

Mega-Fit Connectors

As next-generation devices require more functionality, speed and power, design engineers face the challenge of delivering increased current in space-constrained designs. Mega-Fit Connectors deliver superior performance in low-to-mid-power applications by handling high currents up to 30.0A. With an innovative, compact design, these robust connectors are engineered to meet the rigorous demands of USCAR2 standards and are ideal for challenging environments. These products also offer a diverse range of features, including terminal position assurance (TPA), connector position assurance (CPA) and potting capabilities for secure connections and long-term reliability. Offering unmatched flexibility to meet various manufacturing demands, the Mega-Fit Connector portfolio is an exceptional choice for your design needs.

ADVANTAGES AND FEATURES

Allows same-circuit, multiple-connector use with virtually no chance of cross-mating; provides visual indication of the properly mated connector for faster assembly

There are multiple mechanical keying and color-coded options with polarization for operational safety and efficient assembly.

Reduces the risk of handling and transit damage

A tangless terminal design is available with TPA receptacles only.

Offers a compact mid-power solution

A small pitch size allows these connectors to take up less space on the PCB and provide the power designers require in a limited space.

Pitch	5.70mm
Current	30.0A
Voltage	600V
Industry Standards	Glow Wire capable
Operating Temperatures	-40 to +105°C—tin -40 to +120°C—gold

Ensures mated connector assemblies will not accidentally disengage

The TPA feature reduces assembly errors and ensures terminals are fully seated and will not back out. These connectors also offer a CPA option for additional locking security.

Meets USCAR2 specifications for shock and vibration

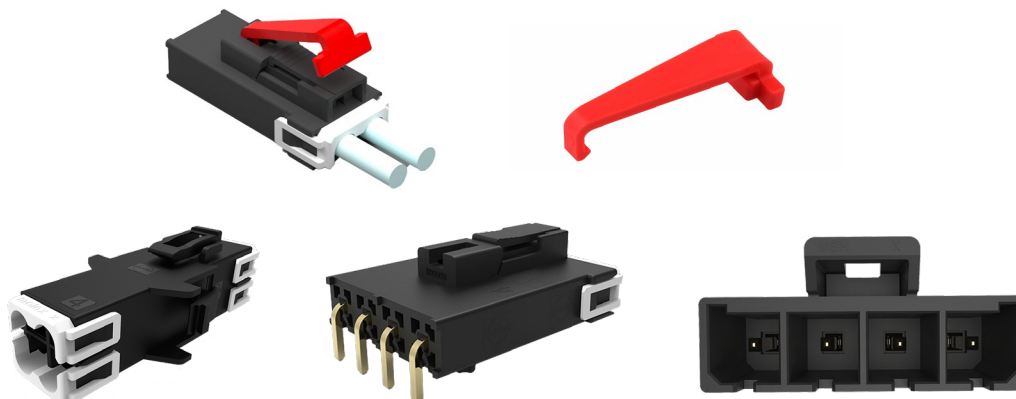
These connectors are suitable for use in automotive applications (not suitable for safety or on-engine applications).

Helps prevent dust and moisture at lower costs than for sealed products

Potting-capable headers ensure environmental protection and long-term reliability.

Creates space efficiency, optimal current paths, and enhanced robustness and reliability

Unique terminal designs use two similar wire gauges in one terminal and include a double crimp option.



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MARKETS AND APPLICATIONS

Automotive

Lighting and automation systems
Interior dashboards
Power converters
Unsealed electronic control modules

Telecommunications

Power supplies and distribution
Switches
Servers



Interior Dashboards



Servers

SPECIFICATIONS

Reference Information

Packaging: Reel, tray, bag
UL File No.: E29179
CSA File No.: LR-19980_A_000
Mates With: Mega-Fit receptacles, plugs
Use With: Mega-Fit receptacles, plugs
Terminal Used: Series 172063, 076823, 105418, 105417
Designed In: Millimeters
RoHS: Yes, compliant materials
Halogen Free: Yes, options available
Glow Wire Capable: Yes

Dual-Row Wire-to-Wire and Single-Row Systems mates with:

- Single-Row HDR: 200456
- Single-Row REC: 200241
- TPA: 200456, 171692, 105412
- Dual-Row Plug: 171692
- Dual-Row HDR: 171692
- Dual-Row REC: 105412, 76825, 76829, 172064, 172065
- Male Terminal: 76823, 172063
- Female Terminal: 105418, 105417

Use With:

Male Terminal: 105412
Female Terminal: 171692, 200456
TPA: 200456, 171692
Single-Row Receptacle: 76823, 105415
Dual-Row Receptacle: 76823, 105415
Single-Row Receptacle: 76823, 105415
Dual-Row Plug: 105418, 105415

Electrical

Voltage (max.): 600V
Current (max.): 30.0A
Contact Resistance: 6 Milliohms
Dielectric Withstanding Voltage: No breakdown
Current Leakage: <5mA
Insulation Resistance (min.): 1,000 Megohms

Mechanical

Contact Insertion Force (max.): 6.8N
Contact Retention to Housing: 30N
Insertion Force to PCB (max.): 85N
Mating Force: Tin plated (max.):
6.8N initial mating force per circuit
0.36 or 0.78μ (15 or 30μ") gold plated (max.):
6.0N per circuit
Unmating Force: Tin plated (max.):
6.5N initial unmating force per circuit
0.36 or 0.78μ (15 or 30μ") gold plated (max.):
5.6N per circuit
Durability (min.): Maximum change from
initial—tin-2 Megohms; gold-2 Megohms
Header Pin Retention Force in Housing
Vertical Header: 89N min per pin

Physical

Housing: UL 94 V0, Glow Wire combination
Contact: High-conductivity copper
Plating:
Contact Area — gold 30μ" and 15μ" options
or tin
Solder Tail Area: Tin
Underplating — nickel
PCB Thickness: 1.60 and 2.40mm (.062 and .093")
Operating Temperature: -40 to 105°C (tin);
-40 to 120°C (gold)

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