New Eagle™
MECHATRONIC CONTROL SOLUTIONS

New Eagle Sensors to CAN Display Module

Revision 0.0

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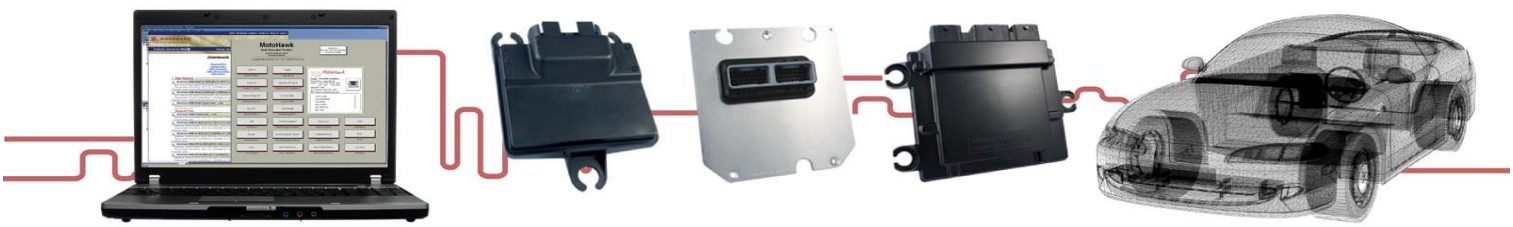

New Eagle 3588 Plymouth Road, #272 Ann Arbor, MI 48105-2603 877.234.1410 (voice) 270.964.8706 (fax)

Description

The New Eagle™ Sensors to CAN module is capable of reading a wide variety of automotive or marine sensors and broadcasting this data to a CAN bus. Once this data is available on the CAN bus, sensor data can be sent to an in-vehicle display. The Sensors to CAN module is especially useful in vehicles/boats that don't already have Electronic Control Modules to process and broadcast sensor data (i.e. older vehicles built before the widespread adoption of the OBDII standard, for example). The Sensors to CAN module is also useful in applications that do have an ECM, but do not broadcast these parameters through a standardized connection port. The module can be even be configured through the display to detect system faults and alert the operator through the display.

General Features

- Easily read a wide variety of sensor data from a single CAN bus
- Relay CAN bus data to a graphical display
- Graphical fault detection in Display
- Read data from analog sensors, VR (Variable Reluctance) sensors, digital frequency sensors
- Broadcast sensor data on as many as 2 CAN buses
- Can be configured to output data to CAN bus using any of the following protocols: OBDII, J1939, NMEA 2000 or a custom protocol

Automotive Applications

- Vehicles built before widespread OBDII adoption (pre-1995)
- Applications in which certain desired sensor data is not available from OBDII and must be measured directly.
- Example of Automotive Application:
    - Oil temperature
    - Engine coolant temperature
    - Transmission fluid temperature
    - Manifold Pressure
    - Oil Pressure
    - Vehicle Speed
    - Fuel Pressure
    - Battery Voltage
    - Air Fuel Ratio
    - Engine Speed
    - Fuel Level
    - Left/Right Turn
    - Alarms
        - Low Fuel Alarm
        - Low Oil Pressure Alarm
        - High Coolant Temperature Alarm
        - Manifold Pressure Alarm

Remote Emissions Monitoring Applications

- Portable Emissions Device: Instrument vehicle with sensors listed below and relay sensor data plus J1939 data to telematics device over CAN bus. Telematics device broadcasts data over cellular network.
- Typical Sensors used:
    - NOx
    - Exhaust Gas Temperature

Marine Applications

- Example of Marine Application:
    - Oil temperature
    - Engine coolant temperature
    - Manifold Pressure
    - Oil Pressure
    - Port/Starboard Fuel Pressure
    - Battery Voltage
    - Drive Trim
    - Engine Speed
    - Fuel Level
    - Engine Hours
    - Alarms
        - Fuel Filter Alarm
        - Manifold Pressure Alarm
        - Coolant Water Level Alarm
        - Engine Oil Pressure Alarm
        - Exhaust (Salt Water Flow) Alarm

Modules Available

- 24-pin Module Inputs
    - 10 Analog
    - 1 VR Encoder
- 70-pin Module Inputs
    - 17 Analog
    - 1 Oxygen Sensor
    - 1 VR or Digital Encoder
    - 1 Digital Encoder
    - 1 Digital Frequency
- 112-pin Module Inputs
    - 33 Analog
    - 4 Oxygen Sensor
    - 2 VR or Digital Encoder
    - 3 Digital Frequency

Operating Conditions

	Parameter	Min	Max	Units
24	Operating Voltage	8	16	V
	Operating Temperature	-40	105	C
70	Operating Voltage	6.5	16	V
	Operating Temperature	-40	85	C
112	Operating Voltage	9	16	V
	Operating Temperature	-40	105	C