

## INTRODUCTION



## CMC Hybrid Panel Mount PCB Header 2.54mm (0.100") and 3.50mm (0.138") Pitch

*Part of the Molex CMC Hybrid Connector family, the right-angle PCB header series 36638 provides a flexible design solution for power-train applications in the transportation market*

### **36638** 48- and 96-Circuit, Right-Angle, Wire-to-Board

Molex developed the CMC Hybrid PCB Header to meet the Euro 3/III emission control requirements. The design centered around the need to maximise the efficiency of fuel management systems in automotive and commercial vehicles.

The CMC Hybrid header is used in automotive power-train applications such as engine-control units, engine management systems, emission gas release systems and solenoid valves.

The 36638 series from Molex is a Hybrid CMC header available in both single- and two-pocket versions that provides customers with design flexibility for their applications. The single-pocket header is available in 1 to 48-circuits, whilst the two pocket header is available in 1 to 96-circuits.

The header has a mounting flange which allows it to be firmly secured onto the application whilst the optional snap-in peg provides retention of the connector to the PCB during soldering. The terminal used is right-angle-twisted during stamping to ensure strong terminal rigidity.



## FEATURES AND BENEFITS

- Polarized geometry prevents mismatching of header and receptacle
- Mounting flanges provide easy mounting of the header assembly to the chassis
- Extended power pin ensures grounding due to first mate / last break
- Optional snap-in peg for retention of the header to the PCB
- Different circuit size options for single and double port headers provides configuration flexibility
- Wave and manual solder compatible
- Tapered lead-in on PC tails to ease insertion into the PCB
- Shrouded geometry for sealed and unsealed applications

## MARKETS AND APPLICATIONS

- Automotive:
  - Power-train:
    - EMS (Engine Management System) for 4 Wheeler
    - EGR (Emission Gas Release) system
    - Body control module
  - Solenoid valve
  - EMS (Engine Management System) for two wheeler
- Markets:
  - Cars
  - Trucks
  - Buses
  - Agricultural Equipment
  - Motorcycle
  - Marine

**SPECIFICATIONS**



**CMC Hybrid Panel Mount PCB Header 2.54mm (0.100") and 3.50mm (0.138") Pitch**

**36638 48- and 96-Circuit, Right-Angle, Wire-to-Board**

**Reference Information**

Packaging: Tray

Mates with: CMC 48-Circuit connector series 64320

Black: Left - 64320-1311 Receptacle  
Right - 64320-3311 Receptacle

Brown: Left - 64320-1319 Receptacle  
Right - 64320-1319 Receptacle

Use with:

Terminals: Series 64322 CP 0.635mm (.025")  
Series 64323 CP 1.50mm (.059")

Plugs: 64325-1010 for CP 0.635mm (.025") cavity  
64325-1023 for CP 1.50mm (.059") cavity

Wire Cap: 48-way: 64320-1301

Design In: Millimeters

**Mechanical**

Contact Insertion Force: 35.00N (7.86lb) min

Contact Retention to Housing: 35.00N (7.86lb) min.

Mating Force: 80.00N (17.98lb)

Unmating Force: 80.00N (17.98lb)

**Electrical**

Voltage: 250V AC

Current:

CP 0.635mm (.025") terminals - max 6.0A (0.75mm<sup>2</sup> wire)\*

CP 1.50mm (.059") terminals - max 12.0A (2.00mm<sup>2</sup> wire)\*

\*Current tested on a 5 terminals loaded connector, current for temperature increase of 40°C

Contact Resistance:

0.635mm (.025") terminals: 8 milliohms maximum

1.5mm (.059") terminals: 4 milliohms maximum

Dielectric Withstanding Voltage:

1000V AC for 1 minute

Insulation Resistance: 100 Megohms min

**Physical**

Housing: PBT Polyester, Black, UL 94-HB Glass-filled

Contact: Brass (CuZn) Alloy

Plating:

Contact Area - 4.0µm (160µ") Tin (Sn)

Solder Tail Area - 4.0µm (169µ") Tin (Sn)

Under plating - 1.3µm (50µ") Nickel (Ni)

PCB Thickness: Ref order table

Operating temperature: -40 up to +125°C



**ORDERING INFORMATION**

Order No.	Description	Circuit Size	Pins Loaded	PCB Locking	Pin Projection out from PCB Solder Surface	PCB Thickness	Mates with
36638-0001	CMC Header, 2 port	96	72	No	1.30mm/0.90mm	1.60mm/2.0mm	48-circuit CMC connector Black color coding Left wire output 64320-1311 Right wire output 64320-3311
36638-0002	CMC Header, 48 way X 1, T3 interface, Black	48	48	Yes	1.30mm	1.60mm	
36638-0004				No	1.30mm/0.90mm	1.60mm/2.0mm	
36638-0003	CMC Header, 48 way X 1, T3 interface, Brown			Yes	1.30mm	1.60mm	
36638-0005				No	1.30mm/0.90mm	1.60mm/2.0mm	
36638-0006	CMC Header, 48 way X 1, Black	48	36	Yes	1.30mm	1.60mm	48-circuit CMC connector Brown color coding Left wire output 64320-1319 Right wire output 64320-3319
36638-0008				No	1.30mm/0.90mm	1.60mm/2.0mm	
36638-0007	CMC Header, 48 way X 1, Brown			Yes	1.30mm	1.60mm	
36638-0009				No	1.30mm/0.90mm	1.60mm/2.0mm	
36638-0010	CMC Header, 2 port	96	72	Yes	1.30mm	1.60mm	

[www.molex.com/product/cmc.html](http://www.molex.com/product/cmc.html)

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