Devicenet™

Application

For on/off or positioning control of motorized valves. DeviceNet™ is a type of communication network that allows up to 63 field devices to be linked together with a singe five-conductor cable. DeviceNet™ is a product of Allen-Bradley and is an open, non-proprietary, bus network. Typically, a DeviceNet™ system is used with the Allen-Bradley PLC5 and SLC series of programmable logic controllers. A standard DeviceNet™ Scanner interface is available for both types. Devices in the field are connected via a drop line to a 5 conductor trunk-line that is then routed to the scanner card.

Features

- Provides open/stop/close or positioning control with limit switch status feedback
- Provides instantaneous motor reversal protection
- Command and end-of-travel verification alarm
- Conforms to ODVA standard
- Easy-to-see LED indicators for all control outputs, status inputs and diagnostic alarm
- ESD functions for 'go open', 'stay put', or 'go closed'

Models
DNET115 115 Volt A.C. Actuators

Specifications

Hardware Specifications
Supply Power: 2W @ 24VDC
Operating Temperature: -20°C – 70°C
Storage Temperature: -40°C – 80°C
Humidity: 90% Non Condensing
Solid State Outputs: (2) Isolated 600VAC 15A
Digital Inputs: (8) Dry Contacts
Analog Inputs: (2) Channels (see below)
Processor: Temic 89C51CC01
RAM: 1K
Flash: 32K
EEPROM: 32K

Serious Interfaces
One CAN 2.0 port.

Network Communication Protocols
Module Supports DeviceNet™ Group 2 Slave.

Analog Inputs Specification
Resolution: 10bit
Accuracy: 1% of FS.
Linearity: 1% of FS.
Temperature Drift: 2% of FS.
Range: 0 to 5V or 0-20mA input for AI1 1-5K Potentiometer for the Position Feedback.

Technical Summary of DeviceNet™
Network Size: Up to 64 nodes (including scanner)

Network Length: Up to 1,640 ft. at 125 Kbps.

Data Packets: 0-8 bytes

Bus Topology: Trunkline/Dropline

Cable: 5-Conductor cable (2 for power, 2 for communication, and 1 for ground).

Thick Trunk Lines: Belden 3082A or 3083A

Thin Drop Lines: Belden 3084A or 3085A

Drop Lines: Max. drop length is 20 ft. with cumulative drop length of 512 ft.

Repeaters: Not currently, but expected in future revisions of specifications.

Input/Output Listing

Digital Input Status:
Bit 0   Communication Loss
Bit 1   Reserved
Bit 2   Loss of Position Signal
Bit 3   Motor Stall
Bit 4   Limit Calibration Incorrect
Bit 5   Thermostat Trip
Bit 6   Manual Operation
Bit 7-15 Reserved

Environmental
Temperature Range:
Storage: -40°C to +90°C
Operating: -20°C to +80°C

Humidity Range:
5% to 95% at 25°C non-condensing

Vibration:
IEC 6B-2-6 1G @ 40-50 Hz., 0.012p-p @ 10-40 Hz.

Digital Output Command:
Bit 0   Open Command
Bit 1   Close Command
Bit 2   Stop Command
Bit 3   ESD Command
Bit 4-7   Future

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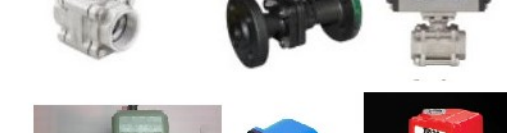Water – Air – Hot Water – Steam
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