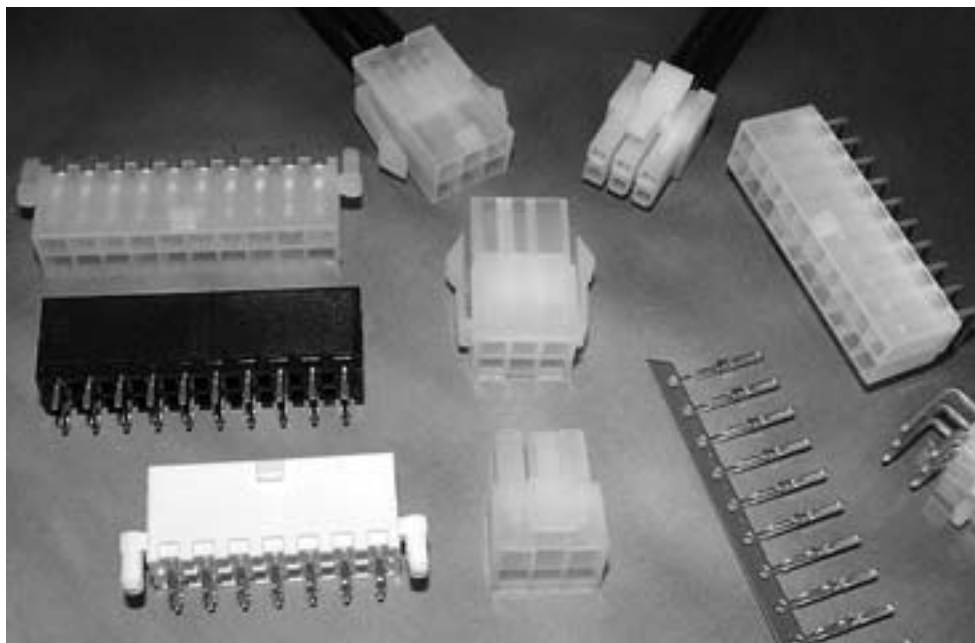


AMP-DUAC Connectors

Product Facts

- Wire-to-board and wire-to-wire connector system
- Free hanging or panel mount plug housings
- Vertical header with or without mounting pegs and with or without drain holes
- Selective loading available on vertical headers
- 4.2 mm x 4.2 mm centerline
- Male and female contacts designed for 26-22 AWG and 22-18 AWG wire
- Receptacle housings accept female contacts with less orientation than competitive product
- Right-angle headers
- Designed for power applications
- Positive latch feature helps prevent disconnection
- AMP-DUAC (dual action) receptacle contacts
- Anti-stubbing contact design
- Polarized housings
- Intermateable with Molex Mini-Fit Jr. connectors
- Recognized under Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189



AMP-DUAC Connectors, for power or signal applications, belong to the broad family of Tyco Electronics Soft Shell connectors.

The dual action design of the female receptacle contact provides for low insertion force, yet maintains high-performance current capacity. To help meet your production requirements, semiautomatic bench machines and hand tools are available for strip and loose piece contacts, respectively.

High density, 4.2 mm x 4.2 mm [.165 x .165] centerline, dual-row receptacle housings mate with plug housings (free hanging or panel mount) or pc board headers (vertical or right-angle). Selective contact loading is available for vertical headers.

All housings are polarized for easier mating and locking latches help maintain reliable connections.

AMP-DUAC wire-to-board, wire-to-panel, and wire-to-wire connectors are intermateable with Molex Mini-Fit Jr. series connectors.

Technical Documents

Product Specifications

108-1699—Headers
108-19099—Receptacles

Application Specification

114-19048—Use of Receptacles

Qualification Test Report

501-434
501-576

Performance Data

Voltage Rating—600 VAC

Current Rating—9 amps maximum
in 2 position applications

Low Level Resistance—
10 megohms max.

Dielectric Withstanding Voltage—
1500 VAC/min.

Insulation Resistance—
1000 megohms minimum

Operating Temperature—
-55°C to +105°C [-67°F to +221°F]

Need more information?

Call Technical Support.

Technical Support is staffed with specialists well versed in Tyco Electronics products. They can provide you with:

- Technical support
- Catalogs
- Technical Documents
- Product Samples
- Tyco Electronics Authorized Distributor Locations

Receptacle Housings

2-24 Position Housings

Accept female contacts.

