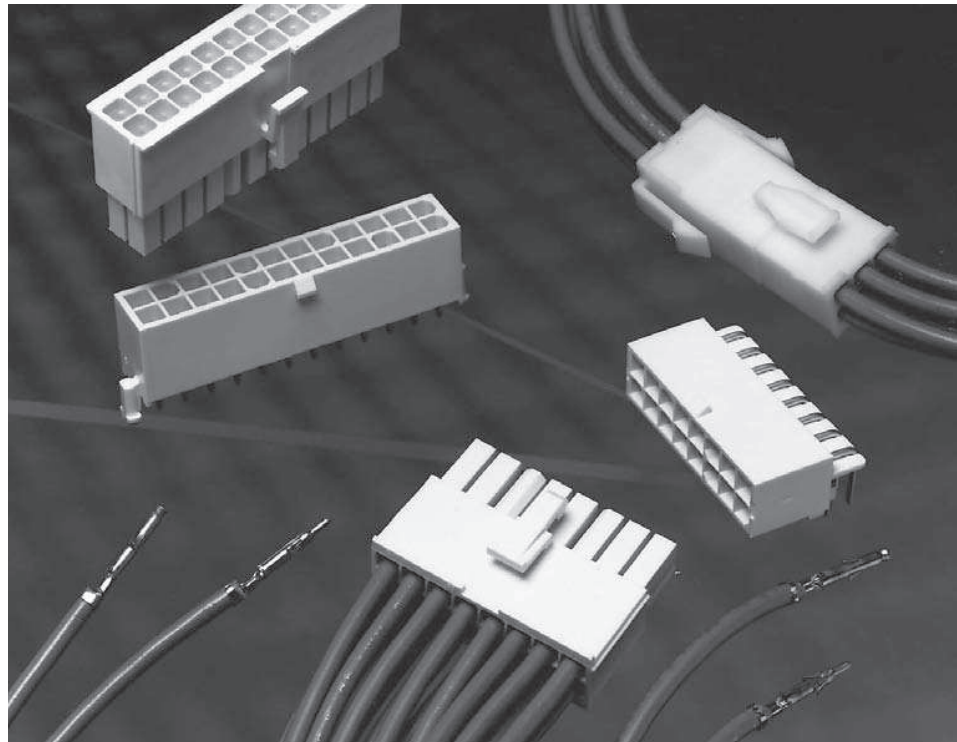


**Mini-Universal MATE-N-LOK Connectors**

**Product Facts**

- Compact, durable housings
- Pins and sockets can be accommodated in the same housings
- Contacts fully protected in the housings. Both pins and sockets can be used on the power supply wiring
- Fully polarized to provide proper plug-to-cap mating incorporating a positive locking mechanism to help prevent accidental disengagement of mated connectors. Also facilitates panel mounting
- Free-hanging or panel mount
- Housings available in 1, 2, 3, 4, 6, 9, 12 and 15 circuit configuration for wire-to-wire connection
- Connectors can be mounted to .031-.079 [0.79-2.00] thick panels
- Printed circuit board pin headers are available in 2 thru 24 circuit vertical and right-angle configurations
- Hermaphroditic housings available in 2, 3 and 4 circuits for free-hanging applications
- Low insertion/extraction forces
- Contacts accept wire size range 30-16 AWG [.05-1.2 mm<sup>2</sup>]
- Test probe contacts available
- .163 [4.14] centerline spacing
- Not for interrupting current
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



**Performance Characteristics**

The Mini-Universal MATE-N-LOK Connector performance characteristics found on pages 83-84 are based on free-hanging and panel mount connectors, loaded with contacts crimped on stranded wire.

**Low Level Termination Resistance**  
20 milliohms max. total resistance between wire crimps of a mated pin and socket

**Dielectric Withstanding Voltage**—  
1.5 KVAC between adjacent circuits

**Insulation Resistance**—  
1000 megohms minimum between adjacent circuits

**Voltage Rating**—600 V AC or DC

**Contact Retention**—8 lb. min. per contact

**Durability**—20 cycles, mating and unmating

**Technical Documents**

- Product Specifications**
- 108-1542 Mini-Universal MATE-N-LOK Connectors
  - 108-1543 Mini-Universal MATE-N-LOK Headers
  - 108-5151 Mini-Universal MATE-N-LOK Connectors (UL94V-2)
  - 108-5138 Mini-Universal MATE-N-LOK Connectors (UL94V-0)

- Application Specification**
- 114-16017 Mini-Universal MATE-N-LOK Connectors

- Instruction Sheets**
- 408-3234 Mini-Universal MATE-N-LOK Connectors
  - 411-5105 Mini-Universal MATE-N-LOK Connectors

High Density

Mini-Universal MATE-N-LOK Connectors  
.163 [4.14] Centerline

**Mini-Universal MATE-N-LOK Connectors** (Continued)

**Performance Characteristics** (Continued)

**Maximum Current**—Maximum current rating of Mini-Universal MATE-N-LOK connectors is limited by the maximum operating temperature of the housings which is 105°C including the temperature rise of the contacts which is a maximum of 30°C. There are several variables which have a direct effect on this maximum current-carrying capability for a given connector and must be considered for each application. These variables are:

**Wire Size**—Larger diameter wire will carry more current since it has less internal resistance to current flow and thus generates less heat. Longer wire lengths also enhance current-carrying capabilities since the wire conducts heat away from the connector.

**Connector Size**—In general, the more circuits in a connector, the less current can be carried.

**Ambient Temperature**—The higher the ambient temperature, the less current can be carried in any given connector.

**Printed Wiring Board Conductor Size**—The finished trace conductor width and thickness should be maximized to allow for the greatest current-carrying capacity and heat dissipation.

Mini-Universal MATE-N-LOK connectors also will withstand the following tests:

**Housing Panel Retention**—26 lb. min.

**Housing Lock Strength**—9 lb. min.

**Thermal Shock**—-55°C to +105°C

**Temperature-Humidity Cycling**—25°C to 65°C at 95 RH

**Vibration**—10-55-10 cycles per minute at .06 inch total excursion

**Physical Shock**—18 drops, 50 G half-sine at 11 milliseconds

**Current Rating Verification for 30°C Maximum Temperature Rise 100% Energized**

**Wire-to-Wire**

**Mini-Universal MATE-N-LOK Connectors — Calculated Current Table**

Number of Circuits	Wire AWG						
	16	18	20	22	24	26	30
2	9.50	9.00	7.50	6.00	5.00	4.00	3.00
3	8.50	8.00	7.00	5.50	4.50	4.00	3.00
4	8.00	7.00	6.00	5.00	4.50	3.50	2.50
6	7.00	6.50	5.50	4.50	4.00	3.00	2.50
9	6.00	5.50	4.50	4.00	3.50	3.00	2.00
12	6.00	5.50	4.50	3.50	3.00	2.50	2.00
15	5.50	5.00	4.00	3.50	3.00	2.50	2.00

Values are based on initial Temperature Rise versus Current Testing and are intended to be a guide in the selection of a connector family. All applications should be tested by the end user. The values listed are per circuit, for fully loaded housings being 100% energized. **Note:** All combinations above were not tested and this chart contains interpolated and extrapolated values.

**Minimum Wire Lengths for T-Rise vs. Current Testing**

AWG	Min. Length (in.)	AWG	Min. Length (in.)
30	2.6	18	9.4
28	3.2	16	11.3
26	4.1	14	13.7
24	5.1	12	16.4
20	7.8	10	19.3

**Note:** If wire lengths used are less than those listed above, the current-carrying ability of the system will be reduced due to less heat being conducted away from the connector. The customer should fully test all applications.

**Wire-to-Board**

Due to the vast differences in trace geometry and printed circuit board configurations, we are unable to provide a separate current carrying chart for our printed circuit board header products. However, the above Wire-to-Wire charts may be used as a guideline for headers if the trace width and thickness is equal to the listed wire gauge. For vertical headers, only 95% of the Wire-to-Wire value should be used. For right-angle headers, only 75% of the Wire-to-Wire value should be used. The chart values are only a tool for connector selection and will require the customer to fully test their application.

**Termination Resistance/Contact Crimp Tensile Force**

Wire Size		Termination Resistance		Contact Crimp Tensile Force	
AWG	mm <sup>2</sup>	Test Current (Amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	N
30	.05	—	—	—	—
28	.08	—	—	—	—
26	.12	—	—	4	18
24	.2	—	—	7	31
22	.3	—	—	11	49
20	.5	—	—	13	58
18	.8	—	—	15	67
16	1.2	—	—	18	80

High Density

Mini-Universal MATE-N-LOK Connectors  
.163 [4,14] Centerline

**Mini-Universal MATE-N-LOK Connectors (Continued)**

**Mini-Universal MATE-N-LOK Connector Mating Combinations**

Number of Circuits	Connector Part Number				Mating Connector Part Number				
	Flammability Rating	Style	Plug <sup>1</sup> Housing Part No.	Cap <sup>1</sup> Housing Part No.	PC Board Pin Headers				
					Plating	With Drain Holes	Vertical Without Drain Holes	Blindmate	Right-Angle With Board Lock
1	UL94V-2	In-Line	172335-1	172327-14	—	—	—	—	—
	UL94V-0	In-Line	172164-1	172156-14	Tin <sup>6</sup>	—	—	—	1-794374-0
2	UL94V-2	In-Line	172336-1	172328-12	Duplex <sup>5</sup>	—	—	—	—
			172807-1 <sup>3</sup>	172343-14	—	—	—	—	—
			173956-1 <sup>3</sup>	172807-1 <sup>3</sup>	—	—	—	—	—
	UL94V-0	In-Line	172165-1	172157-12	Tin <sup>6</sup>	1-770166-0	1-770872-0	—	1-770966-0
			794894-1 <sup>7</sup>	172233-14	Duplex <sup>5</sup>	1-770166-1	1-770872-1	—	1-770966-1
			172808-1 <sup>3</sup>	794896-1 <sup>2,7</sup>	Tin/Duplex	1-770166-1	1-770872-1	—	1-770966-1
3	UL94V-2	In-Line	172337-1	172329-12	—	—	—	—	
			173957-1 <sup>3</sup>	172344-14	Duplex <sup>5</sup>	—	—	—	—
	UL94V-0	In-Line	172166-1	172158-12	Tin	1-770170-0	1-770873-0	—	1-770967-0
			172809-1 <sup>3</sup>	172234-14	Duplex <sup>5</sup>	1-770170-1	1-770873-1	—	1-770967-1
4	UL94V-2	Dual Row	172338-1	172809-1 <sup>3</sup>	—	—	—	—	
			173958-1 <sup>3</sup>	172330-12	—	—	—	—	
	UL94V-0	Dual Row	172167-1	172159-12	Tin	1-770174-0	1-770874-0	1-794325-0	1-770968-0
			794805-1 <sup>7</sup>	794939-1 <sup>2,7</sup>	Duplex <sup>5</sup>	1-770174-1	1-770874-1	1-794325-1	1-770968-1
6	UL94V-2	Dual Row	172339-1	172331-12	Tin/Duplex	1-770174-1	1-770874-1	—	1-770968-1
			172168-1	172160-12	—	—	—	—	—
8	UL94V-0	Dual Row	770579-1	794940-1 <sup>2,7</sup>	Tin	1-770178-0	1-770875-0	1-794326-0	1-770969-0
			794821-1 <sup>7</sup>	794941-1 <sup>2,7</sup>	Duplex <sup>5</sup>	1-770178-1	1-770875-1	1-794326-1	1-770969-1
9	UL94V-2	Matrix	172340-1	172332-1 <sup>2</sup>	Tin/Duplex	1-770178-1	1-770875-1	—	1-770969-1
			172169-1	172161-1 <sup>2</sup>	—	—	—	—	—
10	UL94V-0	Dual Row	770580-1	794942-1 <sup>2,7</sup>	Tin	1-794065-0	1-794073-0	1-794327-0	1-770970-0
			794781-1 <sup>7</sup>	794943-1	Duplex <sup>5</sup>	1-794065-1	1-794073-1	1-794327-1	1-770970-1
12	UL94V-2	Matrix	172341-1	172333-1 <sup>2</sup>	Tin/Duplex	1-794065-1	1-794073-1	—	1-770970-1
			172170-1	172162-1 <sup>2</sup>	—	—	—	—	—
	UL94V-0	Dual Row	770581-1	—	Tin	1-770182-0	1-770876-0	1-794432-0	—
			770582-1	—	Duplex <sup>5</sup>	1-770182-1	1-770876-1	1-794432-1	—
14	UL94V-2	Matrix	172342-1	172334-1 <sup>2</sup>	Tin	1-770743-0	1-770858-0	1-794328-0	1-770971-0
			172171-1	172163-1 <sup>2</sup>	Duplex <sup>5</sup>	1-770743-1	1-770858-1	1-794328-1	1-770971-1
16	UL94V-0	Dual Row	770583-1	—	Tin/Duplex	1-770743-1	1-770858-1	—	1-770971-1
			770584-1	—	—	—	—	—	—
18	UL94V-2	Matrix	172342-1	172334-1 <sup>2</sup>	Tin	1-770186-0	1-794040-0	1-794329-0	—
			172170-1	172162-1 <sup>2</sup>	Duplex <sup>5</sup>	1-770186-1	1-794040-1	1-794329-1	—
20	UL94V-0	Dual Row	770585-1	—	Tin	1-794066-0	1-770621-0	—	1-770972-0
			770586-1	—	Duplex <sup>5</sup>	1-794066-1	1-770621-1	—	1-770972-1
22	UL94V-2	Matrix	172342-1	172334-1 <sup>2</sup>	Tin	1-794067-0	1-794074-0	—	1-770973-0
			172171-1	172163-1 <sup>2</sup>	Duplex <sup>5</sup>	1-794067-1	1-794074-1	—	1-770973-1
24	UL94V-0	Dual Row	770587-1	—	—	—	—	—	—
			770588-1	—	Tin	1-770190-0	1-770859-0	1-794330-0	—
26	UL94V-2	Matrix	172342-1	172334-1 <sup>2</sup>	Duplex <sup>5</sup>	1-770190-1	1-770859-1	1-794330-1	—
			172171-1	172163-1 <sup>2</sup>	Tin	1-794068-0	1-794075-0	—	1-770974-0
28	UL94V-0	Dual Row	770589-1	—	Duplex <sup>5</sup>	1-794068-1	1-794075-1	—	1-770974-1
			770590-1	—	Tin	1-794069-0	1-794076-0	—	1-794105-0
30	UL94V-2	Matrix	172342-1	172334-1 <sup>2</sup>	Duplex <sup>5</sup>	1-794069-1	1-794076-1	—	1-794105-1
			172171-1	172163-1 <sup>2</sup>	Tin	1-794070-0	1-794077-0	—	1-794106-0
32	UL94V-0	Dual Row	770585-1	—	Duplex <sup>5</sup>	1-794070-1	1-794077-1	—	1-794106-1
			770586-1	—	Tin	1-794071-0	1-794078-0	—	1-794107-0
34	UL94V-2	Matrix	172342-1	172334-1 <sup>2</sup>	Duplex <sup>5</sup>	1-794071-1	1-794078-1	—	1-794107-1
			172171-1	172163-1 <sup>2</sup>	Tin	1-794072-0	1-794079-0	—	1-794108-0
36	UL94V-0	Dual Row	770587-1	—	Duplex <sup>5</sup>	1-794072-1	1-794079-1	—	1-794108-1
			770588-1	—	—	—	—	—	—

<sup>1</sup>Mini-Universal MATE-N-LOK plug and cap housings accept pin or socket contacts. Use the appropriate contacts in the plug housing as required by the mating connector. All **Plugs** are **free-hanging** and **Caps** are **free-hanging** or **panel mount**, unless otherwise noted.

