



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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MX150™
Sealed Connector System



Applications

The pre-assembled, submersible MX150™ is a high-performance connector system for challenging, rugged and harsh applications.

The innovative MX150 Sealed Connector System is based upon the 1.50mm (.060") ISO blade-type terminal system, available with pre-Tin, selective Gold and pure Silver contact finishes. It is designed to meet the need for a rugged, environmentally sealed connector system supporting both low-level signal and power applications up to 22.0A. Designed for on-engine automotive to off-road construction equipment applications, the MX150 Sealed Connector System's reduced package size is ideal for typical SAE-style wire.

The MX150 family consists of 2 types of connection system's: matte-sealed and cable-sealed designs. The matte-sealed design eliminates the need to purchase, handle and crimp individual wire seals to lower applied cost. It incorporates a single silicone-based seal with individual wire openings allowing for a tighter overall pitch and smaller package size.

The cable-sealed design incorporates individual wire seals crimped to each individual terminal, allowing for superior sealing performance in applications with 'aggressive' wire routings.

Both cost-effective connector designs feature all-in-one plug and receptacle housings with pre-assembled, wire and interfacial connector seals. Integral terminal position assurance (TPA) and optional connector position assurance (CPA) components eliminate time-consuming and costly assembly operations. Completing the application is as simple as crimping the appropriate terminal, inserting the crimped terminal lead and seating the TPA to its final lock position. No additional components are required.

Tooling solutions include FineAdjust™ crimp-press applicators for high-volume production, as well as hand tools for low-volume production and field repairs.

For additional information on Molex's MX150 product offering, visit: www.molex.com/ind/mx150.html

Markets and Applications

- Automotive vehicles
- Commercial vehicles
- Recreational vehicles
- Industrial vehicles and equipment
- Construction equipment
- Marine equipment

Driver Interface

- Interior Speakers
- Door Lock Mechanisms
- Wipers, Washers and Defoggers
- Power Steering



Vehicle Exterior

- Exterior Lighting
- Head Lamps
- Turn Signals



www.molex.com/ind/mx150.html

Safety/Chassis

- Traction Control
- Brake Control (ABS)
- Stability Control
- Tire Safety
- Adaptive Cruise Control
- Forward Collision Warning
- Airbags/Safety Bags
- Impact Sensors
- Occupant Sensing
- Pedestrian Protection
- Horns
- Fluid Reservoirs



Powertrain

- Fuel Injection
- Valvetrain
- Emissions Control
- Engine Cooling
- Ignition
- Transmission, Transaxles
and 4-Wheel Drive
- Powertrain Harness Connectors
- Powertrain Control Modules
- Spark Plugs





MX150 Matte Seal Configurations

Capabilities.....	5
1.50mm Sealed Female Terminal System.....	6
1.50mm Unsealed Female Terminal System.....	6
1.50mm Standard Male Terminal System.....	7
1.50mm Male Terminal System with Shorting-Bar.....	7

MX150 Single Row Features and Specifications

Connection System Construction	8
1-by-2 Connector System.....	9
1-by-3 Connector System.....	10
1-by-4 Connector System.....	11
1-by-4 Shorting-Bar Connector System.....	12
1-by-5 Connector System.....	13
1-by-6 Connector System.....	14

MX150 Dual Row Features and Specifications

Connection System Construction	15
2-by-2 Connector System.....	16
2-by-3 Connector System.....	17
2-by-4 Connector System.....	18
2-by-6 Connector System.....	19
2-by-8 Connector System.....	20
2-by-10 Connector System.....	21

MX150 Dual Row Hybrid Features and Specifications

Features and Specifications	22
2-by-8 Hybrid Connector System.....	23
2-by-8 Hybrid Shorting-Bar Connector System.....	24
Unused Cavity Strategy.....	25

MX150 Cable Seal Configurations

Capabilities.....	26
Connection System Construction	27
1.50mm Cable Seal Terminal System.....	28
1-by-2 Cable Seal Inline System.....	29
1-by-2 Global Fuel Injector Connector System.....	30
1-by-3 Single Key Headlamp Connector System.....	31
1-by-3 Dual Key Headlamp Connector System.....	32
Serviceability.....	33, 34
Geometry and Dimensions.....	35
Crimp Tooling.....	36 to 38



