Micro-Lock Plus Wire-to-Board Connector System

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

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

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

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

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

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

- **Withstands harsh environments**
  - Low-halogen and high-temperature capabilities
  - Outer lock
    - Strengthens lock for more reliable connection

- **Micro-Lock Plus 1.25mm Connector**

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

- **Micro-Lock Plus 2.00mm Connector**

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

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

- **Low-halogen and high-temperature capabilities**
  - Withstands harsh environments

- **Dual-contact terminal design**
  - Offers secure contact and terminal retention
## 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

---

### 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**

<table>
<thead>
<tr>
<th>AWG#</th>
<th>Amps [A]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-circuit</td>
</tr>
<tr>
<td>26</td>
<td>3.6</td>
</tr>
<tr>
<td>28</td>
<td>3.1</td>
</tr>
<tr>
<td>30</td>
<td>2.8</td>
</tr>
</tbody>
</table>

**DUAL**

<table>
<thead>
<tr>
<th>AWG#</th>
<th>Amps [A]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8-circuit</td>
</tr>
<tr>
<td>26</td>
<td>2.4</td>
</tr>
<tr>
<td>28</td>
<td>2.1</td>
</tr>
<tr>
<td>30</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Micro-Lock Plus Wire-to-Board Connector System

**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

**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

<table>
<thead>
<tr>
<th>AWG#</th>
<th>2-circuit</th>
<th>8-circuit</th>
<th>16-circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>4.7</td>
<td>3.5</td>
<td>3.4</td>
</tr>
<tr>
<td>24</td>
<td>3.9</td>
<td>3.1</td>
<td>3.0</td>
</tr>
<tr>
<td>26</td>
<td>2.9</td>
<td>2.7</td>
<td>2.6</td>
</tr>
</tbody>
</table>
## Micro-Lock Plus Wire-to-Board Connector System

### Ordering Information

<table>
<thead>
<tr>
<th>Series No.</th>
<th>Pitch (mm)</th>
<th>Component</th>
<th>Plating</th>
<th>AWG / Allowable Current</th>
<th>Circuits</th>
<th>Rows</th>
<th>Cover Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>505431-1000</td>
<td>-</td>
<td>Female Receptacle Terminal</td>
<td>Tin</td>
<td>AWG 26 to 30</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>505431-1100</td>
<td>-</td>
<td>Female Receptacle Terminal</td>
<td>Gold, 0.10µm</td>
<td>AWG 26 to 30</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>505431-1200</td>
<td>-</td>
<td>Female Receptacle Terminal</td>
<td>Gold, 0.38µm</td>
<td>AWG 26 to 30</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>505431-1300</td>
<td>-</td>
<td>Female Receptacle Terminal</td>
<td>Gold, 0.76µm</td>
<td>AWG 26 to 30</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>505505-XX01</td>
<td>1.25</td>
<td>Receptacle Housing</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505507-XX31</td>
<td></td>
<td>Right-Angle Header</td>
<td>Gold, 0.38µm</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505507-XX51</td>
<td></td>
<td>Right-Angle Header</td>
<td>Gold, 0.76µm</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505507-XX81</td>
<td></td>
<td>Right-Angle Header</td>
<td>Gold, 0.10µm</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505508-XX31</td>
<td></td>
<td>Vertical Header</td>
<td>Gold, 0.38µm</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>505508-XX51</td>
<td></td>
<td>Vertical Header</td>
<td>Gold, 0.76µm</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>505508-XX71</td>
<td></td>
<td>Vertical Header</td>
<td>Tin</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>505508-XX81</td>
<td></td>
<td>Vertical Header</td>
<td>Gold, 0.10µm</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>505505-XX01</td>
<td>1.25</td>
<td>Receptacle Housing</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505503-XX21</td>
<td></td>
<td>Vertical Header</td>
<td>Gold, 0.38µm</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505503-XX31</td>
<td></td>
<td>Vertical Header</td>
<td>Gold, 0.38µm</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>505503-XX41</td>
<td></td>
<td>Vertical Header</td>
<td>Gold, 0.76µm</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>505503-XX51</td>
<td></td>
<td>Vertical Header</td>
<td>Gold, 0.76µm</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>505503-XX61</td>
<td></td>
<td>Vertical Header</td>
<td>Gold, 0.10µm</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505503-XX71</td>
<td></td>
<td>Vertical Header</td>
<td>Tin</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>505503-XX81</td>
<td></td>
<td>Vertical Header</td>
<td>Tin</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>505572-1000</td>
<td>2.00</td>
<td>Female Receptacle Terminal</td>
<td>Tin</td>
<td>AWG 22 to 30</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>505570-XX01</td>
<td></td>
<td>Receptacle Housing</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505578-XX71</td>
<td></td>
<td>Right-Angle Header</td>
<td>Tin</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505575-XX71</td>
<td></td>
<td>Vertical Header</td>
<td>Tin</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>505575-XX81</td>
<td></td>
<td>Vertical Header</td>
<td>Tin</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

Molex is a registered trademark of Molex, LLC in the United States of America and may be registered in other countries; all other trademarks listed herein belong to their respective owners.

www.molex.com/link/microlockplus.html