DATASHEET

Micro-Fit Connectors ›

As consumers demand smaller, faster, more powerful devices, Micro-Fit Connectors offer a compact, high-performance interconnect solution, blending power and flexibility without compromising space or reliability. These connectors also provide grounding protection and halogen-free components to meet government regulation guidelines for environment health and safety (EH&S) compliance. Designed for durability and proficiency, Micro-Fit Connectors are feature rich, including FMLB for enhanced safety, unmatched design flexibility and excellent cost savings.

ADVANTAGES AND FEATURES

Allows up to 2.54mm misalignment
Self-aligning feature is molded into housings for blind-mating capability.

Offers header retention and strain relief options
Fitting nails and solderable clips are available.

Increases durability; supports ergonomics and user-friendly interfaces
These connectors have RMF terminals.

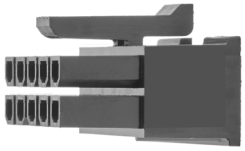
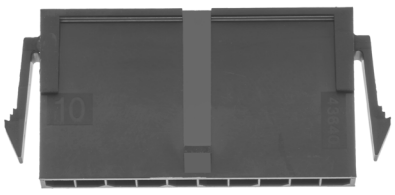
Improves safety due to hot-mating compatible design
FMLB terminals help engineers safely enable hot-plug connections by controlling the order in which circuits connect and disconnect; terminals are rated and structured specifically for safe use in hot-plugging environments, unlike standard connectors; longer ground pins establish the grounding path before live circuits engage.

Current	Up to 10.5A
Industry Standards	Halogen-free, V0 and Glow Wire capable
Pitch	3.00mm
Operating Temperatures	Gold plated (Glow Wire): -40 to +125°C Tin plated (Glow Wire): -40 to 105°C Non-Glow Wire: -40 to 105°C

Helps prevent connector damage
Pin-mating sequence enables grounding first, then power and signal (disconnect in reverse order); the FMLB option controls the connection order which helps minimize arcing, extending the connector life.

Provides design flexibility
SMT, press-fit through-hole compliant pin interface and surface-mount compatible versions are available.

Provides excellent cost savings
These connectors are potting capable and do not require the use of sealants, thereby reducing customer's raw material costs.


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MARKETS AND APPLICATIONS

Appliance
Freezers
HVAC systems
Printers
Refrigerators
Scanners
Security systems
Smart homes
Washing machines



Freezers



Interior Automotive Devices



Servers

Automotive
Harness manufacturers
Interior automotive devices
Non-sealed applications

Industrial
Routers and switches
Servers
Storage systems

Power for Data Center
Routers and switches
Servers
Storage systems

Telecommunications
Routers and switches
Servers
Storage systems

SPECIFICATIONS

Reference Information
Packaging:
  UL File No.: E29179
  CSA File No.: LR19980
Mates With:
Micro-Fit 3.0 single-row plug
  (Series 43640) and header (Series 43650);
  TPA single-row receptacle (Series 171850)
Micro-Fit 3.0 dual-row plug housing
  (Series 43020) and header
  (Series 43045 and 44914)
TPA dual-row receptacle (Series 172952)
TPA-dual-row plug (Series 203632)
Terminal Used:
  Micro-Fit 3.0 female crimp terminals
  (Series 43030 and 46235)
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes (non-Glow-Wire versions)
Glow Wire Capable: Option available;
  contact Molex

Electrical
Voltage (max.): 600V
Current (max.): Up to 10.5A
Contact Resistance: 10 milliohms
Dielectric Withstanding Voltage: <5mA
Insulation Resistance (min.): 1,000 Megohms

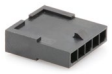
Mechanical
Contact Insertion Force (max.): 14.7N per contact
Contact Retention to Housing (min.): 24.5N
Mating Force (max.): 8N per circuit
Unmating Force (min.): 2.4N per circuit
Durability (max.): typically, 30 cycles,
  refer to product specifications

Physical
Housing: Nylon
Header: LCP
Contact: Various (Phosphor Bronze, Copper Alloy—see product specifications for exact connector system)
Gold plated (Glow Wire): -40 to +125°C
Tin plated (Glow Wire): -40 to 105°C
Non-Glow Wire: -40 to 105°C