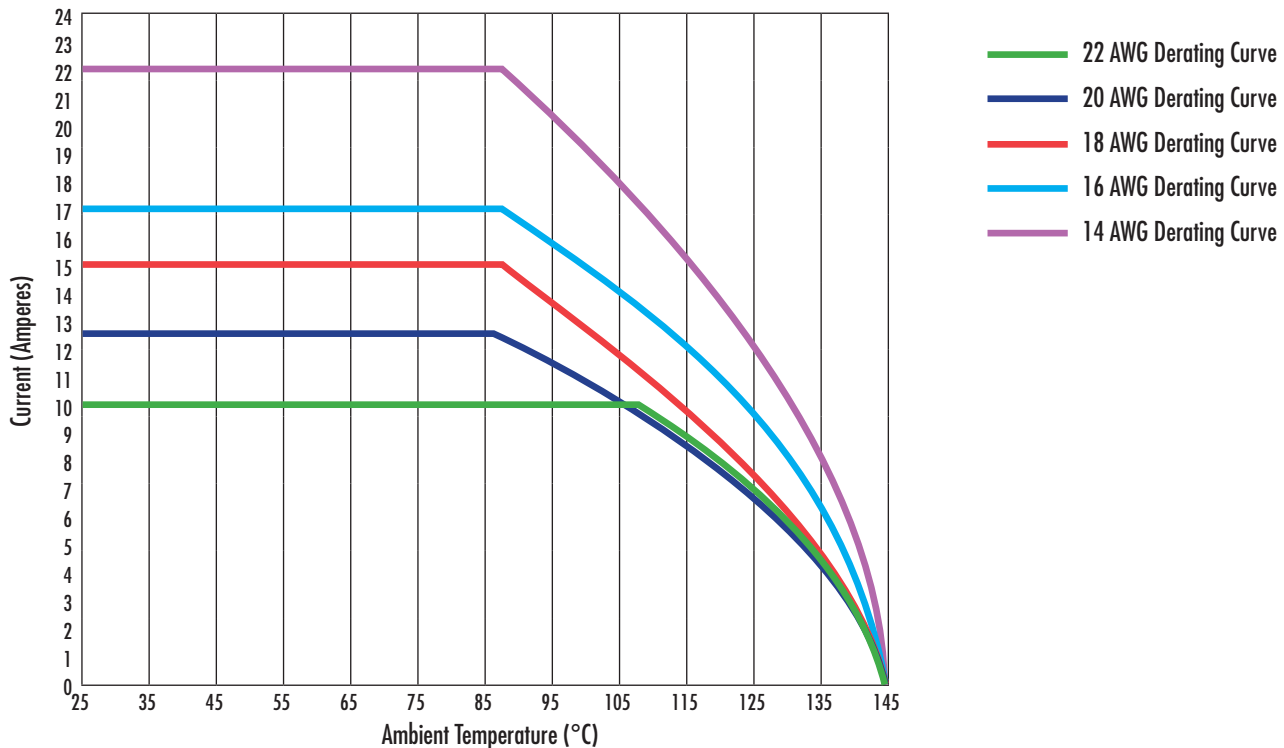
DESCRIPTION	METRIC	IMPERIAL (U.S.)
Operating Temperature Range (USCAR Class III)	-40° to 125°C	-104° to 257°F
Current Carrying Capacity (See Derating Curves below)	22.0A	
Wire Range	2.00 to 0.50mm ²	14 AWG to 22 AWG
Insulation Diameter	2.70 to 1.50mm	.106 to .059"
Terminal Pitch (Matte Seal Product)	3.50mm (adjacent terminal) 6.00mm (row-to-row)	.138" (adjacent terminal) .236" (row to row)
Connector System Retention (Main Latch) USCAR Requirement: Exceeds spec. (more than 2x)	255N (avg.)	24.7 lbs min. 57.3 lbs (avg.)
Terminal Retention (to Connector) USCAR Requirement: Exceeds spec. (more than 2x)	90N min. 210N (avg.)	20.2 lbs min. 47.2 lbs (avg.)
Sealing Performance (USCAR-2 Rev. 3) Heat Soak Submersion (USCAR-2 Rev. 3) Pressure/Vacuum Immersion	125°C and submerge depth: 40cm water 48 kPa	257°F and submerge depth: 15.75' water 7 psi
IP Ratings	IP6K7, IP6K9K	
Vibration Performance (USCAR-2 Rev. 3) Random "On-Engine" Profile	118.7 m/s ² rms 60 to 1,200 Hz	12.1 grams 60 to 1,200 Hz
(USCAR-2 Rev. 3) Mechanical Shock	343 m/s ² , half sine wave 10 msec pulse	35 g. half sine wave 10 msec pulse
(GMW3191) Vibration Random "On Engine" Profile	170 m/s ² rms 10 to 1,500 Hz	17.3 grams 10 to 1,500 Hz
(GMW3191) Vibration Sine "On Engine" Profile	280 m/s ² Pk 100 to 440 Hz	28.5 g Pk 100 to 440 Hz
(GMW3191) Mechanical Shock	245 m/s ² , half sine wave 10 msec pulse	25 g. half sine wave 10 msec pulse

Note: Matte Sealed Product Specifications PS 33471-0001 and PS 33472-000 available on molex.com

Electrical Requirements validated to USCAR-20 (FCLT), USCAR-21, USCAR-2

CURRENT CARRYING CAPACITY CURVE

Max Current vs. Ambient Temperature



FEATURES AND SPECIFICATIONS



1.50mm MX150™ Terminals (060) Sealed Applications

33012/33001
Female



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
 Mates With: 33011, 33000, 31296
 Use With: MX150 plastic series 33471, 33472, 33476
 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.
 22AWG—70N
 Mating Force: 3.0N average
 Unmating Force: 3.0N average
 Normal Force: 6.0N average

Physical

Contact: Copper Alloy
 Plating: Tin, Silver or Gold
 Wire Gauge: 2.00 to 0.35mm² (14 to 22 AWG)
 Insulation Diameter: 2.70 to 1.20mm (.106 to .047")
 Operating Temperature: -40 to +125°C

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

FEATURES AND SPECIFICATIONS



1.50mm MX150™ Terminals (060) Unsealed Applications

33012
Female



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
 Mates With: 33000 and 33011
 Use With: MX150 plastic series 31372
 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.
 22AWG—70N min.
 Mating Force: 3.0N average
 Unmating Force: 3.0N average
 Normal Force: 6.0N average

Physical

Contact: Copper Alloy
 Plating: Tin
 Wire Gauge: 2.00 to 0.35mm² (14 to 22 AWG)
 Insulation Diameter: 2.70 to 1.20mm (.106 to .047")
 Operating Temperature: -40 to +125°C

Order No.		Plating	Wire Gauge
Right Payoff, B Wound	Left Payoff, D Wound		
33012-2021	33012-3021	Tin	14 to 16 AWG
33012-2022	33012-3022		18 to 20 AWG
33012-2023	33012-3023		22 AWG

FEATURES AND SPECIFICATIONS



1.50mm MX150™ Terminals (060)

