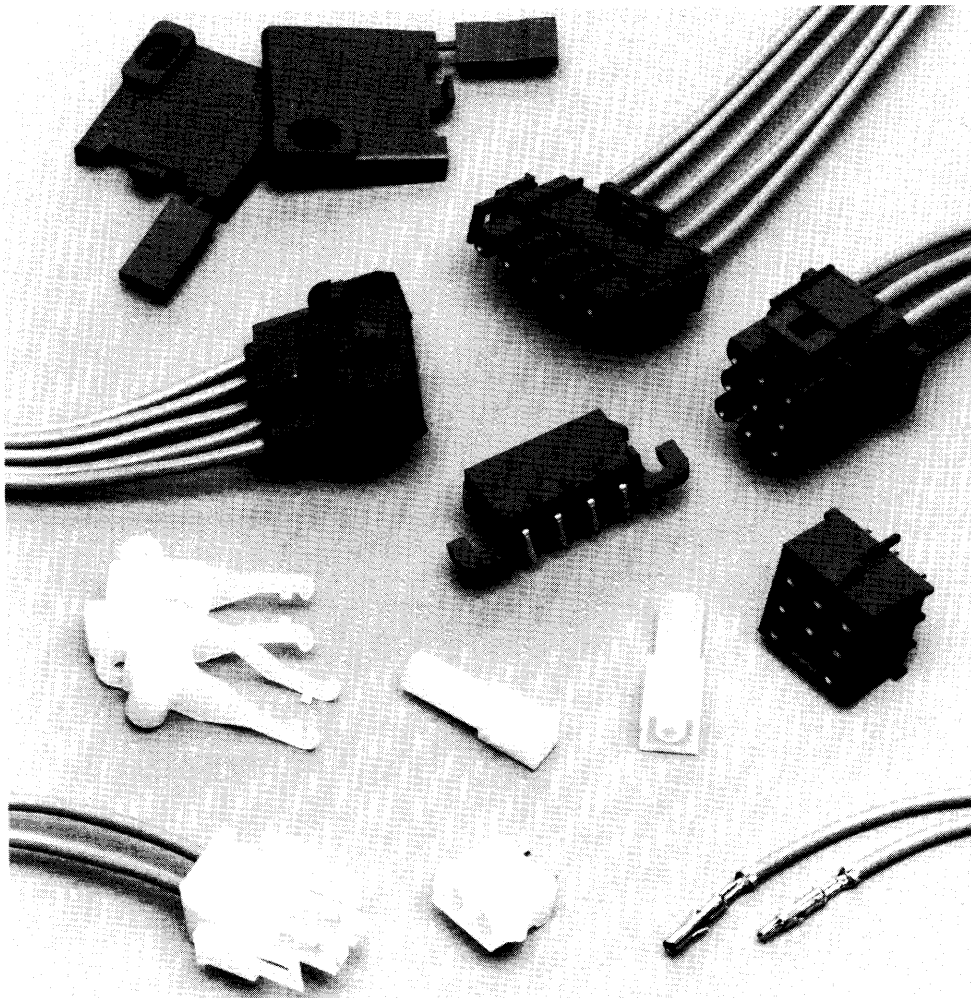


Universal MATE-N-LOK Connectors

Product Facts

- Pins and sockets can be intermixed in the same housing
- Positive polarization
- Rear cavity identification
- Contacts completely enclosed in housings
- Positive locking housings
- Insulation capability to .200 [5.08] diameter
- Removable, crimp snap-in contacts
- Low contact mating force
- Contacts accept 30-10 AWG [.05-5.0 mm²] wire sizes
- Contacts available with pre-tin or gold plating
- Dual locking lances provide optimum contact stability
- Panel mount or free hanging
- Mate with Universal MATE-N-LOK II Housings
- Available in UL 94V-0 flame retardant material. Meets the material requirements of table 25.1 of U.L. Standard 1410 (television receivers and video products)
- Not for interrupting current
- Harness to PC Board capability using pin or socket headers
- Pin and socket headers are available in both vertical and right angle style
- Solderability — headers meet MIL-STD 202 Method 208
- Contacts are on .250 [6.35] centerline spacing
- Recognized under the Component Program of Underwriters Laboratories, Inc. File No. E28476
- Certified by Canadian Standards Association File No. LR 7189
- Tested by VDE under their Test Report No. 14397-1431-1003



Performance Characteristics

The Universal MATE-N-LOK connector performance specifications found on pages 4 and 5 apply to free hanging and panel mount connectors.

Dielectric Withstanding Voltage
5.0 KVAC or 10 KVDC between adjacent circuits

Insulation Resistance
1000 megohms minimum initial between adjacent circuits

Voltage Rating 600V AC or DC

Connector Mating
Solid Pin — 3.0 lb. max. per circuit
Split Pin — 1.5 lb. max. per circuit

Connector Unmating
Solid Pin — .7 lb. min. per circuit
Split Pin — .5 lb. min. per circuit

Contact Insertion Force 2.0 lb. max. per contact

Contact Retention 15 lb. min. per contact

Durability 50 cycles, mating and unmating

Wire Size		Termination Resistance		Tensile Force Per Contact (Wire Pullout)	
AWG	mm ²	Test Current (Amps)	Resistance Milliohms (Max. Init.)	Force (Min.)	
				lbs.	N
30	.05	—	—	2	9
28	.08	—	—	3	13
26	.12	—	—	6	27
24	.2	1.5	3.50	8	36
22	.3	3	3.50	14	62
20	.5	4.5	3.00	14	62
18	.8	6	3.00	30	133
16	1.2	8	2.75	45	200
14	2.0	10	2.75	50	222
12	3.0	—	—	60	267
10	5.0	—	—	70	311

Note: This is the total resistance between wire crimps of a mated pin and socket.

Technical Documents

Product Specifications

- 108-1031 Universal MATE-N-LOK Connectors
- 108-1053 Universal MATE-N-LOK PC Board Headers

Application Specification

- 114-1010 Universal MATE-N-LOK Contacts

Instruction Sheet

- IS 7714 Plug, Cap, Headers, Pin, Socket and Accessories

Universal MATE-N-LOK Connectors

Performance Characteristics (Continued)

Maximum Current Maximum current rating of 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.

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

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

Physical Shock 18 drops, 50 g saw-tooth at 10 milliseconds

Housing Panel Retention .75 lb. min.

Housing Lock Strength .35 lb. min.

