

# 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 8.5A maximum current rating and many design options such as a terminal position assurance, blind-mating and compliant pin features**

## Features and Benefits



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



### 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



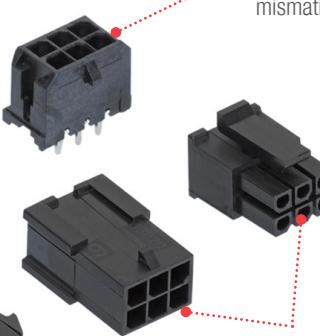
SMT, press-fit or surface mount compatible versions available  
Provides design flexibility. Offers options to meet many application needs



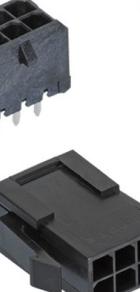
High-temperature LCP headers  
Withstand 260°C IR reflow processes



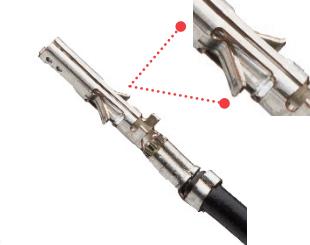
Fully polarized housings  
Prevents accidental misingating



Positive latching  
Ensures a reliable connection



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

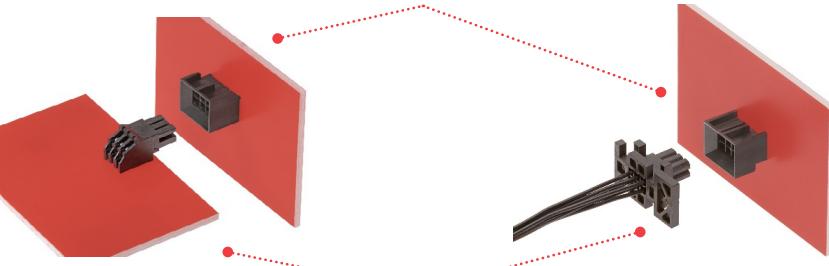


30 to 18 AWG terminals available  
Delivers design flexibility to meet the power needs of a range of applications

## Micro-Fit BMI Connectors

### Blind-mating wire-to-wire and wire-to-board connectors

Offers full range of options for every application and orientation



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



## 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

## 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



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

### Available with factory-applied lubricant

Increases durability to 250 mating cycles

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



## 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

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## Applications

### Consumer

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

### Telecommunications/Networking

Routers and switches  
Servers  
Storage

### Medical

Diagnostic equipment  
Patient monitors

### Sustainable Energy

Solar power

### Automotive

Harness manufacturers  
Non-sealed applications  
Inside devices



Refrigerator



Office Equipment



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 (Non-Glow-Wire Versions)

Glow Wire Compliant: 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  
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 (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 (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 (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) (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) (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) (Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold)(2 - 24 Circuits) (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) (Available in: UL 94V-0, Glow Wire, Low-Halogen)(2 - 12 Circuits)	
<a href="#">43640</a>	Single-Row Plug (mates with 43645, 171850) (Available in: UL 94V-0, Glow Wire, Low-Halogen)(2 - 12 Circuits) (Panel Mount and Non-Panel Mount)	
<a href="#">200875</a>	Single Row TPA Plug (Mates with Micro-Fit 171850 and 43645) (UL94V-0)(Low Halogen)(Color – Black)(2-7 Circuits)	
<a href="#">43650</a>	Single-Row Header (mates with 43645, 171850) (Available in: 0.25µm Select Tin, 0.38µm and 0.76µm Select Gold)(2 - 12 Circuits) (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) (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) (Available in: UL 94V-0, 94V-2, Glow Wire, Low-Halogen)(4 - 22 Circuits) (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) (Available in: Low-Halogen)(4 - 22 Circuits) (Black and Natural Color)	
<a href="#">45132</a>	Off-the-Shelf Micro-Fit TPA Discrete Wire Cable Assemblies (Available in: 4 - 8 Circuits)(1.0M, 150.00mm, 300.00mm Lengths)	

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Series No.	Component	
<u>44133</u>	BMI Dual Row, Panel Mount Receptacle Housing (mates with 44300, 44432, 44428, 45280) (Available In: UL 94V-0, Halogen-Free)(4 - 24 Circuits)	
<u>44300</u>	BMI Dual Row, Panel Mount Plug Housing (mates with 44133, 44769, 44764) (Available In: 4 - 24 Circuits)	
<u>44428</u>	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 - 24 Circuits)	
<u>44432</u>	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 - 24 Circuits)	
<u>44764</u>	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 - 24 Circuits)	
<u>44769</u>	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 - 24 Circuits)	
<u>45280</u>	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 - 24 Circuits)	
<u>44914</u>	Compliant Pin Vertical Header, Dual Row (mates with 43025, 172952) (Available In: Tin, 0.38µm and 0.76µm Select Gold; Glow Wire)(4 - 24 Circuits)	
<u>46622</u>	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 - 7 Circuits)	
<u>46623</u>	BMI Single Row Panel Mount Receptacle (mates with 46622) (UL 94V-0; Halogen-Free)(2 - 7 Circuits)	
<u>46625</u>	BMI Single Row Panel Mount Plug (mates with 46622) (UL 94V-0; Halogen-Free)(2 - 7 Circuits)	

Custom Product	Description
<u>Contact Molex</u>	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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