The 64 Circuit Wire-to-Board Connection System and Female Crimp Terminal complement the MOX family of housings and connectors and offer a robust, reliable and competitively priced solution for electronic devices primarily in the Transportation Market.

The MOX (Micro Omega Molex) connector family ranges from 2 to 64 circuits and is designed for use in harsh automotive applications. The 64 circuit MOX system is a 2-row, 0.635mm (.025") wire-to-board connection comprising of MOX 98615 series housing and mating header, series 98599. The header is positioned on the PCB in a right-angle orientation with two PCB location pegs and is currently available in three different pin-out configurations. The connector system is designed with a mate-assist slider that assures a positive-lock between the housing and header. Used with 0.64mm MOX crimp terminals the 64 circuit system offers a proven and cost effective solution for airbag controllers, body electronics and comfort-and-convenience applications in the Transportation market.

The MOX Terminal is a universal contact system in automotive electronics. MOX 0.64mm (.025") crimp terminals from Molex are being used by leading car manufacturers in Europe today. As a widely accepted standard and volume product, the terminals offer a competitively priced solution for both manufacturer and supplier for a wide range of electronic devices in automotive applications. Typical features of the crimp terminal include a high-density packaging of 2.54 by 2.54mm (.100 by .100") centerline, a robust, reliable design, limited dimensions and rational application tooling. A full range of application tooling is available from Molex. The MOX terminal is suitable for wire thickness from 18 to 24 AWG.

The MOX crimp terminal is a two-piece, laser-welded design. Assembly of this standard 0.64mm (.025") terminal is achieved by crimping the steel sleeve over the body. The terminal contact body is made from highly conductive 0.20mm (.079") thick Copper alloy strip.

The sleeve features a steel cantilever spring which provides the function of primary locking and is the first contact retention of the terminal. In addition, this external steel spring secures the internal sleeve-contact spring against overstressing and mechanical damage. Separation of the mechanical stress and electrical strain ensures the contact system achieves the highest performance levels required by customers.

Molex offers a proven and cost effective terminal design for use with all 0.635mm MOX housings; Series 98615, 98298, 98193, 98696, 98786, 98982.

### MARKETS AND APPLICATIONS

- **64 Circuit Wire-to-Board System**
  - Automotive applications:
    - Airbag controller
    - Body electronics
    - Comfort-and-convenience

- **Commercial vehicles**
  - Cars
  - Trucks
  - Buses
  - Agricultural equipment
  - Motorcycle
  - Marine

- **Other Markets** for Crimp Terminal when used with MOX family of connectors/MQS compatible connectors
  - Consumer
  - HVAC
  - Industrial

- **Crimp Terminal**
  - Automotive: Everywhere there is a signal to carry in sealed or unsealed wire-to-board or wire-to-wire applications
    - Power-train
    - Airbag controller
    - Body electronics
    - Comfort and convenience
**MOX 64 Circuit Wire-to-Board System with Crimp Terminal**

- **98599 64 Circuit Header**
- **98615 64 Circuit Housing**
- **98658 Female Crimp Terminal 2.54mm (.100") Pitch**

### Reference Information
- **Packaging:** Reel
- **Mates with:** 0.64mm (.25") pin
- **Use with:** PCB
- **Designed In:** Millimeters
- **RoHS:** Yes
- **Halogen Free:** Yes
- **Voltage (max.):** 14V DC
- **Current (max.):** 7.5A at 85°C
- **Dielectric Withstanding Voltage:** 1000V AC
- **Insulation Resistance:** 100mOhms min.

