

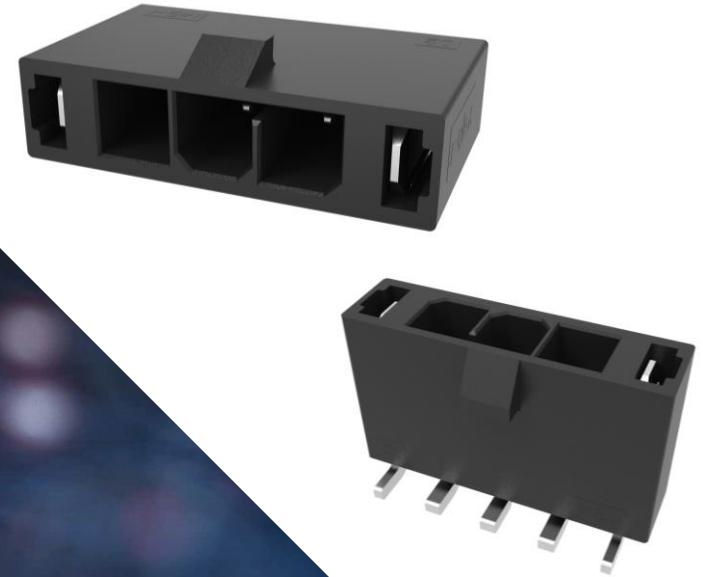
Mini-Fit Max Connectors

ADDING: Surface-mount (SMT) connectors

The Mini-Fit Max SMT version expands the Mini-Fit Max product line within the wire-to-board selection and is available in single and double-row formats. This SMT version is equipped with a nail feature that improves support and retention on the PCB post-soldering. Additionally, these connectors limit terminal movement in both upward and downward directions, offering greater retention force.

NPI ENHANCEMENT

JUNE 2025



Mini-Fit Max Connectors

As engineers seek connector solutions that bridge the gap between mid-power (10.0A) and high-power (25.0A) ranges, Molex offers a reliable solution. The Molex Mini-Fit Max Connector offers 20.5A of current for mid-range power needs with keying and polarization options to help prevent mis-mating. These connectors also provide an optional TPA that helps ensure terminals are properly seated in the receptacle. Meeting European electrical standards with a glow-wire capable solution, the Mini-Fit Max Connectors are well-suited for appliance, industrial and telecommunications applications, effectively addressing industry requirements.

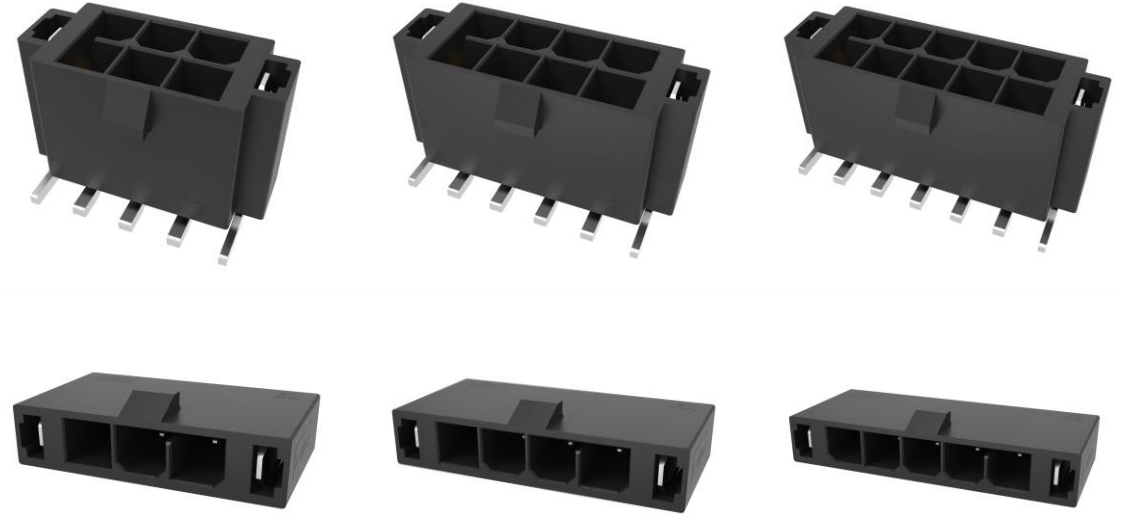
Key Product Information

Category: Wire-to-Board Connectors

Current: 20.5A (max.)

