# Micro MATE-N-LOK 3 mm Connector System

## Product Facts

- **Wire-to-wire and wire-to-board pin and receptacle connector system**
- **Contacts are on 3 mm [.118] centerline spacing**
- **2-12 contact positions – single row**
- **2-24 contact positions – dual row**
- **Panel mount or free-hanging wire-to-wire configurations**
- **Dual beam contact design for reliable interconnection**
- **Contacts accept 24-20 [0.2-0.6] and 30-26 [0.05-0.15] AWG wire with insulation diameter of .060 [1.52] maximum**
- **Contacts available in strip form or loose piece**
- **Pcb mount pin header assemblies in both vertical and right-angle styles**
- **Surface mount or through-hole pcb pin header attachment**
- **Pcb headers are IR reflow process compatible**
- **Recognized under the Component Program of Underwriters Laboratories Inc. to US and Canadian Standards, File No. E28476**
- **Passed Tests for VDE under Registration Number 40005280/Continuous Surveillance**

## Performance Characteristics

**Voltage Rating**—250 vac

**Current Rating**—5 amp max. on 20 AWG wire

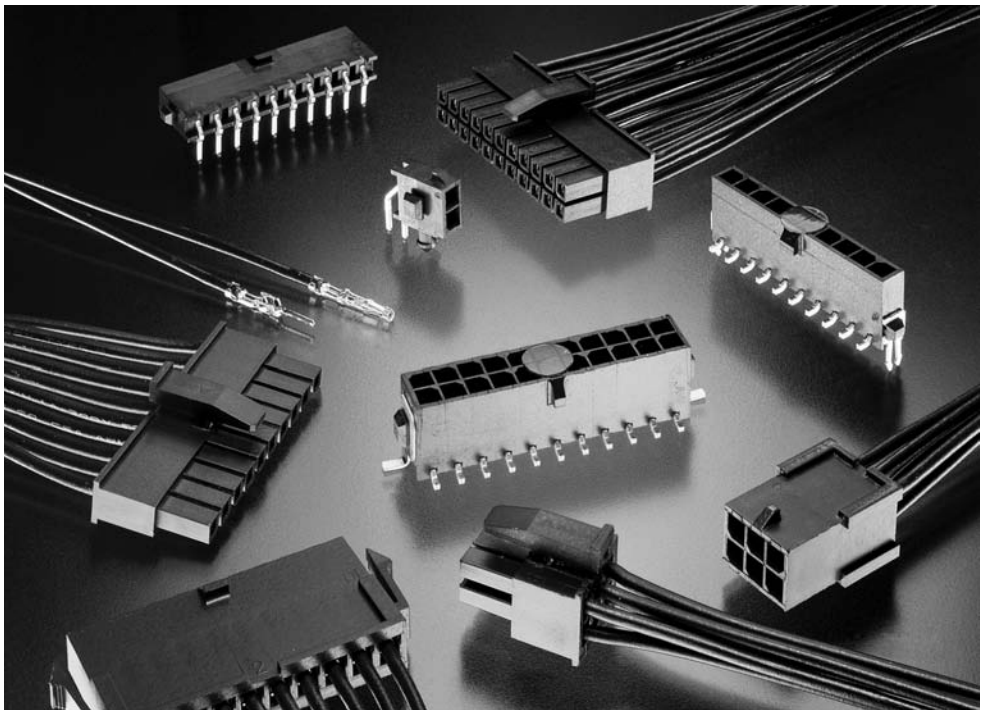
**Contact Resistance**—20 milliohms max. final

**Dielectric Withstanding Voltage**—1500 VAC

**Insulation Resistance**—1000 megohms min.

**Operating Temperature**— -40°C to +105°C

**Mating Force**—1.5lb [6.67N] max per contact



The Micro MATE-N-LOK 3 mm Connector System is a wire-to-wire and wire-to-board connector system with contacts on a 3 mm [.118] centerline. Both single-row and dual-row configurations are available. Crimp, snap-in pin and receptacle contacts are used to terminate 24-20 [0.2-0.6] and 30-26 [0.05-0.15] AWG wire. Plug and receptacle housings allow wire-to-wire and wire-to-panel configurations.

Header assemblies for wire-to-board interconnections include vertical and right-angle components. These IR reflow process compatible headers are available in through-hole and surface mount configurations.

Typical uses of the Micro MATE-N-LOK 3 mm Connector System include the appliance, instrumentation, industrial machinery, home equipment, and security system industries.

