Visit www.molex.com to access more part numbers and product information, download sales drawings, product specifications, 3D models, place sample requests, and more.

molex®
one company › a world of innovation

As a major supplier to the global automotive industry, Molex offers vehicle manufacturers and their suppliers a wide range of products and extensive research and development capabilities that include rapid prototyping and high volume production support. In addition, we apply breakthrough technologies from other markets and industries and apply them to in-vehicle electronic devices.

The average new vehicle today contains twice as many connectors as models produced only ten years ago. As electronic content increases in automotive vehicles, Molex is responding with solutions that simplify electrical distribution systems. We are dedicated to reducing weight and packaging space while boosting performance and reliability. Many products incorporate our proprietary technologies in shielding, filtering and assembly.

Our automotive design teams are located in technical centers throughout the world and are linked electronically to share expertise and expedite development. All of our manufacturing sites are ISO 9000 and QS 9000 certified and we currently support automotive manufacturing in all areas of the world.

We are dedicated to developing products that address the growing demand for innovative electrical interfaces, and Molex has created and defined new industry standards by partnering with many agencies including USCAR.

Molex has created unique connector interfaces for four key application segments:

Power train

- Fully sealed, high performance interconnect systems that offer the densest package in the automotive market
- MX123™ and CMC accommodate low level signal and high current load requirements
- Mate assist receptacles reduce harness assembly complexity by integrating the housing, lever, terminal retention feature and connector retention features in one standard assembly
- Sealing performance and package size are optimized by utilizing interfacial and matte seal technologies
- Applications include: on-engine, off road construction, industrial equipment

Sealed

- Wide standard product portfolio dedicated to offering low and stable contact resistance in harsh applications
- Available in matte sealed and cable sealed versions, the MX150™ systems are designed to support current loading for both low-level signal and power applications up to 22.0A
- The MX150 connector footprint and profile has been adapted by industry agency USCAR as their design criteria for systems supporting this specification
- Applications include: exterior lighting, door lock mechanisms, fuel injectors, spark plugs, wiper motors, washers, power steering and hosts of other safety devices

Unsealed

- Stack64™, the modular 0.64mm, 1.50mm and 2.80mm terminal interconnect system, addresses the growing electronic device requirements within today's vehicles by supporting both low-level signal requirements and power requirements up to 30.0A
- Fully-validated to USCAR specifications, Stac64 header assemblies can be used as stand alone components or multiple headers may be ganged together to support a large range of signal and power needs without the need for additional tooling
- Other product in this application segment include: H-DAC64™, MOST, MOX, NSCC
- Applications include: radios, amplifiers, power seats, HVAC, door zone modules, interior lighting, electronic mirrors and most interior electronic interfaces

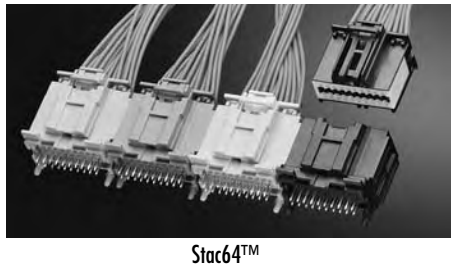
High Speed

- Molex's HSAutoLink™ family is the emerging high-speed data bus for vehicles, encompassing technologies such as Universal Serial Bus (USB 2.0), Low Voltage Differential Signaling (LVDS), 1394, FlexRay, eMOST and Ethernet
- Leveraging data communications expertise, Molex has packaged an economical and widely deployed five-pin shielded connection system from the consumer market into a more rugged connector system to meet automakers' mechanical requirements and to bring USB and other technologies to vehicle information and entertainment systems
- USCAR-30 supports USB 2.0 requirements for OEM system certification
- Applications include: MP3 players, infotainment, telematic devices, safety cameras and displays

MX123™

CMC

MX150™

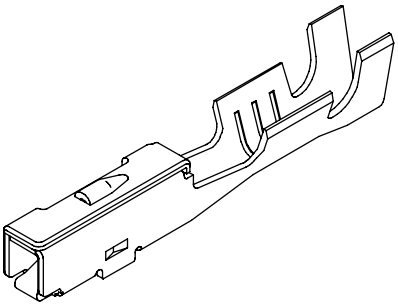


Stac64™

HSAutoLink™

1.00mm (.040") Tab Terminal

50654
Female



Order No.	Wire Range (mm²)	Lead-free
50654-1001	AVS (AVSS) 0.3-0.5	Yes

Features and Benefits
- Locking tab secures terminal to housing

Reference Information
Product Specification: PS-68145-002
Packaging: Reel
Mates With: 50660 Terminal
Use With: 35563, 35564, 35896, 35898, 49014, 64002 and 68508 housings
Designed In: Millimeters

Electrical
Voltage: 13V
Current: 5.0A max.
Contact Resistance: 5 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC Megohms min.

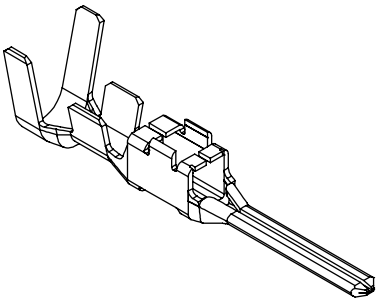
Mechanical
Contact Insertion Force: 1.5 kgf max.
Contact Retention to Housing: 8.0 kgf min.
Durability: 50 cycles

Physical
Contact: Copper Alloy
Plating: Pre-Tin

www.molex.com/customer.html?seriesNumber=50654

1.00mm (.040") Tab Terminal

50660
Male



Order No.	Wire Range (mm²)	Lead-free
50660-9001	AVS (AVSS) 0.3-0.5	Yes

Features and Benefits
- Locking tab secures terminal to housing

Reference Information
Product Specification: PS-68145-002
Packaging: Reel
Mates With: 50654 terminal
Use With: 35897, 35899, 49016, 49102 and 68507 housings
Designed In: Millimeters

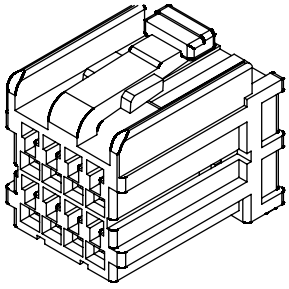
Electrical
Voltage: 13V
Current: 5.0A max.
Contact Resistance: 5 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical
Contact Insertion Force: 1.5 kgf max.
Contact Retention to Housing: 8.0 kgf min.
Durability: 50 cycles

Physical
Contact: Brass
Plating: Pre-Tin

1.00mm (.040") Tab Wire-to-Wire/ Wire-to-Board 040 111 Housing

68508/64002/35563/35564
Female, 2 Rows



Circuits	Order No.	Color
8	68508-0811	Black
	68508-0815	Gray
12	64002-1210	White
	64002-1215	Gray
16	35563-1610	White
	35563-1615	Gray
20	35564-2010	White
	35564-2015	Gray

Features and Benefits
- Meets industry-standard requirements for 040 automotive interface
- Side Terminal Position Assurance (TPA) feature virtually eliminates terminal backout
- Rugged contact design offers increased life cycle durability and mechanical and electrical reliability
- Fully shrouded to protect contacts

Reference Information
Product Specification: PS-68145-002
Packaging: Bag
Mates With: 53874, 68145 and 68151
Use With: 50654
Designed In: Millimeters

Electrical
Voltage: 13V
Current: 5.0A max.
Contact Resistance: 5 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical
Contact Insertion Force: 1.5 kgf max.
Contact Retention to Housing: 8.0 kgf min.

Circuits	Mating Force (kgf. max.)	Unmating Force (kgf. max.)
8	10	10
12		
16	15	15
20		

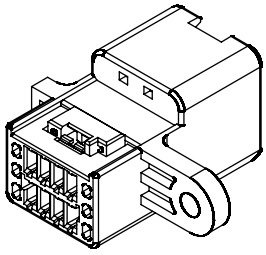
Durability: 50 cycles

Physical
Housing: Polyester, UL 94-HB

www.molex.com/customer.html?seriesNumber=68508

1.00mm (.040") Tab Wire-to-Wire 040 III Housing

68507/64002
Male, 8 Circuits, 2 Rows



Circuits	Order No.	Type
8	68507-0811	Screw
	68507-0821	Clip
12	64002-1210	Screw
	64002-1215	

Features and Benefits
- Meets industry-standard requirements for 040 automotive interface
- Side Terminal Position Assurance (TPA) feature virtually eliminates terminal backout
- Rugged contact design offers increased life cycle durability, and mechanical and electrical reliability
- Side flange provides panel mounting retention
- Fully shrouded to protect contacts

Reference Information
Product Specification: PS-35896-001 and PS-68507-003
Packaging: Bag
Mates With: 68508, 64022
Use With: 50654 and 50660
Designed In: Millimeters

Electrical
Voltage: 13V
Current: 5.0A max.
Contact Resistance: 5 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

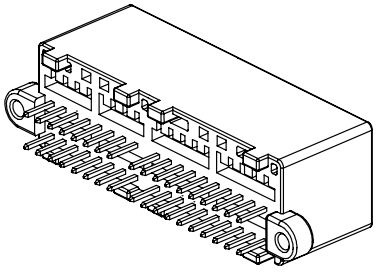
Mechanical
Contact Insertion Force: 1.5 kgf max.
Contact Retention to Housing: 8.0 kgf min.
Mating Force: 10 kgf max.
Unmating Force: 10 kgf max.
Durability: 50 cycles

Physical
Housing: Polyester, UL 94-HB

www.molex.com/customer.html?seriesNumber=68507

1.00mm (.040") Tab Wire-to-Board 040 III Header

68145/68151-XX1X
Vertical



Features and Benefits
- Meets industry-standard requirements for 040 automotive interface
- Rugged contact design offers increased life cycle durability and mechanical and electrical reliability
- Fully shrouded to protect contacts

Reference Information
Product Specification: PS-68145-002 and PS-68145-005
Packaging: Tray
Mates With: 35563, 35564, 64002 and 68508
Use With: 50654
Designed In: Millimeters

Electrical
Voltage: 13V
Current: 5.0A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical
Contact Insertion Force: 1.5 kgf max.
Contact Retention to Housing: 8.0 kgf min.

Circuits	Mating Force (kgf. max.)	Unmating Force (kgf. max.)
8	10	10
12		
16	15	15
20		
28	18	18
36		

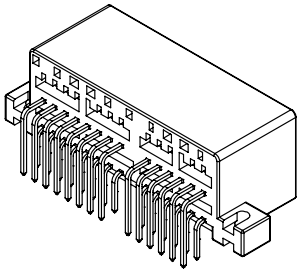
Durability: 50 cycles

Physical
Housing: Polyester, UL 94-HB
Contact: Brass
Plating: Contact Area—Tin
Solder Tail Area—Tin
Underplating: Copper
PCB Thickness: 1.6mm (.062")

Circuits	Order No.	Color	Lead-free
8	68145-0811	Black	Yes
	68145-0815	Gray	
12	68145-1211	Black	
	68145-1215	Gray	
16	68145-1615		
20	68151-2015		
28	68145-2815		
	68145-2811	Black	
36	68145-3615	Gray	

1.00mm (.040") Tab Wire-to-Board 040 III Header

68145/68151-XX2X
Right Angle



Features and Benefits
- Meets industry-standard requirements for 040 automotive interface
- Rugged contact design offers increased life cycle durability and mechanical and electrical reliability
- Fully shrouded to protect contacts

Reference Information
Product Specification: PS-68145-002 and PS-68145-005
Packaging: Tray
Mates With: 35563, 35564, 64002 and 68508
Use With: 50654
Designed In: Millimeters

Electrical
Voltage: 13V
Current: 5.0A max.
Contact Resistance: 5 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

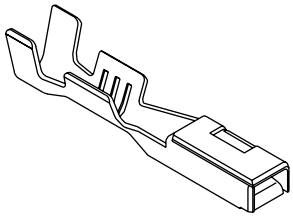
Mechanical
Contact Insertion Force: 1.5 kgf max.
Contact Retention to Housing: 8.0 kgf min.
Mating Force: 15 kgf max.
Unmating Force: 15 kgf max.
Durability: 50 cycles

Physical
Housing: Polyester, UL 94-HB
Contact: Brass
Plating: Contact Area—Tin
Solder Tail Area—Tin
Underplating: Copper
PCB Thickness: 1.6mm (.062")

Circuits	Order No.	Color	Lead-free
8	68145-0821	Black	Yes
	68145-0825	Gray	
12	68145-1221	Black	
	68145-1225	Gray	
16	68145-1625		
20	68151-2025		
28	68145-2825		
	68145-2821	Black	
36	53874-3615		

2.30mm (.090") Tab Terminal

35421
Female



Features and Benefits
- Housing-locking feature avoids deformation of terminal
- Accepts wide wire range (0.3 to 2.0mm²)

Reference Information
Product Specification: PS-35282
Packaging: Reel
Mates With: 35420-9702/9802/9902
Use With: 35284 housing
Designed In: Millimeters

Electrical
Voltage: 13V
Current:

Wire Size	Current
0.3	6A
0.5	8A
0.85	10A
1.25	14A
2.0	18A

Contact Resistance: 3 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical
Contact Insertion Force: 1.5 kgf max.
Contact Retention to Housing: 10 kgf min.
Durability: 50 cycles

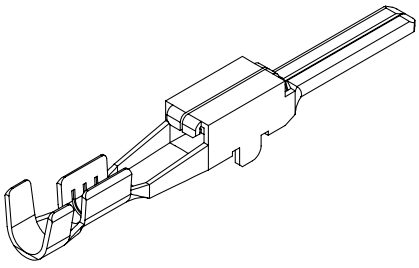
Physical
Contact: Copper Alloy
Plating: Tin

Order No.	Wire Range (mm²)	Lead-free
35421-6702	AVS (CAVS) 0.30 to 0.50 (.012 to .020)	Yes
35421-6802	AVS (CAVS) 0.50 to 1.25 (.020 to .050)	
35421-6902	AVSS 2f	

www.molex.com/customer.html?seriesNumber=35421

2.30mm (.090") Tab Terminal

57919
Male



Features and Benefits
- Locking tab secures terminal to housing

Reference Information
Product Specification: PS-35896-2090
Packaging: Reel
Mates With: 35421 Terminal
Use With: 35897 and 49016 housings
Designed In: Millimeters

Electrical
Voltage: 13V
Current:

Wire Size	Current
0.3	6A
0.5	8A
0.85	10A
1.25	14A
2.0	18A

Contact Resistance: 3 milliohms max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical
Contact Insertion Force: 1.5 kgf max.
Contact Retention to Housing: 10 kgf min.
Durability: 50 cycles

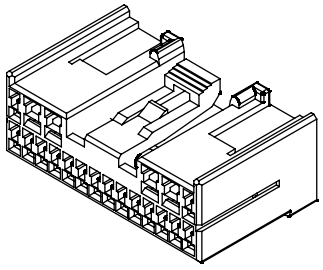
Physical
Contact: Brass
Plating: Pre-Tin

Order No.	Wire Range (mm²)	Insulation Diameter	Lead-free
57919-6702	0.3-0.5	2.60mm (.102") max.	Yes
57919-6802	0.85-1.25	2.90mm (.115") max.	
57919-6902	2.0		

www.molex.com/customer.html?seriesNumber=57919

1.00/2.30mm (.040/.090") Tab Wire-to-Wire 0409 Hybrid Housing

49014/35898/35896
Female



Features and Benefits
- Meets industry-standard requirements for 040/090 automotive interface
- Side Terminal Position Assurance (TPA) feature virtually eliminates terminal backout
- Rugged contact design offers increased life cycle durability, and mechanical and electrical reliability
- Side flange provides panel mounting retention
- Fully shrouded to protect contacts
- Hybrid structure:
  1.00mm (.040") terminals for signal circuits
  2.30mm (.090") terminals for normal circuits

Circuits	Signal	Normal
20	16	4
22	18	
24	20	

Reference Information
Product Specification: PS-35896-001 and PS-68507-003
Packaging: Bag
Mates With: 35897, 35899 and 49016
Use With: 35421 and 50654
Designed In: Millimeters

Electrical
Voltage: 13V
Current: 5.0A max. (.040")
10.0A max. (.090")
Contact Resistance: 3 milliohms max. (090)
5 milliohms max. (040)
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical
Contact Insertion Force: 1.5 kgf max.
Contact Retention to Housing: 8 kgf min. (040)
10 kgf min (090)

Circuits	Mating Force (kgf. max.)	Unmating Force (kgf. max.)
10	14	14
14	18	18
20		
22		
24		

Durability: 50 cycles

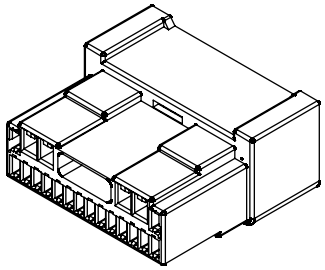
Physical
Housing: White Polyester, UL 94-HB

Circuits	Order No.
14	35898-1410
20	35896-2010
22	35896-2210
24	35896-2410

www.molex.com/customer.html?seriesNumber=49014

1.00/2.30mm (.040/.090") Tab Wire-to-Wire 0409 Hybrid Housing

35897
Male



Features and Benefits
- Meets industry-standard requirements for 040/090 automotive interface
- Side Terminal Position Assurance (TPA) feature virtually eliminates terminal backout
- Rugged contact design offers increased life cycle durability, and mechanical and electrical reliability
- Side flange provides panel mounting retention
- Fully shrouded to protect contacts

Reference Information
Product Specification: PS-35896-2090
Packaging: Bag
Mates With: 35896
Use With: 50660 and 57919
Designed In: Millimeters

Electrical
Voltage: 13V
Current: 5.0A max. (.040")
10.0A max. (.090")
Contact Resistance: 3 milliohms max. (090)
5 milliohms max. (040)
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

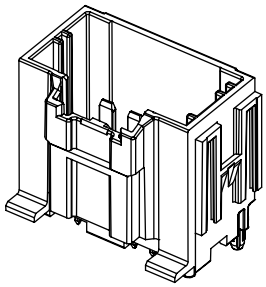
Mechanical
Contact Insertion Force: 1.5 kgf min.
Contact Retention to Housing: 8 kgf min. (040)
10 kgf min (090)
Mating Force: 18 kgf max.
Unmating Force: 18 kgf max.
Durability: 50 cycles

Physical
Housing: Polyester, UL 94-HB

Circuits	Order No.
20	35897-2010
22	35897-2210
24	35897-2410

2.54mm (.100") Pitch Stac64™ Header

34695
Vertical Single-Bay Hybrid



Features and Benefits
- PCB alignment posts ensure all terminals are properly aligned into PCB through-holes during assembly and retain header to PCB during assembly and solder processing
- PCB stand-offs molded into housings provide additional trace-routing real estate under the headers
- High temperature thermoplastic housings withstand infra red (IR) and wave lead-free solder processing per ES-40000-5013 Molex specification
- Stackable connection system of readily available PCB headers ensure reduced time-to-market: engineering and validation times reduced significantly, no tooling necessary to produce custom multi-bay headers
- Pre-assembled, linear Mylar PC tail alignment strip for right-angle headers reduces PCB packaging complexity and provides space savings
- The header housings are molded in standard USCAR color schemes for additional polarizations to match harness connector color-coding scheme for visual aid in assembly
- Modular-housing design with standard dovetail features molded into the housings allows headers to be ganged together in large assemblies to meet growing terminal quantity requirements

Reference Information
Packaging: Male Headers–Tray
Mates With: Series 31372 female connectors
Designed In: Millimeters

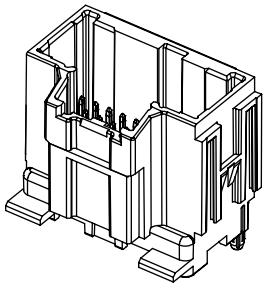
Electrical
Voltage: 500V max.
Current: 2.80mm (.110")—30.0A max.
1.50mm (.059")—18.0A max.
Dielectric Withstanding Voltage: 500V DC
Isolation Resistance: 20 Megohms min.
Durability: 10 milliohms max.—10 cycles
Header Pin retention Force:
2.80mm (.110")—70N (15.7 lb) min.
1.50mm (.059")—70N (15.7 lb) min.