Thermal Shock -55°C to +85°C

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

Corrosion 48 hr. at 5% salt concentration

Related Product Data

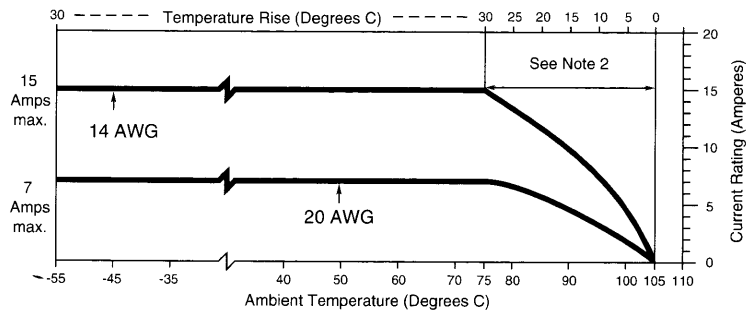
Product Specifications

108-1031 Universal MATE-N-LOK Connectors

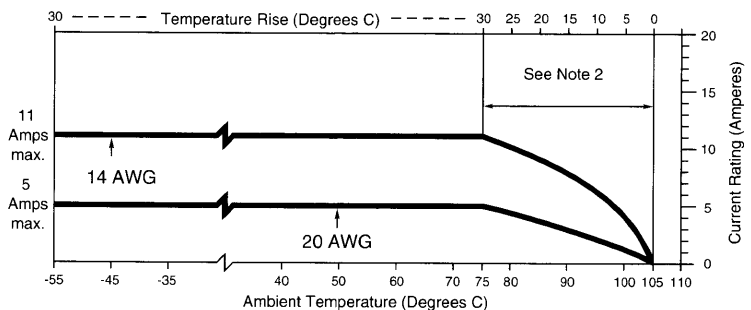
108-1053 Universal MATE-N-LOK Headers

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

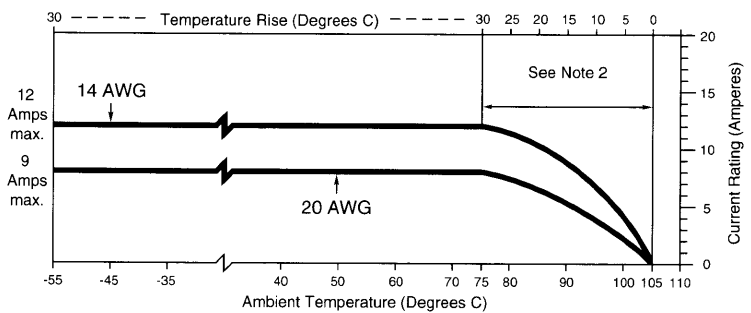
4 Circuit Connector (Wire-to-Wire)



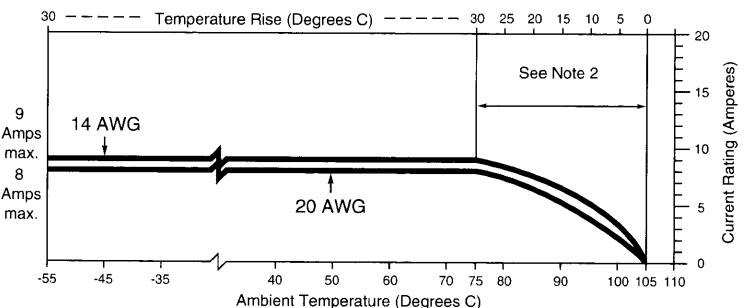
12 Circuit Connector (Wire-to-Wire)



4 Circuit Vertical Header (Wire-to-Board)



2 Circuit Right Angle Header (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.

Universal MATE-N-LOK Connectors

Contacts

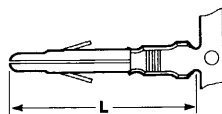
Solid pin diameter .084 [2.13]
Split pin diameter .086 [2.18]
Stock thickness .012 [.305] unless otherwise noted.
These contacts are to be used in Universal MATE-N-LOK Plug or Cap housings only.

Related Product Data

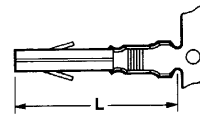
Product Specification
108-1031 Universal MATE-N-LOK Connectors

Application Specification
114-1010 Universal MATE-N-LOK Contacts

Performance Characteristics — pg. 4 and 5
Technical Documents — pg. 60
Application Tooling — pg. 61, 62 and 63
Housings — pg. 8



Pin



Socket

Wire Size Range AWG [mm ²]	Ins. Dia. Range	L Dim.		Material & Finish	Contact Part Numbers				HDM Applicator Part No. ⁶	Hand Tool Part No.
		Pin	Socket		Pin		Socket			
					Strip Form	Loose Form	Strip Form	Loose Form		
30-26 [.05-.12]	.032-.057 .813-1.45	.790 20.06	.760 19.30	Brass, Pre-tin	350924-1	770672-1	350925-1	770673-1	466616-2	58439-1
				Phos. Brz., Gold ²	350924-6	770672-6	350925-6	—		
24-18 [.2-.8]	.040-.100 1.02-2.54	.790 20.06	.760 19.30	Brass, Pre-tin	350561-1	350690-1	350851-1 350570-1 ¹	350689-1 ¹	466320-1 466320-2	90300-2
				Brass, Gold ²	350561-2	350690-2	350851-2 350570-2 ¹	640347-2 350689-2 ¹		
				Brass, Select Gold ³	350561-7	350690-7	350851-7 350570-7 ¹	350689-7 ¹		
				Phos. Brz., Pre-tin	350561-3	350690-3	350570-3 ¹	350689-3 ¹		
				Phos. Brz., Select Gold ³	—	—	350570-6 ¹	—		
20-14 [.5-2.0]	.060-.130 1.52-3.30	.790 20.06	.760 19.30	Brass, Pre-tin	350218-1	350547-1	350536-1	350550-1	687763-1 687763-2	90296-2
				Brass, Gold ²	350218-2	350547-2	350536-2	350550-2		
				Brass, Select Gold ³	350218-7	350547-7	350536-7	350550-7		
				Phos. Brz., Pre-tin	350218-3	350547-3	350536-3	350550-3		
				Phos. Brz., Select Gold ³	350218-6	350547-6	350536-6	350550-6		
20-14 [.5-2.0]	.130-.200 3.30-5.08	.810 20.57	.780 19.81	Brass, Pre-tin	350538-1	350552-1	350537-1	350551-1	687926-1 687926-2	90298-2 ⁷ 90299-2 ⁷
				Brass, Gold ²	350538-2	350552-2	350537-2	350551-2		
				Brass, Select Gold ³	350538-7	350552-7	350537-7	350551-7		
				Phos. Brz., Pre-tin	350538-3	350552-3	350537-3	350551-3		
				Phos. Brz., Select Gold ³	350538-6	350552-6	350537-6	350551-6		
18-14 ⁴ [.8-2.0]	.130-.200 3.30-5.08	.810 20.57	.780 19.81	Brass, Pre-tin	350873-1	—	350874-1	—	466588-1 466588-2	90298-2 ⁷ 90299-2 ⁷
				Phos. Brz., Pre-tin	350873-3	350918-3	350874-3	350919-3		
				Phos. Brz., Pre-tin	350922-3	640309-3	350923-3	640310-3		
12-10 [3.0-5.0]	.200 max. ⁵ 5.08	.810 20.57	.780 19.81	Phos. Brz., Select Gold ³	350922-6	640309-6	350923-6	640310-6	466597-1 466597-2	69710-1 ⁷
				Phos. Brz., Gold ²	350922-4	—	350923-4	—		