<sup>2</sup>Panel mount only.

<sup>3</sup>Hermaphroditic: Mates to itself.

<sup>4</sup>Free-hanging only.

<sup>5</sup>Duplex Finish — Plated with .000030 [.000762] min. gold in mating area and matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

<sup>6</sup>Tin Finish — Plated with .000150 [.00381] min. tin over .000050 [.00127] min. nickel underplate on entire contact.

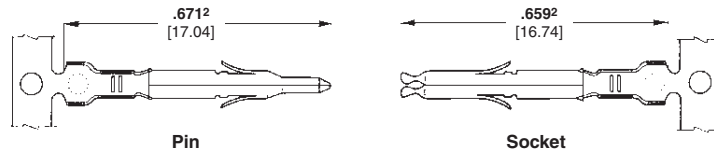
<sup>7</sup>For Splash-Proof Sealing.

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

**Mini-Universal MATE-N-LOK Connectors (Continued)**

**Contacts**

Pin diameter .039 [0.99]



**Material**

Brass or Phosphor bronze  
Stock Thickness .008 [0.20]

These contacts are to be used in Mini-Universal MATE-N-LOK Plug or Cap housings only.

**Related Product Data**

- Product Specifications**  
108-1542 Mini-Universal MATE-N-LOK Connectors  
108-1543 Mini-Universal MATE-N-LOK Headers

**Application Specification**

114-16017 Mini-Universal MATE-N-LOK Connectors

**Performance Characteristics**— pages 83-84

**Housings** — pages 87-89

**Technical Documents**—pages 83 and 205-206

**Application Tooling**—pages 207-210

Wire Size Range AWG [mm <sup>2</sup> ]	Ins. Dia. Range	Material and Finish	Contact Part Numbers				HDM Applicator Part No.	Hand Tool Part No.
			Pin		Socket			
			Strip Form	Loose Pieces	Strip Form	Loose Pieces		
30-26 [.05-.12]	.035-.050 [.889-1.27]	Brass, Pre-tin	770835-1	794059-1	770834-1	794058-1	567418-1 <sup>3</sup>	90717-2
		Phos. Brz., Pre-tin	—	—	770834-4	—	567418-2 <sup>3</sup>	
		Brass, Duplex <sup>1</sup>	1-770835-0	1-794059-0	1-770834-0	1-794058-0	567418-3 <sup>3</sup>	
26-22 [.12-.3]	.047-.069 [1.19-1.75]	Brass, Pre-tin	770901-1	770985-1	770902-1	770986-1	567066-3 <sup>4</sup>	91529-1
		Phos. Brz., Pre-tin	—	—	770902-4	—	567066-4 <sup>4</sup>	
		Brass, Duplex <sup>1</sup>	1-770901-0	1-770985-0	1-770902-0	1-770986-0	567066-5 <sup>4</sup>	
22-18 [.3-.8] or 22 x (2) [.3]	.059-.094 [1.50-2.39] or .067 x (2) [3.38]	Brass, Pre-tin	770903-1	770987-1	770904-1	770988-1	567067-1 <sup>3</sup>	91522-1
		Phos. Brz., Pre-tin	—	—	770904-4	—	567067-2 <sup>3</sup>	
		Brass, Duplex <sup>1</sup>	1-770903-0	1-770987-0	1-770904-0	1-770988-0	567067-3 <sup>3</sup>	
20-16 [.5-1.2] or 20 x (2) [.5]	.079-.126 [2.01-3.20] or .075 x (2) [1.91]	Brass, Pre-tin	794406-1 <sup>2</sup>	171638-1 <sup>2</sup>	794407-1 <sup>2</sup>	171639-1 <sup>2</sup>	680582-2 <sup>3</sup>	91536-1
		Phos. Brz., Pre-tin	—	—	794407-4 <sup>2</sup>	—	680582-3 <sup>3</sup>	
		Brass, Duplex <sup>1</sup>	1-794406-0 <sup>2</sup>	—	1-794407-0 <sup>2</sup>	—	680582-3 <sup>3</sup>	
		Phos. Brz., Duplex <sup>1</sup>	—	—	1-770904-1	—		

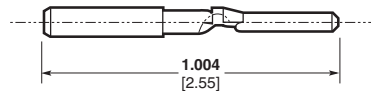
- <sup>1</sup> Duplex Finish — Plated with .000030 [.000762] min. gold in mating area and .000100 [.00254] min. tin in crimping area over .000050 [.00127] min. nickel underplate on entire contact.  
<sup>2</sup> .671 [17.04] and .659 [16.74] dimensions are .689 [17.50] for indicated part numbers.  
<sup>3</sup> HDM Applicator part number ending in -1 is used on AMPOMATOR CLS Machine with T or G Terminators, -2 is used on AMP-O-LECTRIC Model K Machine, -3 is used on AMP-O-ELECTRIC Model G Machine. See pages 207-210 for further information.  
<sup>4</sup> HDM Applicator part number ending in -3 is used on AMPOMATOR CLS Machine with T or G Terminators, -4 is used on AMP-O-LECTRIC Model K Machine, -5 is used on AMP-O-LECTRIC Model G Machine. See pages 207-210 for further information.

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

**Keying Plug**

**Material**

UL94V-0 Nylon, white color

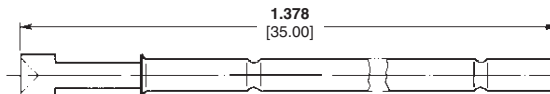


**Part Number**  
174670-1

**Test Probe Contact**

**Material and Finish**

Phosphor bronze, nickel plated



**Part Number**  
172971-1

**Notes:**

1. The test probe is inserted into the housing in the same direction as indicated by the **arrow** shown to the right.
2. The test probe can be used in the Cap or Plug Housing.
3. Test probes are supplied unassembled.



**Contact Extraction Tool**  
No. 189727-1  
IS 408-4118



**Contact Insertion Tool**  
(For inserting contacts applied to small diameter wire)  
No. 91002-1  
IS 408-7347

Mini-Universal MATE-N-LOK Connectors .163 [4.14] Centerline High Density

**Mini-Universal MATE-N-LOK Connectors (Continued)**

**Housings**

**Free-Hanging or Panel Mount**

.163 [4.14] Centerline spacing

**Related Product Data**

**Product Specifications**

108-1542 Mini-Universal MATE-N-LOK Connectors

108-1543 Mini-Universal MATE-N-LOK Headers

108-5151 Mini-Universal MATE-N-LOK Connectors (UL94V-2)

108-5138 Mini-Universal MATE-N-LOK Connectors (UL94V-0)

**Performance Characteristics**— pages 83-84

**Contacts** — page 86

**Keying Plug** — page 86

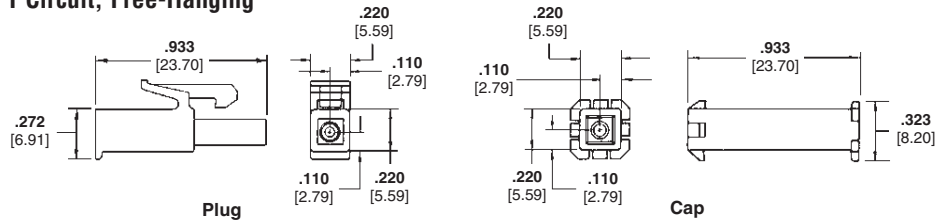
**Test Probe Contact** — page 86

**Panel Cutout Recommendations**— page 89

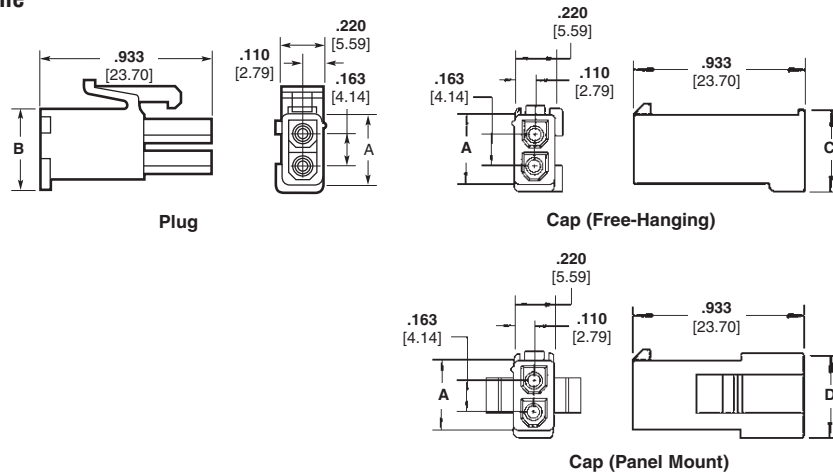
**Technical Documents**— pages 83 and 205-206

**Mating Headers** — pages 90-92

**1 Circuit, Free-Hanging**



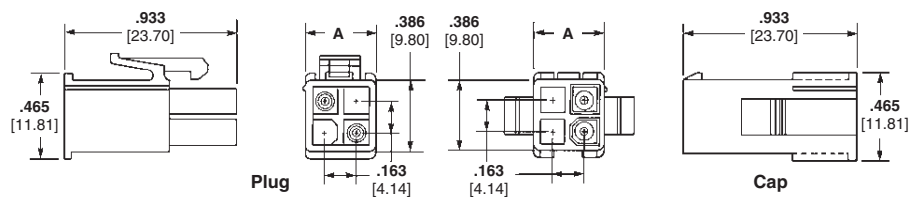
**2 and 3 Circuit, In-Line**



Number of Circuits	Dimensions				Housing Part Numbers <sup>1</sup>					
					UL94V-0 Nylon, White Color			UL94V-2 Nylon, Natural Color		
	A	B	C	D	Plug	Cap Panel Mount	Cap Free-Hanging	Plug	Cap Panel Mount	Cap Free-Hanging
1	—	—	—	—	172164-1	—	172156-1	172335-1	—	172327-1
2	.386 9.80	.425 10.79	.488 12.39	.464 11.78	172165-1	172157-1	172233-1	172336-1	172328-1	172343-1
3	.551 14.00	.591 15.01	.654 16.61	.630 16.00	172166-1	172158-1	172234-1	172337-1	172329-1	172344-1

Note: All part numbers are RoHS Compliant.

**4 and 6 Circuit, Dual Row**



Number of Circuits	A Dim.	Housing Part Numbers <sup>1</sup>			
		UL94V-0 Nylon, White Color		UL94V-2 Nylon, Natural Color	
		Plug	Cap	Plug	Cap
4	.386 9.80	172167-1	172159-1	172338-1	172330-1
6	.551 14.00	172168-1	172160-1	172339-1	172331-1

<sup>1</sup>Housing part numbers shown in both charts (above) are also available in other colors: Red, Green, Blue, Black. To order connectors in these colors use the appropriate dash numbers as follows: Red 1-XXXXXX-2, Green 1-XXXXXX-5, Blue 1-XXXXXX-6, Black 1-XXXXXX-9

Note: All part numbers are RoHS Compliant.

