

Series 31m - mVEC

Multiplexed Vehicle Electrical Center

The multiplexed Vehicle Electrical Center (mVEC) offers economical CAN Network oversight for high power circuits in vehicle power distribution. Rated for 200A; the mVEC may be configured to provide various OEM circuit protection and switching functions, using 2.8mm (mini footprint) fuses, relays and breakers, with the status and control of each circuit accessible through J1939 CAN messages. The mVEC is based on proven and patented technology and is suited for the most demanding transportation vehicle applications.

Features & Benefits

The mVEC acts as a slave module on a J1939 network communicating via the vehicle data bus with the master controller. Functionality as a node in existing vehicle networks is available today with plans for limited stand-alone capability planned for the future. Features include relay control as well as diagnostic reports for fuses, relays and circuit breakers via the vehicle's CAN bus. Both 12 & 24V functionality is available along with high-side & low-side control.

Options

- Cover: Solid domed cover with gasket
- Cover marking: Laser etching inside, outside, or both
- Components: 2.8mm (mini) footprint fuse, breaker, relay, etc.
- Standard & customized circuit layouts
- Standard & custom CAN messages
- Compression limiters on mounting feet
- Internal spare fuse holder and socket for fuse extraction tool



Specifications

Capacity

- 200A maximum rating
- 30A per output (100A per output connector)
- Maximum of 12 relays or 32 fuses, or various combinations thereof (unique design configurations may be required)

Materials

- Housing and connector cavities: UL 94 V-0 rated thermoplastic
- Internal power grid: tin-plated copper
- CAN circuit board: conformally coated

Operating temperature ratings

–40°F (-40°C) to 185°F (85°C)

Ingress protection

IP66 compliant

Foot torque rating

- 60 in-lbs brass compression limiters
- 200 to 300 in-lbs with stainless steel compression limiters

Connections

Output: Standard Eaton 32006 VEC connectors

- 8-way, colored/keyed, sealed (IP66 with wire seals & plugs) connectors
- 30A maximum per terminal (100A per connector)
- Accepts Delphi Metri-Pack® 280 Series terminals (tanged/tangless)

Input: Studded or Connectorized

- Studded input option: Supports two M8 input power studs for DC power into the VEC power grid (100A maximum per stud)
- Connectorized: Accepts up to two Eaton 32004 VEC input connectors (two terminals each, colored/keyed, sealed connectors)
- 60A maximum per terminal, providing power to the VEC Power Grid; uses Delphi Metri-Pack 800 series terminals

Terminations

Output

- Delphi Metri-Pack 280 Series terminals (sealed/unsealed and tanged/tangless)
- Delphi Metri-Pack 280 Series cavity plugs are installed where wires are not used.

Wire Sizes

- With wire seals: #12-22 AWG (0.35-5.0mm²)
- Without wire seals: #10-22 AWG (0.35-5.0mm²)

Input

- Delphi Metri-Pack 800 Series terminals (sealed/unsealed)

Wire Sizes

- With wire seals: #10-14 AWG (2.0-8.0mm²)
- Without wire seals: #8-14 AWG (2.0-8.0mm²)

CAN

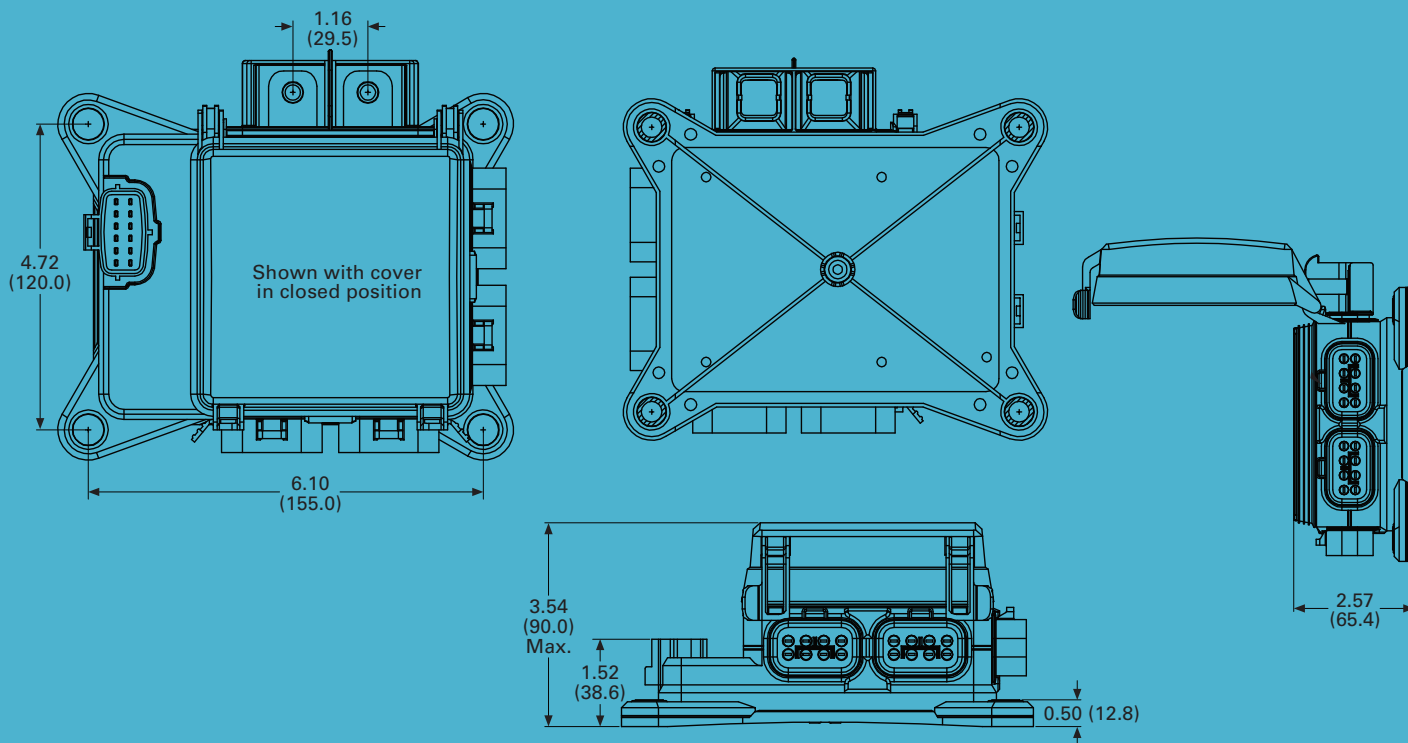
- Uses AMP SSC 12-position sealed connector
- CAN connector provides CAN signaling, power, ground, addressing, auxiliary relay control and reserve connections to mVEC "smart" layer

Maximum torque rating

- M8 input stud: 18 FT-LBS
- Mounting: 2.5 FT-LBS

Notes: Each design is customer specific. Consult your sales representative today for your application. Electrical terminals, cable seals and cavity plugs are NOT supplied by Eaton.

Dimensions in Inches (mm)



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