

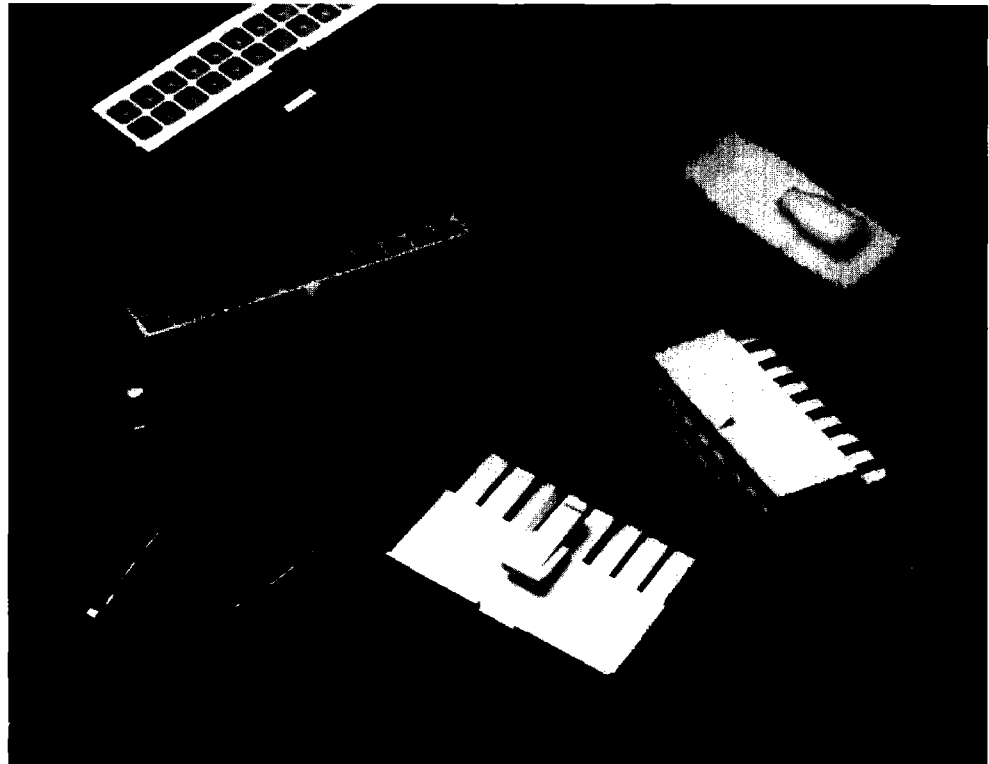


Mini-Universal MATE-N-LOK Connectors

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 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-.078 [0.79-1.98] 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 mm²]
- 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 38721 
- Passed test by VDE under their Registration Number 3476/ Continuous Surveillance



Performance Characteristics

The Mini-Universal MATE-N-LOK Connector performance characteristics found on pages 49 and 50 are based on free hanging and panel mount connectors, loaded with contacts crimped on stranded wire.

Low Level Termination Resistance

10 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

600V AC or DC

Contact Retention

8 lb. min. per contact

Durability

20 cycles, mating and unmating

Wire Size		Termination Resistance		Contact Crimp Tensile Force	
AWG	mm ²	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

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 Sheet

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

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.

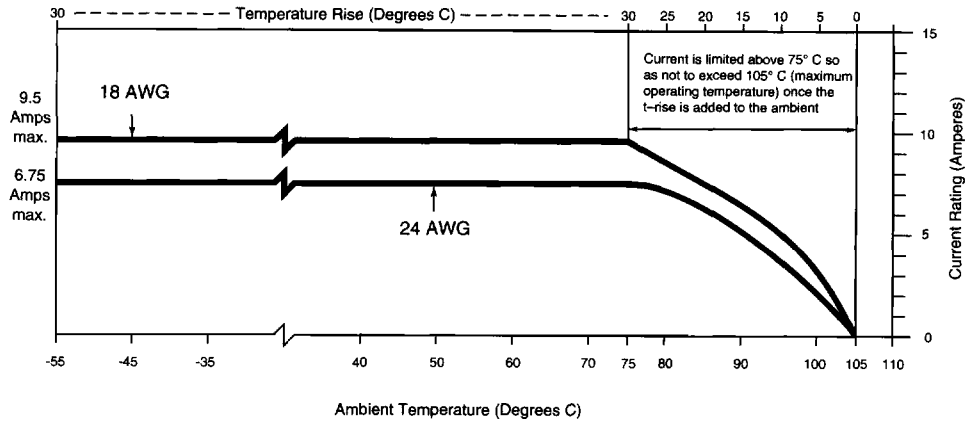
Connector Size In general, the more circuits in a connector, the less current can be carried.