33011/33000
Male



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
 Mates With: 33012 and 33001
 Use With: MX150 plastic series 33481,
 33482 and 33486
 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.
 22AWG—70N min.
 Mating Force: 3.0N average
 Unmating Force: 3.0N average
 Normal Force: 6.0N average
 Nominal Width: 1.50mm
 Nominal Thickness: 0.80mm

Physical

Contact: Copper Alloy
 Plating: Tin, Silver or Gold
 Wire Gauge: 2.00 to 0.35mm² (14 to 22 AWG)
 Insulation Diameter: 2.70 to 1.20mm (.106 to .047")
 Operating Temperature: -40 to +125°C

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

FEATURES AND SPECIFICATIONS



1.50mm MX150™ Terminals (060) Sealed Shorting-Bar Applications

31296
Male



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
 Mates With: 33012, 33001
 Use With: MX150 plastic series 31280
 Designed In: Millimeters

Electrical

Voltage: 250V
 Current: 15.0A
 Contact Resistance: 10 milliohms max.
 Dielectric Withstanding Voltage: 500V DC
 Insulation Resistance: 20 Megohms min.

Mechanical

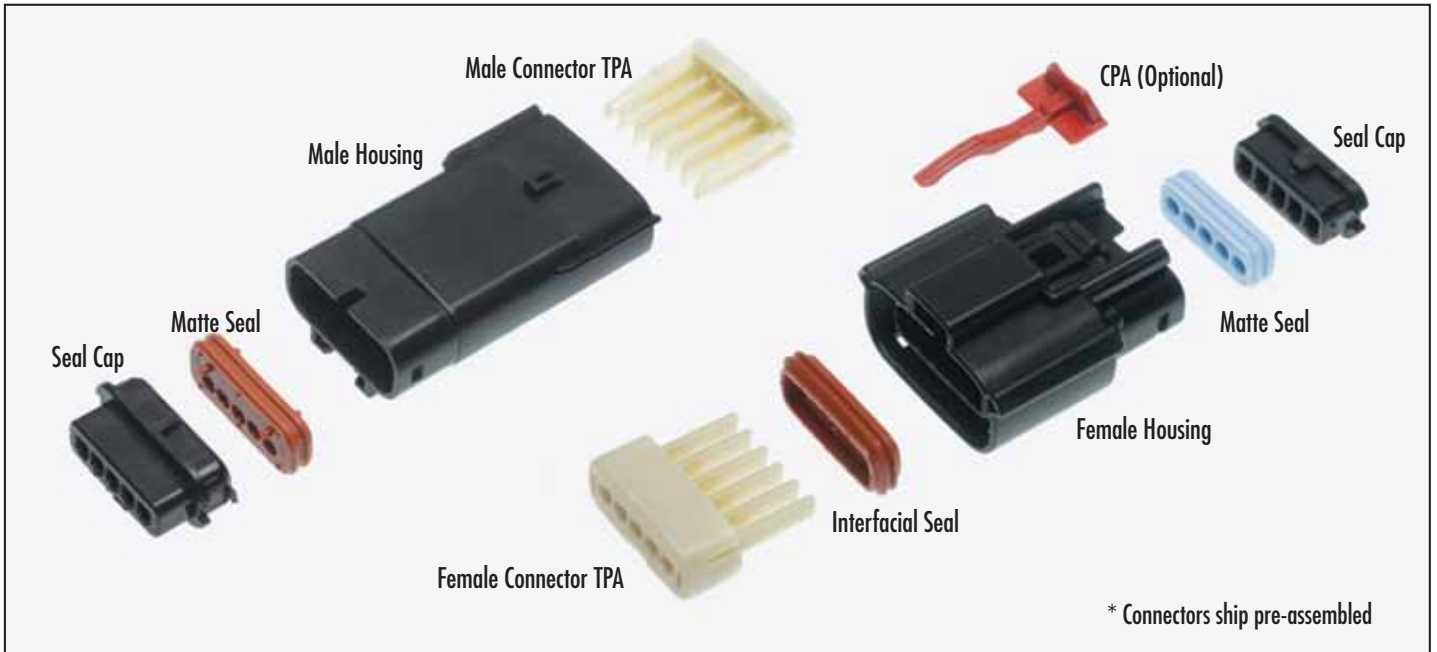
Contact Insertion Force: 3.0N average
 Wire Pull-Out Force:
 14 AWG—180N min.
 22AWG—70N min.
 Mating Force: 3.0N average
 Unmating Force: 3.0N average
 Normal Force: 6.0N average
 Nominal Width: 1.50mm
 Nominal Thickness: 0.80mm

Physical

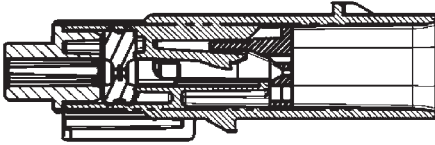
Contact: Copper Alloy
 Plating: Tin or Gold
 Wire Gauge: 2.00 to 0.35mm² (14 to 22 AWG)
 Insulation Diameter: 2.70 to 1.20mm (.106 to .047")
 Operating Temperature: -40 to +125°C

Order No.		Plating	Wire Gauge
Right Payoff, B Wound	Left Payoff, D Wound		
31296-1008	31296-0008	Gold	18 to 20 AWG

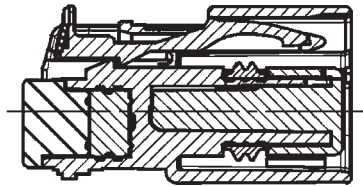
Exploded View of Connector System



System Cross Section



Male Connector



Female Receptacle

Retention Clip-Slot Feature



Male Connector

Overall Mated Lengths



Standard Matte Seal Connector System



Matte Seal Connector System with Shorting-Bars

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-2 Receptacle

33471
Female



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

Reference Information

Packaging: Bulk
Mates With: 33481
Use With: 33012 and 33001 MX150 terminals
Designed In: Millimeters

