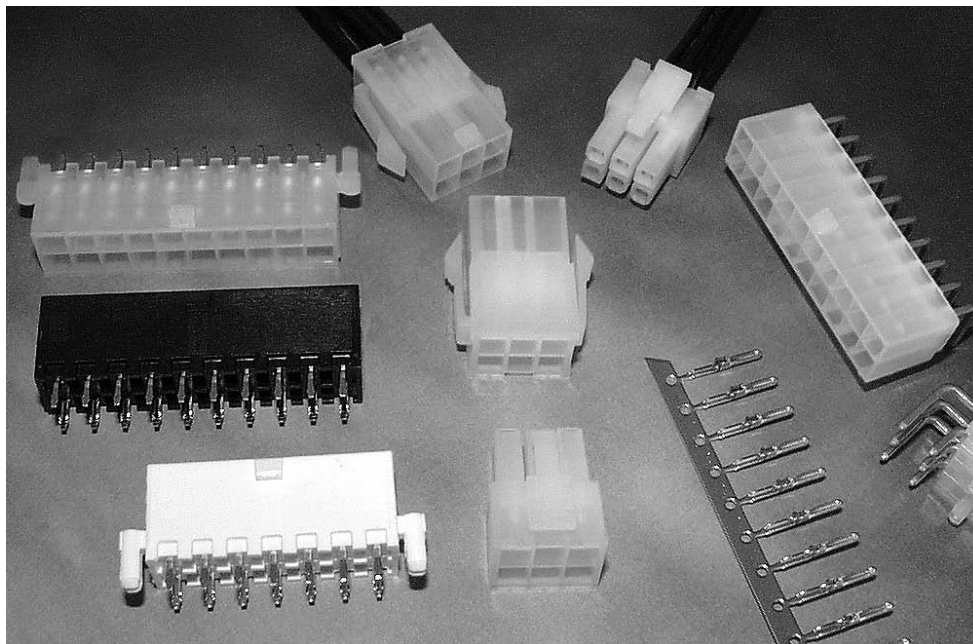


AMP-DUAC Connectors

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

AMP-DUAC Connectors (Continued)

Receptacle Housings

2-24 Position Housings

Accept female contacts.

Material

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

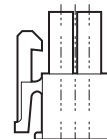
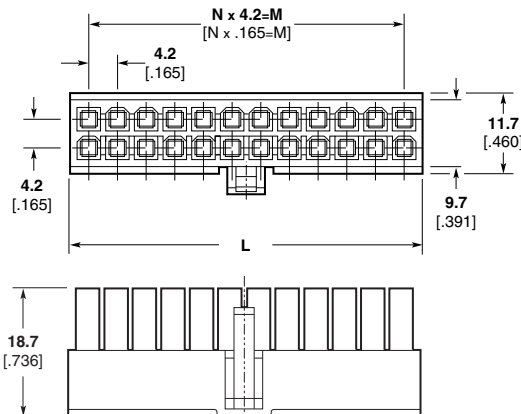
Related Product Data

Mate with—Vertical headers (pages 128-133), right-angle headers (page 128) and plug housings (page 127).

Contacts—See below.

Strain Relief—See below and page 127.

Technical Documents—pages 125 and 205-206



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

Strain Relief, 6 Position Part Number 1375618-1

Used with plug or receptacle housings.

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

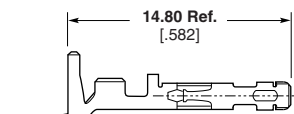
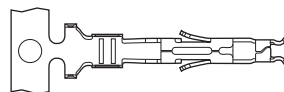
Material—Nylon,
UL 94V-2, Natural color

Female Contacts

Used in receptacle housings.

Material—Phos. Bronze

Application Tooling—See chart and pages 207-210



Technical Documents

Product Specifications

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

Application Specification

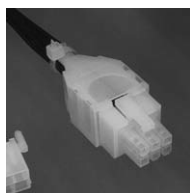
114-19048 AMP-DUAC Receptacle Contact

Wire Size Range AWG [mm ²]	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 or 16 [.8-.9] [1.29]	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.



AMP-DUAC Connectors (Continued)

Plug Housings

2-24 Position Housings

Accept male contacts.

Material

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

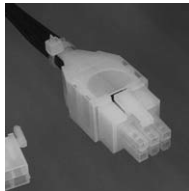
Related Product Data

Mate with—Receptacle housings
(page 126)

Contacts—See below.

Strain Relief—See below.