Material

Housings—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Related Product Data

Mate with—Vertical headers (pages 122-127), right-angle headers (page 122) and plug housings (page 121).

Contacts—See below.

Strain Relief—See below and page 121.

Technical Documents—pages 119 and 199-200



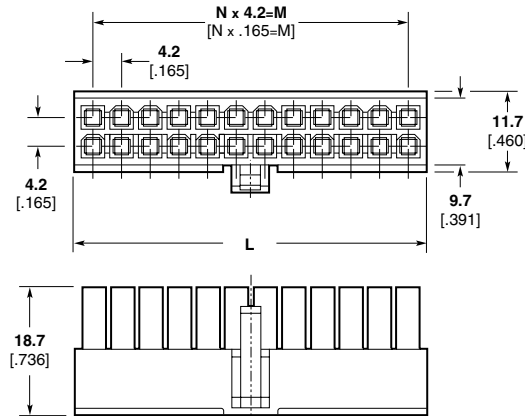
Strain Relief, 6 Position Part Number 1375618-1

Used with plug or receptacle housings.

Wire Bundle Range—4.19-5.59
[.165-.220]

Material—Nylon,
UL 94V-2, Natural color

AMP-DUAC Connectors (Continued)



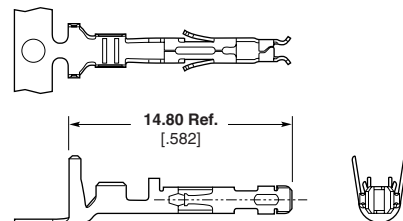
Number of Positions	Dimensions			Part Number	
	L	M	N	UL 94V-2 Natural	UL 94V-0 White
2	5.5 .216	—	1	106527-2	794657-2
4	9.7 .381	4.2 .165	1	106527-4	794657-4
6	13.9 .547	8.4 .330	2	106527-6	794657-6
8	18.1 .712	12.6 .496	3	106527-8	794657-8
10	22.3 .877	16.8 .661	4	1-106527-0	1-794657-0
12	26.5 1.043	21.0 .826	5	1-106527-2	1-794657-2
14	30.7 1.208	25.2 .992	6	1-106527-4	1-794657-4
16	34.9 1.374	29.4 1.157	7	1-106527-6	1-794657-6
18	39.1 1.539	33.6 1.322	8	1-106527-8	1-794657-8
20	43.3 1.704	37.8 1.488	9	2-106527-0	2-794657-0
22	47.5 1.870	42.0 1.653	10	2-106527-2	2-794657-2
24	51.7 2.035	46.2 1.818	11	2-106527-4	2-794657-4

Female Contacts

Used in receptacle housings.

Material—Phos. Bronze

Application Tooling—See chart and pages 201-204



Technical Documents

Product Specifications

108-1699 AMP-DUAC Header
108-19099 AMP-DUAC Receptacle

Application Specification

114-19048 AMP-DUAC Receptacle Contact

Wire Size Range AWG [mm²]	Ins. Dia. Range	Plating	Part Number		Applicator Part Number		
			Strip Form	Loose Piece	for AMP-O-ELECTRIC Bench Machine	for AMP-O-MATIC Stripper/Crimper Machine	CERTI-CRIMP Hand Tool Part Number
22-18 [.3-.8]	1.5-2.4 .059-.094	Tin	106529-2	1-106529-2	680308-□*	567959-1	734202-2
		Gold	1-794138-3	1-794141-3			
26-22 [.12-.3]	1.3-1.75 .047-.069	Tin	106528-2	1-106528-2	680307-□*	567960-1	—
		Gold	1-794139-3	1-794142-3			
2@18 [.8]	3.3 Total Max. .130	Tin	794418-1	794421-1	680350-□*	—	90714-1
		Gold	1-794140-3	1-794143-3			

Extraction Tool Part Number 188688-1

*Part Number suffix “-2” indicates Applicator for Model K Machine and “-3” for Model G Machine.

Note: All part numbers are RoHS Compliant.

Plug Housings

2-24 Position Housings

Accept male contacts.

Material

Housings—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Related Product Data

Mate with—Receptacle housings
(page 120)

Contacts—See below.

Strain Relief—See below.