Physical
Header Housings: Glass filled SPS
Contact:
2.80mm (.110") blades—Copper Alloy
1.50mm (.059") blades—Copper Alloy
Plating:
1.50mm (.059") blades: Overplating—Tin Underplating—Nickel
2.80mm (.110") blades: Overplating—Tin Underplating—Nickel

Circuit Size	Order No.	Polarization Option	Color	Packaging	Assembly Features	Headers
10	34695-0100	A	Black	Tray	Housing and Blades Assembly	Power
	34695-0101	B	Grey			

2.54mm (.100") Pitch Stac64™ Header

34690
Vertical Single-Bay



Features and Benefits
- PCB alignment posts ensure all terminals are properly aligned into PCB through-holes during assembly and solder processing
- PCB stand-offs molded into housings provide additional trace-routing real estate under the headers
- High temperature thermoplastic housings withstand infra red (IR) and wave lead-free solder processing per ES-40000-5013 Molex specification
- Stackable connection system of readily available PCB headers ensure reduced time-to-market: engineering and validation times reduced significantly, no tooling necessary to produce custom multi-bay headers
- The header housings are molded in standard USCAR color schemes for additional polarizations to match harness connector color-coding scheme for visual aid in assembly
- Modular-housing design with standard dovetail features molded into the housings allows headers to be ganged together in large assemblies to meet growing terminal quantity requirements

Reference Information
Packaging: Male Vertical Headers—Tray or Tube
Mates With: Series 34729 female connectors
Designed In: Millimeters

Electrical
Voltage: 500V max.
Current: 0.64mm (.025")—8.0A max.
Dielectric Withstanding Voltage: 500V DC
Isolation Resistance: 20 Megohms min.

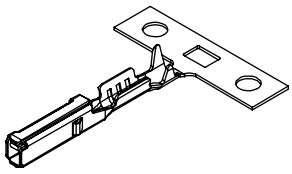
Mechanical
Durability: 10 milliohms max.—10 cycles
Header Pin Retention Force:
0.64mm (.025")—15N (3.4 lb) min.

Physical
Header Housings: Glass filled SPS
Contact: 0.64mm (.025") pins—Copper Alloy
Plating:
0.64mm (.110") signal pins: Overplating—Tin Underplating—Nickel

Circuit Size	Order No.	Polarization Option	Color
8	34690-0080	A	Black
	34690-0081	B	Grey
	34690-0082	C	Brown
12	34690-0120	A	Black
	34690-0121	B	Grey
	34690-0122	C	Brown
16	34690-0160	A	Black
	34690-0161	B	Grey
	34690-0162	C	Brown
20	34690-0200	A	Black
	34690-0201	B	Grey
	34690-0202	C	Brown
	34690-0203	D	Green

0.64mm (.025") CTX64 Crimp Terminal

34803
Female



Features and Benefits
- Excellent stress-relaxation properties
- One-piece design to keep cost low
- Clean-body design to insert through matte seal
- Accommodates ISO/JASO and SAE wires
- Lead free
- Compatible to competitor's RH-terminal cavity
- Single polarization

Reference Information
Product Specification: PS-502306-001
Packaging: Reel
Mates With: 0.64mm wide by 0.64mm thick blade
Use With: 34729, 98833 and 502725
Designed In: Millimeters

Electrical
Voltage: 250V
Current: 7.0A
Contact Resistance: 5 milliohms max.

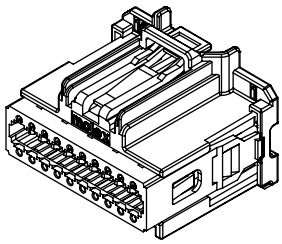
Mechanical
Wire Pull-Out Force: 0.85mm²—130N min.
0.22mm²—40N min
Mating Force: 4N max.
Unmating Force: 4N max.
Durability: 10 mates max.

Physical
Contact: Copper alloy
Plating: Contact Area—Tin
Solder Tail Area—Tin
Underplating—Nickel
Insulation Diameter: 1.9mm max.
Wire Gauge: 0.22 to 0.85mm²

Order No.		Polarization Option See Inset	Grip Code	Wire Gauge			Plating
D-Wind (Left Payoff)	B-Wind (Right Payoff)			ISO (mm²)	JASO (mm²)	SAE (gauge)	
34803-0211	34803-0213	Dual	S	0.22-0.35	0.3	22	Tin
34803-0212	34803-0214		L	0.50-0.75	0.50-0.85	20	

2.54mm (.100") Pitch Stac64™ Signal Receptacle

34729



Features and Benefits
- Pre-assembled TPA to receptacle housing shipped as single assembly provide applied labor and cost savings

Reference Information
Packaging: Female Receptacle Connectors—Bulk Pack
Mates With: Series 34690, 34691 male unsealed headers
Use With Terminals:
0.64mm (.059") female—Series 502306
Designed In: Millimeters

Electrical
Voltage: 500V max.
Current: 0.64mm (.025")—8.0A max.
Contact Resistance: 0.64mm (.025")—20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Isolation Resistance: 20 Megohms min.

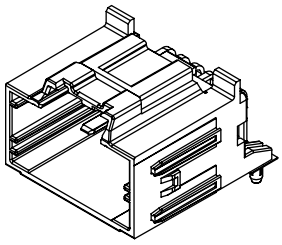
Mechanical
Connector Retention (Primary latch): 110N (24.7 lb) min.
Contact Retention to Housing:
0.64mm (.025")—75N (16.9 lb) min. with TPA,
30N (6.7 lb) without TPA
Contact Insertion Force Into Housing: 30N (6.7 lb) max.
Connector Audible Feedback: 7dB over ambient
Durability: 10 milliohms max.—10 cycles
TPA Insertion Force: 60N (13.5 lb) max.
TPA Extraction Force: 60N (13.5 lb) max.
Thermal Shock (Class 2, 100 cycles):
0.64mm (.025")—20 milliohms max.
Vibration/Mechanical Shock (electrical):
0.64mm (.025")—20 milliohms max.
Temperature/Humidity (electrical):
0.64mm (.025")—20 milliohms max.
High Temperature Exposure (electrical):
0.64mm (.025")—20 milliohms max.

Physical
Harness Housings: Glass filled SPS/nylon blend
TPA: 15% glass filled polyester

Circuit Size	Order No.	Polarization Option	Color	Assembly Features	Comment
8	34729-0080	A	Black	Housing and TPA Assembly	0.64mm (.025") terminal size USCAR receptacle connectors
	34729-0081	B	Grey		
	34729-0082	C	Brown		
12	34729-0120	A	Black		
	34729-0121	B	Grey		
	34729-0122	C	Brown		
16	34729-0160	A	Black		
	34729-0161	B	Grey		
	34729-0162	C	Brown		
20	34729-0200	A	Black		
	34729-0201	B	Grey		
	34729-0202	C	Brown		
	34729-0203	D	Green		

2.54mm (.100") Pitch Stac64™ Header

34696
Right Angle Single-Bay Hybrid



Features and Benefits
- PCB alignment posts ensure all terminals are properly aligned into PCB through-holes during assembly and retain header to PCB during assembly and solder processing
- PCB stand-offs molded into housings provide additional trace-routing real estate under the headers
- High temperature thermoplastic housings withstand infra red (IR) and wave lead-free solder processing per ES-40000-5013 Molex specification
- Stackable connection system of readily available PCB headers ensure reduced time-to-market: engineering and validation times reduced significantly, no tooling necessary to produce custom multi-bay headers
- The header housings are molded in standard USCAR color schemes for additional polarizations to match harness connector color-coding scheme for visual aid in assembly
- Modular-housing design with standard dovetail features molded into the housings allows headers to be ganged together in large assemblies to meet growing terminal quantity requirements

Reference Information
Packaging: Male Headers—Tray or Tube
Mates With: Series 31372 female connectors
Designed In: Millimeters

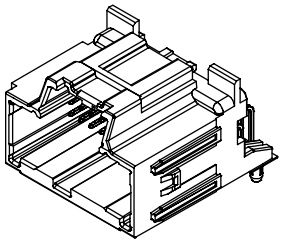
Electrical
Voltage: 500V max.
Current: 2.80mm (.110")—30.0A max.
1.50mm (.059")—18.0A max.
Dielectric Withstanding Voltage: 500V DC
Isolation Resistance: 20 Megohms min.
Polarization Feature Effectiveness: 220N (49.5 lb) min.
Durability: 10 milliohms max.—10 cycles
Header Pin retention Force:
2.80mm (.110")—70N (15.7 lb) min.
1.50mm (.059")—70N (15.7 lb) min.

Physical
Header Housings: Glass filled SPS
Contact:
2.80mm (.110") blades—Copper Alloy
1.50mm (.059") blades—Copper Alloy
Plating: 1.50mm (.059") blades:
Overplating—Tin
Underplating—Nickel
2.80mm (.110") blades: Overplating—Tin
Underplating—Nickel

Circuit Size	Order No.	Polarization Option	Color	Packaging	Assembly Features	Headers
10	34695-0100	A	Black	Tray	Housing and Blades Assembly	Power
	34695-0101	B	Grey			
	34695-9100	A	Black	Tube		
	34695-9101	B	Grey			

2.54mm (.100") Pitch Stac64™ Header

34691
Right Angle Single-Bay



Features and Benefits
- PCB alignment posts ensure all terminals are properly aligned into PCB through-holes during assembly and retain header to PCB during assembly and solder processing
- PCB stand-offs molded into housings provide additional trace-routing real estate under the headers
- High temperature thermoplastic housings withstand infra red (IR) and wave lead-free solder processing per ES-40000-5013 Molex specification
- Stackable connection system of readily available PCB headers ensure reduced time-to-market: engineering and validation times reduced significantly, no tooling necessary to produce custom multi-bay headers
- The header housings are molded in standard USCAR color schemes for additional polarizations to match harness connector color-coding scheme for visual aid in assembly
- Modular-housing design with standard dovetail features molded into the housings allows headers to be ganged together in large assemblies to meet growing terminal quantity requirements

Reference Information
Packaging: Male Vertical Headers—Tray
Mates With: Series 34729 female connectors
Designed In: Millimeters

Electrical
Voltage: 500V max.
Current: 0.64mm (.025")—8.0A max.
Dielectric Withstanding Voltage: 500V DC
Isolation Resistance: 20 Megohms min.

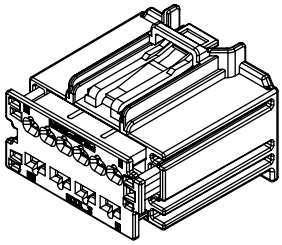
Mechanical
Durability: 10 milliohms max.—10 cycles
Header Pin retention Force:
0.64mm (.025")—15N (3.4 lb) min.

Physical
Header Housings: Glass filled SPS
Contact: 0.64mm (.025") pins—Copper Alloy
Plating: 0.64mm (.110") signal pins:
Overplating—Tin
Underplating—Nickel

Circuit Size	Order No.	Polarization Option	Color
8	34691-0080	A	Black
	34691-0081	B	Grey
	34691-0082	C	Brown
12	34691-0120	A	Black
	34691-0121	B	Grey
	34691-0122	C	Brown
16	34691-0160	A	Black
	34691-0161	B	Grey
	34691-0162	C	Brown
20	34691-0200	A	Black
	34691-0201	B	Grey
	34691-0202	C	Brown
	34691-0203	D	Green

2.54mm (.100") Pitch Stac64™ Hybrid Receptacle

31372



Features and Benefits

- Pre-assembled TPA to receptacle housing shipped as single assembly provide applied labor and cost savings

Reference Information

Packaging: Female Receptacle Connectors—Bulk Pack
Male Vertical Headers—Tray
Mates With: Series 34695, 34696 male unsealed headers
Use With Terminals:
1.50mm (.059") female—Molex 33012-2001, -2002, -2003
2.80mm (.110") female—Tyco and Yazaki
Tooling: Molex & Tyco Electronics
Designed In: Millimeters

Electrical

Voltage: 500V max.
Current: 2.80mm (.110")—30.0A max.
1.50mm (.059")—18.0A max.
Contact Resistance: 2.80mm (.110")—5 milliohms max.
1.50mm (.059")—10 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Isolation Resistance: 20 Megohms min.

Mechanical

Mating Force: Less than 75N (16.9 lb)
Unmating Force: Less than 75N (19.1 lb)
Connector Retention (Primary latch): 110N (24.7 lb) min.
Contact Retention to Housing: 2.80mm (.110")—90N (20.2 lb) min. with TPA, 60N (13.5 lb) without TPA
1.50mm (.059")—85N (19.1 lb) min. with TPA, 45N (10.1 lb) without TPA
Contact Insertion Force Into Housing: 30N (6.7 lb) max.
Connector Audible Feedback: 7dB over ambient
Durability: 10 milliohms max.—10 cycles
TPA Insertion Force: 60N (13.5 lb) max.
TPA Extraction Force: 60N (13.5 lb) max.
Thermal Shock (Class 2, 100 cycles):
2.80mm (.110")—5 milliohms max.
1.50mm (.059")—10 milliohms max.
Vibration/Mechanical Shock (electrical):
2.80mm (110")—5 milliohms max.
1.50mm (.059")—10 milliohms max.
Temperature/Humidity (electrical):
2.80mm (.110")—5 milliohms max.
1.50mm (.059")—10 milliohms max.
High Temperature Exposure (electrical):
2.80mm (.110")—5 milliohms max.
1.50mm (.059")—10 milliohms max.

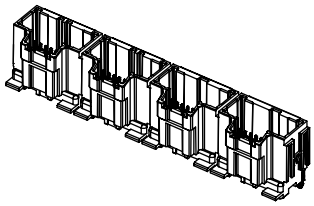
Physical

Harness Housings: glass filled SPS/nylon blend
TPA: 15% glass filled polyester
Contact:
2.80mm (.110") blades—Copper Alloy
1.50mm (.059") blades—Copper Alloy
Plating: 1.50mm (.059") blades:
Overplating—Tin
Underplating—Nickel 1.50mm (.059")
Receptacle Terminals: Overplating—Tin
Underplating—Nickel
2.80mm (.110") blades: Overplating—Tin
Underplating—Nickel

Circuit Size	Order No.	Polarization Option	Color	Comment
10	31372-1000	A	Black	1.50 and 2.80mm (.059 and .110") terminal size hybrid receptacle connectors
	31372-1001	B	Grey	

2.54mm (.100") Pitch Stac64™ Header

34707
Vertical Ganged Multi-Bay



Features and Benefits

- PCB alignment posts ensure all terminals are properly aligned into PCB through-holes during assembly and retain header to PCB during assembly and solder processing
- High temperature thermoplastic housings withstand infra red (IR) and wave lead-free solder processing per ES-40000-5013 Molex specification
- Stackable connection system of readily available PCB headers ensure reduced time-to-market: engineering and validation times reduced significantly, no tooling necessary to produce custom multi-bay headers
- The header housings are molded in standard USCAR color schemes for additional polarizations to match harness connector color-coding scheme for visual aid in assembly
- Modular-housing design with standard dovetail features molded into the housings allows headers to be ganged together in large assemblies to meet growing terminal quantity requirements

Reference Information

Packaging: Male Headers—Tray or Tube
Mates With: Series 34729 and 31372 female connectors
Designed In: Millimeters

Electrical

Voltage: 500V max.
Current: 2.80mm (.110")—30.0A max.
1.50mm (.059")—22.0A max.
0.64mm (.025")—8.0A max.
Dielectric Withstanding Voltage: 500V DC
Isolation Resistance: 20 Megohms min.

Mechanical

Durability: 10 milliohms max.—10 cycles
Header Pin retention Force:
2.80mm (.110")—70N (15.7 lb) min.
1.50mm (.059")—70N (15.7 lb) min.
0.64mm (.025")—15N (3.4 lb) min.

Physical

Header Housings: Glass filled SPS
Contact:
2.80mm (.110") blades—Copper Alloy
1.50mm (.059") blades—Copper Alloy
0.64mm (.025") pins—Copper Alloy
Plating: 0.64mm (.110") signal pins:
Overplating—Tin
Underplating—Nickel
1.50mm (.059") blades: Overplating—Tin
Underplating—Nickel
2.80mm (.110") blades: Overplating—Tin
Underplating—Nickel

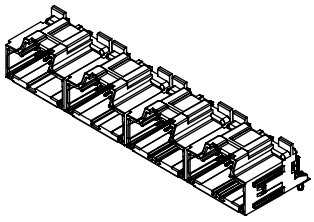
Order No.	No. of Bays	Circuit Sizes by Bay	Assembly Features	Headers
34707-2000	2	20 by 20	Housing and Pins Assembly	Signal
34707-2002				
34707-2012		10 by 20	Housing, Pins and Blades Assembly	Signal and Power
34707-2022		20 by 10	Housing and Blades Assembly	
34707-2030		10 by 10	Housing, Pins and Blades Assembly	Power
34707-4000	4	20 by 20 by 20 by 20	Housing and Pins Assembly	Dense Signal

Note: Other configurations available, contact Molex

2.54mm (.100") Pitch Stac64™ Header

34708

Right Angle Ganged Multi-Bay



Features and Benefits

- PCB alignment posts ensure all terminals are properly aligned into PCB through-holes during assembly and retain header to PCB during assembly and solder processing
- High temperature thermoplastic housings withstand infra red (IR) and wave lead-free solder processing per ES-40000-5013 Molex specification
- Stackable connection system of readily available PCB headers ensure reduced time-to-market: engineering and validation times reduced significantly, no tooling necessary to produce custom multi-bay headers
- The header housings are molded in standard USCAR color schemes for additional polarizations to match harness connector color-coding scheme for visual aid in assembly
- Modular-housing design with standard dovetail features molded into the housings allows headers to be ganged together in large assemblies to meet growing terminal quantity requirements

Reference Information

Packaging: Male Headers—Tray or Tube
Mates With: Series 34729 and 31372 female connectors
Designed In: Millimeters

Electrical

Voltage: 500V max.
Current: 2.80mm (.110")—30.0A max.
1.50mm (.059")—22.0A max.
0.64mm (.025")—8.0A max.
Dielectric Withstanding Voltage: 500V DC
Isolation Resistance: 20 Megohms min.

Mechanical

Durability: 10 milliohms max.—10 cycles
Header Pin Retention Force:
2.80mm (.110")—70N (15.7 lb) min.
1.50mm (.059")—70N (15.7 lb) min.
0.64mm (.025")—15N (3.4 lb) min.

