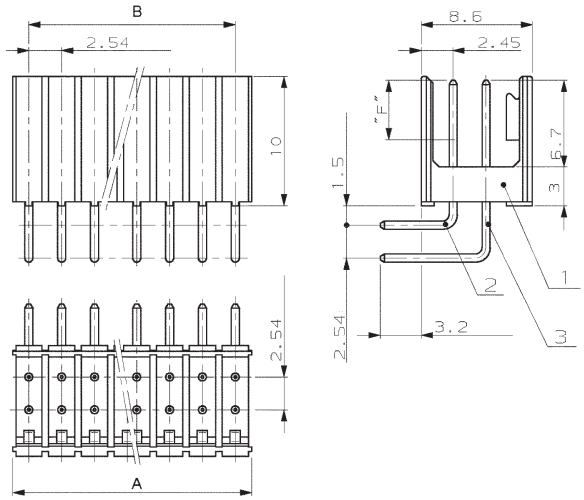
Surface-Mount-Compatible Headers (SMC)—Shrouded

0.63mm Round Post Right-Angle, Double Row



Material and Finish:

Housing—Polyester for high operating temp. (PCT), black, glass fibre filled

Posts—Phosphor bronze, (Plating A) or brass (Plating B) plated as follows:

Plating A

Contact Zone (Area F)—0.1 µm gold over 0.7 µm palladium alloy, over 1.27 µm nickel

Soldering Zone—2.0 µm min. tin over 1.27 µm nickel

Plating B—2.0 µm min. pre-tin over 1.27 µm nickel

Technical Documents:

Product Specification
108-18012

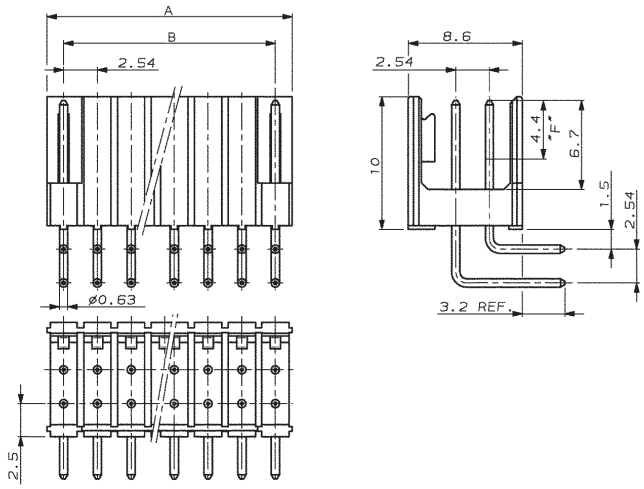
Mateable Connectors
AMPMODU IV Receptacles P/N 926476

No. of Positions	Dimensions		F=4.4 Plating / Part Number	
	A	B	Plating A	Plating B
2x3	7.62	5.08	826470-3	827298-3
2x4	10.16	7.62	826470-4	827298-4
2x5	12.70	10.16	826470-5	827298-5
2x6	15.24	12.70	826470-6	827298-6
2x7	17.78	15.24	826470-7	827298-7
2x8	20.32	17.78	826470-8	827298-8
2x9	22.86	20.32	826470-9	827298-9
2x10	25.40	22.86	1-826470-0	1-827298-0
2x11	27.94	25.40	1-826470-1	1-827298-1
2x12	30.48	27.94	1-826470-2	1-827298-2
2x13	33.02	30.48	1-826470-3	1-827298-3
2x14	35.56	33.02	1-826470-4	1-827298-4
2x15	38.10	35.56	1-826470-5	1-827298-5
2x16	40.64	38.10	1-826470-6	1-827298-6
2x17	43.18	40.64	1-826470-7	1-827298-7
2x18	45.72	43.18	1-826470-8	1-827298-8
2x19	48.26	45.72	1-826470-9	1-827298-9
2x20	50.80	48.26	2-826470-0	2-827298-0
2x30	76.20	73.66	3-826470-0	3-827298-0
2x40	101.60	99.06	4-826470-0	4-827298-0
2x50	127.00	124.46	5-826470-0	5-827298-0

Ordering Information: For intermediate number of positions, dash numbers should be combined properly

Surface-Mount-Compatible Headers (SMC)—Shrouded with Polarisation

0.63mm Round Post Right Angle, Double Row



Material and Finish:

Housing—Polyester for high operating temp. (PCT), black, glass fibre filled

Posts—Phosphor bronze, plated as follows:

Plating A

Contact Zone (Area F)—0.1 µm gold over 0.7 µm palladium alloy, over 1.27 µm nickel

Soldering Zone—2.0 µm min. tin over 1.27 µm nickel

Technical Documents:

Product Specification
108-18012

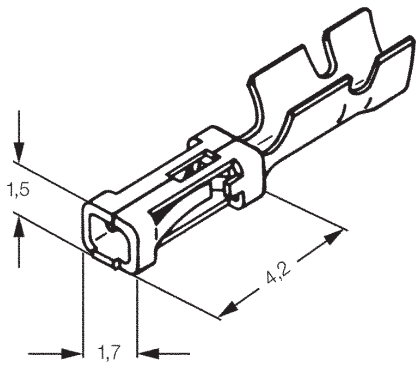
Mateable Connectors
AMPMODU IV Receptacles P/N 964542

No. of Positions	Dimensions		F=4.4 Plating / Part Number	
	A	B	Plating A	Plating B
3	7.62	5.08	966074-3	-
4	10.16	7.62	966074-4	-
5	12.70	10.16	966074-5	-
6	15.24	12.70	966074-6	-
7	17.78	15.24	966074-7	-
8	20.32	17.78	966074-8	-
9	22.86	20.32	966074-9	-
10	25.40	22.86	1-966074-0	-
11	27.94	25.40	1-966074-1	-
12	30.48	27.94	1-966074-2	-
13	33.02	30.48	1-966074-3	-
14	35.56	33.02	1-966074-4	-
15	38.10	35.56	1-966074-5	-
16	40.64	38.10	1-966074-6	-
17	43.18	40.64	1-966074-7	-
18	45.72	43.18	1-966074-8	-
19	48.26	45.72	1-966074-9	-
20	50.80	48.26	2-966074-0	-
30	76.20	73.66	3-966074-0	-
36	91.44	88.90	3-966074-6	-

Ordering Information: For intermediate number of positions, dash numbers should be combined properly

AMPMODU IV/V Receptacle Contacts

Crimp Snap-In Receptacles with Insulation Support (Standard and High Pressure)



Material and Finish:

Body—Phosphor bronze, plated as follows:

Duplex Gold Plating—Duplex plated 0.8 µm gold on contact area, 2.5 µm tin on crimp area, with entire contact underplated 1.27 µm nickel

Selective Gold Plating—Plated 0.8 µm gold over nickel on contact area. Gold flash on rest

Tin Plating—Plated 2.0 µm tin.
Extraction Tool: 843473-1

Related Product Data:

Application Tooling
Hand Tool: 169481-1

Product Specification
108-125007
AMPMODU V - High Pressure

108-25020
AMPMODU IV - Standard Pressure

108-25021
AMPMODU IV - Short Contact Point

Application Specification
114-250003

AMPMODU IV Receptacle Contacts

Wire Size Range mm²	AWG	Insulation Diameter mm	Version	Part Numbers				
				Selective Gold	Duplex Gold	with Short Contact Point		
						Selective Gold	Duplex Gold	Tin
0.032-0.09	32-28	1.2	Reel	167020-2	167020-1	167021-2	167021-1	167021-3
			Loose Piece	167023-2	167023-1	167024-2	167024-1	167024-3
0.2-0.56	24-20	1.4	Reel	167300-6	167300-8	167301-4	2-167301-4	2-167301-2
(0.14-0.12*)	26		Loose Piece	141603-3	141603-4	141708-1	1-141708-2	1-141708-1

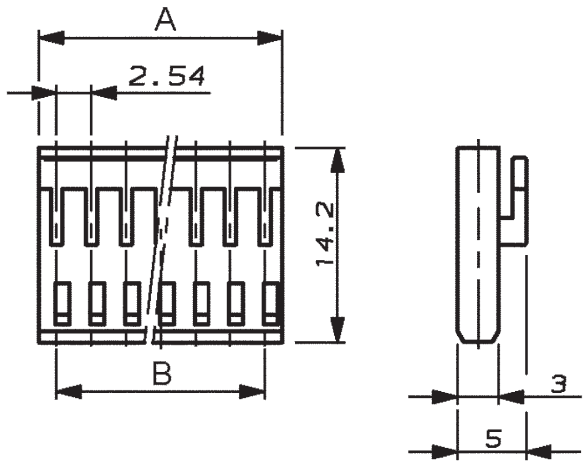
AMPMODU V Receptacle Contacts (High Pressure)

Wire Size Range mm²	AWG	Insulation Diameter mm	Version	Part Numbers				
				Selective Gold	Duplex Gold	with High Contact Pressure		
						Selective Gold	Duplex Gold	Tin
0.032-0.09	32-28	1.2	Reel	-	-	167022-2	167022-1	167022-3
			Loose Piece	-	-	167025-2	167025-1	167025-3
0.2-0.56	24-20	1.4	Reel	-	-	167309-2	-	166309-3
(0.14-0.12*)	26		Loose Piece	-	-	166310-2	-	166310-3

* Consult Tyco Electronics for this wire size range

AMPMODU IV Receptacle Housings

Single Row



Material and Finish:

Housing—Polyester (PBT)
black, glass fibre filled

Technical Documents:

Product Specification
See cover sheet

Application Specification
114-25003

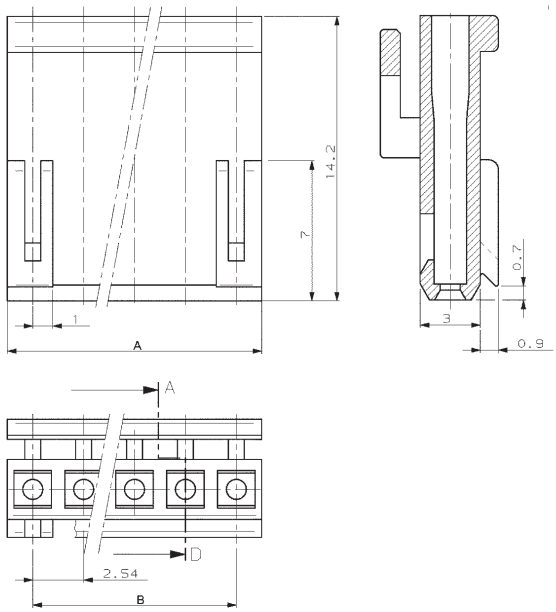
Mateable Headers—AMPMODU II
Headers P/N 827295
Headers P/N 827296
Headers P/N 826467
Headers P/N 826468

No. of Positions	Dimension		Part Numbers
	A	B	
3	7.62	5.08	926475-3
4	10.16	7.62	926475-4
5	12.70	10.16	926475-5
6	15.24	12.70	926475-6
7	17.78	15.24	926475-7
8	20.32	17.78	926475-8
9	22.86	20.32	926475-9
10	25.40	22.86	1-926475-0
11	27.94	25.40	1-926475-1
12	30.48	27.94	1-926475-2
13	33.02	30.48	1-926475-3
14	35.56	33.02	1-926475-4
15	38.10	35.56	1-926475-5
16	40.64	38.10	1-926475-6
17	43.18	40.64	1-926475-7
18	45.72	43.18	1-926475-8
19	48.26	45.72	1-926475-9
20	50.80	48.26	2-926475-0
30	76.20	73.66	3-926475-0
36	91.44	88.90	3-926475-6

Ordering Information: For intermediate number of positions, dash numbers should be combined properly

AMPMODU IV Receptacle Housings with Polarisation

Single Row with Polarisation



Material and Finish:

Housing—Polyester (PBT)
black, glass fibre filled

Technical Documents:

Product Specification
See cover sheet

Application Specification
114-25003

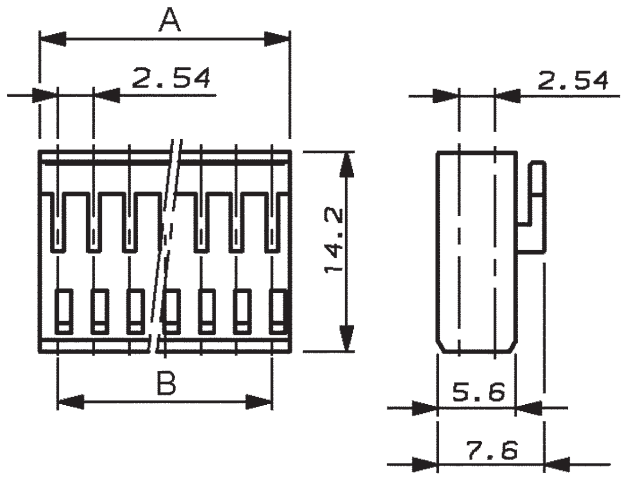
Mateable Headers—AMPMODU II
Headers P/N 966073
Headers P/N 966075

No. of Positions	Dimension A	Dimension B	Part Numbers
3	7.62	5.08	964543-3
4	10.16	7.62	964543-4
5	12.70	10.16	964543-5
6	15.24	12.70	964543-6
7	17.78	15.24	964543-7
8	20.32	17.78	964543-8
9	22.86	20.32	964543-9
10	25.40	22.86	1-964543-0
11	27.94	25.40	1-964543-1
12	30.48	27.94	1-964543-2
13	33.02	30.48	1-964543-3
14	35.56	33.02	1-964543-4
15	38.10	35.56	1-964543-5
16	40.64	38.10	1-964543-6
17	43.18	40.64	1-964543-7
18	45.72	43.18	1-964543-8
19	48.26	45.72	1-964543-9
20	50.80	48.26	2-964543-0
30	76.20	73.66	3-964543-0
36	91.44	88.90	3-964543-6

Ordering Information: For intermediate number of positions, dash numbers should be combined properly

AMPMODU IV Receptacle Housings

Double Row



Material and Finish:

Housing—Polyester (PBT)
black, glass fibre filled

Technical Documents:

Product Specification
See cover sheet

Application Specification
114-25003

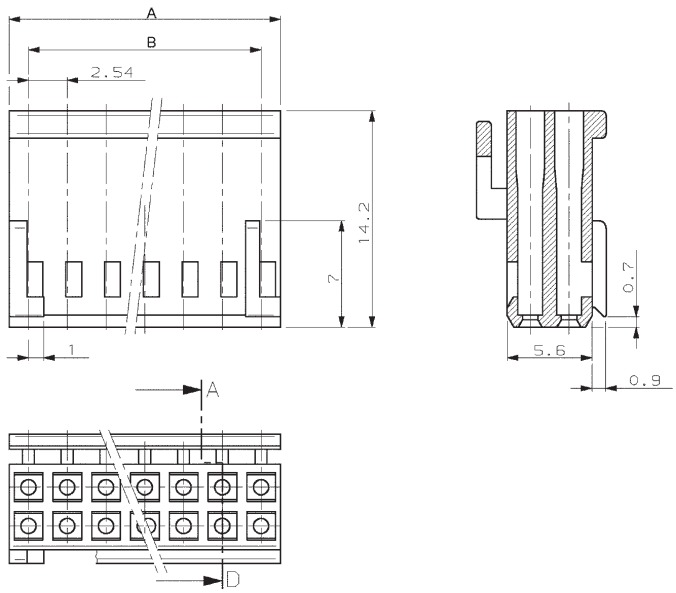
Mateable Headers—AMPMODU II
Headers P/N 827297
Headers P/N 827298
Headers P/N 826469
Headers P/N 826470

No. of Positions	Dimension		Part Numbers
	A	B	
2x2	5.08	2.54	926476-2
2x3	7.62	5.08	926476-3
2x4	10.16	7.62	926476-4
2x5	12.70	10.16	926476-5
2x6	15.24	12.70	926476-6
2x7	17.78	15.24	926476-7
2x8	20.32	17.78	926476-8
2x9	22.86	20.32	926476-9
2x10	25.40	22.86	1-926476-0
2x11	27.94	25.40	1-926476-1
2x12	30.48	27.94	1-926476-2
2x13	33.02	30.48	1-926476-3
2x14	35.56	33.02	1-926476-4
2x15	38.10	35.56	1-926476-5
2x16	40.64	38.10	1-926476-6
2x17	43.18	40.64	1-926476-7
2x18	45.72	43.18	1-926476-8
2x19	48.26	45.72	1-926476-9
2x20	50.80	48.26	2-926476-0
2x30	76.20	73.66	3-926476-0
2x36	91.44	88.90	3-926476-6

Ordering Information: For intermediate number of positions, dash numbers should be combined properly

AMPMODU IV Receptacle Housings with Polarisation

Double Row with Polarisation



Material and Finish:

Housing—Polyester (PBT)
black, glass fibre filled

Technical Documents:

Product Specification
See cover sheet

Application Specification
114-25003

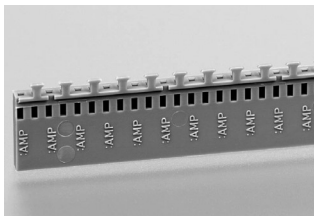
Mateable Headers—AMPMODU II
Headers P/N 966072
Headers P/N 966074

No. of Positions	Dimension A	Dimension B	Part Numbers
2x2	5.08	2.54	964542-2
2x3	7.62	5.08	964542-3
2x4	10.16	7.62	964542-4
2x5	12.70	10.16	964542-5
2x6	15.24	12.70	964542-6
2x7	17.78	15.24	964542-7
2x8	20.32	17.78	964542-8
2x9	22.86	20.32	964542-9
2x10	25.40	22.86	1-964542-0
2x11	27.94	25.40	1-964542-1
2x12	30.48	27.94	1-964542-2
2x13	33.02	30.48	1-964542-3
2x14	35.56	33.02	1-964542-4
2x15	38.10	35.56	1-964542-5
2x16	40.64	38.10	1-964542-6
2x17	43.18	40.64	1-964542-7
2x18	45.72	43.18	1-964542-8
2x19	48.26	45.72	1-964542-9
2x20	50.80	48.26	2-964542-0
2x30	76.20	73.66	3-964542-0
2x36	91.44	88.90	3-964542-6

Ordering Information: For intermediate number of positions, dash numbers should be combined properly

AMPMODU IV Receptacle Housings

Single Row (with and without Strain Relief)



Material and Finish:

Green polyamide, 6.6 UL 94 V-HB rated

Keying Plugs:

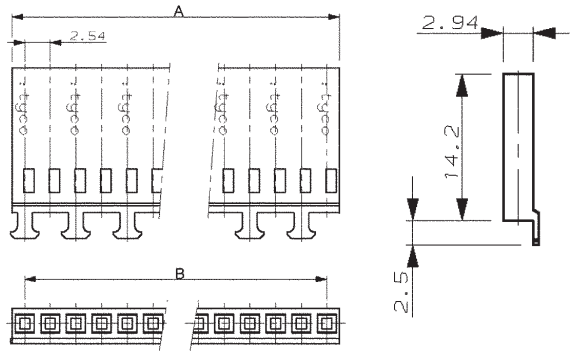
926519-1, Black
926519-2, Green
1-926519-1, Natural
1-926519-2, Red

Technical Documents:

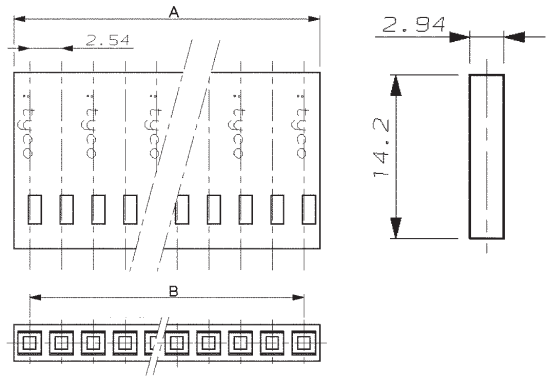
Product Specification
see cover sheet

Application Specification
114-25003

with Strain Relief



without Strain Relief

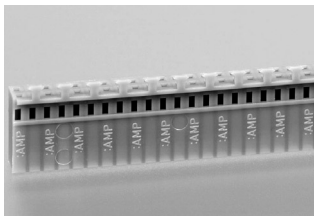


No. of Positions	Part Number	
	With Strain Relief	Without Strain Relief
2	925369-2	925366-2
3	925369-3	925366-3
4	925369-4	925366-4
5	925369-5	925366-5
6	925369-6	925366-6
7	925369-7	925366-7
8	925369-8	925366-8
9	925369-9	925366-9
10	1-925369-0	1-925366-0
50	5-925369-0	5-925366-0

Ordering Information: For intermediate number of positions, dash numbers should be combined properly. Example: 20 positions = 2-925369-0 or 2-925366-0

AMPMODU IV Receptacle Housings

Double-Row (with and without Strain Relief)



Material and Finish:

Green polyamide, 6.6 UL 94 V-HB rated

Keying Plugs:

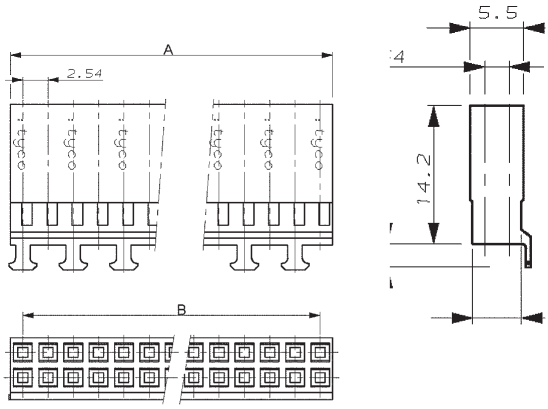
926519-1, Black
926519-2, Green
1-926519-1, Natural
1-926519-2, Red

Technical Documents:

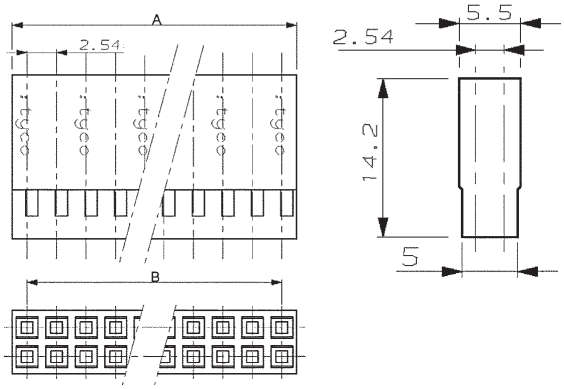
Product Specification
see cover sheet

Application Specification
114-25003

with Strain Relief



without Strain Relief



No. of Positions	Part Number	
	With Strain Relief	Without Strain Relief
2	925370-2	925367-2
3	925370 -3	925367-3
4	925370-4	925367-4
5	925370-5	925367-5
6	925370-6	925367-6
7	925370-7	925367-7
8	925370-8	925367-8
9	925370-9	925367-9
10	1-925370-0	1-925367-0
50	5-925370-0	5-925367-0

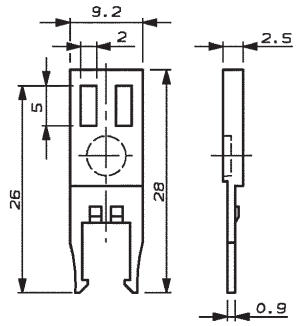
Ordering Information: For intermediate number of positions, dash numbers should be combined properly. Example: 20 positions = 2-925370-0 or 2-925367-0

AMPMODU IV - Accessories

Retention Plug with Strain Relief

Material and Finish:
Polycarbonate, glass fibre filled

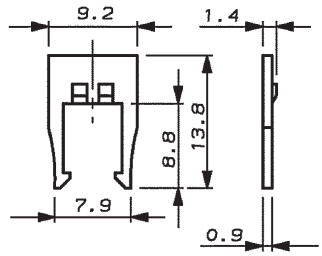
Part Number	Colour
926478-1	Black
926478-2	Green
926478-3	Red



Retention Plug

Material:
Polycarbonate, glass fibre filled

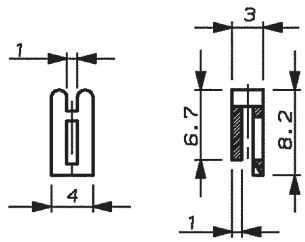
Part Number	Colour
926477-1	Black
926477-2	Green
926477-3	Red



Keying Plug

Material:
Polyamide 6.6 glass fibre filled

Part Number	Colour
926498-1	Black
926498-2	Green
926498-3	Red

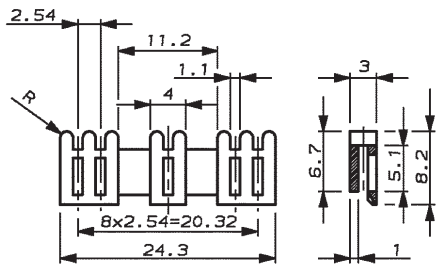


Keying Block

Material:
Polyamide 6.6 glass fibre filled

Technical Documents:
Application Specification
114-25003

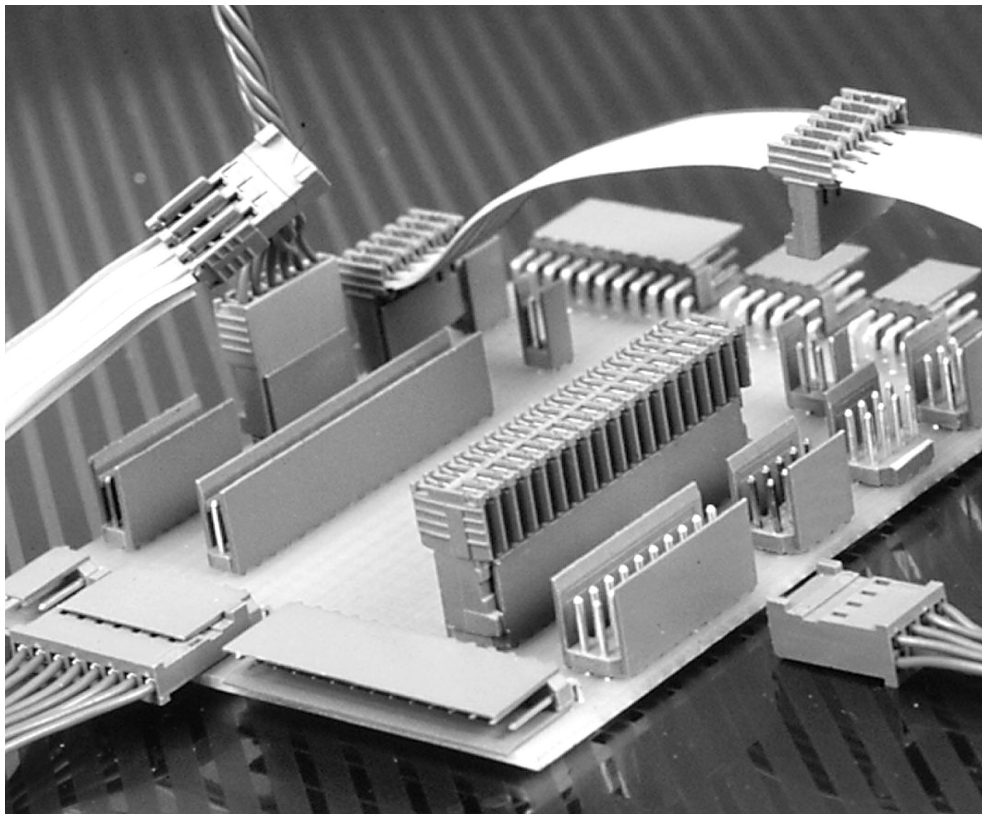
Part Number	Colour
927607-1	Black
927607-2	Green
927607-3	Red



Introduction

Product Facts

- **Receptacle plugs preloaded with Insulation Displacement Contacts (IDC) to terminate discrete wires or 2.54 mm centerline ribbon cables**
- **Receptacle plugs designed to receive crimp-on snap-in contacts to terminate discrete wires (straight exit)**
- **Polarised housings**
- **Headers provided with straight or right-angle exit pins to be soldered onto 1.6 mm thick printed circuit boards**
- **Protective shrouds feature an integrated detent latching device**
- **SMT versions available (Surface Mount Technology)**
- **Compliant to CEI IEC 603-8 International Standard**



This multi-contact connector range is designed to reliably meet today's electronic circuit interconnection requirements for signal transmission in a variety of applications for computer industries,telecommunications and industrial equipments.