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

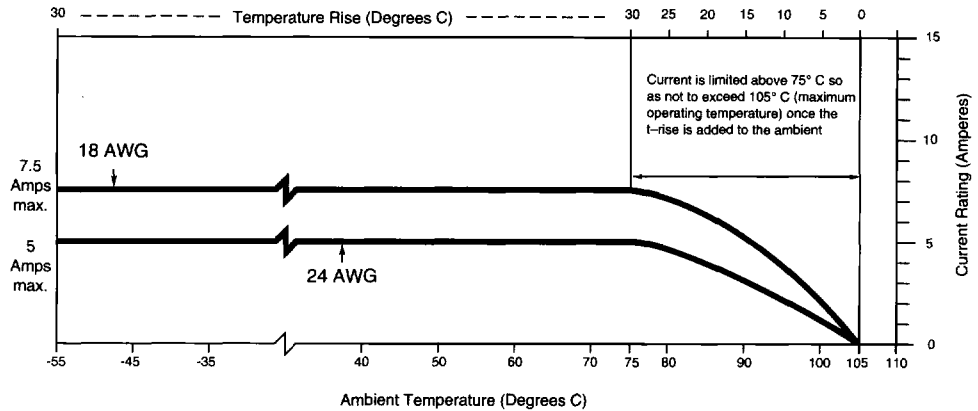
Printed Wiring Board Conductor Size The finished trace conductor width and thickness should be maximized to allow for the greatest current carrying capacity and heat dissipation.

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

2 Circuit Connector (Wire-to-Wire)



10 Circuit Connector (Wire-to-Board)



- Notes:**
1. Data for these curves based on initial T-Rise vs. Current Testing.
 2. Current is limited above 75°C so as not to exceed 105°C (maximum operating temperature) once the T-Rise is added to the ambient.
 3. Housings are fully loaded with all circuits 100% energized. Current rating is per circuit.

Related Product Data

Product Specifications

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

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 -20°C to +105°C

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

Corrosion 48 hr. at 5% salt concentration

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

Physical Shock 18 drops, 50 g half-sine at 11 milliseconds

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 ¹ Housing Part No.	Cap ¹ Housing Part No.	Plating	PC Board Pin Headers				
						Vertical		Right Angle		
						With Drain Holes	Without Drain Holes	Standard Board Lock	Short Board Lock	
1	UL94V-2	In-Line	172335-1							
	UL94V-0	In-Line	172164-1							
2	UL94V-2	In-Line	172336-1							
			172807-1 ³							
			173956-1 ³							
	UL94V-0	In-Line	172165-1							
			172808-1 ³							
			172337-1							
3	UL94V-2	In-Line	172337-1							
			173957-1 ³							
			172166-1							
	UL94V-0	In-Line	172166-1							
			172338-1							
			172958-1 ³							
4	UL94V-2	Dual Row	172809-1 ³							
			172338-1							
			172958-1 ³							
	UL94V-0	Dual Row	172167-1							
			172339-1							
			172168-1							
6	UL94V-2	Dual Row	172339-1							
			172168-1							
			172339-1							
	UL94V-0	Dual Row	172168-1							
			172339-1							
			172168-1							
8	UL94V-0	Dual Row	770579-1							
			172340-1							
			172169-1							
	UL94V-2	Matrix	172340-1							
			172169-1							
			172341-1							
9	UL94V-0	Dual Row	770580-1							
			172341-1							
			172170-1							
	UL94V-2	Matrix	172341-1							
			172170-1							
			172170-1							
10	UL94V-0	Dual Row	770580-1							
			172341-1							
			172170-1							
	UL94V-2	Matrix	172341-1							
			172170-1							
			172170-1							
12	UL94V-0	Dual Row	770581-1							
			172342-1							
			172171-1							
	UL94V-2	Matrix	172342-1							
			172171-1							
			172171-1							
14	UL94V-0	Dual Row	770582-1							
			172342-1							
			172171-1							
	UL94V-2	Matrix	172342-1							
			172171-1							
			172171-1							
15	UL94V-0	Dual Row	770583-1							
			172342-1							
			172171-1							
	UL94V-2	Matrix	172342-1							
			172171-1							
			172171-1							
16	UL94V-0	Dual Row	770583-1							
			172342-1							
			172171-1							
	UL94V-2	Matrix	172342-1							
			172171-1							
			172171-1							
18	UL94V-0	Dual Row	770584-1							
			172342-1							
			172171-1							
	UL94V-2	Matrix	172342-1							
			172171-1							
			172171-1							
20	UL94V-0	Dual Row	770585-1							
			172342-1							
			172171-1							
	UL94V-2	Matrix	172342-1							
			172171-1							
			172171-1							
22	UL94V-0	Dual Row	770586-1							
			172342-1							
			172171-1							
	UL94V-2	Matrix	172342-1							
			172171-1							
			172171-1							
24	UL94V-0	Dual Row	770587-1							
			172342-1							
			172171-1							
	UL94V-2	Matrix	172342-1							
			172171-1							
			172171-1							