Technical Documents—pages 119
and 199-200



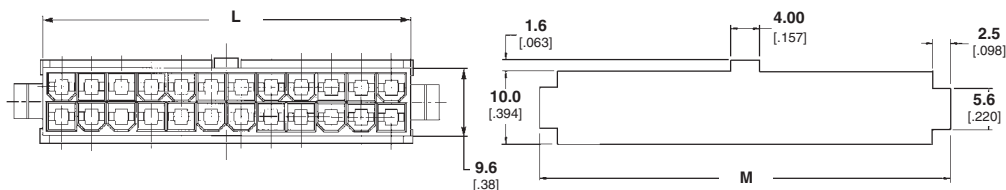
Strain Relief, 6 Position Part Number 1375618-1

Used with plug or receptacle housings.

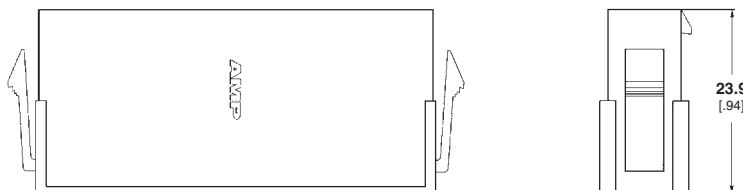
Wire Bundle Range—4.19-5.59
[.165-.220]

Material—Nylon,
UL 94V-2, Natural color

AMP-DUAC Connectors (Continued)



**Recommended Cutout
for 2.00 [.079] Max. Thick Panel**



Number of Positions	Dimensions		Part Number			
			UL 94V-2, Natural		UL 94V-0, White	
	L	M	Free Hanging	Panel Mount	Free Hanging	Panel Mount
2	5.4 .213	10.8 .425	794542-2	794550-2	*794594-2	*794598-2
4	9.6 .378	15.0 .591	794542-4	794550-4	*794594-4	*794598-4
6	13.8 .543	19.2 .756	794542-6	794550-6	*794594-6	*794598-6
8	18.0 .709	23.4 .921	794542-8	794550-8	*794594-8	*794598-8
10	22.2 .874	27.6 1.087	1-794542-0	1-794550-0	*1-794594-0	*1-794598-0
12	26.4 1.039	31.8 1.252	1-794542-2	1-794550-2	*1-794594-2	*1-794598-2
14	30.6 1.205	36.0 1.417	1-794542-4	1-794550-4	*1-794594-4	*1-794598-4
16	34.8 1.370	40.2 1.583	1-794542-6	1-794550-6	*1-794594-6	*1-794598-6
18	39.0 1.535	44.4 1.748	1-794542-8	1-794550-8	*1-794594-8	*1-794598-8
20	43.2 1.701	48.6 1.913	2-794542-0	2-794550-0	*2-794594-0	*2-794598-0
22	47.4 1.866	52.8 2.079	2-794542-2	2-794550-2	*2-794594-2	*2-794598-2
24	51.6 2.032	57.0 2.244	2-794542-4	2-794550-4	*2-794594-4	*2-794598-4

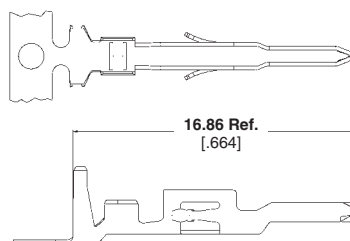
*Call for availability.

Male Contacts

Used in plug housings.

Material—Phos. Bronze

Application Tooling—See chart and
pages 201-204



Wire Size Range AWG [mm²]	Ins. Dia. Range	Plating	Part Number		Applicator Part Number		
			Strip Form	Loose Piece	for AMP-O-ELECTRIC Bench Machine	for AMP-O-MATIC Stripper/Crimper Machine	CERTI-CRIMP Hand Tool Part Number
22-18 [.3-.8]	1.5-2.4 .059-.094	Tin Gold	794576-1 794576-4	794577-1 —	680308-□*	567959-1	734202-2
26-22 [.12-.3]	1.3-1.75 .047-.069	Tin Gold	794578-1 794578-4	794579-1 —	680307-□*	567960-1	—

*Part Number suffix "-2" indicates Applicator for Model K Machine and "-3" for Model G Machine.

Note: All part numbers are RoHS Compliant.