This modular connector family manufactured by Tyco Electronics fully complies with the CEI IEC 603-8 international standard.
This wire-to-board interconnection system is composed of IDC receptacle assemblies for discrete wires or ribbon cable, or housings for crimp snap-in receptacle contacts as well as 2.54mm pitch vertical or right-angle shrouded and polarised board-mount headers.

These low cost headers preloaded with tin-plated or selectively gold-plated contacts are designed to be wave soldered on 1.6 mm thick printed circuit boards with a hole drill layout of 2.54x2.54 mm.

Technical Documents:

Product Specification
108-15053

Application Specification:
114-15030 (Right-Angle Plug)
114-15031 (Straight Plug)

Performance Specifications:

Electrical

Contact Current Rating—
3 amperes for single contact at 20°C (Amperage could vary due to ambient temperature, wire size and duty cycles.)

Contact Termination Resistance—
20 milliohms max (HE 13) and
30 milliohms max (HE 14)

Dielectric Withstanding Voltage—
1000 V rms (HE 13) and
500 V rms (HE 14)

Insulation Resistance—
5,000 megaohms (HE 13) and
1,000 megaohms (HE 14)

Environmental

Operating Temperature—
-55°C to +125°C

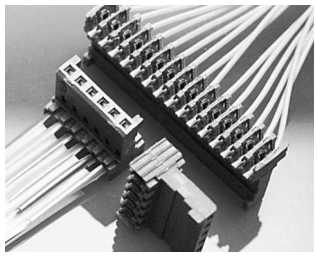
Mechanical

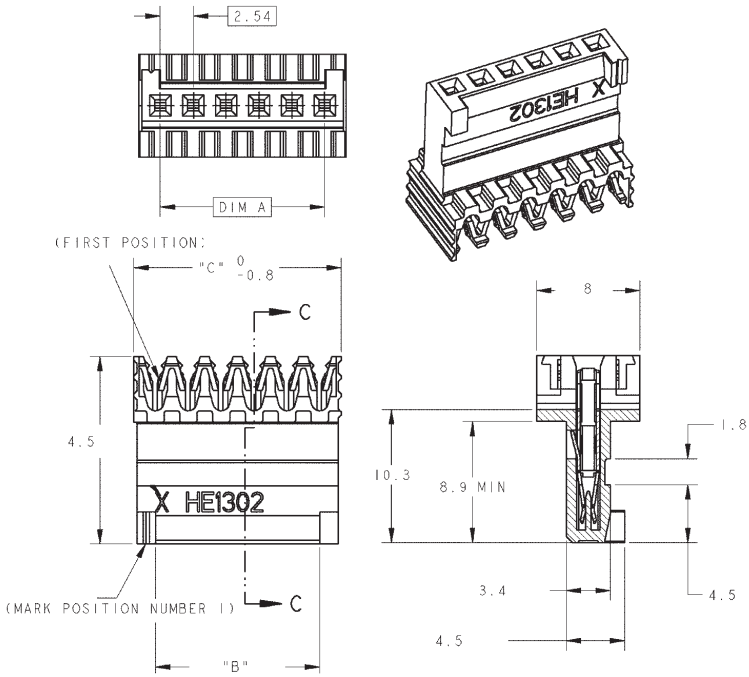
Durability—
400 cycles (HE 13) and
30 cycles (HE 14)

Insertion/Extraction Forces—
1.5 N max + locking (HE 13) and
3 N max + locking (HE 14)

IDC Receptacle Assembly, Right-Angle

Single Row Right-Angle Receptacle Assembly





Material and Finish:

Housing—Blue flame retardant glass filled polyester, UL 94-V0 rated

IDC Contact—Phosphor bronze, plated as follows:

HE13—contact area, 2.5-4.0 µm tin on entire contact, underplated 1.27 µm nickel

HE14—contact area, tin plated 0.8 µm on entire contact, underplated 1.27 µm nickel

Technical Documents:

Product Specification
108-15053

Application Specification:

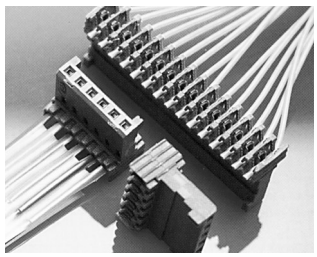
114-15030 (Right-Angle Plug)
114-15031 (Straight Plug)

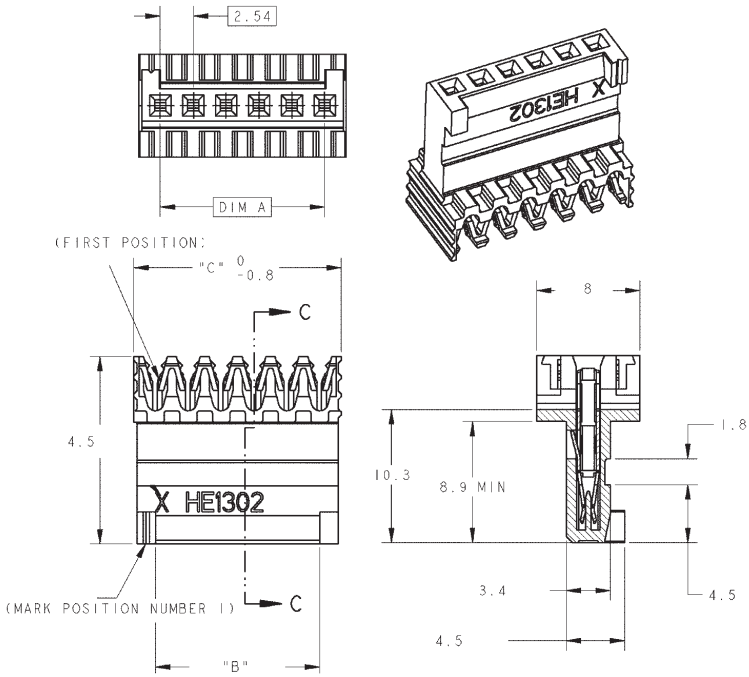
HE13

No. of Positions	Dimensions		Part Numbers					
			28 AWG		26 AWG		24 AWG	
	A-B	C	Tube	Loose Piece	Tube	Loose Piece	Tube	Loose Piece
2	2.54	5.88	281715-2	144275-2	281712-2	144274-2	281709-2	144273-2
3	5.08	8.42	281715-3	144275-3	281712-3	144274-3	281709-3	144273-3
4	7.62	10.96	281715-4	144275-4	281712-4	144274-4	281709-4	144273-4
5	10.16	13.50	281715-5	144275-5	281712-5	144274-5	281709-5	144273-5
6	12.70	16.04	281715-6	144275-6	281712-6	144274-6	281709-6	144273-6
7	15.24	18.58	281715-7	144275-7	281712-7	144274-7	281709-7	144273-7
8	17.78	21.12	281715-8	144275-8	281712-8	144274-8	281709-8	144273-8
9	20.32	23.66	-	-	-	-	-	-
10	22.86	26.20	1-281715-0	1-144275-0	1-281712-0	1-144274-0	1-281709-0	1-144273-0
11	25.40	28.74	-	-	-	-	-	-
12	27.94	31.28	1-281715-2	1-144275-2	1-281712-2	1-144274-2	1-281709-2	1-144273-2
13	30.48	33.82	-	-	-	-	-	-
14	33.02	36.36	-	-	-	-	-	-
15	35.56	38.90	1-281715-5	1-144275-5	1-281712-5	1-144274-5	1-281709-5	1-144273-5
16	38.10	41.44	-	-	-	-	-	-
17	40.64	43.98	-	-	-	-	-	-
18	43.18	46.52	1-281715-8	1-144275-8	1-281712-8	1-144274-8	1-281709-8	1-144273-8
19	45.72	49.06	-	-	-	-	-	-
20	48.26	51.60	-	-	-	-	-	-

IDC Receptacle Assembly, Right-Angle (continued)

Single Row Right-Angle Receptacle Assembly





Material and Finish:

Housing—Blue flame retardant glass filled polyester, UL 94-V0 rated

IDC Contact—Phosphor bronze, plated as follows:

HE13—contact area, 2.5-4.0 µm tin on entire contact, underplated 1.27 µm nickel

HE14—contact area, tin plated 0.8 µm on entire contact, underplated 1.27 µm nickel

Technical Documents:

Product Specification
108-15053

Application Specification:

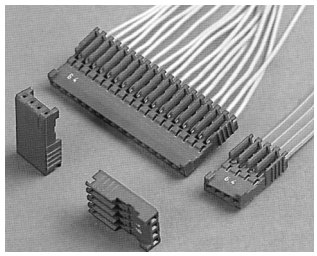
114-15030 (Right-Angle Plug)
114-15031 (Straight Plug)

HE14

No. of Positions	Dimensions		Part Numbers					
			28 AWG		26 AWG		24 AWG	
	A-B	C	Tube	Loose Piece	Tube	Loose Piece	Tube	Loose Piece
2	2.54	5.88	281714-2	144272-2	281711-2	144271-2	281708-2	144271-2
3	5.08	8.42	281714-3	144272-3	281711-3	144271-3	281708-3	144271-3
4	7.62	10.96	281714-4	144272-4	281711-4	144271-4	281708-4	144271-4
5	10.16	13.50	281714-5	144272-5	281711-5	144271-5	281708-5	144271-5
6	12.70	16.04	281714-6	144272-6	281711-6	144271-6	281708-6	144271-6
7	15.24	18.58	281714-7	144272-7	281711-7	144271-7	281708-7	144271-7
8	17.78	21.12	281714-8	144272-8	281711-8	144271-8	281708-8	144271-8
9	20.32	23.66	-	-	-	-	-	-
10	22.86	26.20	1-281714-0	1-144272-0	1-281711-0	1-144271-0	1-281708-0	1-144271-0
11	25.40	28.74	-	-	-	-	-	-
12	27.94	31.28	1-281714-2	1-144272-2	1-281711-2	1-144271-2	1-281708-2	1-144271-2
13	30.48	33.82	-	-	-	-	-	-
14	33.02	36.36	-	-	-	-	-	-
15	35.56	38.90	1-281714-5	1-144272-5	1-281711-5	1-144271-5	1-281708-5	1-144271-5
16	38.10	41.44	-	-	-	-	-	-
17	40.64	43.98	-	-	-	-	-	-
18	43.18	46.52	1-281714-8	1-144272-8	1-281711-8	1-144271-8	1-281708-8	1-144271-8
19	45.72	49.06	-	-	-	-	-	-
20	48.26	51.60	-	-	-	-	-	-

IDC Receptacle Assembly, Straight

Single Row Straight Receptacle Assembly



Material and Finish:

Housing—Blue flame retardant glass filled polyester, UL 94-V0 rated

IDC Contact—Phosphor bronze, plated as follows:

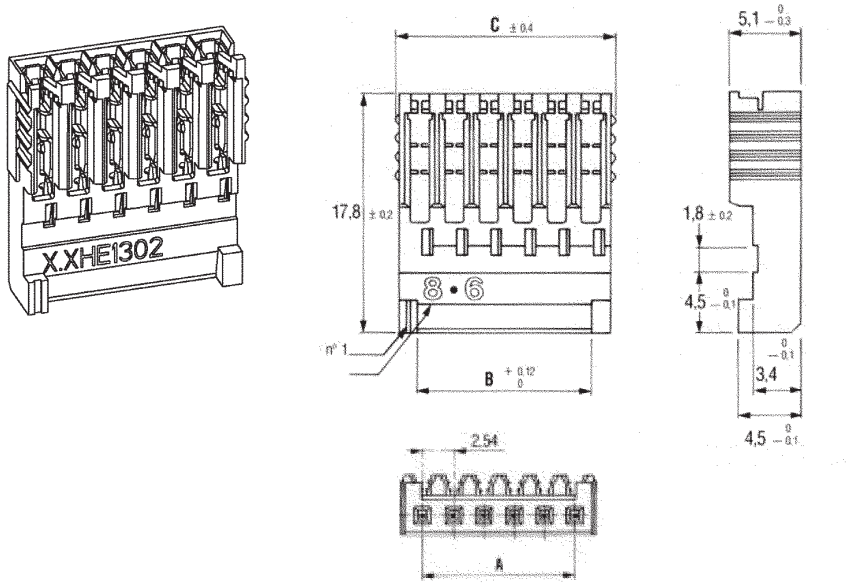
HE13—Plated min. 0.4 µm gold on contact area, 2.5-4.0 µm tin on entire contact, underplated 1.27 µm nickel

HE14—Tin plated min. 2.5-4.0 µm on on entire contact, underplated 1.27 µm nickel

Technical Documents:

Product Specification
108-15053

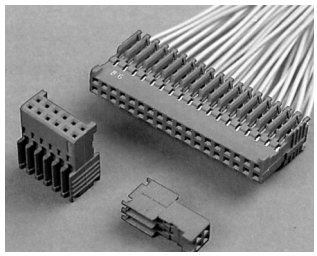
Application Specification:
114-15031 (Straight version)



No. of Positions	Dimensions		Part Numbers			
			HE13		HE14	
			28-26 AWG	26-24 AWG	28-26 AWG	26-24 AWG
	A-B	C	Loose Piece	Loose Piece	Loose Piece	Loose Piece
2	2.54	5.88	281787-2	281784-2	281786-2	281783-2
3	5.08	8.42	281787-3	281784-3	281786-3	281783-3
4	7.62	10.96	281787-4	281784-4	281786-4	281783-4
5	10.16	13.50	281787-5	281784-5	281786-5	281783-5
6	12.70	16.04	281787-6	281784-6	281786-6	281783-6
7	15.24	18.58	-	-	-	-
8	17.78	21.12	281787-8	281784-8	281786-8	281783-8
9	20.32	23.66	-	-	-	-
10	22.86	26.20	1-281787-0	1-281784-0	1-281786-0	1-281783-0
11	25.40	28.74	-	-	-	-
12	27.94	31.28	1-281787-2	1-281784-2	1-281786-2	1-281783-2
13	30.48	33.82	-	-	-	-
14	33.02	36.36	-	-	-	-
15	35.56	38.90	1-281787-5	1-281784-5	1-281786-5	1-281783-5
16	38.10	41.44	-	-	-	-
17	40.64	43.98	-	-	-	-
18	43.18	46.52	1-281787-8	1-281784-8	1-281786-8	1-281783-8
19	45.72	49.06	-	-	-	-
20	48.26	51.60	-	-	-	-

IDC Receptacle Assembly, Straight

Double Row Right-Angle Receptacle Assembly



Material and Finish:

Housing—Blue flame retardant glass filled polyester, UL 94-V0 rated

IDC Contact—Phosphor bronze, plated as follows:

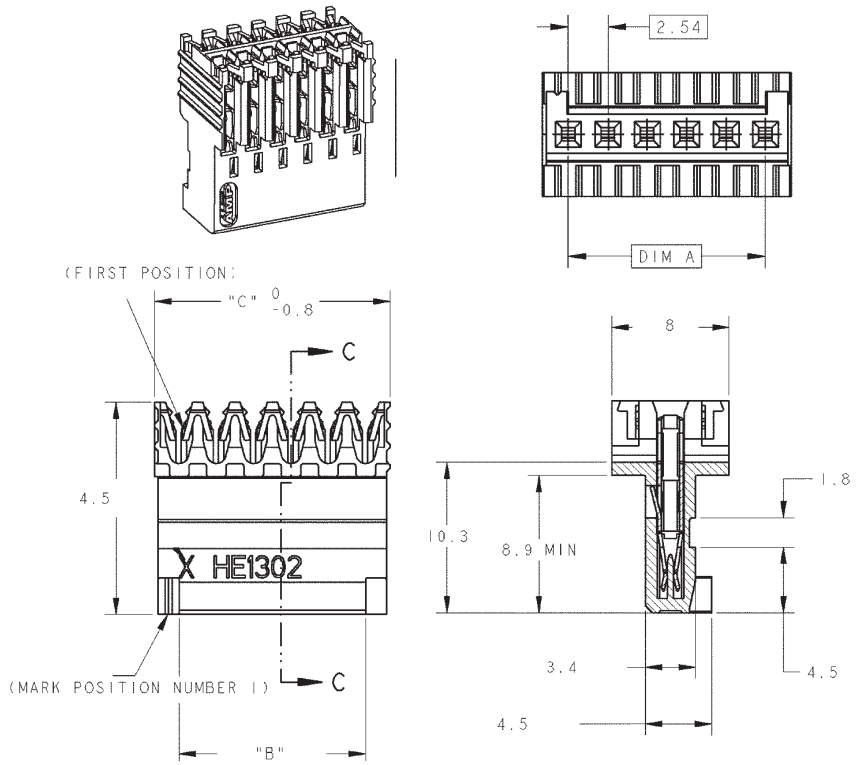
HE13—Plated min. 0.4 µm gold on contact area, 2.5-4.0 µm tin on entire contact, underplated 1.27 µm nickel

HE14—Tin plated min. 2.5-4.0 µm on on entire contact, underplated 1.27 µm nickel

Technical Documents:

Product Specification
108-15053

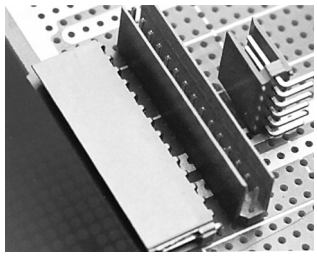
Application Specification:
114-15030 (Right-Angle version)



No. of Positions	Dimensions		Part Numbers			
			HE13		HE14	
			28-26 AWG	26-24 AWG	28-26 AWG	26-24 AWG
	A-B	C	Loose Piece	Loose Piece	Loose Piece	Loose Piece
2x2	2.54	5.88	281793-2	281790-2	281792-2	281789-2
2x3	5.08	8.42	281793-3	281790-3	281792-3	281789-3
2x4	7.62	10.96	281793-4	281790-4	281792-4	281789-4
2x5	10.16	13.50	281793-5	281790-5	281792-5	281789-5
2x6	12.70	16.04	281793-6	281790-6	281792-6	281789-6
2x7	15.24	18.58	-	-	-	-
2x8	17.78	21.12	281793-8	281790-8	281792-8	281789-8
2x9	20.32	23.66	-	-	-	-
2x10	22.86	26.20	1-281793-0	1-281790-0	1-281792-0	1-281789-0
2x11	25.40	28.74	-	-	-	-
2x12	27.94	31.28	1-281793-2	1-281790-2	1-281792-2	1-281789-2
2x13	30.48	33.82	-	-	-	-
2x14	33.02	36.36	-	-	-	-
2x15	35.56	38.90	1-281793-5	1-281790-5	1-281792-5	1-281789-5
2x16	38.10	41.44	-	-	-	-
2x17	40.64	43.98	-	-	-	-
2x18	43.18	46.52	1-281793-8	1-281790-8	1-281792-8	1-281789-8
2x19	45.72	49.06	-	-	-	-
2x20	48.26	51.60	-	-	-	-

Shrouded Headers, Single Row

0.63 mm Square Post Straight & Right-Angle



Material and Finish:

Housing—Blue flame retardant glass filled polyester, UL 94-V0 rated

Posts—Phosphor bronze, plated as follows:

HE13—Plated min. 0.4 µm gold on contact area, gold flash on insertion area, 2.5-4.0 µm tin on solder tail, with entire post underplated 1.27 µm nickel

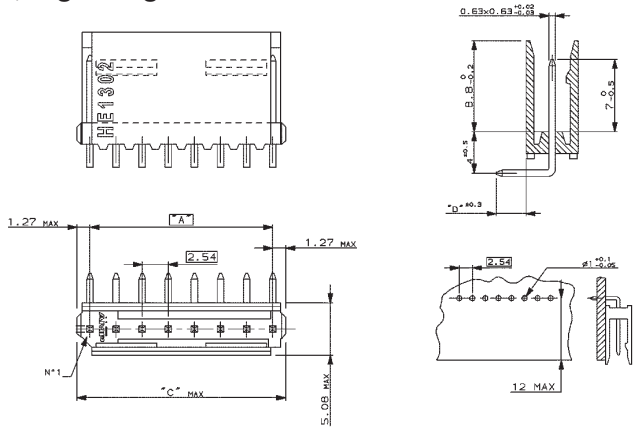
HE14—Tin plated min. 2.5-4.0 µm on contact area, tin plated 0.8 µm on entire post, underplated 1.27 µm nickel

Technical Documents:

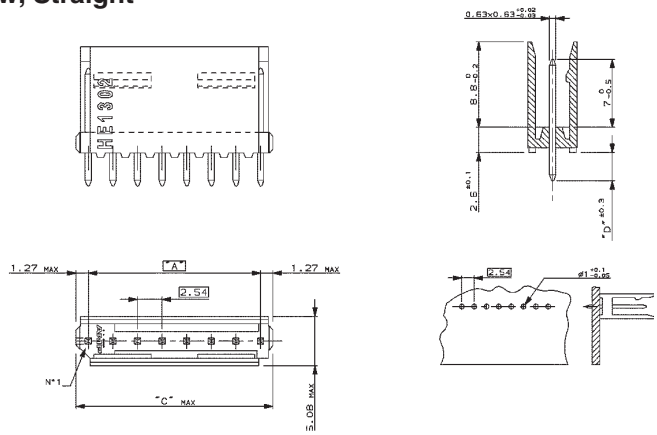
Product Specification
108-15053

Application Specification:
114-15030 (Right-Angle Plug version)
114-15031 (Straight Plug version)

Single-Row, Right-Angle



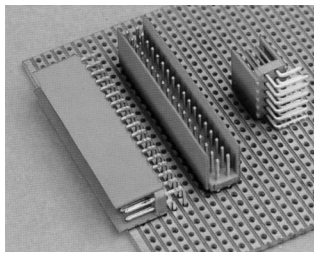
Single-Row, Straight



No. of Positions	Dimensions			Single-Row Straight Type / Part Number		Single-Row Right Angle Type / Part Number	
	A	B	D	HE13	HE14	HE13	HE14
2	2.54	5.54	2.9	281696-2	281695-2	281699-2	281698-2
3	5.08	8.08	2.9	281696-3	281695-3	281699-3	281698-3
4	7.62	10.62	2.9	281696-4	281695-4	281699-4	281698-4
5	10.16	13.16	2.9	281696-5	281695-5	281699-5	281698-5
6	12.70	15.70	2.9	281696-6	281695-6	281699-6	281698-6
7	15.24	18.24	2.9	281696-7	281695-7	281699-7	281698-7
8	17.78	20.78	2.9	281696-8	281695-8	281699-8	281698-8
9	20.32	23.32	2.9	-	-	-	-
10	22.86	25.86	2.9	1-281696-0	1-281695-0	1-281699-0	1-281698-0
11	25.40	28.40	2.9	-	-	-	-
12	27.94	30.94	2.9	1-281696-2	1-281695-2	1-281699-2	1-281698-2
13	30.48	33.48	2.9	-	-	-	-
14	33.02	36.02	2.9	-	-	-	-
15	35.56	38.56	2.9	1-281696-5	1-281695-5	1-281699-5	1-281698-5
16	38.10	41.10	2.9	-	-	-	-
17	40.64	43.64	2.9	1-281696-7	1-281695-7	1-281699-7	1-281698-7
18	43.18	46.18	2.9	1-281696-8	1-281695-8	1-281699-8	1-281698-8
19	45.72	48.72	2.9	-	-	-	-
20	48.26	51.26	2.9	-	-	-	-
21	50.80	53.80	2.9	-	-	-	-
22	53.34	56.34	2.9	-	-	-	-
23	55.88	58.88	2.9	-	-	-	-
24	58.42	61.42	2.9	-	-	-	-
25	60.96	63.96	2.9	-	-	-	-

Shrouded Headers, Double Row

0.63 mm Square Post Straight & Right-Angle



Material and Finish:

Housing—Blue flame retardant glass filled polyester, UL 94-V0 rated

Posts—Phosphor bronze, plated as follows:

HE13—Plated min. 0.4 µm gold on contact area, gold flash on insertion area, 2.5-4.0 µm tin on solder tail, with entire post underplated 1.27 µm nickel

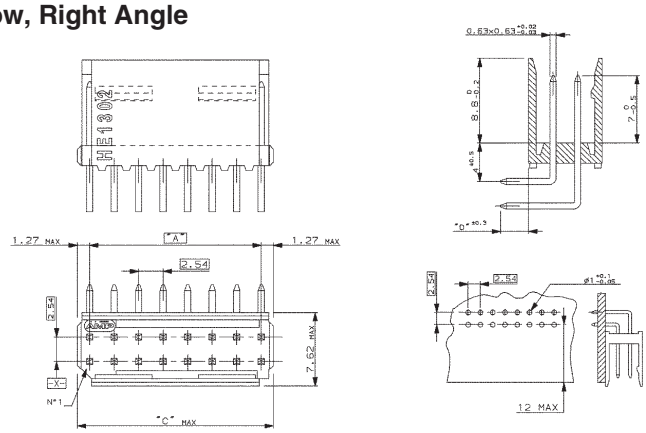
HE14—Tin plated min. 2.5-4.0 µm on contact area, tin plated 0.8 µm on entire post, underplated 1.27 µm nickel

Technical Documents:

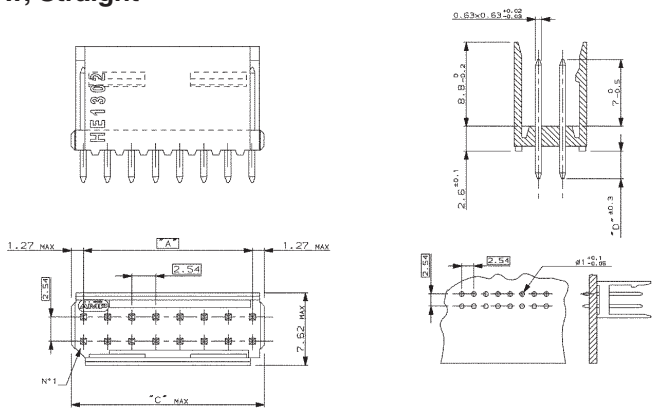
Product Specification
108-15053

Application Specification:
114-15030 (Right-Angle Plug version)
114-15031 (Straight Plug version)

