



THE DATASHEET OF
5054311000



Micro-Lock Plus Wire-to-Board Connector System

molex

Ideal for compact applications, the Micro-Lock Plus Wire-to-Board Connector System provides electrical and mechanical reliability in a high-temperature design that meets other industry requirements

Features and Advantages

Smallest 1.25mm-pitch connector with positive lock
Delivers secure mating retention without sacrificing compactness

Wide positive latch that delivers audible click
Provides secure mating retention. Ensures proper mating

Inner lock for dual-row versions; outer lock for single-row versions
Strengthens lock for more reliable connection

Withstands up to 105°C operating temperature
Meets other industry requirements. Withstands harsh environments

2 to 42 circuits, single and dual rows, vertical and horizontal plug configurations
Offers design flexibility

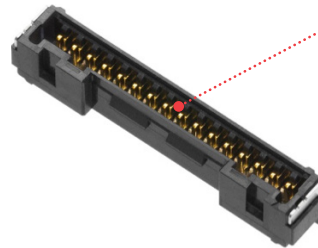
Robust metal solder tabs
Provides secure PCB retention and strain relief to solder joints

Dual-contact terminal design
Offers secure contact and terminal retention

Micro-Lock Plus 1.25mm Connector

Gold-plated headers, plugs and terminals
Offers superior reliability and durability

Tin-bismuth terminals
Prevents whiskering for a clean and uninterrupted signal. Supports terminal ruggedness and reliability



2 to 16 circuits, single-row plug in vertical and horizontal configurations
Offers design flexibility

SMT terminals
Prevents whiskering for a clean and uninterrupted signal. Supports terminal ruggedness and reliability

Micro-Lock Plus 2.00mm Connector

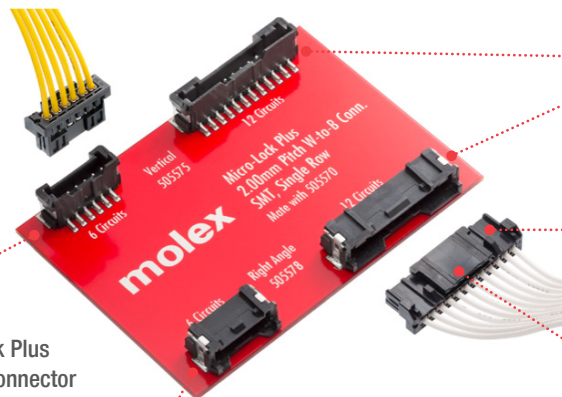
2.00mm-pitch connector with positive lock
Delivers secure mating retention without sacrificing compactness

Wide positive latch that delivers audible click
Provides secure mating retention. Ensures proper mating

Robust metal solder tabs
Provides secure PCB retention and strain relief to solder joints

Low-halogen and high-temperature capabilities
Withstands harsh environments

Outer lock
Strengthens lock for more reliable connection



Micro-Lock Plus Wire-to-Board Connector System



Applications

Datacom

Servers

Consumer

White goods

Gaming machines

Drones

Air conditioners

Laser printers

Vacuum cleaners

Desktop PCs

Power tools

Automotive

Steering wheel, paddle shift,

combination switches

Internal connection with other units



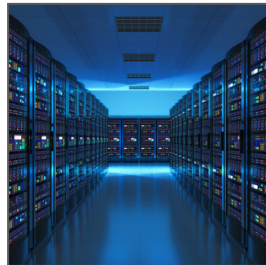
Air Condition



White Goods



Steering Wheel Switches



Servers



Drones



Industrial Automation

Specifications 1.25mm

REFERENCE INFORMATION

Packaging: Reel (Terminal);

Embossed (Header Assembly);

Bag (Receptacle Housing);

Mates with: Micro-Lock Plus Connectors and

Crimp terminals

Designed In: Millimeters

RoHS: Yes

Low Halogen: Yes *Depends on series number

ELECTRICAL

Voltage (max.): 50V

Current (max.): 3.6A/Single (2 circuit/AWG 26)

2.4A/Dual (8 circuit/AWG 26)

Contact Resistance (max.): 20 milliohms

Dielectric Withstanding Voltage: 500V AC

Insulation Resistance (min.): 100 Megohms

MECHANICAL

Durability (max.): 30 Cycles

Crimp Terminal Insertion Force (max.): 4.9N

Crimp Terminal Retention Force (min.): 9.8N

Crimping Pull Out Force: 19.6N (min.) (AWG 26)

Housing Lock Strength: 68.6N(min.) (Single 14-16

circuits) / 98.0N(min.) (Dual 38-42 circuits)