## Technical Documents

**Application Specification**

114-13000 Micro MATE-N-LOK Connectors

**Product Specification**

108-1836 3 mm Micro MATE-N-LOK Connector



Catalog 82181
Revised 4-08

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Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

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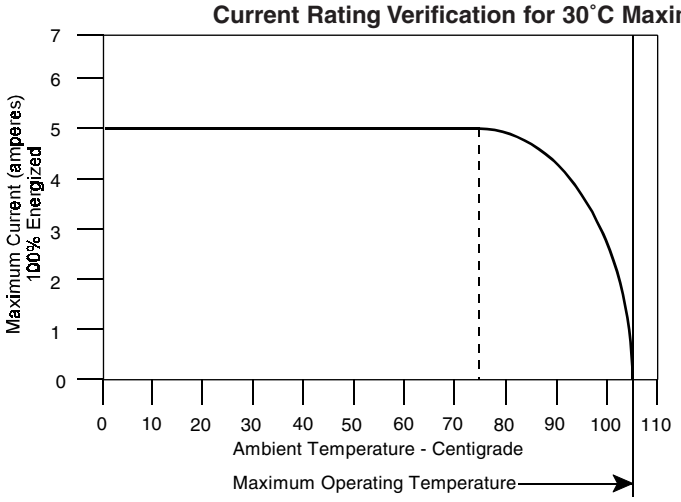
Mexico: 01-800-733-8926
C. America: 52-55-1106-0803

South America: 55-11-2103-6000
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-8706-080-208

## Micro MATE-N-LOK 3 mm Connector System (Continued)



### Current Rating Verification for 30˚C Maximum Temperature Rise 100% Energized




| Number of Circuit Positions | Multiplication Factor Wire Size (AWG) | |
|---|---|---|
| | 28 | 20 |
| 2 to 6 | 0.40 | 1 |
| 8 to 20 | 0.40 | 0.85 |
| 22 to 24 | 0.36 | 0.85 |

To determine acceptable current carrying capacity for connector size and wire gage indicated, use the Multiplication Factor from the chart above and multiply it times the Base rated Current at the maximum ambient operating temperature shown in the current rating figure.



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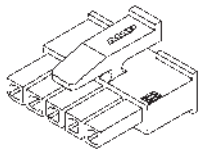
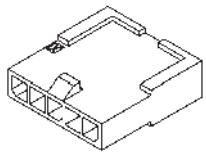
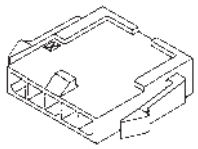
## Micro MATE-N-LOK 3 mm Connector System (Continued)

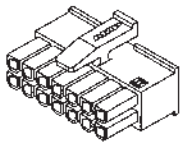
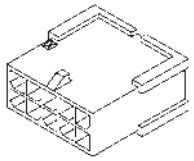
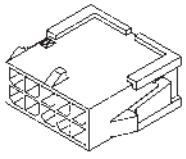


### Connector Application — Wire-to-Wire and Wire-to-Panel

#### Single Row

| Receptacle | | Plug | |
|---|---|---|---|
| Contact | Housing | Contact | Housing |
|  |  |  |  Free-Hanging □-1445049-□ Page 25 |
| □-794606-□, □-794607-□, □-794610-□, □-794611-□ Page 22 | □-1445022-□ Page 23 | □-794608-□, □-794609-□, □-794612-□, □-794613-□ Page 22 |  Panel Mount □-1445048-□ Page 26 |

#### Dual Row

| Receptacle | | Plug | |
|---|---|---|---|
| Contact | Housing | Contact | Housing |
|  |  |  |  Free-Hanging □-794616-□ Page 27 |
| □-794606-□, □-794607-□, □-794610-□, □-794611-□ Page 22 | □-794617-□ Page 24 | □-794608-□, □-794609-□, □-794612-□, □-794613-□ Page 22 |  Panel Mount □-794615-□ Page 28 |



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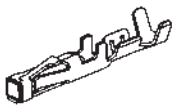
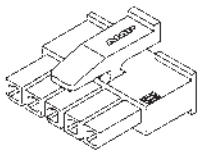
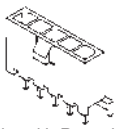
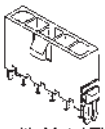
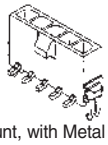
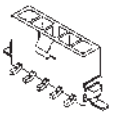
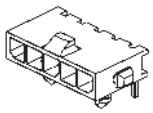
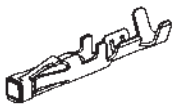
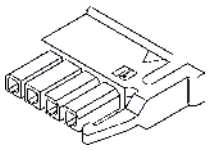
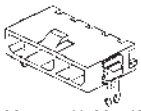
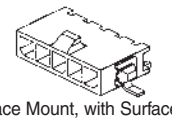
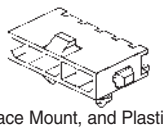
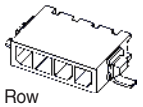
## Micro MATE-N-LOK 3 mm Connector System (Continued)