Physical

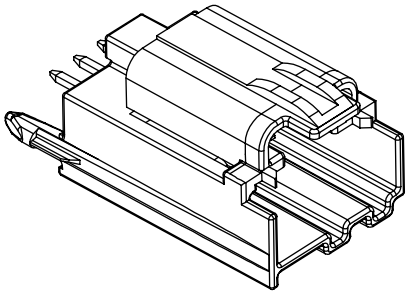
Header Housings: Glass filled SPS
Contact:
2.80mm (.110") blades—Copper Alloy
1.50mm (.059") blades—Copper Alloy
0.64mm (.025") pins—Copper Alloy
Plating: 0.64mm (.110") signal pins:
Overplating—Tin
Underplating—Nickel
1.50mm (.059") blades: Overplating—Tin
Underplating—Nickel
2.80mm (.110") blades: Overplating—Tin
Underplating—Nickel

Order No.	No. of Bays	Circuit Sizes by Bay	Assembly Features	Headers
34708-2000	2	20 by 20	Housing, Blades and Mylar Assembly	Signal
34708-2012		10 by 20	Housing, Pins, Blades and Mylar Assembly	Signal and Power
34708-2022		20 by 10		
34708-2030		10 by 10	Housing, Blades and Mylar Assembly	Power
34708-4000	4	20 by 20 by 20 by 20	Housing, Pins and Mylar Assembly	Dense Signal

Note: Other configurations available, contact Molex

2.54mm (.100") Pitch H-DAC 64™ Header

31101
Vertical Single Row



Features and Benefits
- Versatile product selection
- Scoop-proof housing
- Three standard polarizations in 3 colors
- TPA feature
- Positive-lock provides audible click
- Optional clip slot feature

Reference Information
Product Specifications: PS-31067-0001 (single row)
PS-31101-0001 (headers)
Packaging: Bag
Mates With:
Male and Female
Single Row—31067, 31068, 31072 and 31073
Headers—31100 and 31101
Use With: Industry approved male and female terminals
Designed In: Millimeters

Electrical
Voltage: 500V
Current: 10A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

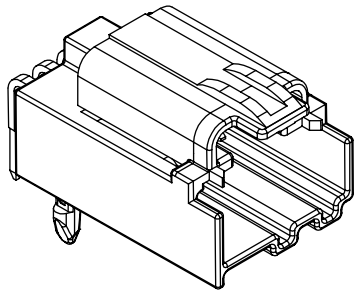
Mechanical
Contact Insertion Force: 30N (6.7 lb)
Contact Retention to Housing: 30N (6.7 lb)
Mating Force: 45N (10.1 lb)
Unmating Force: 45N (10.1 lb)
Durability: 10 cycles

Physical
Housing: Glass filled SPS
Contact: Copper Alloy
Plating: Overplating—Tin
Underplating—Nickel

Circuits	Order No.	Polarization	Options	Lead-free
4	31101-0040	A	PCB Retention Pegs	Yes
	31101-0041	B		
	31101-0042	C		
	31101-1140	A	Wings	
	31101-1240	B		
	31101-1340	C		

2.54mm (.100") Pitch H-DAC 64™ Header

31100
Right Angle Single Row



Features and Benefits
- Versatile product selection
- Scoop-proof housing
- Three standard polarizations in three colors
- TPA feature
- Positive-lock provides audible click
- Optional clip slot feature

Reference Information
Product Specifications: PS-31067-0001 (single row)
PS-31101-0001 (headers)
Packaging: Bag
Mates With:
Male and Female
Single Row—31067, 31068, 31072 and 31073
Headers—31100 and 31101
Use With: Industry approved male and female terminals
Designed In: Millimeters

Electrical
Voltage: 500V
Current: 10A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

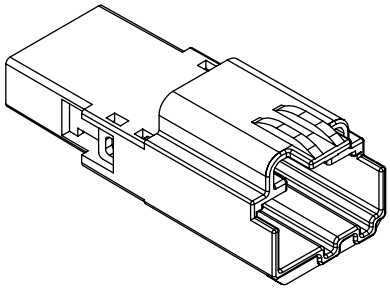
Mechanical
Contact Insertion Force: 30N (6.7 lb)
Contact Retention to Housing: 30N (6.7 lb)
Mating Force: 45N (10.1 lb)
Unmating Force: 45N (10.1 lb)
Durability: 10 cycles

Physical
Housing: Glass filled SPS
Contact: Copper Alloy
Plating: Overplating—Tin
Underplating—Nickel

Circuits	Order No.	Polarization	Lead-free
4	31100-0040	A	Yes
	31100-0041	B	
	31100-0042	C	

2.54mm (.100") Pitch H-DAC 64™ Male Plug

31067/31068/31072/ 31073 Single Row



Features and Benefits
- Versatile product selection
- Scoop-proof housing
- Three standard polarizations
- TPA feature
- Positive-lock provides audible click
- Optional clip slot feature

Reference Information
Product Specifications: PS-31067-0001 (single row)
PS-31101-0001 (headers)
Packaging: Bulk
Mates With:
Male and Female
Single Row—31067, 31068, 31072 and 31073
Headers—31100 and 31101
Use With: Industry approved male and female terminals
Designed In: Millimeters

Electrical
Voltage: 500V
Current: 10A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

Mechanical
Contact Insertion Force: 30N (6.7 lb)
Contact Retention to Housing: 30N (6.7 lb)
Mating Force: 45N (10.1 lb)
Unmating Force: 45N (10.1 lb)
Durability: 10 cycles

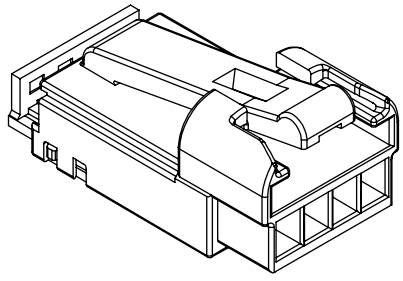
Physical
Housing: Glass filled SPS
Contact: Copper Alloy
Plating: Overplating—Tin
Underplating—Nickel

Circuits	Order No.	Polarization	Options	Lead-free
3	31067-1040	A		Yes
	31067-1041	B		
	31067-1042	C		
	31067-1070	A	christmas tree attachment	
	31067-1071	B		
	31067-1072	C		
4	31068-1040	A		
	31068-1041	B		
	31068-1042	C		
	31068-1070	A	christmas tree attachment	
	31068-1071	B		
	31068-1072	C		

Circuits	Order No.	Polarization	Options	Lead-free
5	31072-1040	A		Yes
	31072-1041	B		
	31072-1042	C		
	31072-1070	A	christmas tree attachment	
	31072-1071	B		
	31072-1072	C		
6	31073-1040	A		
	31073-1041	B		
	31073-1042	C		
	31073-1070	A	christmas tree attachment	
	31073-1071	B		
	31073-1072	C		

2.54mm (.100") Pitch H-DAC 64™ Female Receptacle

31067/31068/31072/31073 Single Row



Features and Benefits
- Versatile product selection
- Scoop-proof housing
- Three standard polarizations
- TPA feature
- Positive-lock provides audible click
- Optional clip slot feature

Reference Information
Product Specifications: PS-31067-0001 (single row)
PS-31101-0001 (headers)
Packaging: Bulk
Mates With:
Male and Female
Single Row—31067, 31068, 31072 and 31073
Headers—31100 and 31101
Use With: Industry approved male and female terminals
Designed In: Millimeters

Electrical
Voltage: 500V
Current: 10A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

Mechanical
Contact Insertion Force: 30N (6.7 lb)
Contact Retention to Housing: 30N (6.7 lb)
Mating Force: 45N (10.1 lb)
Unmating Force: 45N (10.1 lb)
Durability: 10 cycles

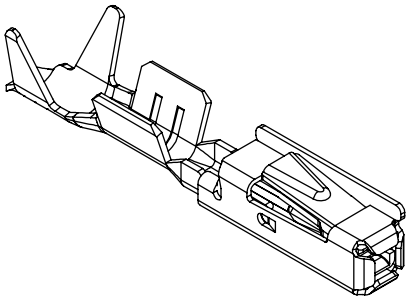
Physical
Housing: Glass filled SPS
Contact: Copper Alloy
Plating: Overplating—Tin
Underplating—Nickel

Circuits	Order No.	Polarization	Lead-free
3	31067-1010	A	Yes
	31067-1011	B	
	31067-1012	C	
4	31068-1010	A	
	31068-1011	B	
	31068-1012	C	

Circuits	Order No.	Polarization	Lead-free
5	31072-1010	A	Yes
	31072-1011	B	
	31072-1012	C	
6	31073-1010	A	
	31073-1011	B	
	31073-1012	C	

2.54mm (.100") Pitch MOX Crimp Terminal

98658
Female



Features and Benefits
- Two-piece laser-welded terminal
- Two points of contact
- For wire termination
- Two-piece terminal with sleeve design
- Steel sleeve protects mating area
- Polarization rib for terminal orientation during assembly
- Long contact area provides secure electrical connection

Reference Information
Product Specification: PS-98658-005
Packaging: Reel
Mates With: 0.635mm (.025") square pin terminals
Use With: MOX housings and various other connectors
Designed In: Millimeters

Electrical
Voltage: 14V DC
Current: 6.5A
Contact Resistance: 8 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 100 Megohms min.

Mechanical
Contact Insertion Force: 3.0N max.
Contact Retention to Housing: 40.0N min.
Wire Pull-Out Force: 50N min. on 0.22mm^2 wire
Insertion Force to Housing: 5.0N max. (for unsealed); 10.0N max. (for sealed connector)
Durability: 20 cycles

Physical
Contact: High Conductive Copper Alloy, 0.635mm (.025"), square
Plating: Pre-plated
Contact Area: Tin—1 to 3µm min.; Gold—0.4µm min.
Underplating: Nickel (for Gold-plated version only)

Order No.	Plating	Wire Size (AWG)	Wire size (mm^2)	Wire Insulation Diameter	Wire Strip Length	Lead-free
98658-1211	Tin	20-24	0.22-0.60	1.20-1.80mm (.047-.071")	3.00mm	Yes
98658-1212		18-22	0.75	1.70mm (.067") max	3.50mm	
98658-1213		20-24	0.22-0.50	1.20-1.50mm (.047-.060")	3.00mm	
98658-1221	Select Gold	20-24	0.22-0.60	1.20-1.80mm (.047-.071")		
98658-1222		18-22	0.75	1.70mm (.067") max	3.50mm	
98658-1223		20-24	0.22-0.50	1.20-1.50mm (.047-.060")	3.00mm	
98658-1231	2 points Select Gold	20-24	0.22-0.60	1.20-1.80mm (.047-.071")		
98658-1232		18-22	0.75	1.70mm (.067") max	3.50mm	
98658-1233		20-24	0.22-0.50	1.20-1.50mm (.047-.060")	3.00mm	

2.54mm (.100") Pitch MOX Receptacle Housing

98193
Single Row, Vertical With TPA

Features and Benefits
- Reusable one-piece secondary locking
- Inertial locking feature
- One-piece design with integrated secondary lock for easy use

Reference Information
Packaging: Bag
Use With: 98658
Designed In: Millimeters

Electrical
Voltage: 14V DC
Current: 6.0A
Contact Resistance: 8 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 100 Megohms min.

Mechanical
Contact Insertion Force: 5.0N (1.12 lb) max.
Contact Retention to Housing: 40.0N (9 lb) min.
Wire Pull-Out Force: 100.0N (22.5 lb) min.
Mating Force: 60.0N (13.5 lb) max.
Unmating Force: 60.0N (13.5 lb) max.
Durability: 20 cycles (with Tin-plated terminal)

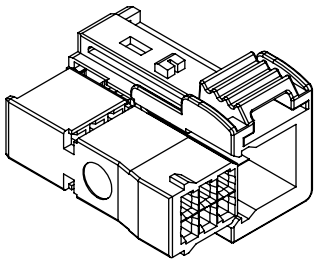
Physical
Housing: Black PA Polyamide (nylon) 6, UL 94V-2

Circuits	Order No.	Lead-free
6	98193-0001	Yes

2.54mm (.100") Pitch MOX Receptacle Housing

98298

2 by 3 Circuits Dual Row, Vertical Breakable



Features and Benefits

- Reusable two-piece secondary locking feature
- Inertial locking feature
- Six color and mechanical codings
- One-piece design with integrated secondary lock for easy use

Reference Information

Packaging: Bag
Mates With: Industry-standard interface
Use With: 98658
Designed In: Millimeters

Electrical

Voltage: 14V DC
Current: 6.0A
Contact Resistance: 8 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 5.0N (1.12 lb) max.
Contact Retention to Housing: 40.0N (9 lb) min.
Wire Pull-Out Force: 100N (22.5 lb) min.
Mating Force: 65.0N (14.6 lb) max.
Unmating Force: 60.0N (13.5 lb) max.
Durability: 20 cycles (with Tin-plated terminals)

Physical

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

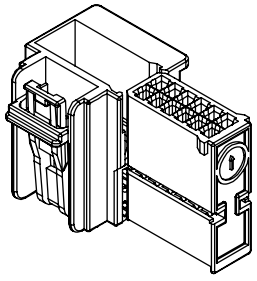
Circuits	Order No.	Color	Lead-free
6	98298-0001	Black	Yes
	98298-0002	White	
	98298-0003	Green	
	98298-0004	Brown	
	98298-0005	Gray	
	98298-0006	Blue	

www.molex.com/product/mox.html

2.54x2.54mm (.100"x.100") Pitch MOX Receptacle Housing

94552

Dual Row, Breakable 8/12 Circuits



Features and Benefits

- One-piece housing and secondary locking
- Breakable configuration
- Ease of use
- MQS compatible
- According to USCAR standard

Reference Information

Packaging: PK-94552-001
Mates With: 31341 series
Use With: 98658 series terminals
Designed In: Millimeters

Electrical

Voltage: 125 V RMS
Current: 7.5A max.
Contact Resistance: 7 milliohms max.
Dielectric Withstanding Voltage: 1000 V max.
Insulation Resistance: 10 Megohms min.

Mechanical

Contact Insertion Force into Housing: 15N (3.4 lb) max.
Contact Retention to Housing: 60N (13.5 lb) max.
Wire Pull-Out Force: 50N min.
Mating Force: 75N min.
Unmating Force: 75N min.
Durability: 20 cycles

Physical

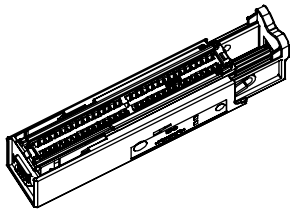
Housing: PBT 20% G.F.

Circuits	Order No.	Polarization	Lead-Free
8	94552-9008	B	Yes
12	94552-9012	A	

2.54mm (.100") Pitch MOX Receptacle Housing

98615

Dual Row, 64 Circuits



Features and Benefits

- Slide locking assistance
- Design compatible with wire version (0986151002) or FFC version (0986151001)
- Wire cap available
- Secondary locking

Reference Information

Packaging: Tray
Mates With: 98317, 98599 and 98580
Use With: 98658 (wire terminal) or 98194 (FFC terminal)
Designed In: Millimeters

Electrical

Voltage: 14V DC
Current: 6.0A max.
Contact Resistance: 8 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 5.0N (1.12 lb) max.
Contact Retention to Housing (TPA inactive): 40.0N (9 lb) min.
Wire Pull-Out Force: 100N (22.5 lb) min.
Mating Force: 80.0N (18.0 lb) max.
Unmating Force: 80.0N (18.0 lb) max.
Durability: 20 cycles (with Gold/Tin plated terminals)

Physical

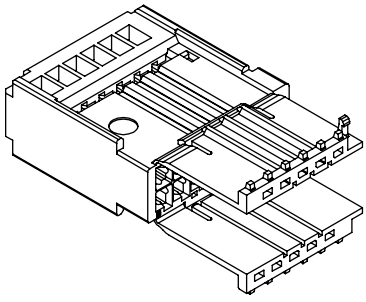
Housing: PBT Polyester, Glass-filled, UL 94-HB

Order No.	Version	Lead-Free
98615-1001	Flex	Yes
98615-1002	Wire	

www.molex.com/mox.html

2.54mm (.100") Pitch MOST Receptacle Housing

98684



Features and Benefits

- TPA integrated by filme hinge function
- Fits into 98681-1001 and 98681-1002
- Keying prevents wrong insertion into housing frame
- Terminal cavities designed for Molex MOX 0.64mm (.025") terminals
- Conforms to USCAR-2 Rev. 3

Reference Information

Product Specification: PS-98681-001
Packaging: Box
Mates With: 91500, 91547, 98681
Use With: 98658

Electrical

Voltage: 9 to 16V DC (operating normal)
Current: 7.5A max.
Contact Resistance: 100 milliohms max.

Mechanical

Contact Insertion Force: 30.00N (6.74 lb)
Contact Retention to Housing: 60.00N (13.49 lb)
Mating Force: 75.00N (16.86 lb)
Unmating Force: 75.00N (16.86 lb)
Durability: 11 mating cycles

Physical

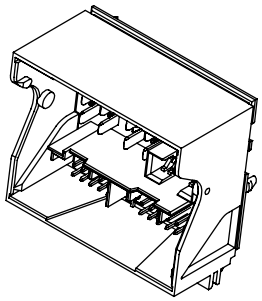
Housing: PBT Polyester, UL 94-HB

Circuits	Order No.	Color Coding	Key	Lead-free
12	98684-0001	Black	Key A	Yes
	98684-0002	Natural	Key B	

2.54mm (.100") Pitch MOST Junction Box

91616

Vertical, without 10.0A Fuse



Circuits	Order No.	Lead-free
40	91616-0001	Yes

Features and Benefits

- Complies with MOST specifications and is therefore a drop-in replacement part
- Fuse options available
- Mini-PCB assembly available
- Lead-free

Reference Information

Product Specification: PS-91616-001
Packaging: Tray
Designed In: Millimeters

Electrical

Voltage: 16V
Current: 6.0A
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 500 Megohms min.

Mechanical

Insertion Force to PCB: 70.0N (15.74 lb)
Durability: 30 cycles

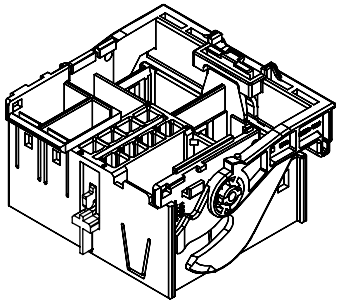
Physical

Housing: Glass-filled PA Polyamide (nylon), UL 94V-0
Contact: Copper Alloy
Plating: Contact Area—Tin
PCB Thickness: 1.6mm (0.62")

5.08mm (.200") Pitch MOST Frame Receptacle Housing

98681

With Lever, 40 Electrical and 4 Optical Circuits (Optional)



Order No.		Lead-free
With Cable Cover	Without Cable Cover	
98681-1001	98681-1002	Yes

Features and Benefits

- MOST corporation interface
- Plastic optical fiber option integrated
- Version with feature to receive wire cap/strain relief 98660-0001
- Conforms to USCAR-2 Rev. 3 and Ford SDS Rev. 10

Reference Information

Product Specification: PS-98681-001
Packaging: Box
Mates With: 91616, 91574
Use With: 98660, 98684, 98685
Designed In: Millimeters

Electrical

Voltage: 9 to 16V DC (operating normal)
Current: 24.0A max.
Contact Resistance: 5 milliohms max.

Mechanical

Contact Insertion Force: <30.00N (6.74 lb)
Contact Retention to Housing: >60.00N (13.49 lb)
Mating Force: 75.00N (16.86 lb)
Unmating Force: 75.00N (16.86 lb)
Durability: 11 mating cycles

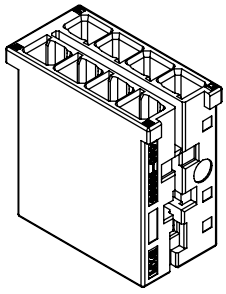
Physical

Housing: Black glass-filled SPS/PA 6/6, UL 94-HB

5.08mm (.200") Pitch MOST Receptacle Power Connector

98685

With TPA Lock



Circuits	Order No.	Lead-free
8	98685-1001	Yes

Features and Benefits

- Fits to MOST frame receptacle housing 98681-1001 and 98681-1002
- Delivered with Terminal Position Assurances (TPA) in pre-lock position
- Conforms to USCAR-2 Rev. 3 and Ford SDS Rev. 10

Reference Information

Product Specification: PS-98681-001
Packaging: Box
Mates With: 91500, 91547 and 98681
Use With: 2.80mm (.110") MPQ terminals

Electrical

Voltage: 9 to 16V DC (operating normal)
Current: 24.0A max.
Contact Resistance: 5 milliohms max.

Mechanical

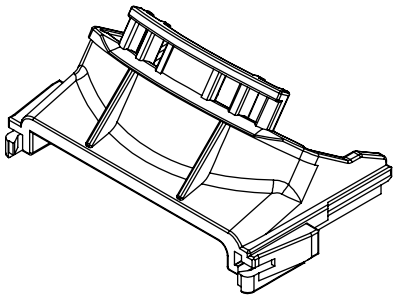
Contact Insertion Force: 30.00N (6.74 lb) min.
Contact Retention to Housing: 60.00N (13.49 lb) max.
Mating Force: 75.00N (16.86 lb)
Unmating Force: 75.00N (16.86 lb)

Physical

Housing: Black glass-filled SPS Crystalline Polymer, UL 94-HB

5.08mm (.200") Pitch MOST Strain Relief Cable Cover

98660



Order No.	Lead-free
98660-0001	Yes

Features and Benefits

- Provides 45˚ wire
- Positive clip
- Conforms to USCAR-2 Rev. 3 and Ford SDS Rev. 10

Reference Information

Product Specification: PS-98681-001
Packaging: Bag
Use With: 98681-1001

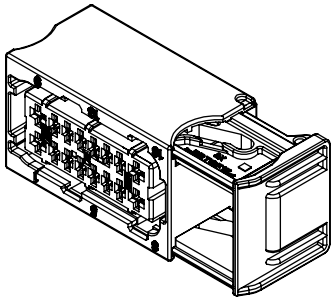
Physical

Housing: Black PBT Polyester

3.33mm (.131")/ 6.00mm (.236") Pitch NSCC Hybrid Inline Receptacle Housing

98273

Dual Row, Vertical with Slide



Features and Benefits

- Secondary locking for 1.54 and 2.8mm (.060 and .110") terminals
- Slide to reduce mating force
- Right slide orientation
- Hole feature to seal the slide in locked position
- Six mechanical codings correlating with 6 housing colors

Reference Information

Packaging: Box
Mates With: 98276
Use With: 98897 and 98898
Designed In: Millimeters

Electrical

Voltage: 13.5V
Current:
1. 50mm—7.0A max. at 85˚C crimped on 2.0mm² wire
2. 80mm—15.0A max. at 85˚C crimped on 4.0mm² wire

Dielectric Withstanding Voltage: 1000V min.
Insulation Resistance: 200 Megohms min.

Mechanical

Contact Insertion Force: 1.5mm (.060")—5.0N max.
2.8mm (.110")—8.0N max.
Contact Retention to Housing: 1.5mm (.060")—100.0N min.
2.8mm (.110")—100.0N min.
Mating Force: 60.0N max.
Unmating Force: 20.0N min.
Normal Force: 150.0N min.
Durability: 20 cycles

Physical

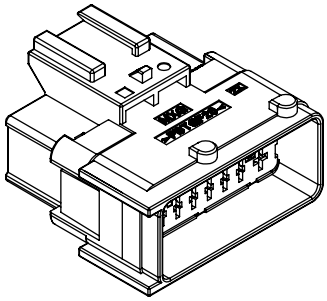
Housing: Glass-filled PBT Polyester, UL 94-HB

Circuits	Order No.	Color	Lead-free
16	98273-1001	Black	Yes
	98273-1002	Green	
	98273-1003	Blue	
	98273-1004	White	
	98273-1005	Brown	
	98273-1006	Gray	

3.33mm (.131")/ 6.00mm (.236") Pitch NSCC Hybrid Inline Plug Housing

98276

Dual Row, Vertical



Features and Benefits

- Secondary locking for 1.5 and 2.8mm (.060 and .110") terminals
- Six mechanical codings correlating with 6 housing colors
- Clip feature for standard fir tree clip

Reference Information

Packaging: Box
Mates With: 98273
Use With: 1.5 and 2.8mm blade terminals
Designed In: Millimeters

Electrical

Voltage: 13.5V
Dielectric Withstanding Voltage: 1000V min.
Insulation Resistance: 200 Megohms min.