**Mini-Universal MATE-N-LOK Connectors (Continued)**

**Housings**

.163 [4.14] Centerline spacing

**Related Product Data**

- Product Specifications**  
 108-1542 Mini-Universal MATE-N-LOK Connectors  
 108-1543 Mini-Universal MATE-N-LOK Headers  
 108-5151 Mini-Universal MATE-N-LOK Connectors (UL94V-2)  
 108-5138 Mini-Universal MATE-N-LOK Connectors (UL94V-0)

**Performance Characteristics**—  
pages 83-84

**Contacts** — page 86

**Keying Plug** — page 86

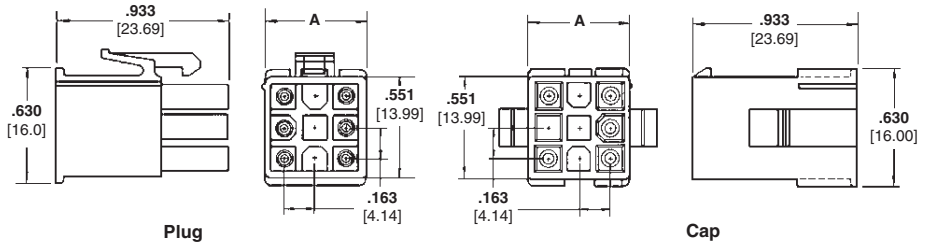
**Test Probe Contact** — page 86

**Panel Cutout Recommendations**—  
page 89

**Technical Documents**—pages 83  
and 205-206

**Mating Headers** — pages 90-92

**9, 12 and 15 Circuit,  
Free-Hanging or Panel Mount, Matrix**

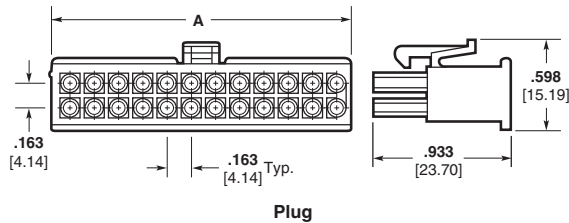


Number of Circuits	A Dim.	Housing Part Numbers <sup>1</sup>			
		UL94V-0 Nylon, White Color		UL94V-2 Nylon, Natural Color	
		Plug	Cap	Plug	Cap
9	.551 13.99	172169-1	172161-1	172340-1	172332-1
12	.716 18.19	172170-1	172162-1	172341-1	172333-1
15	.882 22.40	172171-1	172163-1	172342-1	172334-1

<sup>1</sup>Housing part numbers shown in chart are also available in other colors: Red, Green, Blue, Black. To order connectors in these colors use the appropriate dash numbers as follows: Red 1-XXXXXX-2, Green 1-XXXXXX-5, Blue 1-XXXXXX-6, Black 1-XXXXXX-9

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

**8 thru 24 Circuit,  
Free-Hanging, Dual Row**



Number of Circuits	A Dim.	Part Number UL94V-0 Nylon, White Color Plug
8	.714 18.14	770579-1
10	.877 22.28	770580-1
12	1.040 26.42	770581-1
14	1.203 30.56	770582-1
16	1.366 34.70	770583-1
18	1.529 38.84	770584-1
20	1.692 42.98	770585-1
22	1.855 47.12	770586-1
24	2.018 51.26	770587-1

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

Mini-Universal MATE-N-LOK Connectors .163 [4.14] Centerline

High Density

**Mini-Universal MATE-N-LOK Connectors (Continued)**

**Housings  
Hermaphroditic  
Free-Hanging**

**2, 3 and 4 Circuit**

**Related Product Data**

**Product Specifications**

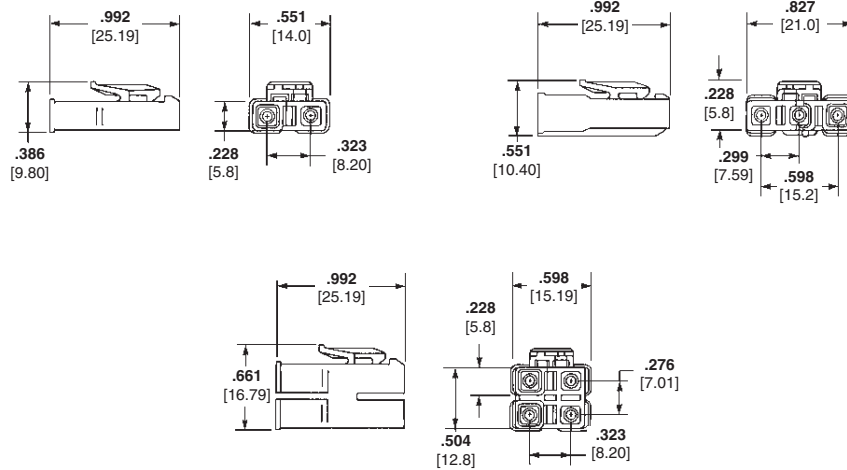
- 108-1542 Mini-Universal MATE-N-LOK Connectors
- 108-1543 Mini-Universal MATE-N-LOK Headers
- 108-5151 Mini-Universal MATE-N-LOK Connectors (UL94V-2)
- 108-5138 Mini-Universal MATE-N-LOK Connectors (UL94V-0)

**Performance Characteristics**—  
pages 83-84

**Contacts** — page 86

**Cap Housings** — pages 87-89

**Technical Documents**—pages 83  
and 205-206



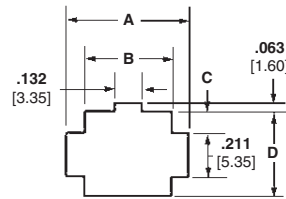
Number of Circuits	Part Numbers	
	UL94V-2 Nylon, Natural Color	UL94V-0 Nylon, White Color
2	172807-1	173956-1
3	172808-1	173957-1
4	172809-1	173958-1

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

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

**Recommended Cap  
Housing Panel Cutouts**

View is from cap entry side  
Recommended Panel  
Thickness .031—.079 [1.79 – 2.01]



Number of Circuits	Dimensions			
	A	B	C	D
2	.421 10.69	.242 6.15	.098 2.49	.407 10.3
3	.421 10.69	.242 6.15	.181 4.60	.573 14.55
4	.587 14.91	.407 10.34	.098 2.49	.407 10.3
6	.752 19.10	.573 14.55	.098 2.49	.407 10.3
9	.752 19.10	.573 14.55	.181 4.60	.573 14.55
12	.917 23.29	.738 18.75	.181 4.60	.573 14.55
15	1.080 27.43	.904 22.96	.181 4.60	.573 14.55

**Mini-Universal MATE-N-LOK Connectors (Continued)**

**Vertical PC Board  
Pin Headers**

.163 [4.14] Centerline spacing

**Material**

**Housing**—Nylon, white

**Flammability Rating**—UL94V-0

**Contacts**—Brass

Solder tail diameter .039 [1.00]

**Related Product Data**

**Product Specifications**

108-1542 Mini-Universal MATE-N-LOK Connectors

108-1543 Mini-Universal MATE-N-LOK Headers

108-5151 Mini-Universal MATE-N-LOK Connectors (UL94V-2)

108-5138 Mini-Universal MATE-N-LOK Connectors (UL94V-0)

**Performance Characteristics**—pages 83-84

**Recommended PC Board Hole Layouts**—page 93

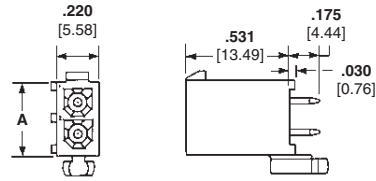
**Technical Documents**—pages 83 and 205-206

**Mating Connectors**

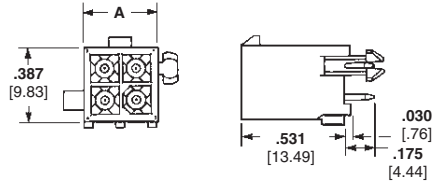
**Mini-Universal MATE-N-LOK**  
Plug Housings—pages 87-89

**Mini-Universal MATE-N-LOK 2**  
Plug Housings—pages 101-102

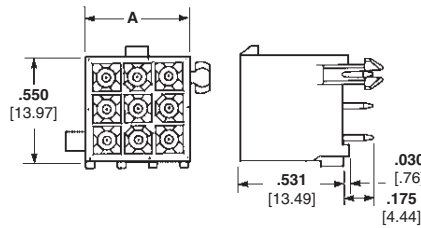
**2 and 3 Circuit, In-Line**



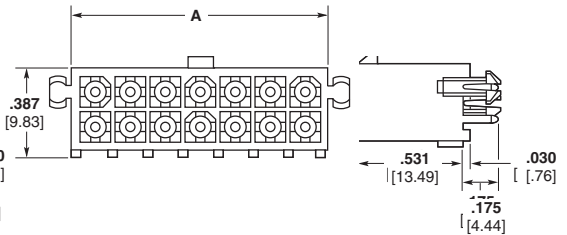
**4, 6, 8, 10 and 12 Circuit, Dual Row**



**9, 12 and 15 Circuit, Matrix**



**14, 16, 18, 20, 22 and 24 Circuit, Dual Row**



Number of Circuits	Style	A Dim.	Pin Finish	Vertical Pin Header Part Numbers		Mates with Plug Housing Part Number (Using Socket Contact)	
				With Drain Holes	Without Drain Holes	Mini-Universal MATE-N-LOK	Mini-Universal MATE-N-LOK 2
2	In-Line	.387 9.83	Tin <sup>1</sup>	1-770166-0	1-770872-0	172165-1	794184-1
			Duplex <sup>2</sup>	1-770166-1	1-770872-1		
3	In-Line	.550 13.97	Tin <sup>1</sup>	1-770170-0	1-770873-0	172166-1	794186-1
			Duplex <sup>2</sup>	1-770170-1	1-770873-1		
4	Dual Row	.387 9.83	Tin <sup>1</sup>	1-770174-0	1-770874-0	172167-1	794188-1
			Duplex <sup>2</sup>	1-770174-1	1-770874-1		
6	Dual Row	.550 13.97	Tin <sup>1</sup>	1-770178-0	1-770875-0	172168-1	794190-1
			Duplex <sup>2</sup>	1-770178-1	1-770875-1		
8	Dual Row	.713 18.11	Tin <sup>1</sup>	1-794065-0	1-794073-0	770579-1	794192-1
			Duplex <sup>2</sup>	1-794065-1	1-794073-1		
9	Matrix	.551 14.00	Tin <sup>1</sup>	1-770182-0	1-770876-0	172169-1	794194-1
			Duplex <sup>2</sup>	1-770182-1	1-770876-1		
10	Dual Row	.877 22.28	Tin <sup>1</sup>	1-770743-0	1-770858-0	770580-1	794196-1
			Duplex <sup>2</sup>	1-770743-1	1-770858-1		
12	Dual Row	1.039 26.39	Tin <sup>1</sup>	1-794066-0	1-770621-0	770581-1	794198-1
			Duplex <sup>2</sup>	1-794066-1	1-770621-1		
12	Matrix	.713 18.11	Tin <sup>1</sup>	1-770186-0	1-794040-0	172170-1	794200-1
			Duplex <sup>2</sup>	1-770186-1	1-794040-1		
14	Dual Row	1.202 30.53	Tin <sup>1</sup>	1-794067-0	1-794074-0	770582-1	794202-1
			Duplex <sup>2</sup>	1-794067-1	1-794074-1		
15	Matrix	.877 22.28	Tin <sup>1</sup>	1-770190-0	1-770859-0	172171-1	794204-1
			Duplex <sup>2</sup>	1-770190-1	1-770859-1		
16	Dual Row	1.365 34.67	Tin <sup>1</sup>	1-794068-0	1-794075-0	770583-1	794206-1
			Duplex <sup>2</sup>	1-794068-1	1-794075-1		
18	Dual Row	1.528 38.81	Tin <sup>1</sup>	1-794069-0	1-794076-0	770584-1	794208-1
			Duplex <sup>2</sup>	1-794069-1	1-794076-1		
20	Dual Row	1.691 42.95	Tin <sup>1</sup>	1-794070-0	1-794077-0	770585-1	794210-1
			Duplex <sup>2</sup>	1-794070-1	1-794077-1		
22	Dual Row	1.854 47.09	Tin <sup>1</sup>	1-794071-0	1-794078-0	770586-1	794212-1
			Duplex <sup>2</sup>	1-794071-1	1-794078-1		
24	Dual Row	2.017 51.23	Tin <sup>1</sup>	1-794072-0	1-794079-0	770587-1	794214-1
			Duplex <sup>2</sup>	1-794072-1	1-794079-1		

<sup>1</sup> Tin Finish—Plated with .000150 [.00381] min. tin over .000050 [.00127] min. nickel underplate on entire contact.  
<sup>2</sup> Duplex Finish—Plated with .000030 [.000762] min. gold in mating area and matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

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

High Density

Mini-Universal MATE-N-LOK Connectors  
.163 [4.14] Centerline



**Mini-Universal MATE-N-LOK Connectors** (Continued)

**Vertical PC Board  
Blindmate Pin Headers**

.163 [4.14] Centerline spacing

**Material**

**Housing**—Nylon, white

**Flammability Rating**—UL94V-0

**Contacts**—Brass  
Solder tail diameter .039 [1.00]

**Related Product Data**

**Product Specifications**  
108-1693 Mini-Universal MATE-N-LOK 2  
Connectors

108-1694 Mini-Universal MATE-N-LOK 2  
Headers

**Performance Characteristics**—  
pages 83-84

**Recommended PC Board Hole  
Layouts**—page 93

**Technical Documents**—pages 83  
and 205-206

**Mating Connectors**

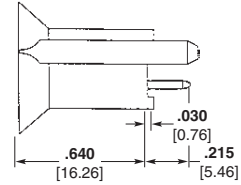
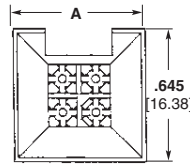
**Mini-Universal MATE-N-LOK**

Plug Housings — pages 87-89

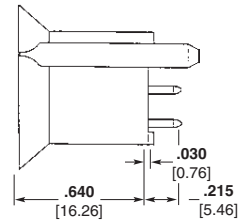
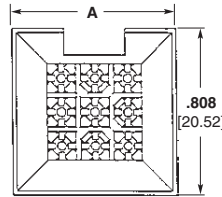
**Mini-Universal MATE-N-LOK 2**

Plug Housings — pages 101-102

**4, 6, 8 and 10 Circuit,  
Dual Row**



**9, 12 and 15 Circuit,  
Matrix**



Number of Circuits	Style	A Dim.	Pin Finish	Pin Header Part Numbers With Drain Holes	Mates with Plug Housing Part Number (Using Socket Contacts)	
					Mini-Universal MATE-N-LOK	Mini-Universal MATE-N-LOK 2
4	Dual Row	.645 16.38	Tin <sup>1</sup>	1-794325-0	172167-1	794188-1
			Duplex <sup>2</sup>	1-794325-1		
6	Dual Row	.808 20.52	Tin <sup>1</sup>	1-794326-0	172168-1	794190-1
			Duplex <sup>2</sup>	1-794326-1		
8	Dual Row	.971 24.66	Tin <sup>1</sup>	1-794327-0	770579-1	794192-1
			Duplex <sup>2</sup>	1-794327-1		
9	Matrix	.808 20.52	Tin <sup>1</sup>	1-794432-0	172169-1	794194-1
			Duplex <sup>2</sup>	1-794432-1		
10	Dual Row	1.134 28.80	Tin <sup>1</sup>	1-794328-0	770580-1	794196-1
			Duplex <sup>2</sup>	1-794328-1		
12	Matrix	.971 24.66	Tin <sup>1</sup>	1-794329-0	172170-1	794200-1
			Duplex <sup>2</sup>	1-794329-1		
15	Matrix	1.134 28.80	Tin <sup>1</sup>	1-794330-0	172171-1	794204-1
			Duplex <sup>2</sup>	1-794330-1		

<sup>1</sup> Tin Finish — Plated with .000150 [.00381] min. tin over .000050 [.00127] min. nickel underplate on entire contact.