**Connector Application — Wire-to-PCB**

| | Receptacle | | Header |
|---|---|---|---|
| | Contact | Housing | |
| Single Row |  □-794606-□, □-794607-□, □-794610-□, □-794611-□ (Page 22) |  □-1445022-□ (Page 23) |  Vertical Through-Hole, with Retention Feature on Soldertail and Polarization Feature to PCB □-1445050-□, □-1445084-□, □-1445093-□ (Page 30)<br>  Vertical Through-Hole, with Metal Through-Hole Hold-down □-1445051-□, □-1445085-□, □-1445094-□ (Page 31)<br>  Vertical Surface Mount, with Metal Through-Hole Hold-down □-1445052-□, □-1445086-□, □-1445095-□ (Page 32)<br>  Vertical Surface Mount, with Surface Mount Hold-down □-1445053-□, □-1445087-□, □-1445096-□ (Page 33)<br>  Right-angle, Through-Hole, with Metal Through-Hole Hold-down □-1445054-□, □-1445088-□, □-1445097-□ (Page 38)<br>  Right-angle, Through-Hole, with Plastic Boardlock □-1445055-□, □-1445089-□, □-1445098-□ (Page 39) |
| Low Profile, Single Row |  □-794606-□, □-794607-□, □-794610-□, □-794611-□ (Page 29) |  □-2029047-□, □-2029102-□, □-2029030-□, □-2029104-□, (Page 29) |  Right-angle, Surface Mount, with Metal Through-Hole Hold-down □-1445056-□, □-1445090-□, □-1445099-□ (Page 40)<br>  Right-angle, Surface Mount, with Surface Mount Hold-down □-1445057-□, □-1445091-□, □-1445100-□ (Page 41)<br>  Right-angle, Surface Mount, and Plastic Boardlock □-1445058-□, □-1445092-□, □-1445101-□ (Page 42)<br>  Low Profile, Single Row □-2029030-□, □-2029102-□ (Page 29) |



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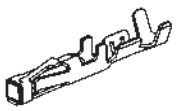
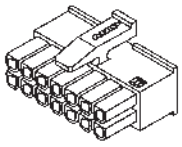
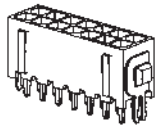
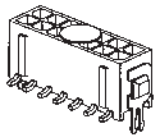
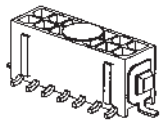
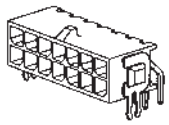
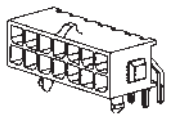
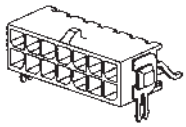
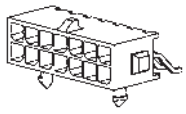
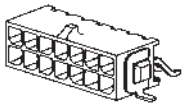
## Micro MATE-N-LOK 3 mm Connector System (Continued)



**Connector Application — Wire-to-PCB**

**Dual Row**

| Receptacle | | Header |
|---|---|---|
| Contact | Housing | |
|  |  |  |
| ☐-794606-☐, ☐-794607-☐, ☐-794610-☐, ☐-794611-☐ (Page 22} | ☐-794617-☐ (Page 24) | Vertical Through-Hole, with Retention Feature on Soldertail and Optional Metal Through-Hole Hold-down ☐-794630-☐, ☐-794631-☐, ☐-794632-☐, (Page 34) ☐-794680-☐, ☐-794681-☐, ☐-794682-☐ (Page 35) |
| | |  Vertical Surface Mount, with Metal Through-Hole Hold-down ☐-794633-☐, ☐-794634-☐, ☐-794635-☐ (Page 36) |
| | |  Vertical Surface Mount, with Surface Mount Hold-down ☐-794636-☐, ☐-794637-☐, ☐-794638-☐ (Page 37) |
| | |  Right-angle, Through-Hole, with Metal Through-Hole Hold-down ☐-794677-☐, ☐-794678-☐, ☐-794679-☐ (Page 43) |
| | |  Right-angle, Through-Hole, with Plastic Boardlock ☐-794618-☐, ☐-794619-☐, ☐-794620-☐ (Page 44) |
| | |  Right-angle, Surface Mount, with Metal Through-Hole Hold-down ☐-794624-☐, ☐-794625-☐, ☐-794626-☐ (Page 45) |
| | |  Right-angle, Surface Mount, with Plastic Boardlock ☐-794621-☐, ☐-794622-☐, ☐-794623-☐ (Page 46) |
| | |  Right-angle, Surface Mount, with Surface Mount Hold-down ☐-794627-☐, ☐-794628-☐, ☐-794629-☐ (Page 47) |