Mechanical

Contact Insertion Force: 1.5mm (.060")—5.0N max.
2.8mm (.110")—8.0N max.
Contact Retention to Housing: 1.5mm (.060")—100.0N min.
2.8mm (.110")—100.0N min.
Mating Force: 60.0N max.
Unmating Force: 20.0N min.
Normal Force: 150N min.
Durability: 20 cycles

Physical

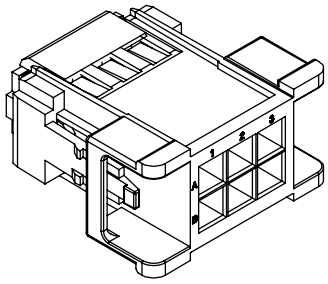
Housing: Glass-filled PBT Polyester, UL 94-HB

Circuits	Order No.	Color	Lead-free
16	98276-1001	Black	Yes
	98276-1002	Green	
	98276-1003	Blue	
	98276-1004	White	
	98276-1005	Brown	
	98276-1006	Gray	

5.00mm (.197") Pitch NSCC Wire-to-Board Receptacle Housing

98438

Vertical, with Bridges For 2.80mm (.110") Tab



Features and Benefits

- Designed for 2.80mm (.110") terminals from Molex
- Secondary locking
- Six mechanical codings available
- Two bridges to avoid damaging of latches
- Unsealed connector system

Reference Information

Packaging: Box
Mates With: Any 2.80mm (.110") header
Use With: 98898 2.80mm (.110") UCC terminals
Designed In: Millimeters

Electrical

Current: 15.0A max. @ 85°C
Dielectric Withstanding Voltage: 1000V AC or 1400V DC
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force: 10.0N (2.25 lb) max.
Contact Retention to Housing: 80.0N (17.98 lb) min.
Mating Force: 60.0N (13.49 lb) max.
Unmating Force: 150.0N (33.72 lb) max.

Physical

Housing: PBT Polyester, UL 94-HB

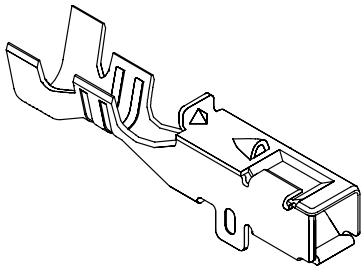
Circuits	Order No.	Color	Lead-free
6	98438-1001	Natural	Yes
	98438-1002	Black	
	98438-1003	Gray	
	98438-1004	Blue	
	98438-1005	Brown	
	98438-1006	Red	

www.molex.com

4.00mm (.157") Pitch OBD-II Wire-to-Wire Terminal

50420

Female



Features and Benefits

- Two-point contact design provides a redundant electrical interface
- Accepts retainer for additional terminal retention

Reference Information

Product Specification: PS-51115-001
Packaging: Reel
Mates With: 57964
Use With: 51115 and 51116
Designed In: Millimeters

Electrical

Voltage: 30V

Current:

Wire Size	Current
AVS.AVSS 0.3	4A
AVS.AVSS.CAVS 0.5	5A
AVS.AVSS.CAVS 0.85	6A

Contact Resistance: 100 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Physical

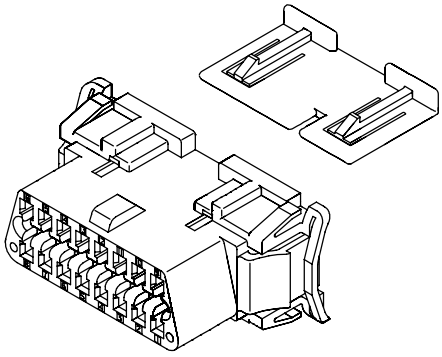
Contact: Phosphor Bronze
Plating: Tin
Insulation Diameter: 1.60 to 2.30mm (.024 to .091")

Order No.	Wire Range (mm²)	Lead-free
50420-8000	AVS 0.3-0.5	Yes
	AVS 0.30f-0.75f	
	AVSS 0.50-0.85	
	AVSS 0.50f-0.75f	
	CAVS 0.50-0.85	

4.00mm (.157") Pitch OBD-II Wire-to-Wire Housing

51115

Female, Panel Mount Type



Circuits	Order No.
16	51115-1601
	51115-1611

Features and Benefits

- Size 16 circuits only
- SAE J1962 standard for no board diagnostic
- Panel mount type

Reference Information

Product Specification: PS-51115-001
Packaging: Bag
Mates With: 51117 TPA, 68503 (Housing, Cover, CPA), 68154 (Dummy Plug)
Use With: 50420
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 6.0A max.
Contact Resistance: 100 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical

Contact Insertion Force: 9.8N (2.2 lb)
Contact Retention to Housing: 80.0N min. (with 51117)
Wire Pull-Out Force:

AVS 0.3	58.8N
AVS 0.5	88.2N
AVS 0.75F	107.8N
AVS 0.85	117.6N

Mating Force: 142N max.
Unmating Force: 88.0N max.
Durability: 200 cycles

Physical

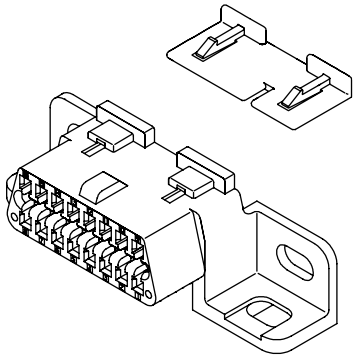
Housing: Polyester, UL 94V-0
TPA: Polyester

www.molex.com/customer.html?seriesNumber=51115

4.00mm (.157") Pitch OBD-II Wire-to-Wire Housing

51116

Female, Screw Mount Type



Circuits	Order No.
16	51116-1601
	51116-1611

Features and Benefits

- Size 16 circuits only
- SAE J1962 standard for no board diagnostic
- Screw mount type

Reference Information

Product Specification: PS-51115-001
Packaging: Bag
Mates With: 51118 TPA, 68503 (Housing, Cover, CPA), 68154 (Dummy Plug)
Use With: 50420
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 6.0A max.
Contact Resistance: 100 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical

Contact Insertion Force: 9.8N (2.2 lb)
Contact Retention to Housing: 80.0N min. (with 51117)
Wire Pull-Out Force:

AVS 0.3	58.8N
AVS 0.5	88.2N
AVS 0.75F	107.8N
AVS 0.85	117.6N

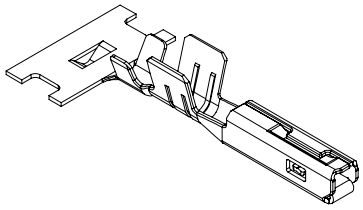
Mating Force: 142N max.
Unmating Force: 88.0N max.
Durability: 200 cycles

Physical

Housing: Polyester, UL 94V-0
TPA: Polyester

1.50mm (.060") Pitch MX150™ Terminals

33001/33012
Female
Mat Sealed



Features and Benefits
- Meets USCAR performance testing
- Low insertion force
- Multiple plating options
- Strong crimps
- Accommodates SAE and metric wires
- Sealed and unsealed versions
- Lead free

Reference Information
Packaging: Reel
Use With: MX150 plastic series 33471, 33472 and 33476
Mates With: 33012 and 33001
Designed In: Millimeters

Electrical
Voltage: 250V
Current: 22.0A
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

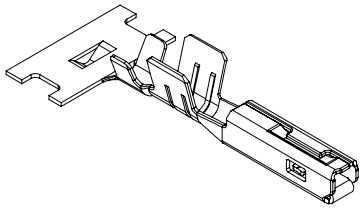
Mechanical
Contact Insertion Force: 3.0N average
Wire Pull-Out Force: 14 AWG—180N min.
22 AWG—70N
Mating Force: 3.0N average
Unmating Force: 3.0N average
Normal Force: 6.0N average

Physical
Contact: Copper Alloy
Plating: Tin, Gold or Silver
Wire Gauge: 14 to 22 AWG (max. O.D. = 2.49mm)

Order No.		Plating	Wire Gauge
Right Payoff, B Wound	Left Payoff, D Wound		
33012-2001	33012-3001	Tin	14 to 16 AWG
33012-2002	33012-3002		18 to 20 AWG
33012-2003	33012-3003		22 AWG
33001-2003	33001-3003	Gold	14 to 16 AWG
33001-2004	33001-3004		18 to 20 AWG
33001-2005	33001-3005		22 AWG
33001-4001	33001-5001	Silver	14 to 16 AWG
33001-4002	33001-5002		18 to 20 AWG
33001-4003	33001-5003		22 AWG

1.50mm (.060") Pitch MX150™ Terminals

34081/34083
Female
Cable Sealed



Features and Benefits
- Meets USCAR performance testing
- Low insertion force
- Multiple plating options
- Strong crimps
- Accommodates SAE and metric wires
- Sealed and unsealed versions
- Lead free

Reference Information
Packaging: Reel
Use With: MX150 plastic series 34250 and 34062
Mates With: 34080
Designed In: Millimeters

Electrical
Voltage: 250V
Current: 22.0A
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

Mechanical
Contact Insertion Force: 3.0N average
Wire Pull-Out Force: 14 AWG—180N min.
22 AWG—70N
Mating Force: 3.0N average
Unmating Force: 3.0N average
Normal Force: 6.0N average

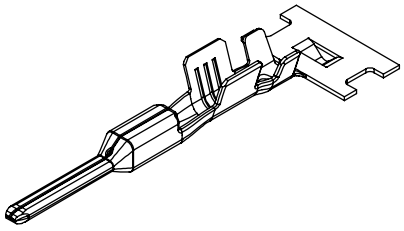
Physical
Contact: Copper Alloy
Plating: Tin, Gold or Silver
Wire Gauge: 14 to 22 AWG (max. O.D. = 2.49mm)

Order No.		Plating	Wire Gauge
Right Payoff, B Wound	Left Payoff, D Wound		
34083-2001	34083-3001	Tin	14 to 16 AWG
34083-2002	34083-3002		18 to 20 AWG
34083-2003	34083-3003		22 AWG
34081-2003	34081-3003	Gold	14 to 16 AWG
34081-2004	34081-3004		18 to 20 AWG
34081-2005	34081-3005		22 AWG
34081-4001	34081-5001	Silver	14 to 16 AWG
34081-4002	34081-5002		18 to 20 AWG
34081-4003	34081-5003		22 AWG

1.50mm (.060") Pitch MX150™ Terminals

33000/33011

Male
Mat Sealed



Features and Benefits

- Meets USCAR performance testing
- Low insertion force
- Multiple plating options
- Strong crimps
- Accommodates SAE and metric wires
- Lead free

Reference Information

Packaging: Reel
Use With: MX150 plastic series 33471, 33472 and 33476
Mates With: 33012 and 33001
Designed In: Millimeters

Electrical

Voltage: 250V
Current: 22.0A
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

Mechanical

Contact Insertion Force: 3.0N average
Wire Pull-Out Force: 14 AWG—180N min.
22 AWG—70N
Mating Force: 3.0N average
Unmating Force: 3.0N average
Normal Force: 6.0N average

Physical

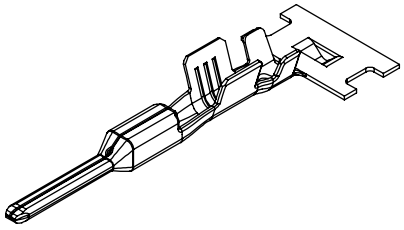
Contact: Copper Alloy
Plating: Tin, Gold or Silver
Wire Gauge: 14 to 22 AWG (max. O.D. = 2.49mm)

Order No.		Plating	Wire Gauge
Right Payoff, B Wound	Left Payoff, D Wound		
33000-0001	33000-1001	Tin	14 AWG
33000-0002	33000-1002		16 to 20 AWG
33000-0003	33000-1003		22 AWG
33011-1002	33011-0002	Gold	14 AWG
33011-1004	33011-0004		16 to 20 AWG
33011-1006	33011-0006		22 AWG
33011-2001	33011-3001	Silver	14 AWG
33011-2002	33011-3002		16 to 20 AWG
33011-2003	33011-3003		22 AWG

1.50mm (.060") Pitch MX150™ Terminals

34080

Male
Cable Sealed



Features and Benefits

- Meets USCAR performance testing
- Low insertion force
- Multiple plating options
- Strong crimps
- Accommodates SAE and metric wires
- Lead free

Reference Information

Packaging: Reel
Use With: MX150 plastic series 34091 and 34615
Mates With: 34083
Designed In: Millimeters

Electrical

Voltage: 250V
Current: 22.0A
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

Mechanical

Contact Insertion Force: 3.0N average
Wire Pull-Out Force: 14 AWG—180N min.
22 AWG—70N
Mating Force: 3.0N average
Unmating Force: 3.0N average
Normal Force: 6.0N average

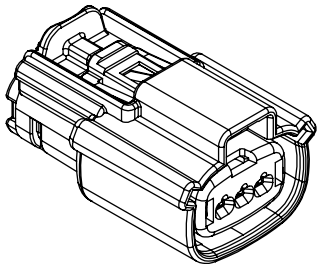
Physical

Contact: Copper Alloy
Plating: Tin
Wire Gauge: 14 to 22 AWG (max. O.D. = 2.49mm)

Order No.		Plating	Wire Gauge
Right Payoff, B Wound	Left Payoff, D Wound		
34080-0001	34080-1001	Tin	14 to 16 AWG
34080-0002	34080-1002		18 to 20 AWG
34080-0003	34080-1003		22 AWG

3.50mm (.138") Pitch MX150™ Sealed Connectors

33471 Female
33481 Male
Single Row



Features and Benefits
- Meets USCAR performance requirements
- Smallest 1.50mm (.059") sealed connector in the market
- Terminal retention is 2x industry standard
- Matte seal design
- Polarization options available
- Available with or without CPA
- Clip slot standard on male side

Reference Information
Packaging: Bulk
Mates With: 33471 and 33481
Use With: MX150 terminals
Designed In: Millimeters

Electrical
Voltage: 250V
Current: 22.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

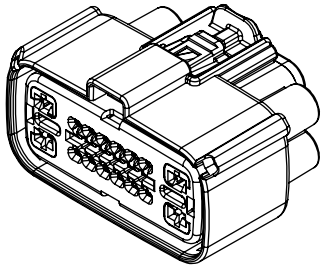
Mechanical
Contact Insertion Force: Less than 15N
Contact Retention to Housing: 110N min.
Wire Pull-Out Force: 90N min.
Mating Force: 75N max.
Unmating Force: 75N max.
Normal Force: Terminal dependent

Physical
Housing: 30% glass filled nylon, UL 94-HB
Contact: Will accommodate Tin, Silver or Gold
Insulation Diameter: 14 AWG UTX 2.49mm O.D. to 22 AWG TXL
Wire Gauge: 14 to 22 AWG and Metric

Circuits	Order No.	Description	Color	CPA Option
3	33471-0301	1x3 Female Polarization A	Black	No
	33471-0302	1x3 Female Polarization B	Gray	
	33471-0306	1x3 Female Polarization A	Black	Yes
	33471-0307	1x3 Female Polarization B	Gray	
	33481-0301	1x3 Male Polarization A	Black	No
	33481-0302	1x3 Male Polarization B	Gray	
4	33471-0401	1x4 Female Polarization A	Black	No
	33471-0402	1x4 Female Polarization B	Gray	
	33471-0406	1x4 Female Polarization A	Black	Yes
	33471-0407	1x4 Female Polarization B	Gray	
	33481-0401	1x4 Male Polarization A	Black	No
	33481-0402	1x4 Male Polarization B	Gray	
6	33471-0601	1x6 Female Polarization A	Black	No
	33471-0602	1x6 Female Polarization B	Gray	
	33471-0606	1x6 Female Polarization A	Black	Yes
	33471-0607	1x6 Female Polarization B	Gray	
	33481-0601	1x6 Male Polarization A	Black	No
	33481-0602	1x6 Male Polarization B	Gray	

3.50mm (.138") Pitch MX150™ Hybrid Sealed Connectors

33476 Female
33486 Male
Dual Row



Features and Benefits
- Combines 1.50 and 2.80mm (.059 and .110") terminals in same connector
- Terminal retention is 2x industry standard
- Polarization options available
- Available with or without CPA
- Clip slot standard on male side

Reference Information
Packaging: Bag
Mates with: 33471 and 33481
Use With: MX150 terminals
Designed In: Millimeters

Electrical
Voltage: 250V
Current: 22.0A for 1.5mm terminals and 25.0A for 2.8mm terminals
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

Mechanical
Contact Insertion Force: Less than 15N
Contact Retention to Housing: 110N min.
Wire Pull-Out Force: 90N min.
Mating Force: 75N max.
Unmating Force: 75N max.
Normal Force: Terminal dependent

Physical
Housing: 30% glass filled nylon, UL 94-HB

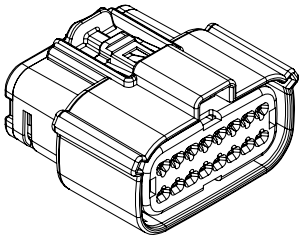
1.5mm terminals
Contact: Tin, Silver or Gold
Insulation Diameter: 14 AWG UTX 2.49mm O.D. to 22 AWG TXL
Wire Gauge: 14 to 22 AWG and Metric

2.8mm terminals
Contacts: Tin
Wire Gauge: 12 to 22 AWG

Order No.	Description	Color	CPA Option
33476-1601	2x8 Female Polarization A	Black	No
33476-1602	2x8 Female Polarization B	Gray	
33476-1606	2x8 Female Polarization A	Black	Yes
33476-1607	2x8 Female Polarization B	Gray	
33486-1601	2x8 Male Polarization A	Black	No
33486-1602	2x8 Male Polarization B	Gray	

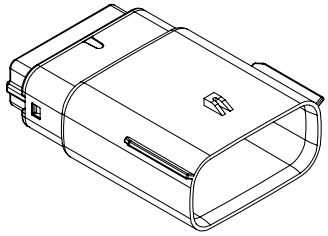
3.50mm (.138") Pitch MX150™ Sealed Connectors

33472 Female
33482 Male
Dual Row



Features and Benefits
- Meets USCAR footprint and performance requirements
- Smallest 1.50mm (.059") sealed connector in the market
- Terminal retention is 2x industry standard
- Matte seal design
- Polarization options available
- Available with or without CPA
- Clip slot standard on male side

Reference Information
Packaging: Bag
Mates With: 33471 and 33481
Use With: MX150 terminals
Designed In: Millimeters



Electrical
Voltage: 250V
Current: 22.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

Mechanical
Contact Insertion Force: Less than 15N
Contact Retention to Housing: 110N min.
Wire Pull-Out Force: 90N min.
Mating Force: 75N max.
Unmating Force: 75N max.
Normal Force: Terminal dependent

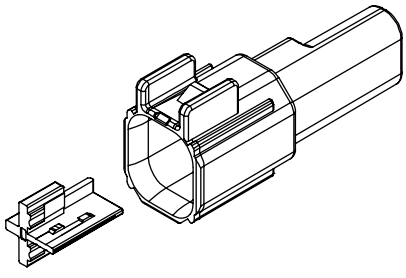
Physical
Housing: 30% glass filled nylon, UL 94-HB
Contact: Will accommodate Tin, Silver or Gold
Insulation Diameter: 14 AWG UTX 2.49mm O.D. to 22 AWG TXL
Wire Gauge: 14 to 22 AWG and Metric

Circuits	Order No.	Description	Color	CPA Option
4	33472-0401	2x2 Female Polarization A	Black	No
	33472-0402	2x2 Female Polarization B	Gray	
	33472-0406	2x2 Female Polarization A	Black	Yes
	33472-0407	2x2 Female Polarization B	Gray	
	33482-0401	2x2 Male Polarization A	Black	No
	33482-0402	2x2 Male Polarization B	Gray	
6	33472-0601	2x3 Female Polarization A	Black	No
	33472-0602	2x3 Female Polarization B	Gray	
	33472-0606	2x3 Female Polarization A	Black	Yes
	33472-0607	2x3 Female Polarization B	Gray	
	33482-0601	2x3 Male Polarization A	Black	No
	33482-0602	2x3 Male Polarization B	Gray	
8	33472-0801	2x4 Female Polarization A	Black	No
	33472-0802	2x4 Female Polarization B	Gray	
	33472-0806	2x4 Female Polarization A	Black	Yes
	33472-0807	2x4 Female Polarization B	Gray	
	33482-0801	2x4 Male Polarization A	Black	No
	33482-0802	2x4 Male Polarization B	Gray	

Circuits	Order No.	Description	Color	CPA Option
12	33472-1201	2x6 Female Polarization A	Black	No
	33472-1202	2x6 Female Polarization B	Gray	
	33472-1206	2x6 Female Polarization A	Black	Yes
	33472-1207	2x6 Female Polarization B	Gray	
	33482-1201	2x6 Male Polarization A	Black	No
	33482-1202	2x6 Male Polarization B	Gray	
16	33472-1601	2x8 Female Polarization A	Black	No
	33472-1602	2x8 Female Polarization B	Gray	
	33472-1606	2x8 Female Polarization A	Black	Yes
	33472-1607	2x8 Female Polarization B	Gray	
	33482-1601	2x8 Male Polarization A	Black	No
	33482-1602	2x8 Male Polarization B	Gray	
20	33472-2001	2x10 Female Polarization A	Black	No
	33472-2002	2x10 Female Polarization B	Gray	
	33472-2006	2x10 Female Polarization A	Black	Yes
	33472-2007	2x10 Female Polarization B	Gray	
	33482-2001	2x10 Male Polarization A	Black	No
	33482-2002	2x10 Male Polarization B	Gray	

5.00mm (.197") Pitch MX150™ Cable Sealed Connectors

34675
Male
Single Row



Features and Benefits
- Compact 1.50mm (.059") terminal connector
- Glass-filled thermoplastic housing and pre-loaded terminal position assurance (TPA)
- Optional clip slot
- Audible and tactile clicks on insertion, extraction and mating
- Accommodates up to 14AWG wire

Reference Information
Product Specification: PS-34062-000
Packaging: Bag
Mates With: 34062 female receptacle
Use With: 34080 male terminals
Designed In: Millimeters

Electrical
Voltage: 500V
Current: 22.0A
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Insulation Resistance: 20 Megohms min.