¹Mini-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.

²Panel mount only.

³Hermaphroditic: Mates to itself.

⁴Free hanging only.

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

⁶Tin-Lead Finish — Plated with .000150 [.00381] min. tin-lead over .000050 [.00127] min. nickel underplate on entire contact.

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

Contacts

Pin diameter .039 [0.99]

Material

Brass

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

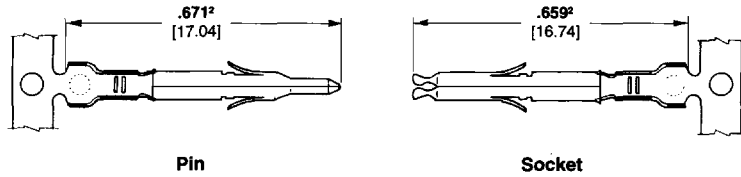
114-16017 Mini-Universal MATE-N-LOK Connectors

Performance Characteristics — pg. 49 and 50

Housings — pg. 53, 54 and 55

Technical Documents — pg. 80

Application Tooling — pg. 81-85



Wire Size Range AWG (mm²)	Ins. Dia. Range	Finish	Contact Part Numbers				HDM Applicator Part No.	Hand Tool Part No.
			Pin		Socket			
			Strip Form	Loose Form	Strip Form	Loose Form		
30-26 [.05-.12]	.035-.050 .889-1.27	Pre-tin	770835-1	794059-1	770834-1	794058-1	567418-1 ³ 567418-2 ³ 567418-3 ³	—
		Duplex ¹	770835-3	794059-3	770834-3	794058-3		
26-22 [.12-.3]	.047-.069 1.19-1.75	Pre-tin	770901-1	770985-1	770902-1	770986-1	567066-3 ⁴ 567066-4 ⁴ 567066-5 ⁴	90710-1
		Duplex ¹	770901-3	770985-3	770902-3	770986-3		
22-18 [.3-.8] or 22 x (2) [.3]	.059-.094 1.50-2.39 or .133 Max. 3.38	Pre-tin	770903-1	770987-1	770904-1	770988-1	567067-1 ³ 567067-2 ³ 567067-3 ³	90711-1
		Duplex ¹	770903-3	770987-3	770904-3	770988-3		
20-16 [.5-1.2] or 20 x (2) [.5]	.079-.126 2.01-3.20 or .094 x (2) 2.39	Pre-tin	171636-1 ²	171638-1 ²	171637-1 ²	171639-1 ²	567251-2 ³ 567251-3 ³	90707-1
		Duplex ¹	—	—	171637-3 ²	—		

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

².671 [17.04] and .659 [16.74] dimensions are .689 [17.50] for indicated part numbers.

³HDM Applicator part number ending in -1 is used on AMPOMATER 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 page 85 for further information.

⁴HDM 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 page 85 for further information.

