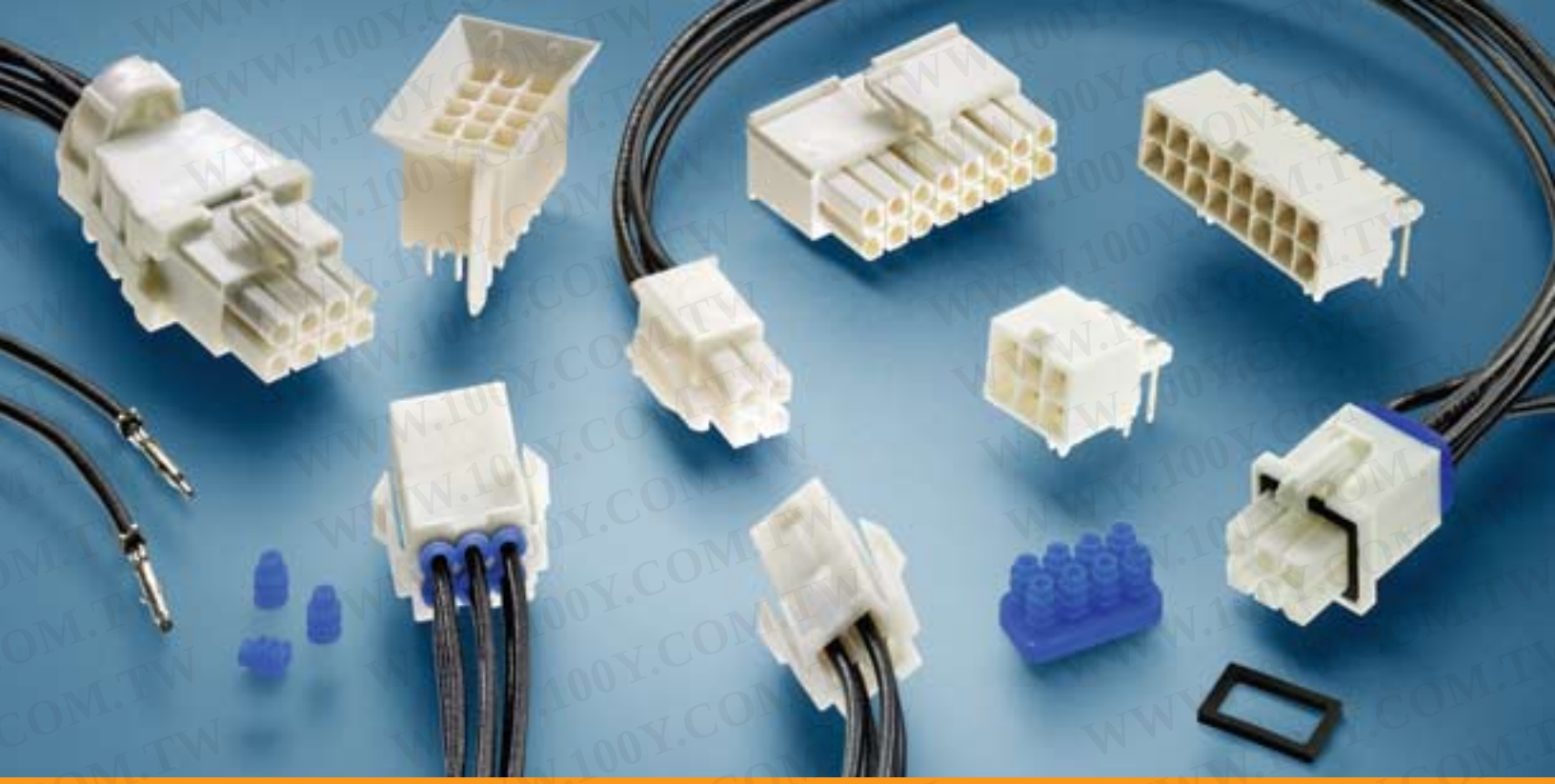


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# Quick Reference Guide

## Mini-Universal MATE-N-LOK Connector System

The Mini-Universal MATE-N-LOK Connector System offers wire-to-wire and wire-to-board connections with contacts on a 4.14 mm [.163] centerline and current ratings up to 9.5 Amps max. per line. Plug and receptacle housings allow wire-to-wire and wire-to-panel configurations and header assemblies offer wire-to-board connections in vertical and right angle configurations. Wire-to-wire, free-hanging or panel mount options are available in 1-15 position in-line, dual row or matrix configurations and wire-to-board systems in dual row and matrix configurations are available in 2-24 positions. Hermaphroditic housings are also available in 2-4 positions for free-hanging applications. Crimp, snap-in pin and receptacle contacts are used to terminate 30-16 [0.05-1.2 $mm^2$] AWG wire with insulation diameters up to 3.20 mm. The Mini-Universal MATE-N-LOK Connector System also offers a splash-proof design allowing for use in areas where high humidity, intermittent liquid splashing or foam-in applications require a sealed connector for improved electrical performance. The sealed system is available in select 2-16 positions.

