DATASHEET

FA Control Network Enhanced Communication Module

MVI56E-FLN

The FA Control Network Enhanced Communication Module is a single slot solution that allows ControlLogix® compatible processors to easily interface with other FL-net protocol compatible devices. The module is certified for use with the standard FA control network (FL-net version 2.00; OPCN-2), as defined by the Japan Electrical Manufacturers Association (JEMA).

The FA control network module acts as a gateway between the FL-net network and the ControlLogix backplane. The data transfer from the ControlLogix processor is asynchronous from the actions on the FL-net network.

The module accepts commands to control and monitor the data stored in the FL-net databases. This data is passed between the module and the ControlLogix processor over the backplane for use in automated process and control applications.



Features	Benefits
RSLogix™ 5000 Integrated	♦ Module configuration and communication is integrated within RSLogix 5000
"E" for Enhancements	♦ Enhancements enable the module to support faster network speed, with minimal frame interval times as low as 100 microseconds (or setting 1 of the FL-net protocol)
Personality Module	♦ Incorporates a non-volatile Compact Flash memory for storing the module's setup and network configuration data (or personality) ♦ Allows restoring of a module by simply exchanging the Personality Module (for disaster recovery) without the need to use a PC or re-configure.
Ethernet Port with Built-in Web Server	♦ Module Ethernet port provides a built-in web server for access to module status and to update the module firmware. ♦ Local and remote diagnostics access available through the Ethernet Port (E1)

Configuration

ProSoft Configuration Builder (PCB) provides a graphical configuration tool for management of MVI56E-FLN configuration files, as well as viewing communication and module diagnostic information. The MVI56E-FLN Setup Guide, with the sample configuration, provides step-by-step instructions on how to move data through the module from the network to the processor.

General Specifications

- Single-slot, 1756 backplane-compatible
- The module appears as an Input/Output module to the ControlLogix® (CLX) processor
- Ladder logic is used for data transfer between module and processor
- Can be installed in Local or Remote CLX racks

Functional Specifications MVI56E-FLN

- Message Transfer Command functions
  - Log data read service (server function)
  - Log data clear service (server function)
  - Network Parameter Read (server function)
  - Return Message (server function)
  - Profile Read (server function)
  - Network Management Table: According to FL-net version 2.00 specification
  - Own-node Management Table: According to FL-net version 2.00 specification
  - Participating Node Management Table: According to FL-net version 2.00 specification
  - Maximum 249 nodes of user data
- Discovery service: Allows ProSoft Configuration Builder (or separate utility) to find and display products located on the network with key product attributes such as name, serial number, and IP address.
- LED Display: LED provides detailed, plain English diagnostics and error information for the module, backplane communication, and network conditions.
- Master-less token control method.
- FA link protocol on Ethernet UDP/IP
- Cyclic data transfer: Supports virtual memory Area 1 (512 words) and Area 2 (8192 words). The cyclic data is mapped to the modules I/O area.
- Configurable Mapping Feature: Optimization of Input Data mapping from the network
- Configurable Minimum Frame Interval Time (0 to 50 with each unit being equal to 100 ms)
- Configurable Token Watchdog Time (1 to 255 ms)

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Hardware Specifications

Specification	Description
Backplane Current Load	800 mA @ 5 Vdc 3 mA @ 24 Vdc
Operating Temperature	32° F to 140°F (0° C to 60°C)
Storage Temperature	-40° F to 185°F (-40° C to 85°C)
Shock	30g Operational 50g Non-operational Vibration: 5g from 10 Hz to 150 Hz
Baud Rate	10/100 Mbit/s
Relative Humidity	5% to 95% RH, with no condensation
LED Indicators	Module Status (OK) Application Status(APP) ERR (not used)
Ethernet Ports	
Ethernet Port 1(E1) Configuration only	10/100 Base-T RJ45 Connector Link and activity LED indicators Electrical Isolation 1500 V rms at 50 Hz to 60 Hz for 60 s, applied as specified in section 5.3.2 of IEC 60950: 1991 Ethernet Broadcast Storm Resiliency = less than or equal to 5000 [ARP] frames-per-second and less than or equal to 5 minutes duration
Ethernet Port 2 (E2) FL-net Application Only	10/100 Base-T RJ45 Connector Link and activity LED indicators Electrical Isolation 1500 V rms at 50 Hz to 60 Hz for 60 s, applied as specified in section 5.3.2 of IEC 60950: 1991 Ethernet Broadcast Storm Resiliency = less than or equal to 5000 [ARP] frames-per-second and less than or equal to 5 minutes duration
Shipped with Unit	RJ45 Ethernet cable for each port
Debug/Configuration port (CFG)	
CFG Port (CFG)	RJ45 Ethernet port

Agency Approvals & Certifications

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MVI56E-FLN

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