

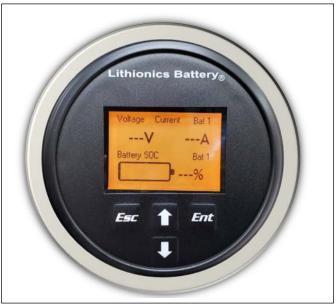
Wednesday, January 13, 2021

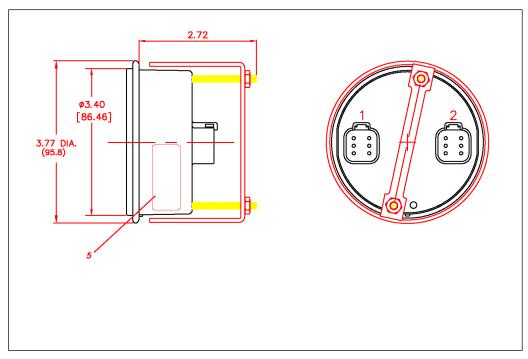
Introduction of the Multi-Function-Display for the Compact Series (CS200) BMS Battery System ("MFD" Gage)

Description: a hard-mounted display to provide State of Charge, State of Health and Diagnostic Code data. A single display will connect to 1 or more batteries operating in parallel.

Current Battery Compatibility: GTX12V315A-E2107-CS200 GTX12V320A-E2107-CS200-UL



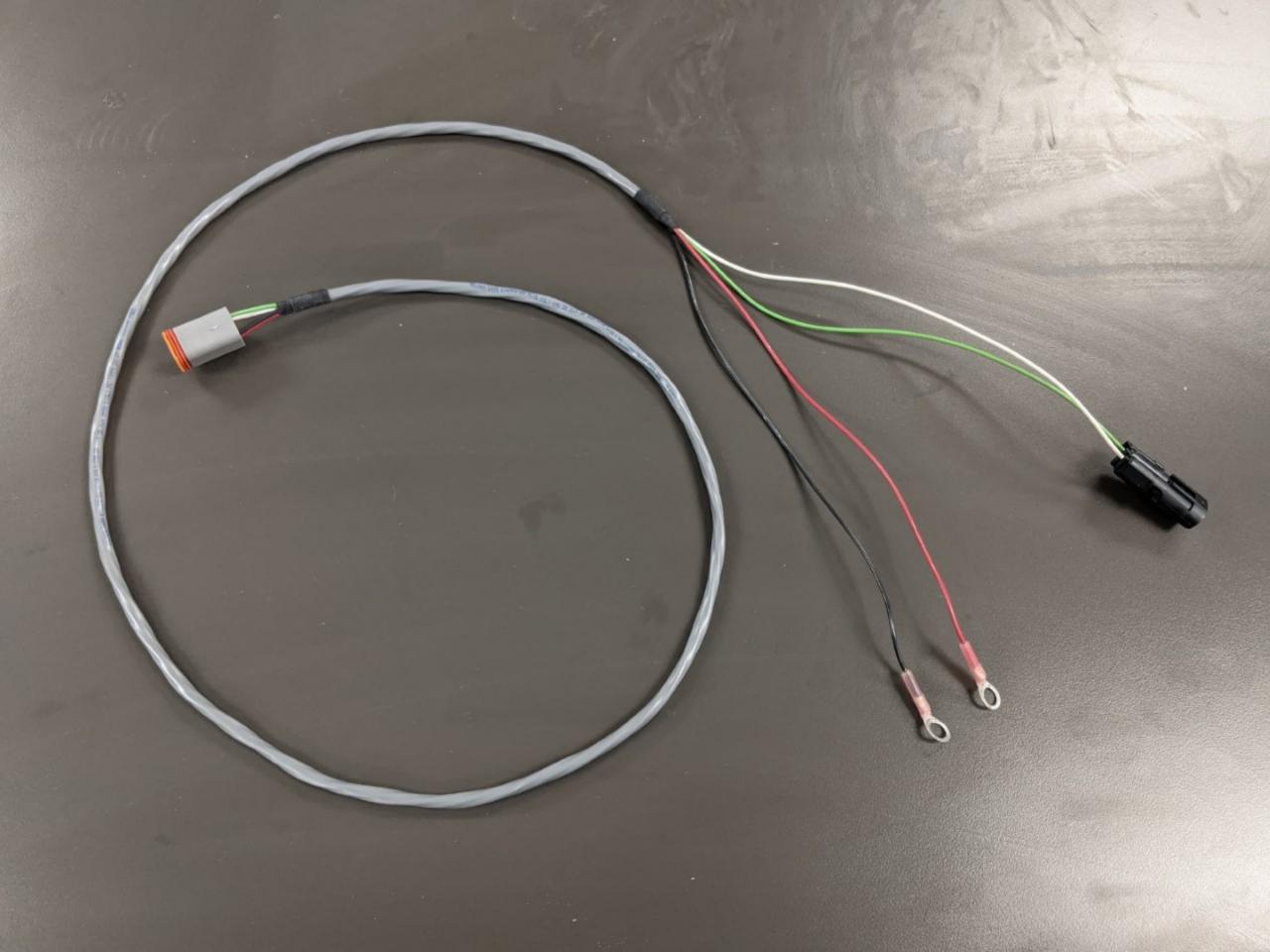














IDEAL FOR CONSTRUCTION, AG, INDUSTRIAL, SPECIALTY Mini-MFD is a self-contained, multi-function, J1939 display based on Maxima's best-in-class Direct Data-Bus Instruments (DDBI) line. Designed for severe-duty environments, it's totally sealed. It comes with 50-stored parameters for easy program-ming and processes digital and analog inputs such as fuel level. And, it fits a 3-3/8" tach opening for easy installation.

BOTTOM-LINE: MORE FEATURES & BENEFITS

- $oxdittilde{\square}$ Fits tach opening, pin-for-pin compatible with DDBITM & other displays
- ☑ Larger easy-to-read LCD, with amber LED backlighting
- 4-tactile switches, easily engaged, sealed, LED backlit; with intuitive menu control
- ☑ LED status indicators—amber alert, red warning
- ☑ 4-digital or analog inputs; supports non-bus functions such as fuel level
- ☑ Easy-to-install, with integral sealed connectors