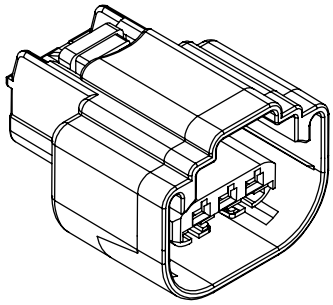
Mechanical
Contact Insertion Force: 30N (6.7 lb) max.
Contact Retention to Housing: 90N (20.2 lb) min.
Mating Force: 45N (10.1 lb)
Unmating Force: 45N (10.1 lb)
Durability: 10 cycles

Physical
Housing: Nylon 6, 30% glass filled

Circuits	Order No.	Clip Slot	Lead-free
2	34675-0001	No	Yes
	34675-0002		
	34675-0003	Yes	
	34675-0004		

4.50mm (.177") Pitch MX150™ Cable Sealed Connector

34250
Single Row



Features and Benefits
- Compact 1.50mm (.059") terminal connector
- Meets USCAR footprints
- Uses cable sealed terminals
- Available with or without CPA
- Polarization options available
- Single and dual key options

Reference Information
Packaging: Bag
Mates With: Direct connect only
Designed In: Millimeters

Electrical
Voltage: 250V
Current: 15.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

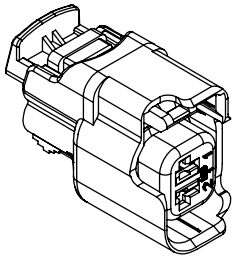
Mechanical
Contact Insertion Force: Less than 15N
Contact Retention to Housing: 100N min.
Wire Pull-Out Force: 90N min.
Mating Force: Less than 45N
Unmating Force: Less than 45N
Normal Force: Terminal dependent

Physical
Housing: PBT + 10% glass filled, UL 94-HB
Contact: Tin or Gold
Wire Gauge: 16 to 22 AWG

Order No.	Description	Color	CPA
34250-0001	1x3 Dual Key Polarization A	Black	Yes
34250-0002	1x3 Dual Key Polarization B	Gray	
34250-0003	1x3 Dual Key Polarization C	Brown	
34250-0004	1x3 Dual Key Polarization D	Green	
34250-0017	1x3 Dual Key Polarization A	Black	No
34250-0018	1x3 Dual Key Polarization B	Gray	
34250-0019	1x3 Dual Key Polarization C	Brown	
34250-0020	1x3 Dual Key Polarization D	Green	
34250-0033	1x3 Single Key Polarization A	Black	Yes
34250-0034	1x3 Single Key Polarization B	Gray	
34250-0035	1x3 Single Key Polarization C	Brown	
34250-0036	1x3 Single Key Polarization D	Green	
34250-0049	1x3 Single Key Polarization A	Black	No
34250-0050	1x3 Single Key Polarization B	Gray	
34250-0051	1x3 Single Key Polarization C	Brown	
34250-0052	1x3 Single Key Polarization D	Green	

5.00mm (.197") Pitch MX150™ Cable Sealed Connector

34062
Single Row



Features and Benefits
- Compact 1.50mm (.059") terminal connector
- Meets USCAR footprints
- Uses cable sealed terminals
- Available with or without CPA
- Polarization options available

Reference Information
Packaging: Bag
Mates With: Direct connect only
Designed In: Millimeters

Electrical
Voltage: 250V
Current: 15.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

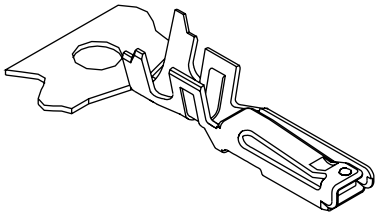
Mechanical
Contact Insertion Force: Less than 15N
Contact Retention to Housing:100N min.
Wire Pull-Out Force:90N min.
Mating Force:Less than 45N
Unmating Force:Less than 45N
Normal Force:Terminal dependent

Physical
Housing: PBT + 10% glass filled, UL 94-HB
Contact: Tin or Gold
Wire Gauge: 16 to 22AWG

Order No.	Description	Color	CPA
34062-0001	1x2 Polarization A	Black	No
34062-0002	1x2 Polarization B	Gray	
34062-0003	1x2 Polarization C	Black	
34062-0004	1x2 Polarization D		
34062-0005	1x2 Polarization A	Black	Yes
34062-0006	1x2 Polarization B	Gray	
34062-0007	1x2 Polarization C	Black	
34062-0008	1x2 Polarization D		
34062-0009	1x2 Polarization D	Gray	No
34062-0010	1x2 Polarization D	Gray	Yes

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Crimp Terminal

50148



Order No.	Packaging	Lead-free
50148-8000	Reel	Yes
50148-8100	Bag	

Features and Benefits

- Unique spring-beam design provides high pressure and small deflection for high vibration applications
- Stabilizing bump at tip keeps terminal in place during mating

Reference Information

Packaging: Reel or bag
Use With: 52213
Designed In: Millimeters

Electrical

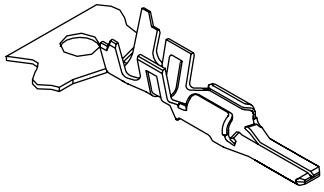
Voltage: 18V max. (2 circuits)
25V max. (3-4 circuits)
Current: AVSS/CAVS 0.50 sq. (20 AWG)—4.0A
AVSS/CAVS 0.30 sq. (22 AWG)—3.0A

Physical

Contact: Phosphor Bronze
Plating: Tin
Wire Range: AVSS/CAVS 0.30 sq., 0.50 sq. (20 to 22 AWG)
Insulation Range: 1.40 to 1.70mm
Strip Length: 2.00 to 2.50mm

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Crimp Terminal

50147



Order No.	Packaging	Lead-free
50147-8000	Reel	Yes
50147-8100	Bag	

Features and Benefits

- Seal is in housing to simplify crimping process
- Raised split-beam design provides polarization

Reference Information

Packaging: Reel or bag
Use With: 52266
Designed In: Millimeters

Electrical

Voltage: 18V max. (2 circuits)
25V max. (3-4 circuits)
Current: AVSS/CAVS 0.50 sq. (20 AWG)—4.0A
AVSS/CAVS 0.30 sq. (22 AWG)—3.0A

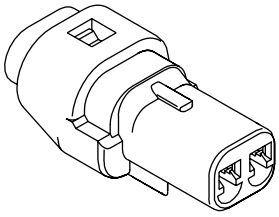
Physical

Contact: Phosphor Bronze
Plating: Tin
Wire Range: AVSS/CAVS 0.30 sq., 0.50 sq. (20 to 22 AWG)
Insulation Range: 1.40 to 1.70mm
Strip Length: 2.00 to 2.50mm

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Receptacle

52213

2-Circuit Version



Circuits	Order No.
2	52213-0211

Features and Benefits

- Size 2 circuits
- JIS D0203 S2 waterproof compliant
- Unique seal stopper design provides low insertion force
- For tight packaging applications
- User-friendly friction lock saves space and protects locking latch area
- Polarizing rib to ensure proper mating

Reference Information

Product Specification: PS-52213-001
Packaging: Tray
Mates With: 52266
Use With: 50148
Designed In: Millimeters

Electrical

Voltage: 18V max.
Current: 4.0A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 250 Megohms min.

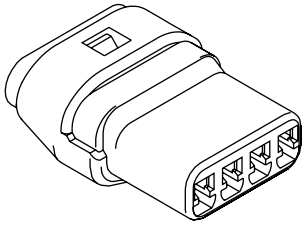
Physical

Housing: Black glass-filled PBT
Cap: Glass-filled PBT
Wire End Seal: Silicone

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Receptacle

52213

3 and 4-Circuit Version



Circuits	Order No.	Housing/Cap Color
3	52213-0311	Black
4	52213-0417	Brown

Features and Benefits

- Sizes 3 and 4 circuits
- JIS D0203 S2 waterproof compliant
- Unique seal stopper design provides low insertion force
- For tight packaging applications
- User-friendly friction lock saves space and protects locking latch area
- One-body wire and seal enables tighter spacing between terminals

Reference Information

Product Specification: PS-52213-002
Packaging: Tray
Mates With: 52266
Use With: 50148
Designed In: Millimeters

Electrical

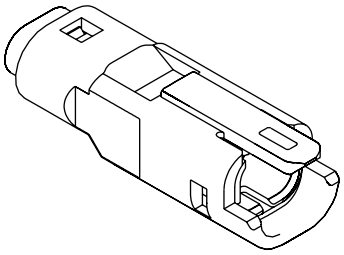
Voltage: 25V max.
Current: 4.0A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 250 Megohms min.

Physical

Housing/Cap: Glass-filled PBT
Wire End Seal: Silicone

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Plug

52266
2-Circuit Version



Circuits	Order No.
2	52266-0211

Features and Benefits
- Size 2 circuits
- JIS D0203 S2 waterproof compliant
- Unique seal stopper design provides low insertion force
- For tight packaging applications
- User-friendly friction lock saves space and protects locking latch area
- One-body wire and seal enables tighter spacing between terminals

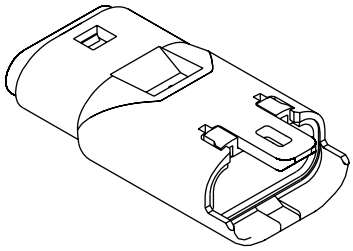
Reference Information
Product Specification: PS-52213-001
Packaging: Tray
Mates With: 52213
Use With: 50147
Designed In: Millimeters

Electrical
Voltage: 18V max.
Current: 4.0A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 250 Megohms min.

Physical
Housing: Black glass-filled PBT
Cap: Glass-filled PBT
Wire End Seal: Silicone
Seal Stopper: Glass-filled PBT
Seal: Silicone

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Plug

52266
3 and 4-Circuit Version



Circuits	Order No.	Housing/Cap Color
3	52266-0311	Black
4	52266-0417	Brown

Features and Benefits
- Sizes 3 and 4 circuits
- JIS D0203 S2 waterproof compliant
- Unique seal stopper design provides low insertion force
- For tight packaging applications
- User-friendly friction lock saves space and protects locking latch area
- One-body wire and seal enables tighter spacing between terminals

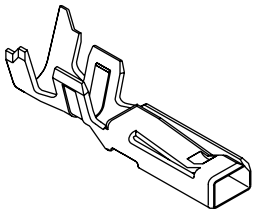
Reference Information
Product Specification: PS-52213-002
Packaging: Tray
Mates With: 52213
Use With: 50147
Designed In: Millimeters

Electrical
Voltage: 25V max.
Current: 4.0A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 250 Megohms min.

Physical
Housing/Cap: Glass-filled PBT
Wire End Seal: Silicone
Seal Stopper: Glass-filled PBT
Seal: Silicone

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Crimp Terminal

50039



Order No.	Packaging	Lead-free
50039-8000	Reel	Yes
50039-8100	Bag	

Features and Benefits

- Unique spring-beam design provides high pressure and small deflection for high vibration applications

Reference Information

Packaging: Reel or Bag
Use With: 52117
Designed In: Millimeters

Electrical

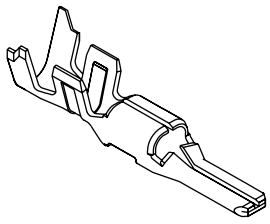
Voltage: 250V
Current: 3.0A

Physical

Contact: Phosphor Bronze
Plating: Tin
Wire Range: AVS 0.30 sq., CAVS 0.50 sq. (20 to 22 AWG)
Insulation Range: 1.80 to 1.90mm
Strip Length: 2.00 to 2.50mm

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Crimp Terminal

50038



Order No.	Packaging	Lead-free
50038-8000	Reel	Yes
50038-8100	Bag	

Features and Benefits

- Seal is in housing to simplify crimping process
- Raised body design provides polarization

Reference Information

Packaging: Reel or Bag
Use With: 52116
Designed In: Millimeters

Electrical

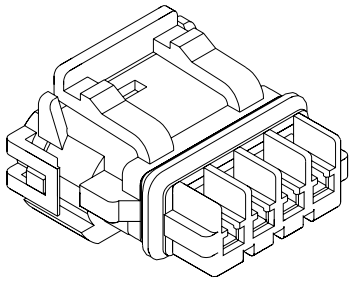
Voltage: 250V max.
Current: 3.0A max.

Physical

Contact: Phosphor Bronze
Plating: Tin
Wire Range: AVS 0.30 sq., CAVS 0.50 sq. (20 to 22 AWG)
Insulation Range: 1.80 to 1.90mm
Strip Length: 2.00 to 2.50mm

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Receptacle Housing

52117



Circuits	Order No.
2	52117-024X
3	52117-034X
4	52117-041X

Note: Replace X with
0 = White color
1 = Black color
2 = Red color (available in 2 and 3 circuits only)

Features and Benefits

- Sizes 2 to 4 circuits
- JIS D0203 S2 compliant
- User friendly friction lock provides secure connection

Reference Information

Product Specification: PS-52117-001 (2 circuits)
PS-52117-003 (3 circuits)
PS-52117-005 (4 circuits)
Packaging: Tray
Mates With: 52116 housing
Use With: 50039 terminal
Designed In: Millimeters

Electrical

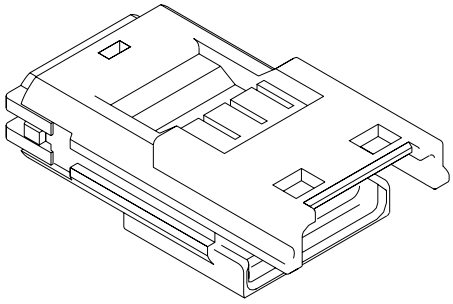
Voltage: 250V max.
Current: 3.0A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 250 Megohms min.

Physical

Housing: Glass-filled PBT
Cap: Glass-filled PBT
Seal: Silicon

2.50mm (.098") Pitch Splash Proof Wire-to-Wire Plug Housing

52116



Circuits	Order No.
2	52116-024X
3	52116-034X
4	52116-041X

Note: Replace X with
0 = White color
1 = Black color
2 = Red color (available in 2 and 3 circuits only)

Features and Benefits

- Sizes 2 to 4 circuits
- JIS D0203 S2 compliant
- User friendly friction lock provides secure connection

Reference Information

Product Specification: PS-52117-001 (2 circuits)
PS-52117-003 (3 circuits)
PS-52117-005 (4 circuits)
Packaging: Tray
Mates With: 52117 housing
Use With: 50038 terminal
Designed In: Millimeters

Electrical

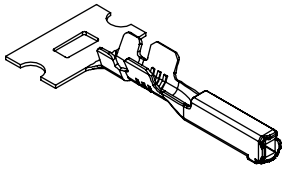
Voltage: 250V max.
Current: 3.0A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 250 Megohms min.

Physical

Housing: Glass-filled PBT
Cap: Glass-filled PBT
Seal: Silicon

2.54mm (.100") Pitch MX123™ Sealed Connection System 0.64mm Terminal

33467/33468



Features and Benefits

- Precious plating ensures stable contact resistance under extreme temperature and vibration conditions

Reference Information

Packaging: Reel
Mates With: 73- and 80-Circuit Receptacle (Series 34566)
56 Receptacle (Series 34576)

Electrical

Voltage: 500V max.
Current: 0.64mm (.025")—11.0A max.
Contact Resistance: 0.64mm (.025")—20 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Isolation Resistance: 20 Megohms min.

Mechanical

Durability—10 Cycles:
0.64mm (.025")—20 milliohms max.
FCLT (Class 3): 20 milliohms max.
Thermal Shock (Class 3, 100 cycles):
0.64mm (.025")—20 milliohms max.
Mechanical Shock and Vibration Sequence (GMW3191, Electrical):
0.64mm (.025")—20 milliohms max.

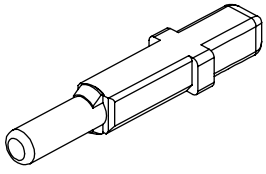
Physical

Contact: Copper Alloy
Terminal Plating:
Contact Area: 0.64mm (.025")—Gold
Underplating: 0.64mm (.025")—Nickel

Order No.	Size (mm)	Plating	Wire Size (AWG)	Payoff Direction
33467-0004	0.64	Gold	22	D
33467-0003				B
33467-0006			18 to 20	D
33467-0005				B
33468-0002		Tin	22	D
33468-0001				B
33468-0004			18 to 20	D
33468-0003				B

2.54mm (.100") Pitch MX123™ Sealed Connection System Cavity Plug

34586



Reference Information

Packaging: Bulk
Use With: 73- and 80-Circuit Receptacle (Series 34566)
56 Circuit Receptacle (Series 34576)

Mechanical

Insertion Force: Less than 40N (9 lb)

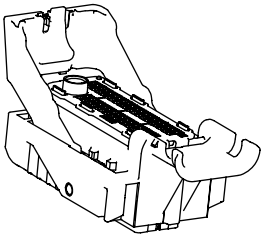
Physical

Material: 30% glass-filled SPS/Nylon Blend

Order No.	Assembly Features	Size (mm)
34586-0001	Lock Tab and Forward Stop	0.64mm terminal

2.54mm (.100") Pitch MX123™ Sealed Connection System Lever Receptacle

34566/34576
Mate-Assist



Features and Benefits

- MX123 was originally designed for on-engine, high-vibration applications in under-hood environments
- Receptacle and header housings with unique mechanical polarization options and unique color coding offer the ability to use multiple connectors on one module without the risk of cross-mating incorrect harness connectors
- Wire dress available in 2 options: 0 and 180˚ orientation which allows for wire-routing design flexibility
- Anti-scooping feature is friendly to "blind-mate" conditions
- Integrated PLR and CPA components reduce assembly complexity
- Lever retention lock on harness connector retains lever in pre-lock position for ease of installation

Reference Information

Packaging: Lever Receptacles: Cell-Pack Partition
Mates With: 73- and 80-Circuit: Headers (Series 31387)
56- Circuit: Header (Series 31386)
Use With: MX64—0.64mm (.025") (Series 33467)

Electrical

Voltage: 500V max.
Current: 2.80mm (.110")—25.0A max.
0.64mm (.025")—11.0A max.
Contact Resistance: 2.80mm (.110")—5 milliohms max.
0.64mm (.025")—20 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Isolation Resistance: 20 Megohms min.

