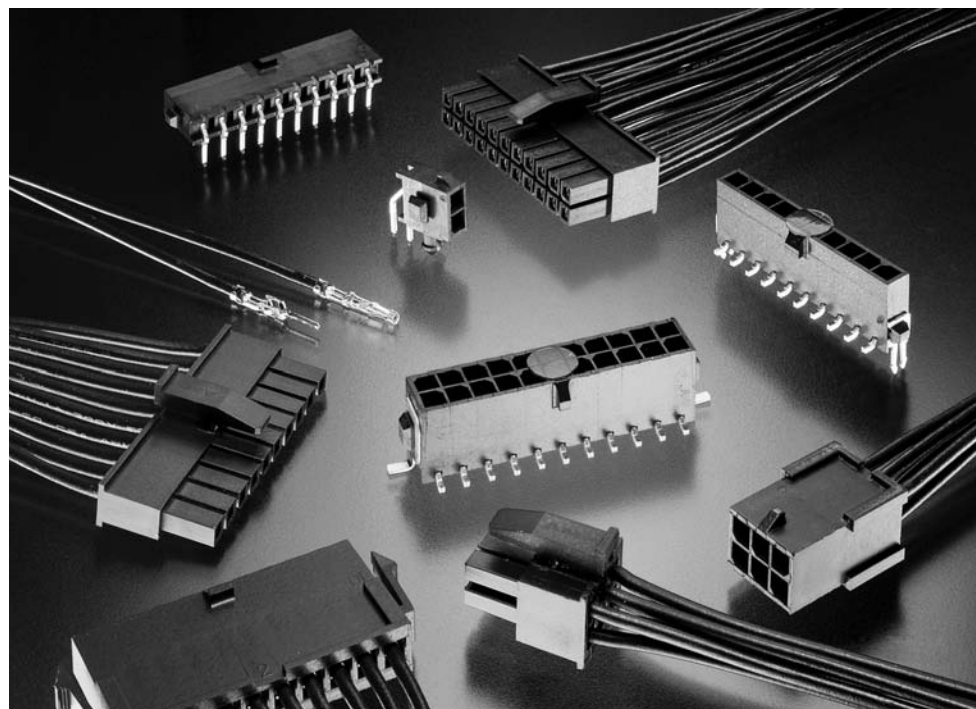


Micro MATE-N-LOK 3 mm Connector System

Product Facts

- Wire-to-wire and wire-to-board pin and receptacle connector system
- Contacts are on 3 mm [.118] centerline spacing
- 2-12 contact positions – single row
- 2-24 contact positions – dual row
- Panel mount or free-hanging wire-to-wire configurations
- Dual beam contact design for reliable interconnection
- Contacts accept 24-20 [0.2-0.6] and 30-26 [0.05-0.15] AWG wire with insulation diameter of .060 [1.52] maximum
- Contacts available in strip form or loose piece
- Pcb mount pin header assemblies in both vertical and right-angle styles
- Surface mount or through-hole pcb pin header attachment
- Pcb headers are IR reflow process compatible
- Recognized under the Component Program of Underwriters Laboratories Inc.  to US and Canadian Standards, File No. E28476
- Passed Tests for VDE under Registration Number 40005280/Continuous Surveillance 



The Micro MATE-N-LOK 3 mm Connector System is a wire-to-wire and wire-to-board connector system with contacts on a 3 mm [.118] centerline. Both single-row and dual-row configurations are available. Crimp, snap-in pin and receptacle contacts are used to terminate 24-20 [0.2-0.6] and 30-26 [0.05-0.15] AWG wire. Plug and receptacle housings allow wire-to-wire and wire-to-panel configurations.

Header assemblies for wire-to-board interconnections include vertical and right-angle components. These IR reflow process compatible headers are available in through-hole and surface mount configurations.

Typical uses of the Micro MATE-N-LOK 3 mm Connector System include the appliance, instrumentation, industrial machinery, home equipment, and security system industries.

Technical Documents

Application Specification

114-13000 Micro MATE-N-LOK Connectors

Product Specification

108-1836 3 mm Micro MATE-N-LOK Connector

Performance Characteristics

Voltage Rating—250 vac

Current Rating—5 amp max. on 20 AWG wire

Contact Resistance—20 milliohms max. final

Dielectric Withstanding Voltage—1500 VAC

Insulation Resistance—1000 megohms min.