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ORDERING INFORMATION

Series No.	Component	
43030	Female Terminal (Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (18 - 30AWG)	
46235	Reduced Mating Force (RMF) Female Terminal, available with or without Lubricant (Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (20 - 30AWG)	
203951	RMF Female Terminal (Available in: 0.25µm Select Tin) (18 AWG)	
43031	Male Terminal (Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (18 - 30AWG)	
43031-5XXX	TPA Plug Male Terminal (Used with: Housing Series 200875) (Available in: Preplated Tin 1µm - 2.5µm, 0.38µm Min Selective Gold Over 2.5µm Min Selective Tin Over 1.27µm Overall Nickel, 0.76µm Min Selective Gold Over 2.5µm Min Selective Tin Over 1.27µm Overall Nickel, 2.5µm Min Matte Tin Over 1.27µm Overall Nickel) (20 – 30AWG)	
43031-1XXX	FMLB terminals	
43025	Dual-Row Receptacle Housing (mates with 43020, 43045, 44914, 44242) (Available in: UL 94V-0, Glow Wire, Low-Halogen) (2 to 24 Circuits)	
43020	Dual-Row Plug (mates with 43025, 45132, 245132, 172952) (Available in: UL 94V-0, Glow Wire, Low-Halogen) (Panel/Non-Panel Mount) (2 to 24 Circuits)	
43045	Dual-Row Header (mates with 43025, 45132, 245132, 172952) (Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (2 to 24 Circuits) (Right Angle and Vertical Orientations; Surface Mount, Through Hole - Kinked Pin and Through Hole Termination Interface Style)	
43645	Single-Row Receptacle (mates with 43640, 43650) (Available in: UL 94V-0, Glow Wire, Low-Halogen) (2 to 12 Circuits)	
43640	Single-Row Plug (mates with 43645, 171850) (Available in: UL 94V-0, Glow Wire, Low-Halogen) (2 to 12 Circuits) (Panel Mount and Non-Panel Mount)	
200875	Single Row TPA Plug (Mates with Micro-Fit 171850 and 43645) (UL94V-0)(Low Halogen)(Color – Black) (2 to 7 Circuits)	
43650	Single-Row Header (mates with 43645, 171850) (Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (2 to 12 Circuits) (Right Angle and Vertical Orientations; Surface Mount, Through Hole - Kinked Pin and Through Hole Termination Interface Style)	
171850	TPA Single-Row Receptacle (mates with 43640, 43650) (Available In: UL 94V-0, Low-Halogen) (2 to 7 Circuits)	
172952	TPA Dual-Row Receptacle (2 TPA parts required for each receptacle) (mates with 43020, 43045, 44914) (Available In: UL 94V-0, 94V-2, Glow Wire, Low-Halogen) (4 to 22 Circuits) (Black and Natural Color)	
203632	TPA Dual-Row Plug (Mates with 172952 and 43025)	

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ORDERING INFORMATION

Series No.	Component	
172953	TPA Retainer (2 TPA parts required for each receptacle) (Available In: Low-Halogen) (4 to 22 Circuits) (Black and Natural Color)	
45132	Off-the-Shelf Micro-Fit TPA Discrete Wire Cable Assemblies (Available in: 4 - 8 Circuits) (1.0M, 150.00mm, 300.00mm Lengths)	
44133	BMI Dual Row, Panel Mount Receptacle Housing (mates with 44300, 44432, 44428, 45280) (Available In: UL 94V-0, Halogen-Free) (4 to 24 Circuits)	
44300	BMI Dual Row, Panel Mount Plug Housing (mates with 44133, 44769, 44764) (Available In: 4 to 24 Circuits)	
44428	BMI Dual Row, Surface Mount Compatible, Right Angle Headers (mates with 44769, 44764, 44133) (Available In: Tin, 0.38µm and 0.76µm Select Gold; Low-Halogen) (4 to 24 Circuits)	
44432	BMI Dual Row, Surface Mount Compatible, Vertical Header (mates with 44769, 44764, 44133) (Available In: Tin, 0.38µm and 0.76µm Select Gold; Low-Halogen) (4 to 24 Circuits)	
44764	BMI Dual Row, Right Angle PCB Receptacle Header with Press-fit Plastic Pegs (mates with 44300, 44428, 44432, 45280) (Available In: Tin, 0.38µm and 0.76µm Select Gold; Low-Halogen) (4 to 24 Circuits)	
44769	BMI Dual Row, Vertical Receptacle Header with Press-fit Plastic Pegs (mates with 44300, 44432, 45280, 44428) (Available In: Tin, 0.38µm and 0.76µm Select Gold; Low-Halogen) (4 to 24 Circuits)	
45280	BMI Vertical Compliant Pin Header, Dual Row (mates with 44769, 44764, 44133) (Available In: Tin, 0.38µm and 0.76µm Select Gold; UL 94V-0) (4 to 24 Circuits)	
44914	Compliant Pin Vertical Header, Dual Row (mates with 43025, 172952) (Available In: Tin, 0.38µm and 0.76µm Select Gold; Glow Wire) (4 to 24 Circuits)	
46622	BMI Single Row Header (mates with 46623, 46625) (Available in Tin, 0.38µm and 0.76µm Select Gold; UL 94V-0, Halogen-Free; Right Angle, Vertical) (2 to 7 Circuits)	
46623	BMI Single Row Panel Mount Receptacle (mates with 46622) (UL 94V-0; Halogen-Free) (2 to 7 Circuits)	
46625	BMI Single Row Panel Mount Plug (mates with 46622) (UL 94V-0; Halogen-Free) (2 to 7 Circuits)	

Custom Product	Description
Contact Molex	Customized Micro-Fit Overmolded Cable Assemblies
	Customized Micro-Fit Discrete Wire Cable Assemblies

www.molex.com

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