Mechanical

Mating Force: Less than 75N (16.9 lb)
Unmating Force: Less than 75N (16.9 lb)
Connector Retention (Primary Latch): 110N (24.7 lb) min.
Contact Retention to Housing:
2.80mm (.110")—90N (20.2 lb) min.
0.64mm (.025")—75N (16.9 lb) min.
Contact Insertion Force Into Housing: 30N (6.7 lb) max.
Polarization Feature Effectiveness: 220N (49.5 lb) min.
Durability—10 Cycles:
2.80mm (.110")—5 milliohms max.
0.64mm (.025")—20 milliohms max.
PLR Insertion Force: 75N (16.9 lb) max.
PLR Extraction Force: 120N (27.0 lb) max.
CPA Insertion Force: 60N (13.5 lb) max. (unmated), 22N (5.0 lb) max. (fully mated)
CPA Extraction Force: 22N (5.0 lb) max.
FCLT (Class 3): 20 milliohms max.
Thermal Shock (Class 3, 100 cycles):
2.80mm (.110")—5 milliohms max.
0.64mm (.025")—20 milliohms max.
High-Temperature Exposure (Sealing): 48kPa for 15 seconds and submersion for 30 minutes and isolation resistance of 20 Megohms at 500V DC min.
Temperature/Humidity (Sealing): 48kPa for 15 seconds and submersion for 30 minutes and isolation resistance of 20 Megohms at 500V DC min.
Fluid Resistance (Sealing): submersion for 30 minutes and isolation resistance of 100 Megohms at 500V DC min.
Mechanical Shock and Vibration Sequence (GMW3191, Electrical):
2.80mm (.110")—5 milliohms max.
0.64mm (.025")—20 milliohms max.
Ingress Protection (IP-code) Rating: -IP6K7
-IP6K9K

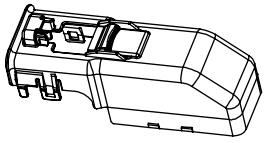
Physical

Housing: 30% glass-filled SPS/Nylon Blend
PLR: 30% Glass Filled SPS/Nylon Blend
Contact: Copper Alloy
Terminal Plating:
Contact Area: 2.80mm (.110")—Tin
0.64mm (.025")—Gold
Underplating: 2.80mm (.110")—Nickel
0.64mm (.025")—Nickel

Order No.	Circuit Size	Key Option	PLR Color
34566-0703	80	G	Blue
34566-0803		H	Gray
34566-0103	73	A	Black
34566-0203		B	Gray
34566-0303		C	Blue
34576-0703	56	G	
34576-0803		H	Gray

2.54mm (.100") Pitch MX123™ Sealed Connection System Wire Dress Cover

34565/34575



Order No.	Assembly Features	Cover for Circuit Sizes
34565-0003	Lever Retention Lock	73 and 80
34575-0003		56

Features and Benefits

- Wire dress available in 2 options: 0 and 180˚ orientation which allows for wire-routing design flexibility

Reference Information

Packaging: Bulk
Use With: 73- and 80-Circuit Receptacle (Series 34566)
56 Circuit Receptacle (Series 34576)

Mechanical

Engage Force: Less than 75N (16.9 lb)
Disengage Force: Less than 110N (16.9 lb)

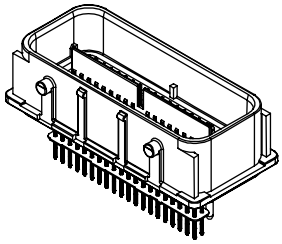
Physical

Material: 30% glass-filled SPS/Nylon Blend

2.54mm (.100") Pitch MX123™ Sealed Connection System Header

31386/31387

Vertical, Top-Load, Solder-tail



Features and Benefits

- MX123 was originally designed for on-engine, high-vibration applications in under-hood environments
- Receptacle and header housings with unique mechanical polarization options and unique color coding offer the ability to use multiple connectors on one module without the risk of cross-mating incorrect harness connectors
- Anti-scooping feature is friendly to "blind-mate" conditions
- PCB tail customization: available with solder-tail or compliant-pin technology allows for PCB design flexibility
- Header placement flexibility allows top or bottom header loading to streamline module manufacturing process
- Precious plating ensures stable contact resistance under extreme temperature and vibration conditions

Reference Information

Vertical Headers: Tray
Mates With: 73- and 80-Circuit Receptacle (Series 34566)
56 Receptacle (Series 34576)
Use With: MX64—0.64mm (.025") (Series 33467)

Electrical

Voltage: 500V max.
Current: 2.80mm (.110")—25.0A max.
0.64mm (.025")—11.0A max.
Contact Resistance: 2.80mm (.110")—5 milliohms max.
0.64mm (.025")—20 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Isolation Resistance: 20 Megohms min.

Mechanical

Mating Force: Less than 75N (16.9 lb)
Unmating Force: Less than 75N (16.9 lb)
Connector Retention (Primary Latch): 110N (24.7 lb) min.
Polarization Feature Effectiveness: 220N (49.5 lb) min.
Durability—10 Cycles:
2.80mm (.110")—5 milliohms max.
0.64mm (.025")—20 milliohms max.
FCLT (Class 3): 20 milliohms max.
Thermal Shock (Class 3, 100 cycles):
2.80mm (.110")—5 milliohms max.
0.64mm (.025")—20 milliohms max.
High-Temperature Exposure (Sealing): 48kPa for 15 seconds and submersion for 30 minutes and isolation resistance of 20 Megohms at 500V DC min.
Temperature/Humidity (Sealing): 48kPa for 15 seconds and submersion for 30 minutes and isolation resistance of 20 Megohms at 500V DC min.
Fluid Resistance (Sealing): submersion for 30 minutes and isolation resistance of 100 Megohms at 500V DC min.
Mechanical Shock and Vibration Sequence (GMW3191, Electrical): 2.80mm (.110")—5 milliohms max.
0.64mm (.025")—20 milliohms max.

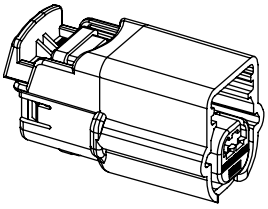
Physical

Housing: 30% glass-filled PBT
Contact: Copper Alloy
Terminal Plating:
Contact Area: 2.80mm (.110")—Tin
0.64mm (.025")—Gold
Underplating: 2.80mm (.110")—Nickel
0.64mm (.025")—Nickel

Order No.	Plating	Circuit Size	Key Option	Colors
31387-4001	Select Gold	80	G	Blue
31387-4009			H	Gray
31387-2014		73	A	Black
31387-2002			B	Gray
31387-2003			C	Blue
31386-2001		56	G	
31386-2002			H	Gray

2.54mm (.100") Pitch MX64™ Sealed Connectors

31403
Single Row Female



Features and Benefits
- Meets all USCAR footprints and testing requirements
- Matte seal design
- Available with or without CPA
- Polarization options available

Reference Information
Packaging: Bag
Mates With: Direct connect only
Designed In: Millimeters

Electrical
Voltage: 250V
Current: 11.0A max.
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V DC
Insulation Resistance: 20 Megohms min.

Mechanical
Contact Insertion Force: 30N max.
Contact Retention to Housing: 90N min.
Mating Force: Less than 75N
Unmating Force: Less than 75N

Physical
Housing: Glass-filled PBT
Contact: Tin or Gold
Wire Gauge: 18 to 22 AWG

Order No.		Rows/Circuits	Polarization	Color
Without CPA	With CPA			
31403-2100	31403-2110	1x2	A	Black
31403-2200	31403-2210		B	Gray
31403-2300	31403-2310		C	Brown
31403-2400	31403-2410		D	Green
31403-2500	31403-2510		B	Black
31403-2600	31403-2610		C	
31403-2700	31403-2710		D	
31403-3100	31403-3110	1x3	A	
31403-3200	31403-3210		B	Gray
31403-3300	31403-3310		C	Brown
31403-3400	31403-3410		D	Green
31403-3500	31403-3510		B	Black
31403-3600	31403-3610		C	
31403-3700	31403-3710		D	
31403-6100	31403-6110	1x6	A	
31403-6200	31403-6210		B	Gray
31403-6300	31403-6310		C	Brown
31403-6400	31403-6410		D	Green
31403-6500	31403-6510		B	Black
31403-6600	31403-6610		C	
31403-6700	31403-6710		D	

CMC Hybrid Connectors
Standard and Power Versions

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 1.5mm (.059"). Power version CMC hybrid connectors hold three different terminal sizes, 0.635mm (.025"), 1.50mm (.059") and 2.80mm (.110"). Both connector versions run at operating temperatures between -40 and +125˚C.

Market and Applications

CMC can be used in the following markets: cars, trucks, buses, agricultural equipment, motorcycle or marine.

This wire-to-board application can run on Powertrain applications such as Engine Control Units, Gear Boxes and Suspension Controllers but also on Body Electronics like Junction Box, Lightning Control System or Electrical Doors.

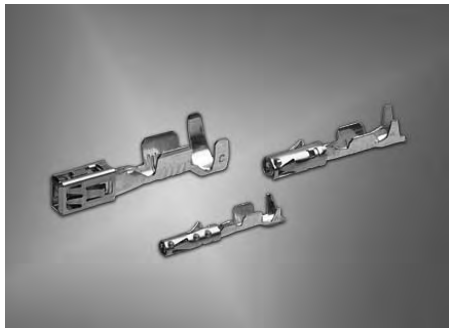
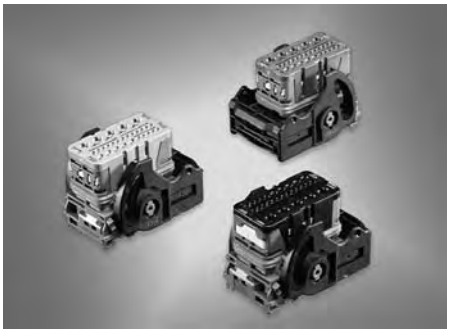
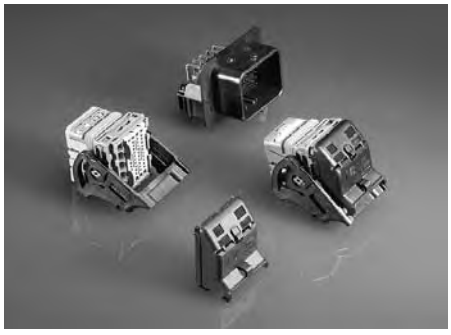
Features

- 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.

Sealing

High performing matte seal technology is used for CP 0.635mm (.025") and CP 1.50mm (.059") terminals. Single wire-seal technology is used for CP 2.8mm (.110") terminals to secure reliable sealing for 2.8mm (.110") CP terminals.



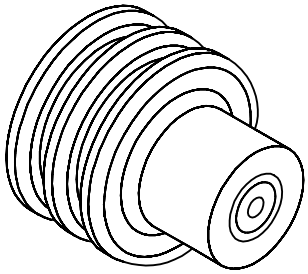





CMC Product Family
Part Number Overview

Circuits	Order No.		Wire Cap	Description	Color	Sealing	Mates With	Terminal Loading
	Left Wire Output	Right Wire Output						
24	64319-2211			CMC Receptacle	black	mat	N/A	18 x CP 0.6 terminal 6 x CP 1.5 terminal
	64319-2218				grey			
		64319-4211			black			
		64319-4218			grey			
			64319-1201	For CMC Receptacle	N/A			N/A
28	64318-1011	64318-3011		Power CMC Receptacle	black	mat	Contact Molex	18 x CP 0.6 terminal 5 x CP 1.5 terminal 5 x CP 2.8 terminal
	64318-1018	64318-3018			grey			
	64318-1019	64318-3019			brown			
			64320-1301	For CMC Receptacle	N/A			
32	64319-1211	64319-3211		CMC Receptacle	black	mat	Contact Molex	24 x CP 0.6 terminal 8 x CP 1.5 terminal
	64319-1216	64319-3216			blue			
	64319-1218	64319-3218			grey			
	64319-1219	64319-3219			brown		80 circuit CMC header 502225-0801	
			64319-1201	For CMC Receptacle	N/A		N/A	N/A
36	64320-2311			CMC Receptacle	black	mat	48 circuit header with 36 circuit loaded 36638-0006/36638-0008	30 x CP 0.6 terminal 6 x CP 1.5 terminal
	64320-2319				brown		48 circuit header with 36 circuit loaded 36638-0007/36638-0009	
		64320-4311			black		48 circuit header with 36 circuit loaded 36638-0006/36638-0008	
		64320-4319			brown		48 circuit header with 36 circuit loaded 36638-0007/36638-0009	
			64320-1301	For CMC Receptacle	N/A		N/A	N/A
48	64320-1311			CMC Receptacle	black	mat	48 circuit CMC header/98 circuit CMC header 36638-0001 up to 36638-0012 48 circuit CMC header 500762-0481	40 x CP 0.6 terminal 8 x CP 1.5 terminal
	64320-1315				green		N/A	
	64320-1318				grey		N/A	
	64320-1319				brown		48 circuit CMC header/96 circuit CMC header 36638-0001 up to 36638-0012 80 circuit CMC header 502225-0801	
		64320-3311			black		48 circuit CMC header/98 circuit CMC header 36638-0001 up to 36638-0012 48 circuit CMC header 500762-0481	
		64320-3315			green		N/A	
		64320-3318			grey		N/A	
		64320-3319			brown		48 circuit CMC header/98 circuit CMC header 36638-0001 up to 36638-0012	
			64320-1301	For CMC Receptacle	N/A		N/A	N/A
53	64321-1011	64321-2011		Power CMC Receptacle	black	mat	53 circuit CMC header 98997-1002	40 x CP 0.6 terminal 8 x CP 1.5 terminal 5 x CP 2.8 terminal
	64321-1018	64321-2018			grey		N/A	
	64321-1019	64321-2019			brown			
			64321-1101	For CMC Receptacle	N/A			N/A

For more details please refer to www.molex.com

CMC Product Family
Part Number Overview



CMC CP Terminal

Order No.	Pitch	Plating	Wire Size	Mates With
64322-1019	0.635mm (.025")	Tin	0.35mm²	32 circuit CMC Receptacle 48 circuit CMC Receptacle 28 circuit CMC Receptacle 53 circuit CMC Receptacle
64322-1029			0.75mm²	
64322-1039			0.5mm²	
64322-1219		Gold 1.27µm	0.75mm²	
64322-1229			0.35mm²	
64322-1239			0.5 mm²	
64322-1339			0.75mm²	
64322-1349			0.35mm²	
64322-1359			0.5 mm²	
64323-1029	1.50mm (.059")	Tin	0.5 to 1mm²	
64323-1039			>1 to 2mm²	
64323-1219		Gold 1.27µm	>1 to 2mm²	
64323-1319			0.5 to 1mm²	
64324-1019	2.80mm (.110")	Tin	>3 to 5mm²	28 circuit CMC Receptacle 53 circuit CMC Receptacle
64324-1029			>2 to 3mm²	
64324-1039			>1 to 2mm²	
64324-1049			0.5 to 1mm²	
64324-1119		Gold 1.27µm	>3 to 5mm²	
64324-1129			>2 to 3mm²	
64324-1139			>1 to 2mm²	
64324-1149			0.5 to 1mm²	

For more details please refer to www.molex.com

CMC Blind Plugs

Order No.	Wire Size	Mates With
64325-1010	0.635mm (.025")	32 circuit CMC Receptacle 48 circuit CMC Receptacle 28 circuit CMC Receptacle 53 circuit CMC Receptacle
64325-1023	1.50mm (.059")	
64325-1091	2.80mm (.110")	

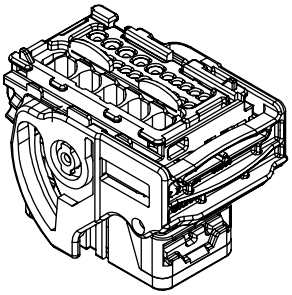
CMC Single Wire Seals

Order No.	Color	Cable Size	Mates With
64325-1162	Red	1.29 to 2.06mm	CMC CP 2.80 (.110") terminal
64325-1175	Green	2.03 to 2.8mm	
64325-1188	Grey	2.8 to 3.5mm	
64325-1196	Blue	3.5 to 4.21mm	

2.54mm (.100")/ 3.50mm (.138")/ 6.75mm (.266") Pitch CMC Wire-to-Board Power Hybrid Connector Receptacle, Plug and Wire Cap

64318

28 Circuit
Left and Right Wire Output



Features and Benefits

- CMC is a sealed, standard and modular connecting system
- Available in several circuit sizes
- Sealed by using high performing matte seal technology
- High density connector
- Hybrid system carrying low, medium and high current
- Used with CMC CP Terminals
- Using CMC CP 2.80 mm terminals for power connecting applications

Reference Information

Product Specification: PS-64318-001
Mates With: 28 circuit CMC header coming soon, please contact Molex for details
Use With:
Terminal: 64322 CMC CP 0.635mm (.025")
64323 CMC CP 1.50mm (.059")
64324 CMC CP 2.80mm (.110")
Plug: 64325-1010 Plug 0.635mm (.025") cavity
64325-1023 Plug 1.50mm (.059") cavity
64325-1091 Plug 2.80mm (.110") cavity
Wire Cap: 64320-1301 CMC Wire Cap for 48 circuit and 28 circuit CMC Receptacle
Designed In: Millimeters

Electrical

Voltage: 250V AC
Current: *
2.5A for CMC CP 0.635mm (.025") terminal (0.75mm² wire)
12.0A for CMC CP 1.50mm (.059") terminal (2.0mm² wire)
21.0A for CMC CP 2.80mm (.110") terminals (5.0mm²)
Contact Resistance:
CMC CP 0.635mm (.025")—8 milliohms max.
CMC CP 1.50mm (.059")—4 milliohms max.
CMC CP 2.80mm (.110")—3 milliohms max.
Dielectric Withstanding Voltage: 1000V AC for 1 minute
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force:
CMC CP 0.635mm (.025")—12.00N max.
CMC CP 1.50mm (.059")—20.00N max.
CMC CP 2.80mm (.110")—25.00N max.
Contact Retention to Housing:
CMC CP 0.635mm (.025")—60.00N min.
CMC CP 1.50mm (.059")—100.00N min.
CMC CP 2.80mm (.110")—100.00N min.
Wire Pull-Out Force: 100.00N min.
Mating Force: 70.00N max.
Unmating Force: 70.00N max.
Durability: 20 mating cycles

Physical

Housing: Glass-filled PBT

* Current tested on a fully loaded connector, current for temperature increase of 40˚C

CMC Power Receptacle				
Circuits	Order No.	Coding	Wire output	Lead-Free
28	64318-1011	Black	Left	Yes
	64318-1018	Grey		
	64318-1019	Brown		
	64318-3011	Black	Right	
	64318-3018	Grey		
	64318-3019	Brown		

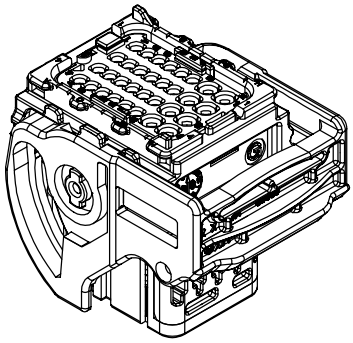
CMC Wire Cap			
Circuits	Order No.	Housing Color	Lead-Free
For 28 circuit (same wire cap as for 48 circuit CMC Receptacle)	64320-1301	Black	Yes

CMC Plug			
Circuits	Order No.	Housing Color	Lead-Free
0.635mm (.025")	64325-1010	White	Yes
1.50mm (.059")	64325-1023	Orange	
2.80mm (.110")	64325-1091	Black	

2.54mm (.100")/ 3.70mm (.146") Pitch CMC Wire-to-Board Hybrid Connector Receptacle, Plug and Wire Cap

64319

32 Circuit
Left and Right Wire Output



Features and Benefits

- CMC is a sealed, standard and modular connecting system
- Available in several circuit sizes
- Sealed by using high performing matte seal technology
- High density connector
- Hybrid system carrying low and medium current
- Used with CMC CP Terminals

Reference Information

Product Specification: PS-64319-001
Mates With:
Single 32 circuit CMC header—please contact Molex
80 circuit CMC header 502225-0801 (32 + 48 circuit)
Use With:
Terminal: 64322 CMC CP 0.635mm (.025")
64323 CMC CP 1.50mm (.059")
Plug: 64325-1010 Plug 0.635mm (.025") cavity
64325-1023 Plug 1.50mm (.059") cavity
Wire Cap: 64319-1201 CMC Wire Cap for 32 circuit CMC Receptacle
Header: 80 circuit CMC header 502225-0801 (32 + 48 circuit)
Designed In: Millimeters

Electrical

Voltage: 250V AC
Current: *
6.0A for CMC CP 0.635mm (.025") terminal (0.75mm² wire)
12.0A for CMC CP 1.50mm (.059") terminal (2.0mm² wire)
Contact Resistance:
CMC CP 0.635mm (.025")—8 milliohms max.
CMC CP 1.50mm (.059")—4 milliohms max.
Dielectric Withstanding Voltage: 1000V AC for 1 minute
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force:
CMC CP 0.635mm (.025")—12.00N max.
CMC CP 1.50mm (.059")—20.00N max.
Contact Retention to Housing:
CMC CP 0.635mm (.025")—60.00N min.
CMC CP 1.50mm (.059")—100.00N min.
Wire Pull-Out Force: 100.00N min.
Mating Force: 70.00N max.
Unmating Force: 70.00N max.
Durability: 20 mating cycles

