



# Universal MATE-N-LOK Connector System

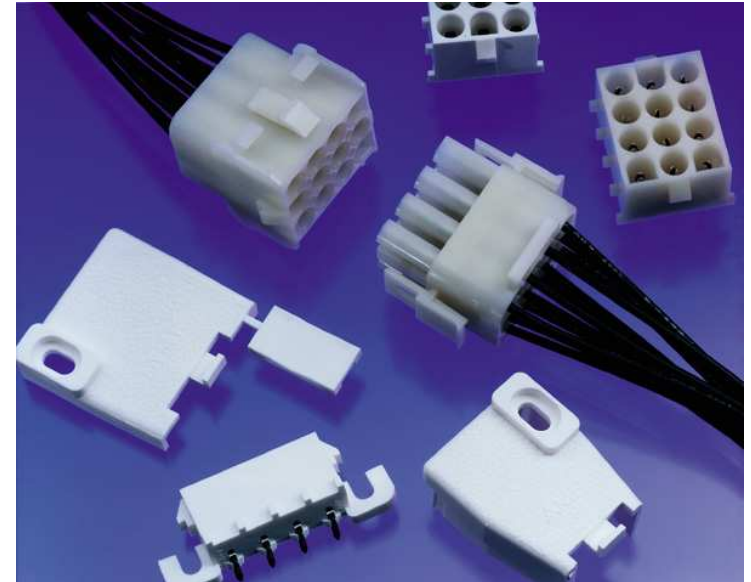
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# Universal MATE-N-LOK Connector System

## What is Universal MATE-N-LOK?

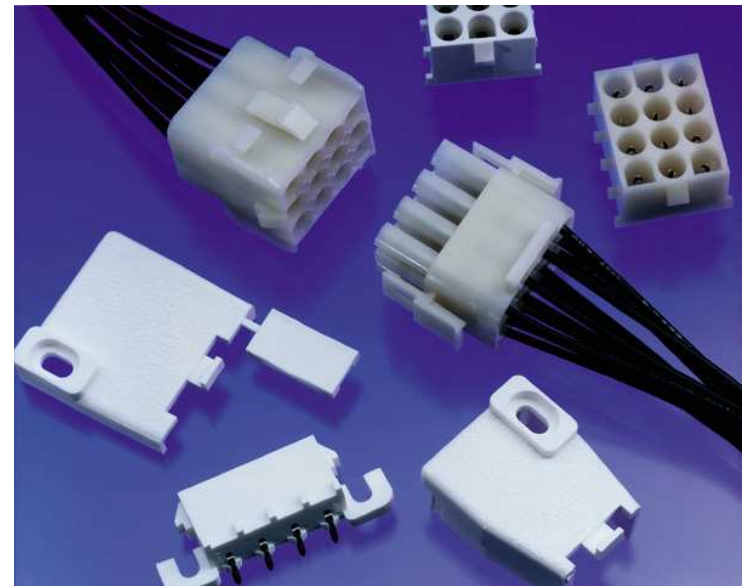
- Four Component Pin & Socket Connector System Plug & Cap Housing and Pin and Socket Contacts
- Many version have Board level product in Vertical and Right Angle
- Custom and Specialty Designs available for specific requirements
- High Volume very competitive market
- UV resistant materials
- High Temperature Materials
- Special Keys to prevent incorrect mating
- Dual locking lance
- Tin or gold plating
- Wire size: 30-10 AWG
- .250 [6.35] centerline



# Universal MATE-N-LOK Connector System

## What is Universal MATE-N-LOK?

- Positions
  - 2-10 In-line
  - 6,9,12,15 Matrix
- Configuration
  - Wire-to-Wire (1-15 pos.)
  - Wire-to-Panel
  - Wire-to-Board (2-15 pos.)
  - Vertical/rt.-angle headers
- Electrical
  - 600 VAC/VDC, 19 A max.
- Housing Material
  - Nylon, UL 94-V2 or V0



# Universal MATE-N-LOK Connector System Product Breadth

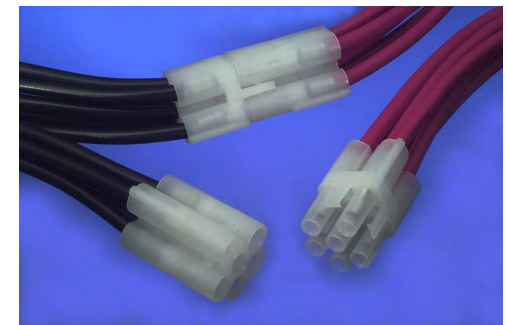
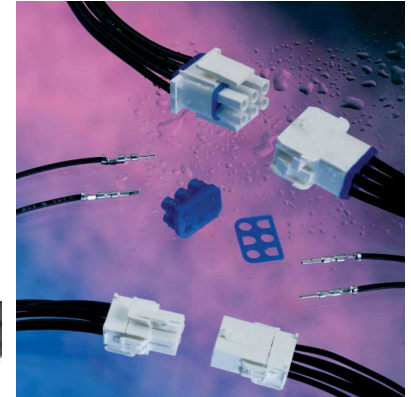
Universal MATE-N-LOK™ Sealed Connector System