¹Socket Contact — .010 [.254] stock thickness

²Gold Finish — Plated with .000030 [.000762] min. gold in mating area and inside wire barrel over .000050 [.00127] min. nickel underplate on entire contact.

³Select Gold Finish — Plated with .000030 [.000762] min. gold in mating area over .000050 [.00127] min. nickel underplate on entire contact.

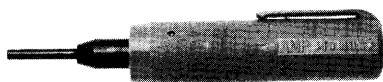
⁴Recommended for predominant use of 14 AWG wire.

⁵There is no insulation barrel on this contact. Insulation maximum diameter is limited by the housing.

⁶Heavy-Duty Miniature (HDM) applicator part no. with -1 is for a Model "T" AMP-O-LECTRIC terminating unit used in automatic leadmaking machines such as the AMPOMATOR CLS III machines; -2 is for a Model "K" AMP-O-LECTRIC Bench-Top Unit. Stripper-Crimper (SCA) and Crimp Quality Monitor (CQM) applicators are available, call the AMP Tooling Assistance Center for part numbers 1-800-722-1111.

⁷Hand Tool No. 90298-2 is for wire size 20-18 AWG; Hand Tool No. 90299-2 is for wire size 16-14 AWG. Hand Tool No. 69710-1 use die set No. 58380-1 for 12 AWG and No. 58380-2 for 10 AWG.

Note: Phosphor bronze material contacts should be used in high temperature/humidity cycling applications.



Contact Extraction Tool
No. 458994-2
IS 7982



Contact Insertion Tool
(For inserting contacts applied to small diameter wire)
No. 455830-1
IS 7984

Dimensions are for reference only.

Universal MATE-N-LOK Connectors

Contacts

Solid pin diameter .084 [2.13]
Split pin diameter .086 [2.18]
Stock thickness .012 [.305]
These contacts are to be used in Universal MATE-N-LOK Plug or Cap housings only.

Related Product Data

Product Specification

108-1031 Universal MATE-N-LOK Connectors

Application Specification

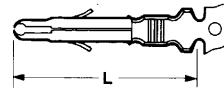
114-1010 Universal MATE-N-LOK Contacts

Performance Characteristics — pg. 4

and 5
Technical Documents — pg. 60

Application Tooling — pg. 61, 62 and 63
Housings — pg. 8

Split Pins



Wire Size Range AWG [mm ²]	Ins. Dia. Range	L Dim.	Material & Finish	Contact Part Numbers		HDM Applicator Part No. ³	Hand Tool Part No.
				Strip Form	Loose Form		
24-18 [.2-.8]	.040-.100 1.02-2.54	.790 20.06	Brass, Pre-tin	350699-1	350706-1	466320-1 466320-2	90300-2
			Brass, Gold ¹	350699-2	350706-2		
			Brass, Select Gold ²	350699-7	350706-7		
20-14 [.5-2.0]	.060-.130 1.52-3.30	.790 20.06	Brass, Pre-tin	350687-1	350705-1	687763-1 687763-2	90296-2
			Brass, Gold ¹	350687-2	350705-2		
			Brass, Select Gold ²	350687-7	350705-7		
20-14 [.5-2.0]	.130-.200 3.30-5.08	.810 20.57	Brass, Pre-tin	350700-1	350707-1	687926-1 687926-2	90298-2 ⁴ 90299-2 ⁴
			Brass, Gold ¹	350700-2	350707-2		
			Brass, Select Gold ²	350700-7	350707-7		

¹Gold Finish — Plated with .000030 [.000762] min. gold in mating area and inside wire barrel over .000050 [.00127] min. nickel underplate on entire contact.

²Select Gold Finish — Plated with .000030 [.000762] min. gold in mating area over .000050 [.00127] min. nickel underplate on entire contact.

³Heavy-Duty Miniature (HDM) applicator part no. with -1 is for a Model "T" AMP-O-LECTRIC terminating unit used in automatic leadmaking machines such as the AMPOMATOR CLS III machines; -2 is for a Model "K" AMP-O-LECTRIC Bench-Top Unit. Stripper-Crimper (SCA) and Crimp Quality Monitor (CQM) applicators are available, call the AMP Tooling Assistance Center for part numbers 1-800-722-1111.

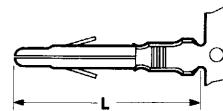
⁴Hand Tool No. **90298-2** for wire size 20-18 AWG. Hand Tool No. **90299-2** for wire size 16-14 AWG.

Notes:

- AMP recommends split pins be used in housings having 6, 9, 12 and 15 circuits to reduce mating force.
- Phosphor bronze material contacts are available for use in high temperature/humidity cycling applications, consult AMP Incorporated.

Grounding Pin

(100 [2.54] longer than standard pin)



Wire Size Range AWG [mm ²]	Ins. Dia. Range	L Dim.	Material & Finish	Contact Part Numbers		HDM Applicator Part No. ²	Hand Tool Part No.
				Strip Form	Loose Form		
24-18 [.2-.8]	.060-.130 1.52-3.30	.890 22.60	Brass, Pre-tin	770210-1	—	567216-2	—
20-14 [.5-2.0]	.060-.130 1.52-3.30	.890 22.60	Brass, Pre-tin	350654-1	350669-1	687763-1 687763-2	90296-2
12-10 [3.0-5.0]	.200 max. ¹ 5.08	.910 23.11	Phos. Brz., Pre-tin	770234-3	—	466597-2	—

¹There is no insulation barrel on this contact. Insulation maximum diameter is limited by the housing.

