The field-proven MX150 Sealed Connector System with a USCAR interface offers a compact package, a superior operating temperature and a current rating up to 22.0A for power and signal automotive and commercial vehicle applications.

**Features and Advantages: Sealed Single- and Dual-Row Connector System**

- **Mat seal technology for MX150 (1.50mm) Terminals**
  - Eliminates the need for individual cable seals which provides reduced package size and reduced cost

- **Connector position assurance (CPA) option available**
  - Assures connectors have been fully mated and prevents accidental disconnection

- **Temperature class 4 (-40 to +150˚C)**
  - and 22.0A current rating
  - Delivers superior performance

- **Preassembled terminal position assurance (TPA) housing**
  - Ensures crimped terminal leads are properly locked into connector

- **Conforms to USCAR-2/USCAR-21/GMW3191**
  - For use in on-engine, high-vibration, under-hood and under-chassis environments at temp class 4

- **V0 versions available (UL1977 certified)**
  - Meets stringent safety requirements

- **Grommet cap**
  - Protects the mat seal and assures proper alignment of the terminals

- **Flashover options (custom void patterns) available**
  - Provides design flexibility

- **4 polarization and color options**
  - Facilitates quick visual installation

- **1-piece 3.5mm-pitch housing**
  - Eliminates unnecessary and costly assembly operations. Offers a compact connector

- **Clip-slot feature standard on blade connectors, optional on receptacle**
  - Fastens/attaches clips. USCAR standard 11.00mm clip slot

**Features and Advantages: Hybrid Connector**

- **Mat seal technology for MX150 (1.50mm) Terminals**
  - Eliminates the need for individual cable seals which provides reduced package size and reduced cost

- **Grommet Cap**
  - Protects the mat seal and assures proper alignment of the terminals

- **Pre-assembled terminal position assurance (TPA) housing**
  - Ensures crimped terminal leads are properly locked into connector

- **Flashover options (i.e., custom void patterns) available**
  - Provides design flexibility

- **11.00mm clip slot standard on blade connector and optional on receptacle**
  - Fastens/attaches clips

- **NEW**
  - 10-way hybrid receptacles

- **PREVIOUSLY RELEASED**
  - 12- and 16-way hybrid receptacle and blade connectors
  - 8-way hybrid receptacles

- **COMING Q4 2020**
  - 9-way receptacles

- **COMING Q1 2021**
  - 8-, 9- and 10-way blade connectors
  - Offers versatility to meet a range of applications

2X3 & 2x6 Panel-Mount Now Available; 20-Way V0 Version Coming in Q2 2021
MX150 Sealed Connector System

Features and Advantages: Hybrid Connector (Continued)

- Backshells/wire dress covers available
  - Secures cable. Provides strain relief

- Connector position assurance (CPA) option available
  - Assures connectors have been fully mated and prevents accidental disconnection

- Meets GMW3191 and USCAR-2 specifications
  - Ensures reliable performance. Mates with USCAR interfaces

Hybrid 8-way Receptacle:
- Six 1.50mm Circuits and Two 6.30mm Circuits

- 4 key options available
  - Facilitates quick visual installation

- Hybrid 12-Way Connector System, Blade and Receptacle:
  - Ten 1.50mm Circuits and Two 2.80mm Circuits

- 8-, 9- and 10-Way Receptacles (8-way & 10-way currently available, 9 way coming soon)

Features and Advantages: Terminals

- Tin, Silver and Gold options available
  - for blade and receptacle matte seal and cable seal terminals
  - Offers reliable, economic connectivity

  - Current rating up to 22.0A
    - Delivers superior performance

  - Validated: USCAR-21, USCAR-2 and GMW3191 specs
    - Meets industry standards

  - Validated wires to GM, Ford, PSA and JASO specifications
    - Meets requirements of major auto manufacturers

- Tin rated up to temp class 3 (-40 to +125°C)
- Silver rated up to temp class 4 (-40 to +150°C)
- Delivers superior performance

Markets and Applications

Automotive and Commercial Vehicle
- Transmissions
- Head/tail lamps
- Body harnesses
- Wipers, washers, defoggers
- Speedometers
- A/C modules
- Turn signals
- Airbag harnesses
- Speakers
- Door connectors
- Brake modules
- Horns

- Transmission
- ECU
- Full Injectors
- Battery Pack
- Head lamp
- Hood Switch
- Horn
- Sensors
- Body Harness
Specifications

SEALED CONNECTORS AND RECEPTACLES

REFERENCE INFORMATION
Packaging:
Housings – Bulk pack
Terminals – Reel
Mates With:
Receptacle Connectors, Series 33471, 33472
Blade Connectors, Series 33481, 33482, 34986
Use With:
- Terminals:
  - Receptacle Connectors, Series 33001, 33012
  - Blades, Series 33000, 33011
  - Backshells, Series 34948, 34949, 34950, 34951
  - Cavity Plugs, Order No. 34345-0001
Designed in: Millimeters

ELECTRICAL
Voltage (max.): 500V DC
Current (max.): 22.0A
Contact Resistance (max.): 10 milliohms max.
Dielectric Withstanding Voltage: 1000V AC min.
Isolation Resistance (min.): 20 Megohms min.