Universal MATE-N-LOK™ Flanged Cap Housing

Circular Universal MATE-N-LOK™

Bulkhead Universal MATE-N-LOK™

Colored Universal MATE-N-LOK™



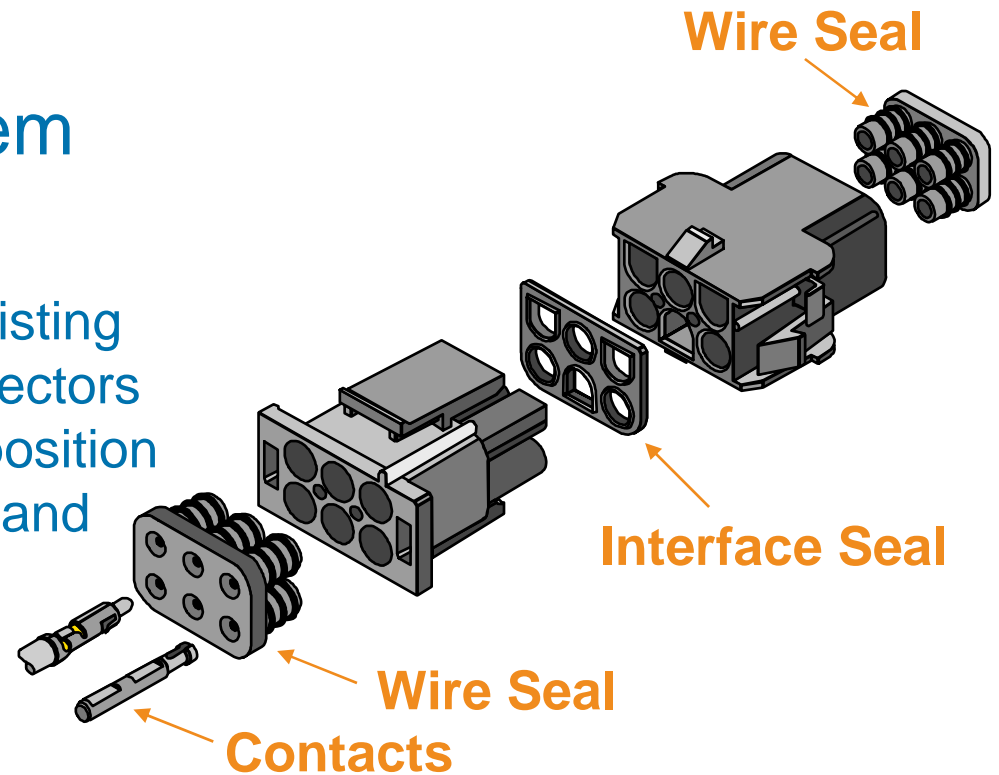
# Universal MATE-N-LOK Sealed Connector System

## Description

Splash Proof Seals used with existing Universal MATE-N-LOK™ Connectors Offered in 2, 3, 4, 6, 9, 12 & 15 position Seals are purchased separately and primarily used in wire-to-wire applications.

## Product Advantages

- Seals fit standard UMNL housings
- Headers without drain holes accept sealed plugs
- Wire AWG only limited by .060-.130 insulation dia.



# Universal MATE-N-LOK Sealed Connector System

Positions	Interface Seal	Wire Seal
2	794269-1*	794270-1*
3	794271-1*	794272-1*
4	794273-1*	794274-1*
6	794275-1*	794276-1*
9	794277-1*	794278-1*
12	794279-1*	794280-1*
15	794281-1*	794282-1*

\*Sample Room Stock

# Universal MATE-N-LOK Flanged Cap Housing

## Description

Flanged Cap Housings with Twist and Lock Feature Offered in 6, 9, and 12 circuits. Designed for appliance applications where a bulkhead connector system is needed in conjunction with foam-in insulation



## Product Advantages

- Provides a low applied cost solution
- Ease of application in fast paced production
- Designed to use Universal MATE-N-LOK Splash Proof Seals for additional sealing protection
- Creates industry leading product to meet bulkhead/foam interconnection
- Recommended for .030”-.090” thick panels
- Locks into place on panel without tools

# Circular Universal MATE-N-LOK Product Offering

Positions	V-0 Cap	V-2 Cap
6	794760-1*	794714-1*
9	794761-1	794715-1*
12	794762-1*	794716-1*