Electrical

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



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA
33471-0201	A	Black	No
33471-0202	B	Light Gray	
33471-0203	C	Dark Gray	
33471-0206	A	Black	Yes
33471-0207	B	Light Gray	
33471-0208	C	Dark Gray	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-2 Connector

33481
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33471
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color
33481-0201	A	Black
33481-0202	B	Light Gray
33481-0203	C	Dark Gray

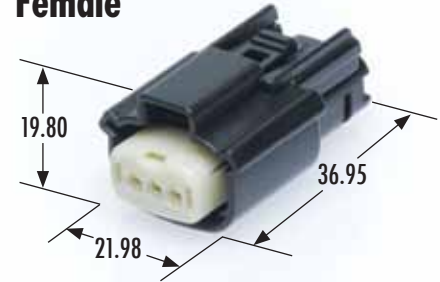
See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-3 Receptacle

33471
Female



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

Reference Information

Packaging: Bulk
Mates With: 33481
Use With: 33012 and 33001 MX150 terminals
Designed In: Millimeters

Electrical

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



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA
33471-0301	A	Black	No
33471-0302	B	Gray	
33471-0303	C	Brown	
33471-0304	D	Green	
33471-0306	A	Black	Yes
33471-0307	B	Gray	
33471-0308	C	Brown	
33471-0309	D	Green	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-3 Connector

33481
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33471
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color
33481-0301	A	Black
33481-0302	B	Gray
33481-0303	C	Brown
33481-0304	D	Green

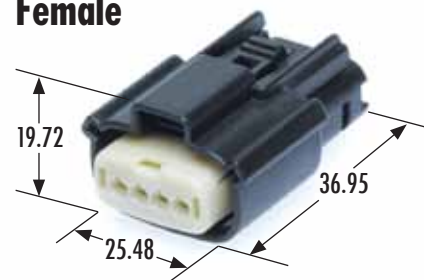
See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-4 Receptacle

33471
Female



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

Reference Information

Packaging: Bulk
Mates With: 33481
Use With: 33012 and 33001 MX150 terminals
Designed In: Millimeters

Electrical

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



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA
33471-0401	A	Black	No
33471-0402	B	Gray	
33471-0403	C	Brown	
33471-0404	D	Green	
33471-0406	A	Black	Yes
33471-0407	B	Gray	
33471-0408	C	Brown	
33471-0409	D	Green	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-4 Connector

33481
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33471
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color
33481-0401	A	Black
33481-0402	B	Gray
33481-0403	C	Brown
33481-0404	D	Green

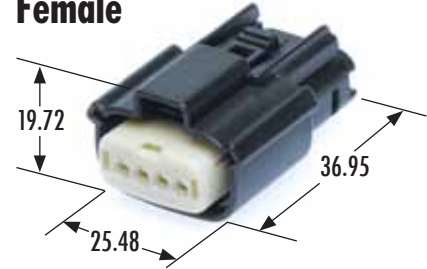
See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-4 Receptacle (with Shorting-Bar)

33471
Female



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

Reference Information

Packaging: Bulk
Mates With: 31280
Use With: 33001 Gold MX150 Terminals
Designed In: Millimeters

Electrical

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



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA
33471-0436	A	Black	No
33471-0437	B	Gray	
33471-0438	C	Brown	
33471-0439	D	Green	
33471-0446	A	Black	Yes
33471-0447	B	Gray	
33471-0448	C	Brown	
33471-0449	D	Green	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-4 Connector (with Shorting-Bar)

31280
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33471
Use With: 31296 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color
31280-0436	A	Black
31280-0437	B	Gray
31280-0438	C	Brown
31280-0439	D	Green

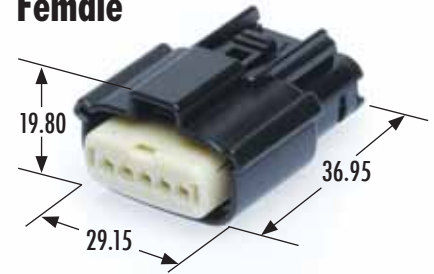
See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060)1-by-5 Receptacle

33471
Female



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

Reference Information

Packaging: Bulk
Mates With: 33481
Use With: 33001 and 33012 MX150 terminals
Designed In: Millimeters

Electrical

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



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA
33471-0501	A	Black	No
33471-0502	B	Gray	
33471-0503	C	Brown	
33471-0504	D	Green	
33471-0506	A	Black	Yes
33471-0507	B	Gray	
33471-0508	C	Brown	
33471-0509	D	Green	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-5 Connector

33481
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33471
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No	Polarity	Color
33481-0501	A	Black
33481-0502	B	Gray
33481-0503	C	Brown
33481-0504	D	Green

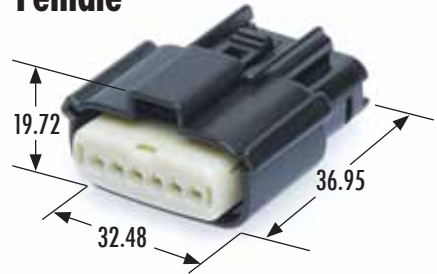
See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-6 Receptacle

33471
Female



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

Reference Information

Packaging: Bulk
Mates With: 33481
Use With: 33001 and 33012 MX150 terminals
Designed In: Millimeters

Electrical

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



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA
33471-0601	A	Black	No
33471-0602	B	Gray	
33471-0603	C	Brown	
33471-0604	D	Green	
33471-0606	A	Black	Yes
33471-0607	B	Gray	
33471-0608	C	Brown	
33471-0609	D	Green	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 1-by-6 Connector

