MDA Scientific CM4 Gas Analyzer Master Module

MVI56-MDA4

This application is useful for any industry producing, using, or exposed to toxic or corrosive gases, where interfacing the MDA4 Gas Analyzer with a ControlLogix processor is required.

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MVI56-MDA4

The MVI56 MDA Scientific CM4 Gas Analyzer Master Module allows Rockwell Automation ControlLogix processors to interface easily as a host with MDA Scientific CM4 gas monitoring hardware (See MVI56-MDA16 for a System 16 solution).

Features and Benefits

The MVI56-MDA4 module acts as an input/output module between the CM4 network and the Rockwell Automation backplane. The data transfer from the ControlLogix processor is asynchronous from the actions on the CM4 network. A 5000-word register space in the module is used to exchange data between the processor and the CM4 network.

General Specifications

- Single Slot – 1756 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
- Local or remote rack

Hardware Specifications

Specification	Description
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 Vibration: 5 g from 10 to 150 Hz
Relative Humidity	5 to 95% (non-condensing)
LED Indicators:	Module Status Backplane Transfer Status Application Status Serial Activity
Debug/Configuration port (CFG)	
CFG Port (CFG)	RJ45 (DB-9M with supplied cable) RS-232 only

Specification	Description
Application ports (PRT1 & PRT2)	
Full hardware handshaking control, providing radio, modem and Multi-drop support	
Software configurable communication parameters	Baud rate: 110 to 115,200 baud, depending on protocol RS-232, 485 and 422 Parity: none, odd or even Data bits: 5, 6, 7, or 8 Stop bits: 1 or 2 RTS on/off delay: 0 to 65535 ms
App Ports (P1,P2) (Serial modules)	RJ45 (DB-9M with supplied cable) RS-232 handshaking configurable 500V Optical isolation from backplane
Shipped with Unit	RJ45 to DB-9M cables for each port 6-foot RS-232 configuration cable

Functional Specifications

Some of the general specifications include:

- Support for the storage and transfer of up to 5000 registers to/from the ControlLogix processor's data files
- Two CM4 master ports.
- Configurable parameters include:
  - Baud Rate 110 to 115,200
  - Parity None, Odd and Even
  - Data Bits 5 to 8
  - Stop Bits 1 or 2
  - RTS On and Off Timing 0 to 65535 milliseconds
  - Use of CTS Modem Line Yes or No
  - Response Timeout 0 to 65535 milliseconds
  - Number of Slaves 1 to 10
  - Reduced Data Structure Y/N
  - Protocol Version 1 or 2
  - Polling Delay 0 to 65535 milliseconds.

A port configured as a virtual CM4 master device on the MVI56-MDA4 module will actively issue CM4 commands to other nodes on the CM4 network. Four read and five write commands are supported.

The MDA-4 product includes the following standard features:

- Two fully configurable serial ports, each capable of supporting the CM4 Master functionality
- Supports up to 10 CM4 units per serial port, 10 total per module
- Support movement of binary, integer, ASCII, and floating point data types
- Memory mapping will be pre-defined in the module to ease implementation in the ladder program
- RS-485 connection from each port directly to the CM4 units
- Software configuration (From processor ladder logic)
  - Slave Addr: 0 to 31
  - Command: Select command to be executed
- Supported CM4 command codes:
  - Read Commands
  - 0x30 Get System Information
  - 0x31 Get Unit Status
  - 0x36 Get Alarm History
  - 0x37 Get Current Point Status
  - Write Commands
  - 0x51 Reset Fault or Alarm
  - 0x52 Set Key-Code
  - 0x53 Lock Keyboard
  - 0x60 End Point Lock-On
  - 0x61 Start Point Lock-On
- Operating Mode returned to ladder processor
- Error Codes returned to the ladder processor

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 include:

MDA Scientific System 16 Gas Analyzer Slave Module

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:

MVI56-MDA4	MDA Scientific CM4 Gas Analyzer Master 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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January 31, 2007