

# 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 for 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.

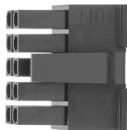
|                        |                                        |
|------------------------|----------------------------------------|
| Current                | Up to 10.5A                            |
| Industry Standards     | Halogen-free, V0 and Glow Wire capable |
| Pitch                  | 3.00mm                                 |
| Operating Temperatures | -40 to +125°C                          |

### 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.



## MARKETS AND APPLICATIONS

### Home appliance

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



Freezers



Interior Automotive Devices



Servers

### Automotive

Harness manufacturers  
Interior automotive devices  
Non-sealed applications

### Power for Data Center

Routers and switches  
Servers  
Storage systems

# Micro-Fit Connectors

## 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)

Operating Temperatures: -40 to +125°C

## ORDERING INFORMATION

| Series No.                 | Component                                                                                                                                                                                                                                                                                                                                 |                                                                                       |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <a href="#">43030</a>      | Female Terminal<br>(Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (18 - 30AWG)                                                                                                                                                                                                                                          |  |
| <a href="#">46235</a>      | Reduced Mating Force (RMF) Female Terminal, available with or without Lubricant<br>(Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (20 - 30AWG)                                                                                                                                                                          |  |
| <a href="#">203951</a>     | RMF Female Terminal (Available in: 0.25µm Select Tin) (18 AWG)                                                                                                                                                                                                                                                                            |  |
| <a href="#">43031</a>      | Male Terminal<br>(Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (18 - 30AWG)                                                                                                                                                                                                                                            |  |
| <a href="#">43031-5XXX</a> | TPA Plug Male Terminal (Used with: Housing Series 200875)<br>(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) |  |
| <a href="#">43025</a>      | Dual-Row Receptacle Housing (mates with 43020, 43045, 44914, 44242)<br>(Available in: UL 94V-0, Glow Wire, Low-Halogen) (2 to 24 Circuits)                                                                                                                                                                                                |  |

