

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

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

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

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	
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)	
43025	Dual-Row Receptacle Housing (mates with 43020, 43045, 44914, 44242) (Available in: UL 94V-0, Glow Wire, Low-Halogen)(2 - 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 - 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 - 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 - 12 Circuits)	
43640	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)	
200875	Single Row TPA Plug (Mates with Micro-Fit 171850 and 43645) (UL94V-0)(Low Halogen)(Color - Black)(2-7 Circuits)	
43650	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)	
171850	TPA Single-Row Receptacle (mates with 43640, 43650) (Available In: UL 94V-0, Low-Halogen)(2 - 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 - 22 Circuits) (Black and Natural Color)	
203632	TPA Dual-Row Plug (Mates with 172952 and 43025)	
172953	TPA Retainer (2 TPA parts required for each receptacle) (Available In: Low-Halogen)(4 - 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)	

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Ordering Information

Series No.	Component	
44133	BMI Dual Row, Panel Mount Receptacle Housing (mates with 44300, 44432, 44428, 45280) (Available In: UL 94V-0, Halogen-Free)(4 - 24 Circuits)	
44300	BMI Dual Row, Panel Mount Plug Housing (mates with 44133, 44769, 44764) (Available In: 4 - 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 - 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 - 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 - 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 - 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 - 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 - 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 - 7 Circuits)	
46623	BMI Single Row Panel Mount Receptacle (mates with 46622) (UL 94V-0; Halogen-Free)(2 - 7 Circuits)	
46625	BMI Single Row Panel Mount Plug (mates with 46622) (UL 94V-0; Halogen-Free)(2 - 7 Circuits)	

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

www.molex.com/link/microfit30.html

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