



CMC Hybrid Connectors Standard and Power Versions

CMC Connectors – sealed, high-density, modular and cost-effective connection system for heavy-duty applications

The CMC connector family from Molex is a sealed, high-density connection system developed for the transportation industry. It is a cost-effective, modular, hybrid system that fits with various headers.

Standard version CMC hybrid connectors hold two different terminal sizes, 0.635mm (.025") and 1.50mm (.059"). The 1.50mm (.059") terminals are rated up to 24.0A for operating temperatures between -40 and +100°C. Power version CMC hybrid connectors hold three different terminal sizes, 0.635mm (.025"), 1.50mm (.059") and 2.80mm (.110"), with the largest rated up to 40.0A at operating temperatures between -40 and +125°C. The CMC modular system offers various color codings associated with mechanical keying for easy mating with the header.

With an audible click, the integrated locking lever locks the connector to the header.

A wire cap guides the wires away from the connector either to the right or to the left. Robust CP terminals are specially designed to perform in high-conductivity applications and in harsh environments. The CMC connection system can be used for various transportation vehicles, such as cars, trucks, busses, agricultural equipment, motorcycles and marine equipment. CMC is used in various power-train applications such as engine-control units, compartment applications, gear boxes, electronic-park breaks and suspension controllers. For more information on CMC products, visit: www.molex.com/product/cmc.html.

Standard Receptacles

64319 32-Circuit Receptacle and Wire Cap

64320 48-Circuit Receptacle and Wire Cap

64325 Plug

Power Receptacles

64318 28-Circuit Receptacle

64320 28-Circuit Wire Cap

64321 53-Circuit Receptacle and Wire Cap

64325 Plug

Features and Benefits

Standard and Power Connector Features and Benefits

- Color coding provides easy visual installation
- Mechanical polarization avoid mis-mating
- Audible click during locking secures locking with the header
- Tie wrap as additional fixing feature provides added security of the wire output
- Multiple terminal sizes available support low, medium and high-current data requirements
- Various backplate configurations and plug seals offer flexibility and high reliability when cavities are not used

Molex High Performing Sealing Function Features and Benefits Wire Side

- Matte seal technology used for CP 0.635mm (.025") and 1.50mm (.059") terminals provide high-performing sealing due to seal cavity design
- Single wire-seal technology used for CP 2.80mm (.110") terminals provide secure and reliable sealing for 2.80mm (.110") CP terminals
- Multiple choices of backplate configurations allow customer to reduce the number of circuits used with a closed-cavity backplate configuration
- Blind plugs for unused circuits secure sealing system when flexibility is required for unused cavities with a standard backplate

Molex High Performing Sealing Function Features and Benefits Mating Side

- Perimeter seal secures seal between the connector and mating header



32- and 48-Circuit CMC Connector Harness

SPECIFICATIONS



CMC Hybrid Connectors Standard and Power Versions

Reference Information

Packaging: Box with Carton Interleaf

Mates with:

32-Way: No mating header available yet at Molex, in development soon

48-Way: Series 36638 and Series 500762

Use with:

Terminals: Series 64322 CP 0.635mm (.025") pitch

Series 64323 CP 1.50mm (.059") pitch

Plugs: 64325-1010 CP 0.635mm (.025")

pitch terminals

64325-1023 CP 1.50mm (.059")

pitch terminals

Wire Caps: 32-Way: 64319-1201

48-Way: 64320-1301

Designed in: Millimeters

Electrical

Voltage: 14V

Current:

max. 10.0A - 0.635mm (.025") pitch terminals

max. 24.0A - 1.50mm (.059") pitch terminals

Contact Resistance:

0.635mm (.025") pitch terminal: 8 milliohms max.

1.50mm (.059") pitch terminal: 4 milliohms max.

Dielectric Withstanding Voltage: 1000V AC min.

Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force:

0.635mm (.025") pitch terminal: 10.00N (2.25 lb)

1.50mm (.059") pitch terminal: 15.00N (3.37 lb)

Contact Retention to Housing:

0.635mm (.025") pitch terminal: 60.00N (13.49 lb)

1.50mm (.059") pitch terminal: 100.00N (22.48 lb)

Wire Pull-Out Force: 100.00N (22.48 lb)

Mating Force: 80.00N (17.98 lb) max.

Unmating Force: 80.00N (17.98 lb) max.