Pitch: 4.20mm

Voltage: 600V



[View Product Landing Page](#)

[Download Datasheet](#)

Series

224491	Mini-Fit Max SMT Single-Row, Vertical Header
224494	Mini-Fit Max SMT Dual-Row, Vertical Header
224900	Mini-Fit Max SMT Single-Row, Right Angle
224903	Mini-Fit Max SMT Dual-Row, Right Angle

Vital Product Information

Mini-Fit Max Connectors

What makes this product different from the competition?

Mini-Fit Max Connectors deliver 20.5A of current in a compact form factor. They feature a robust, tangless terminal design and are end-to-end stackable, offering more power per linear inch and square millimeter than other mid-range power connectors.

How does this product/solution create value for our customers?

Mini-Fit Max Connectors provide a compact and reliable solution to address common quality issues such as terminal backouts and assembly challenges. Equipped with features like terminal position assurance (TPA), mechanical keying, and polarization, these connectors effectively prevent mis-mating and terminal backouts, ensuring secure and accurate connections.

What is the Molex advantage?

Mini-Fit Max Connectors are designed with a 94/V-0 Glow-Wire combination resin, which significantly lowers material and labor costs, while ensuring compliance with European electrical standards. The Molex Mini-Fit Max Connector is ideal for addressing mid-range power requirements in a variety of applications.



Markets and Applications

Mini-Fit Max Connectors



Washers and Dryers

APPLIANCES

- Heaters and air conditioners
- Washers and dryers



HVAC Systems

INDUSTRIAL

- Commercial equipment
- Commercial lighting
- HVAC systems



Servers

TELECOMMUNICATIONS

- Network towers
- Power supplies and distribution
- Servers
- Switches

Product Advantages and Features

Mini-Fit Max Connectors

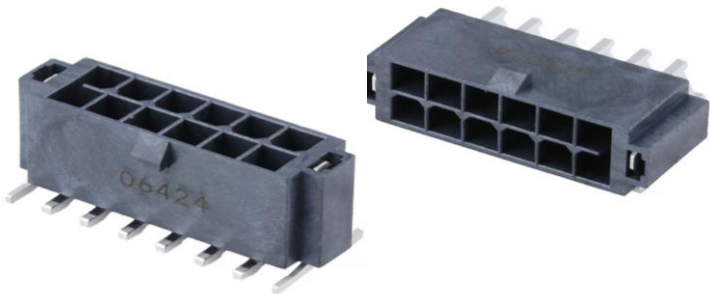
Provides exceptional support and improves PCB retention
A nail lock-in feature secures the housing even in high-vibration environments that lead to unstable connections.

Allows for improved strength and reliability
These connectors are available in termination interface style-SMT, eliminating the need for holes and providing greater resistance to mechanical stress.

Helps prevent terminal movement and improves retention force
Terminals are designed with latches to hold securely and avoid connection disruptions that lead to end-product failures.

Offers a compact mid-power solution
A small pitch size allows these connectors to take up less space on the PCB and help designers overcome technical constraints in tight spaces.

Enhances fire safety
The V-0/Glow Wire combination resin provides increased operational safety, reducing the risk of a fire.



Key Specifications	
Pitch	4.20mm
Current	20.5A
Voltage	600V
Industry Standards	Glow Wire capable
Operating Temperatures	-40 to +105°C

Product Advantages and Features

Mini-Fit Max Connectors

Allows same-circuit, multiple-connector use with low risk of cross-mating; provides visual indication of the properly mated connector

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

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. The CPA option allows for additional locking security.



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Product Specifications

Mini-Fit Max Connectors

Reference Information

Packaging: Reference Molex.com spec.
part number
UL File No.: Reference the product
specification
CSA File No.: Reference the product
specification
Mates With:
Series: 212514 Series: 212520
Series: 212515 Series: 212514
Series: 212516 Series: 212514
Use With: See “Mates With” above
Terminal Used: 212515
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes
Glow-Wire Capable: Yes

Mechanical

Contact Retention to Housing: 40.0N
Mating Force: 6.0N
Unmating Force: 4.0N
Durability (min.): 20 cycles

Electrical

Voltage (max.): 600V
Current (max.): 20.5A
Contact Resistance: 2 mΩ
Dielectric Withstanding Voltage: No breakdown
Current leakage: <5mA
Insulation Resistance: 1,000 MΩ minimum

Physical

Housing: UL 94V-0/Glow Wire
Pitch: 4.20mm
Contact: Tin
Plating:
Contact Area — tin
Solder Tail Area — tin
Underplating — nickel
PCB Thickness: Multiple options
Operating Temperature: -40 to +105°C

Additional Resources

Web Overview Page	https://www.molex.com/en-us/products/connectors/wire-to-board-connectors/mini-fit-connectors
Datasheet	987652-3351.pdf
Global Product Manager	T. Rajachandrasekar, PSBU, CCS



THANK YOU

creating connections for life

molex