# **Pico-Lock Wire-to-Board Connector System**

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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

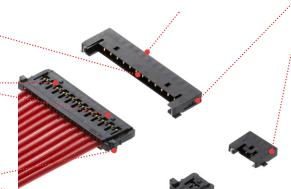
### Supports up to 6.5A current applications

Enables superior performance in compact design

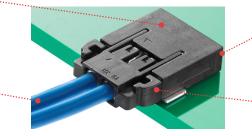
## Two types of crimp barrel

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**

# molex

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>

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