Technical Documents—pages 125
and 205-206

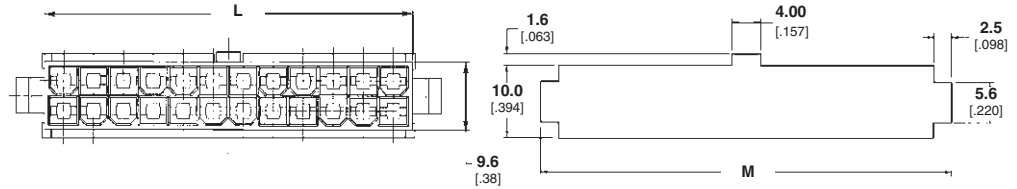


Strain Relief, 6 Position Part Number 1375618-1

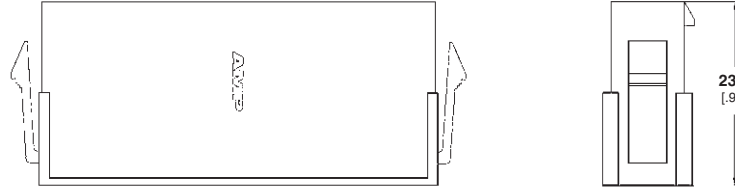
Used with plug or receptacle housings.

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

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



**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 .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

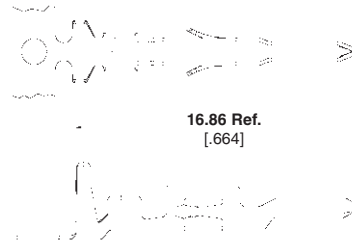
*Call for availability.

Male Contacts

Used in plug housings.

Material—Phos. Bronze

Application Tooling—See chart and
pages 207-210



Wire Size Range AWG [mm ²]	Ins. Dia. Range	Plating	Part Number		Applicator Part Number		CERTI-CRIMP Hand Tool Part Number
			Strip Form	Loose Piece	for AMP-O-LECTRIC Bench Machine	for AMP-O-MATIC Stripper/Crimper Machine	
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

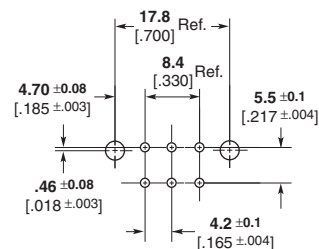
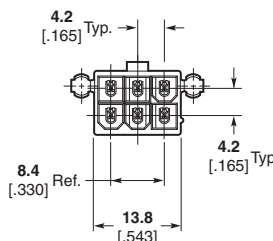
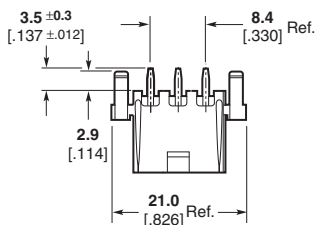
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper
alloy

Related Product Data

Mate with—Receptacle housings
(page 126).

Technical Documents—pages 125
and 205-206



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

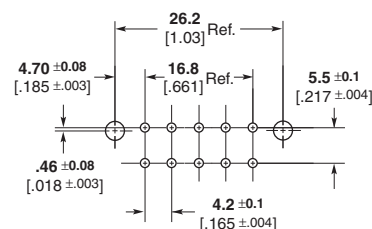
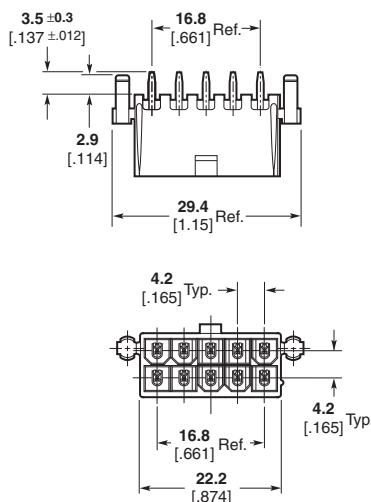
UL 94V-2, Natural color

UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings (page 126).

Technical Documents—pages 125 and 205-206


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

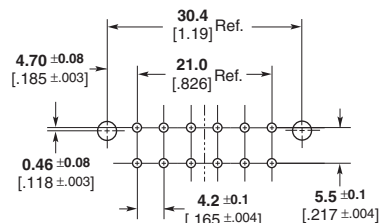
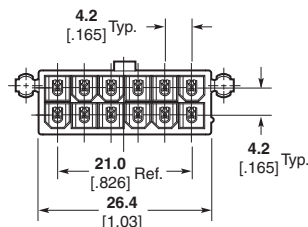
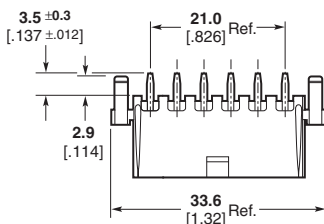
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings
(page 126).