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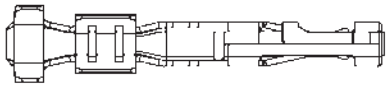
UK: 44-8706-080-208

# Micro MATE-N-LOK 3 mm Connector System (Continued)

## Crimp, Snap-In Contacts



### Material and Finish

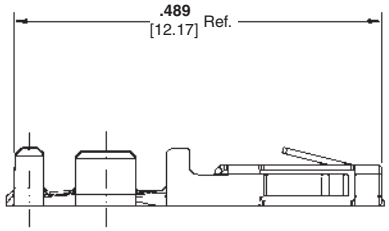
**Receptacle** — Phosphor Bronze

**Plug** — Brass

**Plating A** — .000100 (.000254) minimum bright tin entire stock over .000050 (.000127) minimum nickel entire stock

**Plating B** — .000015 (.000038) minimum gold in localized gold plate area. .000100 (.000254) minimum bright tin in localized tin plate area, both over .000050 (.000127) minimum nickel on entire stock

**Plating C** — .000030 (.000076) minimum gold in localized gold plate area. .000100 (.000254) minimum bright tin in localized tin plate area, both over .000050 (.000127) minimum nickel on entire stock




### Related Product Data

**Connectors used with:**

Receptacle Contacts used with Receptacle Housings — pages 23-24

Plug Contacts used with Plug Housings — pages 25-28

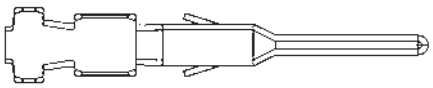
**Application Tooling**— pages 207-210

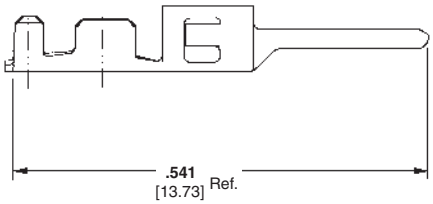
### Receptacle Contacts

| Wire Size Range AWG [mm²] | Ins. Dia. Range | Finish | Contact Part Numbers | | Tooling Part Numbers | |
|---|---|---|---|---|---|---|
| | | | Strip Form | Loose Piece | Applicator | Hand Tool |
| **20-24** 0.50 - 0.20 | **.035 - .060** 0.89-1.52 | Plating A | 794606-1 | 794610-1 | 680893-□* | 91501-1 |
| | | Plating B | 1-794606-1 | 1-794610-1 | | |
| | | Plating C | 1-794606-2 | 1-794610-2 | | |
| **26-30** 0.12 - 0.05 | **.035 - .060** 0.89-1.52 | Plating A | 794607-1 | 794611-1 | 680894-□* | 91502-1 |
| | | Plating B | 1-794607-1 | 1-794611-1 | | |
| | | Plating C | 1-794607-2 | 1-794611-2 | | |

*1=AMPOMATOR CLS Machine, 2=AMP-O-LECTRIC Model K Terminator, 3=AMP-O-LECTRIC Model G Terminator

**Note: All part numbers are RoHS Compliant.**






### Plug Contacts

| Wire Size Range AWG [mm²] | Ins. Dia. Range | Finish | Contact Part Numbers | | Tooling Part Numbers | |
|---|---|---|---|---|---|---|
| | | | Strip Form | Loose Piece | Applicator | Hand Tool |
| **20-24** 0.50 - 0.20 | **.035 - .060** 0.89-1.52 | Plating A | 1-794608-0 | 1-794612-0 | 1385194-□* | 91501-1 |
| | | Plating B | 1-794608-1 | 1-794612-1 | | |
| | | Plating C | 1-794608-2 | 1-794612-2 | | |
| **26-30** 0.12 -0.05 | **.035 - .060** 0.89-1.52 | Plating A | 1-794609-0 | 1-794613-0 | 1385377-□* | 91502-1 |
| | | Plating B | 1-794609-1 | 1-794613-1 | | |
| | | Plating C | 1-794609-2 | 1-794613-2 | | |

*1=AMPOMATOR CLS Machine, 2=AMP-O-LECTRIC Model K Terminator, 3=AMP-O-LECTRIC Model G Terminator

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### Contact Extraction Tools

Part Number 843996-6 for Receptacle Contacts Part Number 1586344-1 for Plug Contacts



Catalog 82181
Revised 4-08

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Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-1106-0803

South America: 55-11-2103-6000
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-8706-080-208