33481
Female



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
- Clipslot standard

Reference Information

Packaging: Bulk
Mates With: 33471
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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

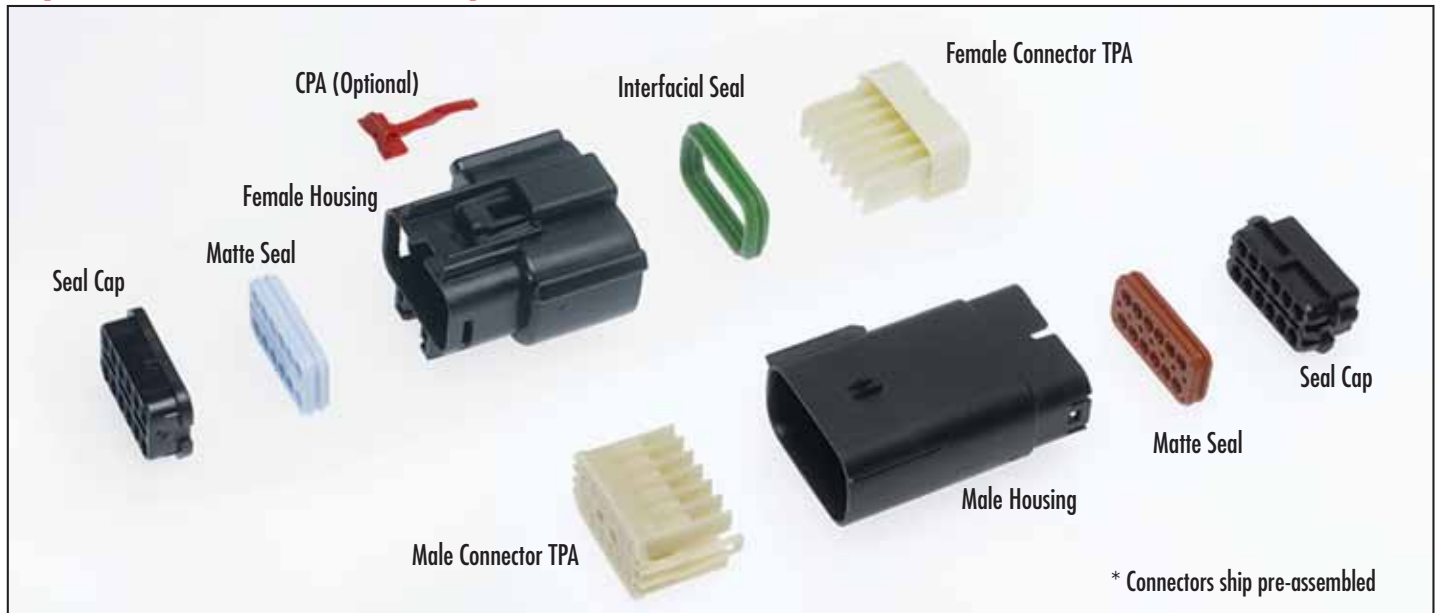
Physical

Housing: 30% glass filled nylon, UL 94-HB
Contact: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

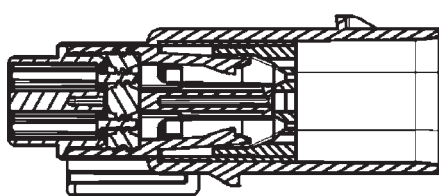
Order No.	Polarity	Color
33481-0601	A	Black
33481-0602	B	Gray
33481-0603	C	Brown
33481-0604	D	Green

See sales drawing on molex.com for specific knockout requests

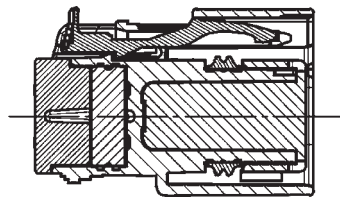
Exploded View of Connector System



System Cross Sections



Male Connector

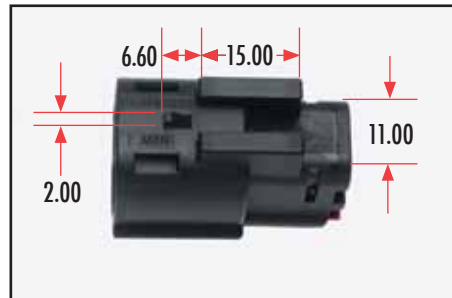


Female Receptacle

Retention Clip-Slot Feature



Male Connector



Female Receptacle

Note: Clipslot standard on male connectors. Also available on 2-by-3, 2-by-4, and 2-by-6 female receptacles.

Overall Mated Lengths



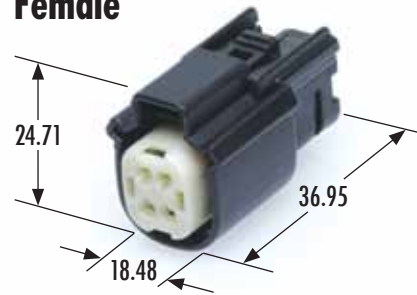
Standard Matte Seal Connector System

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-2 Receptacle

33472
Female



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

Reference Information

Packaging: Bulk
Mates With: 33482
Use With: 33001 and 33012 MX150 terminals
Designed In: Millimeters

Electrical

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



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA
33472-0401	A	Black	No
33472-0402	B	Gray	
33472-0403	C	Brown	
33472-0404	D	Green	
33472-0406	A	Black	Yes
33472-0407	B	Gray	
33472-0408	C	Brown	
33472-0409	D	Green	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-2 Connector

33482
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33472
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color
33482-0401	A	Black
33482-0402	B	Gray
33482-0403	C	Brown
33482-0404	D	Green

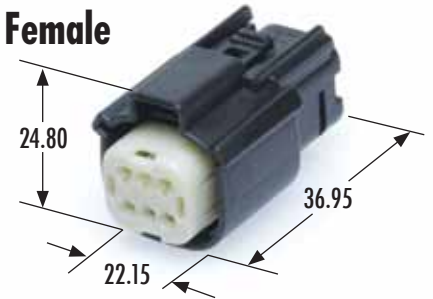
See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-3 Receptacle

33472
Female



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

Reference Information

Packaging: Bulk
Mates With: 33482
Use With: 33001 and 33012 MX150 terminals
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: Less than 15N
Contact Retention to Housing: 110N min.