- ☑ Weather-resistant, engineering resin enclosure with built-in sunshield
- ☑ Wide operating temperature & voltage ranges





Mini MFD

SPECIFICATION SHEET



DESCRIPTION:

Mini MFD is a compact multi-function display featuring an electronic CAN-bus architecture and platform derived from our standard Direct Data-Bus Instrument (DDBITM) tachometer. It provides critical operating information to the user to ensure optimal performance. Sealed push-buttons offer improved tactile feel. Designed for severe-duty, the unit is configurable via intuitive menu control, with 50 stored parameters.

FEATURES:

- LCD, 128 x 96 resolution, viewing area 42 x 29 mm
- Integrated keypad with 4 tactile switches, sealed
- Intuitive menu control: Escape, Up, Down, Enter
- ▶ 50 stored standard parameters (per SAE J1939)
- ▶ Amber LED backlighting for LCD
- ▶ White LED backlighting for switches
- 2 status indicators, LED, amber & red
- ▶ Configurable for digital & analog inputs
- ▶ Switched output capability—controls accessories
- Password-protected for initial set-up & configuration

INPUTS/OUTPUTS:

- ▶ 4 configurable digital or analog inputs
- ▶ 1 high-side switch (e.g. to drive buzzer)
- ▶ 1 low-side switch (e.g. to drive a relay)
- ▶ 1 ignition input
- ▶ 1 battery input
- ▶ 1 ground for analog sender
- ▶ 1 CAN channel

COMMUNICATION LINK:

CAN interface, SAE J1939 protocol

PIN ASSIGNMENTS:



Connector 1: Pin/Function	Connector 2: Pin/Function:
1: Battery (Power Supply)	1: Ignition (Key switch)
2:Ground (Power Supply)	2: Digital/analog 2 (Input)
3:Digital/analog 1 (Input)	3:Digital/analog 3 (Input)
4: CAN+ (J1939 interface)	4: Digital/analog 4 (Input)
5:CAN - (J1939 interface)	5: Analog Ground (Sender)
6:Low-side switch (Driver)	6: High-side switch (Driver)

MAIN MENU Go to display 1 Derived from Maxima's Direct Data-Bus Instrument (DDBI™) tachometer/speedometer

ELECTRICAL:

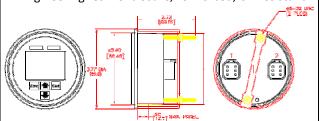
- System voltage: 12/24V nominal, 9-32 VDC range
- Electrical protection: Reverse polarity, transients including load-dump, over-voltage & ESD.

ENVIRONMENTAL:

- ▶ Operating temperature: -30°C to +85°C
- ▶ Storage temperature: -55°C to +85°C
- Sealing: IP 67; Anti-fog coated safety plastic lens
- ▶ Compliant: SAE standards for vibration & salt spray

PHYSICAL CHARACTERISTICS:

- Weight: 0.32 lbs (0.15 kg)
- Mounting: Panel installation via bracket
- Same size as standard tachometer (3-3/8" diameter)
- Engineering resin enclosure, reinforced, UV resistant



CONNECTORS:

- ▶ 2 6-pin Deutsch DT Series connectors, sealed (IP 67)
- Pin-for-pin compatible with competitor's unit (Ask Maxima for more details)

CONFIGURATION/OPERATION:

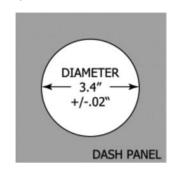
Configurable via menu selections. Displays various Performance and Status Pages via one or two lines of text and/or icons. Use "Esc" (Escape), Up, Down or "Enter" to navigate set-ups and choice of screens. Auto-scroll option enables continuous looping. Unit can be set up for English, Spanish or French. Analog input can be configured for resistance or voltage.

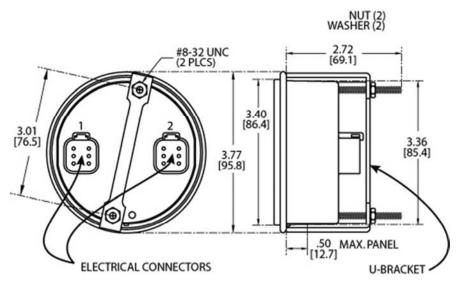


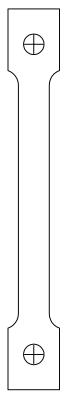
Installation Instructions

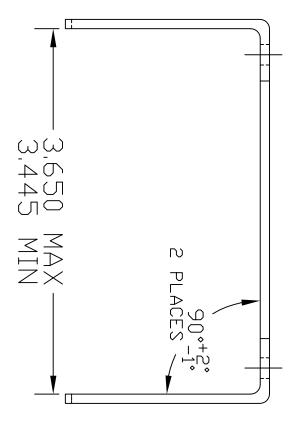
Mini-MFD™

- Recommended panel hole size is 3.4" ± 0.02 " or 86.4mm ± 0.51 mm.
- Insert the instrument in the panel and place the U-bracket over the mounting studs.
- Install one washer and one nut on each stud over the U-bracket.
- Tighten the nuts (4 to 6 in.-lb.) to secure the instrument.











- USE THIS DRAWING WITH COMMERCIAL ZINC PLATE IRIDESCENT YELLOW TO BILL OF MATERIALS, .00005 — .00015 THK., CHROMATE DIP OLIVE DRAB

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CONFIDENTIAL

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EAST PET	EAST PETERSBURG, PA.
RACKET, (3.4" Tach	MOUNTIN / speedo)
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DWN MAJ 3/22/95 SIZE DWG. 71217-00 CHK RCV 3/22/95 A NO. 71217-00Φ <u>_</u>

APPD RCV 3/22/95 SCALE 1=1

SHEET 1 OF 1