### FEATURES AND BENEFITS

- Discrete wire interconnect available in 1-24 position wire-to-wire and wire-to-board pin and receptacle connector system
- Contacts are on 4.14 mm centerline spacing
- Contacts are available in strip form or loose piece
- Pins and sockets can be accommodated in the same housing
- Vertical and right angle pin headers
- Splash-proof design for applications that require sealing
- UL, CSA & VDE approved

### PRODUCT APPLICATIONS

- Household appliances
- Indoor and outdoor lighting
- Medical equipment
- Security systems
- Industrial controls
- HVAC system controls
- Storage and networking systems

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## CONTACTS

| Wire Size Range AWG | Ins. Dia. Range | Plating | | Pin | | Socket | | Automatic | Semiautomatic | | Hand Tool Part No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Tin | Gold | Strip From | Loose Piece | Strip From | Loose Piece | | K Press | G Press | |
| 30-26 [.05-.12] | .035-.050 [.889-1.27] | x | | 770835-1 | 794059-1 | 770834-1 | 794058-1 | 567418-1 | 567418-2 | 567418-3 | 90717-2 |
| 30-26 [.05-.12] | .035-.050 [.889-1.27] | | x | 1-770835-0 | 1-794059-0 | 1-770834-0 | 1-794058-0 | 567418-1 | 567418-2 | 567418-3 | 90717-2 |
| 26-22 [.12-.3] | .047-.069 [1.19-1.75] | x | | 770901-1* | 770985-1* | 770702-1* | 770986-1* | 567066-1 | 567066-2 | 567418-3 | 91529-1 |
| 26-22 [.12-.3] | .047-.069 [1.19-1.75] | | x | 1-770901-0* | 1-770985-0* | 1-770902-0* | 1-770986-0* | 567066-1 | 567066-2 | 567418-3 | 91529-1 |
| 22-18 [.3-.8] or 22 x (2) [.3] | .059-.094 [1.50-2.39] or 0.67 x (2) [3.38] | x | | 770903-1* | 770987-1* | 770904-1* | 770988-1* | 567067-1 | 567067-2 | 567067-3 | 91522-1 |
| 22-18 [.3-.8] or 22 x (2) [.3] | .059-.094 [1.50-2.39] or 0.67 x (2) [3.38] | | x | 1-770903-0* | 1-770987-0* | 1-770904-0* | 1-770988-0* | 567067-1 | 567067-2 | 567067-3 | 91522-1 |
| 20-16 [.5-.12] or 20 x (2) [.5] | .079-.126 [2.01-3.20] or .075 x (2) [1.91] | x | | 794406-1 | 171638-1 | 794407-1 | 171639-1 | 680582-1 | 680582-2 | 680582-3 | 91536-1 |
| 20-16 [.5-.12] or 20 x (2) [.5] | .079-.126 [2.01-3.20] or .075 x (2) [1.91] | | x | 1-794406-0 | | 1-794407-0 | | 680582-1 | 680582-2 | 680582-3 | 91536-1 |
| 22-26 | .050-.069 [1.27-1.75] | x | | 770901-1 | 770985-1 | 770902-1 | 770986-1 | | | | |
| 22-26 | .050-.069 [1.27-1.75] | | x | 1-770901-0 | 1-770985-0 | 1-770902-0 | 1-770986-0 | | | | |
| 18-22 | .050-.083 [1.27-2.11] | x | | 794406-1 | | 794831-1 | | | | | |
| 18-22 | .050-.083 [1.27-2.11] | | x | 794406-3 | | 794831-3 | | | | | |
| 16 | .050-.083 [1.27-2.11] | x | | 1586537-1 | | 1586538-1 | | | | | |
| 16 | .050-.083 [1.27-2.11] | | x | — | | 1586538-3 | | | | | |

*Can be used in conjunction with individual wire seal- part no. 794758-1
Contact Extraction Tool Part No. 189727-1
Contact Insertion Tool Part No. 91002-1



Pin



Socket

The Mini-Universal MATE-N-LOK contacts are brass with pre-tin or gold plating. See catalog 82181 for additional available options. The contacts are fully protected in the housings. The pins and sockets can be accommodated in the same housing.