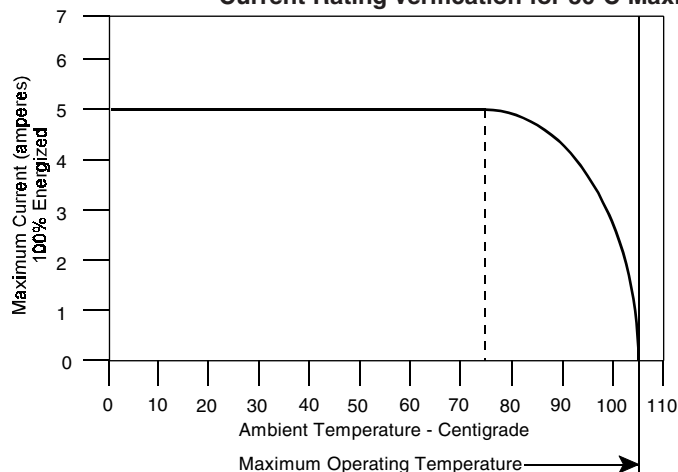
Operating Temperature—-40°C to +105°C

Mating Force—1.5lb [6.67N] max per contact

Micro MATE-N-LOK 3 mm Connector System (Continued)

Connector Application	19-21
Crimp, Snap-In Contacts	22
Receptacle Housings	
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Dual Row	24
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Dual Row, Through-Hole, with Retention Feature on Solder-tail and Metal Through-Hole Hold-down	35
Dual Row, Surface Mount, with Metal Through-Hole Hold-down	36
Dual Row, Surface Mount, with Surface Mount Hold-down	37
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Single Row, Surface Mount, with Metal Through-Hole Hold-down	40
Single Row, Surface Mount, with Surface Mount Hold-down	41
Single Row, Surface Mount, with Plastic Boardlock	42
Dual Row, Through-Hole, with Metal Through-Hole Hold-down	43
Dual Row, Through-Hole, with Plastic Boardlock	44
Dual Row, Surface Mount, with Metal Through-Hole Hold-down	45
Dual Row, Surface Mount, with Plastic Boardlock	46
Dual Row, Surface Mount, with Surface Mount Hold-down	47

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



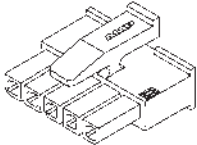
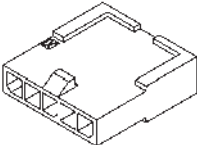
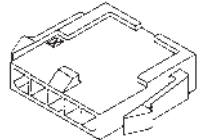
Number of Circuit Positions	Multiplication Factor	
	Wire Size (AWG)	
2 to 6	28	20
	0.40	1
8 to 20	0.40	0.85
	0.36	0.85
22 to 24	0.36	0.85
	0.36	0.85

To determine acceptable current carrying capacity for connector size and wire gage indicated, use the Multiplication Factor from the chart above and multiply it times the Base rated Current at the maximum ambient operating temperature shown in the current rating figure.

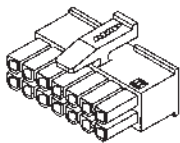
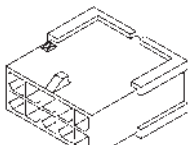
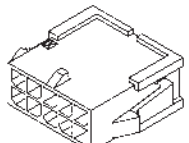
Micro MATE-N-LOK 3 mm Connector System (Continued)

Connector Application — Wire-to-Wire and Wire-to-Panel

Single Row

Receptacle		Plug	
Contact	Housing	Contact	Housing
 □-794606-□, □-794607-□, □-794610-□, □-794611-□ Page 22	 □-1445022-□ Page 23	 □-794608-□, □-794609-□, □-794612-□, □-794613-□ Page 22	 Free-Hanging □-1445049-□ Page 25
			 Panel Mount □-1445048-□ Page 26

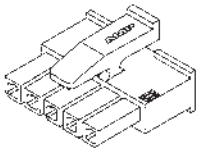
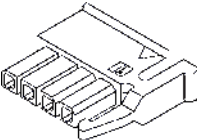
Dual Row

