DATASHEET

Mini-Fit Connector Family ›

Design engineers are often challenged with space constraints, the need for glow wire compatible products and increasing costs associated with the bill of materials (BOM). Mini-Fit Connectors offer a slim profile and mate with existing Mini-Fit headers, allowing for space savings without changing the BOM. These connectors overcome many challenges PCB designers encounter and provide excellent features for reliability. The Mini-Fit Connector Family delivers up to 13.0A, while blind-mating and terminal position assurance options provide a versatile connector system for a wide range of applications.

ADVANTAGES AND FEATURES

Protects against potential damage during handling
The connector housings have fully isolated terminals to protect against potential damage to terminals.

Helps maximize productivity and efficiency
The Mini-Fit Sigma low mating force terminals offer lower mating force of approximately 30% of that of the existing contacts for Mini-Fit Sigma/ TPA 2 contacts. This lower mating force provides improved ergonomics within the entire connector-mated system that increases efficiency.

Helps ensure header and receptacle cannot be mis-mated
The polarized mating geometry protects against mis-mating.

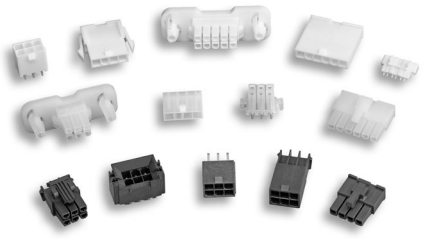
Provides a lower mating force contact to improve impact to the operator
The Mini-Fit Sigma Low Mating Force Terminals improve overall assembly ergonomics for production line operators to reduce injury from high volume assembly or mating of connectors and provides more overall assembly efficiency.

Category	Wire-to-Board Connectors
Voltage (max.)	600V AC/DC
Current (max.)	9.0A (Mini-Fit); 13.0A (Mini-Fit Plus),
Mating Force (max.)	14.7N, 7.0N (Mini-Fit Sigma LMF)
Unmating Force (max.)	1N, 2.6N (Mini-Fit Sigma LMF)
Durability	30 Cycles (Mini-Fit Sigma LMF), 75 Cycles (Tin); 100 Cycles (Gold)
Operating Temperature	-40 to +125°C

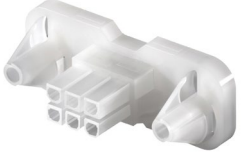
Allows 2.54mm misalignment in x and y axis for all configurations
Mini-Fit Blind-Mate Interface Connectors provide up to 2.54mm of float between mating surfaces for easy blind-mate connections.

Helps ensure connectors are fully mated with easy-to operate thumb latch
The Mini-Fit Connectors offer housings with positive locks to support design flexibility by preventing accidental unmating.

Reduces assembly errors and helps to ensure terminals are fully seated to avoid end-product failure
Terminal position assurance (TPA) reduces terminal back-out by providing locking redundancy.



Mini-Fit Connectors

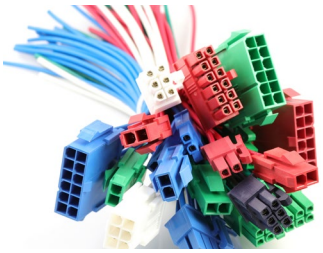


DATASHEET

Mini-Fit Connector Family ›

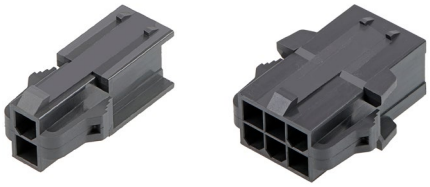
Mini-Fit Plus Connectors

Mini-Fit Sigma Connector

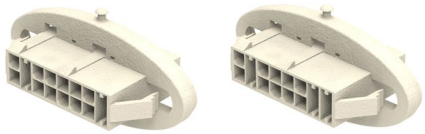


Mini-Fit Versa Color Connectors

Mini-Fit Backshells



Mini-Fit Sigma Plugs



Mini-Fit Sigma FIP Hybrid Connector

MARKETS AND APPLICATIONS

Automotive
Harness manufacturers
Inside infotainment
Electronic control modules
Dashboard

Servers & Storage
Servers
Racks
Switches

Appliances
Refrigerators
Laundry equipment
Dishwashers

Industrial Automation
Industrial equipment
Automation equipment
Food and beverage dispensers

Networking
Copiers
Printers
Bluetooth equipment

Office Equipment

Industrial Equipment

Vending Machines

DATASHEET

Mini-Fit Connector Family ›

SPECIFICATIONS

Reference Information

Packaging: Reel, Bag or Tray
UL File No.: E29179
CSA File No.: LR19980
Mates with: Other Mini-Fit and Mini-Fit Plus Housings
Use With: Mini-Fit and Mini-Fit Plus Terminals
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes, some series
Glow Wire Capable: Yes, some series

Electrical

Voltage (max.): 600V AC/DC
Current (max.): 9.0A (Mini-Fit); 13.0A (Mini-Fit Plus),
11.5A (Mini-Fit Sigma), 11.5A (Mini-Fit Versa Color)
Contact Resistance (max.): 10 milliohm
Dielectric Withstanding Voltage: 2200V AC
Insulation Resistance (min.): 1000 Megohms

Mechanical

Contact Insertion Force (max.): 15N
Contact Retention to Housing (min.): 30N
Insertion Force to PCB (max.): 98N
Mating Force (max.): 14.7N, 7.0N (Mini-Fit Sigma LMF)
Unmating Force (max.): 1N, 2.6N (Mini-Fit Sigma LMF)
Durability (min.): 30 Cycles (Mini-Fit Sigma LMF),
75 Cycles (Tin); 100 Cycles (Gold)

Physical

Flammability: UL 94V-0
Housing: Nylon
Plating:
Contact Area – Tin (Sn) or Gold (Au)
Tail Area – Tin (Sn)
Underplating – Nickel (Ni)
PCB Thickness: Multiple Options
Operating Temperature: -40 to +125°C

www.molex.com

Order No. 987651-8272 Rev. 5
USA/0k/GF/2024.07