<sup>2</sup> Duplex Finish — Plated with .000030 [.000762] min. gold in mating area and matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

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

High Density

Mini-Universal MATE-N-LOK Connectors  
.163 [4.14] Centerline

**Mini-Universal MATE-N-LOK Connectors (Continued)**

**Right-Angle PC Board  
Pin Headers**

.163 [4.14] Centerline spacing

**Material**

**Housing**— Nylon, white color

**Flammability Rating**— UL94V-0

**Contacts**— Brass

Solder tail diameter .039 [1.00]

**Related Product Data**

**Product Specification**

108-1694 Mini-Universal  
MATE-N-LOK 2 Headers

**Performance Characteristics**—  
pages 83-84

**Recommended PC Board Hole  
Layouts**—page 93

**Technical Documents**—pages 83  
and 205-206

**Mating Connectors**

**Mini-Universal MATE-N-LOK**

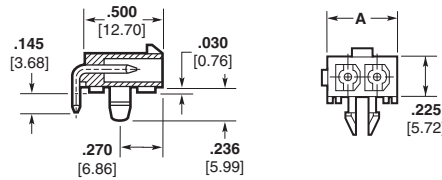
Plug Housings — pages 87-89

**Mini-Universal MATE-N-LOK 2**

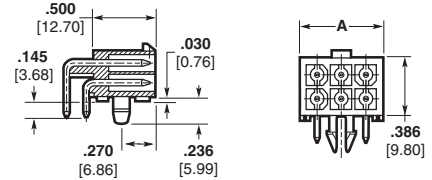
Plug Housings — pages 101-102

**With Board Lock Feature**

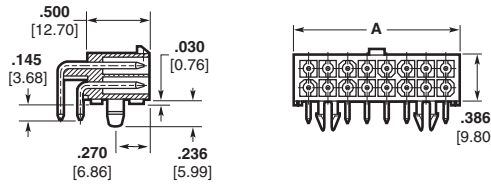
**1, 2 and 3 Circuit, In-Line**



**4, 6, 8, 10 and 12 Circuit, Dual Row**



**14, 16, 18, 20, 22 and 24 Circuit, Dual Row**



Number of Circuits	Style	A Dim.	Pin Finish	Pin Header Part Number With Board Lock	Mates with Plug Housing Part Number (Using Socket Contacts)	
					Mini-Universal MATE-N-LOK	Mini-Universal MATE-N-LOK 2
1	—	.225 5.72	Tin <sup>1</sup>	1-794374-0	172164-1	—
			Duplex <sup>2</sup>	1-794374-1		
2	In-Line	.388 9.86	Tin <sup>1</sup>	1-770966-0	172165-1	794184-1
			Duplex <sup>2</sup>	1-770966-1		
3	In-Line	.551 14.00	Tin <sup>1</sup>	1-770967-0	172166-1	794186-1
			Duplex <sup>2</sup>	1-770967-1		
4	Dual Row	.388 9.86	Tin <sup>1</sup>	1-770968-0	172167-1	794188-1
			Duplex <sup>2</sup>	1-770968-1		
6	Dual Row	.551 14.00	Tin <sup>1</sup>	1-770969-0	172168-1	794190-1
			Duplex <sup>2</sup>	1-770969-1		
8	Dual Row	.714 18.14	Tin <sup>1</sup>	1-770970-0	770579-1	794192-1
			Duplex <sup>2</sup>	1-770970-1		
10	Dual Row	.877 22.28	Tin <sup>1</sup>	1-770971-0	770580-1	794196-1
			Duplex <sup>2</sup>	1-770971-1		
12	Dual Row	1.040 26.42	Tin <sup>1</sup>	1-770972-0	770581-1	794198-1
			Duplex <sup>2</sup>	1-770972-1		
14	Dual Row	1.203 30.56	Tin <sup>1</sup>	1-770973-0	770582-1	794202-1
			Duplex <sup>2</sup>	1-770973-1		
16	Dual Row	1.366 34.70	Tin <sup>1</sup>	1-770974-0	770583-1	794206-1
			Duplex <sup>2</sup>	1-770974-1		
18	Dual Row	1.529 38.84	Tin <sup>1</sup>	1-794105-0	770584-1	794208-1
			Duplex <sup>2</sup>	1-794105-1		
20	Dual Row	1.692 42.98	Tin <sup>1</sup>	1-794106-0	770585-1	794210-1
			Duplex <sup>2</sup>	1-794106-1		
22	Dual Row	1.855 47.12	Tin <sup>1</sup>	1-794107-0	770586-1	794212-1
			Duplex <sup>2</sup>	1-794107-1		
24	Dual Row	2.018 51.26	Tin <sup>1</sup>	1-794108-0	770587-1	794214-1
			Duplex <sup>2</sup>	1-794108-1		

<sup>1</sup>Tin Finish — Plated with .000150 [.00381] min. tin over .000050 [.00127] min. nickel underplate on entire contact.

<sup>2</sup>Duplex Finish — Plated with .000030 [.000762] min. gold in mating area and matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

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

High Density

Mini-Universal MATE-N-LOK Connectors  
.163 [4.14] Centerline

**Mini-Universal MATE-N-LOK Connectors (Continued)**

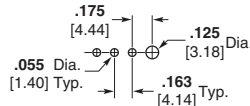
**Recommended PC Board  
Hole Layouts for Vertical  
and Blindmate Headers**

.062 [1.57] thick board, tolerances  
non-accumulative

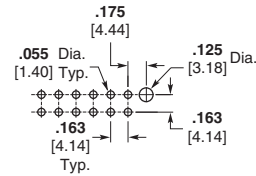
**Related Product Data**

**Vertical Headers**—pages 90-91

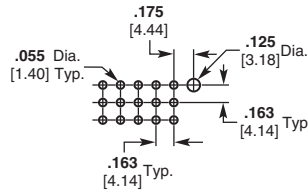
**2 and 3 Circuit, In-Line**



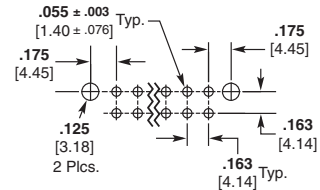
**4, 6, 8, 10 and 12 Circuit, Dual Row**



**9, 12 and 15 Circuit, Matrix**



**14, 16, 18, 20, 22 and 24 Circuit, Dual Row**



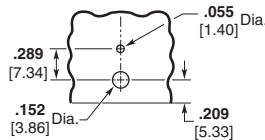
**Recommended PC Board  
Hole Layouts for Right-  
Angle Headers**

.062 [1.57] thick board, tolerances  
non-accumulative

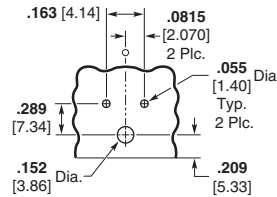
**Related Product Data**

**Right-Angle Headers**—page 92

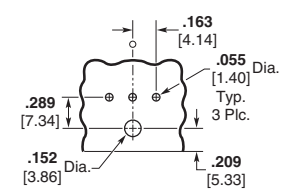
**1 Circuit**



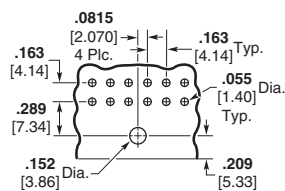
**2 Circuit, In-Line**



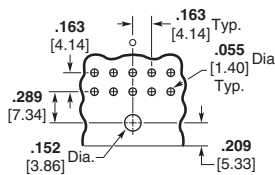
**3 Circuit, In-Line**



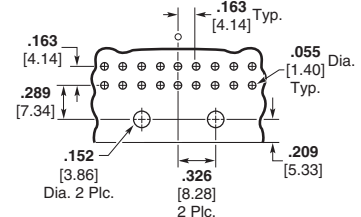
**4, 8 and 12 Circuit, Dual Row**



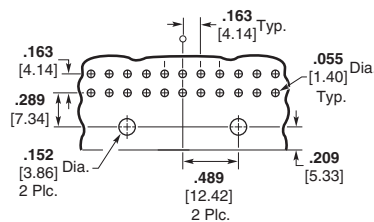
**6 and 10 Circuit, Dual Row**



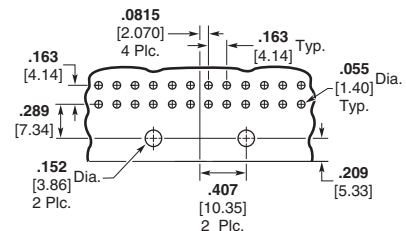
**14 and 18 Circuit, Dual Row**



**22 Circuit, Dual Row**



**16, 20 and 24 Circuit, Dual Row**



High Density

Mini-Universal MATE-N-LOK Connectors  
.163 [4.14] Centerline

**Mini-Universal MATE-N-LOK Connectors (Continued)**

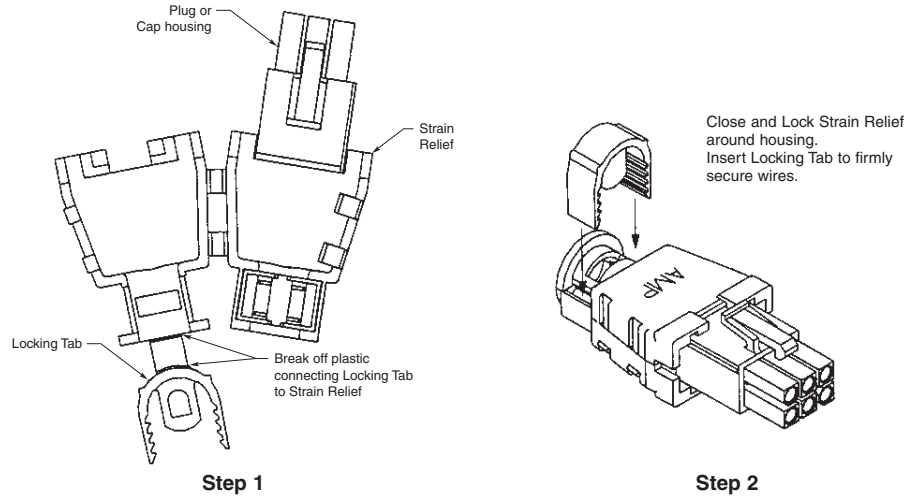
**Strain Reliefs for Plug or Cap Housings**

**Related Product Data**

**Housings**—pages 87-89  
**Technical Documents**—pages 83 and 205-206

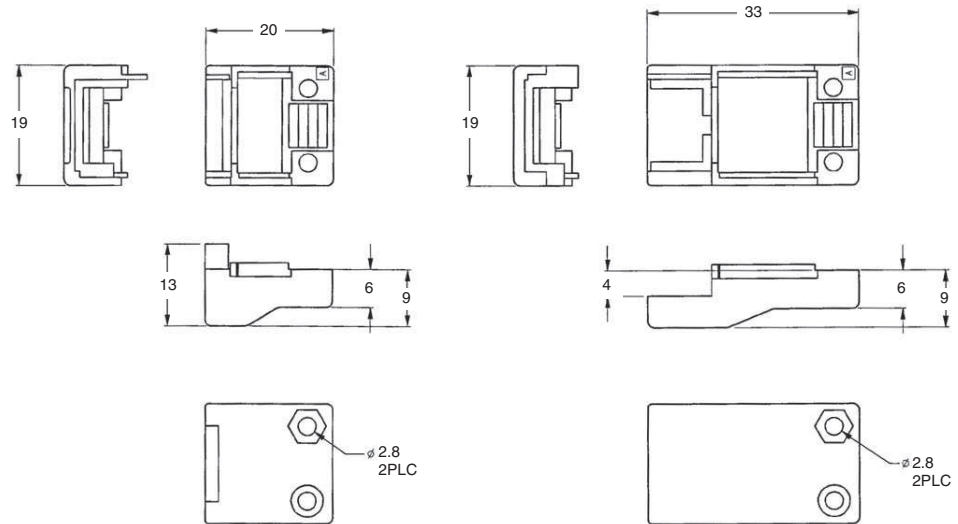
These Strain Reliefs may also be used with AMP-DUAC Receptacle housings on page 126.