Keying Plug

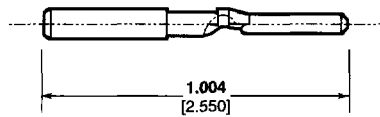
Material

UL94V-0 Nylon, white color

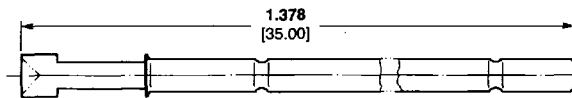
Test Probe Contact

Material and Finish

Phosphor bronze, nickel plated



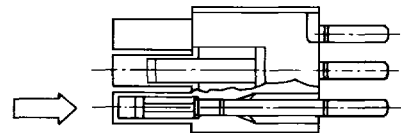
Part Number
174670-1



Part Number
172971-1

Notes:

1. The test probe is inserted into the housing in the same direction as indicated by the arrow to 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. 455830-1
IS 408-7984

Dimensions are for reference only.

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 — pg. 49 and 50

Contacts — pg. 52

Keying Plug — pg. 52

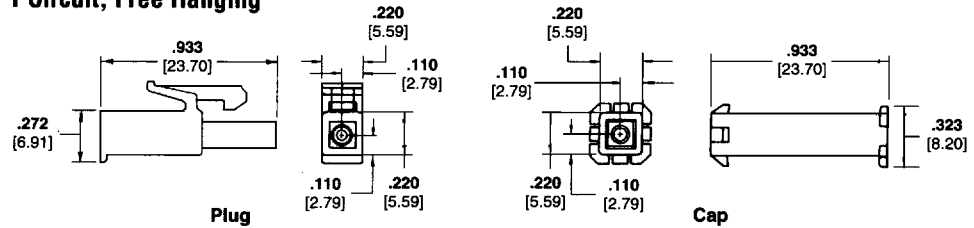
Test Probe Contact — pg. 52

Panel Cutout Recommendations — pg. 55

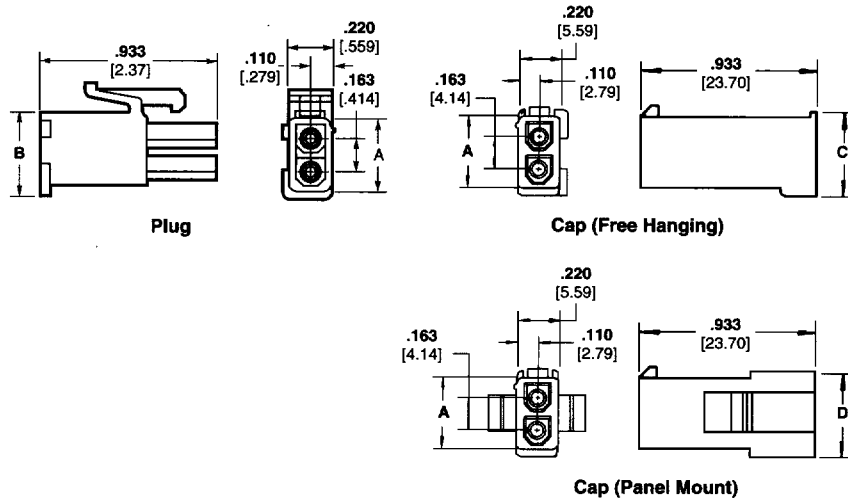
Technical Documents — pg. 80

Mating Headers — pg. 56 and 57

1 Circuit, Free Hanging

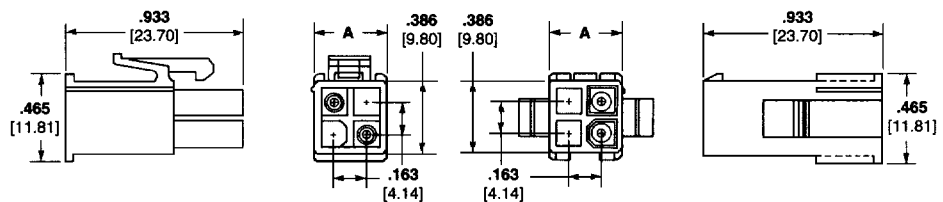


2 and 3 Circuit, In-Line



Number of Circuits	Dimensions				Housing Part Numbers ¹					
					UL94V-0 Nylon, White Color			UL94V-2 Nylon, Natural Color		
					Plug	Cap		Plug	Cap	
	A	B	C	D		Panel Mount	Free Hanging		Panel Mount	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

4 and 6 Circuit, Dual Row



Number of Circuits	A Dim.	Housing Part Numbers ¹			
		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

¹Housing part numbers shown in the tables are all natural color. Other colors, red, green, blue, black, are also available. 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

Dimensions are for reference only.