Durability: 10 mating cycles

Physical

Housing: PBT Polyester, Glass-filled

Lead-Free: Yes

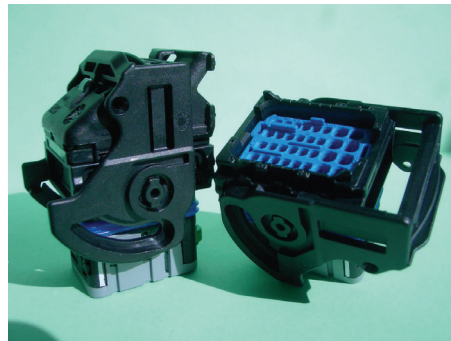
Operating Temperature: -40 to +100°C

Standard Receptacles

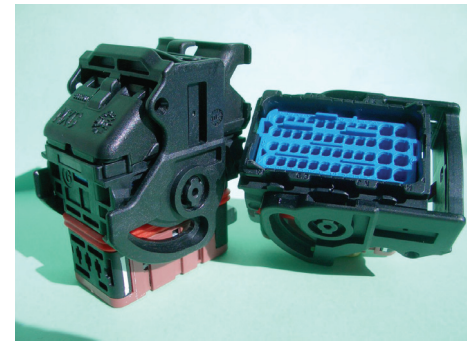
64319 32-Circuit Receptacle
and Wire Cap

64320 48-Circuit Receptacle
and Wire Cap

64325 Plug



32-Circuit CMC Receptacle



48-Circuit CMC Receptacle

ORDERING INFORMATION

Receptacles

Order No.	Circuits	Coding Key Color	Wire Output
64319-3211	32	Black	Right
64319-3216		Blue	
64319-3218		Grey	
64319-3219		Brown	
64319-1211		Black	Left
64319-1216		Blue	
64319-1218		Grey	
64319-1219		Brown	
64320-3311	48	Black	Right
64320-3315		Green	
64320-3318		Grey	
64320-3319		Brown	
64320-1311		Black	Left
64320-1315		Green	
64320-1318		Grey	
64320-1319		Brown	

Wire Caps

Order No.	Circuits	Housing Color
64319-1201	32	Black
64320-1301	48	

32- and 48-Circuit Plugs

Order No.	Terminal Pitch	Housing Color
64325-1010	0.635mm (.025")	White
64325-1023	1.50mm (.059")	Orange

SPECIFICATIONS

Reference Information

Packaging: Box with Carton Interleaf

Mates with:

28-Way: Generic headers available soon

53-Way: 64321-2211 CMC Header

Use with:

Terminals: Series 64322 CP 0.635mm (.025") pitch

Series 64323 CP 1.50mm (.059") pitch

Series 64324 CP 2.80mm (.110") pitch

Plugs: 64325-1010 CP 0.635mm (.025")

pitch terminals

64325-1023 CP 1.50mm (.059")

pitch terminals

64325-1091 Seal Plug CP 2.80mm

(.110") pitch terminals

Wire Caps: 28-Way: 64320-1301

53-Way: 64321-1101

Designed in: Millimeters

Electrical

Voltage: 14V

Current:

max. 10.0A - 0.635mm (.025") pitch terminals

max. 24.0A - 1.50mm (.059") pitch terminals

max. 40.0A - 2.80mm (.110") pitch terminals

Contact Resistance:

0.635mm (.250") pitch terminal: 8 milliohms max.

1.50mm (.059") pitch terminal: 4 milliohms max.

2.80mm (.110") pitch terminal: 4 milliohms max.

Dielectric Withstanding Voltage: 1000V AC min.

Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force:

0.635mm (.025") pitch terminal: 10.00N (2.25 lb)

1.50mm (.059") pitch terminal: 15.00N (3.37 lb)

2.80mm (.110") pitch terminal: 15.00N (3.37 lb)

Contact Retention to Housing:

0.635mm (.025") pitch terminal: 60.00N (13.49 lb)

1.50mm (.059") pitch terminal: 100.00N (22.48 lb)

2.80mm (.110") pitch terminal: 100.00N (22.48 lb)

Wire Pull-Out Force: 100.00N (22.48 lb)

Mating Force: 60.00N (13.49 lb) max.

Unmating Force: 60.00N (13.49 lb) max.

