

# Compactus Sealed Hybrid Connector System >

Compactus Sealed Hybrid Connectors are robust, high-density, automotive-grade connectors that permit manufacturers to fit more power and signal transmission ability into a small space.

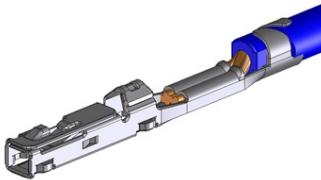
## FEATURES AND ADVANTAGES



Number of Circuits	128, 146, 186 (header); 48, 66, 72, 80, 114 (receptacle)
Terminal Size	0.50, 1.00, 2.80mm
Wire Size	0.30 to 2.50mm <sup>2</sup>
Sealing	IP69K-rated grommet seal
Locking	Pre-lock Independent Secondary Lock (ISL)
Operating Temperature	-40 to +120°C

### Heat resistance, sealing property and vibration resistance

Achieves high performance within the harsh engine environment



### Left and right flexible cable outlet directions

Provide designed-in flexibility for mounting into the very dense engine space



### Three terminal sizes available in one connector (0.50, 1.00 and 2.80mm)

Enables more efficient transmission of low, medium and high current

### Short and long wire dress cover options

Permit closer clearances and improved real estate optimization in space-constrained applications

### Three header sizes (128, 146 and 186 circuits) and five receptacle sizes (48, 66, 72, 80 and 114 circuits) available

Offers various combinations in modularity and design flexibility

### 0.50mm terminal system

Can reduce the interface area by 20% compared with conventional 0.64mm products

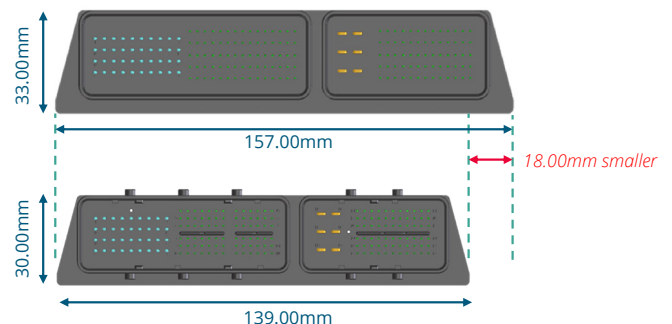
### Designed for thin wires

Aids weight reduction, which, in turn, can help lower emissions

### Header connector size comparison: 0.50 vs. 0.64mm

186 circuits with 0.64 and 2.80mm terminals (wire end seal)

186 circuits with 0.50 and 2.80mm terminals (grommet seal)



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## MARKETS AND APPLICATIONS

### Automotive

Engine control unit (ECU) modules  
Motor control unit (MCU) modules  
Chassis control unit modules  
Zonal control units  
Battery packs  
Transmission controllers  
Suspension controllers  
Electronically controlled parking brakes  
Hybrid electric vehicle (HEV) and electric vehicle (EV) inverters  
Body electronics  
Illumination control systems  
Junction/fuse boxes  
Automatic doors

### Commercial Vehicle

Vehicle control unit (VCU) modules  
Door control unit (DCU) modules  
Construction/agriculture machinery  
Motorcycles



## SPECIFICATIONS

### Reference Information

Packaging: Tray  
Header: Waterproof wire-to-board connector  
128, 146 or 186 circuits (two blocks)  
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<sup>2</sup>  
1.00mm – 0.50 to 1.25mm<sup>2</sup>  
2.80mm – 2.00 to 2.50mm<sup>2</sup>  
Mating Requirement: Keyed pair  
Designed in: Millimeters  
RoHS: Yes

### Mechanical

Terminal Retention Force with Independent  
Secondary Lock (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.): 250V  
Current (max.): Refer to derating curve  
Insulation Resistance: 100 Megohms (min.)

### Physical

Housing: Polybutylene terephthalate (PBT)  
Housing Color: Black  
Contact: Tin  
Operating Temperature: -40 to +120°C  
Vibration Environment:  
Acceleration Rate – 9G (88m/sec<sup>2</sup>)  
Frequency – 20 to 200 Hz  
Sealing Performance:  
Initial – 50kPa (min.)  
After Endurance Test – 30kPa (min.)  
High-Pressure Washing Test – IP69K

[www.molex.com/en-us/products/connectors/automotive-connectivity/automotive-pcb-wire-connectors/compactus-connectors](http://www.molex.com/en-us/products/connectors/automotive-connectivity/automotive-pcb-wire-connectors/compactus-connectors)