## CAP HOUSINGS

| No. of Circuits | UL94V-0 | | UL94V-2 | | Configurations | | |
|---|---|---|---|---|---|---|---|
| | Panel Mount | Free-Hanging | Panel Mount | Free-Hanging | Single Row | Dual Row | Matrix |
| 1 | | 172156-1 | | 172327-1 | x | | |
| 2 | 172157-1 | 172233-1 | 172328-1 | 172343-1 | x | | |
| 3 | 172158-1 | 172234-1 | 172329-1 | 172344-1 | x | | |
| 4 | | 172159-1 | | 172330-1 | | x | |
| 6 | | 172160-1 | | 172331-1 | | x | |
| 9 | | 172161-1 | | 172332-1 | | | x |
| 12 | | 172162-1 | | 172333-1 | | | x |

## HERMAPHRODITIC HOUSINGS

| No. of Circuits | UL94V-0 Nylon, White Color | UL94V-2, Natural Color |
|---|---|---|
| 2 | 173956-1 | 172807-1 |
| 3 | 173957-1 | 172808-1 |
| 4 | 173958-1 | 172809-1 |

**Note:** Housing mates to itself; 2 required per wire-to-wire connection



Cap Housing

## VERTICAL PIN HEADERS

| No. of Circuits | Vertical | | In Line | Dual Row | Matrix | Tin | Gold |
|---|---|---|---|---|---|---|---|
| | with Drain holes | w/out Drain holes | | | | | |
| 2 | 1-770166-0 | 1-770872-0 | x | | | x | |
| 2 | 1-770166-1 | 1-770872-1 | x | | | | x |
| 3 | 1-770170-0 | 1-770873-0 | x | | | x | |
| 3 | 1-770170-1 | 1-770873-1 | x | | | | x |
| 4 | 1-770174-0 | 1-770874-0 | | x | | x | |
| 4 | 1-770174-1 | 1-770874-1 | | x | | | x |
| 6 | 1-770178-0 | 1-770875-0 | | x | | x | |
| 6 | 1-770178-1 | 1-770875-1 | | x | | | x |
| 8 | 1-794065-0 | 1-794073-0 | | x | | x | |
| 8 | 1-794065-1 | 1-794073-1 | | x | | | x |
| 9 | 1-770182-0 | 1-770976-0 | | | x | x | |
| 9 | 1-770182-1 | 1-770976-1 | | | x | | x |
| 10 | 1-770743-0 | 1-770858-0 | | x | | x | |
| 10 | 1-770743-1 | 1-770858-1 | | x | | | x |
| 12 | 1-794066-0 | 1-770621-0 | | x | | x | |
| 12 | 1-794066-1 | 1-770621-1 | | x | | | x |
| 12 | 1-770186-0 | 1-794040-0 | | | x | x | |
| 12 | 1-770186-1 | 1-794040-1 | | | x | | x |
| 14 | 1-794067-0 | 1-794074-0 | | x | | x | |
| 14 | 1-794067-1 | 1-794074-1 | | x | | | x |
| 15 | 1-770190-0 | 1-770859-0 | | | x | x | |
| 15 | 1-770190-1 | 1-770859-1 | | | x | | x |
| 16 | 1-794068-0 | 1-794075-0 | | x | | x | |
| 16 | 1-794068-1 | 1-794075-1 | | x | | | x |
| 18 | 1-794069-0 | 1-794076-0 | | x | | x | |
| 18 | 1-794069-1 | 1-794076-1 | | x | | | x |
| 20 | 1-794070-0 | 1-794077-0 | | x | | x | |
| 20 | 1-794070-1 | 1-794077-1 | | x | | | x |
| 22 | 1-794071-0 | 1-794078-0 | | x | | x | |
| 22 | 1-794071-1 | 1-794078-1 | | x | | | x |
| 24 | 1-794072-0 | 1-794079-0 | | x | | x | |
| 24 | 1-794072-1 | 1-794079-1 | | x | | | x |