**6 and 8 Circuit**



Style	Number of Circuits	A Dim.	Wire Bundle Dia. Range	Part Numbers	
				UL94V-0 Nylon, White Color	Use With
Dual Row	6	.920 23.36	.165-.220 4.19-5.59	794423-1	172168-1 172160-1 172339-1 172331-1
	8	.920 23.36	.180-.245 4.57-6.22	794370-1	770979-1

**9 Circuit**



Style	Number of Circuits	Part Numbers		
		Part Number	Use With	
Matrix	9	<b>Plug</b>	316454-1	172169-1 172340-1
		<b>Cap</b>	316455-1	172161-1 172332-1

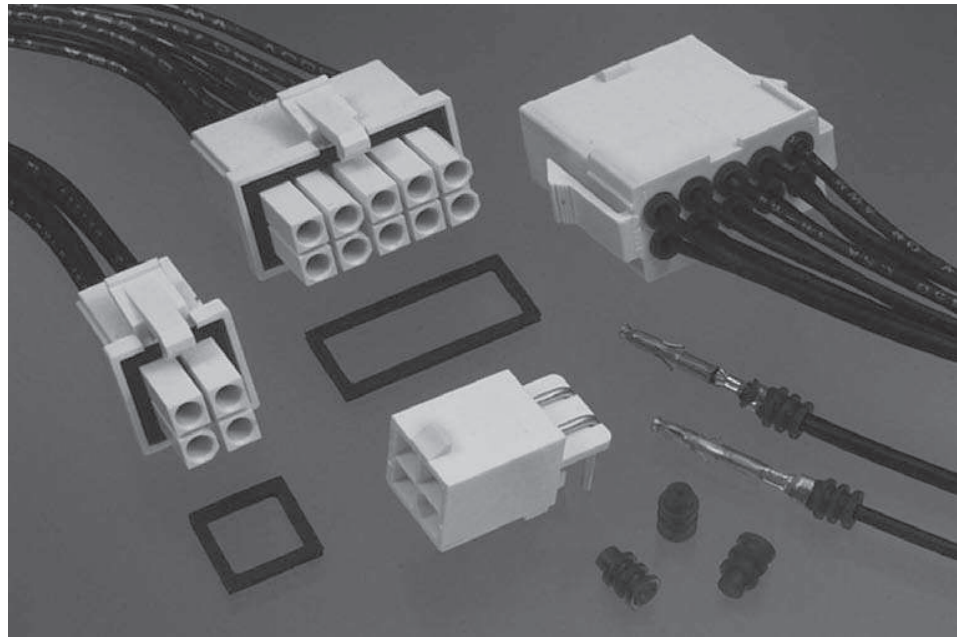
**Note:** All part numbers are RoHS Compliant.

High Density  
Mini-Universal MATE-N-LOK Connectors  
.163 [4.14] Centerline

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

### Product Facts — Sealed Connector System

- Splash-proof design allows use in areas where high humidity, intermittent liquid splashing or foam-in applications require a sealed connector for improved electrical performance
- Wire-to-wire and wire-to-board
- Dual row, 2 to 10 positions (even only) and 16 positions
- Mates with all standard Mini-Universal MATE-N-LOK connector housings and pin headers (except Blindmate)
- Positive, polarized keyed and latched orientation to ease application
- Utilizes proven Mini-Universal MATE-N-LOK contacts with existing application tooling
- Tested to Sealing Level of IP56 and IP57 per IEC 60529
- Primarily used in Appliance, Vending and HVAC applications
- Compact, durable housings
- Pins and sockets can be accommodated in the same housings
- Contacts fully protected in the housings. Both pins and sockets can be used on the power supply wiring
- Fully polarized to provide proper plug-to-cap mating incorporating a positive locking mechanism to help prevent accidental disengagement of mated connectors. Also facilitates panel mounting
- Free-hanging or panel mount
- Connectors can be mounted to .031-.079 [0.79-2.00] thick panels
- With seals, contacts accept wire size range 26-18 AWG [.12-.8 mm<sup>2</sup>] with insulation diameter of .040-.083 [1.02-2.11]
- .163 [4.14] centerline spacing
- Not for interrupting current



### Performance Characteristics

The Mini-Universal MATE-N-LOK Connector performance characteristics found on pages 95-96 are based on free-hanging and panel mount connectors, loaded with contacts crimped on stranded wire.

**Low Level Termination Resistance**  
20 milliohms max. total resistance between wire crimps of a mated pin and socket

**Dielectric Withstanding Voltage**—  
1.5 KVAC between adjacent circuits

**Insulation Resistance**—  
1000 megohms minimum between adjacent circuits

**Voltage Rating**—600 V AC or DC

**Contact Retention**—8 lb. min. per contact

**Durability**—20 cycles, mating and unmating

### Technical Documents

#### Product Specifications

- 108-1542-2 Mini-Universal MATE-N-LOK Splash-Proof Seals
- 108-1542 Mini-Universal MATE-N-LOK Connectors
- 108-1543 Mini-Universal MATE-N-LOK Headers

#### Application Specification

- 114-13089 Mini-Universal MATE-N-LOK Sealed Connector

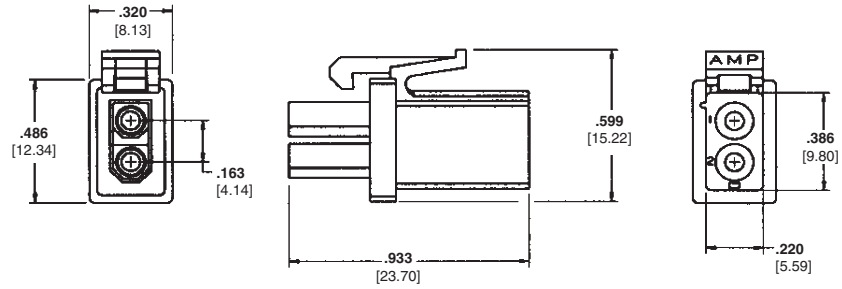
#### Instruction Sheets

- 408-3234 Mini-Universal MATE-N-LOK Connectors
- 411-5105 Mini-Universal MATE-N-LOK Connectors

**Mini-Universal MATE-N-LOK Sealed Connector System (Continued)**

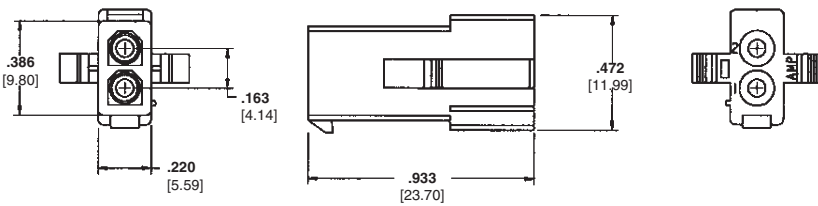
**Plug**

Part Number 794894-1  
(2 position shown)



**Cap**

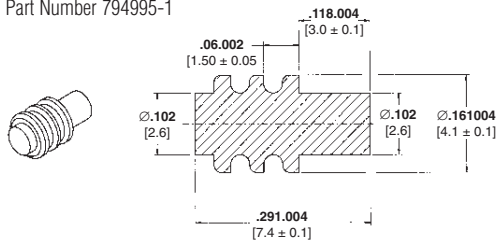
Part Number 794896-1  
(2 position shown)



**Individual Wire Seals**

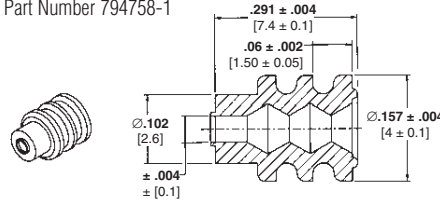
**Single Housing Cavity Plug Seal**

Part Number 794995-1

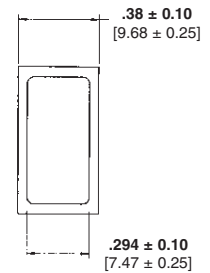


**Single Wire Seal**

Part Number 794758-1



**Interface Seals**



Number of Positions	Interface Seals	Plug for Sealing	Cap for Sealing	Vertical Headers for Sealing	Right Angle Headers for Sealing
2	794772-2	794894-1	794896-1	1-770872-X	1-770966-X
4	794772-4	794805-1	794939-1	1-770874-X	1-770968-X
6	794772-6	794895-1	794940-1	1-770875-X	10770969-X
8	794772-8	794821-1	794941-1	1-794073-X	1-770970-X
10	1-794772-0	794781-1	794942-1	1-770858-X	1-770971-X
16	1-1586362-6	794824-1	—	1-794075-X	1-770974-X

-0 for tin finish, -1 for duplex. See Mini-Universal MATE-N-LOK section for details

**Individual Wire Seal Contacts**

Wire Size Range AWG [mm <sup>2</sup> ]	Ins. Dia. Range	Material and Finish	Contact Part Numbers (for use with Single Wire Seals)				HDM Applicator Part No.	Hand Tool Part No.
			Pin		Socket			
			Strip Form	Loose Piece	Strip Form	Loose Piece		
26-22 [.12-.3]	.040-.060 1.02-1.52	Brass, Pre-tin	770901-1	770985-1	770902-1	770986-1	567066-3 <sup>3</sup>	91529-1
		Brass, Duplex <sup>1</sup>	1-770901-0	1-770985-0	1-770902-0	1-770986-0	567066-4 <sup>3</sup> 567066-5 <sup>3</sup>	
22-18 [.3-.8]	.050-.083 1.27-2.11	Brass, Pre-tin	770903-1	770987-1	770904-1	770988-1	567067-1 <sup>2</sup>	
		Brass, Duplex <sup>1</sup>	1-770903-0	1-770987-0	1-770904-0	1-770988-0	567067-2 <sup>2</sup> 567067-3 <sup>2</sup>	

<sup>1</sup> Duplex Finish — Plated with .000030 [.000762] min. gold in mating area and .000100 [.00254] min. tin in crimping area over .000050 [.00127] min. nickel underplate on entire contact.

<sup>2</sup> HDM Applicator part number ending in -1 is used on AMPOMATOR CLS Machine with T or G Terminators, -2 is used on AMP-O-ELECTRIC Model K Machine, -3 is used on AMP-O-ELECTRIC Model G Machine. See pages 207-210 for further information.

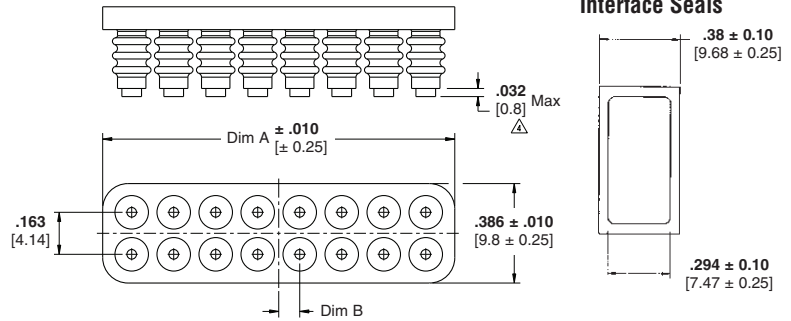
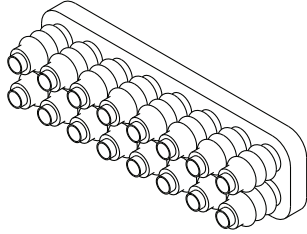
<sup>3</sup> HDM Applicator part number ending in -3 is used on AMPOMATOR CLS Machine with T or G Terminators, -4 is used on AMP-O-ELECTRIC Model K Machine, -5 is used on AMP-O-ELECTRIC Model G Machine. See pages 207-210 for further information.

**Note: Ganged Wire Seals are available; contact Technical Support.**

Mini-Universal MATE-N-LOK Sealed Connector System .163 [4.14] Centerline High Density

**Mini-Universal MATE-N-LOK Connectors (Continued)**

**New: Mini Universal  
Gang Seals  
No Seal Crimping  
Required!**



Number 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

\*-0 for tin finish, -1 for duplex. See Mini-Universal MATE-N-LOK section for details

**Gang Wire Seal Contacts**

Wire Size Range	Insulation Range	Material Finish	Pin		Socket	
			Strip Form	Loose Piece	Strip Form	Loose Piece
16 AWG	.050 - .083	Brass, Pre-tin Brass, Duplex <sup>1</sup>	1586537-1	—	1586538-1	—
			1586537-3	—	1586538-3	—
18 - 22 AWG	.050 - .083	Brass, Pre-tin Brass, Duplex	794440-1	—	794831-1	—
			794440-3	—	794831-3	—
22 - 26 AWG	.050 - .069	Brass, Pre-tin Brass, Duplex <sup>1</sup>	770901-1	770985-1	770902-1	770986-1
			1-770901-0	1-770985-0	1-770902-0	1-770986-0

<sup>1</sup> Duplex Finish — Plated with .000030 [.000762] min. gold in mating area and .000100 [.00254] min. tin in crimping area over .000050 [.00127] min. nickel underplate on entire contact.

High Density

Mini-Universal MATE-N-LOK Sealed Connector System  
.163 [4.14] Centerline

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**Engineering Notes**

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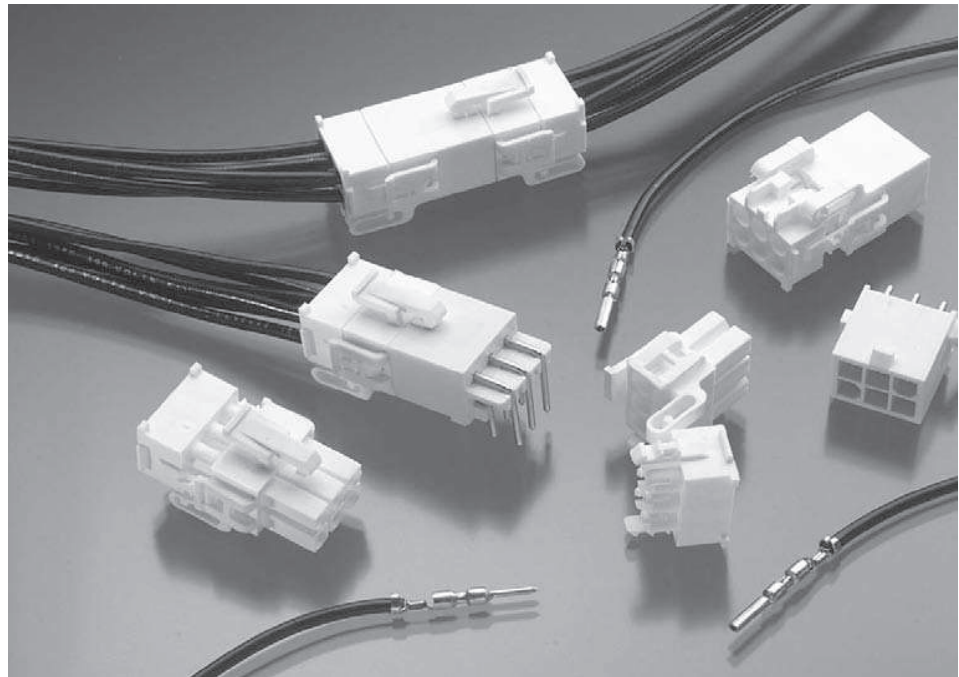




**Mini-Universal MATE-N-LOK 2 Connectors**

**Product Facts**

- One molded piece, secondary locking plug and cap housing assemblies
- Three-point stabilization to provide better terminal position
- Fully polarized to provide proper plug-to-cap mating
- Lanceless contacts for tangle-free handling
- Toolless contact removal
- Tin or duplex gold plated contacts
- Available in 2 through 24 circuit sizes wire-to-wire and wire-to-board
- Mates with standard Mini-Universal MATE-N-LOK headers and connectors
- Contacts available in strip and loose piece
- Polarized housings available in UL 94V-0 or UL 94V-2 flammability rated material
- Mini-Universal MATE-N-LOK 2 pins and sockets can be intermixed in Mini-Universal MATE-N-LOK 2 housings
- Mini-Universal MATE-N-LOK 2 pins and sockets can not be used in standard Mini-Universal MATE-N-LOK housings
- Contacts accept wire size range 30-16 AWG [.05-1.2 mm<sup>2</sup>]
- .163 [4.14] centerline spacing
- Not for interrupting current
- Recognized under the Component Program of  Underwriters Laboratories Inc. to US and Canadian Standards, File No. E28476



**Performance Characteristics**

The Mini-Universal MATE-N-LOK 2 Connector performance characteristics found on pages 99-100 are based on free-hanging connectors, loaded with contacts crimped on stranded wire.