Receptacle		Plug	
Contact	Housing	Contact	Housing
 □-794606-□, □-794607-□, □-794610-□, □-794611-□ Page 22	 □-794617-□ Page 24	 □-794608-□, □-794609-□, □-794612-□, □-794613-□ Page 22	 Free-Hanging □-794616-□ Page 27
			 Panel Mount □-794615-□ Page 28

Micro MATE-N-LOK 3 mm Connector System (Continued)

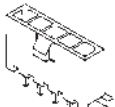
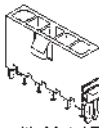
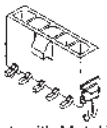
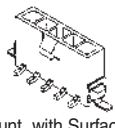
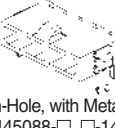
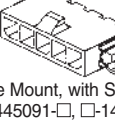
Connector Application — Wire-to-PCB

Single Row

Receptacle	
Contact	Housing
 □-794606-□, □-794607-□, □-794610-□, □-794611-□ (Page 22)	 □-1445022-□ (Page 23)
 □-794606-□, □-794607-□, □-794610-□, □-794611-□ (Page 29)	 □-2029047-□, □-2029102-□, □-2029030-□, □-2029104-□ (Page 29)

Low Profile, Single Row

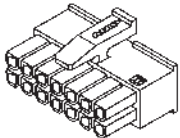
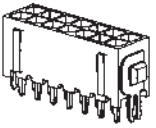
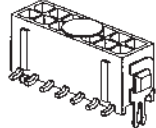
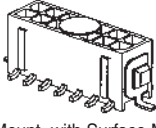
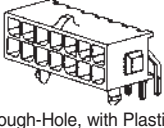
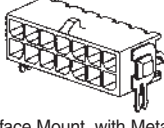
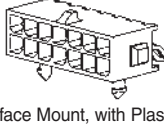
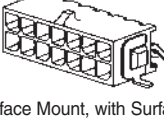
Header

 Vertical Through-Hole, with Retention Feature on Solder Tail and Polarization Feature to PCB □-1445050-□, □-1445084-□, □-1445093-□ (Page 30)
 Vertical Through-Hole, with Metal Through-Hole Hold-down □-1445051-□, □-1445085-□, □-1445094-□ (Page 31)
 Vertical Surface Mount, with Metal Through-Hole Hold-down □-1445052-□, □-1445086-□, □-1445095-□ (Page 32)
 Vertical Surface Mount, with Surface Mount Hold-down □-1445053-□, □-1445087-□, □-1445096-□ (Page 33)
 Right-angle, Through-Hole, with Metal Through-Hole Hold-down □-1445054-□, □-1445088-□, □-1445097-□ (Page 38)
 Right-angle, Through-Hole, with Plastic Boardlock □-1445055-□, □-1445089-□, □-1445098-□ (Page 39)
 Right-angle, Surface Mount, with Metal Through-Hole Hold-down □-1445056-□, □-1445090-□, □-1445099-□ (Page 40)
 Right-angle, Surface Mount, with Surface Mount Hold-down □-1445057-□, □-1445091-□, □-1445100-□ (Page 41)
 Right-angle, Surface Mount, and Plastic Boardlock □-1445058-□, □-1445092-□, □-1445101-□ (Page 42)
 Low Profile, Single Row □-2029030-□, □-2029102-□ (Page 29)

Micro MATE-N-LOK 3 mm Connector System (Continued)

Connector Application — Wire-to-PCB

Dual Row

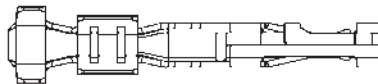
Receptacle			Header
Contact	Housing		
 □-794606-□, □-794607-□, □-794610-□, □-794611-□ (Page 22)	 □-794617-□ (Page 24)		 Vertical Through-Hole, with Retention Feature on Solder-tail and Optional Metal Through-Hole Hold-down □-794630-□, □-794631-□, □-794632-□, (Page 34) □-794680-□, □-794681-□, □-794682-□ (Page 35)
			 Vertical Surface Mount, with Metal Through-Hole Hold-down □-794633-□, □-794634-□, □-794635-□ (Page 36)
			 Vertical Surface Mount, with Surface Mount Hold-down □-794636-□, □-794637-□, □-794638-□ (Page 37)
			 Right-angle, Through-Hole, with Metal Through-Hole Hold-down □-794677-□, □-794678-□, □-794679-□ (Page 43)
			 Right-angle, Through-Hole, with Plastic Boardlock □-794618-□, □-794619-□, □-794620-□ (Page 44)
			 Right-angle, Surface Mount, with Metal Through-Hole Hold-down □-794624-□, □-794625-□, □-794626-□ (Page 45)
			 Right-angle, Surface Mount, with Plastic Boardlock □-794621-□, □-794622-□, □-794623-□ (Page 46)
			 Right-angle, Surface Mount, with Surface Mount Hold-down □-794627-□, □-794628-□, □-794629-□ (Page 47)

