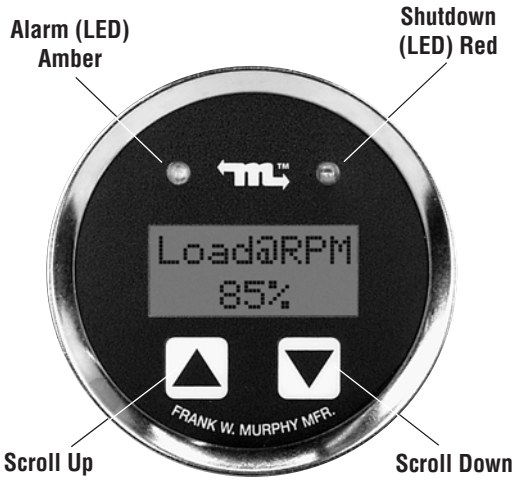
Murphy Display & Diagnostic Module with MODBUS®† RTU Communications

MDB-02106B
Effective 11-02
Catalog Section 78
(00-02-0516)



MDDM-MOD Series

- Specifically Designed For SAE J1939 Controller Area Network (CAN) Equipment Applications
- Displays Over 30 Standard SAE J1939 Parameters Broadcast by Major Engine and Transmission Manufacturers' ECM's
- Displays Active Faults and ECM Stored Fault Codes For Diagnosing Equipment Malfunctions
- Converts Critical SAE J1939 CAN Data Into Standard MODBUS®† RTU Information

Description

The Murphy Display and Diagnostic Module or MDDM is the keystone in a line of components manufactured by FWMurphy as part of its J1939 MurphyLink™ System. The J1939 MurphyLink™ System has been developed to meet the needs for instrumentation and control on electronically controlled engines communicating using the SAE J1939 Controller Area Network (CAN).

The MDDM-MOD is an additional model of the MDDM series. The MDDM-MOD can translate SAE J1939 to MODBUS®† RTU registers for remote monitoring via satellite, land lines and cell phones or other controller and computer systems. This powerful unit is an easy to use multifunction tool that enables the operator to view many different engine parameters and engine service codes.

The MDDM-MOD includes a two-line by eight character backlit LCD display. The top line displays data labels (e.g. *OilPress)*. The bottom line displays appropriate units (e.g. *80 psi* for oil pressure).

The UP and DOWN push buttons located on the front of the MDDM-MOD, are used for scrolling through the parameters and viewing the menu list. Two LEDs (amber & red) are used to annunciate active fault messages received by the MDDM-MOD.

MODBUS®† devices can be connected to the MDDM-MOD by an RS485 twisted pair cable up to 1,000 meters. The MDDM-MOD can be powered by 12 or 24* volt systems, is back lit using LEDs, and is environmentally sealed.

Engine Parameters

The following are typical engine parameters displayed and made available via MODBUS®† by the MDDM-MOD in English and Metric units (when applicable):

- Engine Hours
- Engine RPM
- System Voltage
- % Engine Load at the current RPM
- Coolant Temperature
- Oil Pressure
- Fuel Economy
- Throttle Position
- Manifold Air Temperature
- Current Fuel Consumption
- Active Service Codes
- Stored Service Codes from the engine
- Set the Units for display
- View Engine Configuration Parameters (n/a MODBUS®)

Applications

The Murphy Display and Diagnostic Module is a low-cost solution for your instrumentation needs on stationary or mobile equipment applications.