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA	Clipslot
33472-0601	A	Black	No	No
33472-0602	B	Gray		
33472-0603	C	Brown		
33472-0604	D	Green		
33472-0606	A	Black	Yes	
33472-0607	B	Gray		
33472-0608	C	Brown		
33472-0609	D	Green		
33472-0701	A	Black	No	Yes
33472-0702	B	Light Gray		
33472-0703	C	Brown		
33472-0704	D	Green		
33472-0705	A	Black	Yes	
33472-0706	B	Light Gray		
33472-0707	C	Brown		
33472-0708	D	Green		

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-3 Connector

33482
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33472
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color
33482-0601	A	Black
33482-0602	B	Gray
33482-0603	C	Brown
33482-0604	D	Green

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-4 Receptacle

33472
Female



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

Reference Information

Packaging: Bulk
Mates With: 33482
Use With: 33001 and 33012 MX150 terminals
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: Less than 15N
Contact Retention to Housing: 110N min.
Wire Pull-Out Force: 90N min.



Female Receptacle Polarities

Mating Force: 75N max.
Unmating Force: 75N max.
Normal Force: Terminal dependent

Physical

Housing: 30% glass filled nylon, UL 94-HB
Contact: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA	Clipslot
33472-0801	A	Black	No	No
33472-0802	B	Gray		
33472-0803	C	Brown		
33472-0804	D	Green		
33472-0806	A	Black	Yes	
33472-0807	B	Gray		
33472-0808	C	Brown		
33472-0809	D	Green		
33472-0901	A	Black	No	Yes
33472-0902	B	Light Gray		
33472-0903	C	Brown		
33472-0904	D	Green		
33472-0906	A	Black	Yes	
33472-0907	B	Light Gray		
33472-0908	C	Brown		
33472-0909	D	Green		

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-4 Connector

33482
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33472
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color
33482-0801	A	Black
33482-0802	B	Gray
33482-0803	C	Brown
33482-0804	D	Green

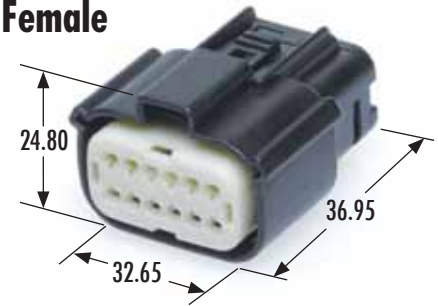
See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-6 Receptacle

33472
Female



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

Reference Information

Packaging: Bulk
Mates With: 33482
Use With: 33001 and 33012 MX150 terminals
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: Less than 15N
Contact Retention to Housing: 110N min.
Wire Pull-Out Force: 90N min.



Female Receptacle Polarities

Mating Force: 75N max.
Unmating Force: 75N max.
Normal Force: Terminal dependent

Physical

Housing: 30% glass filled nylon, UL 94-HB
Contact: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA	Clipslot
33472-1201	A	Black	No	No
33472-1202	B	Gray		
33472-1203	C	Brown		
33472-1204	D	Green	Yes	
33472-1206	A	Black		
33472-1207	B	Gray		
33472-1208	C	Brown	No	Yes
33472-1209	D	Green		
33472-1301	A	Black		
33472-1302	B	Light Gray	Yes	
33472-1303	C	Brown		
33472-1304	D	Green		
33472-1306	A	Black	No	No
33472-1307	B	Light Gray		
33472-1308	C	Brown		
33472-1309	D	Green	Yes	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-6 Connector

33482
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33472
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color
33482-1201	A	Black
33482-1202	B	Gray
33482-1203	C	Brown
33482-1204	D	Green

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-8 Receptacle

33472
Female



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

Reference Information

Packaging: Bulk
Mates With: 33482
Use With: 33001 and 33012 MX150 terminals
Designed In: Millimeters

Electrical

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



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA
33472-1601	A	Black	No
33472-1602	B	Gray	
33472-1603	C	Brown	
33472-1604	D	Green	
33472-1606	A	Black	Yes
33472-1607	B	Gray	
33472-1608	C	Brown	
33472-1609	D	Green	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-8 Connector

33482
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33472
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color
33482-1601	A	Black
33482-1602	B	Gray
33482-1603	C	Brown
33482-1604	D	Green

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-10 Receptacle

33472
Female



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

Reference Information

Packaging: Bulk
Mates With: 33482
Use With: 33001 and 33012 MX150 terminals
Designed In: Millimeters

Electrical

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



Female Receptacle Polarities

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: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

Order No.	Polarity	Color	CPA
33472-2001	A	Black	No
33472-2002	B	Gray	
33472-2003	C	Brown	
33472-2004	D	Green	
33472-2006	A	Black	Yes
33472-2007	B	Gray	
33472-2008	C	Brown	
33472-2009	D	Green	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-10 Connector

33482
Male



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
- Clip slot standard

Reference Information

Packaging: Bulk
Mates With: 33472
Use With: 33000 and 33011 MX150 terminals
Designed In: Millimeters

