

Nano-Fit Power Connectors

molex

Nano-Fit Power Connectors deliver up to 8.0A with a 2.50mm pitch, 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

Provides a small package that eases space constraints. Allows up to 69% more space in the x-axis than competing connectors



Multiple mechanical keying and color-coded options

Help to prevent risk of cross-mating. Enables faster assembly with visual indication of proper mating



Ultra-low mate force terminal

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



Retention tang and contact rib

Maintain stable contact

Terminal Interface with 4 points of contact

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



Fully isolated terminals

Protect against potential damage of terminals during handling and mating



Optional TPA (Terminal Position Assurance) Retainer

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

Multi-layer boards

Eliminate need of through-hole. Ensures mated connector assemblies will not accidentally disengage



Available in embossed tape for pick-and-place assembly

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

Positive-lock housing with anti-snag design

Ensures mated connector assemblies will not accidentally disengage



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



Automotive Interior Lighting



Washers and Dryers

Nano-Fit Power Connectors



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
Glow Wire Capable: Yes

ELECTRICAL

Voltage (Max): 250V
Current (Max): 8.0A
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
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 381μ (15μ") Gold or 762μ 0.76
(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	Color
105307	2 to 8	Single	Black/Natural
105308	4 to 16	Dual	

PLUG HOUSING

Series	Row	Circuits	Panel Mount	Color
200277	Single	2 to 8	Panel Mount and Free Hanging	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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