



### DVC80 – J1939 COMMUNICATION BRIDGE DATA SHEET

The DVC80 (J1939 Bridge) is a unique CAN bus gateway. The DVC80 is designed for a range of applications, including but not limited to agriculture, construction, forestry, mining, material handling, refuse and transportation. This module was built to serve as a data link between DVC and J1939 CAN Bus systems. It uses the DVC CAN Bus protocol and SAE J1939 standard protocol to receive, filter, and retransmit messages. The data gathered by these messages can then be incorporated into the DVC control system, allowing for a proactive system control approach as well as the typical reactive system control approach.

An RS-232 interface allows for connection to on-board computers or laptops. This port is used for setup, real-time diagnostics and data logging. A +5Vdc reference is available for supplying power to external sensors.

#### Rugged Construction:

- ◆ Rugged encapsulated enclosure withstands harsh environments commonly found in mobile applications.
- ◆ All connectors are sealed.
- ◆ Operating Temperature: -40 Celsius to +80 Celsius
- ◆ Storage Temperature: -40 Celsius to +80 Celsius

#### Setup and Installation:

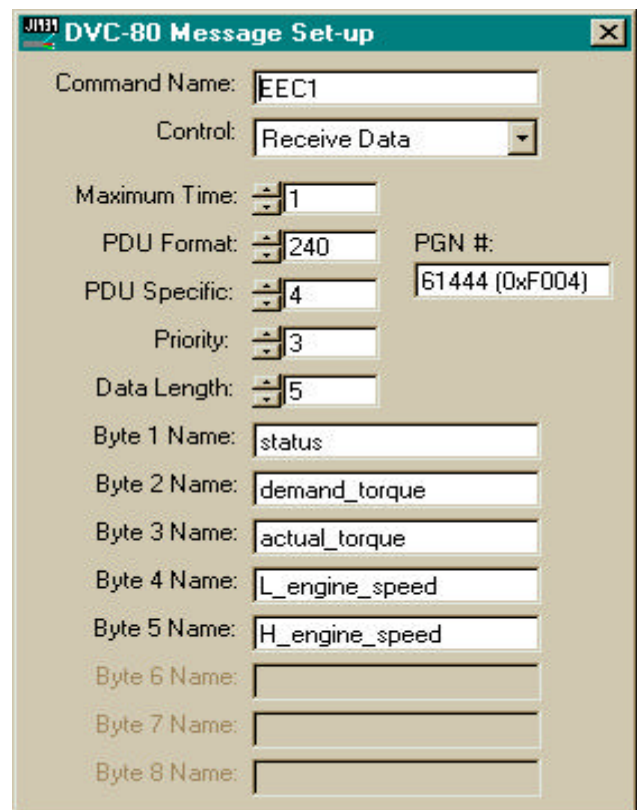
- ◆ User programmable.
- ◆ Physical Size - 6.2L” x 4.75W” x 1.65H” encapsulated module.
- ◆ Each module has two mounting holes 4.0” a part. Mounting hole I.D. is 0.325”.
- ◆ An RS-232 port is used for setup, real-time diagnostics, data logging and setting the MAC ID (node) number.

#### Power Supply:

- ◆ Rugged power supply operates over the full range 8.0Vdc to 32Vdc.
- ◆ Reverse polarity protection and transient protection up to 1.5K watts peak pulse power dissipation.
- ◆ +5 Vdc reference/sensor power output. Supplies 150 mAmps and is fuse protected against shorts and overvoltage.

#### Communications:

- ◆ DVC Can Bus 2.0B – This port is used to interface to the DVC CAN Bus. A DeviceNet protocol is used.
- ◆ J1939 CAN Bus 2.0B – This port is used to interface to J1939 CAN Bus. Connecting a jumper wire between P12-C2 and P12-C3 will add a 120-ohm termination resistor between CAN\_H and CAN\_L.
- ◆ RS-232 serial port – This port is used for setting MAC ID, setting Baud Rate, monitoring, diagnostics and data logging.



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### Loader/Monitor Software Features:

- ◆ Local RS-232 Connection (connected directly to the DVC80).
  - Set the DVC CAN Bus baud rate.
  - Set the module MAC ID.
  - Monitor the J1939 messages passed to the DVC CAN Bus.
  - Select an additional ten J1939 messages to be monitored.
  - Take a data log of all J1939 messages being monitored.
- ◆ Remote RS-232 connection (connected to the DVC10 RS-232 port).
  - Monitor the J1939 messages passed to the DVC CAN Bus.

### Indicators:

- ◆ Module Status (MS) (Qty 1) (R/G) –
  - Off – There is no power applied to the Module.
  - On green – The module is operating in a normal condition.
  - Flashing green – Device in standby state. May need commissioning.
  - Flashing red – Recoverable Fault.
  - On red – Module has an unrecoverable fault.
  - Flashing Red/Green – Device is in self-test.
- ◆ Network Status (NS) (Qty 1) (R/G) –
  - Off - Device in not on-line.
  - Flashing green – Device in on-line but has not established connection to other nodes.
  - On green – Device in on-line and has established connection to other nodes.
  - Flashing red – One or more connections are in a timed-out state.
  - On red – The device has detected an error that has rendered it incapable of communicating on the network.
- ◆ J1939 Status (Qty 1) (R/G) –
  - Off – No message activity.
  - Randomly flashing green – message activity.
  - Flashing red – Loss of communication to the J1939 Bus.

### Connectors:

- ◆ The DVC80 uses the Metri-Pack 150 series (or compatible) sealed electronic header designed for severe under-hood environments.
  - 18-pin Header
- ◆ 5-pin CAN Bus (DeviceNet compliant) connector.
  - Pins are gold plated brass machined from solid stock.
  - Protection rating – Nema 1,3,4,6P, and IEC IP 68.