

Wireless Control Module



DN007-PFE

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 DN007 *DeviceNet*[™] Wireless Control Modules allows other wireless Electronic Innovation devices to access to the network. Compatible devices include a remote control pendant and wireless I/O nodes. Each device is coded with a hardware key, so only the specified devices, may communicate with the network.

These devices communicate in the 900 MHz ISM band, using spread spectrum modulation in order to minimize interference from other devices. 900 MHz spread-spectrum technology has been proven to provide excellent performance in difficult multipath environments such as underground tunnels. The 900 MHz ISM band does not require a license for operation.

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:	550 mA @ 8.8 V Supply 350 mA @ 11.0 V Supply 180 mA @ 25.0 V Supply
Overvoltage Withstand:	120V, 20 seconds
Applicable Standards:	Exceeds QSTAG-307 & SAE 1113

Radio Interface

Radio Frequency:	902-928 Mhz
Modulation Type:	Frequency Hopping Spread Spectrum
Channel Capacity:	25 channel hopping sequence
Range:	500 meters, line of site
Transmit Power:	20 dBm (100 mW)
Receive Sensitivity:	-94 dBm

Environmental

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

Ordering Information

DN007-PFE	Potted into Polyurethane Enclosure, Reverse TNC antenna connector
DN007-SSE	Potted into Stainless Steel Enclosure, Reverse TNC antenna connector



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