Double-Row, Right Angle



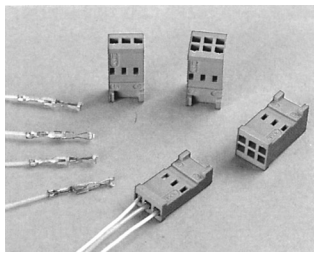
Double-Row, Straight



No. of Positions	Dimensions			Double-Row Straight Type / Part Number		Double-Row Right Angle Type / Part Number	
	A	C	D	HE13	HE14	HE13	HE14
2x2	2.54	5.54	2.9	281740-2	281739-2	281743-2	281742-2
2x3	5.08	8.08	2.9	281740-3	281739-3	281743-3	281742-3
2x4	7.62	10.62	2.9	281740-4	281739-4	281743-4	281742-4
2x5	10.16	13.16	2.9	281740-5	281739-5	281743-5	281742-5
2x6	12.70	15.70	2.9	281740-6	281739-6	281743-6	281742-6
2x7	15.24	18.24	2.9	-	-	-	-
2x8	17.78	20.78	2.9	281740-8	281739-8	281743-8	281742-8
2x9	20.32	23.32	2.9	-	-	-	-
2x10	22.86	25.86	2.9	1-281740-0	1-281739-0	1-281743-0	1-281742-0
2x11	25.40	28.40	2.9	-	-	-	-
2x12	27.94	30.94	2.9	1-281740-2	1-281739-2	1-281743-2	1-281742-2
2x13	30.48	33.48	2.9	1-281740-3	1-281739-3	1-281743-3	1-281742-3
2x14	33.02	36.02	2.9	-	-	-	-
2x15	35.56	38.56	2.9	1-281740-5	1-281739-5	1-281743-5	1-281742-5
2x16	38.10	41.10	2.9	-	-	-	
2x17	40.64	43.64	2.9	1-281740-7	1-281739-7	1-281743-7	1-281742-7
2x18	43.18	46.18	2.9	1-281740-8	1-281739-8	1-281743-8	1-281742-8
2x19	45.72	48.72	2.9	-	-	-	
2x20	48.26	51.26	2.9	2-281740-0	2-281739-0	2-281743-0	2-281742-0
2x21	50.80	53.80	2.9	-	-	-	-
2x22	53.34	56.34	2.9	-	-	-	-
2x23	55.88	58.88	2.9	-	-	-	-
2x24	58.42	61.42	2.9	-	-	-	-
2x25	60.96	63.96	2.9	-	-	-	-

Crimp-On Snap-In Receptacle Housing

Single & Double Row Receptacle Housing



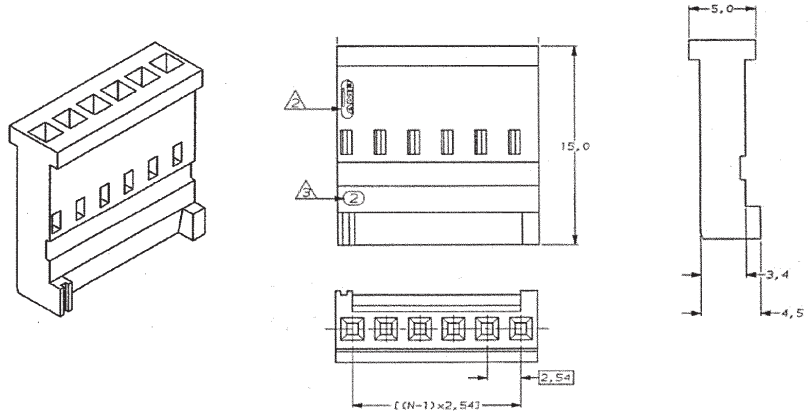
Material and Finish:

Housing—Blue flame retardant glass filled polyester, UL 94-V0 rated

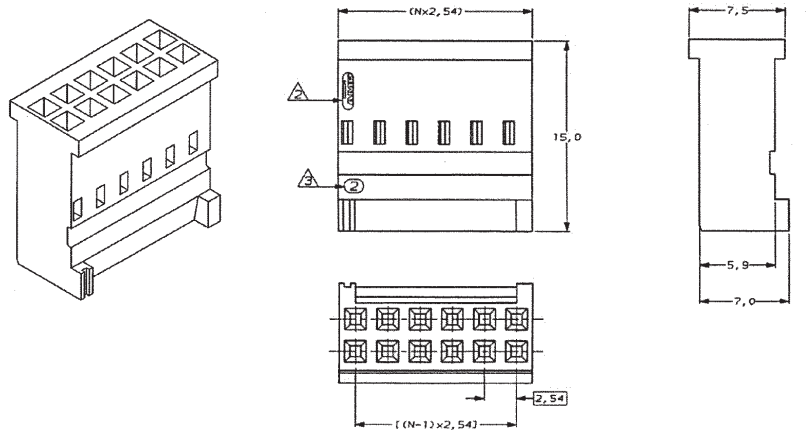
Technical Documents:

Product Specification
108-15053

Single Row



Double Row



No. of Positions	Part Number	
	Single Row	Double Row
2		
3	281838-3	281839-3
4	281838-4	281839-4
5	281838-5	281839-5
6	281838-6	281839-6
7	281838-7	-
8	281838-8	281839-8
9	281838-9	281839-9
10	1-281838-0	1-281839-0
11	-	-
12	1-281838-2	1-281839-2
13	-	-
14	1-281838-4	-
15	1-281838-5	1-281839-5
16	-	-
17	-	-
18	1-281838-8	1-281839-8
19	-	-
20	-	-

HE 13 / HE 14 Wire Crimp-On Snap-In Receptacle Contacts

Crimp Snap-In Receptacles with Insulation Support

Material and Finish:

Phosphor bronze, plated as follows:

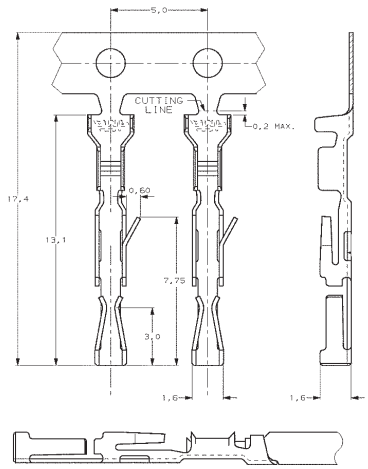
HE13—Selectively plated 0.8 µm gold on contact area, 2.5 µm tin on crimp area, with entire contact underplated 1.3 µm nickel

HE14—Plated 2.5 µm tin

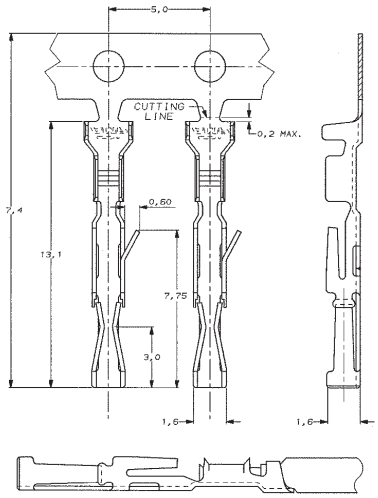
Technical Documents:

Product Specification
108-15053

Contact HE 13



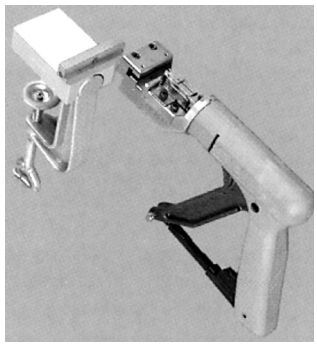
Contact HE 14



Wire Size Range mm²	AWG	Insulation Diameter mm	Plating	Part Numbers	
				Strip Form	Loose Piece
0.22-0.08	24-28	1.5-0.8	HE 13	188746-1	182734-3
			HE 14	188744-1	1377008-1

Application Tooling for IDC Receptacle Assembly, Right-Angle

Manual Pistol Grip



The crimping head terminates one unstripped wire per cycle and indexes the connector to the next terminating position.

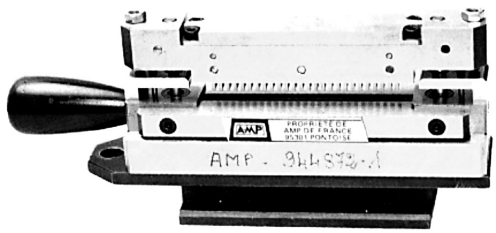
- Mechanical retention and wire transport.
- Integrated cut-off device that automatically cuts single-wire leads to length.

Pistol Grip Hand Tool Kit—
Tool No. 945419-1
Bench Fixing Accessory & Adaptor—
Tool No. 870089-1

Bench Mount Arbor Tool

Tool No. 91085-2 (Manual)
Tool No. 91112-3 (Pneumatic)

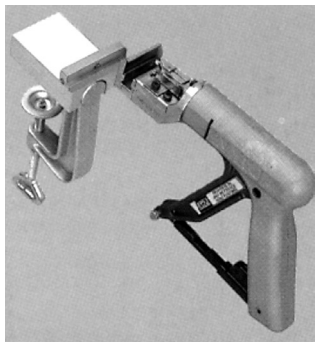
Applicator



Tool No. 944872-1

Application Tooling for IDC Receptacle Assembly, Straight

Manual Pistol Grip

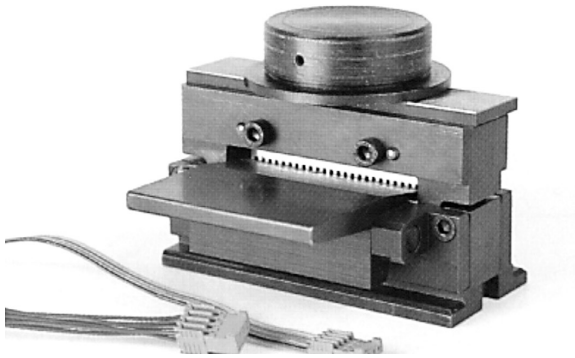


The crimping head terminates one unstripped wire per cycle and indexes the connector to the next terminating position.

- Mechanical retention and wire transport.
- Integrated cut-off device that automatically cuts single-wire leads to length.

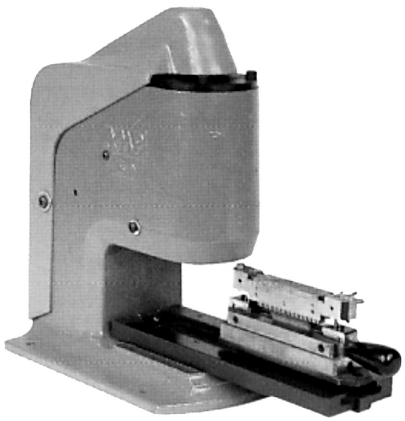
Pistol Grip Hand Tool Kit—
Tool No. 946807-1
Bench Fixing Accessory & Adaptor—
Tool No. 870089-1

Applicator



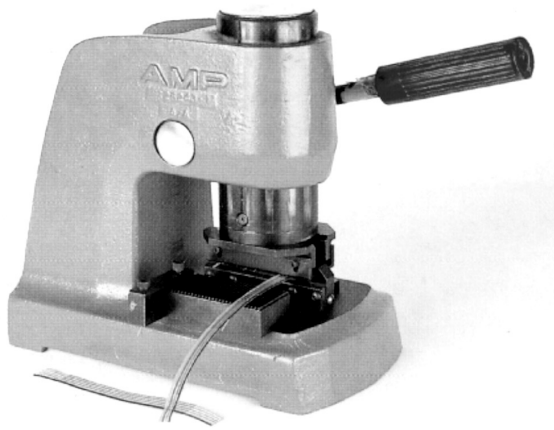
Tool No. 947572-1

Pneumatic Arbor Tool



Tool No. 91112-3 (Pneumatic Arbor Tool)

Manual Arbor Tool

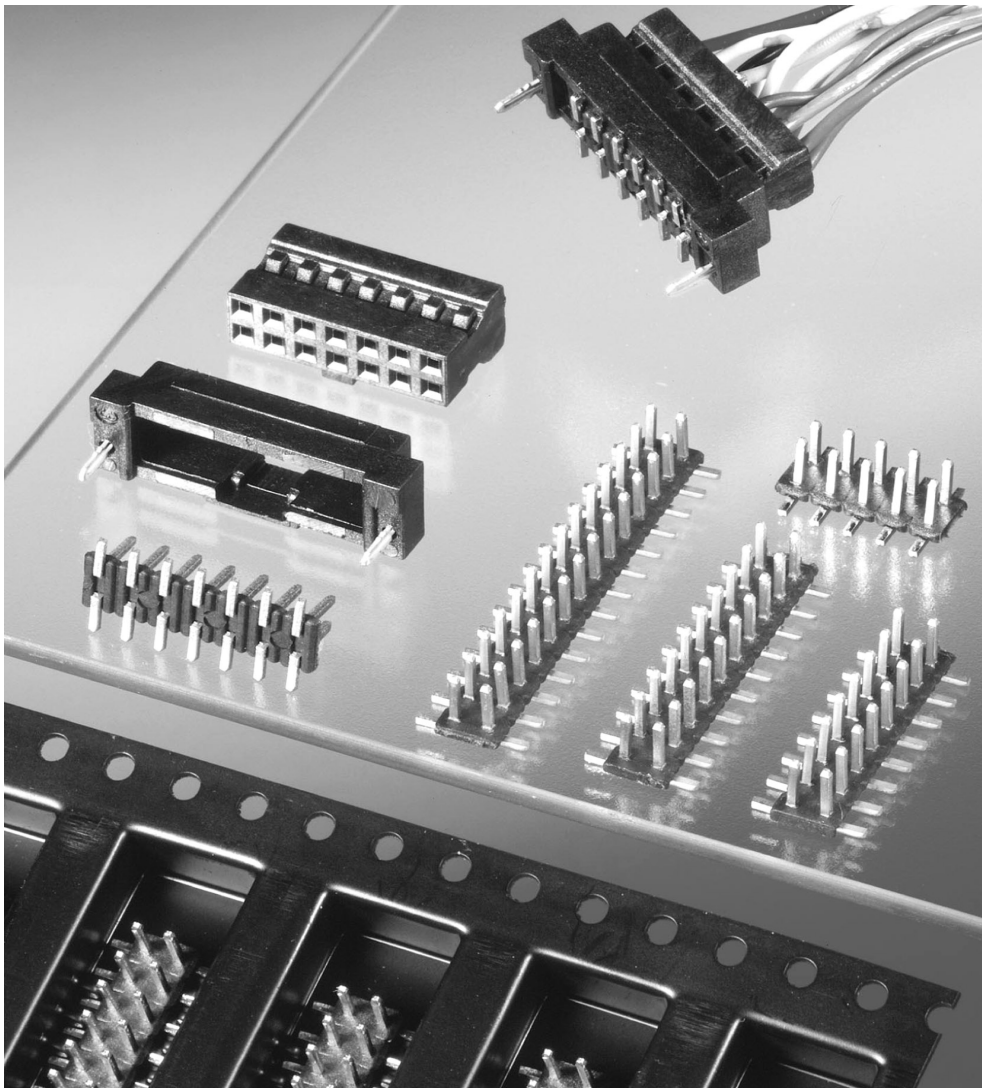


Tool No. 58024-1 (Manual Arbor Tool)
Tool No. 854449-2 (Die for ribbon cable)

Introduction

Product Facts

- New designed wire-to-board and board-to-board connector system
  - -SMT pin header
  - -Shrouds to protect pins
  - -Cable connector with crimp contacts
- Pressing of the shrouds into plated and unplated through connections
- Polarisation and locking
- Compatible with three different receptacle headers for board-to-board application



Material and Finish:

Pin Header—
Brass

Mating Area—
0.8 µm gold over nickel

Solder Post—
1.27 µm tin over nickel

Crimp Contacts—
CuNi alloy

Mating Area—
0.8 µm gold over nickel

Crimp Side—
1.2 µm tin over nickel

Receptacle Housing—
LCP, glass filled, black, UL 94 V-0 rated

Performance Specifications:

Environmental

Operating Temperature—
-40°C to +135°C

Mechanical

Durability—
50 cycles

Max. Current Resistance—
20 mohm

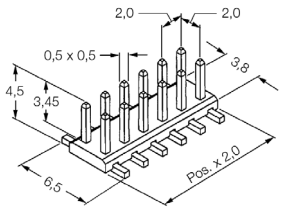
Current Carrying Capacity—
1.0 A for single contact

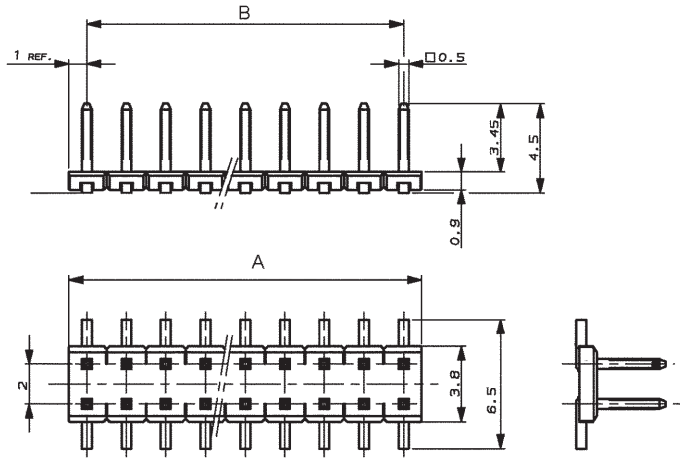
Technical Documents:

Product Specification
108-18544

Surface Mount Headers, Double Row

0.50 mm Square Post Double Row





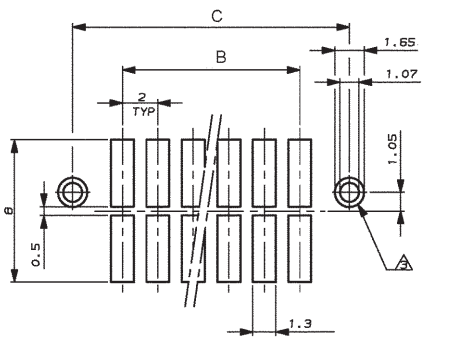
Material and Finish:

Housing—LCP, Black, for high temp.
Posts—Brass, plated as follows:
Contact Zone—0.8 µm gold over nickel
Soldering Zone—1.27 µm tin over nickel

Technical Documents:

Product Specification
108-18544

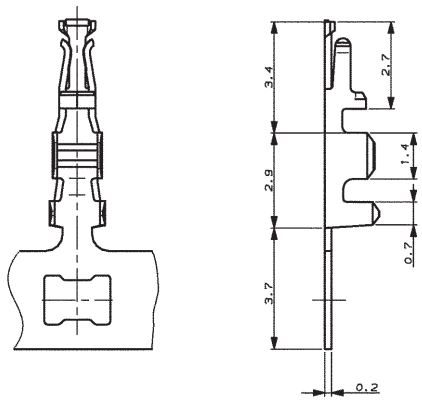
Recommended PCB Layout



No. of Positions	Dimensions			Part Number
	A	B	C	
2	4.00	2.00	7.60	966926-2
3	6.00	4.00	9.60	966926-3
4	8.00	6.00	11.60	966926-4
5	10.00	8.00	13.60	966926-5
6	12.00	10.00	15.60	966926-6
7	14.00	12.00	17.60	966926-7
8	16.00	14.00	19.60	966926-8
9	18.00	16.00	21.60	966926-9
10	20.00	18.00	23.60	1-966926-0
11	22.00	20.00	25.60	1-966926-1
12	24.00	22.00	27.60	1-966926-2

2.0mm Centerline Receptacle Contacts

Crimp Snap-In Receptacle



Material and Finish:

Copper alloy (CuNiSi), plated as follows:

Contact Zone—0.8 µm gold over 1.27 µm nickel

Crimp Zone—1.27 µm tin over nickel

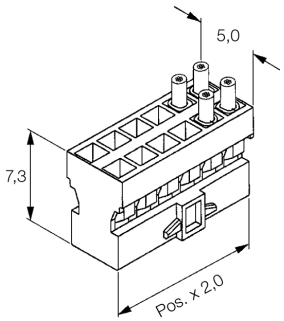
Technical Documents:

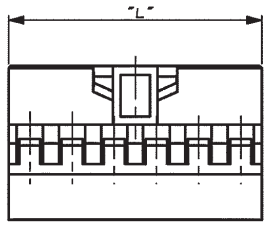
Product Specification
108-18544

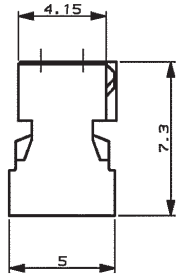
Wire Size Range		Insulation Diameter (max)	Part Number
AWG	mm²		
28-24	0.08-0.22	1.0	969047-3
32-28	0.03-0.08	0.5-1.0	969129-3

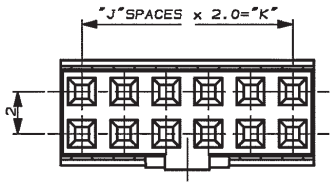
2.0mm Centerline Receptacles, Double Row

Crimp Snap-In Receptacle









Material and Finish:

LCP, Black, flame retardant, UL 94-V0 rated

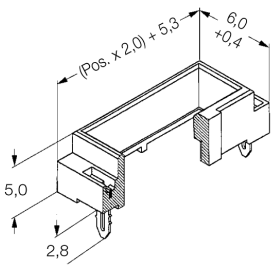
Technical Documents:

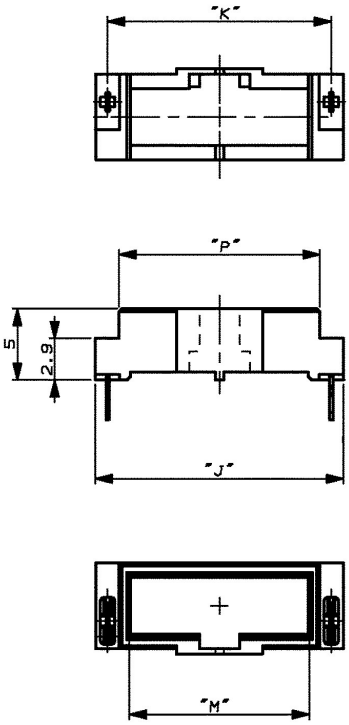
Product Specification
108-18544

Number of Positions	Dimensions		Part Number
	L	K	
2x3	6.0	4.0	-
2x4	8.0	6.0	-
2x5	10.0	8.0	-
2x6	12.0	10.0	964976-6
2x7	14.0	12.0	964976-7
2x8	16.0	14.0	-
2x9	18.0	16.0	-
2x10	20.0	18.0	-

2.0 mm Centerline Shrouds, Double Row

Shrouds with Board Lock





Material and Finish:

Housing—LCP, Black, flame retardant, UL 94-V0 rated

Board Lock—- Beryllium copper, tin over nickel plated

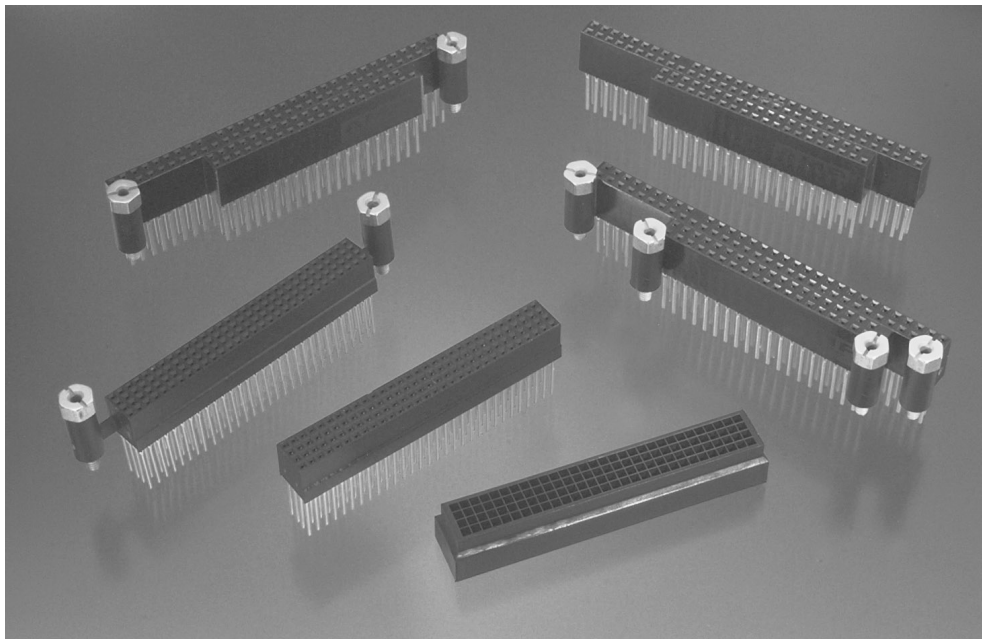
Technical Documents:

Product Specification
108-18544

Number of Positions	Dimensions				Part Number
	P	M	J	K	
2x3	8.0	6.55	11.3	9.6	-
2x4	10.0	8.55	13.3	11.6	-
2x5	12.0	10.55	15.3	13.6	-
2x6	14.0	12.55	17.3	15.6	966917-6
2x7	16.0	14.55	19.3	17.6	966917-7
2x8	18.0	16.55	21.3	19.6	-
2x9	20.0	18.55	23.3	21.6	-
2x10	22.0	20.55	25.3	23.6	-

Product Facts

- **Press fit design — eliminates hand soldering**
- **Unitised PC104 connector assembly — eliminates two piece (64 pin & 40 pin) configuration**
- **Integral board spacers with captive hardware — eases & improves assembly efficiency while minimising stocked hardware**
- **"Flat-rock" insertable — no need for complex insertion tooling**
- **UL Recognition and CSA Certification Pending**
- **Fully compliant with PC104 & PC104-*Plus* standards**



The PC/104 and PC/104-*Plus* connectors are industry standard product offerings which comply with the interconnection requirements defined by the PC/104 organisation (http://www.pc104.org)

Both products are designed specifically for "flat-rock" press-fit installation for ease of application. Solder version is also available.

Optional integral standoffs minimise the customer's system assembly time.

The AMP offering of the standard PC/104 product is a unitised connector rather than the two piece, 40 and 64 position connectors currently on the market. Customer needs to stock and apply only one part number rather than two.

Performance Specifications

Electrical Characteristics

Meets requirements of PC/104 and PC/104-*Plus* standards

Nominal Resistance — 10 milliohms maximum, Δ R

Insulation Resistance — 1000 megohms minimum

Dielectric Withstanding Voltage — 500 VAC for 1 min. at sea level

Mechanical Characteristics

Meets requirements of PC/104 and PC/104-*Plus* standards

Current — Signal application only

Temperature — –55° to 105°C

Material and Finish

Housing — Black Thermoplastic, UL 94V-0

Contact — Phosphor Bronze, Full Gold all over Nickel (stackthrough), Gold on mating end, Tin-Lead on PCB tail all over Nickel (non-stackthrough)

Need more information?

Contact Tyco Electronics.

We are staffed with specialists well versed in Tyco Electronics products. We can provide you with:

- Technical Support
- Catalogues
- Technical Documents
- Product Samples
- Tyco Electronics Authorised Distributor Locations

Technical Documents:

Product Specifications
108-1956

Application Specifications
114-13021

Connector	Centerline	Position
PC/104	**.100** 2.54	104*
PC/104 *Plus*	**.079** 2.0	120

*Two circuits plugged per PC/104 specification.