### Mechanical
- **Contact Insertion Force:** 3.0N (0.67 lb) max.
- **Contact Retention to Housing:** 40.0N (8.99 lb) min.
- **Wire Pull-Out Force:** 50.0N (11.24 lb) min.
- **Mating Force:** 80.0N (18.0 lb) max.
- **Unmating Force:** 80.0N (18.0 lb) max.
- **Durability (min.):** 20 cycles

### Physical
- **Contact Area:** Solder tail area 3-5µm Tin (Sn)
- **Underplating:** Nickel (Ni) for Gold (Au) plated version only
- **Operating temperature:** -40 up to +85°C

### Specifications for Crimp Terminals

### Reference Information
- **Packaging:** Reel
- **Mates with:** 0.64mm (.25") pin
- **Designed In:** Millimeters

### Electrical
- **Voltage (max.):** 14V DC
- **Current (max.):** 7.5A at 85°C
- **Dielectric Withstanding Voltage:** 1000V AC
- **Insulation Resistance:** 100mOhms min.

### Mechanical
- **Contact Insertion Force:** 3.0N (0.67 lb) max.
- **Contact Retention to Housing:** 40.0N (8.99 lb) min.
- **Wire Pull-Out Force:** 50.0N (11.24 lb) min.
- **Insertion Force to Housing:**
  - Unsealed Connector: 5.0N (1.24 lb) max.
  - Sealed Connector: 8.0N (1.80 lb) max.
- **Durability (min.):** 20 cycles

### Physical
- **Contact Area:** Tin (Sn): 1 to 3µm
- **Underplating:** Nickel (Ni) for Gold (Au) plated version only
- **Operating temperature:** Tin (Sn): -40 up to +125°C
  - Gold (Au): 0.4µm
  - Operating temperature: Tin (Sn): -40 up to +125°C
  - Gold (Au): -40 up to +150°C

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### Features and Benefits for 64 Circuit Connection System
- Robust, two-piece, laser-welded terminal for harsh automotive applications
- Reliable and cost-effective interconnect solution, designed for crimp wire termination
- Steel sleeve to provide the function of primary locking and protect the mating contact area against overstressing and mechanical damage
- Polarization rib for terminal orientation ensures secure, easy and error-free assembly

### Features and Benefits for MOX Crimp Terminal
- Mate-assist slider on 64 circuit housing assures safe mating operation and a positive-lock between the header and housing
- Widely accepted standard and volume based product
- RoHS compliant
- Compatible with the MicroQuadlok System (MQS) Terminal from Tyco

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### Operating temperature:
- Tin (Sn): -40 up to +125°C
- Gold (Au): -40 up to +150°C
MOX 64 Circuit Wire-to-Board System with Crimp Terminal

98599 64 Circuit Header
98615 64 Circuit Housing
98658 Female Crimp Terminal 2.54mm (.100") Pitch

ORDERING INFORMATION FOR 64 CIRCUIT CONNECTION SYSTEM

<table>
<thead>
<tr>
<th>Header Order No.</th>
<th>Housing Order No.</th>
<th>&quot;Crimp Terminal Order No.&quot;</th>
<th>Configuration</th>
<th>Sample Plant</th>
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<tbody>
<tr>
<td>98599-1002</td>
<td>98615-1002</td>
<td>98658-XXXX</td>
<td>60 circuits</td>
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<td>64 circuits</td>
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*XXXX refers to required crimp terminal specifications: > see Ordering Information for Crimp Terminal

ORDERING INFORMATION FOR CRIMP TERMINAL

<table>
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<tr>
<th>Crimp Terminal Order No.</th>
<th>Mating/Crimp Plating</th>
<th>Wire size (AWG)</th>
<th>Wire size (mm²)</th>
<th>Wire Strip Length</th>
<th>*Samples available from Plant?</th>
<th>**Application Tooling</th>
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<tbody>
<tr>
<td>98658-1213</td>
<td>Tin/Tin</td>
<td>20 to 24</td>
<td>0.50 to 0.22</td>
<td>3.00mm</td>
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<td>638466100</td>
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<td>98658-1212</td>
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<td>18 to 22</td>
<td>0.75 to 0.50</td>
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<td>Gold/Tin</td>
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*Please use Plant 5102 for Europe and 3109 for Americas
**Automated tooling. For hand tool please use Order No. 638119300

www.molex.com/product/MOX.html