and remote offshore monitoring stations are addressing virtually all aspects of control, data acquisition, and maintenance.

General Specifications

- 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 processors: L20/L30/L31/L32/L35

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The HART protocol is supported by major instrument suppliers and the HART Communication Foundation (HCF).

Today, HART is the most widely used digital communications protocol for instruments in the process control industry. More than 105 manufacturers support HART with a choice of more than 170 different field instruments.

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
Dimensions	Standard 1769 Single-slot module
Current Load	800 mA max@ 5 VDC Power supply distance rating of 2
Operating Temp.	0 to 60°C 32 to 140°F
Storage Temp.	40 to 85°C 40 to 185°F
Relative Humidity	5 to 95% (non-condensing)
LED Indicators	Power and Module Status Application Status Serial Port Activity Serial Activity and Error Status
CFG Port (CFG)	RJ45 (DB-9M with supplied cable) RS-232 only No hardware handshaking
App Port	HART terminal connector
Shipped with Unit	RJ45 to DB-9M cables for each port 6-foot RS-232 configuration Cable

Functional Specifications

The MVI69-HART module supports the HART Multi-drop implementation of the protocol. Following are some general specifications for the module:

- Built in accordance to the HART Bell 202 Frequency Shift Keying (FSK) standard to superimpose digital signals at a low level on top of the 4 to 20mA
 - Two independent HART master ports that are completely user-configurable
 - Supports up to 15 devices per port
 - Point-to-point (slave address 0) or Multi-drop (slave address 1 to 15) modes supported
- Supports 99 universal and common practice commands per port to control and monitor devices with integer, IEEE754 floating-point and packed ASCII character string data blocks
- Burst mode can be used for faster update of data from a single slave
- Supports an auto polling feature that will automatically collect data from each HART instrument on the channel and store the data in the module database
- Communication ports can be configured as a secondary master (that is, handheld configuration device)

Protocol Supported: HART protocol uses the Bell 202 standard frequency shift-keying (FSK) digital signal to communicate at 1200 baud, superimposed at a low level on the 4 to 20mA analog measurement signal.

Supported Function Codes: HART Universal Commands Set supported are 00 to 03, 06 to 09, and 11 to 22. HART Common Practice Commands Set supported are 33 to 83 and 105 to 110.

HART Network Communications: Supports two master channels. Each channel on the module is configured independently to emulate a HART master. Burst mode can be used for faster update of data from a slave device.

Command polling is also user-configurable, including disabled, continuous, on change of data (write only), and dynamically user or automatic enabled.

Status: Error codes returned by the HART protocol available on an individual command basis. In addition, a slave status list is maintained per active channel.

Additional Products

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

Compatible products include ProLinx HART Communication Modules:

- 5107/5127-DH485-HART DH-485 to HART Multi-drop Gateway
- 5107/5127-MCM-HART Modbus Master/Slave to HART Multi-Drop Gateway
- 5107/5127-DFCM-HART DF1 Master/Slave to HART Multi-drop Gateway
- 5207-DFNT-HART EtherNet/IP to HART Multi-drop Gateway
- 5207-MNET-HART Modbus TCP/IP to HART Multi-drop Gateway
- 5307-MBP-HART Modbus Plus to HART Multi-drop Gateway
- 5507-PDPS-HART PROFIBUS DP Slave to HART Multi-drop Gateway
- 5607-RIO-HART Rockwell Automation Remote I/O Adapter to HART Multi-drop Gateway

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:

MVI69-HART HART Multi-drop 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>

Distributors:

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