



## 2.50mm (.098")/ 3.50mm (.138") Pitch Wire-to-Board Connector

Molex offers the 3-in-1 Combo Wire-To-Board interconnect solution for automotive industry

The infotainment applications in the automotive industry has been growing aggressively over the past years. Applications like audio, video players and GPS is becoming very popular. Such application draws power from the vehicle and a secure mating of power-to-application is critical in the safety consideration.

Molex development of this wire-to-board interconnect solution takes into consideration the design of signal, power and the fuse terminals to ensure safety and durability of use. The terminals are housed in a PA Polyamide housing which could withstand high temperature working environment. The both plug and receptacle are securely mated via a positive lock. The fuse act as a control to protect the application from power surge by limiting the current flow to its rated current. It is securely mated to the wedge-like fuse terminals. This fuse terminal provides 2 high pressure point of contact on either side of the fuse. The flange on the receptacle prevents accidental unmating of the fuse during use.

This connector offers 20 signal pins and 2 power pins with 20A current rating.

### Series 87942

PCB Header with Single Fuse Socket



### Series 87943

Receptacle Housing with Fuse



Features	Benefits
<ul style="list-style-type: none"> <li>High-temperature thermoplastic housing</li> </ul>	<ul style="list-style-type: none"> <li>Withstands lead-free processing</li> </ul>
<ul style="list-style-type: none"> <li>Size 20 circuits signal pin</li> </ul>	<ul style="list-style-type: none"> <li>Allow more signal pass thru</li> </ul>
<ul style="list-style-type: none"> <li>Receptacle housing with flange to cover the 20A fuse</li> </ul>	<ul style="list-style-type: none"> <li>Full proof features to protect the system when it is mated</li> </ul>
<ul style="list-style-type: none"> <li>Housing lance</li> </ul>	<ul style="list-style-type: none"> <li>Provides strong terminal retention in housing</li> </ul>
<ul style="list-style-type: none"> <li>Positive lock</li> </ul>	<ul style="list-style-type: none"> <li>Prevents accidental unmating</li> </ul>

## SPECIFICATIONS

### Reference Information

Packaging: Bag  
UL File No.:  
CSA File No.:  
Mates With: 87942 and 87943  
Designed In: mm

### Electrical

Voltage: 250V  
Current: 4.0A, 20A  
Contact Resistance: 20 milliohms max.  
Dielectric Withstanding Voltage: 1000V AC  
Insulation Resistance: 1000 Megohms min.

### Mechanical

87943  
Contact Insertion Force: 15.60N (3.51 lb)  
Contact Retention to Housing: 29.40N (6.61 lb)

### 87942

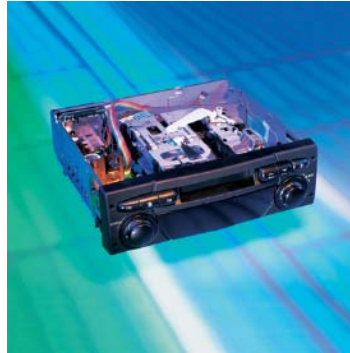
Mating Force: 98.00N (22.03 lb)  
Unmating Force: 30.00N (6.74 lb)  
Durability: 30 cycles

### Physical

Housing: PA Polyamide (Nylon), Black  
87942 : UL 94V-2  
87943 : UL 94-HB  
Contact: Copper (Cu) Alloy  
Plating:  
Contact Area — 2.0 $\mu$ m (80 $\mu$ " ) Tin (Sn)  
Solder Tail Area — 2.0 $\mu$ m (80 $\mu$ " ) Tin (Sn)  
Underplating — Nickel (Ni)  
PCB Thickness: 1.60mm (.062")  
Operating Temperature: -40°C to +105°C



- **Car infotainment system**
  - Car audio
  - Car navigation system



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Wire-to-Board Connector**

**Series 87942**

**PCB Header with Single Fuse Socket**

**Series 87943**

**Receptacle Housing with Fuse**

**Ordering Information**

Description	Lead-free Order No.	Unmated Height	Mated Height	Unmated Width	Overall Length	First-to-Last Circuit	PCB Retention
<b>2.50mm (.098")/ 3.50mm (.138") Pitch, Wire-to-Board Connector, PCB Header with Single Fuse Socket, Right Angle, Through Hole Solder Pins, 20 Circuits</b>	<b>87942-7001</b>	<b>15.10mm (.594")</b>	<b>15.10mm (.594")</b>	<b>25.50mm (1.004")</b>	<b>36.00mm (1.417")</b>	<b>22.50mm (0.886")</b>	<b>Snap-in Plastic Peg</b>

Description	Lead-free Order No.	Lock	Unmated Height	Unmated Width	Overall Length	First-to-Last Circuit	First Contact to End
<b>2.50mm (.098") / 3.50mm (.138") Pitch Wire-to-Board Receptacle Housing with Fuse, 20 Circuits</b>	<b>87943-7001</b>	<b>Positive Locking Ramp</b>	<b>15.00mm (.591")</b>	<b>16.30mm (.642")</b>	<b>34.90mm (1.374")</b>	<b>22.50mm (0.886")</b>	<b>1.55mm (.061")</b>



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