AMP-DUAC Connectors (Continued)

Vertical Header Assemblies

**2, 4 and 6 Position,
with and without Pegs and
with and without Drain
Holes**

Material and Finish

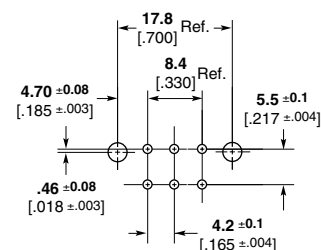
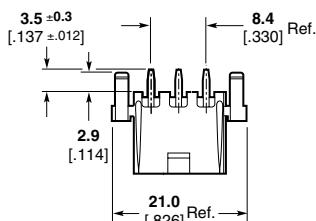
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper
alloy

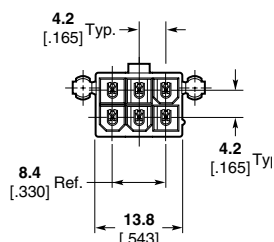
Related Product Data

Mate with—Receptacle housings
(page 120).

Technical Documents—pages 119
and 199-200



Recommended PC Board Layout



Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
2	N	N	Tin	1586491-2	1586495-2
	N	N	30 Gold	1586492-2	1586496-2
	Y	N	Tin	1586489-2	1586493-2
	Y	N	30 Gold	1586490-2	1586494-2
	N	Y	Tin	1-794349-1	1-794543-1
	N	Y	30 Gold	1-794349-2	1-794543-2
	Y	Y	Tin	1-794302-1	1-794540-1
	Y	Y	30 Gold	1-794302-2	1-794540-2
4	Y	N	Tin	1586489-4	1586493-4
	Y	N	30 Gold	1586490-4	1586494-4
	N	N	Tin	1586491-4	1586495-4
	N	N	30 Gold	1586492-4	1586496-4
	Y	Y	Tin	1-794303-1	1-794466-1
	Y	Y	30 Gold	1-794303-2	1-794466-2
	N	Y	Tin	1-794350-1	1-794484-1
	N	Y	30 Gold	1-794350-2	1-794484-2
6	Y	Y	Tin	1-794304-1	1-794467-1
	Y	Y	30 Gold	1-794304-2	1-794467-2
	N	Y	Tin	1-794351-1	1-794485-1
	N	Y	30 Gold	1-794351-2	1-794485-2
	Y	N	Tin	1586489-6	1586493-6
	Y	N	30 Gold	1586490-6	1586494-6
	N	N	Tin	1586491-6	1586495-6
	N	N	30 Gold	1586492-6	1586496-6

Note: All part numbers are RoHS Compliant.

AMP-DUAC Connectors (Continued)

Vertical Header Assemblies
(Continued)

**8 and 10 Position,
with and without Pegs and
with and without Drain
Holes**

Material and Finish

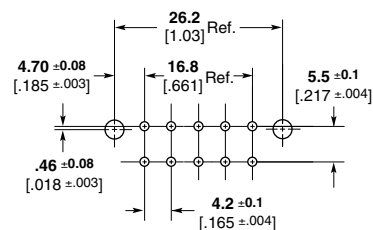
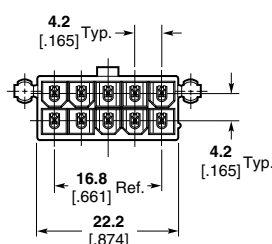
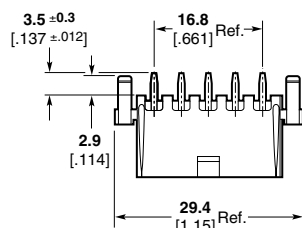
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper
alloy

Related Product Data

Mate with—Receptacle housings
(page 120).

