

# Mini50 Sealed Connector

## Sealed Single-Row Connector



Now offering a sealed 4-circuit and 10-circuit option, the Mini50 sealed interface delivers 25% space savings over traditional sealed 0.64mm connectors, with smaller terminals to fit more low-current electrical circuits in sealed transportation-vehicle environments

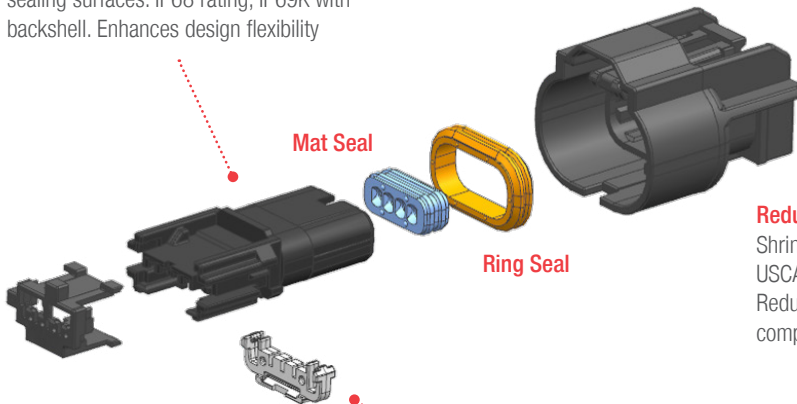
### Features and Benefits

#### Sealed Receptacle

Delivers a 0.50mm connector interface tested to meet full USCAR specifications. No parting lines on sealing surfaces. IP68 rating, IP69K with backshell. Enhances design flexibility

#### Optional CPA

Mating assurance feedback device that prevents accidental un-mating



#### Polarization Options

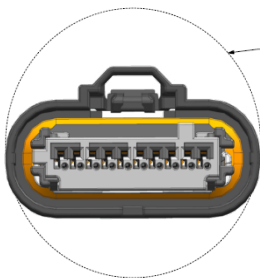
Eliminates mating and assembly errors. Color-coded to correspond to polarity

#### Independent secondary lock (ISL) terminal-retention feature

Pre-loaded in assembly for applied cost savings

#### Reduced package sizes

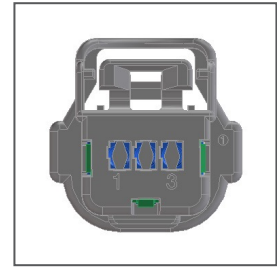
Shrink footprint 25% compared to USCAR 0.64mm unsealed interfaces. Reduces PCB footprint by 30% compared to 4-Circuit connectors



① 2020 0214  
MIN PASS-THRU  
WITH NO CLEARANCE

#### Rounded Shape

Allows for through-hole routing



MX64 Sealed 1x4 (USCAR)



Mini50 Sealed 1x4



### Applications

#### Automotive and Transportation

- Power Steering
- Cameras
- Sensors (parking, radar, etc).
- Braking
- Exterior Lighting
- Mirrors



# Mini50 Sealed Connector

## Sealed Single-Row Connector



### Specifications

#### REFERENCE INFORMATION

Packaging:  
 Housings – Bulk pack  
 Terminals – Reel and loose piece  
 Use With Terminals:  
 Female Series 34905  
 Designed in: Millimeters  
 Dimensions:  
 1x4: Height 16.6; Length 18.4; Depth 28.0  
 1x10: Height 16.6; Length 29.2; Depth 28.0

#### PHYSICAL

Receptacle Housings: High Temperature Thermoplastic  
 Contact: Copper (Cu) Alloy  
 Plating:  
 Contact Area — Tin (Sn) or Silver (Ag)  
 Wire Gauge: 0.13mm<sup>2</sup> to 0.35mm<sup>2</sup>  
 Insulation Diameter: 1.40mm to 0.95mm  
 Operating Temperature:  
 With Tin Terminal: -40 to +105°C  
 With Silver Terminals: -40 to +125°C

#### ELECTRICAL

Voltage (max.): 14V DC  
 Current (max.): 4.0A  
 Contact Resistance (max.): 20 Milliohms  
 Dielectric Withstanding Voltage (min.): 1000V AC  
 Isolation Resistance (min.): 100Megaohms @ 500V DC

#### ELECTRICAL / MECHANICAL

Durability (max.): 20 milliohms  
 Mating cycles (max.): 10  
 High-Temperature Exposure, 1008 hours (USCAR-2 , GMW3191):  
 Post test resistance (max.) – 20 Milliohms  
 Isolation resistance (max.) – 100 Megaohms @ 500V DC  
 Temp / Humidity Cycling, 240 hours (USCAR-2 , GMW3191):  
 Post test resistance (max.) – 20 Milliohms  
 Isolation resistance (max.) – 100 Megohms @ 500V DC  
 Terminal Retention (min.) = 50N  
 Thermal Shock; class 2/3 300 cycles (USCAR-2 , GMW3191):  
 Post test resistance (max.) – 20 Milliohms  
 Isolation resistance (max.) – 100 Megohms @ 500V DC  
 Terminal Retention (min.) = 30N  
 Vibration / Mechanical Shock (Not Coupled to Engine): (USCAR-2, GMW3191):  
 Post test resistance (max.) – 20 Milliohms  
 Thermal Aging at Max Temp  
 1008 hours @ 125C  
 28kPa for 15 sec. min.  
 Submersion for 30 minutes  
 Isolation Resistance (min.): 100Megaohms @ 500V DC

#### ELECTRICAL / MECHANICAL

Current Capability: (USCAR-2, GMW3191):  
 Temperature rise over ambient < 55C  
 Post test resistance (max.) – 20 Milliohms  
 Terminal – Connector Insertion Force (USCAR-2, GMW3191):  
 Insertion Force (max.) = 5N  
 Primary Retention Force (min.) = 20N  
 Secondary Retention Force (min.) = 60N  
 Mating Force (USCAR-2, GMW3191) (max.):  
 45N (1x4)  
 75N (1x10)  
 Unmating Force (USCAR-2) (max.): 75N  
 Connector Drop Test: (USCAR-2):  
 Post test visual inspection  
 Polarization Feature Effectiveness (USCAR-2):  
 min = 3\* mate force

#### SEALING

Sealing Class: 2 (IP68) without Backshell after 2 service cycles

### Ordering Information

#### SEALED RECEPTACLES

Series No.	Component	Rows	Circuit Sizes
<a href="#">34967</a>	Sealed Receptacles	Single	4 and 10

#### CTX50 SEALED TERMINALS

Series No.	Plating	Wire Gauge (mm <sup>2</sup> )	Wound Direction / Payoff Direction
<a href="#">34905</a>	Tin or Silver	0.08 to 0.13	D=Left; B=Right
		0.22 to 0.35	

Note: Reference PS-34791-000 for all validated wire types.

#### SERVICE TOOL FOR MINI50 SEALED

Series No.	Component
Molex Part Number	<a href="#">638247500</a>

[www.molex.com/link/mini50.html](http://www.molex.com/link/mini50.html)

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