

Series 31000/32000 Vehicle Electrical Centers

VEC



About the Vehicle Electrical Center

The Cooper Bussmann Single Vehicle Electrical Center (VEC) and Dual Vehicle Electrical Center (DVEC) are widely used transportation industry power distribution modules. The VEC & DVEC use patented programmable 3D matrix technologies that can be easily modified to accommodate changes to an electrical system. These can be customized for each specific electrical system, but require no tooling for implementation.

The VEC & DVEC accept automotive components including fuses, relays, circuit breakers, diodes, and other devices that have 2.8mm wide terminals on 8.1mm centerline spacing. (See page 34 for additional available components.) The compact size of the VEC (about 4"x4") and larger size of the DVEC (approximately 8"x4") provide for high component density. VECs provide either 8.0mm bladed inputs or M8/M6 stud inputs. The VEC can accommodate up to 2 input connectors - 4 bladed inputs or 2 studs - and 4 output connectors with up to 8 outputs each (32 total). The DVEC can accommodate up to twice this amount. (Some designs may limit the number of connectors available for use.)

Specifications

Input Terminal Rating: 8.0mm blade terminals (60A max per terminal); M8/M6 input studs (100A max per terminal), 200A max total for VEC, 400A max total for DVEC.

Output Terminal Rating: 2.8mm blade terminals (30A max per terminal).
Temperature Rating: -40°F (-40°C) to 260°F (125°C).

Materials: Thermoplastic housing and connectors; tin-plated copper internal grid.

Termination: Delphi Packard Metri-Pack® 280 Series terminals (sealed/unsealed & tanged/tangless) or AMP® terminals.* Delphi Packard 280 Series cavity plugs are installed where wires are not used.* Accepts #10-22 AWG wire sizes.

Mounting Torque Rating: 24 in-lbs (2.7N•m) max.

Mounting Orientation: Unit cannot be installed upsidedown. Consult factory for proper mounting orientations. ingress protection Rating: IP55

Applications

The VEC/DVEC is ideal for distributed main power as well as auxiliary "add-on" applications. Current VEC/DVEC applications include Class 3-8 trucks, buses, chassis and RV, Con-Ag equipment, marine specialty vehicles, and automotive power distribution systems.

Benefits

The customizable designs of the VEC/DVEC enable them to incorporate many different devices and multiple design variations. Splices in the harness can also be eliminated by internally programming them into the grid matrix. The inputs (connector or stud) and outputs (connector) of the VEC/DVEC are color-coded and keyed, and provide quick installation. This makes the module easy to service. The largest benefit of these modules are the reduced lead times and zero tooling cost.

Options

Cover: Vented (VEC), Solid domed cover with gasket (VEC/DVEC), or no cover.

Cover Label: Inside cover, outside cover (VEC only), or none provided.

Input Style: 8.0mm blade terminals or studs (M8/M6).

Mounting: External feet with mounting holes (VEC/DVEC) or internal mounting holes (VEC only).

Components: Fuse, breaker, relay, etc. installation to be specified by customer.

Severe Service: Added environmental protection available (see pg 30 & severe service VEC). Consult factory.

Fuse/breaker Extraction Tool: See page 67.

