MX120G™
SEALED INTERCONNECT SYSTEM

Optimal performance for harsh-environment, non-automotive transportation applications
MX120G™ SEALED INTERCONNECT SYSTEM

36783 Sealed Shrouded Right Angle Header Assembly
36792 Sealed Female Receptacle Assembly With Latch
36799 Female Crimp Terminal
36804 Female Cavity Plug

Greater cost and space savings with superior design and mating features for harsh-environment, non-automotive transportation applications.

MX120G™ connector system is a highly compact, sealed family of interconnects with IP67-ratings that deliver optimal performance especially in wet, high-vibration and wide-operating-temperature conditions.

Easy-to-use and a less costly drop-in replacement of wire-seal equivalents, terminals have wire-sizes of 0.35 to 1 mm² conductor diameter that supports 7 to 10.5 Amp of current, allowing the receptacle to take multiple cable configurations, for added flexibility.

Built-in positive locking feature gives robust terminal retention while unique twist-lock feature ensures proper terminal alignment, eliminating the need for any fasteners.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced 3.20mm (mating) pitch design</td>
<td>Significant space reduction compared to same circuit density products</td>
</tr>
<tr>
<td>Meets IP67 ratings with wide operating temperature range</td>
<td>Protects against dust and water (up to 1m depth) and able to operate from -40 to +105° C</td>
</tr>
<tr>
<td>High-vibration resistance of up to 10G acceleration</td>
<td>Secured mating retention in high-vibration environment</td>
</tr>
<tr>
<td>Independent, primary terminal lock</td>
<td>Reinforced terminal retention prevents accidental terminal back-out</td>
</tr>
<tr>
<td>Twist-lock feature on the terminal and connector</td>
<td>Ensures correct alignment of terminals with contacts, eliminating the need for additional fasteners</td>
</tr>
<tr>
<td>Single-piece female receptacle with matte silicone seal and seal-cap</td>
<td>Greater applied labour and process cost-savings</td>
</tr>
<tr>
<td></td>
<td>More durable and able to withstand higher temperatures</td>
</tr>
<tr>
<td></td>
<td>Easy insertion of crimped wires directly into the connector</td>
</tr>
<tr>
<td>Self-guiding slot on male header</td>
<td>Facilitates easy assembly and subsequent potting into ECU box</td>
</tr>
</tbody>
</table>

Applications

Transportation
- Buses
- Motorcycles and Scooters

Agriculture and Work Site Vehicles
- Utility Vehicles
- Tractors and Combines
- Riding Lawn Mowers

Recreational Vehicles
- Snowmobiles
- Golf Carts
- Jet Skis

Industrial
- Construction Equipment
- Marine Equipment
- Oil and Gas Installations

Exterior LED Lighting
- Traffic Lights
- Overhead Street Lights

Medical
- Splash-proof Medical Equipment
Specifications

REFERENCE INFORMATION
UL File No.: Pending approval
CSA File No.: Pending approval
Designed In: Millimetres

ELECTRICAL
Voltage (max.): 28V DC
Current (max.): 10.5A (per contact)
Contact Resistance:
20 Milliowsms max.
Insulation Resistance:
20 Megohms min.
Dielectric Withstanding Voltage:
1000V AC

MECHANICAL
Durability: 10 cycles max.
Connector Mate & Unmate Forces:
75N max., 90N min. (lock engaged)
(for all Circuits)
Contact Retention to Housing: 50N min.
Contact Insertion Force: 30N max.
Crimped Wire Pullout Force:
0.35 mm² wire – 35N min.
0.50 mm² wire – 55 N min.
0.75 mm² wire – 75 N min.
1 mm² wire – 88 N min.

PHYSICAL
Housing: Black
Plating: Tin
Operating Temperature: -40°C to +105°C
PCB Thickness: 1.60mm (recommended)

Ordering Information

<table>
<thead>
<tr>
<th>WIRE-TO-BOARD SYSTEM</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female Receptacle</strong></td>
<td><strong>Order No.</strong></td>
<td><strong>Pitch - Mating Interface (mm)</strong></td>
</tr>
<tr>
<td>Dual Row Sealed Receptacle Assembly With Latch</td>
<td>36792-1201</td>
<td>3.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Header</strong></th>
<th><strong>Order No.</strong></th>
<th><strong>Pitch - Termination Interface, PCB Side (mm)</strong></th>
<th><strong>Circuit Size</strong></th>
<th><strong>Packaging</strong></th>
<th><strong>Material</strong></th>
<th><strong>PC Tail Length (mm)</strong></th>
<th><strong>Mates With</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual Row Sealed Shrouded Through-Hole Header Assembly</td>
<td>36783-120X X = Colour Mark 1 = No Colour Mark, 2 = Brown, 3 = Red, 4 = Green, 5 = Grey, 6 = Blue, 7 = Yellow, 8 = White</td>
<td>3.5</td>
<td>12</td>
<td>Carton</td>
<td>Housing: HB Rated Glass Filled Nylon, Pins: Brass</td>
<td>3.2</td>
<td>36792-1201</td>
</tr>
</tbody>
</table>

For other circuit sizes (2, 6, 8, 10, 12), single/dual row, right angle/vertical configurations and shrouded/unshrouded versions, please contact Molex Global Product Manager for more details.

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th><strong>Description</strong></th>
<th><strong>Order No.</strong></th>
<th><strong>Use With</strong></th>
<th><strong>Wire Gauge (AWG)</strong></th>
<th><strong>Wire Size (mm²)</strong></th>
<th><strong>Wire Insulation Diameter (mm)</strong></th>
<th><strong>Packaging</strong></th>
<th><strong>Material</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Crimp Terminal, Grip Code M</td>
<td>36799-0001</td>
<td>36792-1201</td>
<td>17 - 20</td>
<td>0.50 - 0.75</td>
<td>1.4 - 1.9</td>
<td>Reel</td>
<td>Copper Alloy</td>
<td></td>
</tr>
<tr>
<td>Female Crimp Terminal, Grip Code S</td>
<td>36799-0002</td>
<td>20 - 22</td>
<td>0.35 - 0.50</td>
<td>1.2 - 1.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For Male Crimp Terminals, please contact Molex Global Product Manager for more details.

<table>
<thead>
<tr>
<th>CAVITY PLUG</th>
<th><strong>Description</strong></th>
<th><strong>Feature</strong></th>
<th><strong>Use With</strong></th>
<th><strong>Packaging</strong></th>
<th><strong>Material</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Cavity Plug</td>
<td>36804-0001</td>
<td>To Block Void Circuit</td>
<td>36792-1201</td>
<td>Bag</td>
<td>Nylon</td>
</tr>
</tbody>
</table>

For Male Cavity Plug, please contact Molex Global Product Manager for more details.

For Wire-to-Wire Male Connector dual row, circuit size 4, 6, 8, 10, 12 and single row, circuit size 2-6, please contact Molex Global Product Manager for more details.
Get more insights at: molex.com/link/mx120g.html