To meet future EU legislation for passively safe street fixtures and to reduce installation, repair and temporary removal times of roadside lighting and electrified signage, Molex has developed the quick-disconnect power connector system with low extraction forces and IP68 sealing properties, suitable for a range of rugged, outdoor power applications.

Molex has developed the Passive-Safety Pole Connectors with overmolded cables to meet future EU legislation governing passively safe street furniture. All powered road-side lighting, traffic lights and signage will be required to have an emergency power quick-disconnect system. In line with the legislation, the Molex Passive-Safety Pole Connectors provide electrical isolation of powered apparatus within 0.40 seconds of impact. This quick-disconnect function prevents poles and cables from becoming live conductors at crash sites. A further safety feature of the Molex system is that it allows a pole, which shears at its base on impact, to break-away cleanly. This prevents armoured electrical supply cables from dangerously tethering a pole during a crash.

The Molex Passive-Safety Pole Connectors can also save pole manufacturers and installers significant time and labour costs and reduce traffic flow disruption and congestion as a quick-installation connector. Poles and posts that have been factory fitted with the Molex male cable assembly can be supplied on-site and simply connected to the pre-installed female (ground) connector and cable. In addition, the Molex connectors enable electrical cables to be disconnected and reconnected as required to facilitate the quick and straight-forward removal, repair, replacement and upgrading of electrified signage and lighting poles. During installation or temporary removal of posts, the female (ground) connector can be sealed to IP68 by the integral sealing cap and safely left unmated as required.

The Molex connector system is also suitable for rugged applications, unrelated to road safety, that require a sealed, quick-disconnect, safety power connector such as on-street charging posts/stations for electric vehicles, dock-side generators, golf buggies/carts, hospital beds and temporary speaker and lighting installations at open air concerts.

FEATURES AND BENEFITS

- IP68 sealing suitable for rugged, outdoor applications
- Female (ground) connector can be sealed to IP68 when unmated i.e. during storage, transit and before installation with the integral sealing cap. Cap cannot be misplaced
- Low extraction forces for mated connectors supports quick-disconnect / connect requirements
- Spring latch provides reliable retention; removes risk of connectors accidentally disconnecting e.g. during pole installation, whilst not interfering with primary quick-disconnect safety function
- Flexible, steel, fixing strap overmolded into both the male and female connector assemblies ensures safety quick-disconnect function. Fixing strap cannot be misplaced
- Connectors and cables are supplied pre-assembled by Molex guaranteeing quality and saving installers time and money during pole installations

SPECIFICATIONS

Reference Information
Packaging: PK-93175
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes

Mechanical
Retention force between male and female connectors: 80N min
Durability: 500cycles

Electrical
Voltage (max.): 250V AC
Current (max.): 16-circuit: 3.0A
5- and 6- circuit: 8.0A
4-circuit: 10.0A
3-circuit: 13.0A
Contact Resistance: 25 milliohms
Dielectric Withstanding Voltage: No voltage breakdown with an unmated connector at 2000V AC for 1 minute
Insulation Resistance: 5 Megohms min
(mated & unmated connector with 1000V DC between adjacent contacts for 1 minute)

Physical
Housing: PBT
Overmold: TPE
Contact: Copper Alloy (Cu)
Plating:
- Contact Area — Gold (Au)

Operating Temperature: -30 °C to +80°C
MARKETS AND APPLICATIONS

- Street and road furniture
  - Street light poles
  - Traffic lights
  - Traffic bollards
  - Illuminated signage
  - VMS (variable message signs)
  - Anywhere on roads, highways and motorways where power is used e.g. cameras, solar-powered panels etc.

- Medical
  - Electric hospital beds
  - Ambulance equipment

- Automotive
  - Charging posts / stations for electric vehicles

- NAT
  - Boats e.g. dock-side charging

- Consumer
  - Outdoor concert equipment (lighting and speakers)
  - Electric golf trolleys and carts

- Other Markets
  Any application where a sealed, power quick-disconnect connector is required

### Passive-Safety Pole Connector System

**93175**  Sealed Male and Female Connectors Overmolded to Cables

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Circuits</th>
<th>Attribute</th>
<th>Cable Length (Dim A)</th>
<th>Connector Colour</th>
<th>Cable Width (Dim C)</th>
<th>Cable Type</th>
<th>Minimum Order Quantity</th>
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<tbody>
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<td>93175-6004</td>
<td>16</td>
<td>Female (Ground Side)</td>
<td>5M (16'4&quot;)</td>
<td>Black</td>
<td>16.80mm (0.66&quot;)</td>
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</table>

Note: 3, 4, 5 and 6-circuit versions, additional cable lengths and custom cable options are available. View the Sales Drawing for further details.