High Density

Micro MATE-N-LOK 3 mm Connector System
.118 [3.00] Centerline

Micro MATE-N-LOK 3 mm Connector System (Continued)

Crimp, Snap-In Contacts



Material and Finish

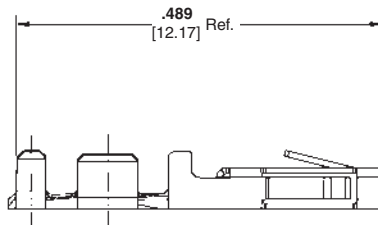
Receptacle — Phosphor Bronze

Plug — Brass

Plating A — .000100 (.000254) minimum bright tin entire stock over .000050 (.000127) minimum nickel entire stock

Plating B — .000015 (.000038) minimum gold in localized gold plate area. .000100 (.000254) minimum bright tin in localized tin plate area, both over .000050 (.000127) minimum nickel on entire stock

Plating C — .000030 (.000076) minimum gold in localized gold plate area. .000100 (.000254) minimum bright tin in localized tin plate area, both over .000050 (.000127) minimum nickel on entire stock

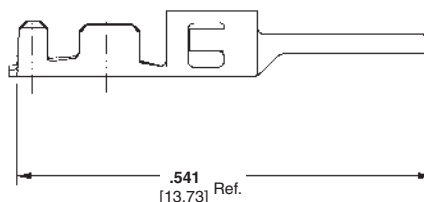
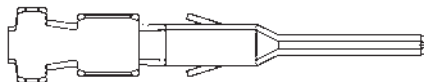


Receptacle Contacts

Wire Size Range AWG [mm ²]	Ins. Dia. Range	Finish	Contact Part Numbers		Tooling Part Numbers	
			Strip Form	Loose Piece	Applicator	Hand Tool
20-24 0.50 - 0.20	.035 - .060 0.89-1.52	Plating A	794606-1	794610-1	680893-□*	91501-1
		Plating B	1-794606-1	1-794610-1		
		Plating C	1-794606-2	1-794610-2		
26-30 0.12 - 0.05	.035 - .060 0.89-1.52	Plating A	794607-1	794611-1	680894-□*	91502-1
		Plating B	1-794607-1	1-794611-1		
		Plating C	1-794607-2	1-794611-2		

*1=AMPOMATOR CLS Machine, 2=AMP-O-LECTRIC Model K Terminator, 3=AMP-O-LECTRIC Model G Terminator

Note: All part numbers are RoHS Compliant.



Plug Contacts

Wire Size Range AWG [mm ²]	Ins. Dia. Range	Finish	Contact Part Numbers		Tooling Part Numbers	
			Strip Form	Loose Piece	Applicator	Hand Tool
20-24 0.50 - 0.20	.035 - .060 0.89-1.52	Plating A	1-794608-0	1-794612-0	1385194-□*	91501-1
		Plating B	1-794608-1	1-794612-1		
		Plating C	1-794608-2	1-794612-2		
26-30 0.12 - 0.05	.035 - .060 0.89-1.52	Plating A	1-794609-0	1-794613-0	1385377-□*	91502-1
		Plating B	1-794609-1	1-794613-1		
		Plating C	1-794609-2	1-794613-2		

*1=AMPOMATOR CLS Machine, 2=AMP-O-LECTRIC Model K Terminator, 3=AMP-O-LECTRIC Model G Terminator

Note: All part numbers are RoHS Compliant.