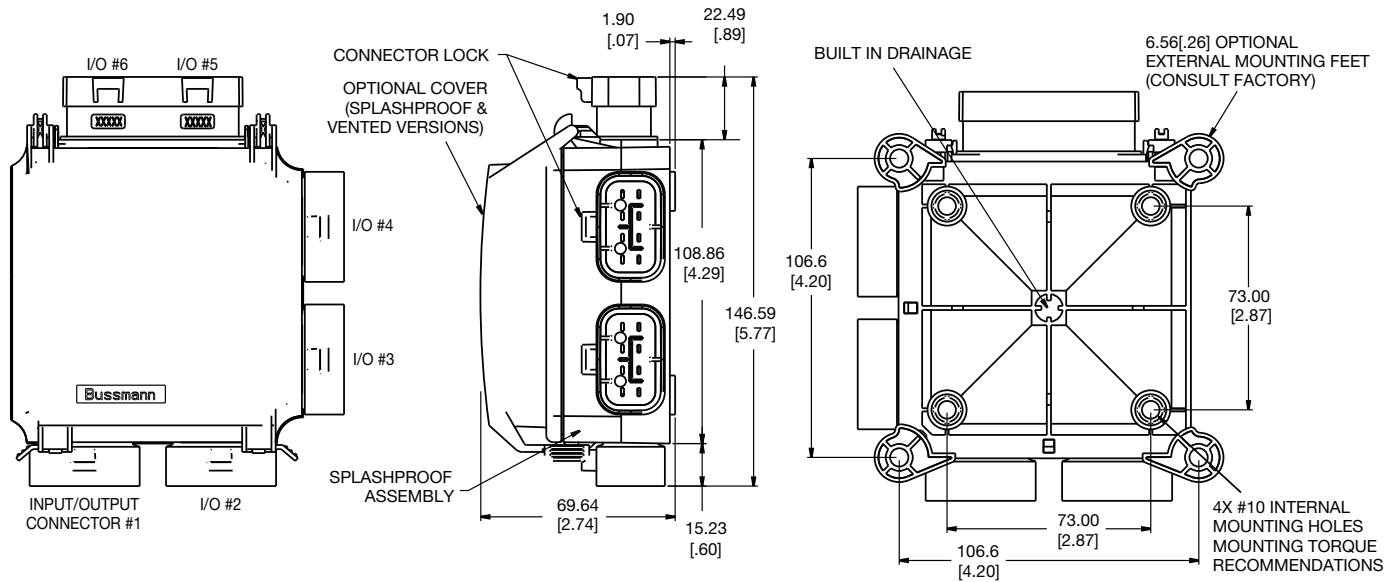
*Electrical terminals, cable seals & cavity plugs are NOT supplied by Cooper Bussmann.

Each design is customer specific. Consult your sales rep today for your application.

