

Nano-Fit Power Connectors 2.50mm Pitch

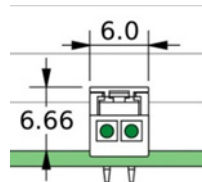
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Nano-Fit Power Connectors deliver both fully protected header terminals and a small package, while also offering keying options to ensure proper mating and terminal position assurance (TPA) retainers to prevent terminal backout

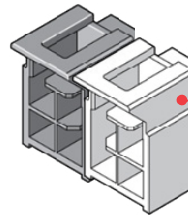
Features and Advantages

Smallest fully isolated headers in the market

Up to 69% smaller than competing connectors in the x axis



Nano-Fit

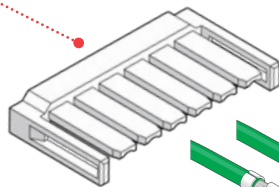


Multiple mechanical keying and color-coded options

Allow same-circuit, multiple-connector use with virtually no chance of cross mating. Color coding enables faster assembly with visual indication of proper mating

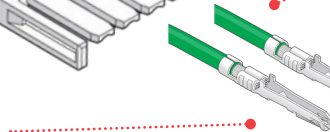
Optional TPA (terminal position assurance) retainer

Ensures terminals are fully seated in housing to reduce backout. Retains terminals if main retention feature fails



Ultra-low mate force terminal

Reduces operator fatigue. Improves assembly compliance for high-circuit applications



Terminals available in gold and tin plating

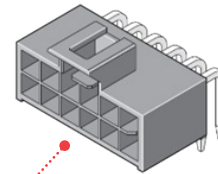
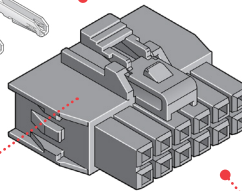
Delivers different cost options while meeting performance needs.

Retention tang and contact rib

Maintains stable contact

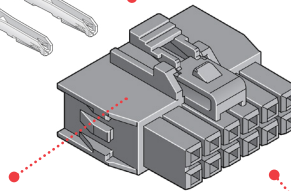
Terminal interface with 4 points of contact

Offers redundant, secondary current paths for long-term performance and reliability



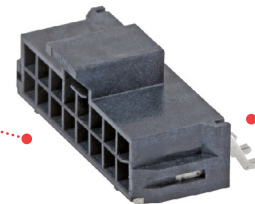
Positive-lock housing with anti-snag design

Ensures mated connector assemblies will not accidentally disengage. Provides audible click while mating. Protects latch from damage due to wire snags



Fully isolated terminals

Protect against potential damage of terminals during handling and mating



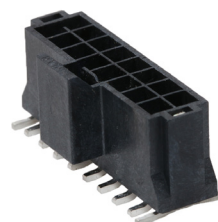
Enables use of multi-layer boards by eliminating the need for through holes Opens up real estate on space-constricted PCBs. Potentially reduces costs by enabling use of smaller PCBs with fewer drilled holes

Available in embossed tape for pick-and-place assembly

Enables quick and accurate component placement to meet fast time-to-market requirements

Multiple mechanical keying and color-coding options

Allow same-circuit, multiple connector use with virtually no chance of cross-mating. Enable faster assembly with visual indication of proper mating



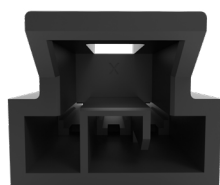
Short electrical path

Provide superior signal integrity performance

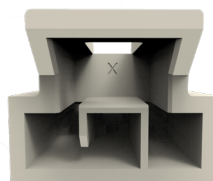
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Features and Advantages

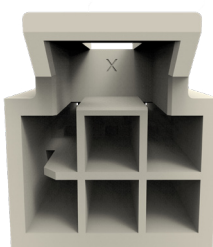


**Keying
Option
A**



**Keying
Option
B**

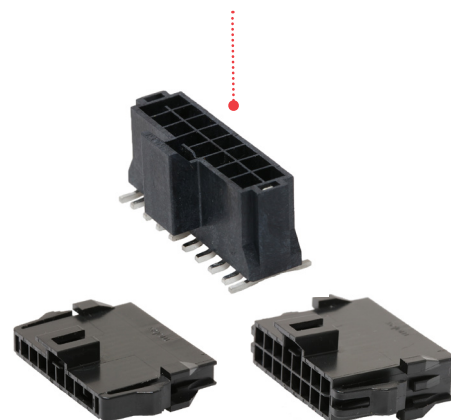
Multiple mechanical keying and color-coding options
Allow same-circuit, multiple connector use with virtually no chance of cross-mating; color-coding enables faster assembly with visual indication of proper mating



Nano-Fit Dual-Row and Single-Row SMT and Wire-to-Wire Connectors

Fully isolated terminals

Protect against potential damage of terminals during handling and mating



Applications

Consumer/Home Appliance

- Refrigerators
- Washers and dryers
- Mobile devices

Telecommunications/Networking

- Servers
- Hubs

Automotive

- Interior
- Lighting

Lighting

- Home lighting fixtures
- Ballasts

Aerospace and Defense

- C4ISR

Industrial

- Assembly line equipment
- Food and beverage

Medical

- Healthcare IT
- Patient care equipment



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Specifications

REFERENCE INFORMATION

Packaging:

Terminals — Reel

Headers — Tray

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 Connectors and

Receptacles Only — No competitive cross

Terminal Used: Reel

Designed In: Millimeters

RoHS: Yes

Halogen Free: Yes

Glow-Wire Capable: Yes

ELECTRICAL

Voltage (Max.): 250V

Current (Max.): 6.5A

Contact Resistance: 10 milliohms change over life

Dielectric Withstanding Voltage: 1500V

Insulation Resistance: 1000 Megohms

MECHANICAL

Contact Insertion Force: 2.5N

Contact Retention to Housing: 27N

Insertion Force to PCB: 5N

Mating Force: 3N

Unmating Force: 3N

Durability (min.): 20 Tin, 50 Gold

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 — Tin or 381μ (15μ") Gold or 762μ (30μ") Gold

Solder Tail Area — Tin

Underplating — Nickel

PCB Thickness: 1.60 and 2.40mm

Operating Temperature: -40 to +105°C (Tin),

-40 to +115°C (Gold)

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			

RECEPTACLE HOUSING

Series	Circuits	Rows
105307	2 to 8	Single
105308	4 to 16	Dual

PLUG HOUSING

Series	Row	Circuits	Panel Mount	Color
200277	Single	2 to 8	Panel Mount and Free	Black/Natural
201444	Dual	4 to 16		

TERMINAL POSITION ASSURANCE (TPA) RETAINER

Series	Circuits	Color
105325	2 to 8	Black/Natural

CRIMP TERMINALS

Series	Type	Wire Gauge (AWG)	Plating
201447	Male	20 to 26	Tin, Gold
105300	Female		

www.molex.com/link/nanofit.html

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