Electrical

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



Male Connector Polarities

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

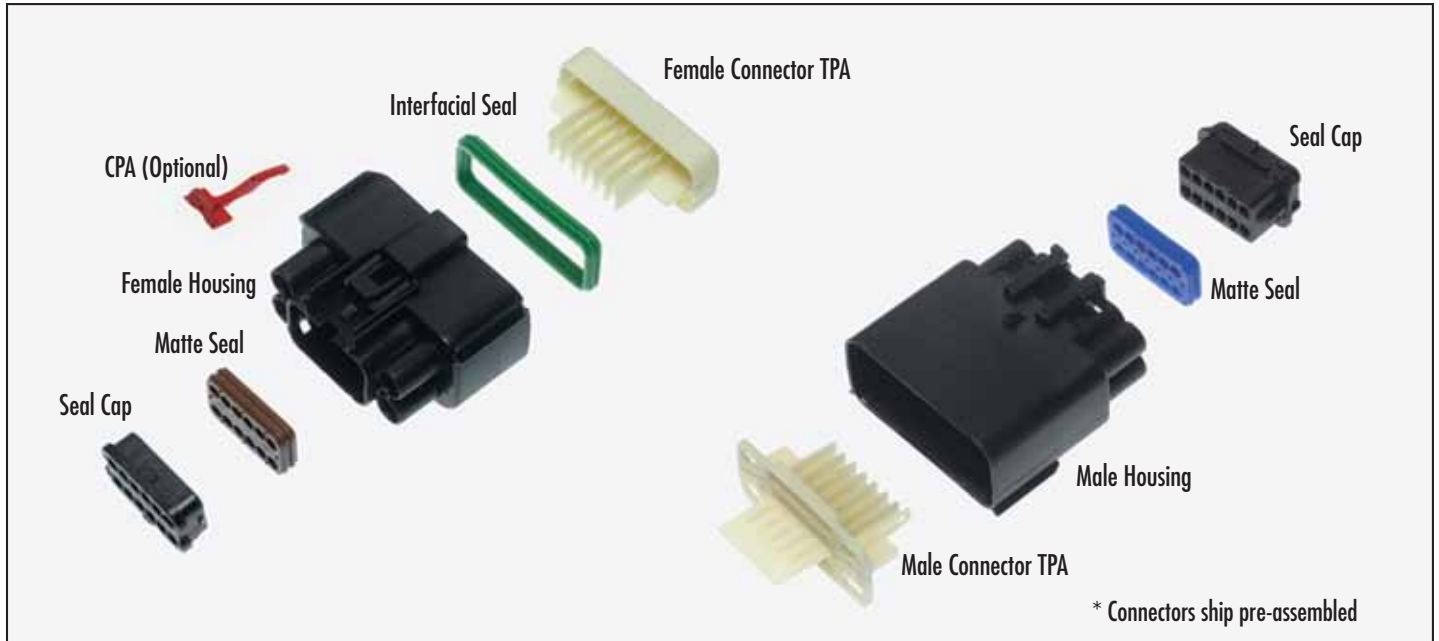
Physical

Housing: 30% glass filled nylon, UL 94-HB
Contact: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C
Pitch: 3.50mm (.138")

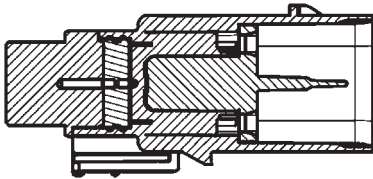
Order No.	Polarity	Color
33482-2001	A	Black
33482-2002	B	Gray
33482-2003	C	Brown
33482-2004	D	Green

See sales drawing on molex.com for specific knockout requests

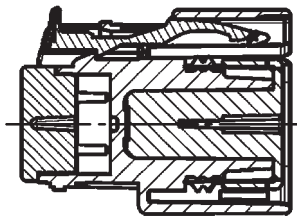
Exploded View of Connector System



System Cross Sections

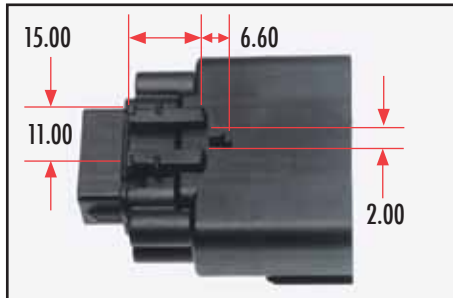


Male Connector

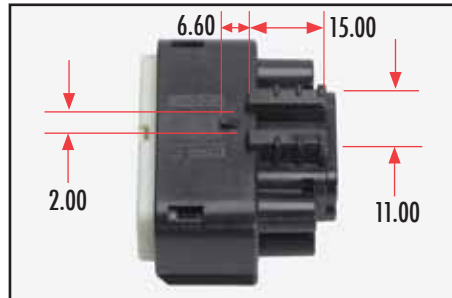


Female Receptacle

Retention Clip-Slot Feature

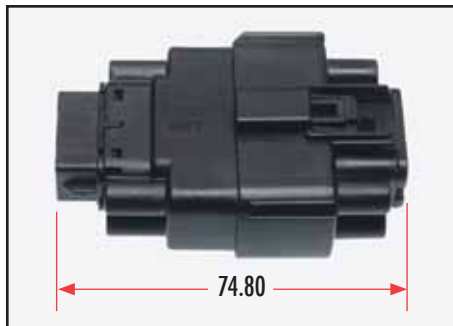


Male Connector

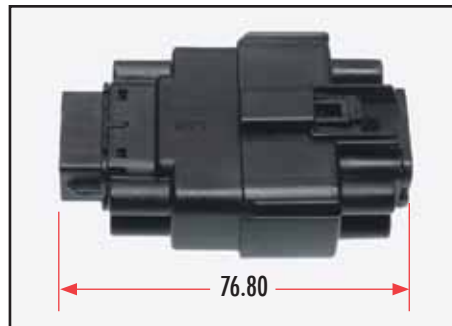


Female Receptacle

Overall Mated Lengths



Hybrid Connector System



Hybrid Connector System with Shorting-Bar

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-8 Hybrid Receptacle

33476
Female



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
- With or without clip slot