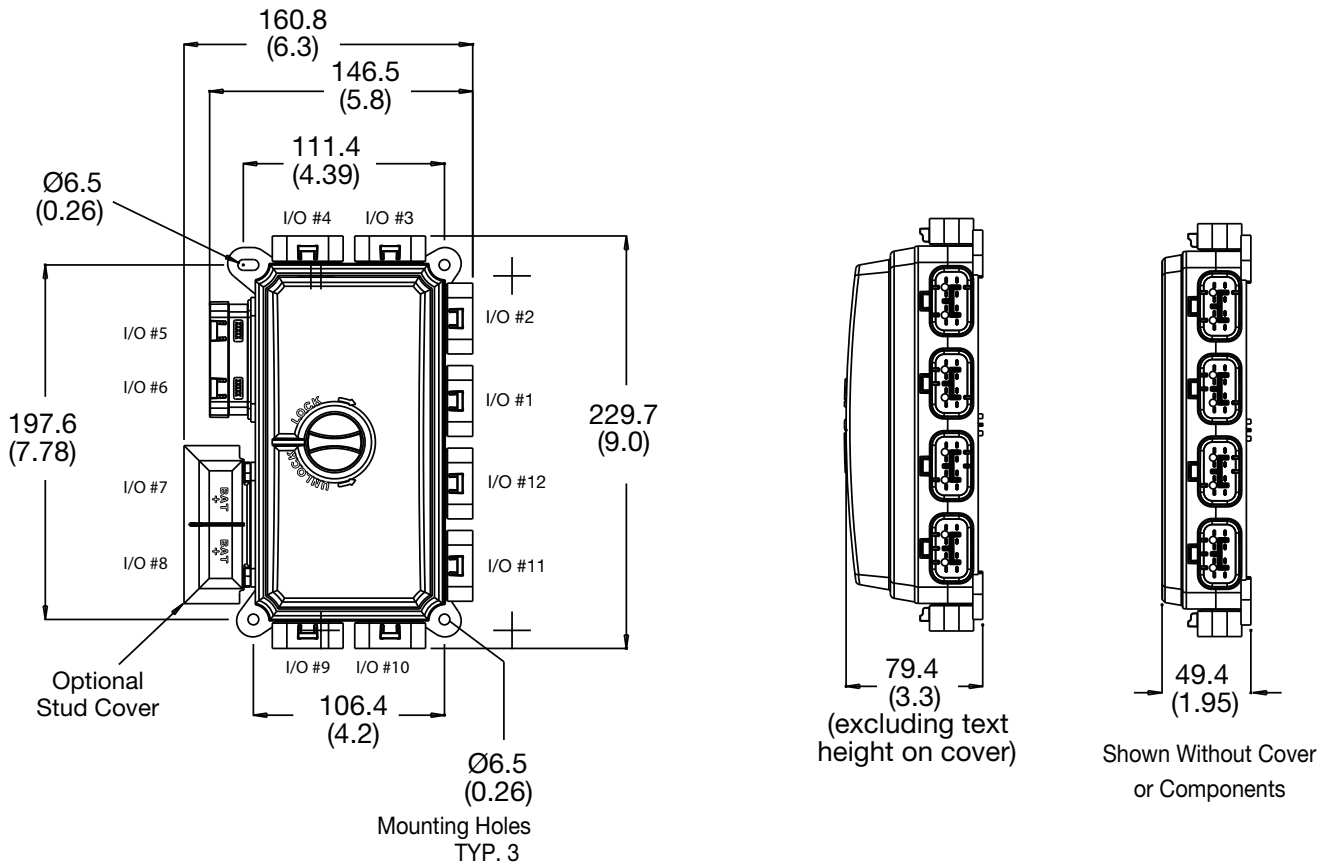
Series 31000/32000 Vehicle Electrical Centers

Dimensions - mm(in) (Dims. shown are for reference only. Consult factory for latest prints)

VEC 31000 Series VEC



32000 Series VEC

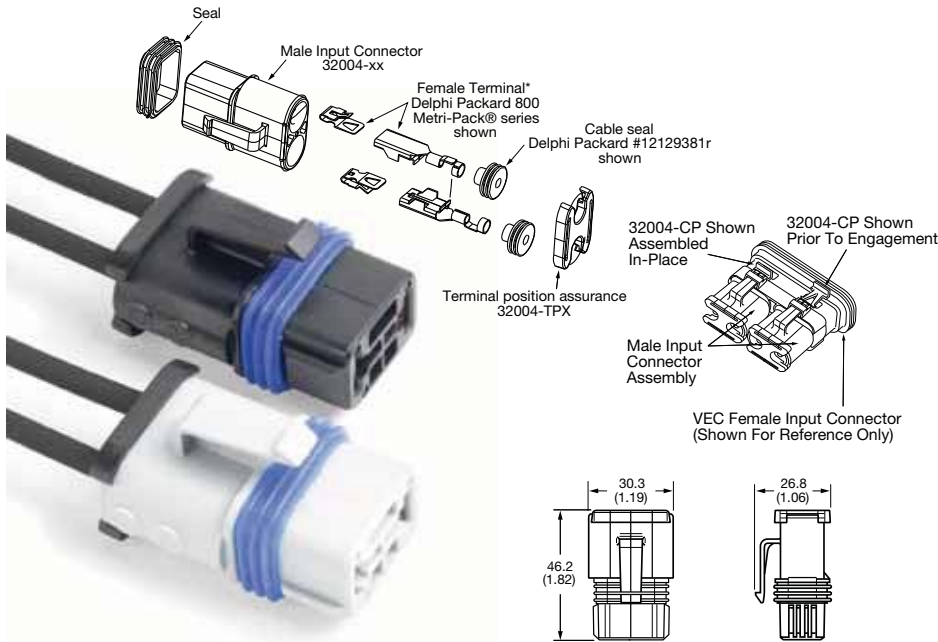


Vehicle Electrical Center Connectors

VEC

Dimensions - mm(in)