## RIGHT ANGLE HEADERS

| No. of Circuits | Part No. | In Line | Dual Row | Gold | Tin |
|---|---|---|---|---|---|
| 1 | 1-794374-0 | | | | x |
| 1 | 1-794374-1 | | | x | |
| 2 | 1-770966-0 | x | | | x |
| 2 | 1-770966-1 | x | | x | |
| 3 | 1-770967-0 | x | | | x |
| 3 | 1-770967-1 | x | | x | |
| 4 | 1-770968-0 | | x | | x |
| 4 | 1-770968-1 | | x | x | |
| 6 | 1-770969-0 | | x | | x |
| 6 | 1-770969-1 | | x | x | |
| 8 | 1-770970-0 | | x | | x |
| 8 | 1-770970-1 | | x | x | |
| 10 | 1-770971-0 | | x | | x |
| 10 | 1-770971-1 | | x | x | |
| 12 | 1-770972-0 | | x | | x |
| 12 | 1-770972-1 | | x | x | |
| 14 | 1-770973-0 | | x | | x |
| 14 | 1-770973-1 | | x | x | |
| 16 | 1-770974-0 | | x | | x |
| 16 | 1-770974-1 | | x | x | |
| 18 | 1-794105-0 | | x | | x |
| 18 | 1-794105-1 | | x | x | |
| 20 | 1-794106-0 | | x | | x |
| 20 | 1-794106-1 | | x | x | |
| 22 | 1-794107-0 | | x | | x |
| 22 | 1-794107-1 | | x | x | |
| 24 | 1-794108-0 | | x | | x |
| 24 | 1-794108-1 | | x | x | |



Vertical Pin Header



Right Angle Pin Header



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Vertical PC Board Pin Header

## VERTICAL PC BOARD BLINDMATE PIN HEADERS

| No. of Circuits | Part No. w/ Drain Holes | Dual Row | Matrix | Tin | Gold |
|---|---|---|---|---|---|
| 4 | 1-794325-0 | x | | x | |
| 4 | 1-794325-1 | x | | | x |
| 6 | 1-794326-0 | x | | x | |
| 6 | 1-794326-1 | x | | | x |
| 8 | 1-794327-0 | x | | x | |
| 8 | 1-794327-1 | x | | | x |
| 9 | 1-794432-0 | | x | x | |
| 9 | 1-794432-1 | | x | | x |
| 10 | 1-794328-0 | x | | x | |
| 10 | 1-794328-1 | x | | | x |
| 12 | 1-794329-0 | | x | x | |
| 12 | 1-794329-1 | | x | | x |
| 15 | 1-794330-0 | | x | x | |
| 15 | 1-794330-1 | | x | | x |

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## GANG SEALS

| No. of Positions | Interface Seals | Gang Wire Seal | Plug for Sealing | Cap for Sealing | Vertical Headers for Sealing* | Right Angle Headers for Sealing* |
|---|---|---|---|---|---|---|
| 2 | 794772-2 | 1586359-2 | 794894-1 | 794896-1 | 1-770872-x | 1-770966-x |
| 4 | 794772-4 | 1586359-4 | 794805-1 | 794939-1 | 1-770874-x | 1-770968-x |
| 6 | 794772-6 | 1586359-6 | 794895-1 | 794940-1 | 1-770875-x | 1-770969-x |
| 8 | 794772-8 | 1586359-8 | 794821-1 | 794941-1 | 1-794073-x | 1-770970-x |
| 10 | 1-794772-0 | 1-1586359-0 | 794781-1 | 794942-1 | 1-770858-x | 1-770971-x |
| 16 | 1-1586362-6 | 1-1586359-6 | 794824-1 | | 1-794075-x | 1-770974-x |

*Note: -0 for tin finish, -1 for gold. See Mini-Universal MATE-N-LOK section in catalog 82181 for details.



