DATASHEET

Limitorque Valve Actuator Master Communication Module
MVI56-LTQ

The MVI56 Limitorque Valve Actuator Master Communication Module allows ControlLogix compatible processors to interface easily with Limitorque Valve Actuators and other Limitorque protocol compatible devices.

The MVI56-LTQ module acts as an input/output module between the Limitorque valve network and the ControlLogix processor. The data transfer from the ControlLogix processor is asynchronous from the actions on the network. The 1500-word register space in the module transfers the valve information from the module to the processor. Ladder logic is responsible for control of the valves. Data transferred from the processor to the module instructs the module to execute commands to valves on the Limitorque network.

Functional Specifications

- Support for the storage and transfer of up to 150 valves to the ControlLogix processor's controller tags
- Emulates Limitorque's Port A/B polling scheme using both ports on the module
- Supports the following valves
  - MX/DDC Modbus
  - UEC-3-DDC Modbus
  - DDC-100M I/O module
  - DDC-100M field unit
  - Valvcon IVO (unit in multi-drop mode only)
- Software configuration
  - Baud rate: 1200 to 115200
  - Message response timeout
  - Number of active slaves
  - Last state on communication failure for valve data
  - Network polling scheme
  - Active slave table (bit mapped)
  - Use of CTS module line option
- Support command
  - Continuously polled
  - Read registers 40008 to 40013, optional 40055 or 40006/40007
  - Commands: open, stop, close, initiate network ESD, terminate network ESD, engage contactors 1 to 6, disengage contactors 1 to 6, position valve (0 to 100%)
- Data returned to the processor for each valve
  - Valve position
  - Status register
  - Fault register
  - Digital outputs
  - Digital inputs registers 1 and 2
  - Communication error code
  - Communication poll counter
  - Special polled registers

General Specifications

- Single Slot - 1756 backplane compatible
- Local or remote rack
- 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
Backplane Current Load	800 mA @ 5 Vdc 3 mA @ 24 Vdc
Operating Temperature	0°C to 60°C (32°F to 140°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Shock	30 g operational 50 g non-operational Vibration: 5 g from 10 Hz to 150 Hz
Relative Humidity	5% to 95% (without condensation)
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
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 milliseconds
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

Agency Approvals & Certifications

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MVI56-LTQ

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