Technical Documents—pages 119
and 199-200



Recommended PC Board Layout

Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
8	Y	N	Tin	1586489-8	1586493-8
	Y	N	30 Gold	1586490-8	1586494-8
	N	N	Tin	1586491-8	1586495-8
	N	N	30 Gold	1586492-8	1586496-8
	Y	Y	Tin	1-794305-1	1-794468-1
	Y	Y	30 Gold	1-794305-2	1-794468-2
	N	Y	Tin	1-794352-1	1-794486-1
	N	Y	30 Gold	1-794352-2	1-794486-2
10	Y	N	Tin	1-1586489-0	1-1586493-0
	Y	N	30 Gold	1-1586490-0	1-1586494-0
	N	N	Tin	1-1586491-0	1-1586495-0
	N	N	30 Gold	1-1586492-0	1-1586496-0
	Y	Y	Tin	1-794306-1	1-794469-1
	Y	Y	30 Gold	1-794306-2	1-794469-2
	N	Y	Tin	1-794353-1	1-794487-1
	N	Y	30 Gold	1-794353-2	1-794487-2

Note: All part numbers are RoHS Compliant.

AMP-DUAC Connectors (Continued)

Vertical Header Assemblies
(Continued)

**12 Position,
with and without Pegs and
with and without Drain
Holes**

Material and Finish

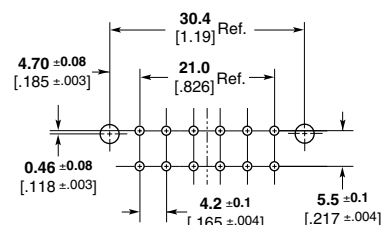
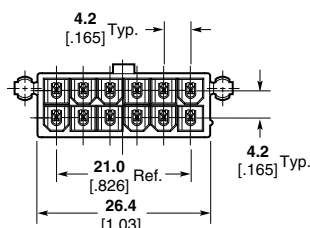
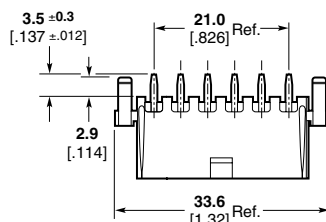
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings
(page 120).

Technical Documents—pages 119
and 199-200



Recommended PC Board Layout

Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
12	Y	N	Tin	1-1586489-2	1-1586493-2
	Y	N	30 Gold	1-1586490-2	1-1586494-2
	N	N	Tin	1-1586491-2	1-1586495-2
	N	N	30 Gold	1-1586492-2	1-1586496-2
	Y	Y	Tin	1-794307-1	1-794470-1
	Y	Y	30 Gold	1-794307-2	1-794470-2
	N	Y	Tin	1-794354-1	1-794488-1
	N	Y	30 Gold	1-794354-2	1-794488-2

**14 Position,
with and without Pegs and
with and without Drain
Holes**

Material and Finish

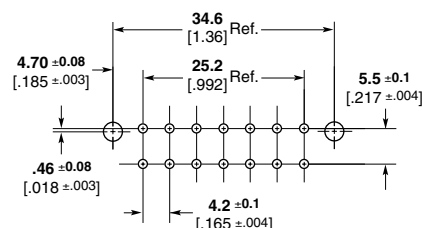
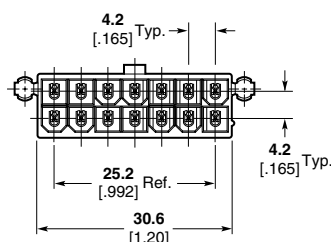
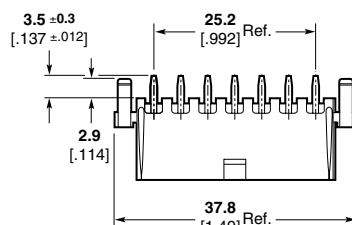
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings
(page 120).

Technical Documents—pages 119
and 199-200



Recommended PC Board Layout

Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
14	Y	N	Tin	1-1586489-4	1-1586493-4
	Y	N	30 Gold	1-1586490-4	1-1586494-4
	N	N	Tin	1-1586491-4	1-1586495-4
	N	N	30 Gold	1-1586492-4	1-1586496-4
	Y	Y	Tin	1-794308-1	1-794453-1
	Y	Y	30 Gold	1-794308-2	1-794453-2
	N	Y	Tin	1-794355-1	1-794489-1
	N	Y	30 Gold	1-794355-2	1-794489-2

Note: All part numbers are RoHS Compliant.