Single & Gang Wire Seals with Interfacial Seal



Single Wire Seal



Gang Seal



Single Wire Seal



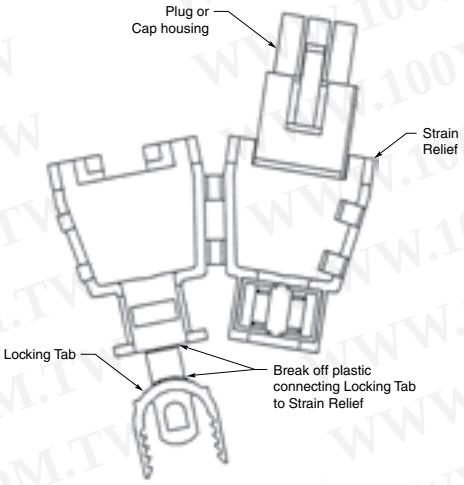
Wire Seal Configuration

## PLUG HOUSINGS

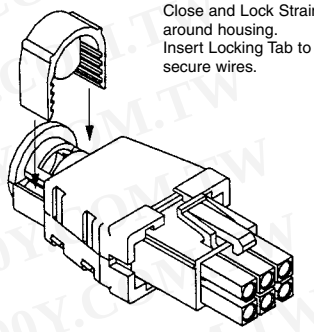
| No. of Circuits | UL94V-0 | UL94V-2 | Single Row | Dual Row | Matrix |
|---|---|---|---|---|---|
| 1 | 172164-1 | 172335-1 | x | | |
| 2 | 172165-1 | 172336-1 | x | | |
| 3 | 172166-1 | 172337-1 | x | | |
| 4 | 172167-1 | 172338-1 | | x | |
| 6 | 172168-1 | 172339-1 | | x | |
| 8 | 770579-1 | — | | x | |
| 9 | 172169-1 | 172340-1 | | | x |
| 10 | 770580-1 | — | | x | |
| 12 | 172170-1 | 172341-1 | | | x |
| 12 | 770581-1 | — | | x | |
| 14 | 770582-1 | — | | x | |
| 15 | 172171-1 | 172342-1 | | | x |
| 16 | 770583-1 | — | | x | |
| 18 | 770584-1 | — | | x | |
| 20 | 770585-1 | — | | x | |
| 22 | 770586-1 | — | | x | |
| 24 | 770587-1 | — | | x | |

## STRAIN RELIEFS - PLUG OR CAP HOUSINGS

| No. of Circuits | Wire Bundle Dia. Range | UL94V-0 Part No. | Use with: | Dual Row | Matrix |
|---|---|---|---|---|---|
| 6 | .135-.220<br>4.19-5.59 | 794423-1 | 172168-1, 172160-1,<br>172339-1, 172331-1 | x | |
| 8 | .180-.245<br>4.57-6.22 | 794370-1 | 770979-1 | x | |
| 9 Plug | | 316454-1 | 172169-1, 172340-1 | | x |
| 9 Cap | | 316455-1 | 172161-1, 171232-1 | | x |




Step 1




Step 2

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## CONNECTOR KITS

| Kit Part Number | Description |
|---|---|
| 1-2110832-0 | Mini-Universal MATE-N-LOK Panel Mount Plug and Receptacle Kit |
| 1-2110832-1 | Mini-Universal MATE-N-LOK Vertical Header and Plug Connector Kit |
| 1-2110832-2 | Mini-Universal MATE-N-LOK Right Angle Header and Plug Connector Kit |
| 1-2110832-3 | Mini-Universal MATE-N-LOK Plug and Receptacle Connector Kit |
| 1-2110832-5 | Mini-Universal MATE-N-LOK Deluxe Header, Plug, Receptacle and Sealed Components Kit |
| 1-2110832-7 | Mini-Universal MATE-N-LOK and Universal MATE-N-LOK Deluxe Sealed Plug, Receptacle and Components Kit |
| 1-2110832-8 | Mini-Universal MATE-N-LOK, Universal MATE-N-LOK and Universal MATE-N-LOK II Deluxe Plug and Receptacle Connector Kit |

## Questions that will help you better select the product that you need:

**What are the current and voltage requirements for your application?**
The Mini-Universal MATE-N-LOK connector system has a maximum current rating of 9.5 Amps per line and is rated for 600 Volts AC/DC.

**What are the wire type and size requirements?**
The Mini-Universal MATE-N-LOK connector system contacts are approved for use with 4 different wire ranges from 30 AWG [0.05] to 16 AWG [1.20] wire with a maximum insulation diameter of .126 [3.20].

**What are the number of positions?**
The Mini-Universal MATE-N-LOK connector system is available in wire-to-wire, free-hanging or panel mount options in 1-15 position in-line, dual row or matrix configurations and wire-to-board is available in 2-24 positions dual row and matrix configurations. The hermaphroditic housings are available in 2-4 positions for free-hanging applications and the sealed system is available in select 2-16 positions.

**What are the operating temperature requirements?**
The Mini-Universal MATE-N-LOK connector system has a maximum operating temperature of 105°C. For more information regarding operating temperatures refer to Product Specification 108-1542.

**What is the benefit of using the hermaphroditic housings?**
The Mini-Universal MATE-N-LOK connector system offers a special hermaphroditic housing design where 2 of the same housings in the same position size mate to one another. The benefit of this design simply reduces the amount of part numbers and inventory for the user.

**What is the benefit of using the Mini-Universal MATE-N-LOK Sealed Connector System?**
The Mini-Universal MATE-N-LOK Sealed Connector System offers a splash-proof design for use in areas where high humidity, intermittent liquid splashing or foam-in applications require a sealed connector for improved electrical performance. The sealed system is available in select 2-16 positions and requires either individual or ganged wire seals and an interface seal in conjunction with the plug and cap housings uniquely designed to accommodate these seals. The sealed plug housings with wire and interface seal can also be mated to the standard Mini-Universal MATE-N-LOK headers without drain holes for a sealed wire to board application.

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