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

Housings

.163 [4.14] Centerline spacing

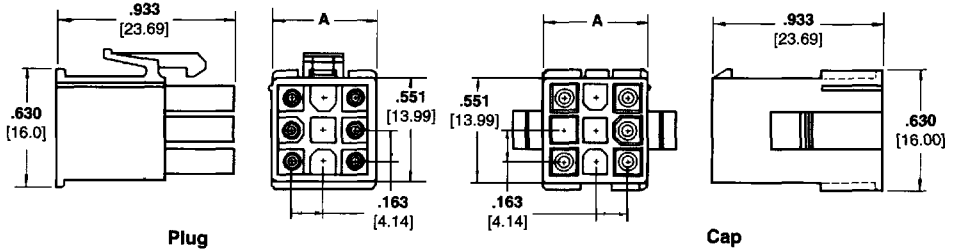
Related Product Data

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 — pg. 49 and 50
 Contacts — pg. 52
 Keying Plug — pg. 52
 Test Probe Contact — pg. 52
 Panel Cutout Recommendations — pg. 55
 Technical Documents — pg. 80
 Mating Headers — pg. 56 and 57

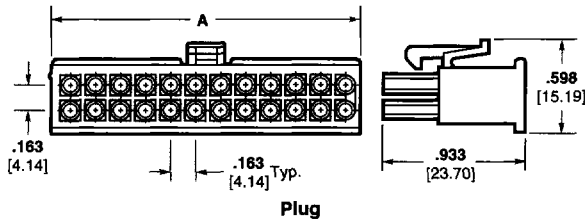
9, 12 and 15 Circuit, Free Hanging or Panel Mount, Matrix



Number of Circuits	A Dim.	Housing Part Numbers ¹			
		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

¹Housing part numbers shown in table are all natural color. Other colors, red, green, blue, black, are also available. 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

8 thru 24 Circuit, Dual Row



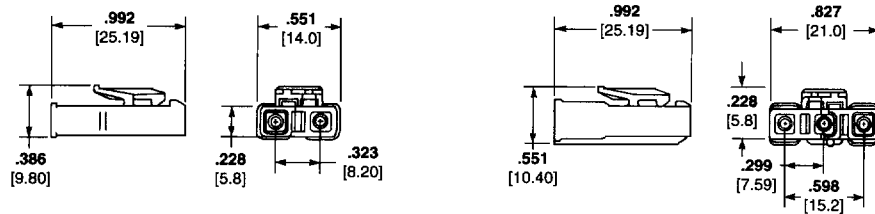
Number of Circuits	A Dim.	UL94V-0 Nylon, White Color
		Plug Part Number
8	.714 18.14	770579-1
10	.877 22.28	770580-1
12	1.040 26.42	770581-1
14	1.203 30.56	770582-1
16	1.366 34.70	770583-1
18	1.529 38.84	770584-1
20	1.692 42.98	770585-1
22	1.855 47.12	770586-1
24	2.018 51.26	770587-1

Dimensions are for reference only.

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

Housings
Hermaphroditic
Free Hanging

2, 3 and 4 Circuit

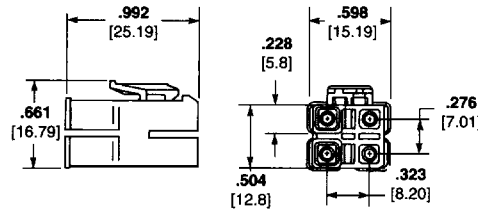


Related Product Data

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 — pg. 49 and 50
Contacts — pg. 52
Cap Housings — pg. 53 and 54
Technical Documents — pg. 80



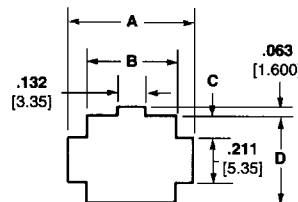
Number of Circuits	Part Numbers	
	UL94V-2 Nylon, Natural Color	UL94V-0 Nylon, White Color
2	172807-1	173956-1
3	172808-1	173957-1
4	172809-1	173958-1

Note: Mates to itself. 2 required per wire-to-wire connection.

Recommended Cap Housing Panel Cutout

View is from cap entry side

Recommended Panel Thickness .032 [0.80] – .787 [2.0]



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

Dimensions are for reference only.