Vertical Header Assemblies (Continued)

16 Position, with and without Pegs and with and without Drain Holes

Material and Finish

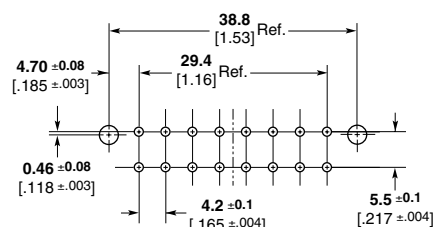
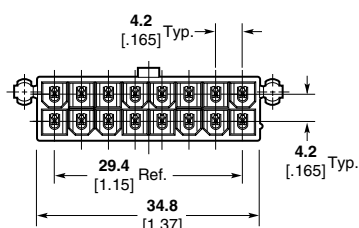
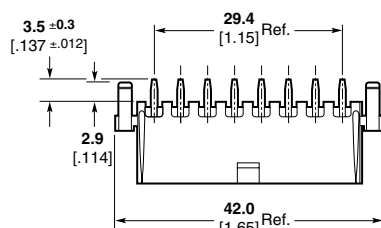
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings
(page 120).

Technical Documents—pages 119
and 199-200



Recommended PC Board Layout

Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
16	Y	N	Tin	1-1586489-6	1-1586493-6
	Y	N	30 Gold	1-1586490-6	1-1586494-6
	N	N	Tin	1-1586491-6	1-1586495-6
	N	N	30 Gold	1-1586492-6	1-1586496-6
	Y	Y	Tin	1-794309-1	1-794429-1
	Y	Y	30 Gold	1-794309-2	1-794429-2
	N	Y	Tin	1-794356-1	1-794490-1
	N	Y	30 Gold	1-794356-2	1-794490-2

18 Position, with and without Pegs and with and without Drain Holes

Material and Finish

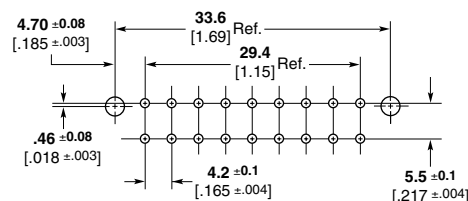
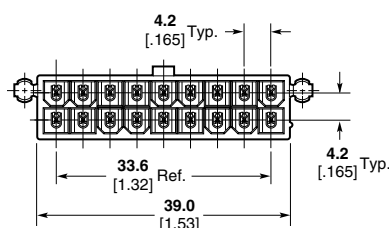
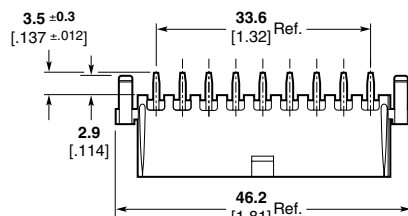
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings
(page 120).

Technical Documents—pages 119
and 199-200



Recommended PC Board Layout

Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
18	Y	N	Tin	1-1586489-8	1-1586493-8
	Y	N	30 Gold	1-1586490-8	1-1586494-8
	N	N	Tin	1-1586491-8	1-1586495-8
	N	N	30 Gold	1-1586492-8	1-1586496-8
	Y	Y	Tin	1-794310-1	1-794454-1
	Y	Y	30 Gold	1-794310-2	1-794454-2
	N	Y	Tin	1-794357-1	1-794491-1
	N	Y	30 Gold	1-794357-2	1-794491-2

Note: All part numbers are RoHS Compliant.

Vertical Header Assemblies (Continued)

20 Position, with and without Pegs and with and without Drain Holes

Material and Finish

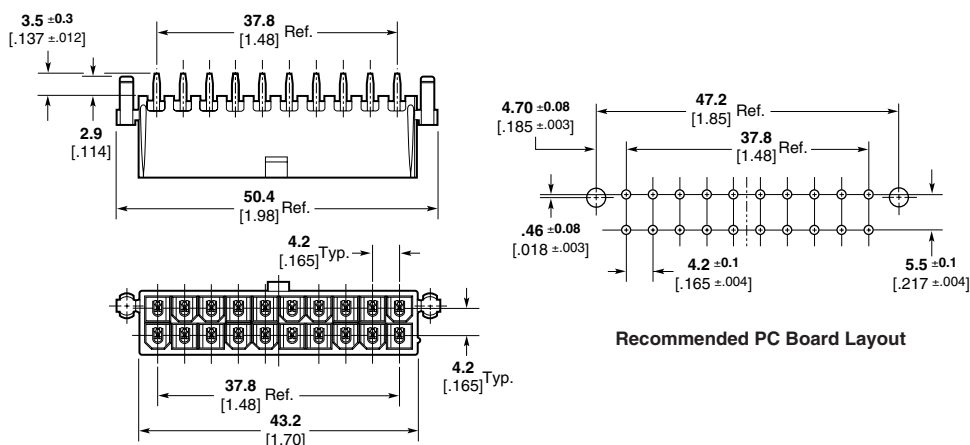
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings (page 120).