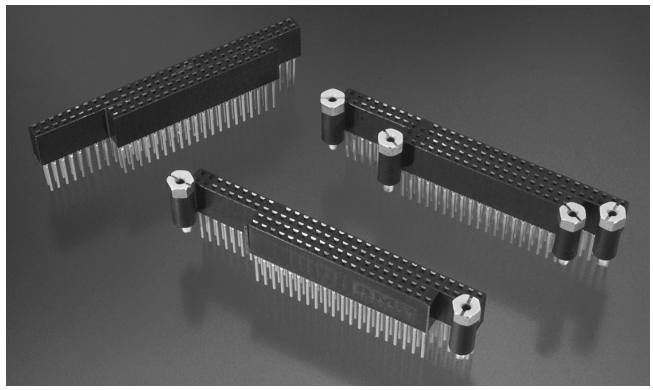
PC/104, Press-Fit

Material and Finish

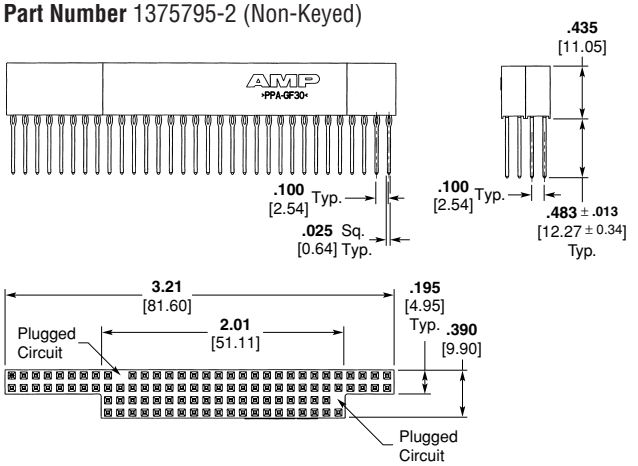
Housing — High Temperature, Glass filled Nylon, Black

Contacts — Phosphor Bronze, 0.000381 [.000015] min. Gold on mating receptacle end, 0.000130 [.000005] min. Gold on remainder, all over 0.001270 [.00005] Nickel (stackthrough), 0.000381 [.000015] min.
Gold on mating receptacle end, 0.00254 [.0001] bright Tin-lead on remainder, all over 0.001270 [.00005] Nickel (non-stackthrough)

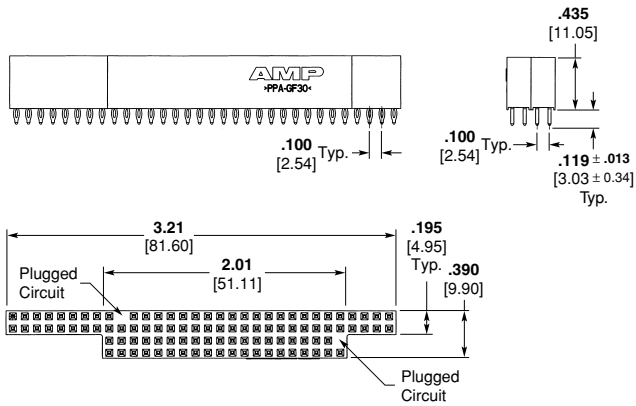
Screwlocks — Steel, Clear Chromate over Zinc



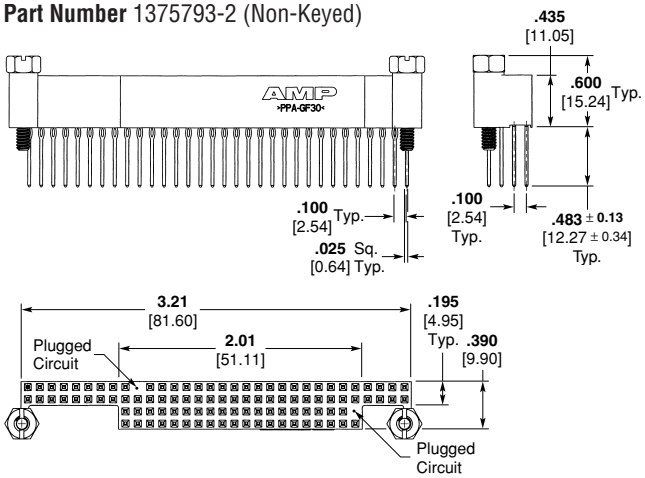
Part Number 1375795-1 (Keyed)
Stackthrough, No Standoffs
Part Number 1375795-2 (Non-Keyed)



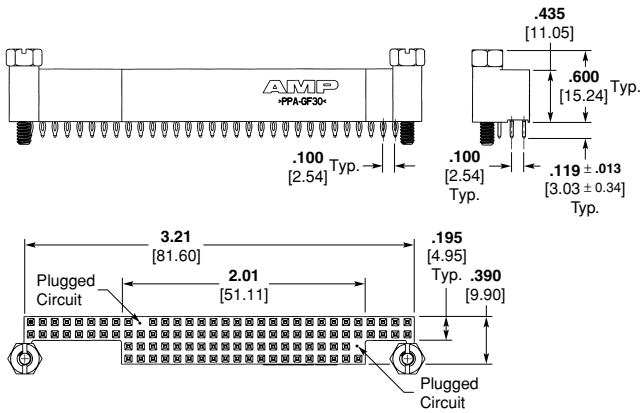
Part Number 1375796-1 (Keyed)
Non-Stackthrough, No Standoffs
Part Number 1375796-2 (Non-Keyed)



Part Number 1375793-1 (Keyed)
Stackthrough, 2 Standoffs
Part Number 1375793-2 (Non-Keyed)

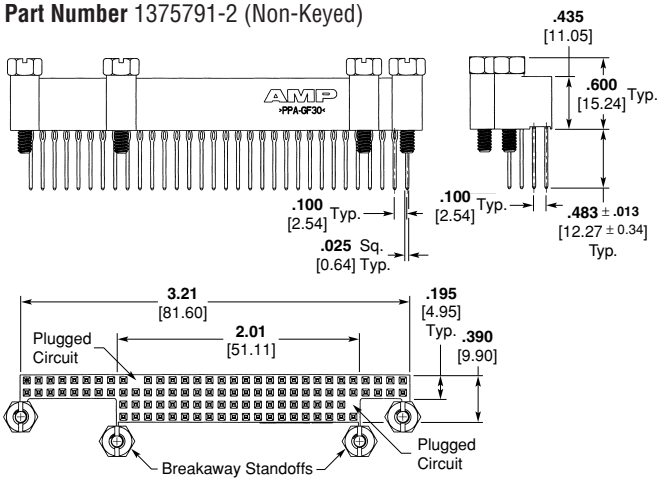


Part Number 1375794-1 (Keyed)
Non-Stackthrough, 2 Standoffs
Part Number 1375794-2 (Non-Keyed)

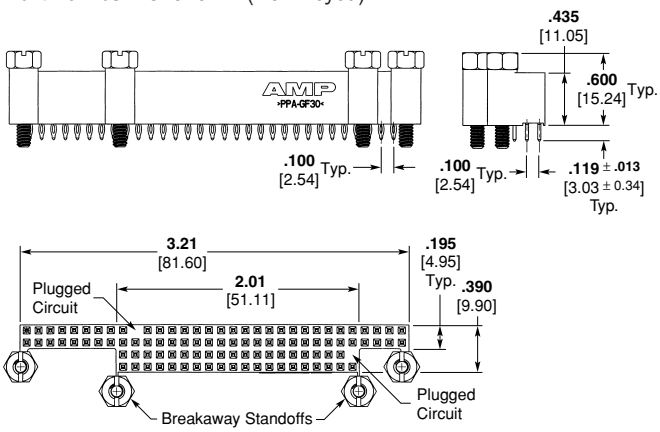


PC/104, Press-Fit

Part Number 1375791-1 (Keyed)
Stackthrough, 4 Standoffs
Part Number 1375791-2 (Non-Keyed)



Part Number 1375792-1 (Keyed)
Non-Stackthrough, 4 Standoffs
Part Number 1375792-2 (Non-Keyed)



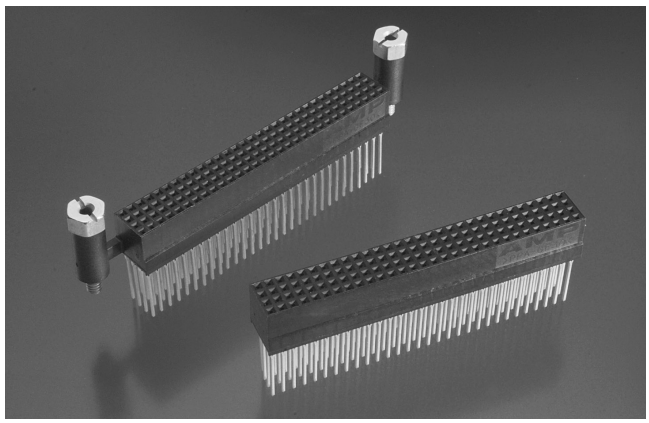
PC/104-*Plus*, Press-Fit

Material and Finish

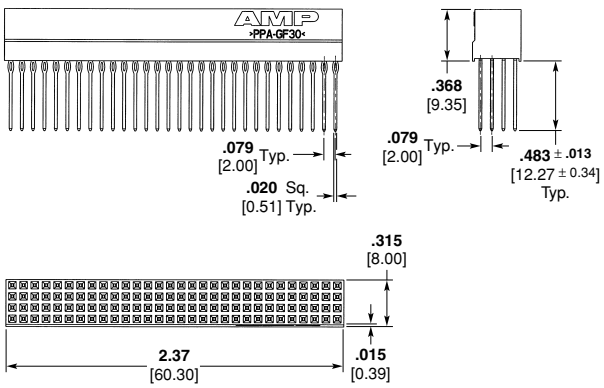
Housing — High Temperature, Glass filled Nylon, Black

Contacts — Phosphor Bronze, 0.000381 [.000015] min. Gold on mating receptacle end, 0.000130 [.000005] min. Gold on remainder, all over 0.001270 [.00005] Nickel (stackthrough), 0.000381 [.000015] min.
Gold on mating receptacle end, 0.00254 [.0001] bright Tin-lead on remainder, all over 0.001270 [.00005] Nickel (non-stackthrough)

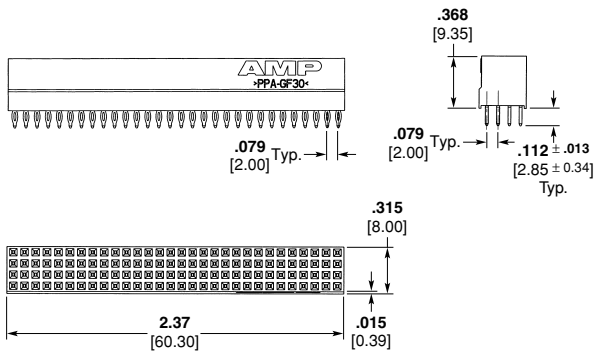
Screwlocks — Steel, Clear Chromate over Zinc



Part Number 1375799-1 (Keyed)
Stackthrough, No Standoffs
Part Number 1375799-2 (Non-Keyed)

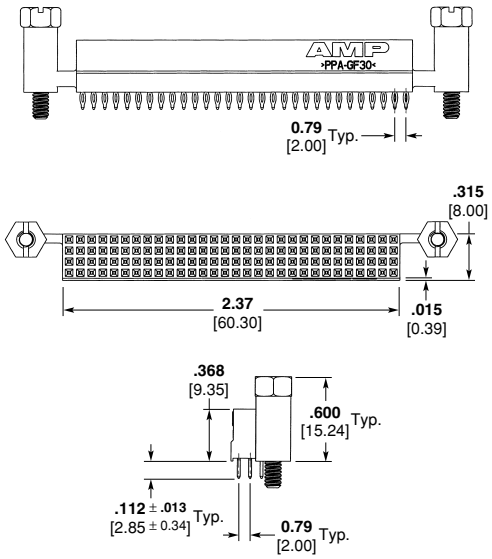


Part Number 1375800-1 (Keyed)
Non-Stackthrough, No Standoffs
Part Number 1375800-2 (Non-Keyed)

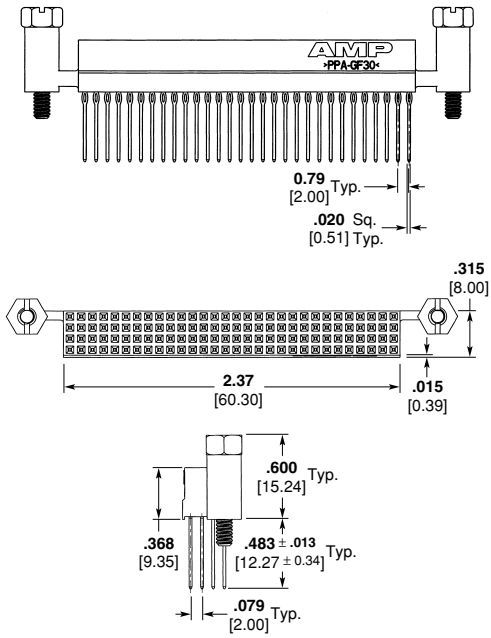


PC/104-*Plus*, Press-Fit

Part Number 1375798-1 (Keyed)
Non-Stackthrough, 2 Standoffs
Part Number 1375798-2 (Non-Keyed)



Part Number 1375797-1 (Keyed)
Stackthrough, 2 Standoffs
Part Number 1375797-2 (Non-Keyed)



PC/104, Solder

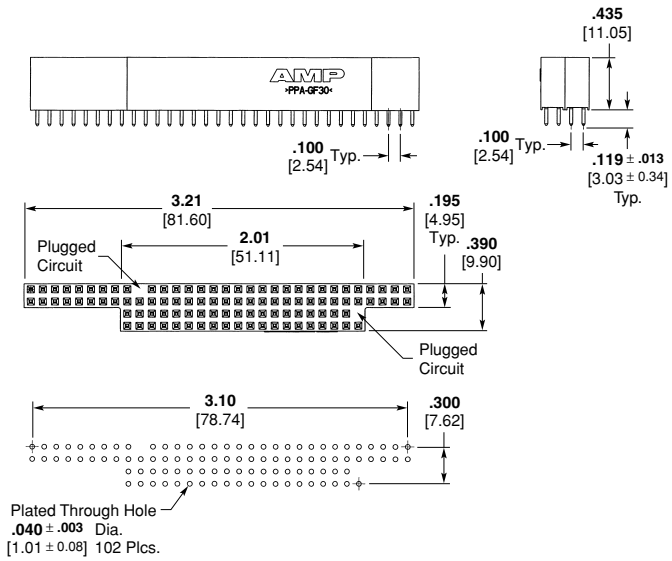
Material and Finish

Housing — High Temperature, Glass filled Nylon, Black

Contacts — Phosphor Bronze, 0.000381 [.000015] min. Gold on mating receptacle end, 0.000130 [.000005] min. Gold on remainder, all over 0.001270 [.00005] Nickel (stackthrough), 0.000381 [.000015] min.
Gold on mating receptacle end, 0.00254 [.0001] bright Tin-lead on remainder, all over 0.001270 [.00005] Nickel (non-stackthrough)

Screwlocks — Steel, Clear Chromate over Zinc

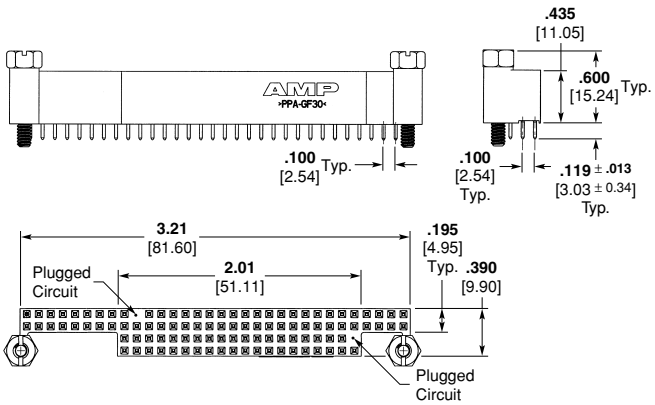
Part Number 1375963-1 (Keyed)
Non-Stackthrough, No Standoffs
Part Number 1375963-2 (Non-Keyed)



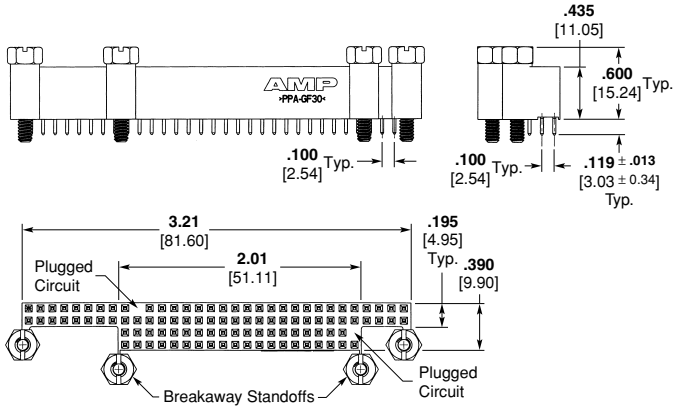
Recommended PC Board Layout

PC/104, Solder

Part Number 1375961-1 (Keyed)
Non-Stackthrough, 2 Standoffs
Part Number 1375962-2 (Non-Keyed)



Part Number 1375959-1 (Keyed)
Non-Stackthrough, 4 Standoffs
Part Number 1375959-2 (Non-Keyed)



PC/104-*Plus*, Solder

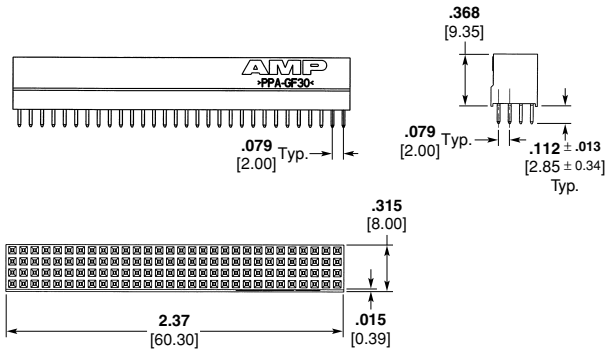
Material and Finish

Housing — High Temperature, Glass filled Nylon, Black

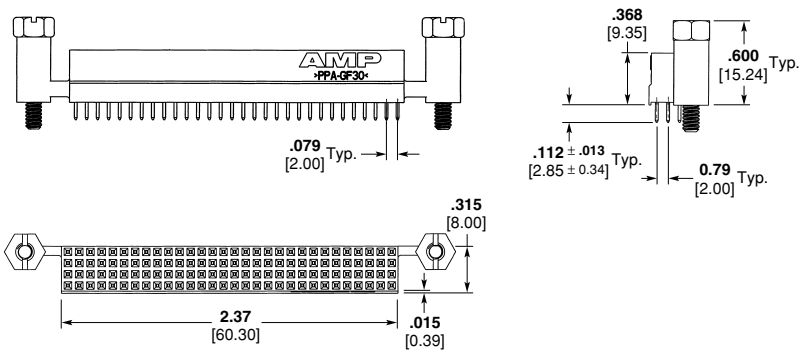
Contacts — Phosphor Bronze, 0.000381 [.000015] min. Gold on mating receptacle end, 0.000130 [.000005] min. Gold on remainder, all over 0.001270 [.00005] Nickel (stackthrough), 0.000381 [.000015] min.
Gold on mating receptacle end, 0.00254 [.0001] bright Tin-lead on remainder, all over 0.001270 [.00005] Nickel (non-stackthrough)

Screwlocks — Steel, Clear Chromate over Zinc

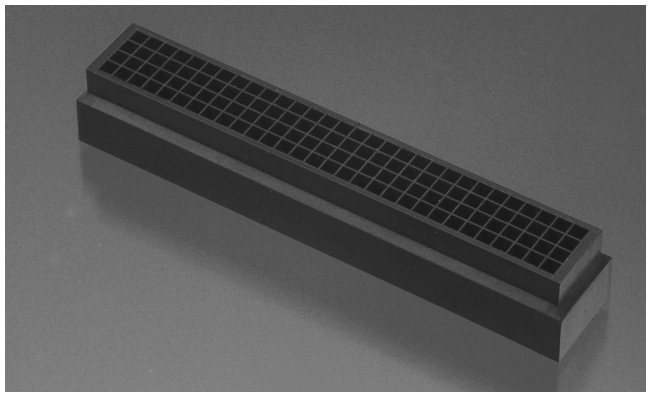
Part Number 1375967-1 (Keyed)
Non-Stackthrough, No Standoffs
Part Number 1375967-2 (Non-Keyed)



Part Number 1375965-1 (Keyed)
Non-Stackthrough, 2 Standoffs
Part Number 1375965-2 (Non-Keyed)

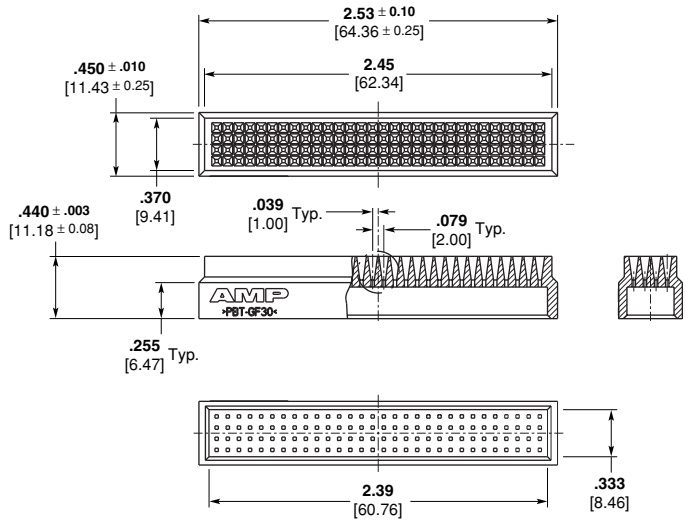


Accessories



Part Number 1375801-1
Shroud, PC/104-*Plus*

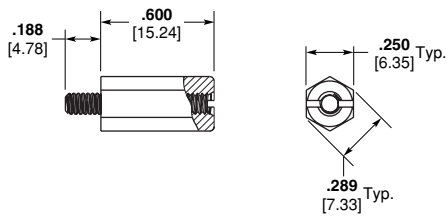
Material and Finish
Housing — PBT, Black



Recommended PC Board Layout

Part Number 1445005-1
Standoff

Material and Finish
Steel, Clear Chromate over Zinc



Part Number 1445251-1
Organiser, PC/104

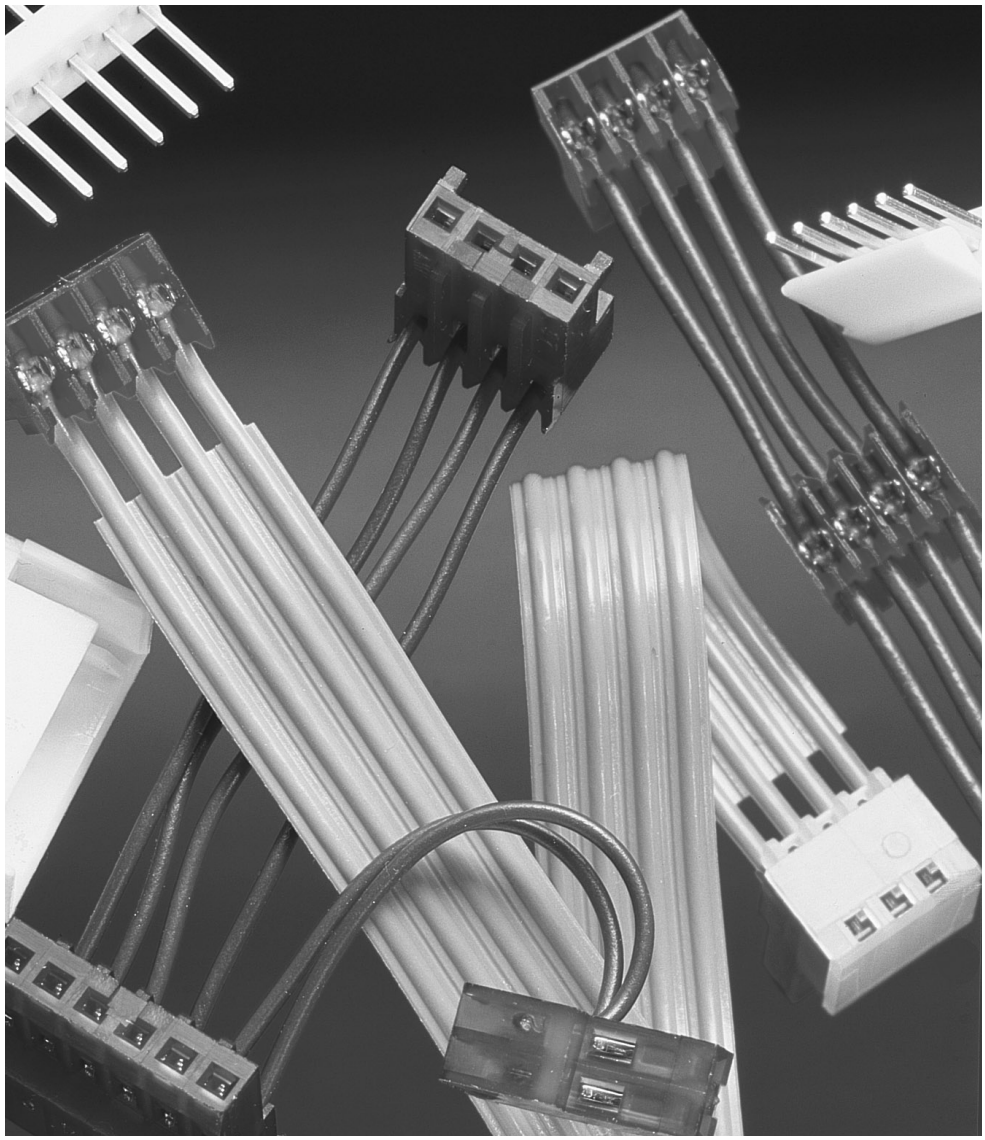
Product Facts

- **Connectors and headers for 2 through 28 positions; wire sizes of 22, 24, 26 and 28 AWG [0.4-0.08] mm²**
- **Wire-to-Post Connectors preloaded with dual beam contacts**
- **Connectors and headers, except shrouded headers, are end-to-end stackable**
- **Connector styles include both closed end and feed-thru connectors with locking ramps, with and without polarising tabs**
- **Polarising tabs do not allow reverse mating**
- **Posted connectors for 2 through 19 positions**
- **Connectors preloaded with IDC contact**
- **All contacts are slotted for insulation displacement (IDC) terminal technique**
- **Contacts are lubricated to prevent fretting corrosion**
- **Benefits derived from the MTA-100 system include increased quality and ease of handling such as —**
  - **One-step assembly**
  - **No wire stripping**
  - **No contact damage**
  - **Reduced wiring errors**
  - **Simpler tooling**
  - **Simple maintenance and repair**
- **Meets the material requirements of Table 23.1 of UL1410 Standards for Television Receiver and Video Products (wire-to-post connectors only)**
- **Recognised under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association File No. LR7189**

Technical Documents:

Product Specification
108-1050 MTA-100 Connectors

Application Specifications
114-1019 MTA-100 Connectors
114-1031 MTA-100 Ribbon Cable Assembly



MTA-100 connectors accept discrete and ribbon cable wire sizes ranging from 22 – 28 AWG [0.4 – 0.08 mm²] with maximum insulation outside diameter of .060 [1.52] for terminating single wire and .050 [1.27] for mass termination of wires. Tin plated solid, fused stranded, or stranded (7 strands) wire with PVC insulation can be used on 22 – 28 AWG [0.4 – 0.09 mm²] MTA-100 connectors and 19 stranded wire on 22– 24 AWG [0.4– 0.2 mm²] MTA-100 connectors. Only one wire to be terminated into an IDC contact slot.

The wire-to-post connector housing material is flame retardant thermoplastic, either UL94V-2 or UL94V-0 rated.

A full line of .100 [2.54] centerline headers completes the system. Headers are available with straight or right-angle posts, in flat, polarised or friction lock styles. Headers are available in 2 through 28 positions. Shrouded headers are available in 2 through 14 positions.

For complete product information, order Catalogue 82056

Performance Data*:

Voltage Rating — 250 vac

Current Rating — 5 amp max.

Low-Level Resistance — 6 mΩ max. initial

Dielectric Withstanding Voltage — 750 vac/1 min.

Insulation Resistance — 5000 MΩ min. initial

Operating Temperature — −55° C to +105° C

Note: Refer to page 2151 for approved wire listings.

*Refer to the Product Specification for additional electrical, mechanical and environmental performance tests and requirements.

Matrix for Tin Plated Part Numbers

This matrix has been prepared to assist you, our customer, in defining the correct mating halves for the MTA-100 header and connector combination. Where a "Y" is indicated the combination is a valid mating pair. Where an "N" is indicated the combination is not acceptable for mating.