Durability (max.): 30 Cycles

PHYSICAL

Housing:

Receptacle – PBT

Header – PA

Crimp terminal: Copper alloy, Tin or Au plating

Header pin: Copper alloy, Tin Bismuth or Au plating

Operating Temperature: -40 to +105°C

SINGLE

AWG#	Amps [A]		
	2-circuit	8-circuit	16-circuit
26	3.6	2.4	2.2
28	3.1	2.1	1.8
30	2.8	1.8	1.5

DUAL

AWG#	Amps [A]				
	8-circuit	16-circuit	24-circuit	32-circuit	42-circuit
26	2.4	1.8	1.7	1.6	1.5
28	2.1	1.6	1.5	1.4	1.3
30	1.8	1.4	1.3	1.2	1.1

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Specifications 2.00mm

REFERENCE INFORMATION

Packaging: Reel (Terminal);
Embossed (Header Assembly);
Bag (Receptacle Housing);
Mates With: Micro-Lock Plus Connectors
Designed In: Millimeters
RoHS: Yes
Low Halogen : Yes

AWG#	Amps [A]		
	2-circuit	8-circuit	16-circuit
22	4.7	3.5	3.4
24	3.9	3.1	3.0
26	2.9	2.7	2.6

ELECTRICAL

Voltage (max.): 250V
Current (max.): 4.7A (2 circuit/AWG 22)
Contact Resistance (max.): 10 Milliohms
Dielectric Withstanding Voltage: 800V AC
Insulation Resistance (min.): 1000 Megaohms

MECHANICAL

Crimp Terminal Insertion Force (max.): 9.8N
Crimp Terminal Retention Force (min.): 25.0N
Crimping Pull Out Force: 39.2N (min.) (AWG 22)
Housing Lock Strength: 80N (min.) (6-16 circuits)
Durability (max.): 30 Cycles

PHYSICAL

Housing:
Receptacle – PBT
Header – PA
Header Pin: Copper Alloy, Tin
Crimp Terminal: Copper Alloy, Tin
Header Pin: Copper Alloy, Tin
Operating Temperature: -40 to +105°C

Micro-Lock Plus Wire-to-Board Connector System



Ordering Information

Series No.	Pitch (mm)	Component	Plating	AWG / Allowable Current	Circuits	Rows	Cover Type
505431-1000	-	Female Receptacle Terminal	Tin	AWG 26 to 30	-	-	-
505431-1100	-	Female Receptacle Terminal	Gold, 0.10µm		-	-	-
505431-1200	-	Female Receptacle Terminal	Gold, 0.38µm		-	-	-
505431-1300	-	Female Receptacle Terminal	Gold, 0.76µm		-	-	-
505565-XX01	1.25	Receptacle Housing	-	AWG 26 AWG 28 AWG 30	2 to 16	Single	No
505567-XX31		Right-Angle Header	Gold, 0.38µm				No
505567-XX51		Right-Angle Header	Gold, 0.76µm				No
505567-XX71		Right-Angle Header	Tin				No
505567-XX81		Right-Angle Header	Gold, 0.10µm				No
505568-XX31		Vertical Header	Gold, 0.38µm				Yes
505568-XX51		Vertical Header	Gold, 0.76µm				Yes
505568-XX71		Vertical Header	Tin				Yes
505568-XX81		Vertical Header	Gold, 0.10µm				Yes
505432-XX01		Receptacle Housing	-				No
505433-XX21		Vertical Header	Gold, 0.38µm		No		
505433-XX31		Vertical Header	Gold, 0.38µm		Yes		
505433-XX41		Vertical Header	Gold, 0.76µm		No		
505433-XX51		Vertical Header	Gold, 0.76µm		Yes		
505433-XX61		Vertical Header	Gold, 0.10µm		No		
505433-XX71		Vertical Header	Tin		No		
505433-XX81		Vertical Header	Tin		Yes		
505433-XX91		Vertical Header	Gold, 0.10µm		Yes		
505488-XX31		Right-Angle Header	Gold, 0.38µm		No		
505488-XX51		Right-Angle Header	Gold, 0.76µm		No		
505488-XX71	Right-Angle Header	Tin	No				
505488-XX91	Right-Angle Header	Gold, 0.10µm	No				
505572-1000	2.00	Female Receptacle Terminal	Tin	AWG 22 AWG 24 AWG 26	-	-	-
505570-XX01		Receptacle Housing	-		2 to 16	Single	No
505578-XX71		Right-Angle Header	Tin				No
505575-XX71		Vertical Header	Tin				No
505575-XX81		Vertical Header	Tin				Yes

www.molex.com/link/microlockplus.html

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