Technical Documents—pages 119 and 199-200



Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
20	Y	N	Tin	2-1586489-0	2-1586493-0
	Y	N	30 Gold	2-1586490-0	2-1586494-0
	N	N	Tin	2-1586491-0	2-1586495-0
	N	N	30 Gold	2-1586492-0	2-1586496-0
	Y	Y	Tin	1-794311-1	1-794455-1
	Y	Y	30 Gold	1-794311-2	1-794455-2
	N	Y	Tin	1-794358-1	1-794492-1
	N	Y	30 Gold	1-794358-2	1-794492-2

High Temperature Headers

IR Reflow compatible, UL 94V-0,
Black color

22 Position, with and without Pegs and with and without Drain Holes

Material and Finish

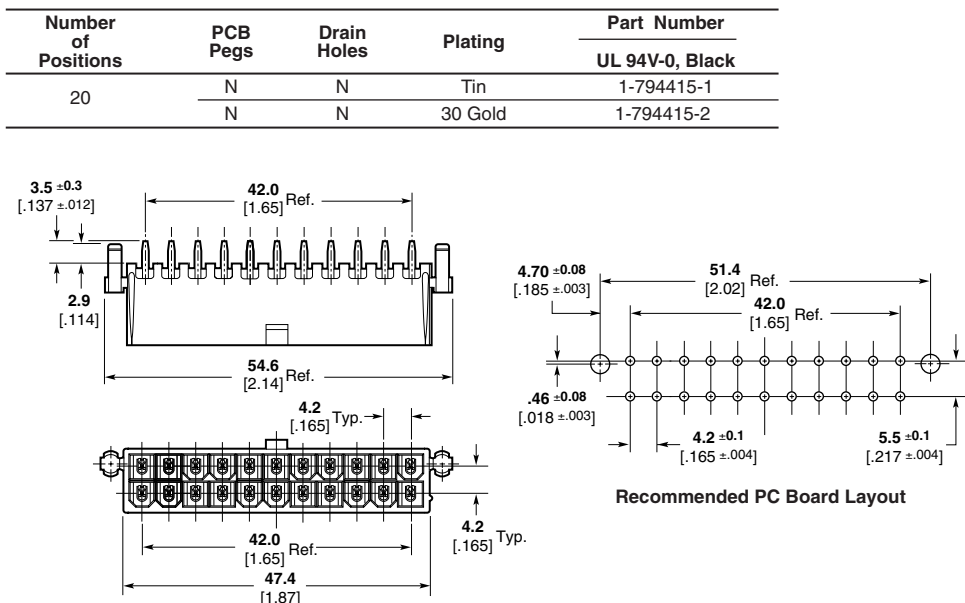
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings (page 120).

Technical Documents—pages 119 and 199-200



Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
22	Y	N	Tin	2-1586489-2	2-1586493-2
	Y	N	30 Gold	2-1586490-2	2-1586494-2
	N	N	Tin	2-1586491-2	2-1586495-2
	N	N	30 Gold	2-1586492-2	2-1586496-2
	Y	Y	Tin	1-794312-1	1-794471-1
	Y	Y	30 Gold	1-794312-2	1-794471-2
	N	Y	Tin	1-794359-1	1-794493-1
	N	Y	30 Gold	1-794359-2	1-794493-2

Note: All part numbers are RoHS Compliant.

