

Nano-Fit Power Connectors >

Molex Nano-Fit Connectors provide a compact, high-performance solution for miniature power applications. Designed for space efficiency, these connectors ensure superior electrical integrity and reliability through isolated contacts that help prevent contact stubbing. With high-current-carrying capabilities, Nano-Fit Connectors offer various configurations and color-coding/ keying options. These connectors are ideal for precise, space-constrained electronic designs and delivers the highest current compared to similar sized connectors.

ADVANTAGES AND FEATURES

Allows same-circuit, multiple-connector use with virtually no chance of cross mating; provides visual indication of the properly mated connector, for faster assembly

There are multiple mechanical keying and color-coded options for operational safety and efficient assembly.

Ensures mated connector assemblies will not accidentally disengage

The TPA feature reduces assembly errors and ensures terminals are fully seated and will not back out. These connectors also offer a CPA option for additional locking security.

Offers design flexibility and ensures proper fitting in the terminated wire housing

The 20 AWG with UL 1569/1007 complies with voltage ratings HVAC/APL manufacturers need to meet within their designs.

Pitch	2.50mm
Current	8.0A
Voltage	250V
Industry Standards	Glow Wire capable
Operating Temperatures *	-40 to +125°C

Enables operators to mate connectors in hard-to-reach areas without a visual
Nano-Fit Connectors have a BMI option.

Meets USCAR2 specifications for shock and vibration

Nano-Fit Connectors are suitable for use in automotive applications (not suitable for safety or on-engine applications).

Reduces operator fatigue and improves assembly compliance for high-circuit applications

Nano-Fit Connectors have an ultra-low mate force terminal.

Protects against potential damage of terminals during handling and mating

These connectors have fully isolated terminals.

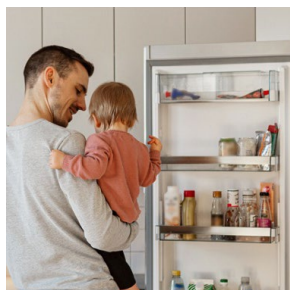


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MARKETS AND APPLICATIONS

Appliances

Dryers
Freezers
Microwave ovens
Ovens
Refrigerators
Washing machines
Water heaters/boilers
Vacuum cleaners



Refrigerators



EV Chargers



Servers

Automotive

Interior lighting and navigation
EV chargers
Batteries
Mopeds
Infotainment systems
Mirrors

Datacom

Servers
Switches
Graphics processing units
Auxiliary power devices
Compute boards
GPU trays

HVAC

Commercial HVAC units
Residential HVAC units

SPECIFICATIONS

Reference Information

Packaging
Terminals—Reel
Headers—Tray, embossed tape and reel
Receptacles—Bag
UL File No: E29179
CSA File No: LR19980
Mates with: Nano-Fit Connectors and receptacles only—no competitive cross
Use with: Nano-Fit terminals and TPA retainers only—no competitive cross
Terminal Used: Reel
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes, select PNs
Glow Wire Capable: Yes

Electrical

Voltage (Max): 250V
Current (Max): 8.0A
Contact Resistance: 10 milliohms
change over life
Dielectric Withstanding Voltage: 1,500V
Insulation Resistance: 1,000 Megohms

Mechanical

Contact Insertion Force: 2.5N
Contact Retention to Housing: 27N
Insertion Force to PCB: 5N
Mating Force: 3N
Unmating Force: 3N
Cycles: 20 cycles (tin), 50 cycles (gold)

Physical

Housing:
Receptacle: Nylon UL 94V-0
Header: LCP UL 94V-0
Contact: High-Conductivity copper
Plating:
Contact Area — 0.38 tin or 381 μ (15 μ)
gold or 762 μ 0.76 (30 μ) gold
Solder Tail Area — tin
Underplating — nickel
PCB Thickness: 1.60 and 2.40mm
Operating Temperatures*: -40 to +125°C

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ORDERING INFORMATION

Headers

Series	Row	Orientation	Circuits	Termination Style	Solder Clip	Color
105429	Dual	Vertical	4 to 16	SMT	No	Black and Natural
105431	Single	Vertical	2 to 8			
105430	Single	Right Angle	2 to 8			
105405	Dual	Right Angle	4 to 16			
105309	Single	Vertical	2 to 8	Through Hole	Yes	
105310	Dual		4 to 16			
105311	Single		2 to 8			
105312	Dual		4 to 16			
105313	Single	Right Angle	2 to 8		No	
105314	Dual		4 to 16			
219637	Dual	Right Angle	4 to 16			

Receptacle Housing

Series	Row	Circuits
105307	Dual	2 to 8
105308	Single	4 to 16
219268	Single	4 to 16
226354	Single	2 to 8
226362	Dual	4 to 16

Terminal Position Assurance (TPA) Retainer

Series	Color	Circuits
105325	Black and Natural	2 to 8

Plug Housing

Series	Row	Circuits	Panel Mount	Color
201444	Single	2 to 8	Panel Mount and Free Hang	Black and Natural
201444	Dual	4 to 16		
224556	Dual	4 to 16		

Crimp Terminals

Series	Type	Wire Gauge (AWG)
105300	Female Terminal	20 to 22, 24 to 26
201447	Male Terminal	20 to 22, 24 to 26
226471	Female Terminal	20 for UL 1569/1007

*Operating temperature (including T-rise from applied current) is rated -40 to 125°C. Field temperatures and field life: tested per EIA-364-1000.01 to meet field temperature of 65°C for 10 years life. The rated temperature of wire needs to be considered for the operating temperature application for example, the rated temperature of UL 1015 wire is 105°C and cannot be used at an operating temperature of 125°C.

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