

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.

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

Feature

Benefit

- | | |
|--|--|
| <ul style="list-style-type: none"> • Reduced 3.20mm (mating) pitch design | <ul style="list-style-type: none"> • Significant space reduction compared to same circuit density products |
| <ul style="list-style-type: none"> • Meets IP67 ratings with wide operating temperature range | <ul style="list-style-type: none"> • Protects against dust and water (up to 1m depth) and able to operate from -40 to +105° C |
| <ul style="list-style-type: none"> • High-vibration resistance of up to 10G acceleration | <ul style="list-style-type: none"> • Secured mating retention in high-vibration environment |
| <ul style="list-style-type: none"> • Independent, primary terminal lock | <ul style="list-style-type: none"> • Reinforced terminal retention prevents accidental terminal back-out |
| <ul style="list-style-type: none"> • Twist-lock feature on the terminal and connector | <ul style="list-style-type: none"> • Ensures correct alignment of terminals with contacts, eliminating the need for additional fasteners |
| <ul style="list-style-type: none"> • Single-piece female receptacle with matte silicone seal and seal-cap | <ul style="list-style-type: none"> • Greater applied labour and process cost-savings • More durable and able to withstand higher temperatures • Easy insertion of crimped wires directly into the connector |
| <ul style="list-style-type: none"> • Self-guiding slot on male header | <ul style="list-style-type: none"> • Facilitates easy assembly and subsequent potting into ECU box |

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 Milliohms max.
 Insulation Resistance:
 20 Megaohms 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)

MX120G™ SEALED INTERCONNECT SYSTEM



Sealed female receptacle assembly with latch



Sealed shrouded right angle header assembly



Female crimp terminal



Female cavity plug

Ordering Information

| WIRE-TO-BOARD SYSTEM | | | | | | | |
|---|--|--|--------------|-----------|---|-----------------------------------|------------|
| Female Receptacle | Order No. | Pitch - Mating Interface (mm) | Circuit Size | Packaging | Material | Use With | Mates With |
| Dual Row Sealed Receptacle Assembly With Latch | 36792-1201 | 3.2 | 12 | Carton | Nylon Housing & Cap, Silicon Seal | 36799-0001 & 36799-0002 Terminals | 36783-120X |
| Header | Order No. | Pitch - Termination Interface, PCB Side (mm) | Circuit Size | Packaging | Material | PC Tail Length (mm) | Mates With |
| Dual Row Sealed Shrouded Right Angle Through-Hole Header Assembly | 36783-120X X = Colour Mark 1 = No Colour Mark, 2 = Brown, 3 = Red, 4 = Green, 5 = Grey, 6 = Blue, 7 = Yellow, 8 = White | 3.5 | 12 | Carton | Housing: HB Rated Glass Filled Nylon, Pins: Brass | 3.2 | 36792-1201 |

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.

| TERMINAL | | | | | | | |
|------------------------------------|-------------------|------------|------------------|------------------------------|-------------------------------|-----------|--------------|
| Description | Order No. | Use With | Wire Gauge (AWG) | Wire Size (mm ²) | Wire Insulation Diameter (mm) | Packaging | Material |
| Female Crimp Terminal, Grip Code M | 36799-0001 | 36792-1201 | 17 - 20 | 0.50 - 0.75 | 1.4 - 1.9 | Reel | Copper Alloy |
| Female Crimp Terminal, Grip Code S | 36799-0002 | | 20 - 22 | 0.35 - 0.50 | 1.2 - 1.6 | | |

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

| CAVITY PLUG | | | | | |
|--------------------|-------------------|-----------------------|------------|-----------|----------|
| Description | Order No. | Feature | Use With | Packaging | Material |
| Female Cavity Plug | 36804-0001 | To Block Void Circuit | 36792-1201 | Bag | Nylon |

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