Technical Documents—pages 125
and 205-206



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

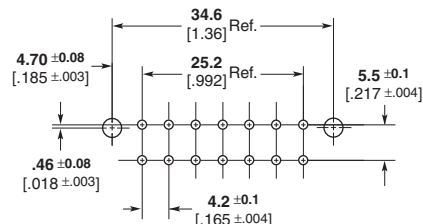
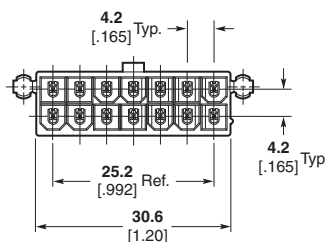
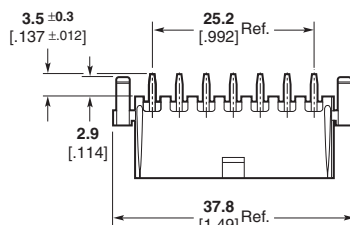
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings
(page 126).

Technical Documents—pages 125
and 205-206



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.

AMP-DUAC Connectors (Continued)

Vertical Header Assemblies (Continued)

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

Material and Finish

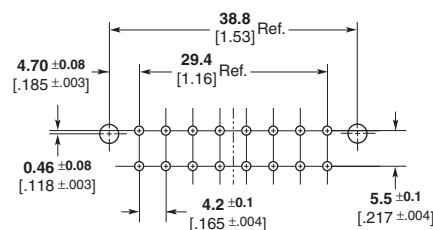
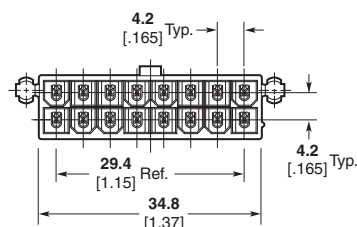
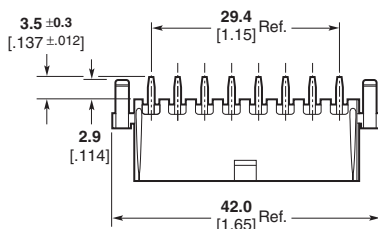
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings
(page 126).

Technical Documents—pages 125
and 205-206



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

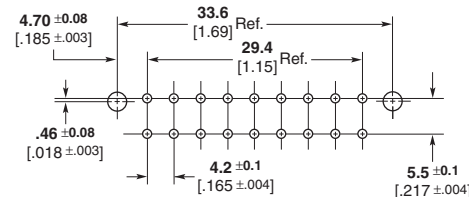
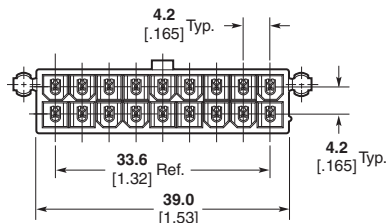
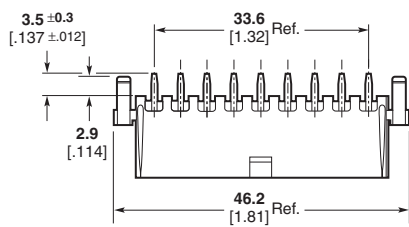
Housing—Nylon
UL 94V-2, Natural color
UL 94V-0, White color

Contacts—0.25 [.010] thick copper alloy

Related Product Data

Mate with—Receptacle housings
(page 126).

Technical Documents—pages 125
and 205-206



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.

AMP-DUAC Connectors (Continued)

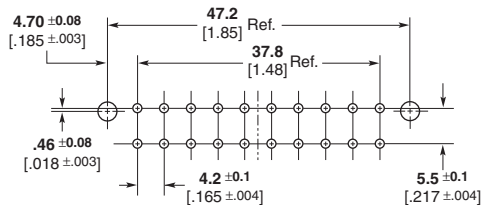
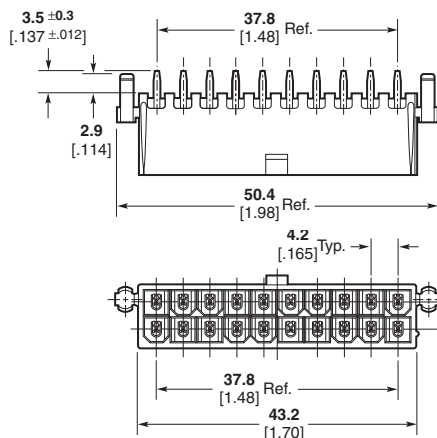
Vertical Header Assemblies (Continued)

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



Recommended PC Board Layout

Related Product Data

Mate with—Receptacle housings
(page 126).