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 Specification

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)

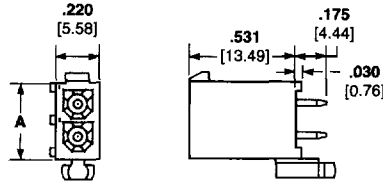
Performance Characteristics — pg. 49 and 50

Recommended PC Board Hole Layout — pg. 58

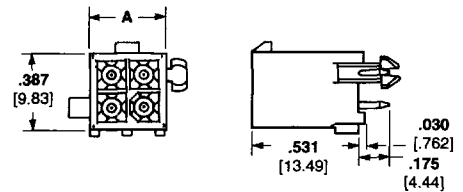
Technical Documents — pg. 80

Mating Plug Housings — pg. 53 and 54

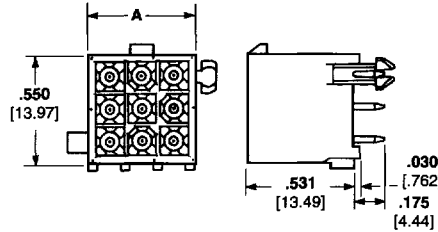
2 and 3 Circuit, In-Line



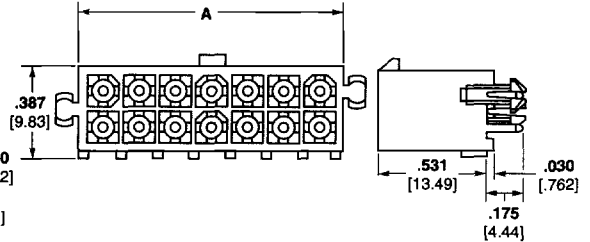
4, 6, 8, 10 and 12 Circuit, Double Row



9, 12 and 15 Circuit, Matrix



14, 16, 18, 20, 22 and 24 Circuit, Double Row



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	
2	In-Line	.387 9.83	Tin-Lead ¹	770166-1	770872-1	172165-1
			Duplex ²	770166-2	770872-2	
3	In-Line	.550 13.97	Tin-Lead ¹	770170-1	770873-1	172166-1
			Duplex ²	770170-2	770873-2	
4	Dual Row	.387 9.83	Tin-Lead ¹	770174-1	770874-1	172167-1
			Duplex ²	770174-2	770874-2	
6	Dual Row	.550 13.97	Tin-Lead ¹	770178-1	770875-1	172168-1
			Duplex ²	770178-2	770875-2	
8	Dual Row	.713 18.11	Tin-Lead ¹	794065-1	794073-1	770579-1
			Duplex ²	794065-2	794073-2	
9	Matrix	.551 14.00	Tin-Lead ¹	770182-1	770876-1	172169-1
			Duplex ²	770182-2	770876-2	
10	Dual Row	.877 22.28	Tin-Lead ¹	770743-1	770858-1	770580-1
			Duplex ²	770743-2	770858-2	
12	Dual Row	1.039 26.39	Tin-Lead ¹	794066-1	770621-1	770581-1
			Duplex ²	794066-2	770621-2	
12	Matrix	.713 18.11	Tin-Lead ¹	770186-1	794040-1	172170-1
			Duplex ²	770186-2	794040-2	
14	Dual Row	1.202 30.53	Tin-Lead ¹	794067-1	794074-1	770582-1
			Duplex ²	794067-2	794074-2	
15	Matrix	.877 22.28	Tin-Lead ¹	770190-1	770859-1	172171-1
			Duplex ²	770190-2	770859-2	
16	Dual Row	1.365 34.67	Tin-Lead ¹	794068-1	794075-1	770583-1
			Duplex ²	794068-2	794075-2	
18	Dual Row	1.528 38.81	Tin-Lead ¹	794069-1	794076-1	770584-1
			Duplex ²	794069-2	794076-2	
20	Dual Row	1.691 42.95	Tin-Lead ¹	794070-1	794077-1	770585-1
			Duplex ²	794070-2	794077-2	
22	Dual Row	1.854 47.09	Tin-Lead ¹	794071-1	794078-1	770586-1
			Duplex ²	794071-2	794078-2	
24	Dual Row	2.017 51.23	Tin-Lead ¹	794072-1	794079-1	770587-1
			Duplex ²	794072-2	794079-2	

¹Tin-Lead Finish — Plated with .000150 [.00381] min. tin-lead over .000050 [.00127] min. nickel underplate on entire contact.