Durability: 10 mating cycles

Physical

Housing: PBT Polyester, Glass-filled

Lead-Free: Yes

Operating Temperature: -40 to +125°C



CMC Hybrid Connectors Standard and Power Versions

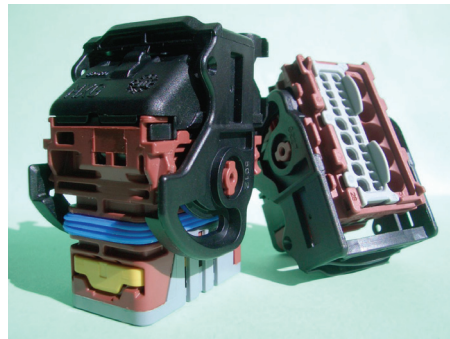
Power Receptacles

64318 28-Circuit Receptacle

64320 28-Circuit Wire Cap

64321 53-Circuit Receptacle
and Wire Cap

64325 Plug



28-Circuit CMC Receptacle



53-Circuit CMC Receptacle

ORDERING INFORMATION

Receptacles

Order No.	Circuits	Coding Key Color	Wire Output
64318-3011	28	Black	Right
64318-3018		Grey	
64318-3019		Brown	
64318-1011		Black	Left
64318-1018		Grey	
64318-1019		Brown	
64321-2011	53	Black	Right
64321-2018		Grey	
64321-2019		Brown	
64321-1011		Black	Left
64321-1018		Grey	
64321-1019		Brown	

Wire Caps

Order No.	Circuits	Housing Color
64320-1301	28	Black
64321-1101	53	

28- and 53-Circuit Plugs

Order No.	Terminal Path	Housing Color
64325-1010	0.635mm (.025")	White
64325-1023	1.50mm (.059")	Orange
64325-1091	2.80mm (.110")	Black



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Standard Receptacles

64319 32-Circuit Receptacle
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64320 48-Circuit Receptacle
and Wire Cap

64325 Plug

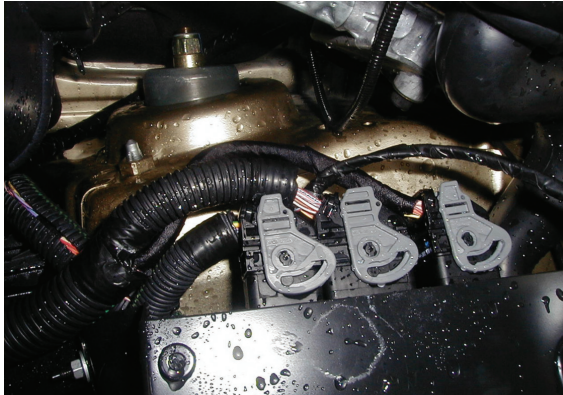
Power Receptacles

64318 28-Circuit Receptacle

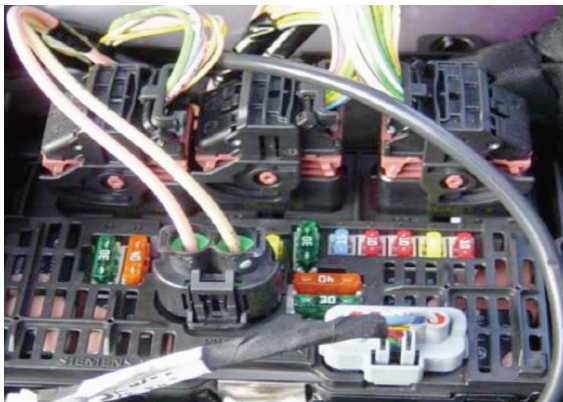
64320 28-Circuit Wire Cap

64321 53-Circuit Receptacle
and Wire Cap

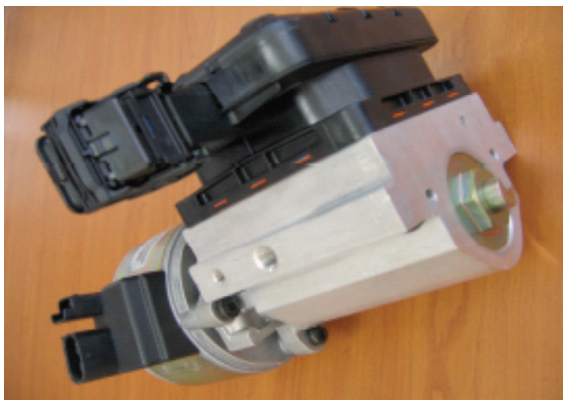
64325 Plug



Engine Control Box



Electronic Body Application



Powertrain Application

■ Markets

- Cars
- Trucks
- Busses
- Agricultural equipment
- Motorcycle
- Marine

■ Applications: Wire-to-Board

Power Train

- Engine control unit
- Gear box
- Suspension controller

Body Electronics

- Junction box
- Lightning control system
- Electrical doors

www.molex.com/product/cmc.html

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