Headers

Connectors

	640452	640453	640454	640455	640456	640457	644456	644457	644486	644488	644694	644695	644803	644861	644874	644875	644876	644877	644892	644893	644894	647047	647048	647050	647051	647106	647166
640440	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640441	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640442	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640443	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640468	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640469	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640470	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640471	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640620	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640621	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640622	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
640623	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641311	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641312	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641313	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641314	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641534	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641535	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641536	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641537	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641653	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641654	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641655	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
641656	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
643498	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
643813	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
643814	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
643815	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
643816	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
643828	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644083	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644312	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644313	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644497	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644511	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644512	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644513	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644514	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644540	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644563	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644564	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644565	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644574	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644575	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644576	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644577	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644578	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644579	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
644795	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
*770602	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

*Select contact plating to match header plating.

For complete product information, order Catalogue 82056

Matrix for Gold Plated Part Numbers

This matrix has been prepared to assist you, our customer, in defining the correct mating halves for the MTA-100 header and connector combination. Where a "Y" is indicated the combination is a valid mating pair. Where an "N" is indicated the combination is not acceptable for mating.

Matrix for .000030 [0.00076] Gold Plated Part Numbers

Headers

Connectors	641211	641212	641213	641214	641215	641216	644487	644489	644884	644885	644886	644887	644896	644897	644898	647108	647109	647114	647116	647117	647168
641237	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
641238	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
641239	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
641240	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
641241	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
641242	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
641243	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
641244	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
644020	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
644042	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
644043	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
644044	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
644702	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
644726	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
*770602	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Matrix for .000015 [0.00038] Gold Plated Part Numbers

Headers

Connectors	641122	641123	641124	641125	641126	641127	644888	644889	644890	644891	647075	647076	647078	647079	647107	647167
641190	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641191	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641192	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641193	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641198	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641199	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641200	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641201	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644038	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644040	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
*770602	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

*Select contact plating to match header plating.

For complete product information, order Catalogue 82056

Closed End and Feed-Thru Connectors

Material and Finish:

Housing — UL94V-2 rated, type 6/6 nylon, see below for colour; or UL94V-0 rated, nylon, black

Contacts — Phosphor bronze, post tin plated, .000030 [0.00076] or .000015 [0.00038] post gold-plated over nickel

Colour Coding by Wire Size for UL94V-2 Connectors

28 AWG — Green
26 AWG — Blue
24 AWG — White
22 AWG — Red

All wire sizes in UL94V-0 — Black

For mateability options, see matrix on pages 2110 and 2111.

For mating half visuals, see pages 2115 thru 2120.

Notes:

1. Refer to page 2151 for approved wire listing.
2. For strain reliefs and dust covers, see page 2114.
3. Other circuit sizes are available upon request. Minimums may apply.
4. Connector circuits can be molded closed for keying purposes. Minimums may apply.
5. Where no part numbers appear in the chart, parts can be made available upon request. Minimums may apply.
6. To determine connector overall length (dim. A), multiply .100 x the number of circuits. Example: .100 x 10 circuits equals 1.000 inch [25.4 mm].

Connector Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described connectors.

Prefixes and suffixes are determined by the number of circuit positions in the connector. For example, the complete part number for a 10-position closed end connector without polarising tabs for 22 AWG wire would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

The correct ordering number is

1-xxxxxx-0

For complete product information, order Catalogue 82056

Base Part Numbers

Connector Type & Wire Size	Closed End				Feed-Thru			
	Without Tabs		With Tabs		Without Tabs		With Tabs	
	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits
Standard UL94V-2, Tin Plated								
22 AWG 0.3-0.4 mm²	640440	2–28	643813	2–28	640620	2–28	644540[1]	2–15
24 AWG 0.2 mm²	640441	2–28	643814	2–28	640621	2–28	644563[1]	2–24
26 AWG 0.12-0.15 mm²	640442	2–28	643815	2–28	640622	2–28	644564[1]	2–15
28 AWG 0.08-0.09 mm²	640443	2–28	643816	2–28	640623	2–28	644565[1]	2–15
Tape Mounted on Reel UL94V-2, Tin Plated								
22 AWG 0.3-0.4 mm²	640468	2–28	644511	2–28	641311	2–28	—	—
24 AWG 0.2 mm²	640469	2–28	644512	2–28	641312	2–28	—	—
26 AWG 0.12-0.15 mm²	640470	2–28	644513	2–28	641313	2–28	—	—
28 AWG 0.08-0.09 mm²	640471	2–28	644514	2–28	641314	2–28	—	—
Standard UL94V-2, .000030 [0.00076] Gold Plated								
22 AWG 0.3-0.4 mm²	641237	2–28	644042	2-28	641241	2-28	644702[1]	2-15
24 AWG 0.2 mm²	641238	2–28	644020	2-28	641242	2-28	—	—
26 AWG 0.12-0.15 mm²	641239	2–28	644043[1]	2-14	641243	2-28	644726[1]	2-15
28 AWG 0.8-0.9 mm²	641240	2–28	644044[1]	2-14	641244	2-28	—	—
Standard UL94V-2, .000015 [0.00038] Gold Plated								
22 AWG 0.3-0.4 mm²	641190	2–28	644038[1]	2-14	641198	2-28	—	—
24 AWG 0.2 mm²	641191	2–28	—	—	641199	2-28	—	—
26 AWG 0.12-0.15 mm²	641192	2–28	644040[1]	2-14	641200	2-28	—	—
28 AWG 0.08-0.09 mm²	641193	2–28	—	—	641201	2-28	—	—
LED*, UL94V-2, Tin Plated (See Note 1)								
22 AWG 0.3-0.4 mm²	641534	2–3	—	—	641653	2–3	—	—
24 AWG 0.2 mm²	641535	2–3	644795	2-3	641654	2–3	—	—
26 AWG 0.12-0.15 mm²	641536 644343[2]	2–3 2	—	—	641655	2–3	—	—
28 AWG 0.08-0.09 mm²	641537	2–3	—	—	641656	2–3	—	—
Standard UL94V-0, Tin Plated (Gold is available, minimums may apply.) (Black in colour)								
22 AWG 0.3-0.4 mm²	643498[1]	2–15	644083[1]	2–15	644575[1]	2–15	644578[1]	2–15
24 AWG 0.2 mm²	644574[1]	2–15	644312[1]	2–15	644576[1]	2–15	644579[1]	2–15
26 AWG 0.12-0.15 mm²	643828[1]	2–15	644313[1]	2–15	644577[1]	2–15	644497[1]	2–15

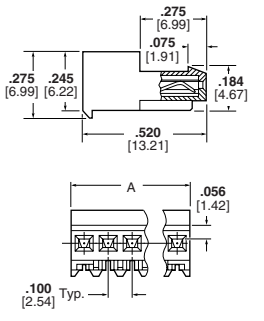
*LED connectors are designed to mate with .014–.020 [0.36–0.51] diameter posts or square leads.

[1] Other circuit sizes are available upon request. Minimums may apply.

[2] Tape mounted

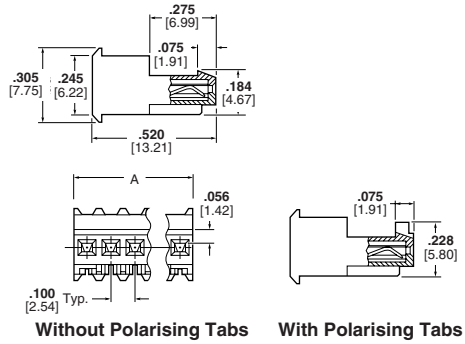
Note: Blocked circuit configurations are available. Contact product engineer or product manager for details. Minimums may apply.

Closed End Connectors



Without Polarising Tabs **With Polarising Tabs**

Feed-Thru Connectors



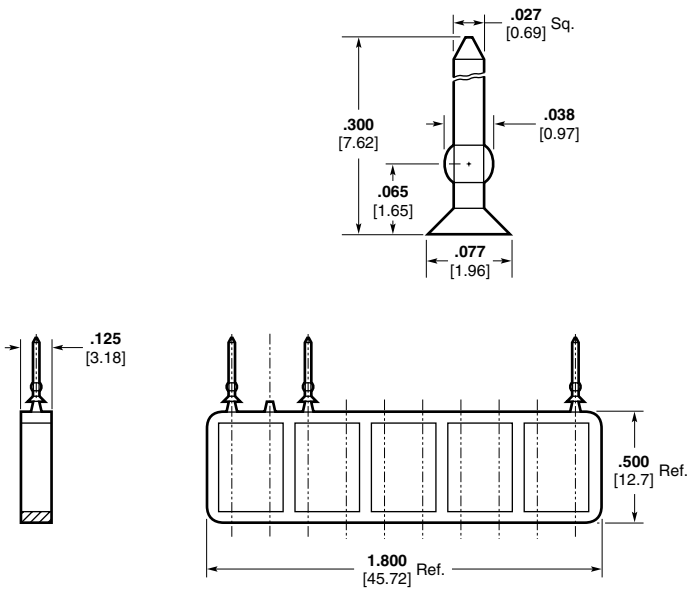
Without Polarising Tabs **With Polarising Tabs**

MTA-100 IDC Connector Accessories

Keying Plug with Carrier Strip (10 plugs per strip) Part No. 641994-1

Material
UL94V-2 rated, type 6/6 nylon, natural colour

Note: Removal of contact is not necessary when using keying plug.

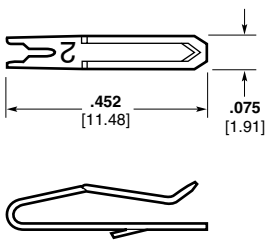


Replacement IDC Contacts

Material and Finish
Phosphor bronze, post tin plated; .000030 [0.00076] or .000015 [0.00038] post gold plated over nickel

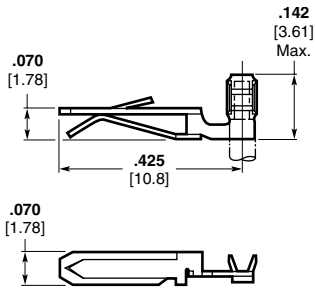
Note:
Tyco Electronics Corporation does not recommend terminating an MTA contact more than one time. Use replacement contacts when required for field repairs or wire changes.

Wire Size		Part Numbers			
AWG	mm²	Standard Tin Plated	.000030 [0.00076] Gold Plated	.000015 [0.00038] Gold Plated	LED Tin Plated
22	0.3-0.4	640636-1	641186-2	641186-1	641643-1
24	0.2	640637-1	641187-2	641187-1	641644-1
26	0.12-0.15	640638-2	641188-2	641188-1	641645-1
28	0.08-0.09	640639-1	641189-2	641189-1	641646-1



Crimp Snap-In Contacts

Material and Finish
Phosphor bronze, tin plated



Wire Size		Part Nos.	
AWG	mm²	Loose Piece*	Strip**
26-22	0.12-0.4	640709-1	640708-1

*Hand Tool No. 59836-1 (IS 408-6527)
**Applicator No. 466747-1 (AI 408-8040)

Special applications for crimp snap-in contacts are:
1. Double wire per contact
2. Coax or shielded wire
3. Mixed wire size in same connector

Note: Only one crimp snap-in contact per connector.

For complete product information, order Catalogue 82056

Accessories

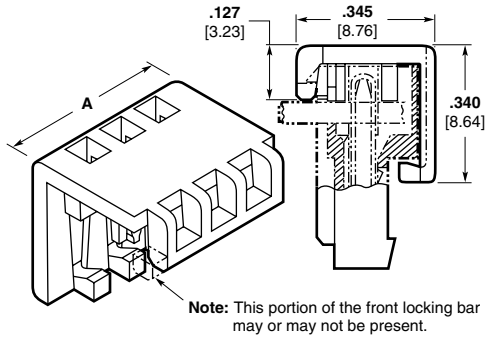
Covers

Material

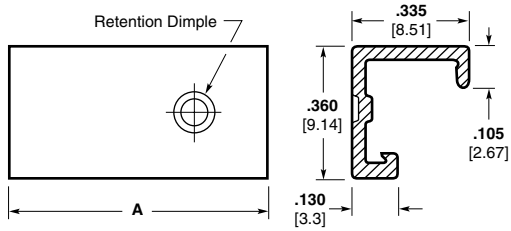
Strain Relief Cover — UL94V-2 rated, nylon, white

Dust Covers — UL94V-0 rated, polyester, white

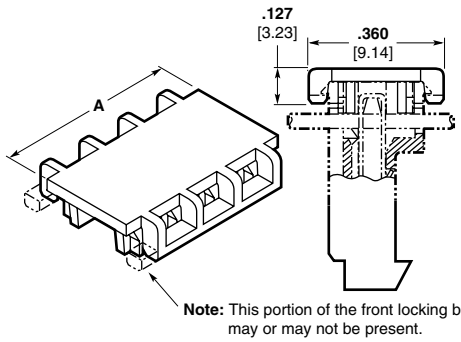
Closed End Strain Relief Covers



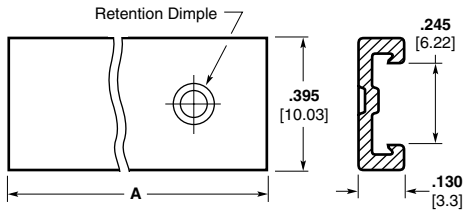
Closed End Dust Covers



Feed-Thru Strain Relief Covers



Feed-Thru Dust Covers



Cover Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described cover.

Prefixes and suffixes are determined by the number of circuit positions in the cover. For example, the complete part number for a 10-position closed end strain relief cover would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

The correct ordering number is

1-xxxxxx-0

Base Part Numbers

Closed End				Feed-Thru			
Strain Relief Covers		Dust Covers		Strain Relief Covers		Dust Covers	
Cover Part Numbers	No. of Circuits	Cover Part Numbers	No. of Circuits	Cover Part Numbers	No. of Circuits	Cover Part Numbers	No. of Circuits
643075	2-28	640550	2-28	643077	2-28	640642	3-28

Cover Length

No. of Circuits	Dim. A	Prefix/ Suffix
2	**.200** 5.08	-2
3	**.300** 7.62	-3
4	**.400** 10.16	-4
5	**.500** 12.7	-5
6	**.600** 15.24	-6
7	**.700** 17.78	-7
8	**.800** 20.32	-8

No. of Circuits	Dim. A	Prefix/ Suffix
9	**.900** 22.86	-9
10	**1.00** 25.4	1- -0
11	**1.100** 27.94	1- -1
12	**1.200** 30.48	1- -2
13	**1.300** 33.02	1- -3
14	**1.400** 35.56	1- -4
15	**1.500** 38.1	1- -5

No. of Circuits	Dim. A	Prefix/ Suffix
16	**1.600** 40.64	1- -6
17	**1.700** 43.18	1- -7
18	**1.800** 45.72	1- -8
19	**1.900** 48.26	1- -9
20	**2.000** 50.8	2- -0
21	**2.100** 53.34	2- -1
22	**2.200** 55.88	2- -2

No. of Circuits	Dim. A	Prefix/ Suffix
23	**2.300** 58.42	2- -3
24	**2.400** 60.96	2- -4
25	**2.500** 63.5	2- -5
26	**2.600** 66.04	2- -6
27	**2.700** 68.58	2- -7
28	**2.800** 71.12	2- -8

For complete product information, order Catalogue 82056

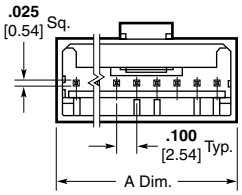
Posted Connectors (Wire-to-Wire) — Closed End, Feed-Thru

Material and Finish:

Housing — UL 94V-2 rated, 6/6, 6/12 nylon, see chart for colour

Contacts — Copper alloy, post tin or gold plated over nickel (see chart)

Notes:
1. Mating half visuals - page 2112.
2. Use feed-thru strain relief covers & feed-thru dust covers (if needed) - page 2114.
3. Approved wire listing - page 2151.



Connector Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described connectors.

Prefixes and suffixes are determined by the number of circuit positions in the connector. For example, the complete part number for a 12-position closed end connector for 22 AWG wire would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -2

The correct ordering number is

1-xxxxxx-2

Colour Coding by Wire Size for UL 94V-2 Connectors

22 AWG — Red
24 AWG — White
26 AWG — Blue
28 AWG — Green

Performance Data:

Voltage Rating — 250 VAC

Current Rating — 4 amp max.

Low-Level Resistance — 16 mΩ max. initial

Dielectric Withstanding Voltage — 750 VAC/1 min.

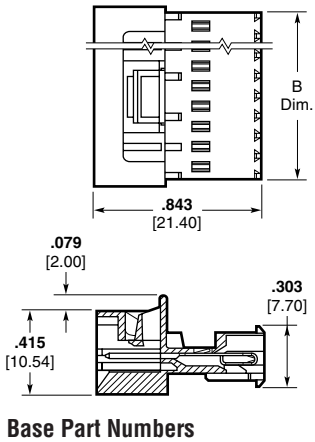
Insulation Resistance — 5000 MΩ min. initial

Operating Temperature — –55°C to +105°C

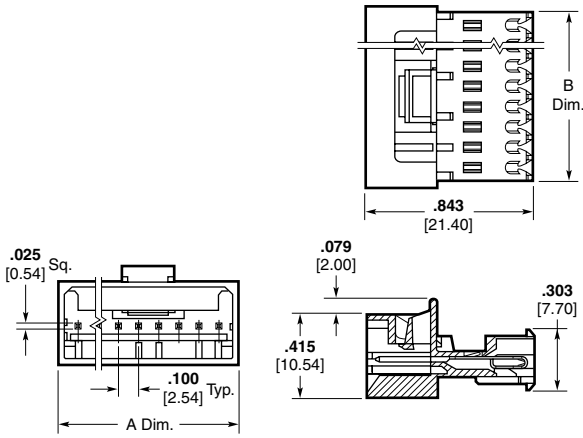
Technical Documents:

Product Specification
108-1050-1 MTA-100 Posted Connector

Closed End



Feed-Thru



Base Part Numbers

Connector Type & Wire Size	Closed End Connector		Feed-Thru Connector	
	Part Numbers	No. of Circuits	Part Numbers	No. of Circuits
Standard UL 94V-2, Tin Plated				
22 AWG 0.3-0.4 mm²	647000	2 - 19[1]	647004	—[2]
24 AWG 0.2 mm²	647001	2 - 19[1]	647005	—[2]
26 AWG 0.12-0.15 mm²	647002	2 - 19[1]	647006	—[2]
28 AWG 0.08-0.09 mm²	647003	2 - 19[1]	647007	—[2]
Standard UL 94V-2, .000030 [0.00076] Gold Plated				
22 AWG 0.3-0.4 mm²	647008	2 - 19[1]	647012	—[2]
24 AWG 0.2 mm²	647009	2 - 19[1]	647013	—[2]
26 AWG 0.12-0.15 mm²	647010	2 - 19[1]	647014	—[2]
28 AWG 0.08-0.09 mm²	647011	2 - 19[1]	647015	—[2]
Standard UL 94V-2, .000015 [0.00038] Gold Plated				
22 AWG 0.3-0.4 mm²	647016	2 - 19[1]	647020	—[2]
24 AWG 0.2 mm²	647017	2 - 19[1]	647021	—[2]
26 AWG 0.12-0.15 mm²	647018	2 - 19[1]	647022	—[2]
28 AWG 0.08-0.09 mm²	647019	2 - 19[1]	647023	—[2]

[1] 2 and 3 position MTA-100 Posted Connectors (Closed End) **can not mate** with MTA-100 connectors with polarising tabs.
[2] Other sizes may be manufactured upon request. Minimums may apply. Contact Product Engineer or Product Manager for details.

No. of Circuits	Dim. A	Dim. B
2	.300 [7.62]	.227 [5.77]
3	.400 [10.16]	.327 [8.31]
4	.500 [12.70]	.427 [10.85]
5	.600 [15.24]	.527 [13.39]

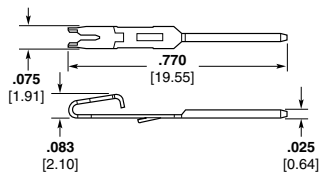
No. of Circuits	Dim. A	Dim. B
6	.700 [17.78]	.627 [15.93]
7	.800 [20.32]	.727 [18.47]
8	.900 [22.86]	.827 [21.01]
9	1.000 [25.40]	.927 [23.55]

No. of Circuits	Dim. A	Dim. B
10	1.100 [27.94]	1.027 [26.09]
11	1.200 [30.48]	1.127 [28.63]
12	1.300 [33.02]	1.227 [31.17]
13	1.400 [35.56]	1.327 [33.71]

No. of Circuits	Dim. A	Dim. B
14	1.500 [38.10]	1.427 [36.25]
15	1.600 [40.64]	1.527 [38.79]
16	1.700 [43.18]	1.627 [41.33]
17	1.800 [45.72]	1.727 [43.87]
18	1.900 [48.26]	1.827 [46.41]
19	2.000 [50.80]	1.927 [48.95]

Application Specification
114-1019 MTA-100 Connectors

Replacement IDC Contacts



Material and Finish:

Contacts — Copper alloy, post tin or gold plated over nickel

Wire Size AWG	Wire Size mm²	Part Numbers Tin Plated	Part Numbers .000030 [.00076] Gold Plated
22	0.3-0.4	647030-1	647030-3
24	0.2	647031-1	647031-3
26	0.12-0.15	647032-1	647032-3
28	0.8-0.9	647033-1	647033-3

For complete product information, order Catalogue 82056

Material and Finish:

Housing — UL94V-0 rated, polyester, white
Posts — Copper alloy, tin plated, .000030 [0.00076] or .000015 [0.00038] gold over nickel

Notes: MTA-100 Flat Headers
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Gold headers are duplex plated, gold on mating end of post and tin on the soldertail.
3. To determine header overall length (dim. A) multiply .100 x the number of posts. Example: .100 x 10 posts equals 1.000 inch [25.4 mm].

Notes: MTA-100 Narrow Flat Headers
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Headers without retentive legs are suitable for breakaway application.
3. 2 or 3 retentive leg(s) per header, depending upon number of positions.
4. Gold headers are duplex plated, gold on mating end of post and tin on the solder tail.
5. To determine header overall length (dim. A) multiply .100 x the number of posts minus (–) .012. Example: .100 x 10 posts – .012 = .988 inches [25.1 mm].

For mateability options, see matrix on pages 2110 and 2111.

For mating half visuals, see page 2112.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with straight posts would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

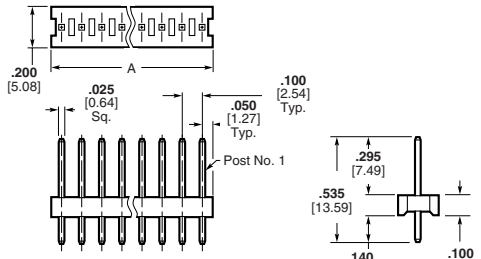
The correct ordering number is

1-xxxxxx-0

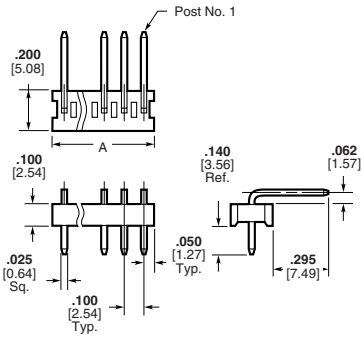
Note:
Select load headers (omitted pin headers) are available upon request. Please contact product engineer or product manager for details.

Flat Headers — Straight and Right-Angle

Straight Post (.025 [0.64] Square)



Right-Angle Post (.025 [0.64] Square)



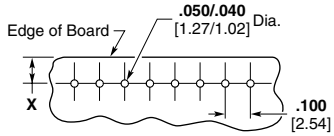
Note: Consult Product Drawing for details on placing headers onto pc boards.

Base Part Numbers

Straight Posts		Right-Angle Posts	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated			
640452	2-28	640453	2-28
Standard UL94V-0, .000030 [0.00076] Gold Plated			
641211	2-28	641212	2-28
Standard UL94V-0, .000015 [0.00038] Gold Plated			
641122	2-28	641123	2-28

Straight Headers
X = .120 [3.05] Min.

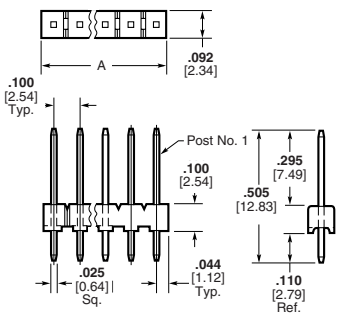
Right-Angle Headers
X = .120 [3.05] Min., .240 [6.1] Max. when mated with MTA-100 Connector.
X = .120 [3.05] Min., when mated with CST-100 II Connector.



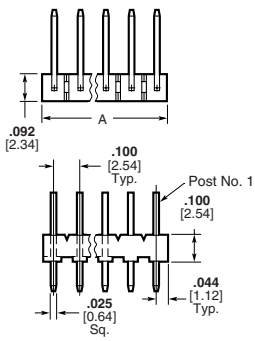
Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board

Narrow Flat Headers — Straight and Right-Angle

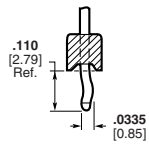
Straight Post (.025 [0.64] Square)

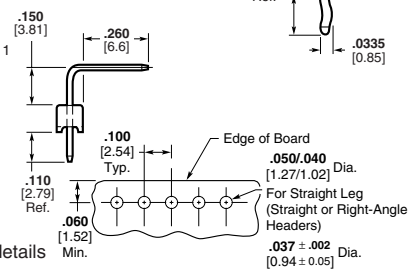


Right-Angle Post (.025 [0.64] Square)



Retentive Leg Detail





Note: Consult Product Drawing for details on placing headers onto pc boards.

Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board

Base Part Numbers

Straight Posts				Right-Angle Posts			
Without Retentive Legs		With Retentive Legs		Without Retentive Legs		With Retentive Legs	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated							
644456	2-28	644695	2-28	644457	2-28	644694	2-28
Standard UL94V-0, .000030 [0.00076] Gold Plated							
644884	2-28	644886	2-28	644885	2-28	644887	2-28
Standard UL94V-0, .000015 [0.00038] Gold Plated							
644888	2-28	644890	2-28	644889	2-28	644891	2-28

For complete product information, order Catalogue 82056

Polarised Headers — Straight and Right-Angle

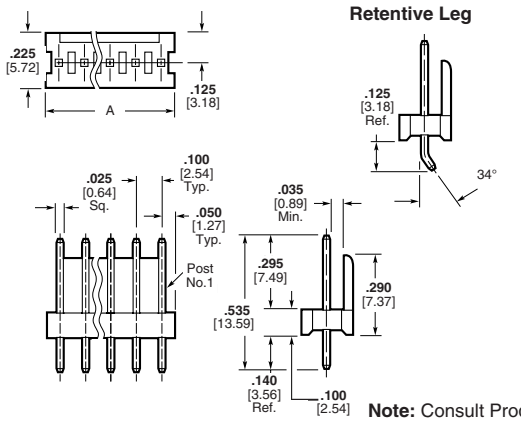
Material and Finish:

Housing — UL94V-0 rated, polyester, white

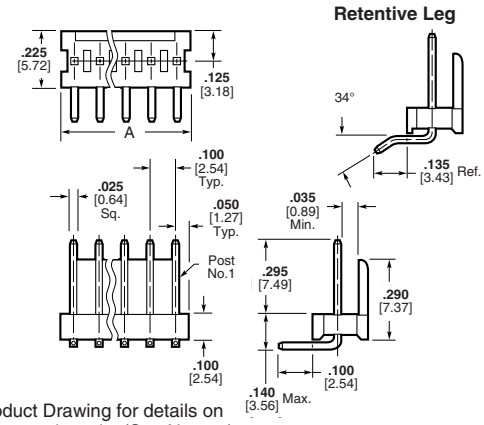
Posts — Copper alloy, tin plated, .000030 [0.00076] or .000015 [0.00038] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Gold headers are duplex plated, gold on mating end of post and tin on the soldertail.
3. All posts on retentive leg headers are bent.
4. To determine header overall length (dim. A) multiply .100 x the number of posts. Example: .100 x 10 posts equals 1.000 inch [25.4 mm].
5. PCB detail shown below is the same for Polarised & Friction Lock Headers.