MECHANICAL/ELECTRICAL/SEALING
Mating Force: Less than 75N max.
Unmating Force: Less than 75N max.
Connector Retention (Primary Latch): 255N (57.33 lb) avg.
(exceeds 110N [24.73 lb] min. USCAR requirement)
Contact Retention to Housing: 210N (47.21 lb) avg.
(exceeds 90N [20.23 lb] min. USCAR requirement)
Contact Insertion Force Into Housing: 30N (6.74 lb) max.
Durability: 10 milliohms max.
Tin (Sn) Plating – 25 Cycles
Silver (Ag) Plating – 100 Cycles
Gold (Au) Plating – 100 Cycles
Thermal Shock (class 3, 100 cycles): 10 milliohms max.
Random “On-Engine” Profile: 118.7 mps2 rms, 60 to 1,200 Hz
Mechanical Shock: 343 mps2, half-sine wave, 10 msec Pulse
Vibration: (GMW 3191) 10 milliohms max.

PHYSICAL
Housing: SPS/Nylon 20% Glass Filled
Terminal: Copper (Cu) Alloy
Size: 1.20 X 0.80 mm
Plating: Tin (Sn) (Silver (Ag) coming soon)
Underplating: Nickel (Ni)
PCB Interface: Solder tail or Compliant pin
Module attachment type: Adhesive
Operating Temperature: -40 to +125°C

REFERENCE INFORMATION
Packaging:
Headers – Trays
Mates With:
Receptacle Connectors, Series 33472
Use With: Blade Terminals, Series 33000, 33011
Designed in: Millimeters

ELECTRICAL
Voltage (max.): 500V DC
Current (max.): 22.0A
Contact Resistance: 8 milliohms max.
Dielectric Withstanding Voltage: 1000V AC min.
Isolation Resistance: 100 Megohms min.

MECHANICAL/ELECTRICAL/SEALING
Durability: 8 milliohms max. at 10 cycles
Sealing: IP67K & IP69K w Backshells

PHYSICAL
Housing: PBT 30% Glass Filled
Terminal: Copper (Cu) Alloy
Size: 1.20 X 0.80 mm
Plating: Tin (Sn) (Silver (Ag) coming soon)
Underplating: Nickel (Ni)
PCB Interface: Solder tail or Compliant pin
Module attachment type: Adhesive
Operating Temperature: -40 to +125°C

REFERENCE INFORMATION
Packaging:
Headers – Trays
Mates With:
Receptacle Connectors, Series 33472
Use With: Blade Terminals, Series 33000, 33011
Designed in: Millimeters

ELECTRICAL
Voltage (max.): 500V DC
Current (max.): 22.0A
Contact Resistance: 8 milliohms max.
Dielectric Withstanding Voltage: 1000V AC min.
Isolation Resistance: 100 Megohms min.

MECHANICAL/ELECTRICAL/SEALING
Durability: 8 milliohms max. at 10 cycles
Sealing: GMW3191 Sealing Class 2, IP67K & IP69K with Backshells

PHYSICAL
Housing: SPS/Nylon 20% Glass Filled, UL 94-HB
TPA: SPS/Nylon Blend 20%GF
Contact: Copper (Cu) Alloy
Plating:
Contact Area — Tin (Sn), Gold (Au) or Silver (Ag)
Underplating — Nickel (Ni)
Wire Gauge: ISO Wire: 0.35 to 1.50mm2 SAE Wire: 22 to 14 AWG
Insulation Diameter: 2.70 to 1.50 mm
Operating Temperature: -40 to +125°C (Sn), -40 to +150°C (Ag)
# MX150 Sealed Connector System

## Specifications

### TWIST-LOCK SEALED BULKHEAD CONNECTORS

**REFERENCE INFORMATION**

- **Packaging:**
  - Housings – Packed in trays
- **Mates With:**
  - Receptacle Connectors, Series 33472
- **Use With:**
  - Blade Terminals, Series 33000 and 33011
- **Designed in:** Millimeters

**ELECTRICAL**

- **Voltage (max.):** 14V DC
- **Current (max.):** 22.0A
- **Contact Resistance (max.):** 8 milliohms
- **Dielectric Withstanding Voltage:** 1000V
- **Isolation Resistance (min.):** 100 Megohms min.

**PHYSICAL**

- **Housing:** SPS/Nylon 20% GF, UL 94-HB
- **TPA:** 20% Glass-Filled SPS/Nylon
- **Wire Gauge:** ISO Wire: 0.35 to 1.50mm², SAE Wire: 22 to 14 AWG
- **Operating Temperature:** -40 to +105°C

**MECHANICAL/ELECTRICAL/SEALING**

- **Durability:** 8 milliohms max. at 10 cycles
- **Sealing:** (GMW3191) and IP67K

### STANDARD AND M3 GRIP TERMINALS

**REFERENCE INFORMATION**

- **Packaging:** Reel (terminals are not packaged with connectors)
- **Use With:**
  - Receptacle Connector Series 33471, 33472, 34985
  - Blade Connector Series 33481, 33482, 34986
- **Designed in:** Millimeters