32004-XX Power Connector (Dims. shown are for reference only. Consult factory for latest prints)



(Dims. shown are for reference only. Consult factory for latest prints)

MALE INPUT CONNECTOR

32004 - X X

- Sealed / Non-Sealed Configuration
- 1 = Non-Sealed Version
- 2 = Sealed Version

- Color of Part
- A = Black
- B = Gray

TERMINAL POSITION ASSURANCE

32004 - TPX

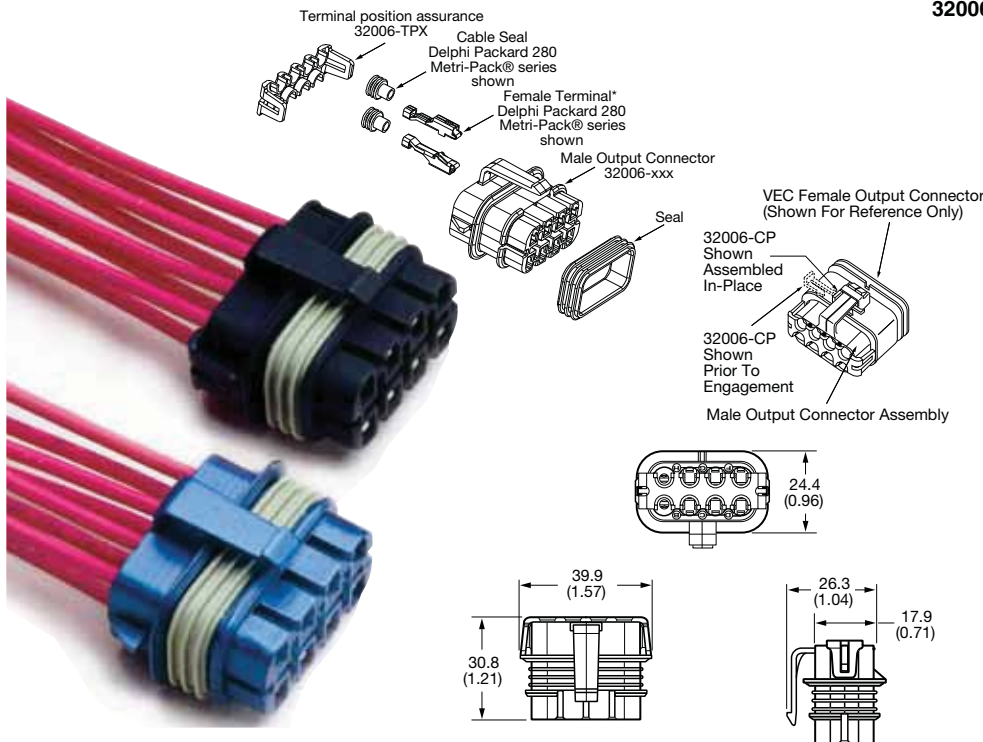
- Sealed / Non-Sealed Configuration
- 1 = Non-Sealed Version
- 2 = Sealed Version

CONNECTOR POSITION ASSURANCE

32004 - CP (Ship in Bulk)

Note: Terminals and Terminal Seal Components are not provided with connectors. Available from Delphi Packard. Contact factory for part list and terminal removal tool. Sealed connector option includes outer body seal.

