

# 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

### Ultra-low-profile mated height

Provides space savings

### Wide robust-fitting nails (solder tabs)

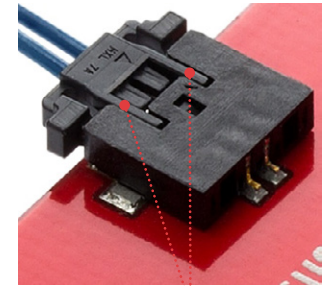
Offer secure PCB retention and additional mechanical stability

### 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



### Mating guide for polarization

Prevents mis-mating while guiding the housing into the header

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

### Supports up to 6.5A current applications

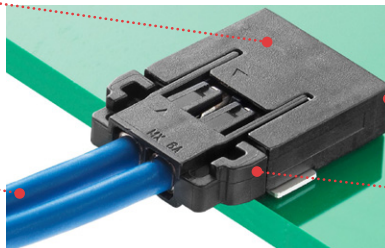
Enables superior performance in compact design

### Ultra-low mated height of 2.60mm is less than half the height of other micro connectors

Enables customers to save valuable space

### Two types of crimp barrel

Allows wide range of wire gauge selection depending on customer needs



### Side positive lock

Provides secure locking system and extra height advantage compared to competitors

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



Automotive infotainment



Smart meters

### Consumer

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

### Telecommunications/Networking

- Wireless modems
- Servers



Security cameras



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 <a href="#">205342</a> )	<a href="#">205341</a>	<a href="#">205338</a>
1.50	2 to 12	24 to 28 (Terminal <a href="#">504052-0098</a> )	<a href="#">504051</a>	<a href="#">504050</a>
		30 to 32 (Terminal <a href="#">504052-0298</a> )		
1.00	2 to 6	28 to 30 (Terminal <a href="#">503765</a> )	<a href="#">503764</a>	<a href="#">503763</a>

[www.molex.com/link/picolock.html](http://www.molex.com/link/picolock.html)

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