Specifications

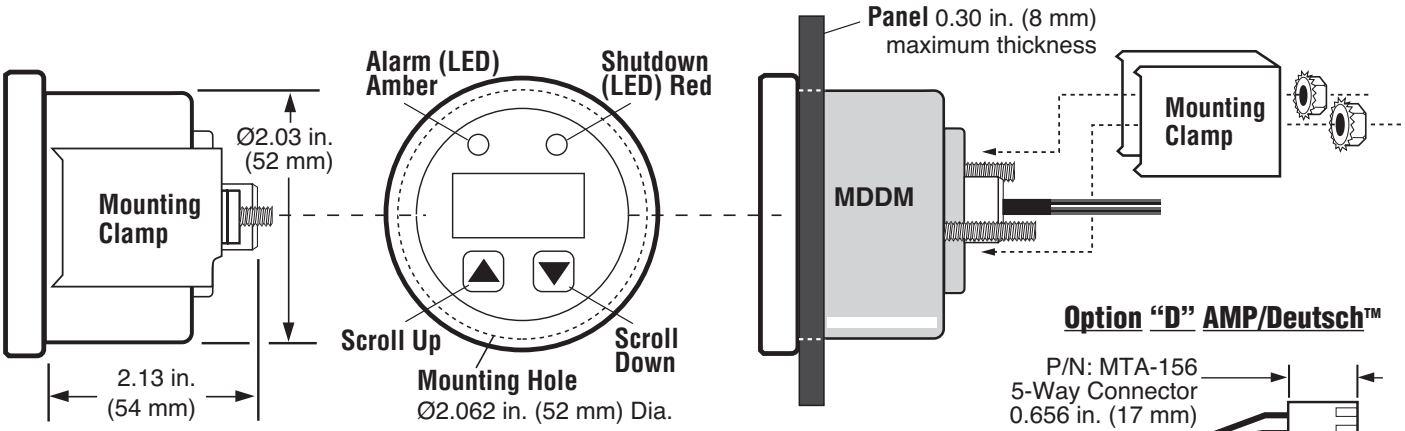
Bezel: Stainless Steel (Black Optional).
Membrane Switch: Polyester.
Case/Clamp: Nickel Plated Steel, Aluminum Killed, QQ-S-698.
Maximum Panel Thickness: 0.30 inch. (8 mm).
Mounting Hole: 2.062 inch (52 mm) in diameter.
Dial: White on Black.
Reversed Polarity: Withstands reversed battery terminal polarity indefinitely within operating temperatures.
CAN BUS: SAE J1939 Compliant.
Communications: One (1) RS485 serial port, MODBUS®† RTU slave, baud rate 9600 or 19200, N, 8, 1 or 2, half duplex.
Operating Voltage: 8 VDC Minimum to 32 VDC Maximum.
Operating Temperature: -4 to 158°F (-20 to 70°C).
Storage Temperature: -40 to 185°F (-40 to 85°C).
Shipping Weights (all models): 1 lb. (45 g.).
Shipping Dimensions (all models): 5-1/2 x 5-1/2 x 5-1/2 in. (140 x 140 x 140 mm).

† MODBUS® is a registered trademark of AEG Schneider Automation Inc. Function code supported 03 MODBUS® 16-bit integer holding registers.
** A voltage converter is required for 24 volts systems for the back light.*

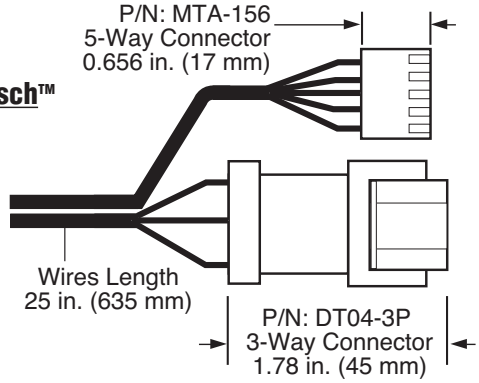
MURPHY®

Dimensions

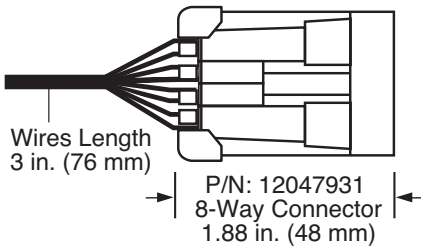
IMPORTANT: The MDDM-MOD display is best viewed either straight on or at the 6 o'clock position.



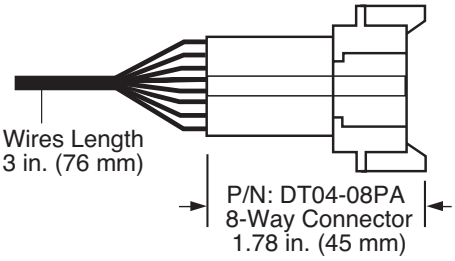
Option "D" AMP/Deutsch™



Connector Option "C" Metri-Pack™



Connector Option "B" Deutsch™



How to Order

To order the MDDM use the model number designation diagram below:

MDDM 20 M – B – B

Model
MDDM = Murphy Display & Diagnostic Module

Size
20 = 2-1/16 in. (52 mm) Mounting hole.

Communications
M = Modbus®†

Bezel Type
Blank = A-20 Type
A = A-20 Type Black
B = SAE Type Low Profile

Connector
B = Deutsch™ (DT04-08PA)
C = Metri-Pack™ (12047931)
D = AMP/Deutsch™ (12047931)

Accessories (MDDM20M-D Applications)

MLVC2412 (Regulator for 24 VDC) = 78-00-0023
Header Board Power Harness (for 24 VDC) = 78-00-0036
Header Board Assembly = 78-00-0024

Warranty

A limited warranty on materials and workmanship is given with this FW Murphy product. A copy of the warranty may be viewed or printed by going to www.fwmurphy.com/support/warranty.htm

MURPHY®

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