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

Dimensions are for reference only.

Mini-Universal MATE-N-LOK Connectors

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

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

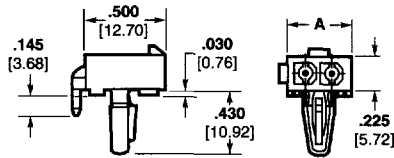
Performance Characteristics — pg. 49 and 50

Recommended PC Board Hole Layout — pg. 58

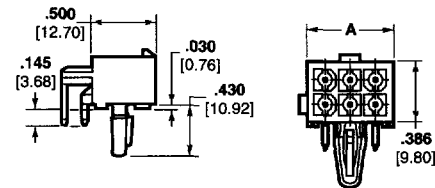
Technical Documents — pg. 80

Mating Plug Housings — pg. 53 and 54

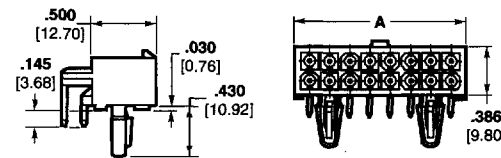
With Standard Board Lock Feature 2 and 3 Circuit, In-Line



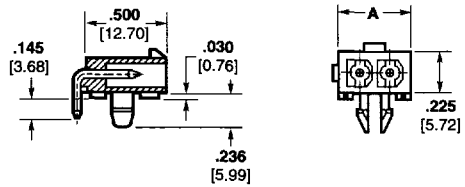
4, 6, 8, 10 and 12 Circuit, Dual Row



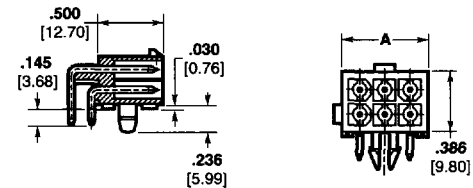
14 thru 24 Circuit, Dual Row



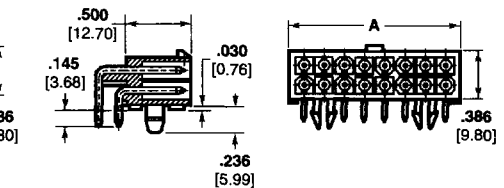
With Short Board Lock Feature 2 and 3 Circuit, In-Line



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



14 and 16 Circuit, Dual Row



Number of Circuits	Style	A: Dim.	Pin Finish	Pin Header Part Numbers		Mates with Plug Housing Part Number (Using Socket Contacts)
				Standard Board Lock	Short Board Lock	
2	In-line	.388 9.86	Tin-Lead ¹	770605-1	770966-1	172165-1
			Duplex ²	770605-2	770966-2	
3	In-line	.551 14.00	Tin-Lead ¹	770606-1	770967-1	172166-1
			Duplex ²	770606-2	770967-2	
4	Dual Row	.388 9.86	Tin-Lead ¹	770607-1	770968-1	172167-1
			Duplex ²	770607-2	770968-2	
6	Dual Row	.551 14.00	Tin-Lead ¹	770608-1	770969-1	172168-1
			Duplex ²	770608-2	770969-2	
8	Dual Row	.714 18.14	Tin-Lead ¹	770609-1	770970-1	770579-1
			Duplex ²	770609-2	770970-2	
10	Dual Row	.877 22.28	Tin-Lead ¹	770610-1	770971-1	770580-1
			Duplex ²	770610-2	770971-2	
12	Dual Row	1.040 26.42	Tin-Lead ¹	770611-1	770972-1	770581-1
			Duplex ²	770611-2	770972-2	
14	Dual Row	1.203 30.56	Tin-Lead ¹	770612-1	770973-1	770582-1
			Duplex ²	770612-2	770973-2	
16	Dual Row	1.366 34.70	Tin-Lead ¹	770613-1	770974-1	770583-1
			Duplex ²	770613-2	770974-2	
18	Dual Row	1.529 38.84	Tin-Lead ¹	770614-1	—	770584-1
			Duplex ²	770614-2	—	
20	Dual Row	1.692 42.98	Tin-Lead ¹	770615-1	—	770585-1
			Duplex ²	770615-2	—	
22	Dual Row	1.855 47.12	Tin-Lead ¹	770616-1	—	770586-1
			Duplex ²	770616-2	—	
24	Dual Row	2.018 51.26	Tin-Lead ¹	770617-1	—	770587-1
			Duplex ²	770617-2	—	

¹Tin-Lead Finish — Plated with .000150 [.00381] min. tin-lead over .000050 [.00127] min. nickel underplate on entire contact.