32006-XXX Output Connector (Dims. shown are for reference only. Consult factory for latest prints)



(Dims. shown are for reference only. Consult factory for latest prints)

MALE OUTPUT CONNECTOR

32006 - X X X

- Sealed / Non-Sealed Configuration
- 1 = Non-Sealed Version
- 2 = Sealed Version

- Connector Cavity Configuration
- 1 = Tang-less Female Connector (Delphi 280)
- 2 = with Tang Female Connector (Delphi 280)
- P = all cavities plugged

Color of Part

- A = Black
- B = Gray
- C = Green
- D = Blue
- E = Yellow
- F = Red
- G = Orange
- H = Brown
- J = Neutral (only available for -JP2 option)

TERMINAL POSITION ASSURANCE

32006 - TPX

- Sealed / Non-Sealed Configuration
- 1 = Non-Sealed Version
- 2 = Sealed Version

CONNECTOR POSITION ASSURANCE

32006 - CP (Ship in Bulk)

Note: Terminals and Terminal Seal Components are not provided with connectors, but are available from Delphi Packard. Contact factory for part list and terminal removal tool. Sealed connector option includes outer body seal.

Series 229 Diode, Resistor, and Transorb

Specifications

Ratings: Consult factory for available ratings and part numbers

Materials: Grey 94V0 thermoplastic housing with metal cover.

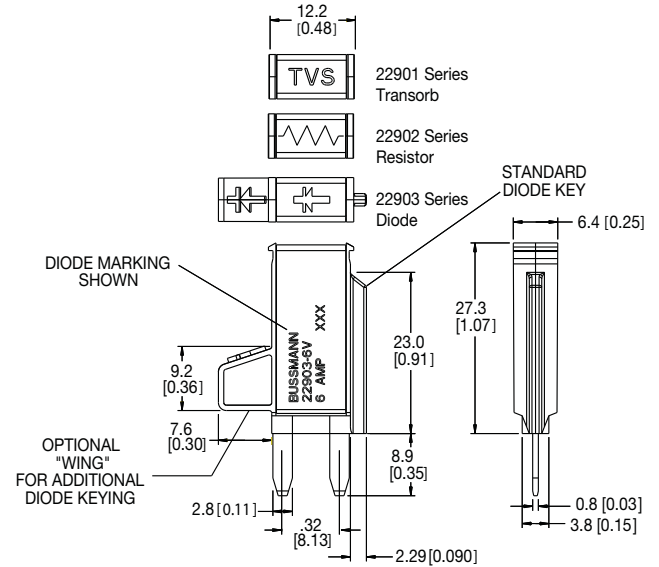
Termination Type: Compatible with 280 Type fuse blocks using 8.1mm centerline.

Diode Key Feature: Standard key denotes installation direction. Extended key available for error-proof installation in VEC.



Dimensions - mm(in)

(Dims. shown are for reference only. Consult factory for latest prints)



Relays (Only Available for VEC, DVEC, RFRM, or RTMR Applications.)

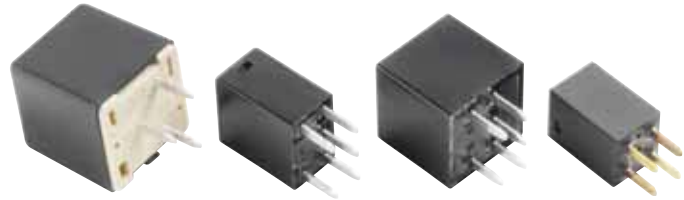
Specifications

Types: 5-pin mini-relay, 12Vdc & 24Vdc
5-pin micro-relay, 12Vdc & 24Vdc
4-pin mini-micro relay, 12Vdc

Consult Factory for available amperage ratings

Termination Type: Compatible with 280 Type fuse blocks using 8.1mm centerline.

Sealed versions of some relays also available.



VEC Accessories



DVEC Cover Tether

Tether available for use with Series 32000 DVECcover. Consult factory.

Series B109-7031 (for use with Series 32000 DVEC)

External bus bar can be used with the Dual VEC to bus together studded power inputs.