**Low Level Termination Resistance**  
20 milliohms max. total resistance between wire crimps of a mated pin and socket

**Dielectric Withstanding Voltage**  
1500 V AC or DC between adjacent circuits at sea level

**Insulation Resistance**—100 megohms minimum between adjacent circuits

**Voltage Rating**—600 V AC or DC

**Contact Retention**—15 lb. min. per contact

**Durability**—25 cycles, mating and unmating

**Current Rating**—up to 10.5 amps per circuit; 2 position

**Mating Force**—2.5 lb. max. per circuit

**Unmating Force**—0.25 lb. minimum per circuit

Wire Size		Termination Resistance		Contact Crimp Tensile Force	
AWG	mm <sup>2</sup>	Test Current (Amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	N
30	.05	—	—	—	—
28	.08	—	—	—	—
26	.12	—	—	4	18
24	.2	—	—	—	—
22	.3	—	—	11	49
20	.5	—	—	13	58
18	.8	—	—	15	67
16	1.2	—	—	18	80

**Technical Documents**

- Product Specifications**  
108-1693 Mini-Universal MATE-N-LOK 2 Connectors  
108-1694 Mini-Universal MATE-N-LOK 2 Headers
- Application Specification**  
114-1111 Mini-Universal MATE-N-LOK 2 Connectors
- Instruction Sheet**  
408-3393 Mini-Universal MATE-N-LOK 2 Connectors

Mini-Universal MATE-N-LOK 2 connectors also will withstand the following tests:

- Housing Lock Strength**—6 lb. min.
- Thermal Shock**—-55°C to +105°C
- Temperature-Humidity Cycling**—25°C to 65°C at 95 RH
- Vibration**—10-55-10 cycles per minute at .06 inch total excursion
- Physical Shock**—18 drops, 50 G half-sine at 11 milliseconds

High Density

Mini-Universal MATE-N-LOK 2 Connectors  
.163 [4.14] Centerline

**Mini-Universal MATE-N-LOK 2 Connectors (Continued)**

**Performance Characteristics (Continued)**

**Maximum Current**—Maximum current rating of Mini-Universal MATE-N-LOK 2 connectors is limited by the maximum operating temperature of the housings which is 105°C (gold) or 85°C (tin) including the temperature rise of the contacts which is a maximum of 30°C. There are several variables which have a direct effect on this maximum current-carrying capability for a given connector and must be considered for each application. These variables are:

**Wire Size**—Larger diameter wire will carry more current since it has less internal resistance to current flow and thus generates less heat. Longer wire lengths also enhance current-carrying capabilities since the wire conducts heat away from the connector.

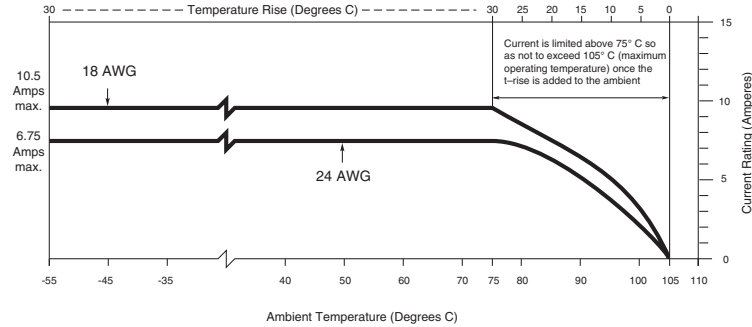
**Connector Size**—In general, the more circuits in a connector, the less current can be carried.

**Ambient Temperature**—The higher the ambient temperature, the less current can be carried in any given connector.

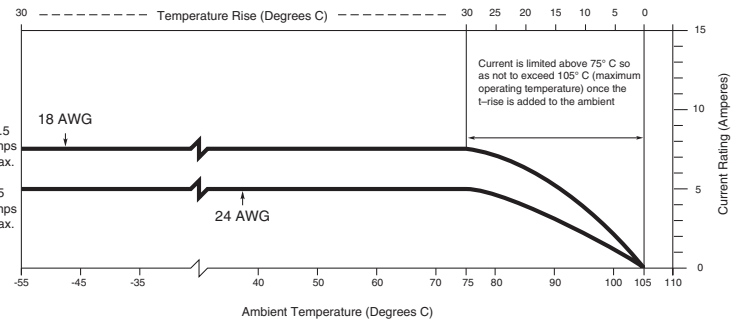
**Printed Wiring Board Conductor Size**—The finished trace conductor width and thickness should be maximized to allow for the greatest current-carrying capacity and heat dissipation.

**Current Rating Verification for 30°C Maximum Temperature Rise 100% Energized**

**2 Circuit Connector (Wire-to-Wire)**



**6 Circuit Connector (Wire-to-Wire)**



**Contacts**

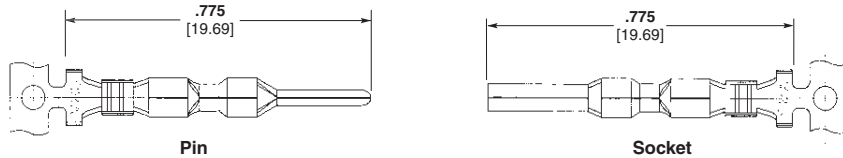
Pin diameter .039 [0.99]

**Material**

Brass

Stock Thickness .010 [0.25]

These contacts can be used in either Mini-Universal MATE-N-LOK 2 Plug or Cap housings **only**.



**Not to be used with Mini-Universal MATE-N-LOK Connectors**

**Related Product Data**

**Product Specifications**

- 108-1693 Mini-Universal MATE-N-LOK 2 Connectors
- 108-1694 Mini-Universal MATE-N-LOK 2 Headers

**Application Specification**

- 114-1111 Mini-Universal MATE-N-LOK 2 Connectors

**Performance Characteristics**—

pages 99-100

**Housings** — pages 101-102

**Technical Documents**—pages 99 and 205-206

Wire Size Range AWG [mm <sup>2</sup> ]	Ins. Dia. Range	Finish	Contact Part Numbers				HDM Applicator Part No.	Hand Tool Part No.
			Pin		Socket			
			Strip Form	Loose Piece	Strip Form	Loose Piece		
30-26 [.05-.12]	.035-.050 .889-1.27	Pre-tin	794216-1	794224-1	794217-1	794225-1	567418-12 567418-22 567418-32	90717-2
			1-794216-0	1-794224-0	1-794217-0	1-794225-0		
26-22 [.12-.3]	.047-.069 1.19-1.75	Pre-tin	794218-1	794226-1	794219-1	794227-1	567066-33 567066-43 567066-53	91529-1
			1-794218-0	1-794226-0	1-794219-0	1-794227-0		
22-18 [.3-.8]	.059-.094 1.50-2.39	Pre-tin	794220-1	794228-1	794221-1	794229-1	680854-12 680854-22 680854-32	91522-1
			1-794220-0	1-794228-0	1-794221-0	1-794229-0		
20-16 [.5-1.2]	.079-.126 2.01-3.20	Pre-tin	794222-1	794230-1	794223-1	794231-1	680582-22 680582-32	91594-1
			1-794222-0	1-794230-0	1-794223-0	1-794231-0		

<sup>1</sup>Duplex Finish—Plated with .000030 [.000762] min. gold in mating area and .000100 [.00254] min. tin in crimping area over .000050 [.00127] min. nickel underplate on entire contact.

<sup>2</sup>HDM Applicator part number ending in -1 is used on AMPOMATOR CLS Machine with T or G Terminators, -2 is used on AMP-O-LECTRIC Model K Machine, -3 is used on AMP-O-ELECTRIC Model G Machine.

<sup>3</sup>HDM Applicator part number ending in -3 is used on AMPOMATOR CLS Machine with T or G Terminators, -4 is used on AMP-O-LECTRIC Model K Machine, -5 is used on AMP-O-LECTRIC Model G Machine.

See pages 207-210 for further information.

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

**Mini-Universal MATE-N-LOK 2 Connectors (Continued)**

**Housings**

**Free-Hanging**

.163 [4.14] Centerline spacing

**Related Product Data**

**Product Specifications**  
108-1693 Mini-Universal MATE-N-LOK 2 Connectors  
108-1694 Mini-Universal MATE-N-LOK 2 Headers

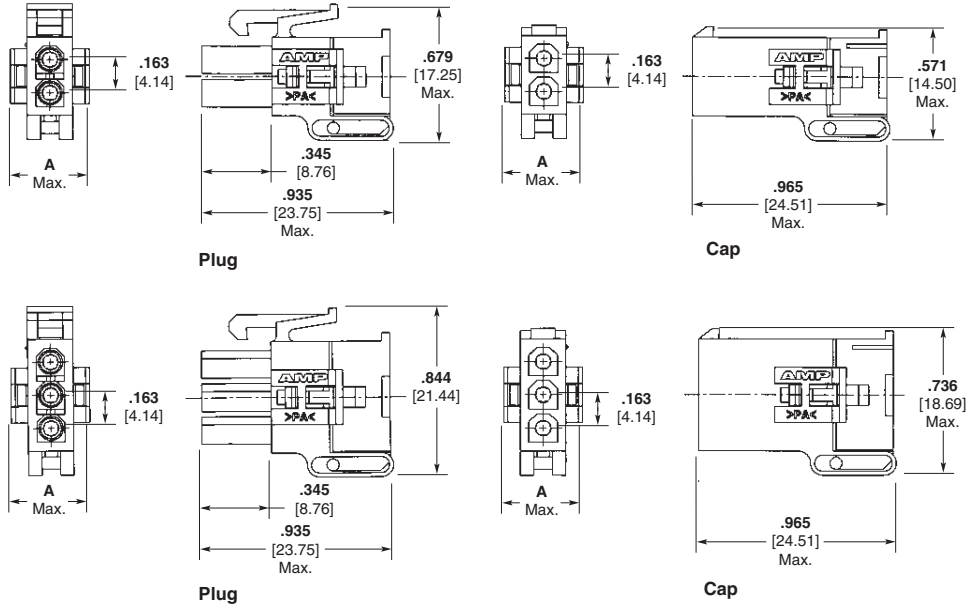
**Performance Characteristics**—  
pages 99-100

**Contacts** — page 100

**Technical Documents**—pages 99 and 205-206

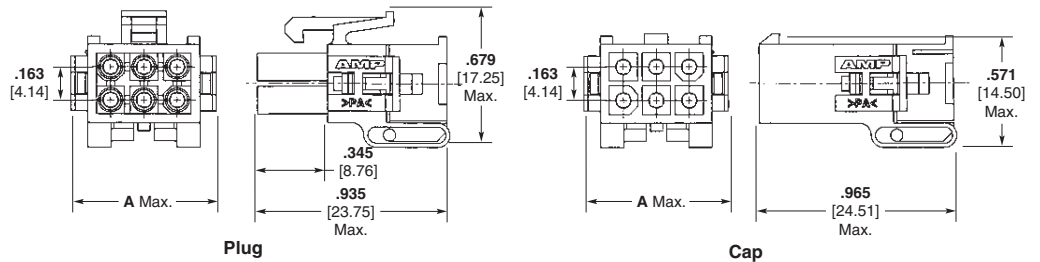
**Mating Headers**—pages 103-105

**2 and 3 Circuit, In-Line**



Number of Circuits	A Dimension	Housing Part Numbers			
		UL94V-0 Nylon, White Color		UL94V-2 Nylon, Natural Color	
		Plug	Cap	Plug	Cap
2	.405 10.29	794184-1	794185-1	794237-1	794238-1
3	.405 10.29	794186-1	794187-1	794239-1	794240-1

**4 and 6 Circuit, Dual Row**

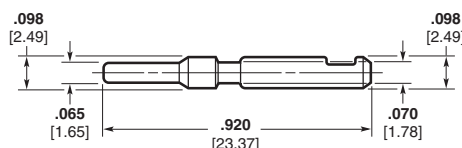


Number of Circuits	A Dimension	Housing Part Numbers			
		UL94V-0 Nylon, White Color		UL94V-2 Nylon, Natural Color	
		Plug	Cap	Plug	Cap
4	.571 14.50	794188-1	794189-1	794241-1	794242-1
6	.736 18.70	794190-1	794191-1	794243-1	794244-1

