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Compactus Sealed Hybrid Connector System ›

Compactus Sealed Hybrid Connectors are robust, high-density, automotive-grade connectors that ensure superior design flexibility through the use of various modular circuit combinations. This versatility permits manufacturers to fit more power and signal transmission capability into a small space, enhancing efficiency.

FEATURES AND ADVANTAGES

Achieves high performance within the harsh engine environment

The connector offers a heat-resistant, vibration-resistant, sealed design that helps prevent inadvertent disconnections and failures due to moisture or dust ingress.

Provides designed-in flexibility for mounting in the dense engine space

Connectors are available with left or right flexible cable outlets, reducing design limitations.

Aids weight reduction

The connector is designed for thin wires which reduce weight and help lower emissions.

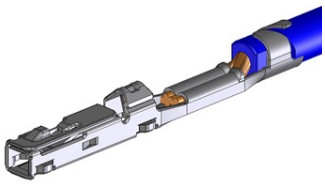
Number of Circuits	80, 128, 146, 186 (header); 48, 66, 72, 80, 114 (receptacle)
Terminal Sizes	0.50, 1.00, 2.80mm
Wire Sizes	0.30 to 2.50mm^2
Sealing	IP69K-rated grommet seal
Locking	Pre-lock independent secondary lock (ISL)
Operating Temperature	-40 to +120°C

Improves real estate optimization

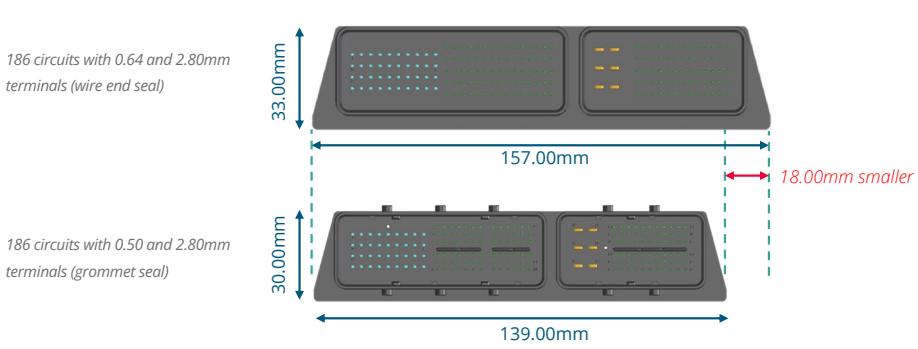
Short and long wire dress cover options permit close clearances and avoid wasting space in compact applications.

Reduces the interface area by up to 20% compared with conventional 0.64mm products

The 0.50mm terminal system saves space and helps prevent overcrowding in dense and compact applications.



Header Connector Size Comparison: 0.50 vs. 0.64mm



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MARKETS AND APPLICATIONS

Automotive

Automatic doors
Battery packs
Body electronics
Chassis control unit modules
DC-to-DC converters
Electric motors
Electric vehicle (EV) reducers
Electronic control units
Electronically controlled parking brakes
Engine control unit modules
Hybrid electric vehicle and EV inverters
Illumination control systems
Junction/fuse boxes
Motor control units
N-in-1 E-drive units
Onboard chargers
Power distribution units
Suspension controllers
Transmission controllers
Vehicle control unit (VCU) modules
Zonal control units

Commercial Vehicle

Construction/agriculture machinery
Door control unit modules
Motorcycles
VCU modules

Construction/Agriculture Machinery

Motor Control Units

SPECIFICATIONS

Reference Information

Packaging: Tray
Header: Waterproof wire-to-board connector
  128, 146 or 186 circuits (two blocks)
Panel-Mount Header: 80 circuits
Female Connector:
  Housing–48, 66, 72, 80 or 114 circuits
  Terminal–0.50mm (signal), 1.00mm
    (medium power) or 2.80mm (power)
  Seal plug
  Dress cover (short or long)
Wire Size:
  0.50mm–0.30 to 0.50mm^2
  1.00mm–0.50 to 1.25mm^2
  2.80mm–2.00 to 2.50mm^2
Mating Requirement: Keyed pair
Designed in: Millimeters
RoHS: Yes

Mechanical

Terminal Retention Force with ISL:
  Signal (0.50mm)–100N (min.)
  Power (1.00 and 2.80mm)–100N (min.)
Mating Force (max.): 70N (lever operation)
Unmating Force (max.): 70N (lever operation)

Electrical

Voltage (max.): 14V
Current (max.): Refer to derating curve
nsulation Resistance (min.): 100 Megohms

Physical

Housing: Polybutylene terephthalate (PBT)
Housing Color: Black
Contact: Tin
Operating Temperature: -40 to +120°C
Vibration Environment:
  Acceleration rate–9G (88m/sec^2)
  Frequency–20 to 200 Hz
Sealing Performance:
  Initial–50kPa (min.)
  After endurance test–30kPa (min.)
  High-pressure washing test–IP69K

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