Vertical Header Assemblies (Continued)

24 Position, with and without Pegs and with and without Drain Holes

Material and Finish

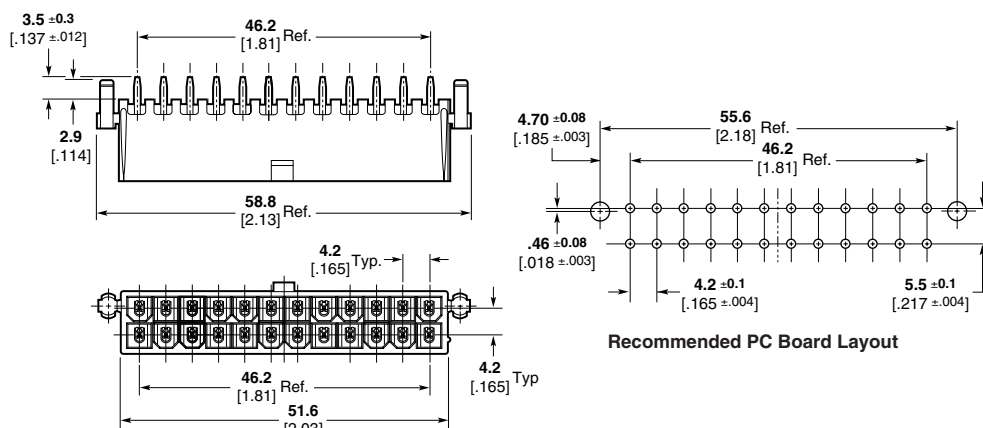
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings (page 120).

Technical Documents—pages 119 and 199-200



Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
24	Y	N	Tin	2-1586489-4	2-1586493-4
	Y	N	30 Gold	2-1586490-4	2-1586494-4
	N	N	Tin	2-1586491-4	2-1586495-4
	N	N	30 Gold	2-1586492-4	2-1586496-4
	Y	Y	Tin	794313-3	1-794472-1
	Y	Y	30 Gold	794313-4	1-794472-2
	N	Y	Tin	1-794360-1	1-794494-1
	N	Y	30 Gold	1-794360-2	1-794494-2

Right-Angle Header Assemblies

2-24 Position, with Pegs and without Drain Holes

Material and Finish

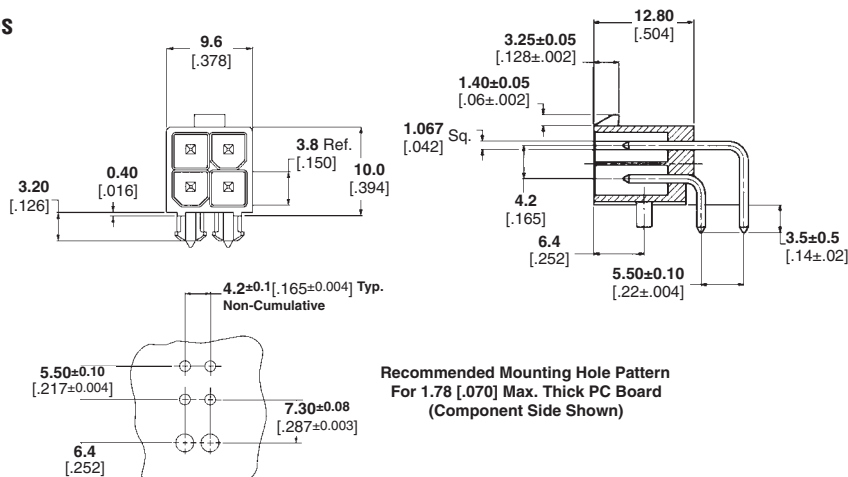
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings (page 120).

Technical Documents—pages 119 and 199-200



Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number	
				UL 94V-2, Natural	UL 94V-0, White
2	Y	N	Tin	1-794507-1	1-794526-1
4	Y	N	Tin	1-794508-1	1-794527-1
6	Y	N	Tin	1-794448-1	1-794528-1
8	Y	N	Tin	1-794509-1	1-794529-1
10	Y	N	Tin	1-794510-1	1-794530-1
12	Y	N	Tin	1-794511-1	1-794531-1
14	Y	N	Tin	1-794512-1	1-794532-1
16	Y	N	Tin	1-794513-1	1-794533-1
18	Y	N	Tin	1-794514-1	1-794588-1
20	Y	N	Tin	1-794449-1	1-794534-1
22	Y	N	Tin	1-794515-1	1-794589-1
24	Y	N	Tin	1-794516-1	1-794590-1

Note: All part numbers are RoHS Compliant.

Engineering Notes

A large grid of graph paper, consisting of 30 columns and 40 rows of small squares, intended for drawing or writing engineering notes.