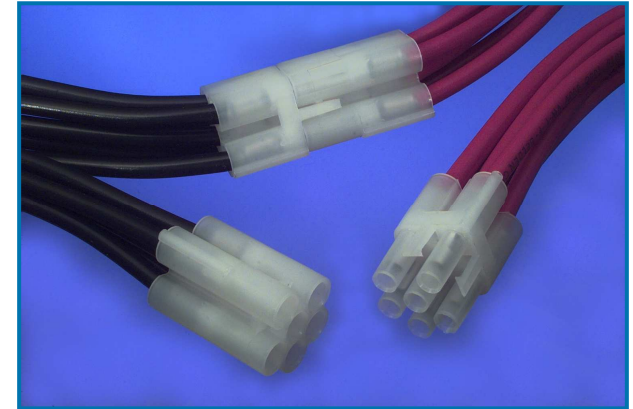
\*Sample Room Stock



# Circular Universal MATE-N-LOK

## Description

A six position circular UMNL housing designed for lighting fixtures where complete product assembly at factory is an advantage; Sensitive areas where quick and easy disconnect and connection of a new fixture is required; Places where space limitations require unique configurations.



## Product Advantages

- Connector will pass through 7/8" electrical box knock out
- Uses existing UMNL contacts
- Configuration allows for fully loaded housing to be certified by UL & CSA at normal current ratings.
- Connector is certified under UL 1977 to 20 AMPS fully loaded (CSA does not have a comparable spec)
- Keyed and ribbed housing insure proper mating of contacts

# Circular Universal MATE-N-LOK Product Offering

Positions	Cap	Plug
6	794912-1*	794911-1*

\*Sample Room Stock

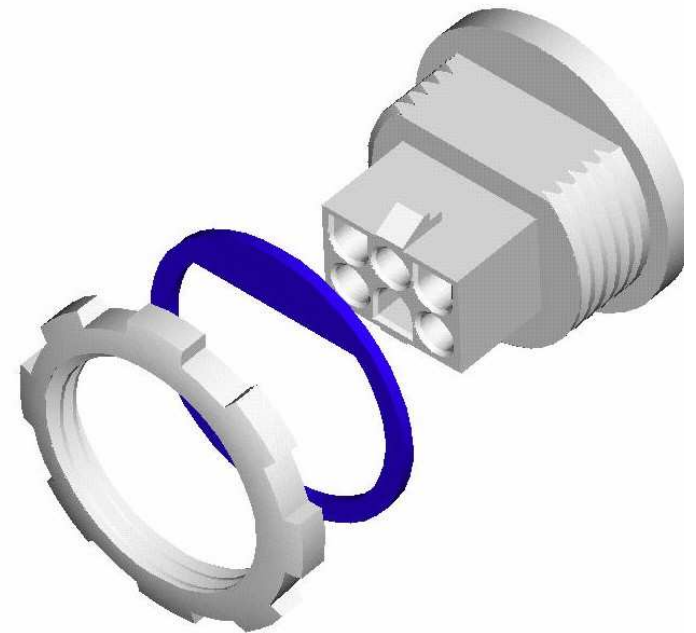
# Bulkhead Universal MATE-N-LOK

## Description

A splash proof design that can be used when there is a need to prevent liquid or dust ingress with a connection that passes through a bulkhead panel.

## Product Advantages

- Available in 4, 6, 9, 12 Positions
- Splash Proof flange mount design with IP 5/6 IP 5/7 Rating
- Provides a low applied cost solution
- Keying feature restricts rotation of connector for positive placement and alignment
- Uses Proven Technology in Standard Universal MATE-N-LOK™ product
- Rear mount flange design enables use in wire harnesses



# Bulkhead Universal MATE-N-LOK Product Offering



Positions	Cap	Interface Seal	Wire Seal
4	1604256-1*	794273-1*	794274-1*
6	1604210-1*	794275-1*	794276-1*
9	1604254-1*	794277-1*	794278-1*
12	1604941-1	794279-1*	794280-1*

\* Sample Room Stock

# Colored Universal MATE-N-LOK

## Description

Colored housings are an excellent opportunity to differentiate connectors on a harness and solve the customer need for keying without cost of customization.

