

Pico-Lock Wire-to-Board Connector System



Available in 1.00, 1.50 and 2.00mm pitch, Pico-Lock Wire-to-Board Connector System is ideal for applications requiring ultra-low profile, high-current and secure locking

Features and Advantages

Beveled header in pin design
Provides smooth mating and pin-and-contact protection

Top friction locks
Provide additional mating retention and visual mating assurance

Side positive locks
Ensure secure mating retention with additional space savings compared to top-style locks

Supports up to 6.5A current applications
Enables superior performance in compact design

Two types of crimp barrel
Allows wide range of wire gauge selection depending on customer needs

Ultra-low-profile mated height
Provides space savings

Wide robust-fitting nails (solder tabs)
Offer secure PCB retention and additional mechanical stability

Mating guide for polarization
Prevents mis-mating while guiding the housing into the header

Ultra-low mated height of 2.60mm is less than half the height of other micro connectors
Enables customers to save valuable space

Side positive lock
Provides secure locking system and extra height advantage compared to competitors

Pico-Lock 1.00mm and 1.50mm pitch Wire-to-Board Connectors

Pico-Lock 2.00mm Pitch Wire-to-Board Connectors

Markets and Applications

Automotive

- Infotainment
- Interior electronics
- Heads-up display
- Control units
- Black boxes

Industrial

- Smart meters
- Factory automation
- Power supplies
- Security/Surveillance devices
- Transformers

Consumer

- LED/LCD TVs
- Notebook PCs
- Tablets
- Gaming equipment
- LED lightings
- Heaters/fans

Telecommunications/Networking

- Wireless modems
- Servers



Automotive infotainment



Smart meters



Factory automation

Pico-Lock Wire-to-Board Connector System



Specifications

REFERENCE INFORMATION

Packaging:
 Header (Embossed tape)
 Housing (Bag)
 Crimp Terminal (Reel)
 Designed In: millimeters
 RoHS: Yes
 Halogen Free: Low-halogen

MECHANICAL

Housing (Positive Lock) Strength (min.):
 1.00mm Pitch(min.): 5N (0.50kgf)
 1.50mm Pitch(min.): 10N (1.02kgf)
 2.00mm Pitch (min.): 19.8N (2.0kgf)
 Crimp Terminal Retention Force (min.):
 1.00mm: 4N
 1.50mm: 6.7N
 2.00mm: 9.8N
 Durability (min.): 30 cycles

ELECTRICAL

Voltage (max.): 150V (1.00 and 1.50mm)
 Voltage (max.): 250V (2.00mm)
 Current (max.): 3.5A per circuit
 * see more detail at derating table
 Contact Resistance(max.): 20 milliohms
 Dielectric Withstanding Voltage:
 500V AC (rms) for 1 minute (1.00 and 1.50mm)
 800V AC (rms) for 1 minute (2.00mm)
 Insulation Resistance(min.): 1000 Megohms

PHYSICAL

Housing/Header: Polyamide (PA), UL 94V-0, Black
 Contact: Copper Alloy
 Plating:
 Contact Area — Gold (Au)
 Solder Tail Area — Gold (Au)
 Underplating — Nickel (Ni)
 Operating Temperature: -40 to +105°C

*Derating table (For electrical specifications)

1.00mm Pitch Pico-Lock rated current (max.)

Wire Size (AWG)	Current (A)		
	2-Circuit	4-Circuit	6-Circuit
28	2.5	2.0	1.5
30	2.0	1.5	1.5

1.50mm Pitch Pico-Lock rated current (max.)

Wire Size (AWG)	Current (A)			
	2-Circuit	4-Circuit	8-Circuit	12-Circuit
24	3.5	3.0	2.5	2.5
26	3.0	2.5	2.0	2.0
28	2.5	2.0	2.0	1.5
30	2.5	2.0	1.5	1.5
32	2.0	1.5	1.5	1.0

2.00mm Pitch Pico-Lock rated current (max.)

Wire Size (AWG)	Current (A)				
	2-Circuit	3-Circuit	4-Circuit	5-Circuit	6-Circuit
20	6.5	5.5	5.5	5.0	5.0
22	5.0	5.0	4.5	4.5	4.0
24	4.5	4.0	3.5	3.5	3.5
26	3.5	3.5	3.0	3.0	3.0

Notes:

- 1) Values are for reference only.
- 2) Current deratings are based on not exceeding 30°C temperature.
- 3) Temperature rise is measured in barrel area of crimp terminal.
- 4) PCB trace design can greatly affect temperature rise results.
- 5) Data is for all circuits powered.

Ordering Information

Pitch (mm)	Circuit Size	Applicable Wire Gauge (AWG)	Housing	PCB Header
2.00	2 to 6	20 to 26 (Terminal 205342)	205341	205338
1.50	2 to 12	24 to 28 (Terminal 504052-0098)	504051	504050
		30 to 32 (Terminal 504052-0298)		
1.00	2 to 6	28 to 30 (Terminal 503765)	503764	503763

www.molex.com/link/picolock.html

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