Physical

Housing: Glass-filled PBT

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

CMC Receptacle

Circuits	Order No.	Coding	Wire Output	Option	Lead-Free
32	64319-1211	Black	Left		Yes
	64319-1216	Blue			
	64319-1218	Grey			
	64319-1219	Brown			
24	64319-2211	Black		Row 1 closed	
	64319-2218	Grey		Row 4 closed	
32	64319-3211	Black	Right		
	64319-3216	Blue			
	64319-3218	Grey			
	64319-3219	Brown			
24	64319-4211	Black		Row 1 closed	
	64319-4218	Grey		Row 4 closed	

CMC Wire Cap

Circuits	Order No.	Housing Color	Lead-Free
For 32 circuit	64319-1201	Black	Yes

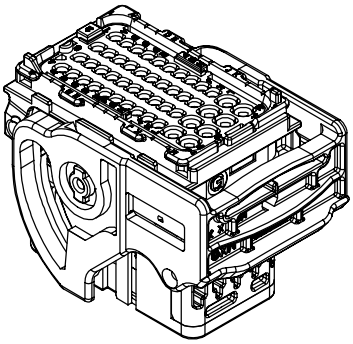
CMC Plug

Circuits	Order No.	Housing Color	Lead-Free
0.635mm (.025")	64325-1010	White	Yes
1.50mm (.059")	64325-1023	Orange	

2.54mm (.100")/ 3.70mm (.146") Pitch CMC Wire-to-Board Hybrid Connector Receptacle, Plug and Wire Cap

64320

48 Circuit
Left and Right Wire Output



Features and Benefits

- CMC is a sealed, standard and modular connecting system
- Several circuit sizes available
- Sealed by using high performing matte seal technology
- High density connector
- Hybrid system carrying low and medium current
- Used with CMC CP Terminals

Reference Information

Product Specification: PS-64319-001
Mates With:
48 circuit CMC header 500762-0481 and 36638 series and 80 circuit CMC header 502225-0801 (32 + 48 circuit)
Use With:
Terminal: 64322 CMC CP 0.635mm (.025")
64323 CMC CP 1.50mm (.059")
Plug: 64325-1010 Plug 0.635mm (.025") cavity
64325-1023 Plug 1.50mm (.059") cavity
Wire Cap: 64320-1301 CMC Wire Cap for 48 circuit and 28 circuit CMC Receptacle
Header: 500762-0481 48 circuit CMC header
36638 48 circuit CMC header
502225-0801 80 circuit CMC header (32 + 48 circuit)
Designed In: Millimeters

Electrical

Voltage: 250 V AC
Current: *
6.0A for CMC CP 0.635mm (.025") terminal (0.75mm² wire)
12.0A for CMC CP 1.50mm (.059") terminal (2.0mm² wire)
Contact Resistance:
CMC CP 0.635mm (.025")—8 milliohms max.
CMC CP 1.50mm (.059")—4 milliohms max.
Dielectric Withstanding Voltage: 1000V AC for 1 minute
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force:
CMC CP 0.635mm (.025")—12.00N max.
CMC CP 1.50mm (.059")—20.00N max.
Contact Retention to Housing:
CMC CP 0.635mm (.025")—60.00N min.
CMC CP 1.50mm (.059")—100.00N min.
Wire Pull-Out Force: 100.00N min.
Mating Force: 70.00N max.
Unmating Force: 70.00N max.
Durability: 20 mating cycles

Physical

Housing: Glass-filled PBT

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

CMC Receptacle					
Circuits	Order No.	Coding	Wire Output	Option	Lead-Free
48	64320-1311	Black	Left		Yes
	64320-1315	Green			
	64320-1318	Grey			
	64320-1319	Brown			
36	64320-2311	Black		Row 1 closed	
	64320-2319	Brown		Row 1 closed	
48	64320-3311	Black	Right		
	64320-3315	Green			
	64320-3318	Grey			
	64320-3319	Brown			
36	64320-4311	Black		Row 1 closed	
	64320-4319	Brown		Row 1 closed	

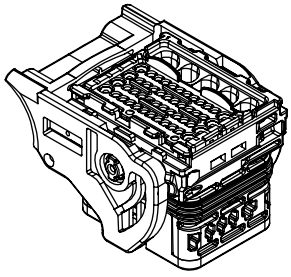
CMC Wire Cap			
Circuits	Order No.	Housing Color	Lead-Free
For 48 circuit	64320-1301	Black	Yes

CMC Plug			
Circuits	Order No.	Housing Color	Lead-Free
0.635mm (.025")	64325-1010	White	Yes
1.50mm (.059")	64325-1023	Orange	

2.54mm (.100")/ 3.50mm (.138")/ 7.00mm (.276") Pitch CMC Wire-to-Board Power Hybrid Connector Receptacle, Plug and Wire Cap

64321

53 Circuit
Left and Right Wire Output



Features and Benefits

- CMC is a sealed, standard and modular connecting system
- Available in several circuit sizes
- Sealed by using high performing matte seal technology
- High density connector
- Hybrid system carrying low, medium and high current
- Used with CMC CP Terminals
- Using CMC CP 2.80mm terminals for power connecting applications

Reference Information

Product Specification: PS-64321-001
Mates With: 53 circuit CMC header 98997-1002, please contact Molex for details
Use With:
Terminal: 64322 CMC CP 0.635mm (.025")
64323 CMC CP 1.50mm (.059")
64324 CMC CP 2.80mm (.110")
Plug: 64325-1010 Plug 0.635mm (.025") cavity
64325-1023 Plug 1.50mm (.059") cavity
64325-1091 Plug 2.80mm (.110") cavity
Wire Cap: 64321-1101 CMC Wire Cap for 53 circuit CMC Receptacle
Designed In: Millimeters

Electrical

Voltage: 250V AC
Current: *
2.5A for CMC CP 0.635mm (.025") terminal (0.75mm² wire)
12.0A for CMC CP 1.50mm (.059") terminal (2.0mm² wire)
21.0A for CMC CP 2.80mm (.110") terminals (5.0mm²)
Contact Resistance:
CMC CP 0.635mm (.025")—8 milliohms max.
CMC CP 1.50mm (.059")—4 milliohms max.
CMC CP 2.80mm (.110")—3 milliohms max.
Dielectric Withstanding Voltage: 1000V AC for 1 minute
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force:
CMC CP 0.635mm (.025")—12.00N max.
CMC CP 1.50mm (.059")—20.00N max.
CMC CP 2.80mm (.110")—25.00N max.
Contact Retention to Housing:
CMC CP 0.635mm (.025")—60.00N min.
CMC CP 1.50mm (.059")—100.00N min.
CMC CP 2.80mm (.110")—100.00N min.
Wire Pull-Out Force: 100.00N min.
Mating Force: 80.00N max.
Unmating Force: 80.00N max.
Durability: 20 mating cycles

Physical

Housing: Glass-filled PBT

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

CMC Power Receptacle				
Circuits	**Order No.**	**Coding**	**Wire Output**	**Lead-Free**
53	64321-1011	Black	Left	Yes
53	64321-1018	Grey	Left	
53	64321-1019	Brown	Left	
53	64321-2011	Black	Right	
53	64321-2018	Grey	Right	
53	64320-2019	Brown	Right	

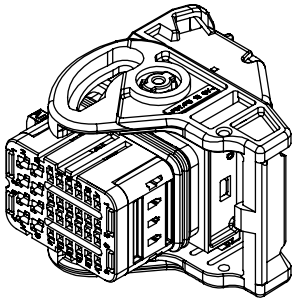
CMC Wire Cap			
Circuits	**Order No.**	**Housing Color**	**Lead-Free**
For 53 circuit	64321-1101	Black	Yes

CMC Plug			
Circuits	**Order No.**	**Housing Color**	**Lead-Free**
0.635mm (.025")	64325-1010	White	Yes
1.50mm (.059")	64325-1023	Orange	
2.80mm (.110")	64325-1091	Black	

2.54mm (.100")/ 3.50mm (.138") Pitch Wire-to-Board CMC Hybrid Crimp Housing

98944

32 Circuits



Features and Benefits

- Secondary locking
- Gel grommet seal to facilitate harness assembly (no cavity plug necessary for unplugged cavities)
- Two wire sizes: hybrid 0.635 and 1.50mm (.025 and .060") connector

Reference Information

Packaging: Tray
Mates With: Various other CMC headers
Use With: 98658, 98915-10x9 terminals and 98649-1003 (wire cap)
Designed In: Millimeters

Electrical

Voltage: 14V
Current:
0.635mm (.025") terminal—6.0A max.
1.50mm (.060") terminal—11.0A max.
Contact Resistance:
0.635mm (.025") terminal—8 milliohms max.
1.50mm (.060") terminal—4 milliohms max.
Dielectric Withstanding Voltage: 1000V AC min.
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force:
0.635mm (.025") terminal—10.00N (2.25 lb)
1.50mm (.060") terminal—15.00N (3.37 lb)
Contact Retention to Housing:
0.635mm (.025") terminal—60.00N (13.49 lb)
1.50mm (.060") 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: 20 mating cycles

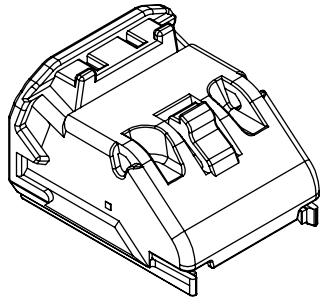
Physical

Housing: Glass-filled PBT Polyester
Sealing Performance: IP67

Circuits	Order No.		Color
	Assembled Right Wire Output	Assembled Left Wire Output	
32	98944-2001	98944-3001	Black
	98944-2002	98944-3002	Gray
	98944-2003	98944-3003	Brown
	98944-2004	98944-3004	Green
	98944-2005	98944-3005	Blue

2.54mm (.100")/ 3.50mm (.138") Pitch CMC Wire Cap

98649



Features and Benefits

- Fixture for strain relief
- Enable right angle wire output in two directions

Reference Information

Packaging: Box
Use With: 98944-200X or 98944-300X
Designed In: Millimeters

Physical

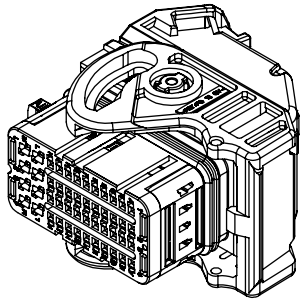
Material: Black PA6—Polyamide

Circuits	Order No.
32	98649-1003

2.54mm (.100")/ 3.50mm (.138") Pitch Wire-to-Board CMC Hybrid Crimp Housing

98950

48 Circuits



Features and Benefits

- Secondary locking
- Gel grommet seal to facilitate harness assembly (no cavity plug necessary for unplugged cavities)
- Two wire sizes: hybrid 0.635 (.025 and .060") and 1.50mm connector

Reference Information

Packaging: Tray
Mates With: Various other CMC headers
Use With: 98658, 98915-10x9 terminals and 98649-1003 (wire cap)
Designed In: Millimeters

Electrical

Voltage: 14V
Current: 0.635mm (.025") terminal—6A max.
1.50mm (.060") terminal—11A max.
Contact Resistance:
0.635mm (.025") terminal—8 milliohms max.
1.50mm (.060") terminal—4 milliohms max.
Dielectric Withstanding Voltage: 1000V AC min.
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force:
0.635mm (.025") terminal—10.00N (2.25 lb)
1.50mm (.060") terminal—15.00N (3.37 lb)
Contact Retention to Housing:
0.635mm (.025") terminal: 60.00N (13.49 lb)
1.50mm (.060") 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: 20 mating cycles

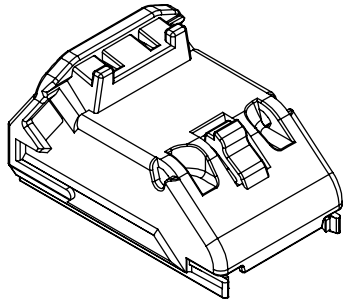
Physical

Housing: Glass-filled PBT Polyester
Sealing Performance: IP67

Circuits	Order No.		Color
	Assembled Right Wire Output	Assembled Left Wire Output	
48	98950-2001	98950-3001	Black
	98950-2002	98950-3002	Gray
	98950-2003	98950-3003	Brown
	98950-2004	98950-3004	Green
	98950-2005	98950-3005	Blue

2.54mm (.100")/ 3.50mm (.138") Pitch CMC Wire Cap

98655



Features and Benefits

- Fixture for strain relief
- Enable right angle wire output in two directions

Reference Information

Packaging: Box
Use With: 98950-200X or 98950-300X
Designed In: Millimeters

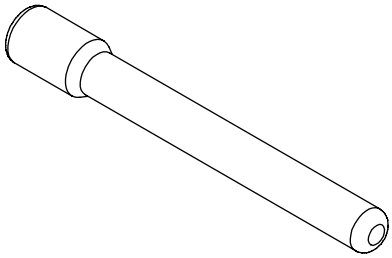
Physical

Material: Black PA6—Polyamide

Circuits	Order No.
48	98655-1003

0.635mm (.025")/ 1.50mm (.059")/ 2.80mm (.110") Terminal Cavity CMC Hybrid Connector Blind Plug

64325



Features and Benefits

- CMC is a sealed, standard and modular connecting system
- Several circuit sizes available
- Sealed by using high performing matte seal technology
- CMC CP blind plugs for unused circuits
- CMC CP blind plugs secure sealing system when flexibility is required for unused cavities with standard backplate

Reference Information

Product Specification:
Please refer to Product Specification of the relevant CMC connector
Mates With:
CMC Plug 0.635mm (.025") and CMC Plug 1.50mm (.059")—CMC connector series 64318, 64319, 64320, and 64321
CMC Plug 2.80mm (.110")—CMC connector series 64318 and 64321
Use With: See under Mates With
Designed In: Millimeters

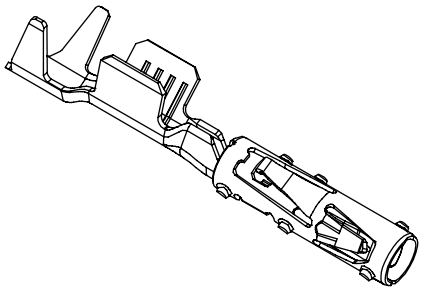
Physical

CMC CP Plug 0.635mm (.025"): White Polyamid
CMC CP Plug 1.50mm (.059"): Orange Polyamid
CMC CP Plug 2.80mm (.110"): Black Rubber

For CMC CP terminal cavity	Order No.	Color	Material
0.635mm (.025")	64325-1010	White	Polyamid
1.50mm (.059")	64325-1023	Orange	Polyamid
2.80mm (.110")	64325-1091	Black	Rubber

0.635mm (.025") Width CMC CP Female Crimp Terminal

64322



Features and Benefits

- Two piece terminal design
- Tang locking system
- Robust design with fully protected beam
- Various wire size compatibility
- Available in tin and gold plating

Reference Information

Product Specification: Please refer to Product Specification of the relevant CMC connector
Mates With: CMC connector series 64318, 64319, 64320 and 64321
Designed In: Millimeters

Electrical

Voltage: 250V AC
Current: *
6.0A for CMC CP 0.635mm (.025") terminal (0.75mm² wire)
Contact Resistance: CMC CP 0.635mm (.025") 8 milliohms max.
Dielectric Withstanding Voltage: 1000V AC for 1 min.
Insulation Resistance: 100 Megohms min.

Mechanical

Contact Insertion Force into Housing (Sealed Connector):
CMC CP 0.635mm (.025")—12.00N min.
Wire Pull-Out Force: 100.00N min. for wire size of 0.50mm²
Mating/Unmating Force:
Please refer to Product Specification of the relevant CMC connector the terminal is used with
Durability: 20 mating cycles

Physical

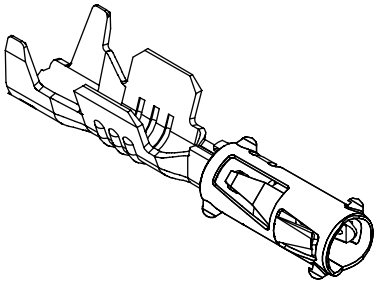
Contact: Phosphor Bronze
Plating: Tin and Gold
Insulation Diameter: See table

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

Order No.	Wire Size (mm²)	Wire Insulation Diameter (mm)	Wire Size (AWG)	Plating	Lead-Free
64322-1019	0.35	1.25 to 1.40	22, 24	Tin	Yes
64322-1029	0.75	1.60 to 1.90		Tin	
64322-1039	0.50	1.40 to 1.70		Tin	
64322-1219	0.75	1.60 to 1.90		1.27µm Gold	
64322-1229	0.35	1.25 to 1.40	22, 24	1.27µm Gold	
64322-1239	0.50	1.40 to 1.70		1.27µm Gold	
64322-1339	0.75	1.60 to 1.90		High Performing version 1.27µm Gold	
64322-1349	0.35	1.25 to 1.40	22, 24	High Performing version 1.27µm Gold	
64322-1359	0.50	1.40 to 1.70		High Performing version 1.27µm Gold	

1.50mm (.059") Width CMC CP Female Crimp Terminal

64323



Features and Benefits

- Two piece terminal design
- Tang locking system
- Robust design with fully protected beam
- Various wire size compatibility
- Available in tin and gold plating

Reference Information

Product Specification:
Please refer to Product Specification of the relevant CMC connector
Mates With: CMC connector series 64318, 64319, 64320 and 64321
Designed In: Millimeters

Electrical

Voltage: 250 V AC
Current: *
12.0A for CMC CP 1.50mm (.059") terminal (2.0mm² wire)
Contact Resistance: CMC CP 1.50mm (.059")—4 milliohms max.
Dielectric Withstanding Voltage: 1000V AC for 1 min.
Insulation Resistance: 100 Megohms min.

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

Mechanical

Contact Insertion Force into Housing (Sealed Connector):
CMC CP 1.50mm (.059")—20.00N min.
Wire Pull-Out Force: 100.00N min. for wire size of 0.50mm²
Mating/Unmating Force:
Please refer to Product Specification of the relevant CMC connector the terminal is used with
Durability: 20 mating cycles

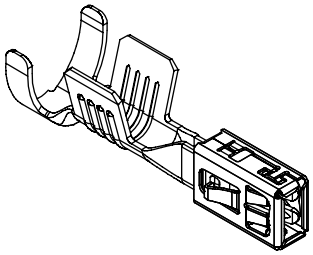
Physical

Contact: Phosphor Bronze
Plating: Tin and Gold
Insulation Diameter: See table

Order No.	Wire Size (mm²)	Wire Insulation Diameter (mm)	Wire Size (AWG)	Plating	Lead-Free
64323-1029	0.50 to 1.00	1.40 to 2.15	18, 20	Tin	Yes
64323-1039	> 1.00 to 2.00	2.10 to 2.80	14, 16	Tin	
64323-1219	> 1.00 to 2.00	2.10 to 2.80	14, 16	1.27µm Gold	
64323-1319	0.50 to 1.00	1.40 to 2.15	18, 20	1.27µm Gold	

2.80mm (.110") Width CMC CP Female Crimp Terminal

64324
With Linked Wire Seal



Features and Benefits
- Two piece terminal design
- Tang locking system
- Robust design with fully protected beam
- Various wire size compatibility
- Available in tin and gold plating

Reference Information
Product Specification:
Please refer to Product Specification of the relevant CMC connector
Mates With: CMC connector series 64318, 64321 and CMC wire seal series 64325
Designed In: Millimeters

Electrical
Voltage: 250V AC
Current: *21.0A for CMC CP 2.80mm (.110") terminals (5.0mm²)
Contact Resistance: CMC CP 2.80mm (.110")—3 milliohms max.
Dielectric Withstanding Voltage: 1000V AC for 1 min.
Insulation Resistance: 100 Megohms min.