Related Product Data

Connectors used with:

Receptacle Contacts used with Receptacle Housings — pages 23-24

Plug Contacts used with Plug Housings — pages 25-28

Application Tooling — pages 207-210

Contact Extraction Tools

Part Number 843996-6 for Receptacle Contacts Part Number 1586344-1 for Plug Contacts

Micro MATE-N-LOK 3 mm Connector System (Continued)

Receptacle Housings

Single Row

Material

Nylon, Black
Flammability Rating—UL 94V-0

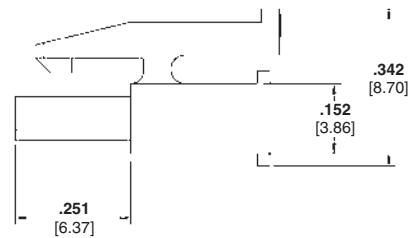
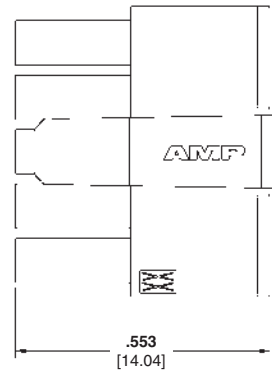
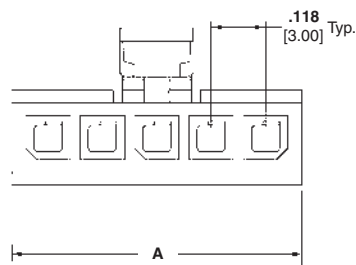
Related Product Data

Contacts:

Receptacle Contacts—page 22

Mateable Housings and Headers:

Single Row Plug Housings—
pages 25-26
Single Row Vertical Pin Header
Assemblies—pages 30-37
Single Row Right-Angle Pin Header
Assemblies—pages 38-47



Number of Circuits	Dimension A	Part Numbers
2	.276 7.00	1445022-2
3	.394 10.00	1445022-3
4	.512 13.00	1445022-4
5	.630 16.00	1445022-5
6	.748 19.00	1445022-6
7	.866 22.00	1445022-7
8	.984 25.00	1445022-8
9	1.102 28.00	1445022-9
10	1.220 31.00	1-1445022-0
11	1.339 34.00	1-1445022-1
12	1.457 37.00	1-1445022-2

Note: All part numbers are RoHS Compliant.

High Density

Micro MATE-N-LOK 3 mm Connector System
.118 [3.00] Centerline

Micro MATE-N-LOK 3 mm Connector System (Continued)

Receptacle Housings (Continued)

Dual Row

Material

Nylon, Black
Flammability Rating—UL 94V-0

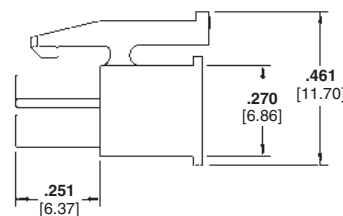
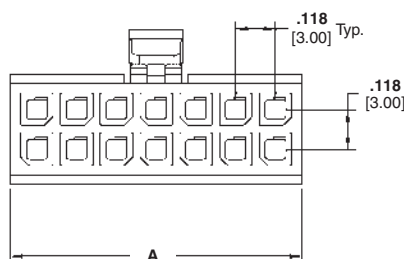
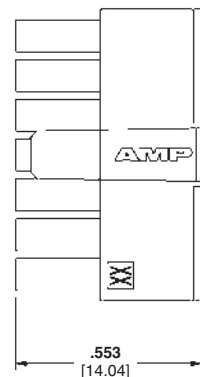
Related Product Data

Contacts:

Receptacle Contacts—page 22

Mateable Housings and Headers:

Dual Row Plug Housings—pages 27-28
Dual Row Vertical Pin Header Assemblies—pages 34-37
Dual Row Right-Angle Pin Header Assemblies—pages 43-47



Number of Circuits	Dimension A	Part Numbers
2	.157 4.00	794617-2
4	.276 7.00	794617-4
6	.394 10.00	794617-6
8	.512 13.00	794617-8
10	.630 16.00	1-794617-0
12	.748 19.00	1-794617-2
14	.866 22.00	1-794617-4
16	.984 25.00	1-794617-6
18	1.102 28.00	1-794617-8
20	1.220 31.00	2-794617-0
22	1.339 34.00	2-794617-2
24	1.457 37.00	2-794617-4

Note: All part numbers are RoHS Compliant.