**Keying Plug**

**Material**

UL94V-0 Nylon, white color



Part Number 794369-1

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

**Mini-Universal MATE-N-LOK 2 Connectors (Continued)**

**Housings**  
**Free-Hanging**

.163 [4.14] Centerline spacing

**Related Product Data**

**Product Specifications**  
108-1693 Mini-Universal MATE-N-LOK 2 Connectors

108-1694 Mini-Universal MATE-N-LOK 2 Headers

**Performance Characteristics**—pages 99-100

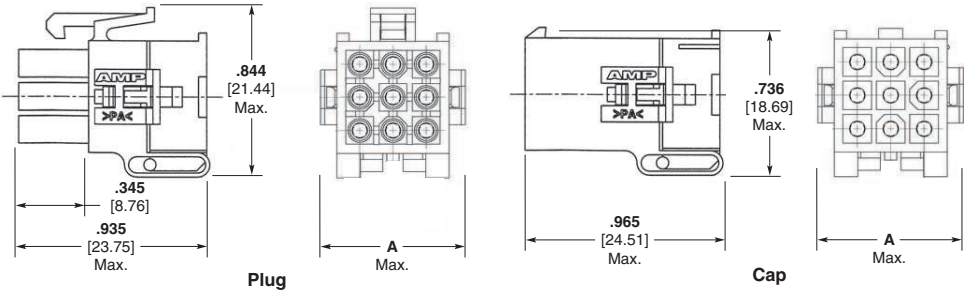
**Contacts**—page 100

**Keying Plug**—page 101

**Technical Documents**—pages 99 and 205-206

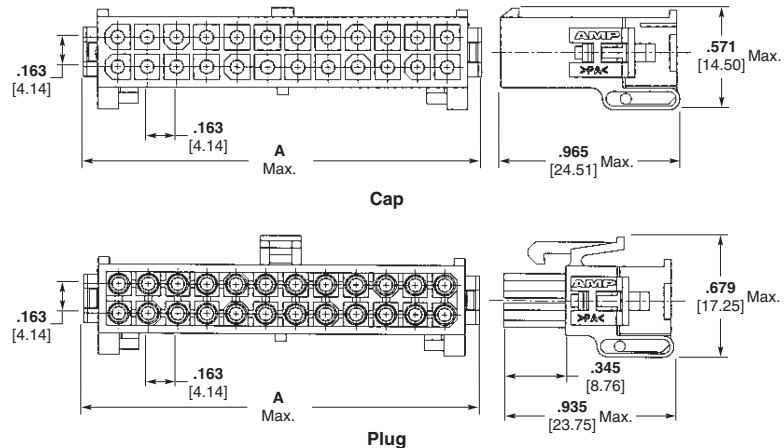
**Mating Headers**—pages 103-105

**9, 12 and 15 Circuit, Matrix**



Number of Circuits	A Dimension	Housing Part Numbers			
		UL94V-0 Nylon, White Color		UL94V-2 Nylon, Natural Color	
		Plug	Cap	Plug	Cap
9	.736 18.69	794194-1	794195-1	794247-1	794248-1
12	.901 22.89	794200-1	794201-1	794253-1	794254-1
15	1.067 27.10	794204-1	794205-1	794257-1	794258-1

**8 through 24 Circuit, Dual Row**



Number of Circuits	A Dimension	Housing Part Numbers			
		UL94V-0 Nylon, White Color		UL94V-2 Nylon, Natural Color	
		Plug	Cap	Plug	Cap
8	.899 22.84	794192-1	794193-1	794245-1	794246-1
10	1.062 26.98	794196-1	794197-1	794249-1	794250-1
12	1.225 31.12	794198-1	794199-1	794251-1	794252-1
14	1.388 35.26	794202-1	794203-1	794255-1	794256-1
16	1.551 39.40	794206-1	794207-1	794259-1	794260-1
18	1.714 43.54	794208-1	794209-1	794261-1	794262-1
20	1.877 47.68	794210-1	794211-1	794263-1	794264-1
22	2.040 51.82	794212-1	794213-1	794265-1	794266-1
24	2.203 55.96	794214-1	794215-1	794267-1	794268-1

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

High Density

Mini-Universal MATE-N-LOK 2 Connectors  
.163 [4.14] Centerline

**Mini-Universal MATE-N-LOK 2 Connectors (Continued)**

**Vertical PC Board Pin Headers**

.163 [4.14] Centerline spacing

**Material**

**Housing**—Nylon, white

**Flammability Rating**—UL94V-0

**Contacts**—Brass  
Solder tail diameter .039 [1.00]

**Related Product Data**

**Product Specifications**

108-1693 Mini-Universal MATE-N-LOK 2 Connectors

108-1694 Mini-Universal MATE-N-LOK 2 Headers

**Performance Characteristics**—pages 99-100

**Recommended PC Board Hole Layout**—page 106

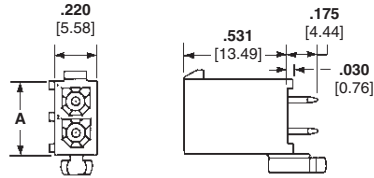
**Technical Documents**—pages 99 and 205-206

**Mating Connectors**

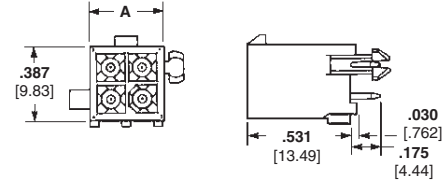
**Mini-Universal MATE-N-LOK 2**  
Plug Housings—pages 101-102

**Mini-Universal MATE-N-LOK**  
Plug Housings—pages 87-89

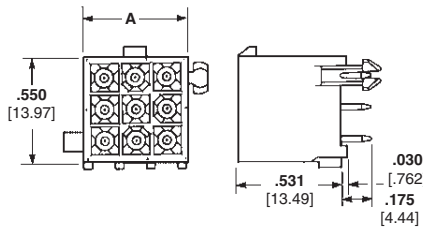
**2 and 3 Circuit, In-Line**



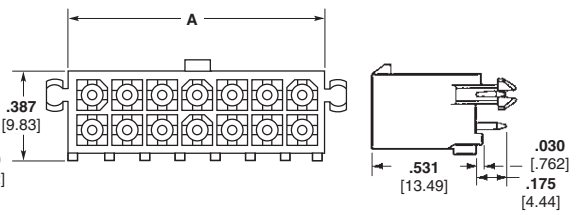
**4, 6, 8, 10 and 12 Circuit, Dual Row**



**9, 12 and 15 Circuit, Matrix**



**14, 16, 18, 20, 22 and 24 Circuit, Dual Row**



High Density

Mini-Universal MATE-N-LOK 2 Connectors  
.163 [4.14] Centerline

Number of Circuits	Style	A Dim.	Pin Finish	Vertical Pin Header Part Numbers		Mates with Plug Housing Part Number (Using Socket Contacts)	
				With Drain Holes	Without Drain Holes	Mini-Universal MATE-N-LOK	Mini-Universal MATE-N-LOK 2
2	In-Line	.387 9.83	Tin <sup>1</sup>	1-770166-0	1-770872-0	172165-1	794184-1
			Duplex <sup>2</sup>	1-770166-1	1-770872-1		
3	In-Line	.550 13.97	Tin <sup>1</sup>	1-770170-0	1-770873-0	172166-1	794186-1
			Duplex <sup>2</sup>	1-770170-1	1-770873-1		
4	Dual Row	.387 9.83	Tin <sup>1</sup>	1-770174-0	1-770874-0	172167-1	794188-1
			Duplex <sup>2</sup>	1-770174-1	1-770874-1		
6	Dual Row	.550 13.97	Tin <sup>1</sup>	1-770178-0	1-770875-0	172168-1	794190-1
			Duplex <sup>2</sup>	1-770178-1	1-770875-1		
8	Dual Row	.713 18.11	Tin <sup>1</sup>	1-794065-0	1-794073-0	770579-1	794192-1
			Duplex <sup>2</sup>	1-794065-1	1-794073-1		
9	Matrix	.551 14.00	Tin <sup>1</sup>	1-770182-0	1-770876-0	172169-1	794194-1
			Duplex <sup>2</sup>	1-770182-1	1-770876-1		
10	Dual Row	.877 22.28	Tin <sup>1</sup>	1-770743-0	1-770858-0	770580-1	794196-1
			Duplex <sup>2</sup>	1-770743-1	1-770858-1		
12	Dual Row	1.039 26.39	Tin <sup>1</sup>	1-794066-0	1-770621-0	770581-1	794198-1
			Duplex <sup>2</sup>	1-794066-1	1-770621-1		
	Matrix	.713 18.11	Tin <sup>1</sup>	1-770186-0	1-794040-0	172170-1	794200-1
			Duplex <sup>2</sup>	1-770186-1	1-794040-1		
14	Dual Row	1.202 30.53	Tin <sup>1</sup>	1-794067-0	1-794074-0	770582-1	794202-1
			Duplex <sup>2</sup>	1-794067-1	1-794074-1		
15	Matrix	.877 22.28	Tin <sup>1</sup>	1-770190-0	1-770859-0	172171-1	794204-1
			Duplex <sup>2</sup>	1-770190-1	1-770859-1		
16	Dual Row	1.365 34.67	Tin <sup>1</sup>	1-794068-0	1-794075-0	770583-1	794206-1
			Duplex <sup>2</sup>	1-794068-1	1-794075-1		
18	Dual Row	1.528 38.81	Tin <sup>1</sup>	1-794069-0	1-794076-0	770584-1	794208-1
			Duplex <sup>2</sup>	1-794069-1	1-794076-1		
20	Dual Row	1.691 42.95	Tin <sup>1</sup>	1-794070-0	1-794077-0	770585-1	794210-1
			Duplex <sup>2</sup>	1-794070-1	1-794077-1		
22	Dual Row	1.854 47.09	Tin <sup>1</sup>	1-794071-0	1-794078-0	770586-1	794212-1
			Duplex <sup>2</sup>	1-794071-1	1-794078-1		
24	Dual Row	2.017 51.23	Tin <sup>1</sup>	1-794072-0	1-794079-0	770587-1	794214-1
			Duplex <sup>2</sup>	1-794072-1	1-794079-1		

<sup>1</sup>Tin Finish — Plated with .000150 [.00381] min. tin over .000050 [.00127] min. nickel underplate on entire contact.  
<sup>2</sup>Duplex Finish — Plated with .000030 [.000762] min. gold in mating area and matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

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

**Mini-Universal MATE-N-LOK 2 Connectors (Continued)**

**Vertical PC Board  
Blindmate Pin Headers**

.163 [4.14] Centerline spacing

**Material**

**Housing**—Nylon, white

**Flammability Rating**—UL94V-0

**Contacts**—Brass  
Solder tail diameter .039 [1.00]

**Related Product Data**

**Product Specifications**

108-1693 Mini-Universal MATE-N-LOK 2  
Connectors

108-1694 Mini-Universal MATE-N-LOK 2  
Headers

**Performance Characteristics**—  
pages 99-100

**Recommended PC Board Hole**

**Layout**—page 106

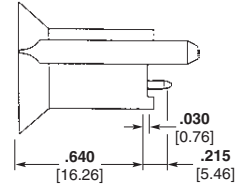
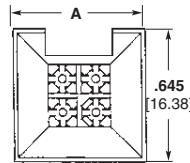
**Technical Documents**—pages 99  
and 205-206

**Mating Connectors**

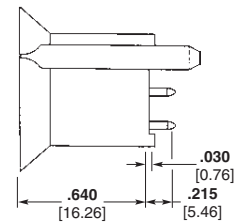
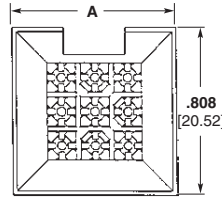
**Mini-Universal MATE-N-LOK 2**  
Plug Housings—pages 101-102

**Mini-Universal MATE-N-LOK**  
Plug Housings—pages 87-89

**4, 6, 8 and 10 Circuit,  
Dual Row**



**9, 12 and 15 Circuit,  
Matrix**



Number of Circuits	Style	A Dim.	Pin Finish	Pin Header Part Numbers with Drain Holes	Mates with Plug Housing Part Number (Using Socket Contacts)	
					Mini-Universal MATE-N-LOK	Mini-Universal MATE-N-LOK 2
4	Dual Row	.645 16.38	Tin <sup>1</sup>	1-794325-0	172167-1	794188-1
			Duplex <sup>2</sup>	1-794325-1		
6	Dual Row	.808 20.52	Tin <sup>1</sup>	1-794326-0	172168-1	794190-1
			Duplex <sup>2</sup>	1-794326-1		
8	Dual Row	.971 24.66	Tin <sup>1</sup>	1-794327-0	770579-1	794192-1
			Duplex <sup>2</sup>	1-794327-1		
9	Matrix	.808 20.52	Tin <sup>1</sup>	1-794432-0	172169-1	794194-1
			Duplex <sup>2</sup>	1-794432-1		
10	Dual Row	1.134 28.80	Tin <sup>1</sup>	1-794328-0	770580-1	794196-1
			Duplex <sup>2</sup>	1-794328-1		
12	Matrix	.971 24.66	Tin <sup>1</sup>	1-794329-0	172170-1	794200-1
			Duplex <sup>2</sup>	1-794329-1		
15	Matrix	1.134 28.80	Tin <sup>1</sup>	1-794330-0	172171-1	794204-1
			Duplex <sup>2</sup>	1-794330-1		

<sup>1</sup>Tin Finish—Plated with .000150 [.00381] min. tin over .000050 [.00127] min. nickel underplate on entire contact.  
<sup>2</sup>Duplex Finish—Plated with .000030 [.000762] min. gold in mating area and matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

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

High Density

Mini-Universal MATE-N-LOK 2 Connectors  
.163 [4.14] Centerline

**Mini-Universal MATE-N-LOK 2 Connectors (Continued)**

**Right-Angle PC Board  
Pin Headers**

.163 [4.14] Centerline spacing

**Material**

**Housing**— Nylon, white color

**Flammability Rating**— UL94V-0

**Contacts**— Brass

Solder tail diameter .039 [1.00]