* Current tested on a fully loaded connector, current for temperature increase of 40˚C

Mechanical
Contact Insertion Force into Housing (Sealed Connector):
CMC CP 2.80mm (.110")—25.00N min
Wire Pull-Out Force: 100.00N min. for wire size of 0.50mm²
Mating/Unmating Force:
Please refer to Product Specification of the relevant CMC connector the terminal is used with
Durability: 20 mating cycles

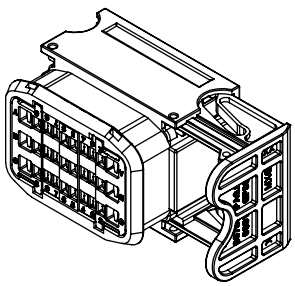
Physical
Contact: Phosphor Bronze
Plating: Tin and Gold
Insulation Diameter: See table

Order No.	Wire Size (mm²)	Wire Insulation Diameter (mm)	Plating	Lead-Free
64324-1019	> 3.0 to 5.0	3.40 to 4.00	Tin	Yes
64324-1029	> 2.0 to 3.0	2.65 to 3.45	Tin	
64324-1039	> 1.0 to 2.0	2.10 to 2.80	Tin	
64324-1049	0.5 to 1.0	1.40 to 2.15	Tin	
64324-1119	> 3.0 to 5.0	3.40 to 4.00	1.27µm Gold	
64324-1129	> 2.0 to 3.0	2.65 to 3.45	1.27µm Gold	
64324-1139	> 1.0 to 2.0	2.10 to 2.80	1.27µm Gold	
64324-1149	0.5 to 1.0	1.40 to 2.15	1.27µm Gold	

www.molex.com/product/cmc.html

3.33mm (.131")/ 4.20mm (.165") Pitch NSCC Wire-to-Wire Hybrid Receptacle Housing

98122
Triple Rows
Sealed



Features and Benefits
- Secondary locking
- Slide to reduce mating force
- Slide orientation right or left
- Grommet seal and perimeter seal
- Color keying
- Two wire sizes: hybrid 1.5 and 2.8mm (.060 and .110") connector

Reference Information
Packaging: Box
Mates With: 98761
Use With: NSCC 1.5 terminal
Designed In: Millimeters

Electrical
Voltage: 13V
Current: 1.5mm (.060")—13.0A
2.8mm (.110")—22.0A
(see Sicma terminal specification for 1.5 and 2.8mm terminals)
Contact Resistance: 1.5mm (.060")—5 milliohms max.
2.8mm (.110")—4 milliohms max.
Dielectric Withstanding Voltage: 1000 VAC or 1400 VDC
Insulation Resistance: 100 Megohms min.

Mechanical
Contact Insertion Force:
1.5mm (.060")—25.0N (5.62 lb) max.
2.8mm (.110")—30.0N (6.74 lb) max.
Contact Retention to Housing: 120.0N (26.98 lb) min.
Wire Pull-Out Force: 120.0N (26.98 lb)
Mating Force: 85.0N (19.11 lb) max. (fully loaded)
Unmating Force: 85.0N (19.11 lb) max. (fully loaded)
Durability: 10 mating cycles

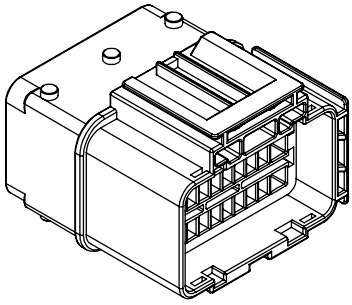
Physical
Housing: Glass-filled PBT Polyester, UL 94V-HB
Sealing Class: 500 mbars (7.25 psi)

Circuits	Order No.	Color	Slide Orientation
30	98122-1001	Black	Right
	98122-1002	Brown	
	98122-1003	Gray	
	98122-1005	Black	Left
	98122-1006	Brown	
	98122-1007	Gray	

3.33mm (.131")/ 4.20mm (.165") Pitch NSCC Wire-to-Wire Hybrid Plug Housing

98761

Triple Rows
Sealed



Circuits	Order No.	Color
30	98761-1001	Black
	98761-1002	Brown
	98761-1003	Gray

Features and Benefits

- Secondary locking feature
- Slide to reduce mating force
- Slide orientation right or left possible
- Grommet seal and perimeter seal
- Color keying
- Two wire sizes: hybrid 1.50 and 2.80mm (.060 and .110") connector

Reference Information

Packaging: Box
Mates With: 98122
Use With: Sicma 1.5 and 2.8mm (.060 and .110") male terminals
Designed In: Millimeters

Electrical

Voltage: 13V
Current: 1.5mm (.060")—13.0A
2.8mm (.110")—22.0A
(see FCI Sicma terminal specification for 1.5 and 2.8mm terminals)
Contact Resistance: 1.5mm (.060")—5 milliohms max.
2.8mm (.110")—4 milliohms max.
Dielectric Withstanding Voltage: 1000V AC or 1400V DC
Insulation Resistance: 100 Megohms min.

Mechanical

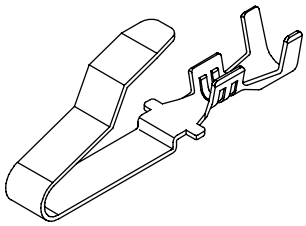
Contact Insertion Force:
1.5mm (.060")—15.0N (3.37 lb) max.
2.8mm (.110")—20.0 N (4.50 lb) max.
Contact Retention to Housing: 120.0 N (26.98 lb) min.
Wire Pull-Out Force: 120.0N (26.98 lb)
Mating Force: 85.0N (19.11 lb) max. (fully loaded)
Unmating Force: 85.0N (19.11 lb) max. (fully loaded)
Durability: 10 mating cycles

Physical

Housing: Glass-filled PBT Polyester, UL 94-HB
Sealing Class: 500 mbars (7.25 psi)

Bulb Socket Sealed Terminal

35464
Positive Lock



Features and Benefits
- Positive locking terminal
- Available for sealed or unsealed systems

Reference Information
Product Specification: PS-35842-001
Packaging: Reel
Use With: 35842 and 35843
Mates With: 35903 Wire Seal
Designed In: Millimeters

Electrical
Voltage: 12V
Current:

Wire Size	Current
0.5 mm²	5A
0.85 mm²	7A

Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical
Contact Insertion Force: 3.0 kgf max.
Contact Retention to Housing: 6.0 kgf min.

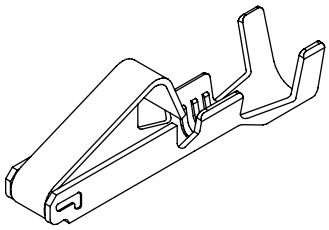
Physical
Contact: Phosphor Bronze
Plating: Contact Area—Unplated
Insulation Diameter: 1.90mm (.075") max.
Strip Length: 2.60 to 3.60mm (.102 to .142")

Order No.	Wire Range (mm²)	Lead-free
35464-8000	AVS (AVSS) 0.3-0.85	Yes

www.molex.com/customer.html?seriesNumber=35464

Bulb Socket Sealed Terminal

35465
Earth



Features and Benefits
- Positive locking terminal
- Available for sealed or unsealed systems

Reference Information
Product Specification: PS-35842-001
Packaging: Reel
Use With: 35842 and 35843
Mates With: 35903 Wire Seal
Designed In: Millimeters

Electrical
Voltage: 12V
Current:

Wire Size	Current
0.5 mm²	5
0.085 mm²	7

Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 100 Megohms min.

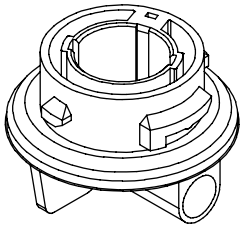
Mechanical
Contact Insertion Force: 3.0 kgf max.
Contact Retention to Housing: 6.0 kgf min.

Physical
Contact: Phosphor Bronze
Plating: Unplated

Order No.	Wire Range (mm²)	Lead-free
35465-8000	AVS (AVSS) 0.3-0.85	Yes

Bulb Socket

35843
Sealed, Single



Features and Benefits
- Used with: 21/5W for double bulb 21W for single bulb
- High temperature material
- Compact size provides space saving
- Easy insertion "push-to-seat" terminal design provides cost savings
- Bottom flange enables easy assembly with lamp
- Simplified lamp design by standardization of light center length
- Silicone wire seal provides good sealing

Reference Information
Product Specification: PS-35842-001
Packaging: Bag
Mates With: Lamp
Use With: 35464 and 35465
Designed In: Millimeters

Electrical
Voltage: 12V
Current: 7.0A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical
Contact Insertion Force: 3.0 kgf max.
Contact Retention Force: 6.0 kgf min.
Wire Pull-Out Force: 58.3N (13.23 lb) min.
Durability: 50 cycles

Physical
Housing: High-temperature Polyamide, UL 94V-2

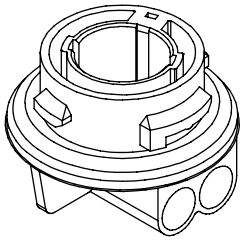
Order No.	Type	Color
35843-1205	A	Gray
35843-1206		White
35843-1210	B	Natural
35843-1211		Black
35843-1215		Gray
35843-1216		White
35843-1217		Brown
35843-1221	C	Black
35843-1225		Gray
35843-1226		White
35843-1227		Brown

Order No.	Type	Color
35843-1240	D	Natural
35843-1245		Gray
35843-1246		White
35843-1247		Brown
35843-1230	EC	Natural
35843-1235		Gray
35843-1236		White
35843-1237		Brown

www.molex.com/customer.html?seriesNumber=35843

Bulb Socket

35842
Sealed, Double



Features and Benefits
- Used with: 21/5W for double bulb 21W for double bulb
- High temperature material
- Compact size provides space saving
- Easy insertion "push-to-seat" terminal design provides cost savings
- Bottom flange enables easy assembly with lamp
- Simplified lamp design by standardization of light center length
- Silicone wire seal provides good sealing

Reference Information
Product Specification: PS-35842-001
Packaging: Bag
Mates With: Lamp
Use With: 35464 and 35465
Designed In: Millimeters

Electrical
Voltage: 12V
Current: 7.0A max.
Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500V DC 100 Megohms min.

Mechanical
Contact Insertion Force: 3.0 kgf max.
Contact Retention Force: 6.0 kgf min.
Wire Pull-Out Force: 58.3N (13.23 lb) min.
Durability: 50 cycles

Physical
Housing: High-temperature Polyamide, UL 94V-2

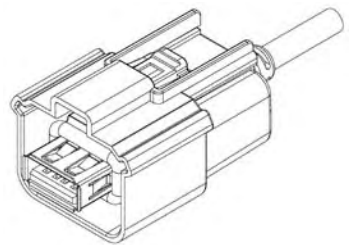
Order No.	Type	Color
35842-1301	A	Black
35842-1305		Gray
35842-1306		White
35842-1307		Brown
35842-1315	B	Gray
35842-1316		White
35842-1317		Brown

www.molex.com/customer.html?seriesNumber=35842

HSAutoLink™ Cable Assembly

111015/111082/111083

USCAR USB Standard A Receptacle to USCAR USB Plug



Latching Shroud

Features and Benefits

- Rugged connectors meet USCAR and other automotive OEM requirements
- Superior signal performance and reduced Electro Magnetic Interference (EMI)
- USCAR-30 compliant
- High durability Standard A receptacle
- Package size optimization of the consumer interface

Reference Information

Packaging: Bag
Mates With: USCAR USB Keyed Headers—Right Angle (49616), Vertical (104004)
Use With: In-Line Cable Assemblies 111005 for separating link applications
Designed In: Millimeters

Electrical

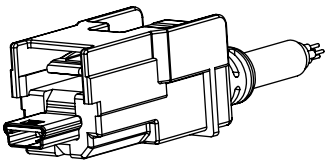
Voltage: 30V
Current: 1.5A
Contact Resistance: 50 milliohms max.
Insulation Resistance: 150 Megohms min.

Mechanical

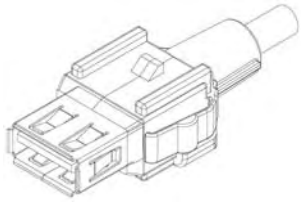
USB Standard A
Mating Force: 35N (7.87 lb) max.
UnmatingForce: 10N (2.25 lb) min.
Durability: 5,000 cycles*
*Durability results range from 5,000 cycles to as many as 20,000 cycles based on test methods used
Plug: Shielded 5 Pin
Mating Force: 45N (10.12 lb) max.
Retention Force: 110N (24.73 lb) max.
Durability: 25 cycles

Physical

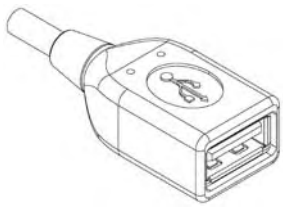
Housing: PBT
Interface Plating: Gold over Nickel



Plug



Unshrouded



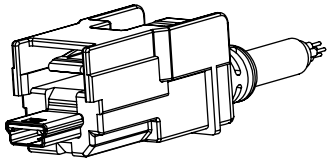
Overmolded

Order No.	Plug Polarization	Standard A	Length*
111015-0100	A	Latching Shroud	0.50m (1.64')
111015-0101	B		
111015-0200	A		1.00m (3.28')
111015-0201	B		
111015-0300	A		1.50m (4.92')
111015-0301	B		
111082-0001	A	Overmolded	0.50m (1.64')
111082-0002	B		
111083-0001	A	Unshrouded	
111083-0002	B		

*Other lengths available, contact Molex.

HSAutoLink™ Cable Assembly

111014
USCAR USB Plug to Plug



Features and Benefits
- Rugged connectors meet USCAR and other automotive OEM requirements
- Superior signal performance and reduced Electro Magnetic Interference (EMI)
- USCAR-30 compliant

Reference Information
Packaging: Bag
Mates With: USCAR USB Keyed Headers—Right Angle (49616), Vertical (104004)
Use With: Cable Assemblies 111005
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 1.5A
Contact Resistance: 50 milliohms max.
Insulation Resistance: 150 Megohms min.

Mechanical
Plug: Shielded 5 Pin
Mating Force: 45N (10.12 lb) max.
Unmating Force: 45N (10.12 lb) max.
Retention Force: 110N (24.73 lb) min.
Durability: 25 cycles
Inline Receptacle: Shielded 5 Pin
Mating Force: 45N (10.12 lb) max.
Unmating Force: 45N (10.12 lb) max.
Retention Force: 110N (24.73 lb) min.
Durability: 25 cycles

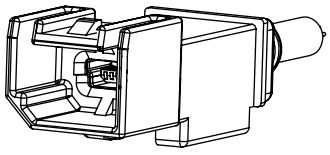
Physical
Housing: PBT
Interface Plating: Gold over Nickel

Order No.	In-Line Receptacle	Plug Polarization	Length*
111014-5000	A	A	0.50m (1.64')
111014-5001		B	
111014-5003	B		

*Other lengths available, contact Molex.

HSAutoLink™ Cable Assembly

111005
USCAR USB Plug to In-line Receptacle



Features and Benefits
- Rugged connectors meet USCAR and other automotive OEM requirements
- Superior signal performance and reduced Electro Magnetic Interference (EMI)
- USCAR-30 compliant
- Integrated retainer slot for standard Christmas-tree clip

Reference Information
Packaging: Bag
Mates With: USCAR USB Keyed Headers—Right Angle (49616), Vertical (104004)
Use With: Cable Assemblies 111014, 111015
Designed In: Millimeters

Electrical
Voltage: 30V
Current: 1.5A
Contact Resistance: 50 milliohms max.
Insulation Resistance: 150 Megohms min.

Mechanical
Plug: Shielded 5 Pin
Mating Force: 45N (10.12 lb) max.
Unmating Force: 45N (10.12 lb) max.
Retention Force: 110N (24.73 lb) min.
Durability: 25 cycles
Inline Receptacle: Shielded 5 Pin
Mating Force: 45N (10.12 lb) max.
Unmating Force: 45N (10.12 lb) max
Retention Force: 110N (24.73 lb) min.
Durability: 25 cycles

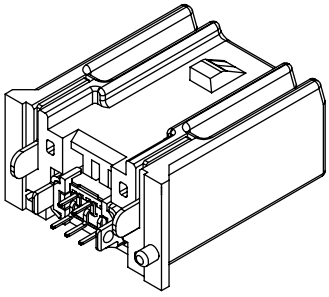
Physical
Housing: PBT
Interface Plating: Gold over Nickel

Order No.	In-Line Receptacle	Plug Polarization	Length*
111005-1010	A	A	0.50m (1.64')
111005-1020		B	
111005-1030	B	A	
111005-1040		B	

*Other lengths available, contact Molex.

HSAutoLink™ Header

104004
Vertical



Order No.	Plug Polarization*
104004-0501	A
104004-0505	B

*For applications where additional plug polarizations are required, contact Molex.

Features and Benefits
- Provides a proven interface offering good mechanical performances
- USCAR-30 compliant
- Meets all USB 2.0 electrical and EMI requirements
- Compatible with Lead-free through-hole reflow process (Pin-in-Paste)

Reference Information
Packaging: Tray
Mates With: Cable Assemblies (Series 111005, 111014, 111015, 111019, 111020 and 111041)
Designed In: Millimeters

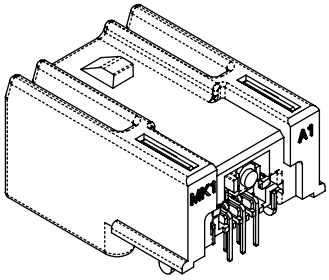
Electrical
Voltage: 16V AC min.
Current: 1.0A max.
Contact Resistance: 50 milliohms max.
Insulation Resistance: 150 Megohms min.

Mechanical
Insertion Force to PCB: 20N (4.50 lb) max.
Mating Force: 45N (10.12 lb) max.
Unmating Force: 45N (10.12 lb) max.
Durability: 25 cycles min.

Physical
Housing: LCP High-Temperature Plastic
Contact: Copper Alloy
Plating: Contact Area—0.75µm min. Gold
Solder Tail Area—3.0µm min. Tin
Underplating—1.25µm min. Nickel
PCB Thickness: 1.60mm (.063")

HSAutoLink™ Header

49616
Right Angle



Order No.	Plug Polarization*
49616-0711	A
49616-0715	B

*For applications where additional plug polarizations are required, contact Molex.

Features and Benefits
- Provides a proven interface offering good mechanical performances
- USCAR-30 compliant
- Meets all USB 2.0 electrical and EMI requirements
- Compatible with Lead-free through-hole reflow process (Pin-in-Paste)

Reference Information
Packaging: Tray
Mates With: Cable Assemblies (Series 111005, 111014, 111015, 111019, 111020 and 111041)
Designed In: Millimeters

Electrical
Voltage: 16.0V AC min.
Current: 1.0A max.
Contact Resistance: 50 milliohms max.
Insulation Resistance: 150 Megohms min.

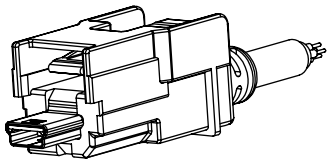
Mechanical
Insertion Force to PCB: 20N (4.50 lb) max.
Mating Force: 45N (10.12 lb) max.
Unmating Force: 45N (10.12 lb) max.
Durability: 25 cycles min.

Physical
Housing: LCP High-Temperature Plastic
Contact: Copper Alloy
Plating: Contact Area—0.75µm min. Gold
Solder Tail Area—3.0µm min. Tin
Underplating—1.25µm min. Nickel
PCB Thickness: 1.60mm (.063")

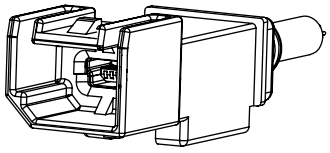
HSAutoLink™ Cable Assembly

111019/111041

LVDS 2- and 4-Wire



Plug



In-line Receptacle

Features and Benefits

- Rugged connectors meet USCAR and other automotive OEM requirements
- Support 2 or 4 wire LVDS technology
- Use of high electrical performance Shielded Twisted Pair cable construction
- Interconnect system already evaluated with most of major LVDS chip suppliers for automotive application

Reference Information

Packaging: Bag
Mates With: USCAR USB Keyed Headers—Right Angle (Series 49616), Vertical (Series 104004)
Designed In: Millimeters

Electrical

Voltage: 30V
Current: 1.0A
Contact Resistance: 50 milliohms max.
Insulation Resistance: 150 Megohms min.

Mechanical

Plug: Shielded 5 Pin
Mating Force: 45N (10.12 lb) max.
Unmating Force: 45N (10.12 lb) max.
Retention Force: 110N (24.73 lb) min.
Durability: 25 cycles

Inline Receptacle: Shielded 5 Pin
Mating Force: 45N (10.12 lb) max.
Unmating Force: 45N (10.12 lb) max.
Retention Force: 110N (24.73 lb) min.
Durability: 25 cycles

Physical

Housing: PBT
Interface Plating: Gold over Nickel

Plug to Plug Cable Assembly

Wires	Order No.	In-Line Receptacle	Plug Polarization	Length*
2	111041-5001	A	A	0.50m (1.64')
	111041-5000		B	
	111041-5002	B		
4	111019-5001	A	A	
	111019-5000		B	
	111019-5002	B		

In-Line Receptacle to Plug Cable Assembly

Wires	Order No.	In-Line Receptacle	Plug Polarization	Length*
2	111041-2010	A	A	0.50m (1.64')
	111041-2030		B	
	111041-2020	B	A	
	111041-2040		B	
4	111019-2010	A	A	
	111019-2030		B	
	111019-2020	B	A	
	111019-2040		B	

*Other lengths available, contact Molex.

Mouser Electronics

Authorized Distributor

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