Straight Post (.025 [0.64] Square)



Right-Angle Post (.025 [0.64] Square)



Note: Consult Product Drawing for details on placing headers onto pc boards. (See Note 5.)

Base Part Numbers

Straight Posts				Right-Angle Posts			
Without Retentive Legs		With Retentive Legs		Without Retentive Legs		With Retentive Legs	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated							
640454	2-28	644876	2-28	640455	2-28	644877	2-28

For mateability options, see matrix on pages 2110 and 2111.

For mating half visuals, see page 2112.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with straight posts would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

The correct ordering number is

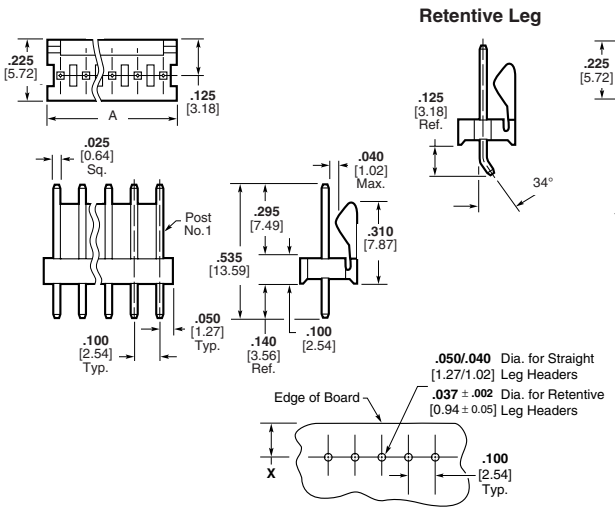
1-xxxxxx-0

Note:
Select load headers (omitted pin headers) are available upon request. Please contact product engineer or product manager for details.

For complete product information, order Catalogue 82056

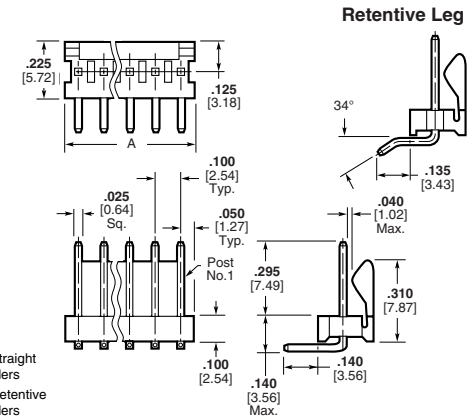
Friction Lock Headers — Straight and Right-Angle

Straight Post (.025 [0.64] Square)



Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board

Right-Angle Post (.025 [0.64] Square)



X = .130 [3.30] Min. for Straight Headers
X = .110 [2.79] Min., .160 [4.06] Max. for Right-Angle Headers when mated with MTA-100 Connectors
X = .110 [2.79] Min., .120 [3.04] Max. for Right-Angle Headers when mated with CST-100 II Connectors

Note: Consult Product Drawing for details on placing headers onto pc boards.

Base Part Numbers

Straight Posts				Right-Angle Posts			
Without Retentive Legs		With Retentive Legs		Without Retentive Legs		With Retentive Legs	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated							
640456	2-28	644874	2-28	640457	2-28	644875	2-28
Standard UL94V-0, .000030 [0.00076] Gold Plated							
641215	2-28	—	—	641216	2-28	—	—
Standard UL94V-0, .000015 [0.00038] Gold Plated							
641126	2-28	—	—	641127	2-28	—	—

Polarised High Temperature Headers (For use with Infrared Reflow Process)

Maximum Temperature Rating: 235°C

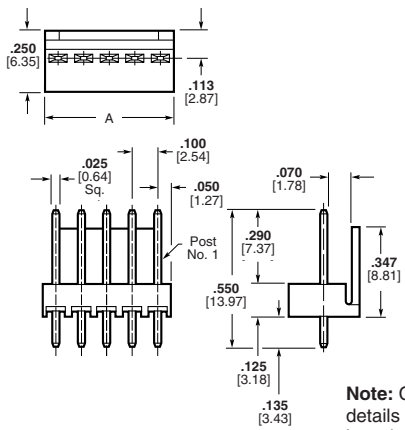
Material and Finish:

Housing — UL94V-0 rated, thermoplastic, black

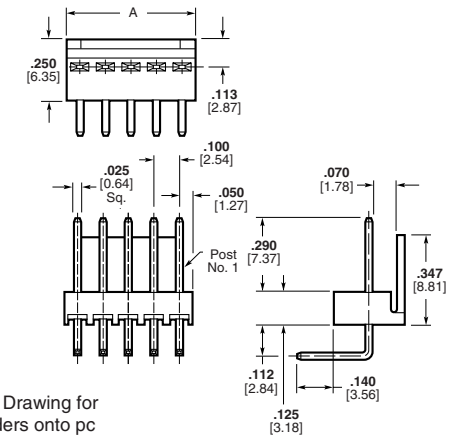
Posts — Copper alloy, tin plated, .000030 [0.00076] or .000015 [0.00038] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Gold headers are duplex plated, gold on mating end of post and tin on the soldertail.
3. To determine header overall length (dim. A) multiply .100 x the number of posts. Example: .100 x 10 posts equals 1.000 inch [25.4 mm].

Straight Post (.025 [0.64] Square)



Right-Angle Post (.025 [0.64] Square)



Note: Consult Product Drawing for details on placing headers onto pc boards.

Base Part Numbers

Straight Posts		Straight Posts Tube Loaded		Right-Angle Posts	
Header Part Number	No. of Posts	Header Part Number	No. of Posts	Header Part Number	No. of Posts
Standard UL94V-0, Tin-Lead Plated					
647047	2-18	647298	2-18	647048	2-18
Standard UL94V-0, .000030 [0.00076] Gold Plated					
647109	2-18	647300	2-18	647114	2-18
Standard UL94V-0, .000015 [0.00038] Gold Plated					
647075	2-18	647299	2-18	647076	2-18

For mateability options, see matrix on pages 2110 and 2111.

For mating half visuals, see page 2112.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with straight posts would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

The correct ordering number is

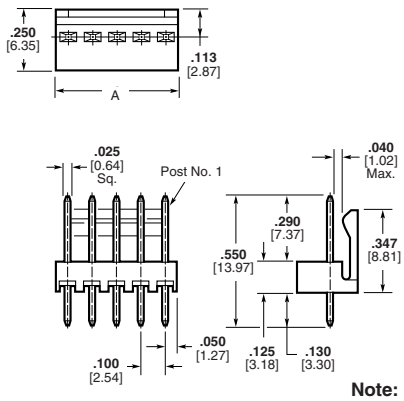
1-xxxxxx-0

Note:
Select load headers (omitted pin headers) and special packaging can be made available upon request. Minimums may apply. Please contact product engineer or product manager for details.

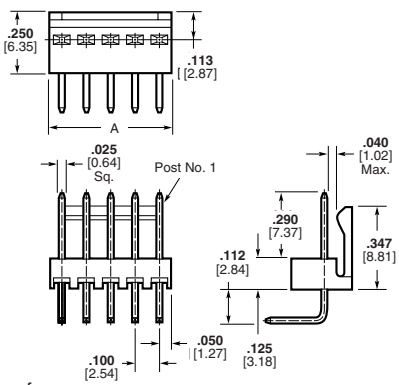
Friction Lock High Temperature Headers (For use with Infrared Reflow Process)

Maximum Temperature Rating: 235°C

Straight Post (.025 [0.64] Square)



Right-Angle Post (.025 [0.64] Square)



Note: Consult Product Drawing for details on placing headers onto pc boards.

Base Part Numbers

Straight Posts		Straight Posts Tube Loaded		Right-Angle Posts	
Header Part Number	No. of Posts	Header Part Number	No. of Posts	Header Part Number	No. of Posts
Standard UL94V-0, Tin-Lead Plated					
647050	2-18	647295	2-18	647051	2-18
Standard UL94V-0, .000030 [0.00076] Gold Plated					
647116	2-18	647297	2-18	647117	2-18
Standard UL94V-0, .000015 [0.00038] Gold Plated					
647078	2-18	647296	2-18	647079	2-18

For complete product information, order Catalogue 82056

Polarised and Friction Lock Surface Mount Headers — Straight

Material and Finish:

Housing — UL94V-0 rated, thermoplastic, black

Posts — Copper alloy, tin plated, .000030 [0.00076] or .000015 [0.00038] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Gold headers are duplex plated, gold on mating end of post and tin on the soldertail.
3. To determine header overall length (dim. A) multiply .100 x the number of posts. Example: .100 x 10 posts equals 1.000 inch [25.4 mm].

For mateability options, see matrix on pages 2110 and 2111.

For mating half visuals, see page 2112.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position surface mount polarised header would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

The correct ordering number is

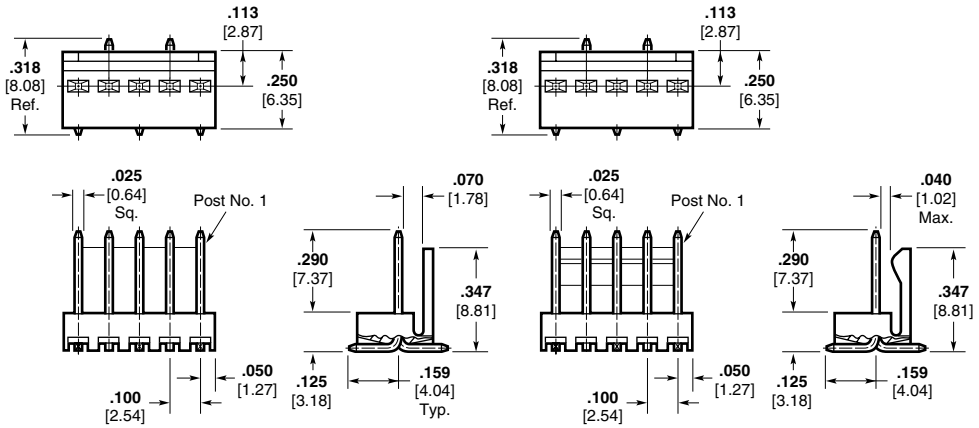
1-xxxxxx-0

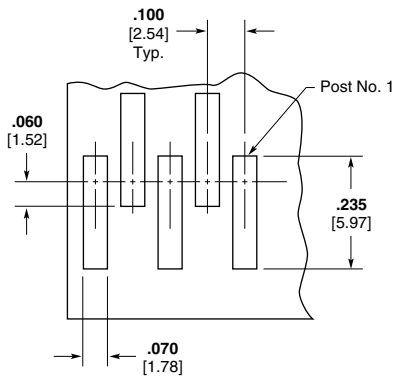
Note:
Select load headers (omitted pin headers) are available upon request. Please contact product engineer or product manager for details.

For use with Infrared Reflow Process

Maximum Temperature Rating: 235°C

Polarised Header **Friction Lock Header**





Recommended PC Board Layout for use with .010 [0.25] Thick Stencil

Base Part Numbers

	Polarised Headers		Friction Lock Headers	
	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin-Lead Plated				
	647106	2-18[1]	647166	2-18[1]
Standard UL94V-0, .000030 [0.00076] Gold Plated				
	647108	2-18[1]	647168	2-18[1]
Standard UL94V-0, .000015 [0.00038] Gold Plated				
	647107	2-18[1]	647167	2-18[1]

[1] Alternate packaging may be available upon request. Minimums may apply. Contact Product Engineer or Product Manager for details.

Shrouded Headers — Straight and Right-Angle

Material and Finish:

Housing — UL94V-0 rated, polyester, black

Posts — Copper alloy, tin plated; or .000030 [0.00076] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Headers with .000015 [0.00038] gold plated post are available upon request. Minimums may apply.
3. Gold headers are duplex plated, gold on mating end of post and tin on the soldertail.

For mateability options, see matrix on pages 2110 and 2111.

For mating half visuals, see page 2112.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with straight post and with pegs would be:

Base number **xxxxxx** plus prefix-and-suffix

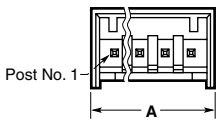
1- — -0

The correct ordering number is

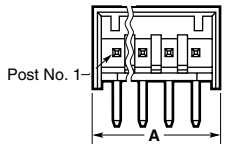
1-xxxxxx-0

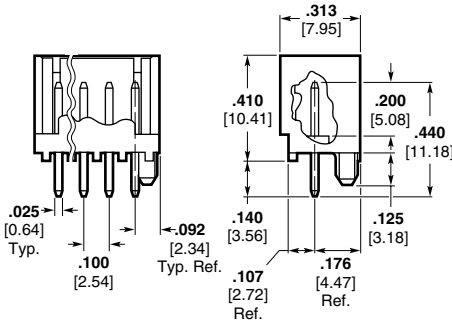
Notes:
1. Select load headers (omitted pin headers) are available upon request. Please contact product engineer or product manager for details.
2. MTA-100 shrouded headers **do not mate** with CST-100 II housings.

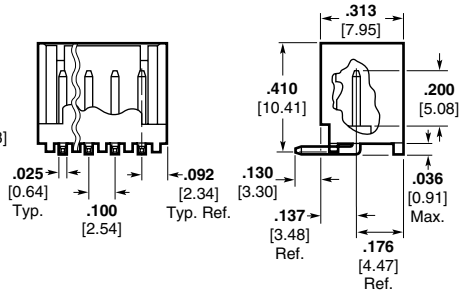
Straight Post (.025 [0.64] Square)



Right-Angle Post (.025 [0.64] Square)

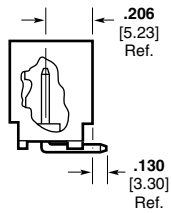




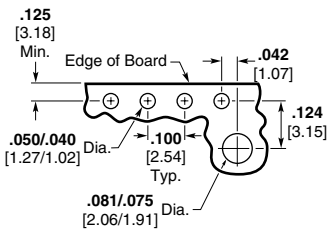


Front Bend

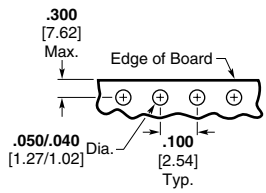
Polarised Retention Peg



Rear Bend



Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board
(Solder Side of Board Shown)



Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board
(Solder Side of Board Shown)

Note: Consult Product Drawing for details on placing headers onto pc boards.

Base Part Numbers

Straight Posts				Right-Angle Posts			
With Pegs		Without Pegs		Without Pegs Only			
				Front Bend		Rear Bend	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin-Lead Plated							
644486	2-14	644861	2-14	644488	2-14	644803	2-14
Standard UL94V-0, .000030 [0.00076] Gold Plated							
644487	2-14	—	—	644489	2-14	—	—

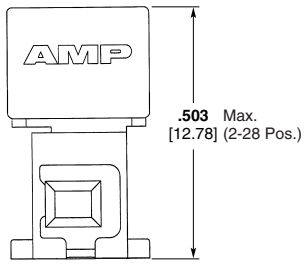
Header Length

No. of Circuits	Dim. A	Prefix/ Suffix
2	**.284** 7.21	-2
3	**.384** 9.75	-3
4	**.484** 12.29	-4
5	**.584** 14.83	-5
6	**.684** 17.37	-6
7	**.784** 19.91	-7
8	**.884** 22.45	-8
9	**.984** 24.99	-9
10	**1.084** 27.53	1- -0
11	**1.184** 30.07	1- -1
12	**1.284** 32.61	1- -2
13	**1.384** 35.15	1- -3
14	**1.484** 37.69	1- -4

For complete product information, order Catalogue 82056

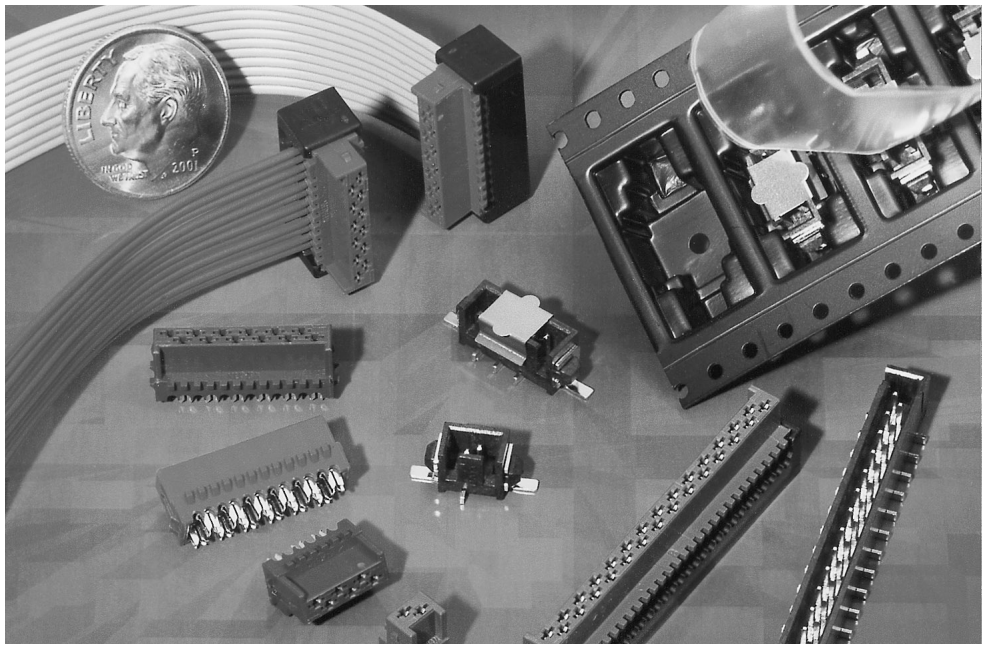
Product Facts

- 2-28 contact positions
- Connectors terminate 26, 28 and 30 AWG discrete wire or .050 [1.27] centerline ribbon cable
- Colour-coded housings
- Maximum cable insulation diameter of .039 [0.99]
- IDC contacts pre-loaded in receptacle housing
- 30 V, 1 A contact rating
- Contact design allows for gold-to-gold or tin-to-tin interface
- Contacts are lubricated to prevent fretting corrosion
- Wire feed-thru capability for daisy-chain wiring or closed end for point-to-point wiring
- Connectors are polarised for proper mating
- Manual and semiautomatic application tooling
- Mating height shown below



Scale: 10:1

- Product has been submitted for Component Recognition Evaluation by Underwriters Laboratories Inc.



The MTA-50 IDC Connector System is a wire-to-printed circuit board system with contacts in a staggered, single row on .050 [1.27] centerline. The design features wire feed-through capability for daisy-chain applications. Insulation displacement contacts are used to terminate a wide range of conductor sizes. Ribbon cable can also be terminated when the appropriate receptacle assembly and strain relief cover are used.

Header assemblies for board mount applications include right-angle (horizontal) and vertical mount products. These are available in through-hole and surface mount configurations.

Typical uses of the MTA-50 IDC connectors would be in the Appliance, Commercial and Home Equipment and Security products industries.

See page 2128 for related products:

- Ribbon Cable (reels), .050 [1.27] centerline
- Application Tooling
- Cable Assemblies

Performance Data

Voltage Rating — 30 VAC

Current Rating — 1 amp max.

Low-Level Resistance — 30 milliohms

Dielectric Withstanding Voltage — 500 VAC

Insulation Resistance — 1,000 megohms

Operating Temperature — –55°C to +105°C for connector only; cable rating may be lower

Technical Documents

Application Specification — 114-13072 MTA-50 Connectors

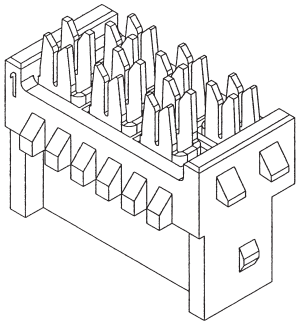
Product Specifications — 108-2113 MTA-50 Connectors

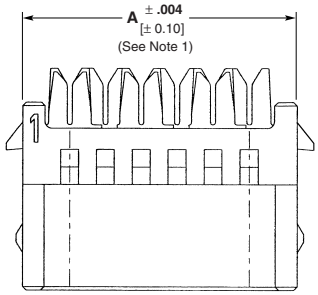
100-4703 MADISON CABLE Specification (28 AWG, 7/36 Tinned copper, PVC insulation)

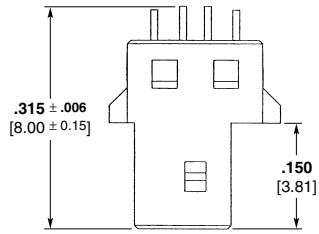
100-6257 MADISON CABLE Specification (28 AWG, 7/36 Tinned copper, TPO insulation)

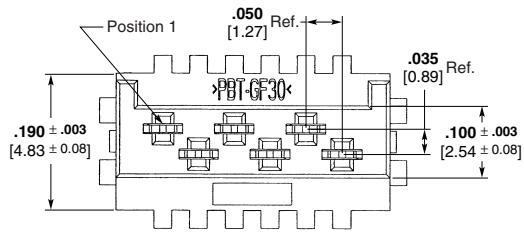
Receptacle Assemblies — Ribbon Cable

Feed-Thru and Closed End Connectors









Material and Finish

Housing — UL 94V-2 rated, thermoplastic

Contacts — Phosphor bronze; .000100 [0.00254] min. tin-lead in wire termination area, over .000050 [0.00127] min. nickel; choice on mating end: .000100 [0.00254] min. tin-lead or .000030 [0.00076] gold or .000015 [0.00038] gold, over .000050 [0.00127] min. nickel

Colour Coding by Wire Size for UL94V-2 Connectors

26 AWG — Blue
28 AWG — Green
30 AWG — Brown

For Strain Relief Covers see page 2123.
For mating Headers see pages 2126 and 2127.
For Mateability Guide, see matrixes on page 2128.

Notes:

1. To determine connector overall length (dim. A), multiply .050 x the number of circuits and add .082. Example: .050 x 10 circuits equals 0.50 + .082 = .582 [14.78].
2. Strain relief covers shown on page 2123 are required and sold as part of the Connector Kit.
3. Stranded UL Style 1061 or equivalent wire is recommended.
4. Unless otherwise stated all tolerances (except plating) to be ±.005 [±0.13].

Connector Kits — Ribbon Cable

Connector Kit Ordering Information

Connector Kit consists of Receptacle Assembly and Strain Relief Cover.

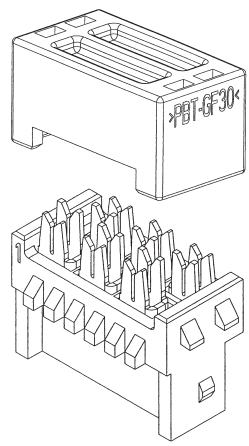
Base part number prefixes and suffixes indicate the number of circuit positions, for example: Base part number 1445359

2 position = 0-1445359-2
and
28 position = 2-1445359-8

Note: Tin-plated connectors and headers in even position sizes from 2–12 and 18 are stocked parts; all other position sizes and products with gold-plated contacts are Make To Order.

Base Part Numbers

Connector Type & Wire Size	Feed-Thru		Closed End	
	Connector Kit Part Nos.	No. of Circuits	Connector Kit Part Nos.	No. of Circuits
Tin Plated				
26 AWG 0.12-0.15 mm²	1445359	2–28	1445368	2–28
28 AWG 0.08-0.09 mm²	1445362	2–28	1445371	2–28
30 AWG 0.05-0.06 mm²	1445365	2–28	1445374	2–28
.000030 [0.00076] Gold Plated				
26 AWG 0.12-0.15 mm²	1445361	2–28	1445370	2–28
28 AWG 0.08-0.09 mm²	1445364	2–28	1445373	2–28
30 AWG 0.05-0.06 mm²	1445367	2–28	1445376	2–28
.000015 [0.00038] Gold Plated				
26 AWG 0.12-0.15 mm²	1445360	2–28	1445369	2–28
28 AWG 0.08-0.09 mm²	1445363	2–28	1445372	2–28
30 AWG 0.05-0.06 mm²	1445366	2–28	1445375	2–28

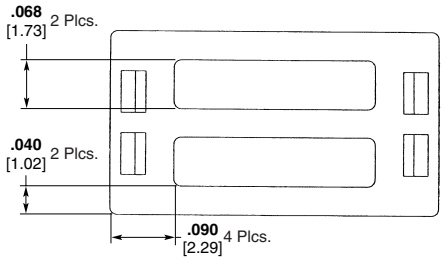


Connector Kits — Ribbon Cable (Continued)

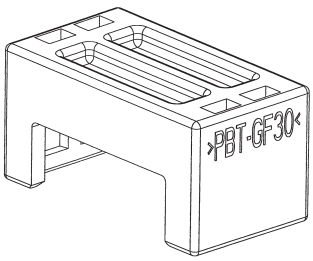
Strain Relief Covers

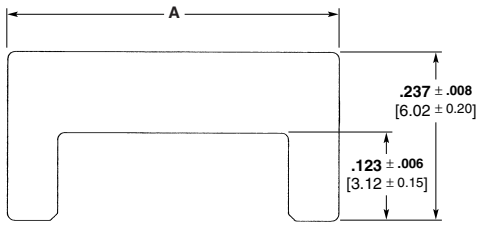
Material and Finish

Strain Relief Cover — UL 94V-0 rated, thermoplastic, black



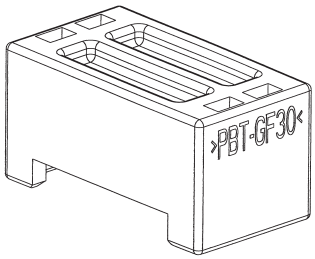
Feed-Thru

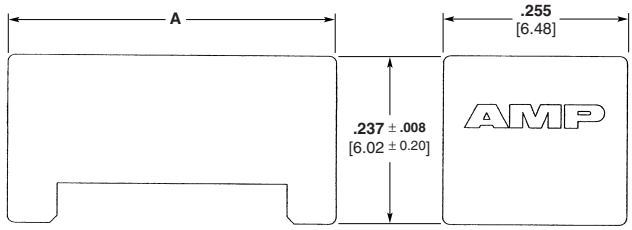




Feed-Thru

Closed End





Closed End

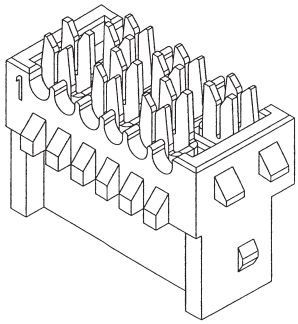
Feed-Thru and Closed End

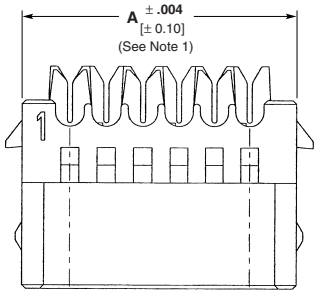
No. of Circuits	Dim. A
2	**.260** 6.60
3	**.310** 7.87
4	**.360** 9.14
5	**.410** 10.41
6	**.460** 11.68
7	**.510** 12.95
8	**.560** 14.22
9	**.610** 15.49
10	**.660** 16.76
11	**.710** 18.03
12	**.760** 19.30
13	**.810** 20.57
14	**.860** 21.84
15	**.910** 23.11

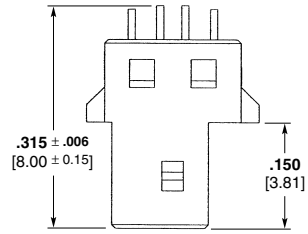
No. of Circuits	Dim. A
16	**.960** 24.38
17	**1.010** 25.65
18	**1.060** 26.92
19	**1.110** 28.19
20	**1.160** 29.46
21	**1.210** 30.73
22	**1.260** 32.00
23	**1.310** 33.27
24	**1.360** 34.54
25	**1.410** 35.81
26	**1.460** 37.08
27	**1.510** 38.35
28	**1.560** 39.62

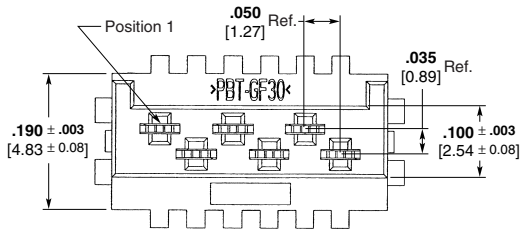
Receptacle Assemblies — Discrete Wire

Feed-Thru and Closed End Connectors









Material and Finish

Housing — UL 94V-2 rated, thermoplastic

Contacts — Phosphor bronze; .000100 [0.00254] min. tin-lead in wire termination area, over .000050 [0.00127] min. nickel; choice on mating end: .000100 [0.00254] min. tin-lead or .000030 [0.00076] gold or .000015 [0.00038] gold, over .000050 [0.00127] min. nickel

Colour Coding by Wire Size for UL94V-2 Connectors

26 AWG — Blue
28 AWG — Green
30 AWG — Brown

For Strain Relief Covers see page 2123.
For mating Headers see pages 2126 and 2127.
For Mateability Guide, see matrixes on page 2128.