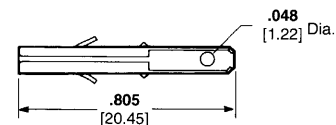
²Heavy-Duty Miniature (HDM) applicator part no. with -1 is for a Model "T" AMP-O-LECTRIC terminating unit used in automatic leadmaking machines such as the AMPOMATOR CLS III machines; -2 is for a Model "K" AMP-O-LECTRIC Bench-Top Unit. Stripper-Crimper (SCA) and Crimp Quality Monitor (CQM) applicators are available, call the AMP Tooling Assistance Center for part numbers 1-800-722-1111.

Programmable Connector Contact

(Socket with 110 Series Special FASTON Tab)

Material and Finish

Brass, pre-tin



Part Number
350877-1

Note: This contact will accept a 110 Series FASTON Receptacle — Part No. **350871-1** (strip form) allows simple field wiring or wiring changes.

Dimensions are for reference only.

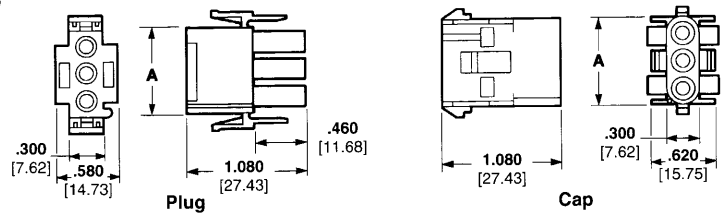
Universal MATE-N-LOK Connectors

Housings

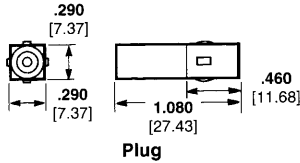
Free Hanging or Panel Mount

.250 [6.35] Centerline spacing

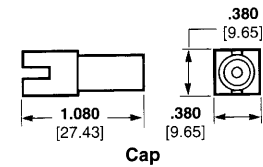
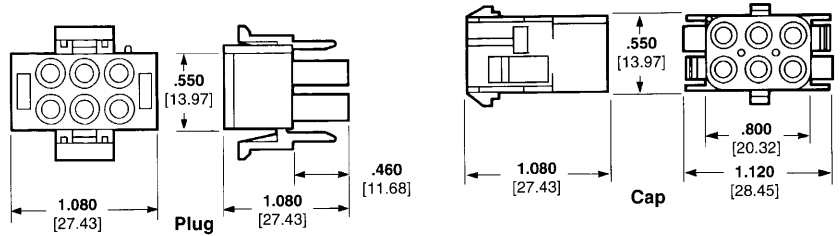
2, 3, 4, 5, 6, 8 and 10 Circuit, In-Line



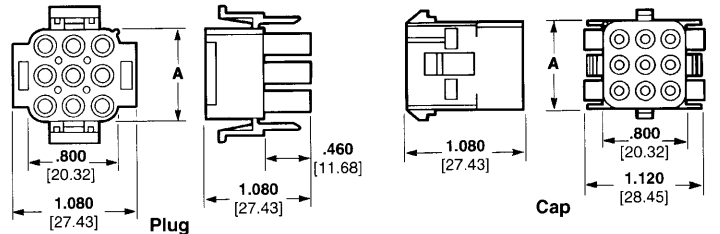
1 Circuit, Free Hanging



6 Circuit, Matrix



9, 12 and 15 Circuit, Matrix



Related Product Data

Product Specification

108-1031 Universal MATE-N-LOK Connectors

Performance Characteristics — pg. 4 and 5

Contacts — pg. 6 and 7

Panel Cutout Recommendations — pg. 9

Keying Plug — pg. 9

Strain Reliefs — pg. 9 and 10

Technical Documents — pg. 60

Mating Headers — pg. 11, 12 and 14

Other Mating Connectors

Universal MATE-N-LOK II Housings — pg. 18, 19 and 20

Number of Circuits	A Dim.	Housing Part Numbers			
		Plug		Cap	
		UL94V-2 Nylon, Natural	UL94V-0 Nylon, Brick Red	UL94V-2 Nylon, Natural	UL94V-0 Nylon, Brick Red
1	—	1-350867-0	350865-1	770421-1	350866-1
		1-641084-0 ²	—	1-641083-0 ^{1,2}	—
2	.550 13.97	1-480698-0 ¹	350777-1 ¹	1-480699-0 ¹	350778-1 ¹
		1-770113-0 ^{1,2}	—	1-770114-0 ^{1,2}	—
3	.800 20.32	1-480700-0 ¹	350766-1 ¹	1-480701-0 ¹	350767-1 ¹
		1-641771-0 ^{1,2}	—	1-641767-0 ^{1,2}	—
4	1.050 26.67	1-480702-0 ¹	350779-1 ¹	1-480703-0 ¹	350780-1 ¹
		770208-1 ^{1,2}	—	770209-1 ^{1,2}	—
5	1.300 33.02	1-480763-0 ¹	350809-1 ¹	1-480764-0 ¹	350810-1 ¹
		640585-1 ¹	640581-1 ¹	926307-1 ¹	926307-3 ¹
6	1.550 39.37	1-480704-0	350715-1	1-480705-0	350781-1
		1-641770-0 ²	—	1-641766-0 ²	—
8	2.050 52.07	640586-1 ¹	640582-1 ¹	926308-1 ¹	926308-3 ¹
9	.800 20.32	1-480706-0	350720-1	1-480707-0	350782-1
		1-641769-0 ²	—	1-641765-0 ²	—
10	2.550 64.77	926302-1 ¹	926302-3 ¹	926309-1 ¹	926309-3 ¹
12	1.050 26.67	1-480708-0	350735-1	1-480709-0	350783-1
		1-641768-0 ²	—	641764-1 ²	—
15	1.300 33.02	1-480710-0	350736-1	1-480711-0	350784-1

¹In-Line version.

²Housing material has 125°C temperature rating. Lime Green color. 12 Circuit cap black color.

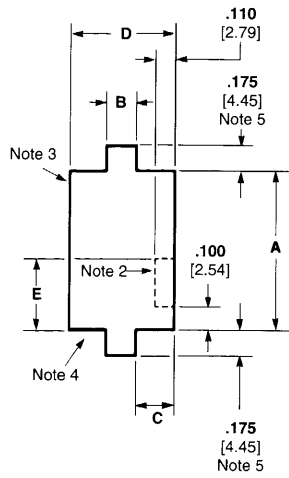
Dimensions are for reference only.

