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-andcontact 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

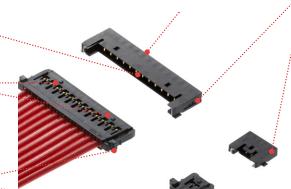
Supports up to 6.5A current applications

Enables superior performance in compact design

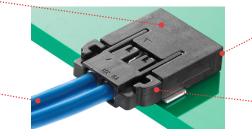
Two types of crimp barrel

Allows wide range of wire gauge selection depending on customer needs

Ultra-low-profile mated height Provides space savings



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

Control units

Black boxes

LED/LCD TVs

Consumer

Interior electronics

Heads-up display

Industrial

- Smart meters Factory automation Power supplies
- Security/Surveillance devices
- Transformers
- Telecommunications/Networking Wireless modems

Servers

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



Automotive infotainment



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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



Smart meters



Factory automation

Pico-Lock Wire-to-Board Connector System

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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.

Notes:

1) Values are for reference only.

5) Data is for all circuits powered.

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

Ordering Information

Pitch (mm)	Circuit Size	Applicable Wire Gauge (AWG)	Housing	PCB Header
2.00	2 to 6	20 to 26 (Terminal <u>205342</u>)	<u>205341</u>	<u>205338</u>
1.50	0 += 10	24 to 28 (Terminal <u>504052-0098</u>)	504051	<u>504050</u>
1.50	2 to 12	30 to 32 (Terminal <u>504052-0298</u>)	<u>504051</u>	
1.00	2 to 6	28 to 30 (Terminal <u>503765</u>)	<u>503764</u>	<u>503763</u>

www.molex.com/link/picolock.html

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