Micro MATE-N-LOK 3 mm Connector System (Continued)

Plug Housings

Single Row, Free-Hanging

Material

Nylon, Black

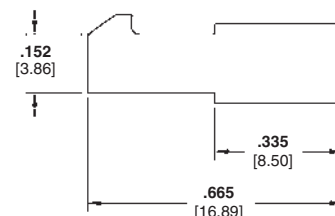
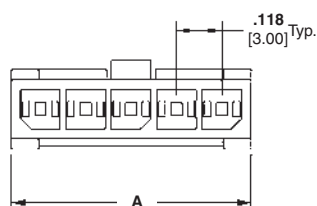
Flammability Rating—UL 94V-0

Related Product Data

Contacts:

Plug Contacts—page 22

Mateable Housings:

Single Row Receptacle Housings—
page 23


Number of Circuits	Dimension A	Part Numbers
2	.270 6.85	1445049-2
3	.388 9.85	1445049-3
4	.506 12.85	1445049-4
5	.624 15.85	1445049-5
6	.742 18.85	1445049-6
7	.860 21.85	1445049-7
8	.978 24.85	1445049-8
9	1.096 27.85	1445049-9
10	1.215 30.85	1-1445049-0
11	1.333 33.85	1-1445049-1
12	1.451 36.85	1-1445049-2

Note: All part numbers are RoHS Compliant.

Micro MATE-N-LOK 3 mm Connector System (Continued)

Plug Housings (Continued)

Single Row, Panel Mount

Material

Nylon, Black
Flammability Rating—UL 94V-0

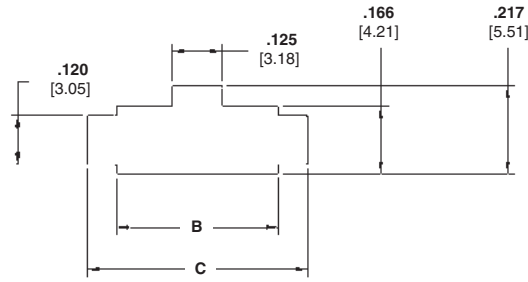
Related Product Data

Contacts:

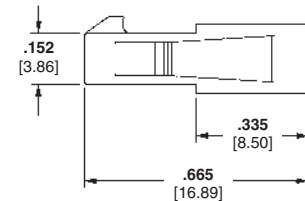
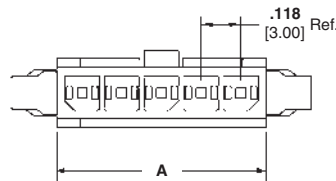
Plug Contacts—page 22

Mateable Housings:

Single Row Receptacle Housings—
page 23



Recommended Panel Cutout*



Number of Circuits	Dimensions			Part Numbers
	A	B	C	
2	.270 6.85	.283 7.20	.428 10.88	1445048-2
3	.388 9.85	.402 10.20	.546 13.88	1445048-3
4	.506 12.85	.520 13.20	.665 16.88	1445048-4
5	.624 15.85	.638 16.20	.783 19.88	1445048-5
6	.742 18.85	.756 19.20	.901 22.88	1445048-6
7	.860 21.85	.874 22.20	1.019 25.88	1445048-7
8	.978 24.85	.992 25.20	1.137 28.88	1445048-8
9	1.096 27.85	1.110 28.20	1.255 31.88	1445048-9
10	1.215 30.85	1.228 31.20	1.373 34.88	1-1445048-0
11	1.333 33.85	1.346 34.20	1.491 37.88	1-1445048-1
12	1.451 36.85	1.465 37.20	1.609 40.88	1-1445048-2

*Recommended panel thickness .062-.091 [1.57-2.30]. Always consult customer drawing for panel cutout dimensions.

Note: All part numbers are RoHS Compliant.