Notes:

1. To determine connector overall length (dim. A), multiply .050 x the number of circuits and add .082. Example: .050 x 10 circuits equals 0.50 + .082 = .582 [14.78].
2. Strain relief covers shown on page 2125 are required and sold as part of the Connector Kit.
3. Stranded UL Style 1061 or equivalent wire is recommended.
4. Unless otherwise stated all tolerances (except plating) to be ±.005 [±0.13].

Connector Kits — Discrete Wire

Connector Kit Ordering Information

Connector Kit consists of Receptacle Assembly and Strain Relief Cover.

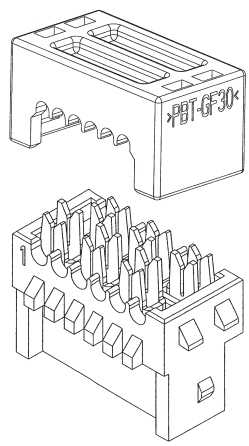
Base part number prefixes and suffixes indicate the number of circuit positions, for example: Base part number 1445341

2 position = 0-1445341-2
and
28 position = 2-1445341-8

Note: Tin-plated connectors and headers in even position sizes from 2–12 and 18 are stocked parts; all other position sizes and products with gold-plated contacts are Make To Order.

Base Part Numbers

Connector Type & Wire Size	Feed-Thru		Closed End	
	Connector Kit Part Nos.	No. of Circuits	Connector Kit Part Nos.	No. of Circuits
Tin Plated				
26 AWG 0.12-0.15 mm²	1445341	2–28	1445350	2–28
28 AWG 0.08-0.09 mm²	1445344	2–28	1445353	2–28
30 AWG 0.05-0.06 mm²	1445347	2–28	1445356	2–28
.000030 [0.00076] Gold Plated				
26 AWG 0.12-0.15 mm²	1445343	2–28	1445352	2–28
28 AWG 0.08-0.09 mm²	1445346	2–28	1445355	2–28
30 AWG 0.05-0.06 mm²	1445349	2–28	1445358	2–28
.000015 [0.00038] Gold Plated				
26 AWG 0.12-0.15 mm²	1445342	2–28	1445351	2–28
28 AWG 0.08-0.09 mm²	1445345	2–28	1445354	2–28
30 AWG 0.05-0.06 mm²	1445348	2–28	1445357	2–28

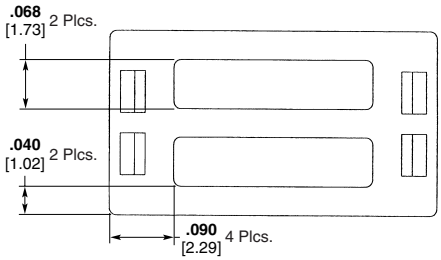


Connector Kits — Discrete Wire (Continued)

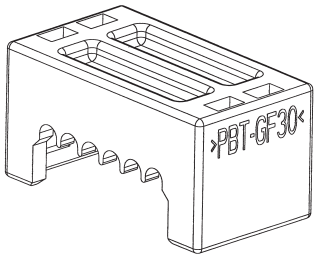
Strain Relief Covers

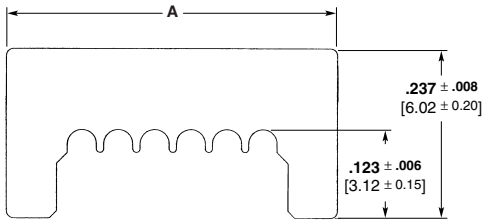
Material and Finish

Strain Relief Cover — UL 94V-0 rated, thermoplastic, black



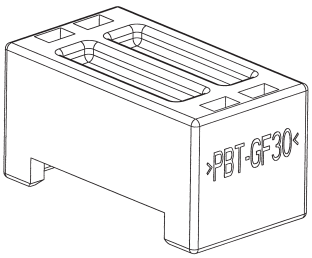
Feed-Thru

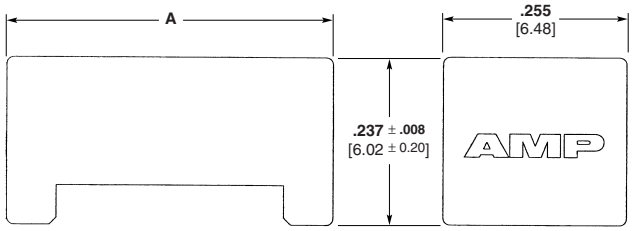




Feed-Thru

Closed End





Closed End

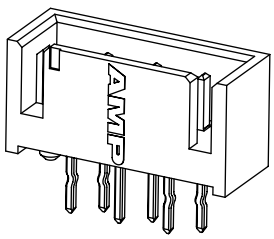
Feed-Thru and Closed End

No. of Circuits	Dim. A
2	**.260** 6.60
3	**.310** 7.87
4	**.360** 9.14
5	**.410** 10.41
6	**.460** 11.68
7	**.510** 12.95
8	**.560** 14.22
9	**.610** 15.49
10	**.660** 16.76
11	**.710** 18.03
12	**.760** 19.30
13	**.810** 20.57
14	**.860** 21.84
15	**.910** 23.11

No. of Circuits	Dim. A
16	**.960** 24.38
17	**1.010** 25.65
18	**1.060** 26.92
19	**1.110** 28.19
20	**1.160** 29.46
21	**1.210** 30.73
22	**1.260** 32.00
23	**1.310** 33.27
24	**1.360** 34.54
25	**1.410** 35.81
26	**1.460** 37.08
27	**1.510** 38.35
28	**1.560** 39.62

Through-Hole Header Assemblies

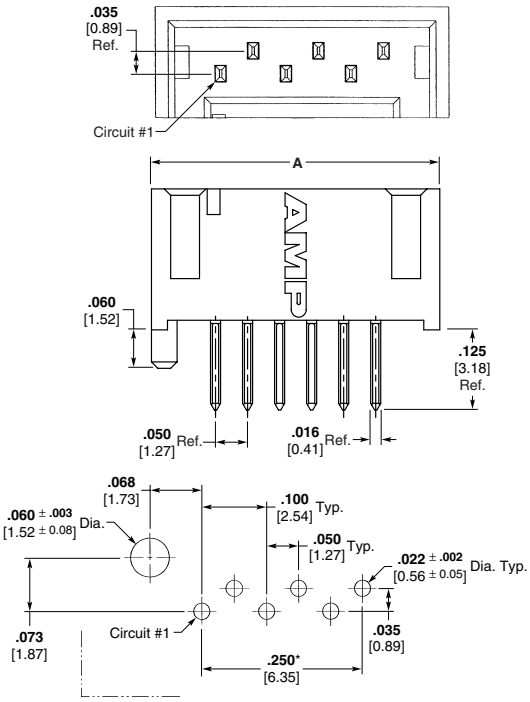
Vertical

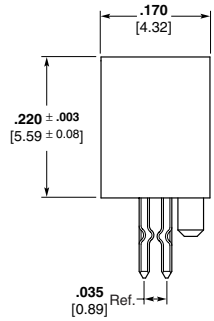


Material and Finish

Housing — UL 94V-0 rated, thermoplastic, black

Contacts — Brass, .000100 [0.00254] min. tin-lead over .000050 [0.00127] min. nickel on solder legs; choice on mating end:
.000100 [0.00254] min. tin-lead or
.000030 [0.00076] gold or
.000015 [0.00038] gold, over
.000050 [0.00127] min. nickel





Note: To determine header overall length (dim. A), multiply .050 x the number of circuits and add .150. Example: .050 x 6 circuits equals .300 + .150 = .450 [11.43].

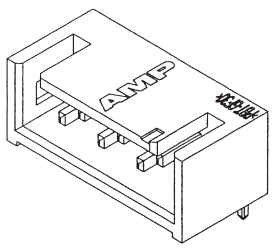
Recommended Mounting Hole Size and Pattern for .062 [1.57] Thick PC Board

* 6-circuit Dim. shown, refer to Customer Drawing for actual PCB Dimensions.

Base Part Numbers

Through-Hole	
Header Part Nos.	**No. of Posts**
Standard UL 94V-0, Tin Plated	
1445120	2-28
Standard UL 94V-0 .000030 [0.00076] Gold Plated	
1445125	2-28
Standard UL 94V-0 .000015 [0.00038] Gold Plated	
1445123	2-28

Right-Angle



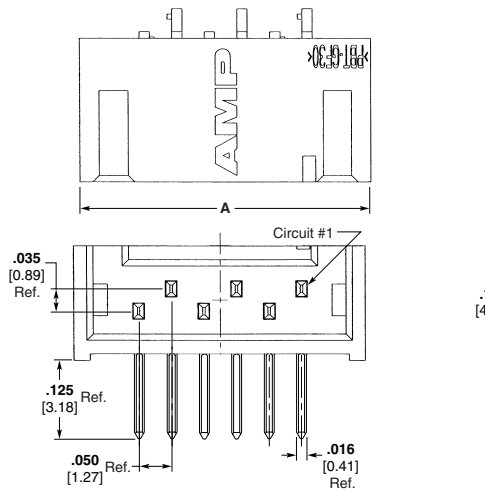
For mating Connector Kits see pages 2122 through 2125. For mateability options, see matrixes on page 2128.

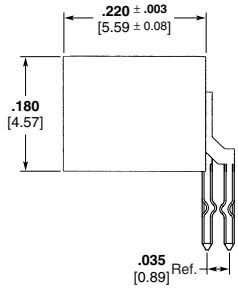
Header Ordering Information

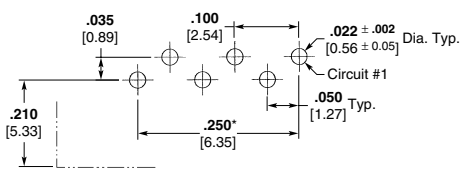
Base part number prefixes and suffixes indicate the number of circuit positions, for example: Base part number 1445120

2 position = 0-1445120-2
and
28 position = 2-1445120-8

Note: Tin-plated connectors and headers in even position sizes from 2–12 and 18 are stocked parts; all other position sizes and products with gold-plated contacts are Make To Order.







Recommended Mounting Hole Size and Pattern for .062 [1.57] Thick PC Board

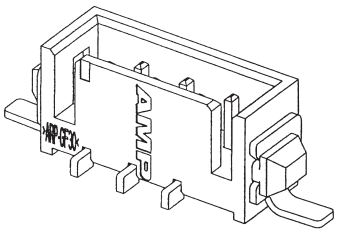
* 6-circuit Dim. shown, refer to Customer Drawing for actual PCB Dimensions.

Base Part Numbers

Through-Hole	
Header Part Nos.	**No. of Posts**
Standard UL 94V-0, Tin Plated	
1445169	2-28
Standard UL 94V-0 .000030 [0.00076] Gold Plated	
1445171	2-28
Standard UL 94V-0 .000015 [0.00038] Gold Plated	
1445170	2-28

Surface Mount Header Assemblies

Vertical

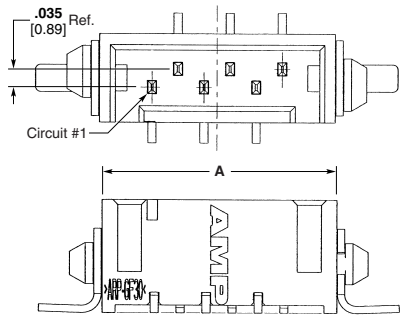


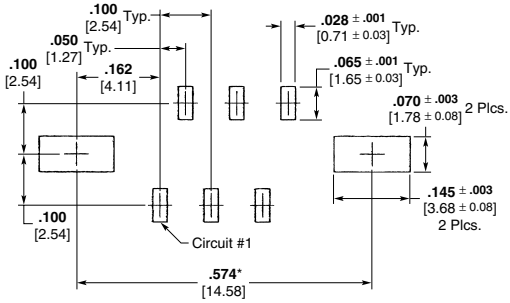
Material and Finish

Housing — UL 94V-0 rated, thermoplastic, black

Contacts — Brass, .000100 [0.00254] min. tin-lead over .000050 [0.00127] min. nickel on solder pads; choice on mating end:
.000100 [0.00254] min. tin-lead or
.000030 [0.00076] gold or
.000015 [0.00038] gold, over
.000050 [0.00127] min. nickel

Boardlock — Phosphor bronze, tin-lead plated .000100 [0.000254] min. over .000050 [0.00127] min. nickel

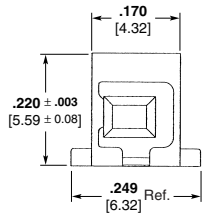




Recommended PC Board Layout for use with .010 [0.25] Thick Stencil

* 6-circuit Dim. shown, refer to Customer Drawing for actual PCB Dimensions.

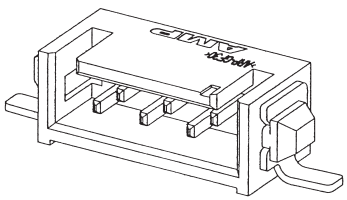
Note: To determine header overall length (dim. A), multiply .050 x the number of circuits and add .150. Example: .050 x 6 circuits equals .300 + .150 = .450 [11.43].



Base Part Numbers

Surface Mount	
Header Part Nos.	No. of Posts
Standard UL 94V-0, Tin Plated	
1445121	2-28
Standard UL 94V-0 .000030 [0.00076] Gold Plated	
1445126	2-28
Standard UL 94V-0 .000015 [0.00038] Gold Plated	
1445124	2-28

Right-Angle



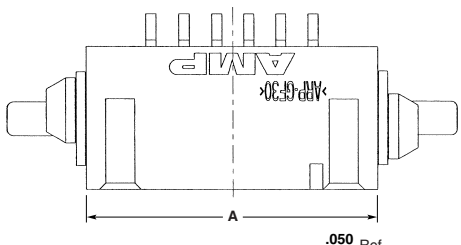
For mating Connector Kits see pages 2122 through 2125. For mateability options, see matrixes on page 2128.

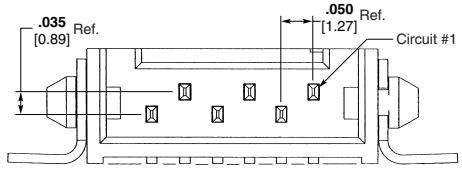
Header Ordering Information

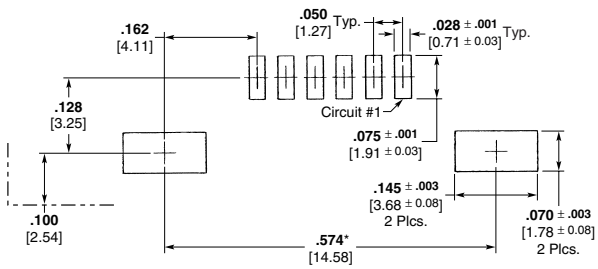
Base part number prefixes and suffixes indicate the number of circuit positions, for example: Base part number 1445121

2 position = 0-1445121-2
and
28 position = 2-1445121-8

Note: Tin-plated connectors and headers in even position sizes from 2–12 and 18 are stocked parts; all other position sizes and products with gold-plated contacts are Make To Order.

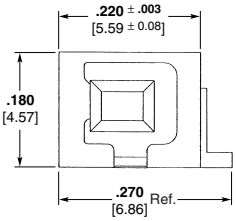






Recommended PC Board Layout for use with .010 [0.25] Thick Stencil

* 6-circuit Dim. shown, refer to Customer Drawing for actual PCB Dimensions.



Base Part Numbers

Surface Mount	
Header Part Nos.	No. of Posts
Standard UL 94V-0, Tin Plated	
1445172	2-28
Standard UL 94V-0 .000030 [0.00076] Gold Plated	
1445174	2-28
Standard UL 94V-0 .000015 [0.00038] Gold Plated	
1445173	2-28

MTA-50 IDC Connector Kit / Header Mateability Guide

These matrixes have been prepared to assist you in defining the correct mating halves for the MTA-50 header and connector kit combination. Where a "Y" is indicated the combination is a valid mating pair.

Note: Tyco Electronics does NOT recommend intermating connectors and headers with different contact platings.

Headers

Connector Kits	1445120	1445121	1445169	1445172
1445341	Y	Y	Y	Y
1445344	Y	Y	Y	Y
1445347	Y	Y	Y	Y
1445350	Y	Y	Y	Y
1445353	Y	Y	Y	Y
1445356	Y	Y	Y	Y
1445359	Y	Y	Y	Y
1445362	Y	Y	Y	Y
1445365	Y	Y	Y	Y
1445368	Y	Y	Y	Y
1445371	Y	Y	Y	Y
1445374	Y	Y	Y	Y

Matrix for Tin Plated Part Numbers

Headers

Connector Kits	1445125	1445126	1445171	1445174
1445343	Y	Y	Y	Y
1445346	Y	Y	Y	Y
1445349	Y	Y	Y	Y
1445352	Y	Y	Y	Y
1445355	Y	Y	Y	Y
1445358	Y	Y	Y	Y
1445361	Y	Y	Y	Y
1445364	Y	Y	Y	Y
1445367	Y	Y	Y	Y
1445370	Y	Y	Y	Y
1445373	Y	Y	Y	Y
1445376	Y	Y	Y	Y

Matrix for .000030 [0.00076] Gold Plated Part Numbers

Headers

Connector Kits	1445123	1445124	1445170	1445173
1445342	Y	Y	Y	Y
1445345	Y	Y	Y	Y
1445348	Y	Y	Y	Y
1445351	Y	Y	Y	Y
1445354	Y	Y	Y	Y
1445357	Y	Y	Y	Y
1445360	Y	Y	Y	Y
1445363	Y	Y	Y	Y
1445366	Y	Y	Y	Y
1445369	Y	Y	Y	Y
1445372	Y	Y	Y	Y
1445375	Y	Y	Y	Y

Matrix for .000015 [0.00038] Gold Plated Part Numbers

Ribbon Cable, Application Tooling, and Cable Assemblies

Ribbon Cable .050 [1.27] Centerline

An array of Madison Cable ribbon cable products is available.
Cables feature a colour-coded edge mark on conductor #1.

Product Specifications

Voltage Rating — 30 VAC

Component Recognised by UL to US and Canadian Standards — AWM Style 2651

Sizes —

26 AWG, 7/34 Tinned copper, PVC insulation (9 – 64 conductors), 500-ft reels (Base AMP Part Number 57034)

28 AWG, 7/36 Tinned copper, PVC insulation (9 – 64 conductors), 100-ft reels (Base AMP Part Number 57040) and 500-ft reels (Base AMP Part Number 971111)

30 AWG

Other conductor counts available on request. For ordering information, call Toll-Free: **1-877-623-4766** or visit:
http://www.madisoncable.com/fsproducts.htm

Application Tooling

Manual Arbor Frame (with slide)
Part Number 1583518-1*

Upper Tooling
Part Number 1583514-1*

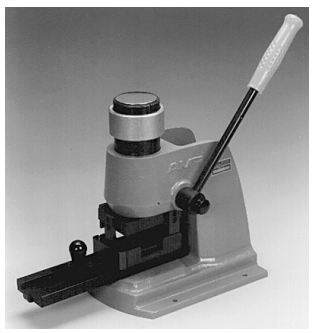
Fixture, Discrete Wire, Closed End
Part Number 1583515-1

Fixture, Discrete Wire, Feed-Thru
Part Number 1583516-1

Fixture, Ribbon Cable
Part Number 1583517-1

*Required, plus appropriate Fixture(s).

Mass Termination



Discrete Termination

IDC Termination Head
Part Number 1583503-1

Manual Pistol-Grip Handle Assembly
Part Number 58074-1

Cable Assemblies

www.tycoelectronics.com/cables

Tyco Electronics Cable Assembly Group can provide customers with design assistance, prototypes, and low- to high-volume production of ribbon cable or discrete wire assemblies.

In addition, prepared ribbon cable is offered in the form of prenotched cable on reels or cut-to-length cable segments.

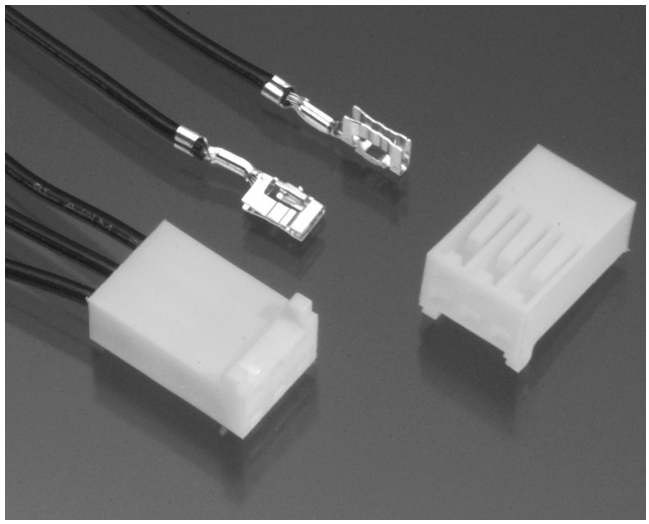
For more information, contact your local Tyco Electronics Sales Representative or call Technical Support at the phone numbers listed below.

Product Facts

- **Low cost wire-to-board interconnections**
- **Wide wire range for single contact**
- **Tin and gold plated contacts**
- **Mates with specified MTA and similar competitive notched headers**
- **Plastic latching feature in housing helps prevent contact backout**
- **Locking ramps and polarising tabs are standard**
- **For keying purposes use keying plug 641994-1 (page 2113)**
- **Recognised under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR7189**

For mateability options, see matrix on pages 2110 and 2111.

For mating half visuals, see pages 2116-2119 and 2130



Contacts

Part Numbers		
Tin Plated	**15 Au Gold Plated**	**30 Au Gold Plated**
1375819-1 (Strip)	1375819-2 (Strip)	1375819-3 (Strip)
1445336-1 (Loose Piece)	1445336-2 (Loose Piece)	1445336-3 (Loose Piece)

Material and Finish:

Phosphor bronze, pretinned or .000015 [.00038] gold, .000030 [0.00076] gold over nickel

Wire Range — 22-26 AWG [0.35-0.13 mm²]

Max. Ins. Dia. — .065 [1.65]

Housing*

Material:

UL94V-0 rated, Nylon, white

No. of Pos.	Dim. A	Part Numbers
2	.220 5.59	1375820-2
3	.320 8.13	1375820-3
4	.420 10.67	1375820-4
5	.520 13.21	1375820-5
6	.620 15.75	1375820-6
7	.720 18.29	1375820-7
8	.820 20.83	1375820-8
9	.920 23.37	1375820-9
10	1.020 25.91	1-1375820-0
11	1.120 28.45	1-1375820-1
12	1.220 30.99	1-1375820-2
13	1.320 33.53	1-1375820-3
14	1.420 36.07	1-1375820-4
15	1.520 38.61	1-1375820-5

No. of Pos.	Dim. A	Part Numbers
16	1.620 41.15	1-1375820-6
17	1.720 43.69	1-1375820-7
18	1.820 46.23	1-1375820-8
19	1.920 48.77	1-1375820-9
20	2.020 51.31	2-1375820-0
21	2.120 53.85	2-1375820-1
22	2.220 56.39	2-1375820-2
23	2.320 58.93	2-1375820-3
24	2.420 61.47	2-1375820-4
25	2.520 64.01	2-1375820-5
26	2.620 66.55	2-1375820-6
27	2.720 69.09	2-1375820-7
28	2.820 71.63	2-1375820-8

Application Tooling

Loose Piece Contacts:

Hand Tool No. 58517-1 (408-4064) with Die Set No. 58517-2 (408-4064)

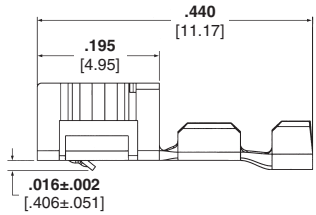
Strip Contacts:

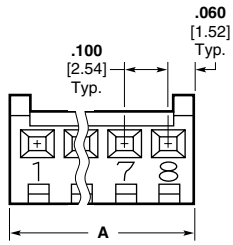
AMP-O-LECTRIC Model "G" Termination Machine* Applicator No. 567373-3 (Request Catalogue 65828)

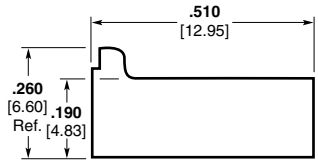
AMP-O-MATIC Stripper-Crimper Machine* Applicator No. 567910-1 or 567827-1 (with CQM) (Request Catalogue 65004)

AMPOMATOR CLS IIIG Lead Making Machine* (Request Catalogue 82659)

*Requires applicators. For part numbers, call Tyco Electronics for latest information.







Performance Data:

Voltage Rating — 250 vac

Current Rating — 4 amp max.

Low-Level Resistance — 6 mΩ max. initial; 10 mΩ max. final

Insulation Resistance — 1000 MΩ min. initial; 100 MΩ min. final

Operating Temperature — −55° C to +105° C

Technical Documents:

Product Specification
108-1948

Application Specification
114-13036

Instruction Sheet
408-8493

For complete product information, order Catalogue 82056

Shrouded Headers — Straight and Right-Angle

Material and Finish:

Housing — UL94V-0 rated, polyester, black

Posts — Copper alloy, tin plated; or .000030 [0.00076] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Headers with .00015 [0.00038] gold plated post are available upon request. Minimums may apply.
3. Gold headers are duplex plated, gold on mating end of post and tin on the soldertail.

For mateability options, see matrix on pages 2110 and 2111.