**ELECTRICAL**

- **Voltage (max.):** 500V
- **Current (max.):** 12.5A

**PHYSICAL**

- **Contact:** Copper (Cu) Alloy
- **Plating:**
  - Contact Area — Tin (Sn), Silver (Ag), Gold (Au)
  - Underplating — Nickel (Ni)
- **Wire Gauge:**
  - ISO Wire: 0.35 to 2.00mm²
  - SAE Wire: 22 to 14 AWG
- **Operating Temperature:** -40 to +125°C – Tin (Sn)
  - Silver (Ag)

**MECHANICAL/ELECTRICAL/SEALING**

- **Durability:** 8 milliohms max. at 10 cycles
- **Sealing:** USCAR-2 Sealing Class 2, IP67K

### 12W HYBRID CONNECTORS (SERIES 160111, 160112)

**REFERENCE INFORMATION**

- **Packaging:**
  - Housings – Bulk Pack
- **Mates With:**
  - MX150 Receptacle Terminals, Series 160111
  - MX150 Blade Terminals, Series 33000, 33011
  - Sumitomo Receptacle Terminal Part Numbers, 8240-0423, 8240-0424
  - Sumitomo Blade Terminal PN’s, 8230-5257, 8230-5258
- **Designed in:** Millimeters

**ELECTRICAL**

- **Voltage (max.):** 500V DC
- **Current (max.):** 22.0A (For MX150 Terminals)
- **Contact Resistance:** 8 milliohms max.
- **Dielectric Withstanding Voltage:** 1000V AC min.
- **Isolation Resistance:** 100 Megohms min.

**MECHANICAL/ELECTRICAL/SEALING**

- **Durability:** 8 milliohms max. at 10 cycles
- **Sealing:** USCAR-2 Sealing Class 2, IP67K

**PHYSICAL**

- **Housing:** Nylon 40% Glass Filled
- **TPA:** Nylon 40% Glass Filled
- **Wire Gauge:**
  - MX150 Terminals ISO Wire: 0.35 to 1.50mm², SAE Wire: 22 to 14 AWG
  - Unsealed FCI Apex 2.80mm Terminals: 1.00 to 3.00mm²
  - Insulation Diameter: 2.69 to 1.20mm (.106 to .047”)
- **Operating Temperature:** -40 to +125°C

### 10W HYBRID RECEPTACLE CONNECTORS (SERIES 160076)

**REFERENCE INFORMATION**

- **Packaging:**
  - Housings – Bulk Pack
- **Use With:**
  - µDPB Modules (series 200316); MX150 Receptacle Terminals, Series 16077 (coming January 2021)
  - Apex 6.30mm Receptacle Terminal PN: 33140138
- **Designed in:** Millimeters

**ELECTRICAL**

- **Voltage (max.):** 500V DC
- **Current (max.):** 22.0A (For MX150 Terminals)
- **Contact Resistance:** 8 milliohms max.
- **Dielectric Withstanding Voltage:** 1000V AC min.
- **Isolation Resistance:** 100 Megohms min.

**MECHANICAL/ELECTRICAL/SEALING**

- **Durability:** 8 milliohms max. at 10 cycles
- **Sealing:** USCAR-2 Sealing Class 2, IP67K

**PHYSICAL**

- **Housing:** Nylon 40% Glass Filled
- **TPA:** Nylon 40% Glass Filled
- **Wire Gauge:**
  - MX150 Terminals ISO Wire: 0.35 to 1.50mm², SAE Wire: 22 to 14 AWG
  - Unsealed FCI Apex 2.80mm Terminals: 1.00 to 3.00mm²
- **Operating Temperature:** -40 to +125°C
# MX150 Sealed Connector System

## Specifications

### 8W HYBRID RECEPTACLE CONNECTORS (SERIES 160078)

### REFERENCE INFORMATION

- **Packaging:**
  - Housings – Bulk Pack
- **Use With:**
  - µDPB Modules (series 200316);
  - MX150 Receptacle Terminals, Series 33012, 33001
  - Apex 6.3mm Receptacle Terminal PN: 33140138
- **Designed in:** Millimeters

### ELECTRICAL

- **Voltage (max.):** 500V DC
- **Current (max.):** 22.0A (For MX150 Terminals)
- **Contact Resistance:** 8 milliohms max.
- **Dielectric Withstanding Voltage:** 1000V AC min.
- **Isolation Resistance:** 100 Megohms min.

### MECHANICAL/ELECTRICAL/SEALING

- **Durability:** 8 milliohms max. at 10 cycles
- **Sealing:** USCAR-2 Sealing Class 2, IP67K

### PHYSICAL

- **Housing:** Nylon 40% Glass Filled
- **TPA:** Nylon 40% Glass Filled
- **Wire Gauge:**
  - MX150 Terminals ISO Wire: 0.35 to 1.50mm², SAE Wire: 22 to 14 AWG
  - Unsealed FCI Apex 6.30mm Terminals: 6.00mm²
- **Operating Temperature:** -40 to +125°C

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For more information, visit [www.molex.com/link/mx150.html](http://www.molex.com/link/mx150.html)

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