Micro MATE-N-LOK 3 mm Connector System (Continued)

Plug Housings (Continued)

Dual Row, Free-Hanging

Material

Nylon, Black

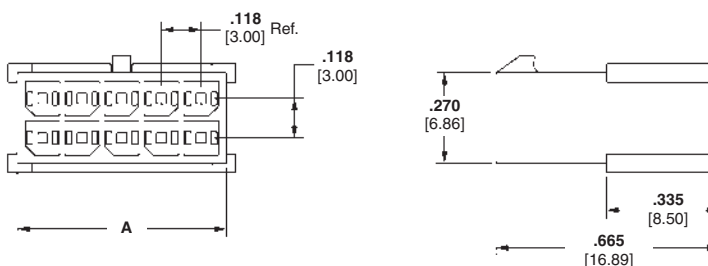
Flammability Rating—UL 94V-0

Related Product Data

Contacts:

Plug Contacts—page 22

Mateable Housings:

Dual Row Receptacle Housings—
page 24


Number of Circuits	Dimension A	Part Numbers
2	.157 3.85	794616-2
4	.276 6.85	794616-4
6	.394 9.85	794616-6
8	.512 12.85	794616-8
10	.630 15.85	1-794616-0
12	.748 18.85	1-794616-2
14	.866 21.85	1-794616-4
16	.984 24.85	1-794616-6
18	1.102 27.85	1-794616-8
20	1.220 30.85	2-794616-0
22	1.339 33.85	2-794616-2
24	1.457 36.85	2-794616-4

Note: All part numbers are RoHS Compliant.

Micro MATE-N-LOK 3 mm Connector System (Continued)

Plug Housings (Continued)

Dual Row, Panel Mount

Material

Nylon, Black
Flammability Rating—UL 94V-0

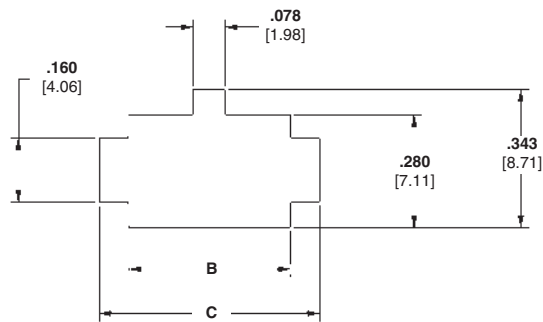
Related Product Data

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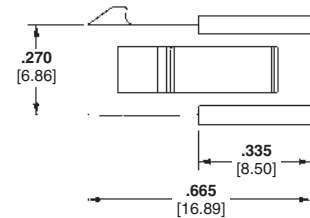
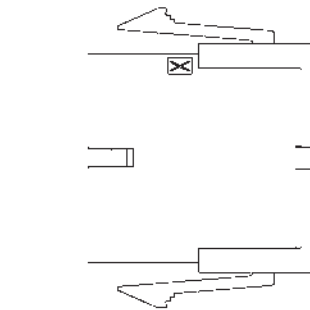
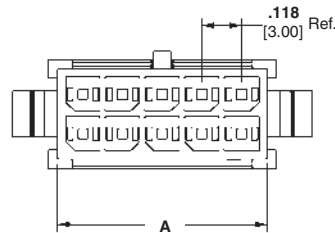
Plug Contacts—page 22

Mateable Housings:

Dual Row Receptacle Housings—
page 24



Recommended Panel Cutout*



Number of Circuits	Dimensions			Part Numbers
	A	B	C	
2	.157 3.85	.165 4.20	.310 7.88	794615-2
4	.276 6.85	.285 7.20	.428 10.88	794615-4
6	.394 9.85	.402 10.20	.546 13.88	794615-6
8	.512 12.85	.520 13.20	.665 16.88	794615-8
10	.630 15.85	.638 16.20	.783 19.88	1-794615-0
12	.748 18.85	.756 19.20	.901 22.88	1-794615-2
14	.866 21.85	.874 22.20	1.019 25.88	1-794615-4
16	.984 24.85	.992 25.20	1.137 28.88	1-794615-6
18	1.102 27.85	1.110 28.20	1.255 31.88	1-794615-8
20	1.220 30.85	1.228 31.20	1.373 34.88	2-794615-0
22	1.339 33.85	1.346 34.20	1.491 37.88	2-794615-2
24	1.457 36.85	1.469 37.20	1.609 40.88	2-794615-4

*Recommended panel thickness .062-.091 [1.57-2.30]. Always consult customer drawing for panel cutout dimensions.

Note: All part numbers are RoHS Compliant.