

# Micro-Fit 3.0 Connector System Product Family

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Micro-Fit 3.0 Connector Systems, available in multiple circuit sizes and cable lengths for power and signal applications, offer a 3.00mm pitch, a 10.5A maximum current rating and many design options such as a terminal position assurance, blind-mating and compliant pin features

## Features and Advantages

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

**SMT, press-fit or surface mount compatible versions available**  
Provides design flexibility. Offers options to meet many application needs

**High-temperature LCP headers**  
Withstand 260°C IR reflow processes

**Fully polarized housings**  
Prevents accidental mismatching

**Positive latching**  
Ensures a reliable connection

**Fully isolated terminals**  
Protect against potential damage of terminals during handling and mating

**30 to 18 AWG terminals available**  
Delivers design flexibility to meet the power needs of a range of applications

**TPA terminals and terminals with locking tangs available**  
Offers design flexibility. Locking tang secures terminals in housings. TPA terminals compatible with TPA plugs only

**Optional terminal position assurance (TPA) feature**  
Reduces assembly error that results in terminal back-outs. Single row: one-piece plug and receptacle design with integrated secondary lock. Dual row: two-piece TPA design

## Micro-Fit BMI Connectors

**Blind-mating wire-to-wire and wire-to-board connectors**  
Offers full range of options for every application and orientation

## Micro-Fit (Compliant Pin) CPI Connectors

**Uses eye-of-the-needle press-fit design**  
Provides a reliable connection

**Accepts standard Micro-Fit female and male crimp terminals**  
Eliminates the need to purchase or inventory additional terminals

**Self-aligning feature molded into housings**  
Allows up to 2.54mm misalignment

## Micro-Fit TPA Single Row Plug

**The plug's TPA retainer mates with the existing Micro-Fit TPA Receptacle to prevent terminal back-outs in wire-to-wire applications**  
Prevents end product failure. Ensures both components provide a reliable connection

## Micro-Fit RMF (Reduced Mating Force) Terminals

**Available in 22 to 24 and 26 to 30 AWG**  
Delivers design flexibility for a broad range of applications

**Available with factory-applied lubricant**  
Increases durability to 250 mating cycles

**Reduction in engagement and disengagement forces**  
Supports ergonomics and user-friendly interface

**10.0A RMF terminal available**  
Delivers higher power with existing Micro-Fit components. Enables running changes to higher amperage

**Terminal position assurance (TPA) feature with integrated secondary lock**  
Eliminates terminal back-outs resulting from improper assembly



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## Applications

### Consumer

Washers and dryers  
Freezers  
Gaming machines  
Printers  
Refrigerators  
Scanners  
Security systems  
Vending machines  
White goods

### Medical

Diagnostic equipment  
Patient monitors

### Sustainable Energy

Solar power

### Automotive

Harness manufacturers  
Non-sealed applications  
Inside devices



Refrigerator



Office Equipment

### Telecommunications/Networking

Routers and switches  
Servers  
Storage



Servers

## 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](#)

### 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 Particular Connector System)  
Operating Temperature: -40 to +105°C

### ELECTRICAL

Voltage (max.): 600V  
Current (max.): 8.5A  
(Please see product specifications;  
determined by terminal used)  
Contact Resistance (max.): 10 milliohms  
Dielectric Withstanding Voltage: <5mA  
Insulation Resistance (min.): 1,000 Megohms

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## 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)(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 - 24 Circuits)   |    |
| <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 - 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 - 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 - 12 Circuits)   |  |
| <a href="#">43640</a>      | Single-Row Plug (mates with 43645, 171850)<br>(Available in: UL 94V-0, Glow Wire, Low-Halogen)(2 - 12 Circuits)<br>(Panel Mount and Non-Panel Mount)   |  |
| <a href="#">200875</a>     | Single Row TPA Plug (Mates with Micro-Fit 171850 and 43645)<br>(UL94V-0)(Low Halogen)(Color - Black)(2-7 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 - 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 - 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 - 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 - 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)   |  |

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## Ordering Information

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

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

[www.molex.com/link/microfit30.html](http://www.molex.com/link/microfit30.html)

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