Universal MATE-N-LOK Connectors

Recommended Cap Housing Panel Cutout

IS 7714

View is from cap entry side



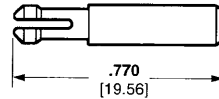
Style	Number of Circuits	Dimensions				
		A	B	C	D	E
In-Line	2	.565 14.35	.340 8.64	.095 2.41	.530 13.46	.250 6.35
	3	.815 20.70	.340 8.64	.095 2.41	.530 13.46	.250 6.35
	4	1.065 27.05	.340 8.64	.095 2.41	.530 13.46	.250 6.35
	5	1.315 33.40	.340 8.64	.095 2.41	.530 13.46	.250 6.35
	6	1.567 39.80	.154 3.91	.189 4.80	.531 13.49	.394 10.0
	8	2.067 52.50	.154 3.91	.189 4.80	.531 13.49	.394 10.0
Matrix	10	2.567 65.20	.154 3.91	.189 4.80	.530 13.46	.394 10.0
	6	.565 14.35	.480 12.19	.275 6.99	1.030 26.16	.250 6.35
	9	.815 20.70	.480 12.19	.275 6.99	1.030 26.16	.250 6.35
	12	1.065 27.05	.480 12.19	.275 6.99	1.030 26.16	.350 8.89
	15	1.315 33.40	.480 12.19	.275 6.99	1.030 26.16	.350 8.89

Notes:

1. Recommended panel thickness — .030-.090 [.762-2.286]. Panel must be punched so that housing enters panel in same direction as the punch.
2. Optional for keying housing to panel.
3. Circuit #1 location when using panel keying with 6, 9, 12 and 15 circuit Matrix housings.
4. Circuit #1 location when using panel keying with 2, 3, 4, 5, 6, 8 and 10 circuit In-Line housings.
5. .175 [4.45] dimension is .125 [3.18] for 6, 8 and 10 circuit In-Line housings.

Keying Plug

IS 7714

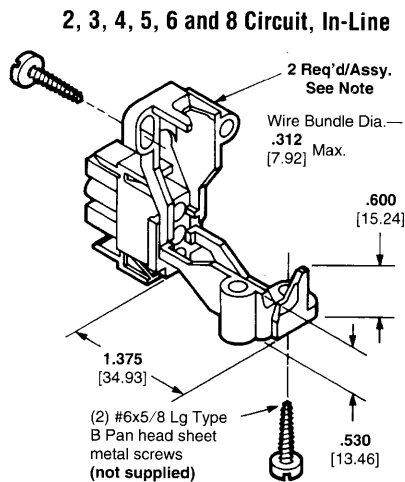


Part Numbers

- UL94V-2 Nylon material, natural color — 1-640415-1
 - UL94V-0 Nylon material, brick red color — 1-640415-0
- Note:** Keying plug snaps into plug or cap housing

Plug Housing Strain Reliefs

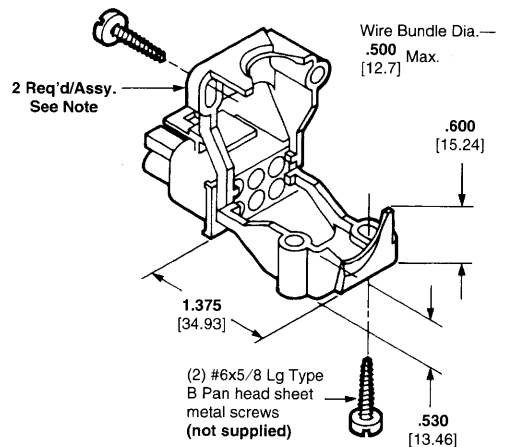
IS 7714



Part Numbers

- UL94V-2 Nylon material, natural color — 1-350589-0
- UL94V-0 Nylon material, brick red color — 350811-1

6, 9, 12 and 15 Circuit, Matrix



Part Numbers

- UL94V-2 Nylon material, natural color — 1-350590-0
- UL94V-0 Nylon material, brick red color — 350812-1

Note: Strain relief part number represents one half of a strain relief. Two strain reliefs required per housing.

Dimensions are for reference only.

Universal MATE-N-LOK Connectors

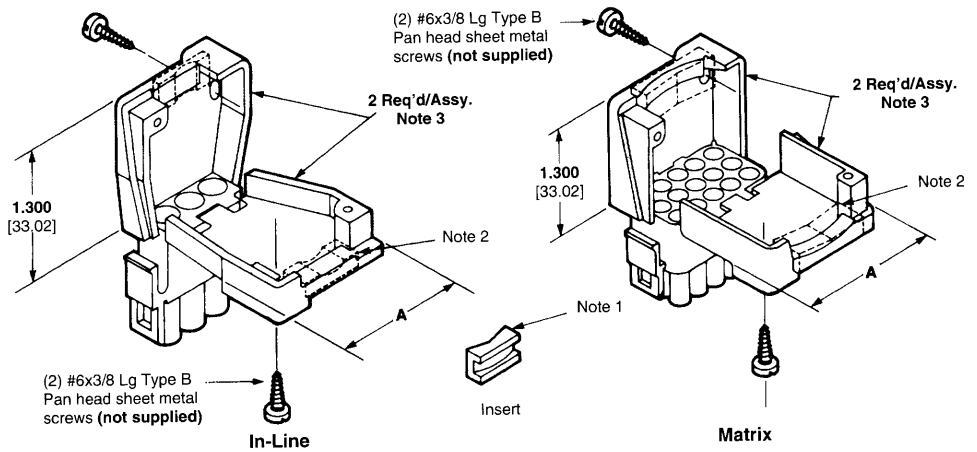
Plug or Cap Housing Strain Reliefs

IS 7714

Related Product Data

Housings — pg. 8
Technical Documents — pg. 60

2, 3, 4, 5, 6, 8, 9, 12 and 15 Circuit (Enclosed)

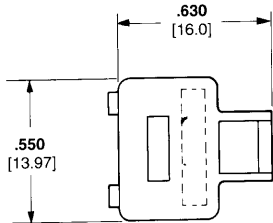


Cap Housing Adapters

These adapters are designed to anchor the cap housing strain reliefs to the housings and prevent the strain relief halves from "drawing in" when the screws are being torqued down to clamp the cable.

