

## FEATURES AND SPECIFICATIONS



**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 mismating of the fuse during use.

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

| Features   | Benefits   |
|--|--|
| • High-temperature thermoplastic housing               | • Withstands lead-free processing                            |
| • Size 20 circuits signal pin                          | • Allow more signal pass thru                                |
| • Receptacle housing with flange to cover the 20A fuse | • Full proof features to protect the system when it is mated |
| • Housing lance  | • Provides strong terminal retention in housing              |
| • Positive lock  | • Prevents accidental unmating                               |

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

### Series 87942

PCB Header with Single Fuse Socket



### Series 87943

Receptacle Housing with Fuse



## 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)

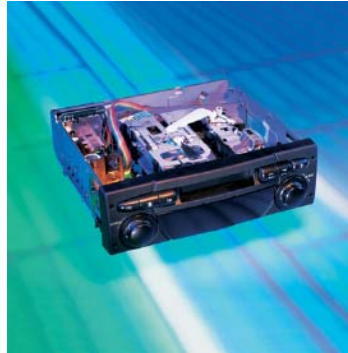
Underplating — Nickel (Ni)

PCB Thickness: 1.60mm (.062")

Operating Temperature: -40°C to +105°C

## Markets and Applications

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



## 2.50mm (.098")/ 3.50mm (.138") Pitch 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       |
|---|---------------------|-----------------|-----------------|------------------|------------------|-----------------------|---------------------|
| 2.50mm (.098")/ 3.50mm (.138") Pitch,<br>Wire-to-Board Connector, PCB Header with Single Fuse Socket,<br>Right Angle, Through Hole Solder Pins, 20 Circuits | 87942-7001          | 15.10mm (.594") | 15.10mm (.594") | 25.50mm (1.004") | 36.00mm (1.417") | 22.50mm (0.886")      | Snap-in Plastic Peg |

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



**Americas Headquarters**  
2222 Wellington Ct.  
Lisle, Illinois 60532 USA  
1-800-78MOLEX  
amerinfo@molex.com

**Asia Pacific North Headquarters**  
Yamato, Kanagawa, Japan  
81-462-65-2324  
feninfo@molex.com

**Asia Pacific South Headquarters**  
Jurong, Singapore  
65-6-268-6868  
fesinfo@molex.com

**European Headquarters**  
Munich, Germany  
49-89-413092-0  
eurinfo@molex.com

**Corporate Headquarters**  
2222 Wellington Ct.  
Lisle, Illinois 60532 USA  
630-969-4550

Visit our Web site at <http://molex.com>