Reference Information

Packaging: Bag
Mates with: 33486
Use With:
MX150 1.50mm and Yazaki 2.80mm terminals
Designed In: Millimeters

Electrical

Voltage: 250V
Current: 22.0A for 1.50mm terminals and 25.0A for 2.80mm terminals
Contact Resistance:
10 milliohms max. for 1.50mm terminal
5 milliohms max. for 2.80mm terminal
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, UL94 – HB

2.80mm terminals

Contact: Copper Alloy
Contact Plating: Tin
Wire Gauge: 12 to 22 AWG
Operating Temperature: -40 to +125°C

1.50mm terminals

Contact: Copper Alloy
Contact Plating: Tin, Silver or Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C



Female Receptacle Polarities

Order No.	Polarity	Color	CPA	Clipslot
33476-1601	A	Black	No	No
33476-1602	B	Light Gray		
33476-1603	C	Brown		
33476-1604	D	Green		
33476-1606	A	Black	Yes	No
33476-1607	B	Light Gray		
33476-1608	C	Brown		
33476-1609	D	Green		
33476-1841	A	Black	No	Yes
33476-1849			Yes	

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS



1.50mm MX150™ (060) 2-by-8 Hybrid Connector

33486
Male



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
- Clip slot standard on male side

Reference Information

Packaging: Bag
Mates with: 33476
Use With:
MX150 1.50mm and Yazaki 2.80mm terminals
Designed In: Millimeters

Electrical

Voltage: 250V
Current: 22.0A for 1.50mm terminals and 25.0A for 2.80mm terminals
Contact Resistance:
10 milliohms max. for 1.50mm terminal
5 milliohms max. for 2.80mm terminal
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, UL94 – HB

2.80mm terminals

Contact: Copper Alloy
Contact Plating: Tin
Wire Gauge: 12 to 22 AWG
Operating Temperature: -40 to +125°C

1.50mm terminals

Contact: Copper Alloy
Contact Plating: Tin, Silver, Gold
Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)
Insulation Diameter: 2.70 to 1.50mm (.106 to .059")
Operating Temperature: -40 to +125°C



Male Connector Polarities

Order No.	Pol.	Color
33486-1601	A	Black
33486-1602	B	Light Gray
33486-1603	C	Brown
33486-1604	D	Green

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS

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
- With or without clip slot

Reference Information

Packaging: Bag

Mates with: 33486

Use With:

MX150 1.50mm and Yazaki 2.80mm terminals

Designed In: Millimeters

Electrical

Voltage: 250V

Current: 22.0A for 1.50mm terminals and

25.0A for 2.80mm terminals

Contact Resistance:

10 milliohms max. for 1.50mm terminal

5 milliohms max. for 2.80mm terminal

Dielectric Withstanding Voltage: 500V DC

Insulation Resistance: 20 Megohms min.



Female Receptacle Polarities



1.50mm MX150™ (060) 2-by-8 Hybrid Receptade (with Shorting-Bar)

33476
Female



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, UL94 – HB

2.80mm terminals

Contact: Copper Alloy

Contact Plating: Tin

Wire Gauge: 12 to 22 AWG

Operating Temperature: -40 to +125°C

1.50mm terminals

Contact: Copper Alloy

Contact Plating: Tin, Silver or Gold

Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)

Insulation Diameter: 2.70 to 1.50mm (.106 to .059")

Operating Temperature: -40 to +125°C

Order No.	Polarity	Color	CPA	Clipslot
33476-1701	E	Black	No	No
33476-1702	F	Light Gray		
33476-1703	G	Brown		
33476-1704	H	Yellow	No	Yes
33476-1713	E	Black		

See sales drawing on molex.com for specific knockout requests

FEATURES AND SPECIFICATIONS

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
- Clip slot standard on male side

Reference Information

Packaging: Bag

Mates with: 33476

Use With:

MX150 1.50mm and Yazaki 2.80mm terminals

Designed In: Millimeters

Electrical

Voltage: 250V

Current: 22.0A for 1.50mm terminals and

25.0A for 2.80mm terminals

Contact Resistance:

10 milliohms max. for 1.50mm terminal

5 milliohms max. for 2.80mm terminal

Dielectric Withstanding Voltage: 500V DC

Insulation Resistance: 20 Megohms min.



Male Connector Polarities



1.50mm MX150™ (060) 2-by-8 Connector (with Shorting-Bar)

33486
Male



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, UL94 – HB

2.80mm terminals

Contact: Copper Alloy

Contact Plating: Tin

Wire Gauge: 12 to 22 AWG

Operating Temperature: -40 to +125°C

1.50mm terminals

Contact: Copper Alloy

Contact Plating: Tin, Silver, Gold

Wire Gauge: 2.00 to 0.50mm² (14 to 22 AWG)

Insulation Diameter: 2.70 to 1.50mm (.106 to .059")

Operating Temperature: -40 to +125°C

Order No.	Pol.	Color
33486-1701	E	Black
33486-1702	F	Light Gray
33486-1703	G	Brown
33486-1704	H	Yellow

See sales drawing on molex.com for specific knockout requests

Circuit Plugs

- Low volume option and general market
- Can be used with male and female connectors
- Order No. 34345-0001



Breakaway Plugs

- Programmed punch-out station for larger volumes
- Serialized part numbers
- Pegs can be removed for various configurations



As Molded



12 circuit Breakaway Plug
(4 cavities plugged shown)