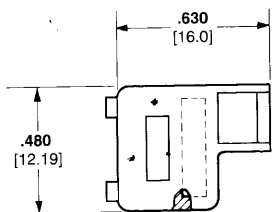
IS 7714

For All Positions Except 2, 6 and 8 Circuit Cap Housings



UL94V-2 Nylon material,
natural color — **641777-1**
UL94V-0 Nylon material,
brick red color — **641778-1**

For 2 In-Line and 6 Matrix Circuit Cap Housings Only



UL94V-2 Nylon material,
natural color — **643182-1**
UL94V-0 Nylon material,
brick red color — **643182-2**

Style	Number of Circuits	A Dim.	Insert Supplied	Single Wire Dia. Range	Wire Bundle Dia. Range	Part Numbers	
						UL94V-2 Nylon, Natural	UL94V-0 Nylon, Brick Red
In-Line	2	.960 24.38	Yes	.040-.190 1.02-4.83	—	1-640719-0	640713-1
			No	—	.200-.350 5.08-8.89	1-640719-1	640713-2
	3	1.140 28.96	Yes	.040-.190 1.02-4.83	—	1-640720-0	640714-1
			No	—	.200-.350 5.08-8.89	641763-1	641945-1
	4	1.325 33.65	Yes	.040-.190 1.02-4.83	—	641775-1	641776-1
			No	—	.200-.350 5.08-8.89	641775-2	641776-2
	5	1.530 38.86	Yes	.040-.190 1.02-4.83	—	643030-3	643030-1
			No	—	.200-.350 5.08-8.89	643030-2	643030-4
	6 Note 5	1.780 45.21	Yes	.040-.190 1.02-4.83	—	643585-1	643313-1
			No	—	.200-.350 5.08-8.89	643585-2	643313-2
	8 Note 5	2.280 56.08	Yes	.040-.190 1.02-4.83	—	—	643314-1
			No	—	.200-.350 5.08-8.89	—	643314-2
Matrix	6	1.030 26.16	Yes	—	.120-.650 3.05-16.51	1-640721-0	640715-1
	9	1.030 26.16	Yes	—	.120-.650 3.05-16.51	1-640722-0	640716-1
	12	1.280 32.51	Yes	—	.150-.750 3.81-19.05	1-640723-0	640717-1
	15	1.530 38.86	Yes	—	.200-.850 5.08-21.59	1-640724-0	640718-1

Notes:

1. Cable clamping insert comes attached to strain relief. It can be used to provide additional adjustment for small wire bundles or discarded.
2. Insert to be positioned as shown by dotted lines.
3. Strain relief part number represents one-half of a strain relief. Two strain reliefs required per housing.
4. Must use cap housing adapters when attaching strain reliefs to a cap housing. Two adapters required per housing.
5. Strain reliefs for 6 and 8 position In-Line fits plug housings only.

Dimensions are for reference only.

Universal MATE-N-LOK Connectors

PC Board Vertical Pin Headers

.250 [6.35] Centerline spacing

Material

Housing —

UL94V-2 Nylon, natural color (94V-2)
UL94V-0 Nylon, brick red color (94V-0)

Contacts — Phosphor bronze

Solder tail diameter .062 [1.57]

Related Product Data

Product Specification

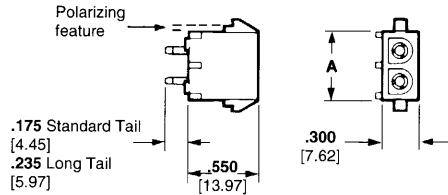
108-1053 Universal MATE-N-LOK PC Board Headers

Performance Characteristics — pg. 5
Recommended PC Board Hole Layout — pg. 13
Technical Documents — pg. 60
Mating Plug Housings — pg. 8

Other Mating Connectors

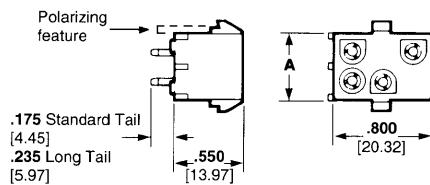
Universal MATE-N-LOK II Housings — pg. 18, 19 and 20

2, 3, 4, 5, 6 and 8 Circuit, In-Line



Number of Circuits	A Dim.	Housing Material	Pin Finish	Pin Header Part Numbers			Mates with Plug Housing Part Number (Using Socket Contacts)
				Standard Tail ²	Standard Tail Polarized ²	Long Tail ³	
2	.550 13.97	94V-2	Pre-tin	350428-1	641963-1	350582-1	1-480698-0
			Duplex ¹	350428-2	641963-2	350582-2	
		94V-0	Pre-tin	350786-1	641964-1	350787-1	350777-1
			Duplex ¹	350786-2	641964-2	350787-2	
3	.800 20.32	94V-2	Pre-tin	350429-1	641965-1	350583-1	1-480700-0
			Duplex ¹	350429-2	641965-2	350583-2	
		94V-0	Pre-tin	350789-1	641966-1	350790-1	350766-1
			Duplex ¹	350789-2	—	350790-2	
4	1.050 26.67	94V-2	Pre-tin	350430-1	641967-1	350584-1	1-480702-0
			Duplex ¹	350430-2	—	350584-2	
		94V-0	Pre-tin	350792-1	641968-1	350793-1	350779-1
			Duplex ¹	350792-2	—	350793-2	
5	1.300 33.02	94V-2	Pre-tin	640466-1	643405-1	—	1-480763-0
			Duplex ¹	640466-2	—	—	
		94V-0	Pre-tin	640900-1	643406-1	—	350809-1
			Duplex ¹	640900-2	—	—	
6	1.550 39.37	94V-2	Pre-tin	641832-1	643407-1	—	640585-1
		94V-0	Pre-tin	641831-1	643408-1	—	640581-1
8	2.050 52.07	94V-2	Pre-tin	641825-1	—	770143-1	640586-1
		94V-0	Pre-tin	641828-1	643410-1	—	640582-1