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

Dimensions are for reference only.

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

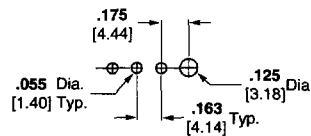
Recommended PC Board Hole Layout for Vertical Headers

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

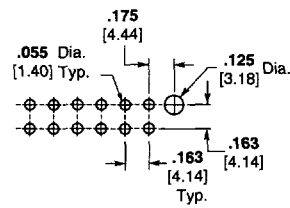
Related Product Data

Vertical Headers—pg. 56

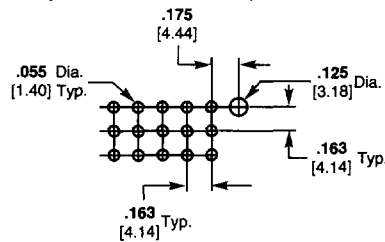
2 and 3 Circuit, In-Line



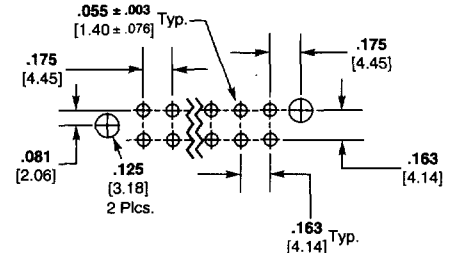
4, 6, 8, 10 and 12 Circuit, Double Row



9, 12 and 15 Circuit, Matrix



14, 16, 18, 20, 22 and 24 Circuit, Double Row



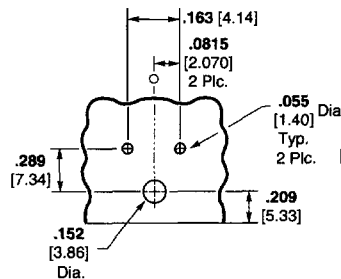
Recommended PC Board Hole Layout for Right Angle Headers

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

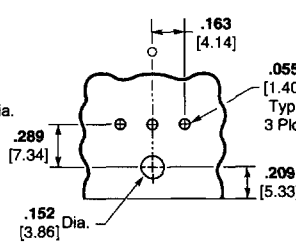
Related Product Data

Right Angle Headers—pg. 57

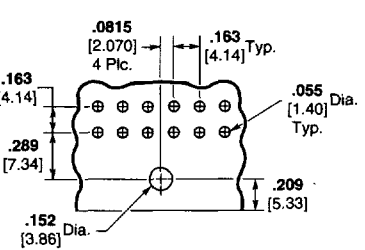
2 Circuit



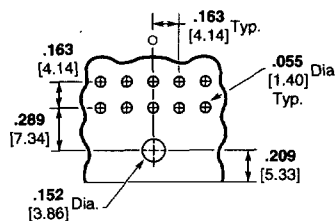
3 Circuit



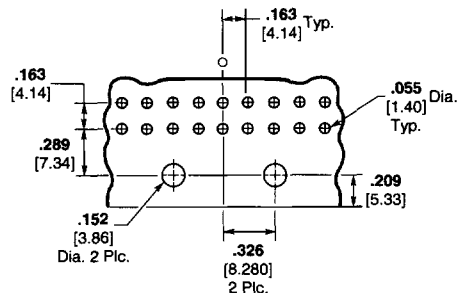
4, 8 and 12 Circuit



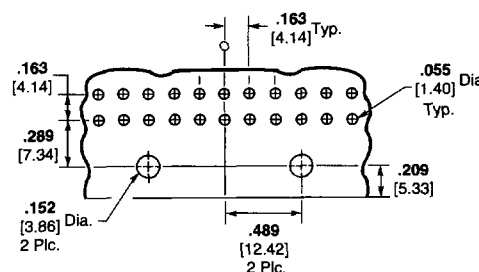
6 and 10 Circuit



14 and 18 Circuit



22 Circuit



16, 20 and 24 Circuit