Technical Documents—pages 125
and 205-206

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

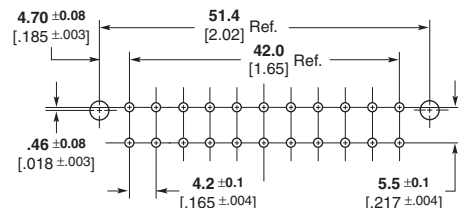
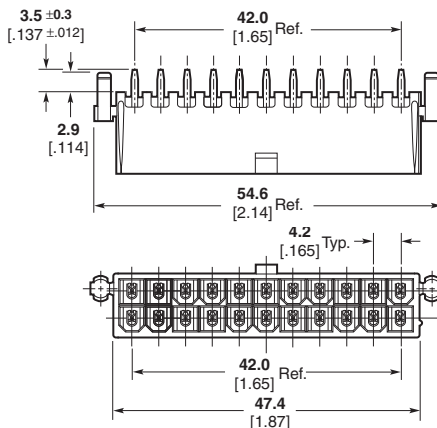
Number of Positions	PCB Pegs	Drain Holes	Plating	Part Number
				UL 94V-0, Black
20	N	N	Tin	1-794415-1
	N	N	30 Gold	1-794415-2

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



Recommended PC Board Layout

Related Product Data

Mate with—Receptacle housings
(page 126).

Technical Documents—pages 125
and 205-206

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.

AMP-DUAC Connectors (Continued)

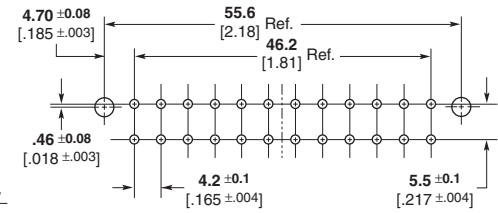
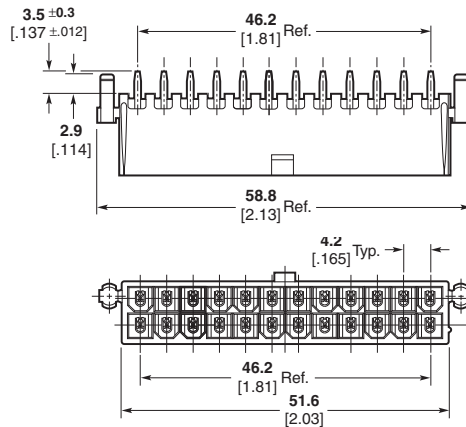
Vertical Header Assemblies (Continued)

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



Recommended PC Board Layout

Related Product Data

Mate with—Receptacle housings
(page 126).

Technical Documents—pages 125
and 205-206

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

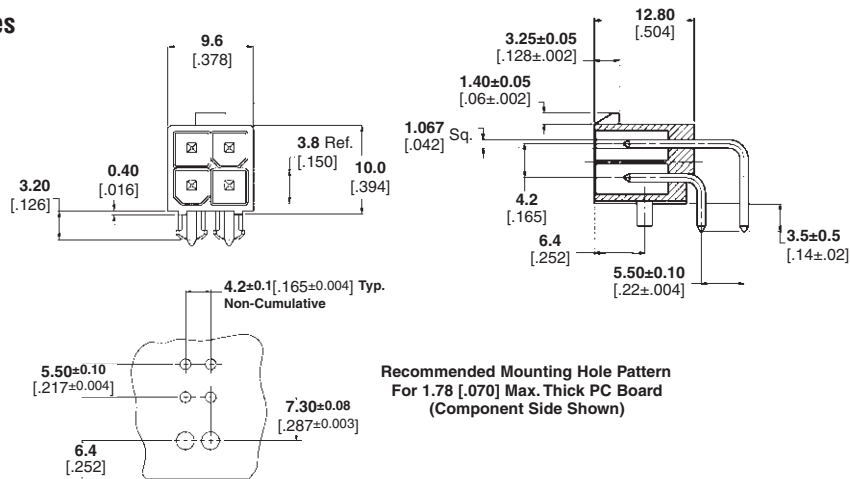
Right-Angle Header Assemblies

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—Copper alloy



Recommended Mounting Hole Pattern
For 1.78 [.070] Max. Thick PC Board
(Component Side Shown)

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.