**Related Product Data**

**Product Specification**

108-1694 Mini-Universal MATE-N-LOK 2 Headers

**Performance Characteristics**— pages 99-100

**Recommended PC Board Hole Layout**— page 106

**Technical Documents**— pages 99 and 205-206

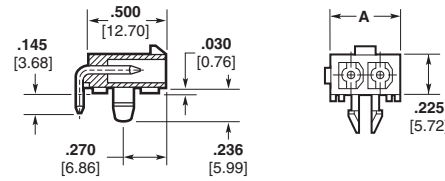
**Mating Connectors**

**Mini-Universal MATE-N-LOK 2**  
Plug Housings— pages 101-102

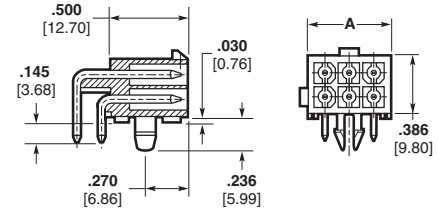
**Mini-Universal MATE-N-LOK**  
Plug Housings— pages 87-89

**With Board Lock Feature**

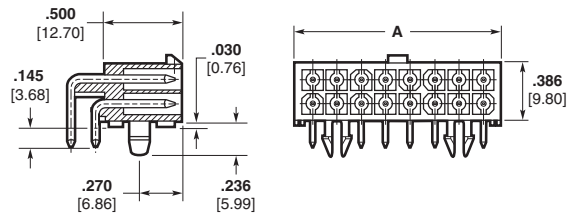
**2 and 3 Circuit, In-Line**



**4, 6, 8, 10 and 12 Circuit, Dual Row**



**14, 16, 18, 20, 22 and 24 Circuit, Dual Row**



Number of Circuits	Style	A Dim.	Pin Finish	Pin Header Part Number with Board Lock	Mates with Plug Housing Part Number (Using Socket Contacts)	
					Mini-Universal MATE-N-LOK	Mini-Universal MATE-N-LOK 2
2	In-line	.388 9.86	Tin <sup>1</sup>	1-770966-0	172165-1	794184-1
			Duplex <sup>2</sup>	1-770966-1		
3	In-line	.551 14.00	Tin <sup>1</sup>	1-770967-0	172166-1	794186-1
			Duplex <sup>2</sup>	1-770967-1		
4	Dual Row	.388 9.86	Tin <sup>1</sup>	1-770968-0	172167-1	794188-1
			Duplex <sup>2</sup>	1-770968-1		
6	Dual Row	.551 14.00	Tin <sup>1</sup>	1-770969-0	172168-1	794190-1
			Duplex <sup>2</sup>	1-770969-1		
8	Dual Row	.714 18.14	Tin <sup>1</sup>	1-770970-0	770579-1	794192-1
			Duplex <sup>2</sup>	1-770970-1		
10	Dual Row	.877 22.28	Tin <sup>1</sup>	1-770971-0	770580-1	794196-1
			Duplex <sup>2</sup>	1-770971-1		
12	Dual Row	1.040 26.42	Tin <sup>1</sup>	1-770972-0	770581-1	794198-1
			Duplex <sup>2</sup>	1-770972-1		
14	Dual Row	1.203 30.56	Tin <sup>1</sup>	1-770973-0	770582-1	794202-1
			Duplex <sup>2</sup>	1-770973-1		
16	Dual Row	1.366 34.70	Tin <sup>1</sup>	1-770974-0	770583-1	794206-1
			Duplex <sup>2</sup>	1-770974-1		
18	Dual Row	1.529 38.84	Tin <sup>1</sup>	1-794105-0	770584-1	794208-1
			Duplex <sup>2</sup>	1-794105-1		
20	Dual Row	1.692 42.98	Tin <sup>1</sup>	1-794106-0	770585-1	794210-1
			Duplex <sup>2</sup>	1-794106-1		
22	Dual Row	1.855 47.12	Tin <sup>1</sup>	1-794107-0	770586-1	794212-1
			Duplex <sup>2</sup>	1-794107-1		
24	Dual Row	2.018 51.26	Tin <sup>1</sup>	1-794108-0	770587-1	794214-1
			Duplex <sup>2</sup>	1-794108-1		

<sup>1</sup>Tin Finish— Plated with .000150 [.00381] min. tin over .000050 [.00127] min. nickel underplate on entire contact.  
<sup>2</sup>Duplex Finish— Plated with .000030 [.000762] min. gold in mating area and matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

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

**Mini-Universal MATE-N-LOK 2 Connectors (Continued)**

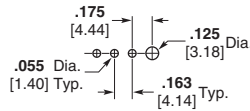
**Recommended PC Board  
Hole Layouts for Vertical  
and Blindmate Headers**

.062 [1.57] thick board, tolerances  
non-accumulative

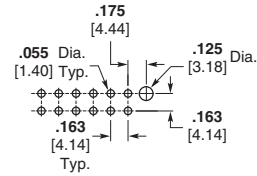
**Related Product Data**

**Vertical Headers**—pages 103-104

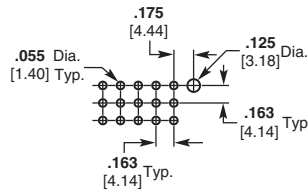
**2 and 3 Circuit, In-Line**



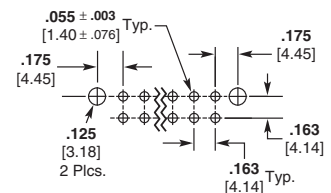
**4, 6, 8, 10 and 12 Circuit,  
Dual Row**



**9, 12 and 15 Circuit, Matrix**



**14, 16, 18, 20, 22 and 24 Circuit, Dual Row**



High Density

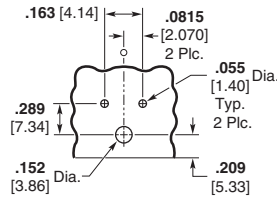
**Recommended PC Board  
Hole Layouts for Right-  
Angle Headers**

.062 [1.57] thick board, tolerances  
non-accumulative

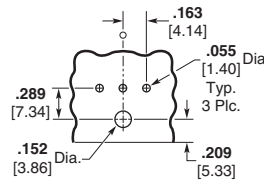
**Related Product Data**

**Right-Angle Headers**—page 105

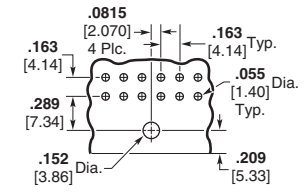
**2 Circuit**



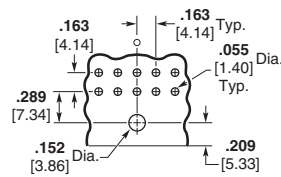
**3 Circuit**



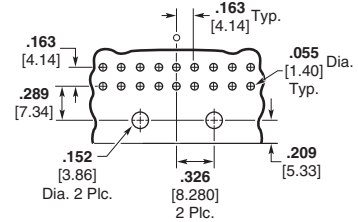
**4, 8 and 12 Circuit**



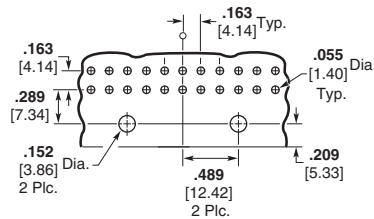
**6 and 10 Circuit**



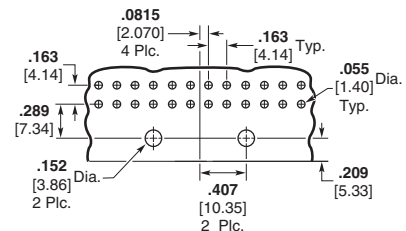
**14 and 18 Circuit**



**22 Circuit**



**16, 20 and 24 Circuit**





**Mini-Universal MATE-N-LOK 2 Connectors** (Continued)

**Mini-Universal  
MATE-N-LOK 2 Connector  
Mating Combinations**

Number of Circuits	Connector Part Number				Mating Connector Part Number				
	Flammability Rating	Style	Plug <sup>1</sup> Housing Part No.	Cap <sup>1</sup> Housing Part No.	PC Board Pin Headers <sup>4</sup>				Right-Angle Board Lock
					Plating	Vertical With Drain Holes	Vertical Without Drain Holes	Blindmate	
2	UL94V-2	In-Line	794237-1	794238-1	—	—	—	—	—
	UL94V-0	In-Line	794184-1	794185-1	Tin <sup>3</sup>	1-770166-0	1-770872-0	—	1-770966-0
3	UL94V-2	In-Line	794239-1	794240-1	Duplex <sup>2</sup>	1-770166-1	1-770872-1	—	1-770966-1
	UL94V-0	In-Line	794186-1	794187-1	—	—	—	—	—
4	UL94V-2	Dual Row	794241-1	794242-1	Tin <sup>3</sup>	1-770170-0	1-770873-0	—	1-770967-0
	UL94V-0	Dual Row	794188-1	794189-1	Duplex <sup>2</sup>	1-770170-1	1-770873-1	—	1-770967-1
6	UL94V-2	Dual Row	794243-1	794244-1	—	—	—	—	—
	UL94V-0	Dual Row	794190-1	794191-1	Tin <sup>3</sup>	1-770174-0	1-770874-0	1-794325-0	1-770968-0
8	UL94V-2	Dual Row	794245-1	794246-1	Duplex <sup>2</sup>	1-770174-1	1-770874-1	1-794325-1	1-770968-1
	UL94V-0	Dual Row	794192-1	794193-1	—	—	—	—	—
9	UL94V-2	Matrix	794247-1	794248-1	Tin <sup>3</sup>	1-770178-0	1-770875-0	1-794326-0	1-770969-0
	UL94V-0	Matrix	794194-1	794195-1	Duplex <sup>2</sup>	1-770178-1	1-770875-1	1-794326-1	1-770969-1
10	UL94V-2	Dual Row	794249-1	794250-1	—	—	—	—	—
	UL94V-0	Dual Row	794196-1	794197-1	Tin <sup>3</sup>	1-770182-0	1-770876-0	1-794432-0	—
12	UL94V-2	Matrix	794253-1	794254-1	Duplex <sup>2</sup>	1-770182-1	1-770876-1	1-794432-1	—
	UL94V-0	Dual Row	794251-1	794252-1	—	—	—	—	—
14	UL94V-2	Matrix	794200-1	794201-1	Tin <sup>3</sup>	1-770186-0	1-794040-0	1-794329-0	—
	UL94V-0	Dual Row	794198-1	794199-1	Duplex <sup>2</sup>	1-770186-1	1-794040-1	1-794329-1	—
15	UL94V-2	Dual Row	794255-1	794256-1	Tin <sup>3</sup>	1-794066-0	1-770621-0	—	1-770972-0
	UL94V-0	Dual Row	794202-1	794203-1	Duplex <sup>2</sup>	1-794066-1	1-770621-1	—	1-770972-1
16	UL94V-2	Matrix	794257-1	794258-1	—	—	—	—	—
	UL94V-0	Dual Row	794204-1	794205-1	Tin <sup>3</sup>	1-794067-0	1-794074-0	—	1-770973-0
18	UL94V-2	Dual Row	794259-1	794260-1	Duplex <sup>2</sup>	1-794067-1	1-794074-1	—	1-770973-1
	UL94V-0	Dual Row	794206-1	794207-1	—	—	—	—	—
20	UL94V-2	Matrix	794204-1	794205-1	Tin <sup>3</sup>	1-770190-0	1-770859-0	1-794330-0	—
	UL94V-0	Dual Row	794208-1	794209-1	Duplex <sup>2</sup>	1-770190-1	1-770859-1	1-794330-1	—
22	UL94V-2	Dual Row	794261-1	794262-1	—	—	—	—	—
	UL94V-0	Dual Row	794206-1	794207-1	Tin <sup>3</sup>	1-794068-0	1-794075-0	—	1-770974-0
24	UL94V-2	Dual Row	794267-1	794268-1	Duplex <sup>2</sup>	1-794068-1	1-794075-1	—	1-770974-1
	UL94V-0	Dual Row	794214-1	794215-1	—	—	—	—	—
24	UL94V-2	Dual Row	794263-1	794264-1	Tin <sup>3</sup>	1-794069-0	1-794076-0	—	1-794105-0
	UL94V-0	Dual Row	794210-1	794211-1	Duplex <sup>2</sup>	1-794069-1	1-794076-1	—	1-794105-1
24	UL94V-2	Dual Row	794265-1	794266-1	—	—	—	—	—
	UL94V-0	Dual Row	794212-1	794213-1	Tin <sup>3</sup>	1-794070-0	1-794077-0	—	1-794106-0
24	UL94V-2	Dual Row	794267-1	794268-1	Duplex <sup>2</sup>	1-794070-1	1-794077-1	—	1-794106-1
	UL94V-0	Dual Row	794212-1	794213-1	—	—	—	—	—
24	UL94V-2	Dual Row	794267-1	794268-1	Tin <sup>3</sup>	1-794071-0	1-794078-0	—	1-794107-0
	UL94V-0	Dual Row	794214-1	794215-1	Duplex <sup>2</sup>	1-794071-1	1-794078-1	—	1-794107-1
24	UL94V-2	Dual Row	794267-1	794268-1	—	—	—	—	—
	UL94V-0	Dual Row	794214-1	794215-1	Tin <sup>3</sup>	1-794072-0	1-794079-0	—	1-794108-0
24	UL94V-2	Dual Row	794267-1	794268-1	Duplex <sup>2</sup>	1-794072-1	1-794079-1	—	1-794108-1

<sup>1</sup>Mini-Universal MATE-N-LOK 2 plug and cap housings accept pin or socket contacts. Use the appropriate contacts in the plug housing as required by the mating connector. All **Plugs** and **Caps** are **free-hanging**.  
<sup>2</sup>Duplex Finish — Plated with .000030 [.000762] min. gold in mating area and matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.  
<sup>3</sup>Tin Finish — Plated with .000150 [.00381] min. tin over .000050 [.00127] min nickel underplate on entire contact.  
<sup>4</sup>All PC Board pin headers have 94V-0 flammability rating and can mate to V-0 or V-2 plug housings.

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