



THE DATASHEET OF
1053081206



Nano-Fit Power Connectors



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



Terminals available in gold and tin plating

Deliver different cost options while meeting performance needs



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



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



Fully isolated terminals

Protect against potential damage of terminals during handling and mating

Positive-lock housing with anti-snag design

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

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

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 | Through Hole | Yes | |
| 105309 | Single | Vertical | 2 to 8 | | | |
| 105310 | Dual | | 4 to 16 | | | |
| 105311 | Single | | 2 to 8 | | | |
| 105312 | Dual | 4 to 16 | | | | |
| 105313 | Single | Right Angle | 2 to 8 | | | |
| 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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