

4 Point Isolated Analog Input Module



DN002-PFE



DN002-SSE



DN002-OFE

The Electronic Innovation Inc. "DN" line of modules is intended to provide rugged, reliable, *DeviceNet*[™] I/O capability in unusually harsh environments. These include applications such as on-board control of heavy mobile equipment.

The DN line has been designed from the ground up to survive these environments with special attention in the following areas:

- Mechanical design for high shock, vibration, and concussion tolerance, resistance to liquids such as water or oil, and most forms of corrosion, along with wide operating temperature ranges.
- Electrical design to ensure reliable operation in the face of severe electrical transients, which can occur on vehicle electrical systems. All modules have been designed and tested according to automotive standard SAE J1113 and mil spec QSTAG-307
- Electronic design to minimize electromagnetic emissions and provide low susceptibility to external electromagnetic interference.
- Extensive design effort has been expended to ensure that hardware, software, or network faults, if and when they occur, will result in a predictable and timely transition of the module to the safest achievable state.

The DN002 *DeviceNet*[™] Voltage and Current Analog Input Module provides four input channels each of which has the choice of either a voltage or a current input. These are well suited to monitor key analog sensor values in a harsh mobile environment. Samples from all inputs are available at up to the maximum network scan rate allowing effective use of these inputs for closed-loop control applications. The inputs have extensive protection circuitry to provide tolerance to electrical transients.

DeviceNet Communications

Default MAC ID:	63, Software Selectable
Data Rates Supported:	125, 250, 500 kbps, Software Selectable
Master/Slave Connection Set:	Supported, Group 2 Only Server
Dynamic Connections (UCMM):	Not Supported
Fragmented Explicit Messaging:	Not Supported

DeviceNet Power Supply

Power Supply Voltage:	9 V to 65 V, continuous operating
Power Supply Isolation:	1.2 kV rms
Current Consumption:	200 mA @ 8.8 V Supply 150 mA @ 11.0 V Supply 80 mA @ 25.0 V Supply
Overvoltage Withstand:	120V, 20 seconds
Applicable Standards:	Exceeds QSTAG-307 & SAE 1113

Analog Inputs

Input Range Selection:	Software Selectable
Voltage Input Ranges:	0 to 5 V, -5 to +5 V, 0 to 10 V, -10 to +10 V
Current Input Ranges:	0 to 20 mA
Resolution:	12 bits
Sampling:	Inputs are sampled at 300 Hz Poll command returns average of last 8 samples.
Calibration:	Factory Set
Analog Input Over-voltage:	Over-voltage inputs will read as full-scale.
Max. Over-voltage:	+35V, indefinite +60V, 10 seconds
Overload Recovery:	1 mS after overload removed

Environmental

Operating Temperature:	-40 °C to +85 °C
Storage Temperature:	-55 °C to +125 °C

Ordering Information

DN002-OFE	Potted into Open Frame stainless steel tray, Terminal block connectors
DN002-SSE	Potted into Polyurethane Enclosure, Micro-Style connectors for inputs
DN002-SSE	Potted into Stainless Steel Enclosure, Micro-Style connectors for inputs



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