6, 9, 12 and 15 Circuit, Matrix



Number of Circuits	A Dim.	Housing Material	Pin Finish	Pin Header Part Numbers			Mates with Plug Housing Part Number (Using Socket Contacts)
				Standard Tail ²	Standard Tail Polarized ²	Long Tail ³	
6	.550 13.97	94V-2	Pre-tin	350431-1	—	350585-1	1-480704-0
			Duplex ¹	350431-2	—	350585-2	
		94V-0	Pre-tin	350711-1	—	350732-1	350715-1
			Duplex ¹	350711-2	641970-2	350732-2	
9	.800 20.32	94V-2	Pre-tin	350432-1	—	350586-1	1-480706-0
			Duplex ¹	350432-2	641971-2	350586-2	
		94V-0	Pre-tin	350712-1	641972-1	350742-1	350720-1
			Duplex ¹	350712-2	641972-2	350742-2	
12	1.050 26.67	94V-2	Pre-tin	350433-1	641973-1	350587-1	1-480708-0
			Duplex ¹	350433-2	—	350587-2	
		94V-0	Pre-tin	350713-1	641974-1	350737-1	350735-1
			Duplex ¹	350713-2	641974-2	350737-2	
15	1.300 33.02	94V-2	Pre-tin	350434-1	641975-1	350588-1	1-480710-0
			Duplex ¹	350434-2	—	350588-2	
		94V-0	Pre-tin	350714-1	641976-1	350738-1	350736-1
			Duplex ¹	350714-2	—	350738-2	

¹Duplex Finish — Plated with .000030 [.000762] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

²Use Standard Tail for .062 [1.57] thick PC Board.

³Use Long Tail for .125 [3.18] thick PC Board.

Dimensions are for reference only.

Universal MATE-N-LOK Connectors

PC Board Vertical Socket Headers

.250 [6.35] Centerline spacing

Material

Housing —

UL94V-2 Nylon, natural color
(94V-2)
UL94V-0 Nylon, brick red color
(94V-0)

Contacts — Phosphor bronze

Solder tail diameter .062 [1.57]

Related Product Data

Product Specification

108-1053 Universal MATE-N-LOK PC
Board Headers

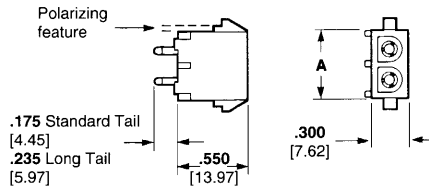
Performance Characteristics — pg. 5
Recommended PC Board Hole Layout —
pg. 13

Technical Documents — pg. 60
Mating Plug Housings — pg. 8

Other Mating Connectors

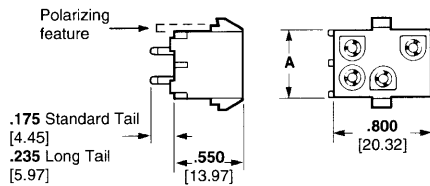
Universal MATE-N-LOK II Housings —
pg. 18, 19 and 20

2, 3, 4, 5, and 6 Circuit, In-Line



Number of Circuits	A Dim.	Housing Material	Socket Finish	Socket Header Part Numbers			Mates with Plug Housing Part Number (Using Pin Contacts)
				Standard Tail ²	Standard Tail Polarized ²	Long Tail ³	
2	.550 13.97	94V-2	Pre-tin	350759-4	643411-1	350986-4	1-480698-0
			Duplex ¹	350759-3	—	—	
		94V-0	Pre-tin	350824-1	643412-1	350831-1	350777-1
			Duplex ¹	350824-2	—	—	
3	.800 20.32	94V-2	Pre-tin	350760-4	643413-1	350987-4	1-480700-0
			Duplex ¹	350760-3	—	—	
		94V-0	Pre-tin	350825-1	643414-1	350832-1	350766-1
			Duplex ¹	350825-2	643414-2	350832-2	
4	1.050 26.67	94V-2	Pre-tin	350761-4	643415-1	350988-4	1-480702-0
			Duplex ¹	350761-3	—	350988-3	
		94V-0	Pre-tin	350826-1	643416-1	350833-1	350779-1
			Duplex ¹	350826-2	—	350833-2	
5	1.300 33.02	94V-2	Pre-tin	640467-1	—	—	1-480763-0
			Duplex ¹	640901-1	—	—	
		94V-0	Pre-tin	640901-1	—	—	350809-1
			Duplex ¹	640901-2	—	—	
6	1.550 39.37	94V-0	Duplex ¹	770262-2	—	—	640581-1

6, 9, 12 and 15 Circuit, Matrix



Number of Circuits	A Dim.	Housing Material	Socket Finish	Socket Header Part Numbers			Mates with Plug Housing Part Number (Using Pin Contacts)
				Standard Tail ²	Standard Tail Polarized ²	Long Tail ³	
6	.550 13.97	94V-2	Pre-tin	350762-4	643423-1	350989-4	1-480704-0
			Duplex ¹	350762-3	—	350989-3	
		94V-0	Pre-tin	350827-1	643424-1	350834-1	350715-1
			Duplex ¹	350827-2	643424-2	350834-2	
9	.800 20.32	94V-2	Pre-tin	350763-4	643425-1	350990-4	1-480706-0
			Duplex ¹	350763-3	—	350990-3	
		94V-0	Pre-tin	350828-1	643426-1	350835-1	350720-1
			Duplex ¹	350828-2	643426-2	350835-2	
12	1.050 26.67	94V-2	Pre-tin	350764-4	—	350991-4	1-480708-0
			Duplex ¹	350764-3	—	350991-3	
		94V-0	Pre-tin	350829-1	643428-1	350836-1	350735-1
			Duplex ¹	350829-2	—	350836-2	
15	1.300 33.02	94V-2	Pre-tin	350765-4	643429-1	350992-4	1-480710-0
			Duplex ¹	350765-3	—	350992-3	
		94V-0	Pre-tin	350830-1	643430-1	350837-1	350736-1
			Duplex ¹	350830-2	—	350837-2	

¹Duplex Finish — Plated with .000030 [.000762] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

²Use Standard Tail for .062 [1.57] thick PC Board.

³Use Long Tail for .125 [3.18] thick PC Board.

Dimensions are for reference only.