## Product Advantages

- Available on all Universal MATE-N-LOK connector housings
- Available in Nine colors (8 plus natural)
- V-0 & V-2 Product
  - Slight Color variations to distinguish products



# Colored Universal MATE-N-LOK Part Number Coding

Dash Number	Color
1-XXXXXXX-0	Natural
1-XXXXXXX-1	Brown
1-XXXXXXX-2	Red
1-XXXXXXX-3	Orange
1-XXXXXXX-4	Yellow
1-XXXXXXX-5	Green
1-XXXXXXX-6	Blue
1-XXXXXXX-8	Gray
1-XXXXXXX-9	Black

# Soft Shell Product Applications

- Applications
  - Industrial: HVAC, Medical Equipment, Fuel Pumps, Security Systems, Garage Door Openers, Industrial Controllers, Power supplies, Commercial Refrigeration
  - Consumer: Major Appliances, washers/dryers, refrigerators, timer controls, motors, Generators, Coin Changers/Vending Machines, Beverage Dispensers, Gaming
  - Lighting Florescent Lights, Message Boards, Sign Boards
  - Automotive: Cars, Trucks, Buses, Recreational Vehicles, Light Rail, All Terrain Vehicles, Garden Tractors
  - Computer: PCs, Mainframes, Disk Drives, Printers, Office Equipment Telecommunications, Games

# Universal MATE-N-LOK Typical Applications

## Where to Sell Universal MATE-N-LOK?

Appliances

Vending

Gaming

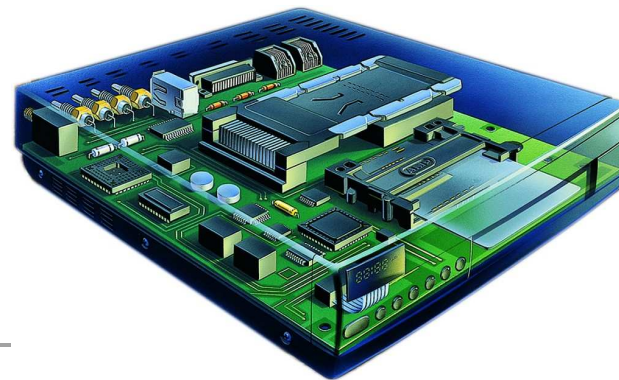
HVAC Systems

Power Supplies

Fan Modules

Lighting

Wiring Harness Assemblies





# Considerations in Selecting Products

- Current Rating (amps) and Voltage required
- Wire type and Size requirements
- Number of positions
- Available Space
- Configuration (Wire to Wire; Wire to Board; Panel mount)
- Operating Temperature Requirements
- Environmental Considerations, are seals required?
- Industry Standards that have to be met

# Universal MATE-N-LOK

## *Application Tooling*

- Hand: Premium CERTI-CRIMP and commercial PRO-CRIMPER II crimping tools (manual); 626 Pneumatic Tool System; insertion/extraction tools
- Semiautomatic: AMP-O-LECTRIC Model “G” and AMP-O-MATIC Stripper-Crimper bench machines
- Automatic: AMPOMATOR CLS IV+ Lead Maker and Komax Lead Makers



# Universal MATE-N-LOK

## ***Standards***

- Universal MATE-N-LOK
  - UL Recognized, File No. E28476
  - CSA Certified, File No. LR 7189
  - VDE Tested, Reg. #5618/Continuous Surveillance
- Splash Proof/Sealed Universal MATE-N-LOK
  - Meets IEC 60529 IP56 & IP57 Internal Protection Sealing Level Requirements
    - IP57 Test -- (Swirling Dust/Immersion @ 1 m for 30 min. - .110-.130 insulation diameter)
    - IP56 Test -- (Swirling Dust/Heavy Seas - .060-.110 insulation diameter)

# Universal MATE-N-LOK

## ***Standards*** (Continued)

- Circular Universal MATE-N-LOK
  - Certified under UL 1977 to 20 AMPS fully loaded (CSA does not have a comparable spec)

# Universal MATE-N-LOK

## *Specifications*

- Product Specifications
  - 108-1031 Universal MATE-N-LOK Connectors
  - 108-1031-1 Splash Proof Seal for UMNL
  - 108-1053 Universal MATE-N-LOK PCB Headers
- Application Specification
  - 114-1010 Universal MATE-N-LOK Contacts
- Instruction Sheet
  - 408-7714 Plug, Cap, Headers, Pin, Socket, & Accessories
  - 408-3392 Splash Proof Seal for UMNL

# Bulkhead Universal MATE-N-LOK™ Standards and Specifications

- Instruction Sheet
  - 408-10017 Universal MATE-N-LOK Bulkhead Connector
- Product Specification
  - 108-1031 Universal MATE-N-LOK Connector
- Application Specification
  - 114-1010 Universal MATE-N-LOK Connector
  
- UL Recognized File No           E284763
- CSA Certified File No           1030930

# Universal MATE-N-LOK

## ***Support Materials***

- Catalog 82181: Soft Shell Pin and Socket Connectors
- Product Information Flyer 1309225: Circular Universal MATE-N-LOK Connector
- Product Information Kit 1307754: Flanged Cap Housings with Twist and Lock Feature
- Sample Kit 1307763: Soft Shell Family
- Sample Kit 1307196: Sealed UMNL