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## ORDERING INFORMATION

| Series No.             | Component                                                                                                                                                                                                                                                                          |                                                                                       |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <a href="#">43020</a>  | Dual-Row Plug (mates with 43025, 45132, 245132, 172952)<br>(Available in: UL 94V-0, Glow Wire, Low-Halogen) (Panel/Non-Panel Mount) (2 to 24 Circuits)                                                                                                                             |    |
| <a href="#">43045</a>  | Dual-Row Header (mates with 43025, 45132, 245132, 172952)<br>(Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (2 to 24 Circuits)<br>(Right Angle and Vertical Orientations; Surface Mount, Through Hole - Kinked Pin and Through Hole Termination Interface Style) |    |
| <a href="#">43645</a>  | Single-Row Receptacle (mates with 43640, 43650)<br>(Available in: UL 94V-0, Glow Wire, Low-Halogen) (2 to 12 Circuits)                                                                                                                                                             |    |
| <a href="#">43640</a>  | Single-Row Plug (mates with 43645, 171850)<br>(Available in: UL 94V-0, Glow Wire, Low-Halogen) (2 to 12 Circuits)<br>(Panel Mount and Non-Panel Mount)                                                                                                                             |    |
| 200875                 | Single Row TPA Plug (Mates with Micro-Fit 171850 and 43645)<br>(UL94V-0)(Low Halogen)(Color – Black) (2 to 7 Circuits)                                                                                                                                                             |    |
| <a href="#">43650</a>  | Single-Row Header (mates with 43645, 171850)<br>(Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold) (2 to 12 Circuits)<br>(Right Angle and Vertical Orientations; Surface Mount, Through Hole - Kinked Pin and Through Hole Termination Interface Style)              |    |
| <a href="#">171850</a> | TPA Single-Row Receptacle (mates with 43640, 43650)<br>(Available In: UL 94V-0, Low-Halogen) (2 to 7 Circuits)                                                                                                                                                                     |  |
| <a href="#">172952</a> | TPA Dual-Row Receptacle (2 TPA parts required for each receptacle) (mates with 43020, 43045, 44914)<br>(Available In: UL 94V-0, 94V-2, Glow Wire, Low-Halogen) (4 to 22 Circuits)<br>(Black and Natural Color)                                                                     |  |
| <a href="#">203632</a> | TPA Dual-Row Plug (Mates with 172952 and 43025)                                                                                                                                                                                                                                    |  |
| <a href="#">172953</a> | TPA Retainer (2 TPA parts required for each receptacle)<br>(Available In: Low-Halogen) (4 to 22 Circuits)<br>(Black and Natural Color)                                                                                                                                             |  |
| <a href="#">45132</a>  | Off-the-Shelf Micro-Fit TPA Discrete Wire Cable Assemblies<br>(Available in: 4 - 8 Circuits) (1.0M, 150.00mm, 300.00mm Lengths)                                                                                                                                                    |  |
| <a href="#">44133</a>  | BMI Dual Row, Panel Mount Receptacle Housing (mates with 44300, 44432, 44428, 45280)<br>(Available In: UL 94V-0, Halogen-Free) (4 to 24 Circuits)                                                                                                                                  |  |
| <a href="#">44300</a>  | BMI Dual Row, Panel Mount Plug Housing (mates with 44133, 44769, 44764)<br>(Available In: 4 to 24 Circuits)                                                                                                                                                                        |  |
| <a href="#">44428</a>  | BMI Dual Row, Surface Mount Compatible, Right Angle Headers (mates with 44769, 44764, 44133)<br>(Available In: Tin, 0.38µm and 0.76µm Select Gold; Low-Halogen) (4 to 24 Circuits)                                                                                                 |  |
| <a href="#">44432</a>  | BMI Dual Row, Surface Mount Compatible, Vertical Header (mates with 44769, 44764, 44133)<br>(Available In: Tin, 0.38µm and 0.76µm Select Gold; Low-Halogen) (4 to 24 Circuits)                                                                                                     |  |
| <a href="#">44764</a>  | BMI Dual Row, Right Angle PCB Receptacle Header with Press-fit Plastic Pegs<br>(mates with 44300, 44428, 44432, 45280)<br>(Available In: Tin, 0.38µm and 0.76µm Select Gold; Low-Halogen) (4 to 24 Circuits)                                                                       |  |

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ORDERING INFORMATION

| Series No.            | Component                                                                                                                                                                                             |                                                                                      |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <a href="#">44769</a> | BMI Dual Row, Vertical Receptacle Header with Press-fit Plastic Pegs<br>(mates with 44300, 44432, 45280, 44428)<br>(Available In: Tin, 0.38µm and 0.76µm Select Gold; Low-Halogen) (4 to 24 Circuits) |   |
| <a href="#">45280</a> | BMI Vertical Compliant Pin Header, Dual Row (mates with 44769, 44764, 44133)<br>(Available In: Tin, 0.38µm and 0.76µm Select Gold; UL 94V-0) (4 to 24 Circuits)                                       |   |
| <a href="#">44914</a> | Compliant Pin Vertical Header, Dual Row (mates with 43025, 172952)<br>(Available In: Tin, 0.38µm and 0.76µm Select Gold; Glow Wire) (4 to 24 Circuits)                                                |   |
| <a href="#">46622</a> | BMI Single Row Header (mates with 46623, 46625)<br>(Available in Tin, 0.38µm and 0.76µm Select Gold; UL 94V-0, Halogen-Free; Right Angle, Vertical)<br>(2 to 7 Circuits)                              |   |
| 46623                 | BMI Single Row Panel Mount Receptacle (mates with 46622)<br>(UL 94V-0; Halogen-Free) (2 to 7 Circuits)                                                                                                |   |
| <a href="#">46625</a> | BMI Single Row Panel Mount Plug (mates with 46622)<br>(UL 94V-0; Halogen-Free) (2 to 7 Circuits)                                                                                                      |  |

| Custom Product                | Description                                         |
|-------------------------------|-----------------------------------------------------|
| <a href="#">Contact Molex</a> | Customized Micro-Fit Overmolded Cable Assemblies    |
|                               | Customized Micro-Fit Discrete Wire Cable Assemblies |