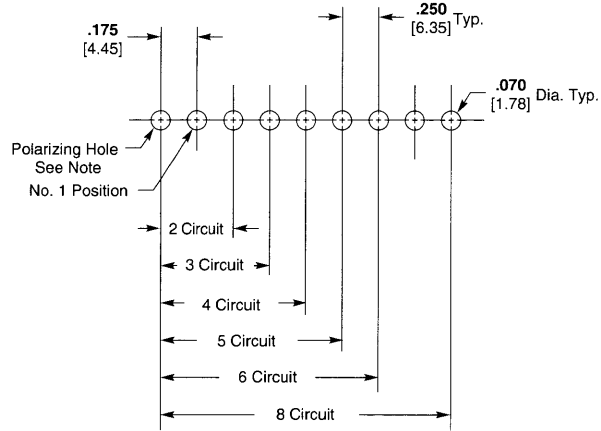
Universal MATE-N-LOK Connectors

Recommended PC Board Hole Layout for Pin and Socket Vertical Headers

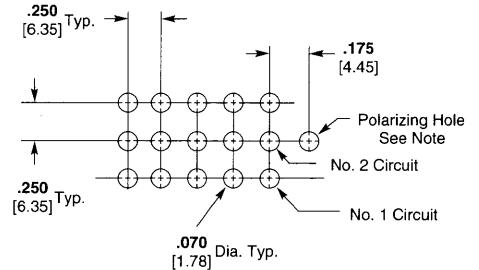
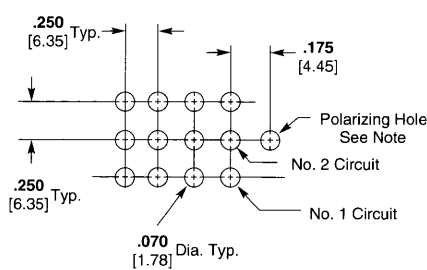
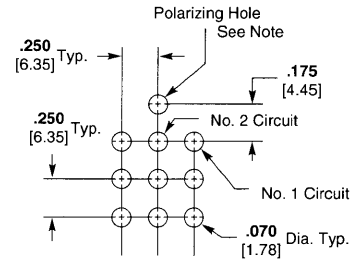
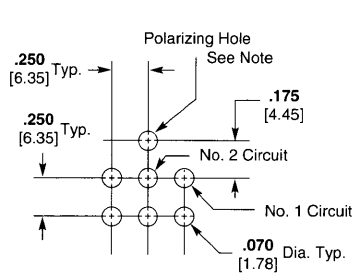
2, 3, 4, 5, 6 and 8 Circuit, In-Line

Related Product Data

Vertical Headers — pg. 11 and 12



6, 9, 12 and 15 Circuit, Matrix



Note: Polarizing hole required for polarized headers only.

Dimensions are for reference only.

Universal MATE-N-LOK Connectors

PC Board Right-Angle Pin and Socket Headers

.250 [6.35] Centerline spacing

Material

Housing — UL94V-0 Nylon, brick red color

Contacts — Phosphor bronze
Solder tail width .052 [1.32]

Related Product Data

Product Specification

108-1053 Universal MATE-N-LOK PC Board Headers

Performance Characteristics — pg. 5

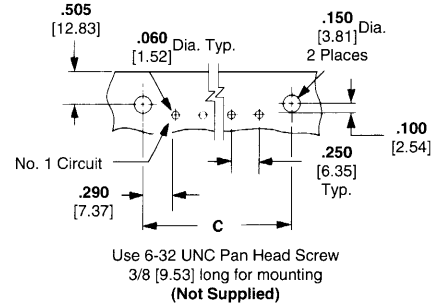
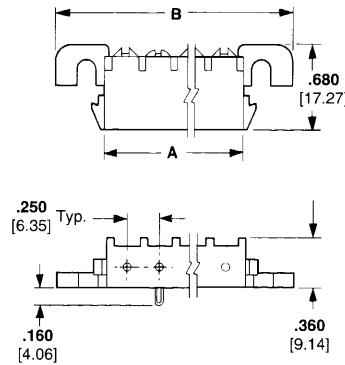
Technical Documents — pg. 60

Mating Plug Housings — pg. 8

Other Mating Connectors

Universal MATE-N-LOK II Housings — pg. 18 and 20

2, 3, 4, 5, 6 and 8 Circuit, In-Line



Recommended PC Board Hole Layout
.062 [1.57] Board Thickness

Number of Circuits	Dimensions			Contact Finish	Part Numbers		Mates with Housing Part Number
	A	B	C		Pin Header	Socket Header	
2	.550	1.245	.830	Pre-tin	1-350942-0	643226-1	350777-1
	13.97	31.62	21.08	Duplex ¹	2-350942-0	—	
3	.800	1.495	1.080	Pre-tin	1-350943-0	643228-1	350766-1
	20.32	37.97	27.43	Duplex ¹	2-350943-0	—	
4	1.050	1.745	1.330	Pre-tin	1-350944-0	643230-1	350779-1
	26.67	44.32	33.78	Duplex ¹	2-350944-0	643230-2	
5	1.300	1.995	1.580	Pre-tin	1-350945-0	643232-1	350809-1
	33.02	50.67	40.13	Duplex ¹	2-350945-0	643232-2	
6	1.550	2.245	1.830	Pre-tin	640583-1	643234-1	640581-1
	39.37	57.02	46.48	Duplex ¹	640583-2	643234-2	
8	2.050	2.745	2.330	Pre-tin	640584-1	643236-1	640582-1
	52.07	69.72	59.18	Duplex ¹	640584-2	643236-2	

¹Duplex Finish — Plated with .000030 [.000762] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

Test Connectors (with spring loaded contacts)

Material

Housing — UL94V-0 Nylon, brick red color

Related Product Data

Mating Connectors — Housings and headers having the same number of circuits. The housings can have pin or socket contacts, or a combination of both.

Mating Housings — pg. 8

Mating Headers — pg. 11, 12 and 14

Other Mating Connectors

Universal MATE-N-LOK II Housings — pg. 18, 19 and 20

Notes:

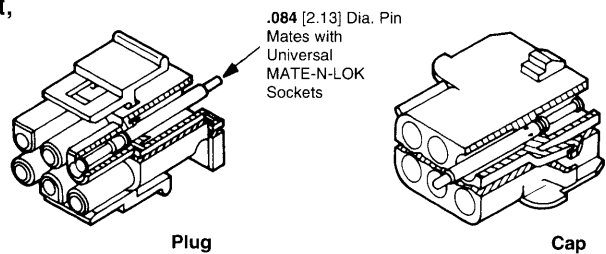
- Test probes have 5 amp maximum current rating, 1,000,000 cycles.
- Test Connector housings are of the same configuration as standard housings. Refer to page 8 for dimensional specifications.

Dimensions are for reference only.

2, 3, 4 and 5 Circuit, In-Line



6, 9, 12 and 15 Circuit, Matrix



Number of Circuits	Part Numbers	
	Plug	Cap
2	350848-2	350849-2
3	350848-3	350849-3
4	350848-4	350849-4
5	350848-5	350849-5
6	350848-6	350849-6
9	350848-9	350849-9
12	1-350848-2	1-350849-2
15	1-350848-5	1-350849-5