For mating half visuals, see page 2129.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with straight post and with pegs would be:

Base number **xxxxxx** plus prefix-and-suffix

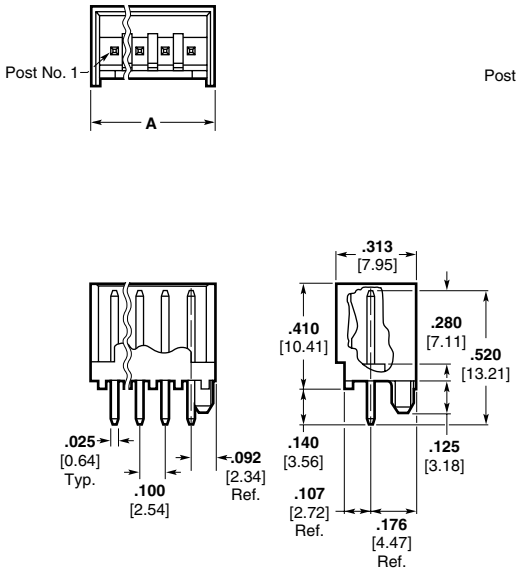
1- — -0

The correct ordering number is

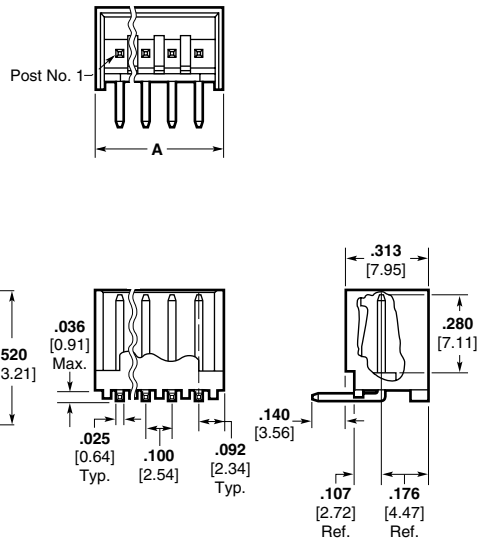
1-xxxxxx-0

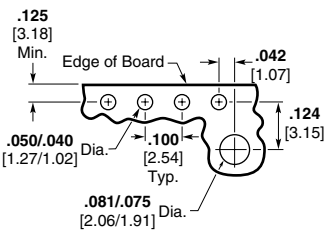
Note:
CST-100 shrouded headers **only mate** with CST-100 housings. All the MTA-100 headers except the MTA-100 shrouded headers mate with CST-100 II housings.

Straight Post (.025 [0.64] Square)



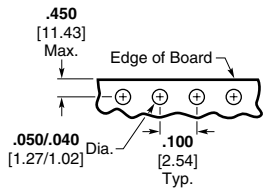
Right-Angle Post (.025 [0.64] Square)





Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board
(Solder Side of Board Shown)

Polarised Retention Peg



Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board
(Solder Side of Board Shown)

Note: Consult Product Drawing for details on placing headers onto pc boards.

Base Part Numbers

Straight Posts				Right-Angle Posts Without Pegs Only	
With Pegs		Without Pegs			
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated					
644893	2-14	644892	2-14	644894	2-14
Standard UL94V-0, .000030 [0.00076] Gold Plated					
644897	2-14	644896	2-14	644898	2-14

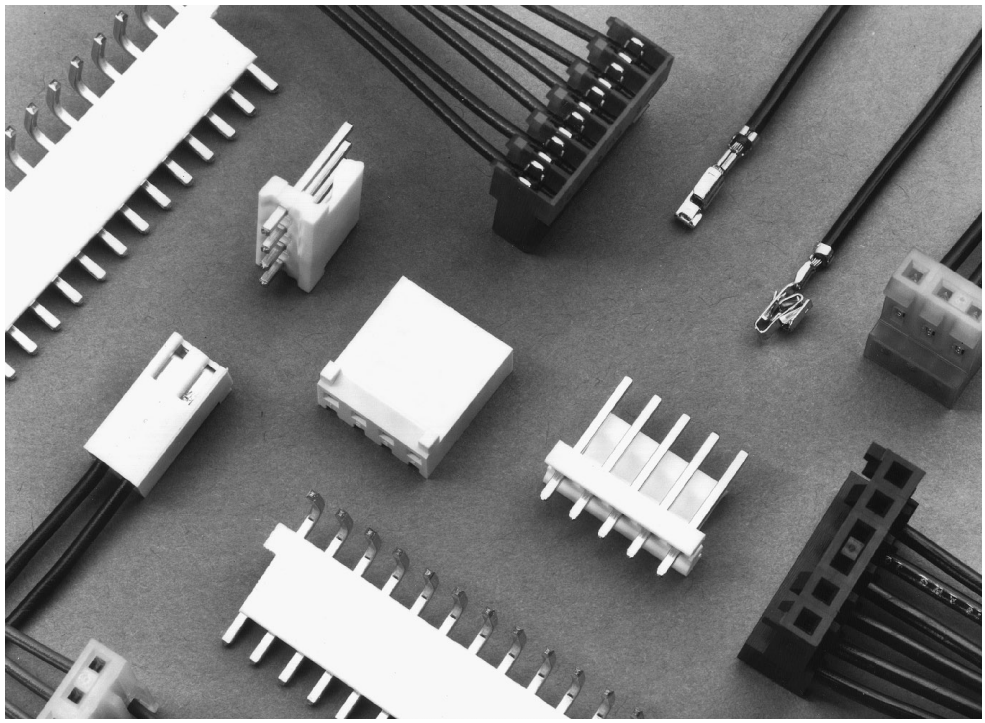
Header Length

No. of Circuits	Dim. A	Prefix/ Suffix	No. of Circuits	Dim. A	Prefix/ Suffix	No. of Circuits	Dim. A	Prefix/ Suffix
2	**.284** 7.21	-2	5	**.584** 14.83	-5	8	**.884** 22.45	-8
3	**.384** 9.75	-3	6	**.684** 17.37	-6	9	**.984** 24.99	-9
4	**.484** 12.29	-4	7	**.784** 19.91	-7	10	**1.084** 27.53	1- -0

For complete product information, order Catalogue 82056

Product Facts

- **Connectors and headers for 2 through 24 positions; wire sizes of 18, 20, 22, 24 and 26 AWG [0 .9–0.12 mm²]**
- **Connectors and headers, except shrouded headers, are end-to-end stackable**
- **QUAD Connectors for higher current rating**
- **Posted connectors for 2, 3, 4, 6, 9, 12, 15 and 24 positions**
- **Card edge connectors for 3, 6, 9, 12, 15, 18 and 20 through 24 positions**
- **Connectors preloaded with IDC contacts**
- **All contacts are slotted for insulation displacement (IDC) termination technique**
- **Connector styles include both closed end and feed-thru, with and without locking ramps and polarising tabs**
- **Polarising tabs do not allow reverse mating**
- **Contacts are lubricated to prevent fretting corrosion**
- **Benefits derived from the MTA-156 system include increases quality and ease of handling such as —**
  - **One-step assembly**
  - **No wire stripping**
  - **No contact damage**
  - **Reduced wiring errors**
  - **Simpler tooling**
  - **Simple maintenance and repair**
- **Meets the material requirements of Table 23.1 of UL 1410 Standards for Television Receiver and Video Products (wire-to-post connectors only)**
- **Recognised under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR7189**



MTA-156 connectors accept discrete and ribbon cable wire sizes ranging from 18 – 26 AWG [0.9– 0.12 mm²] with maximum insulation outside diameter.095 [2.41] for single wire and .070 [1.78] for mass termination of wires. Tin plated solid or fused stranded wire may be used with any wire gauge. Stranded (7, 16, and 19 strands) wire with PVC insulation can be used on 18 AWG [0.8 – 0.9 mm²] MTA-156 connectors; 7, 10, and 19 stranded wire on 20 AWG [0.5 – 0.6 mm²] MTA-156 connectors; and 7 and 19 stranded wire on 22 – 26 AWG [0.4 – 0.12 mm²] MTA-156 connectors.

Only one wire to be terminated into an IDC contact slot.

Mass termination of wire provides the lowest applied cost because it drastically reduces the labour content of virtually any cable or harness assembly required.

The wire-to-post connector housing material is flame retardant thermoplastic, either UL94V-2 or UL94V-0 rated.

A full line of .156 [3.96] centerline headers completes the system. Headers are available with straight or right-angle posts, in flat, friction lock and shrouded styles. Headers are available in 2 through 24 positions, except shrouded. Shrouded headers are available in 2-12 positions.

Note: Refer to page 2151 for approved wire listings.

Performance Data*:

Voltage Rating — 600 vac

Current Rating — 7 amp max. for MTA-156 Connector

Low-Level Resistance — 3.0 mΩ max. initial

Dielectric Withstanding Voltage — 1250 vac/1 min.

Insulation Resistance — 5000 MΩ min. initial

Operating Temperature — −55° C to +105° C

*Refer to the Product Specification for additional electrical, mechanical and environmental performance tests and requirements.

Technical Documents:

Product Specification

108-1051 MTA-156 Connectors

Application Specifications

114-1020 MTA-156 Connectors, Posted Connectors and Card Edge Connectors

114-1032 MTA-156 Ribbon Cable Assembly

For complete product information, order Catalogue 82056

This matrix has been prepared to assist you, our customer, in defining the correct mating halves for the MTA-156 header and connector combination. Where a "Y" is indicated the combination is a valid mating pair. Where an "N" is indicated the combination is not acceptable for mating.

Connectors

Headers	640383	640384	640385	640387	640388	640389	640445	644611	644612	644613	644614	644615	644616	644617	644749	644750	644751	644752	644753	644754	644755	647123	647124	647125	647126	647127	647128	647129	647130	647210	647211	647212	647227	647228	647229	647230
640426	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
640427	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
640428	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
640429	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
640430	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640431	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640432	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640433	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640434	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640435	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640472	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
640473	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640474	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640475	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640476	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640477	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640478	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640479	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640480	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640481	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640595	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640599	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640600	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640601	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640602	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
640604	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640605	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640606	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640607	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
640608	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641301	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
641302	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
641303	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
641304	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
641305	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
641306	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641307	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641308	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641309	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641310	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
643817	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
643818	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
643819	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
643820	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
643821	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
644082	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644461	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644462	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644463	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644464	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644465	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
644466	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
644467	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
644468	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
644469	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644470	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644471	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644472	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644501	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644502	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644566	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644567	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644569	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644570	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644572	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644783	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
644791	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644860	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
644878	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N

Matrix for Gold Plated Part Numbers

Matrix for .000030 [0.00076] Gold Plated Part Numbers

This matrix has been prepared to assist you, our customer, in defining the correct mating halves for the MTA-156 header and connector combination. Where a "Y" is indicated the combination is a valid mating pair. Where an "N" is indicated the combination is not acceptable for mating.

Headers

Connectors

	641202	641203	641204	641207	641208	641209	641210	644627	644628	644629	644630	644631	644632	644633	644756	644757	644758	644759	644760	644761	644762	647131	647132	647133	647134	647135	647136	647137	647138	647192	647193	647194	647195	647196	647197	647198	647213	647214	647215	647216	647217	647218	647219	647231	647232	647233	647234
641217	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641218	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641219	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641220	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641221	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641222	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641223	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641224	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641225	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641226	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641227	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641228	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641229	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641230	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641231	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
641232	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641233	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641234	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641235	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641236	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644460	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
644662	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
644663	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
644687	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644718	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N
644720	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N

Matrix for .000015 [0.00038] Gold Plated Part Numbers

Headers

Connectors

	641113	641114	641115	641118	641119	641120	641121	644763	644764	644765	644766	644767	644768	644769	647139	647140	647141	647142	647143	647144	647145	647146	647199	647200	647201	647202	647203	647204	647205	647220	647221	647222	647223	647224	647225	647226
641148	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641149	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641150	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641151	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641152	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641153	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641154	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641155	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641156	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641157	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641168	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641169	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641170	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641171	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641172	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
641173	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641174	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641175	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641176	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
641177	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644284	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N

For complete product information, order Catalogue 82056

IDC Connectors — Closed End

Material and Finish:

Housing — UL94V-2 rated, type 6/6 or 6/12 nylon, see below for colour; or UL94V-0 rated, nylon, black

Contacts — Phosphor bronze, post tin plated, .000030 [0.00076] or .000015 [.00038] post gold plated over nickel

Colour Coding by Wire Size for UL94V-2 Connectors

26 AWG — Blue
24 AWG — White
22 AWG — Red
20 AWG — Yellow
18 AWG — Orange

All Wire Sizes in UL94V-0 — Black

Notes:
1. Only connectors with locking ramp and without polarising tabs mate with posted connectors on page 2138.
2. Refer to page 2151 for approved wire listing.
3. For strain reliefs and dust covers, see page 2136.
4. For keying plugs and panel mount end caps, see page 2137.
5. Other circuit sizes are available upon request. Minimums may apply.
6. Connector circuits can be molded closed for keying purposes. Minimums may apply.
7. Where no part numbers appear in the chart, parts can be made available upon request. Minimums may apply.
8. To determine connector overall length (Dim. A), multiply .156 x the number of circuits. Example: .156 x 10 circuits equals 1.560 inches [39.62 mm].

Connector Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described connectors.

Prefixes and suffixes are determined by the number of circuit positions in the connector. For example, the complete part number for a 10-position closed end connector with locking ramp and without polarising tabs for 18 AWG wire would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

The correct ordering number is

1-xxxxxx-0

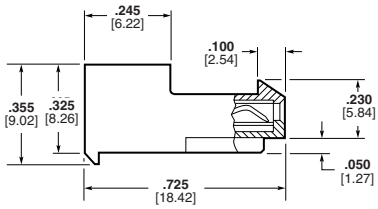
Base Part Numbers

Connector Type & Wire Size	Closed End with Locking Ramp				Closed End without Locking Ramp			
	Without Tabs		With Tabs		Without Tabs		With Tabs	
	Connector Part Numbers	No. of Circuits	Connector Part Numbers	No. of Circuits	Connector Part Numbers	No. of Circuits	Connector Part Numbers	No. of Circuits
Standard UL94V-2, Tin Plated								
18 AWG 0.8-0.9 mm²	640426	2–24	643817	2–24	640431	2–24	644461[5]	2–14
20 AWG 0.5-0.6 mm²	640427	2–24	643818	2–24	640432	2–24	644462[5]	2–14
22 AWG 0.3-0.4 mm²	640428	2–24	643819	2–24	640433	2–24	644463[5]	2–14
Standard UL94V-2, .000030 [0.00076] Gold Plated								
18 AWG 0.8-0.9 mm²	641217	2–24	644460[5]	2-12	641222	2–24	—	—
20 AWG 0.5-0.6 mm²	641218	2–24	644663[5]	2-12	641223	2–24	—	—
22 AWG 0.3-0.4 mm²	641219	2–24	644662[5]	2-12	641224	2-24	644687[5]	2-14
24 AWG 0.2 mm²	641220	2–24	—	—	641225	2–24	—	—
26 AWG 0.12-0.15 mm²	641221	2–24	—	—	641226	2–24	—	—
Standard UL94V-2, .000015 [0.00038] Gold Plated								
18 AWG 0.8-0.9 mm²	641148	2–24	644284[5]	2-12	641153	2–24	—	—
22 AWG 0.3-0.4 mm²	641150	2–24	—	—	641155	2-24	—	—

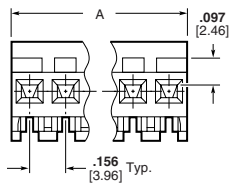
[5] Other circuit sizes are available upon request. Minimums may apply.
[6] With High Force contacts

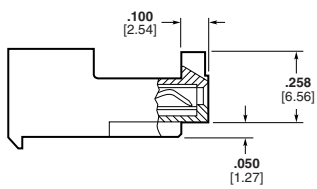
Note: Blocked circuit configurations are available upon request. Contact product engineer or product manager for details. Minimums may apply.

Closed End with Locking Ramp



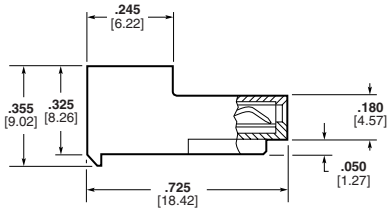
without Polarising Tabs



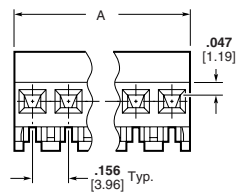


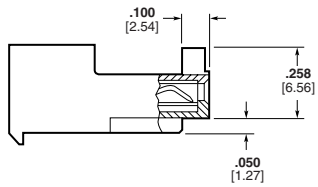
with Polarising Tabs

Closed End without Locking Ramp



without Polarising Tabs





with Polarising Tabs

Mating half visuals for Closed End Connectors with Locking Ramp, see pages 2138 thru 2143 (2140 and 2141 Front Bend Headers Only).

Mating half visuals for Closed End Connectors without Locking Ramp, see pages 2139 thru 2143.

For mateability options, see matrix on pages 2132 and 2133.

IDC Connectors — Feed-Thru

Material and Finish:

Housing — UL94V-2 rated, type 6/6 or 6/12 nylon, see below for colour; or UL94V-0 rated, nylon, black

Contacts — Phosphor bronze; post tin plated, .000030 [.00076] or .000015 [.00038] post gold plated over nickel

Colour Coding by Wire Size for UL94V-2 Connectors

26 AWG — Blue
24 AWG — White
22 AWG — Red
20 AWG — Yellow
18 AWG — Orange

All Wire Sizes in UL94V-0 — Black

Notes:
1. Only connectors with locking ramp and without polarising tabs mate with posted connectors on page 2138.
2. Refer to page 2151 for approved wire listing.
3. For strain reliefs and dust covers, see page 2136.
4. For keying plugs and panel mount end caps, see page 2137.
5. Other circuit sizes are available upon request. Minimums may apply.
6. Connector circuits can be molded closed for keying purposes. Minimums may apply.
7. Where no part numbers appear in the chart, parts can be made available upon request. Minimums may apply.
8. To determine connector overall length (Dim. A), multiply .156 x the number of circuits. Example: .156 x 10 circuits equals 1.560 inches [39.62 mm].

Connector Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described connectors.

Prefixes and suffixes are determined by the number of circuit positions in the connector. For example, the complete part number for a 10-position feed-thru connector with locking ramp and without polarising tabs for 18 AWG wire would be:

Base number **xxxxxx** plus

prefix-and-suffix

1- — -0

The correct ordering number is

1-xxxxxx-0

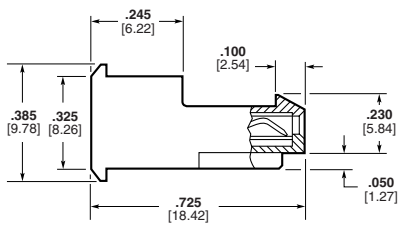
Base Part Numbers

Connector Type & Wire Size	Feed-Thru with Locking Ramp				Feed-Thru without Locking Ramp			
	Without Tabs		With Tabs		Without Tabs		With Tabs	
	Connector Part Numbers	No. of Circuits	Connector Part Numbers	No. of Circuits	Connector Part Numbers	No. of Circuits	Connector Part Numbers	No. of Circuits
Standard UL94V-2, Tin Plated								
18 AWG 0.8-0.9 mm²	640599	2–24	644465[5]	2–14	640604	2–24	644469[5]	2–14
20 AWG 0.5-0.6 mm²	640600	2–24	644466[5]	2–14	640605	2–24	644470[5]	2–14
22 AWG 0.3-0.4 mm²	640601	2–24	644467[5]	2–14	640606	2–24	644471[5]	2–14
24 AWG 0.2 mm²	640602	2–24	644468[5]	2–14	640607	2–24	644472[5]	2–14

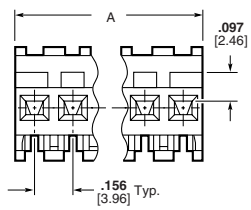
[5] Other circuit sizes are available upon request. Minimums may apply.

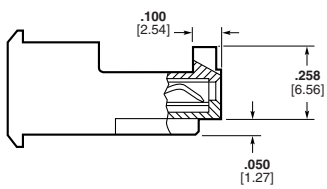
Note: Blocked circuit configurations are available upon request. Contact product engineer or product manager for details. Minimums may apply.

Feed-Thru with Locking Ramp



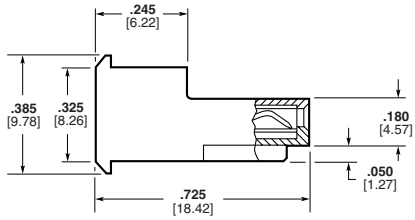
without Polarising Tabs



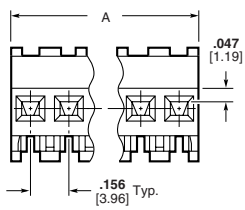


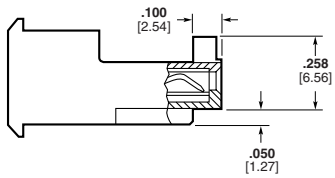
with Polarising Tabs

Feed-Thru without Locking Ramp



without Polarising Tabs





with Polarising Tabs

Mating half visuals for Closed End Connectors with Locking Ramp, see pages 2138 thru 2143 (2140 and 2141 Front Bend Headers Only).

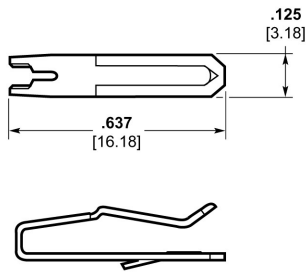
Mating half visuals for Closed End Connectors without Locking Ramp, see pages 2139 thru 2143.

For mateability options, see matrix on pages 2132 and 2133.

For complete product information, order Catalogue 82056

Connector Accessories

Replacement IDC Contacts



Wire Size		Part Numbers		
AWG	mm²	Tin Plated	.000030 [0.00076] Gold Plated	.000015 [0.00038] Gold Plated
18	0.8-0.9	640631-2	641143-2	641143-1
20	0.5-0.6	640632-2	641144-2	641144-1
22	0.3-0.4	640633-2	641145-2	641145-1
24	0.2	640634-2	641146-2	641146-1
26	0.12-0.15	640635-2	641147-2	641147-1

Material and Finish

Contacts — Phosphor bronze, post tin plated; .000030 [0.00076] or .000015 [0.00038] post gold plated over nickel

Note:
Tyco Electronics Corporation does not recommend terminating an MTA contact more than one time. Use replacement contacts when required for field repairs or wire changes.

Closed End and Feed-Thru Covers

Material:

Strain Relief Covers — UL94V-2 rated, nylon, white

Dust Covers — UL94V-0 rated, polyester, white

Cover Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described cover.

Prefixes and suffixes are determined by the number of circuit positions in the cover. For example, the complete part number for a 10-position closed-end strain relief cover would be:

Base number **xxxxxx** plus

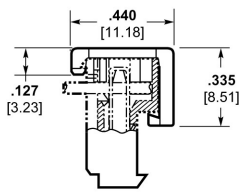
prefix-and-suffix

1- — -0

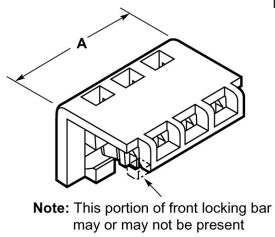
The correct ordering number is

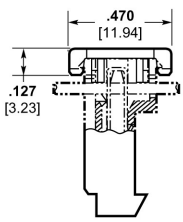
1-xxxxxx-0

Strain Relief Covers

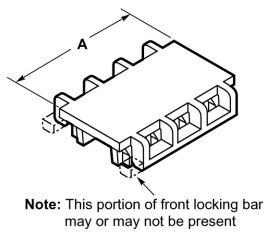


Closed End

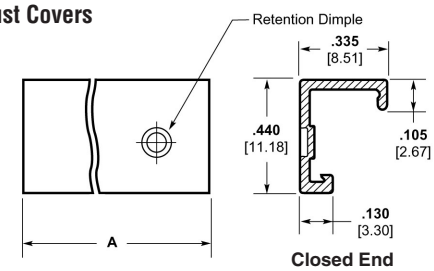




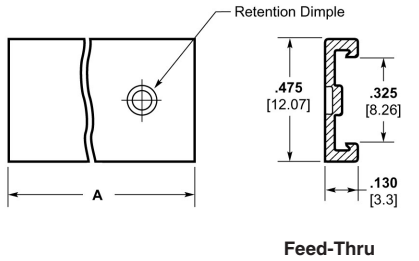
Feed-Thru



Dust Covers



Closed End



Feed-Thru

Base Part Numbers

Closed End				Feed-Thru			
Strain Relief Covers		Dust Covers		Strain Relief Covers		Dust Covers	
Cover Part Numbers	No. of Circuits	Cover Part Numbers	No. of Circuits	Cover Part Numbers	No. of Circuits	Cover Part Numbers	No. of Circuits
643067	2-24	640551	2-24	643071	2-24	640643	2-24

Cover Length

No. of Circuits	Dim. A	Prefix/ Suffix
2	**.312** 7.92	-2
3	**.468** 11.89	-3
4	**.624** 15.85	-4
5	**.780** 19.81	-5
6	**.936** 23.77	-6
7	**1.092** 27.74	-7
8	**1.248** 31.7	-8
9	**1.404** 35.66	-9
10	**1.560** 39.62	1- -0
11	**1.716** 43.59	1- -1
12	**1.872** 47.55	1- -2
13	**2.028** 51.51	1- -3
14	**2.184** 55.47	1- -4
15	**2.340** 59.44	1- -5
16	**2.496** 63.4	1- -6
17	**2.652** 67.36	1- -7
18	**2.808** 71.32	1- -8
19	**2.964** 75.29	1- -9
20	**3.120** 79.25	2- -0
21	**3.276** 83.21	2- -1
22	**3.432** 87.17	2- -2
23	**3.588** 91.14	2- -3
24	**3.744** 95.1	2- -4

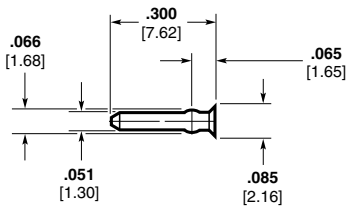
For complete product information, order Catalogue 82056

Connector Accessories

Keying Plugs

Material:
UL94V-2 rated, type 6/6 nylon, natural colour

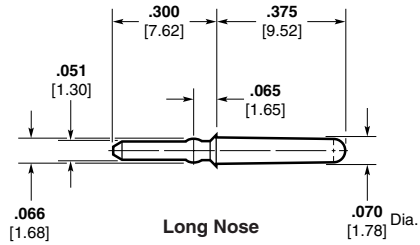
Note: Removal of contact is not necessary when using keying plug.



Flush

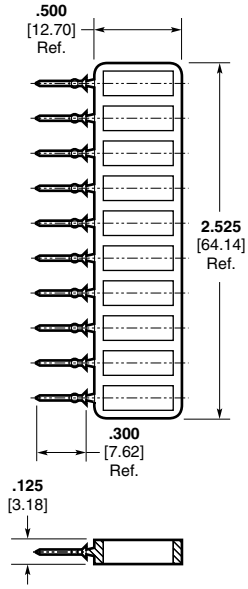
Loose Piece

Part Number 640629-1 **(Flush)**
Used with keyed headers



Long Nose

Part Number 640630-1 **(Long Nose)**
Used with staked post



On Carrier Strip

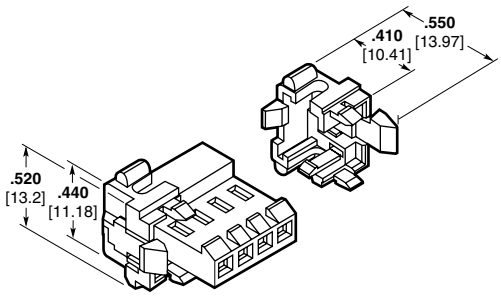
Part Number 641623-1 **(Flush)**
(10 per strip)

Panel Mount End Caps

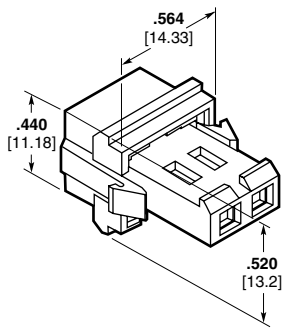
Material:
UL94V-2 rated, nylon, black

Notes:
1. Both left-hand and right-hand end caps are attached by a connecting tab. This tab must be broken off prior to installing on connector.
2. For best results attach panel mount end caps to the MTA-156 (IDC) connectors shown on pages 2134 thru 2135. While not preferred, panel mount end caps can be attached to MTA-156 (IDC) posted connector on page 2138.

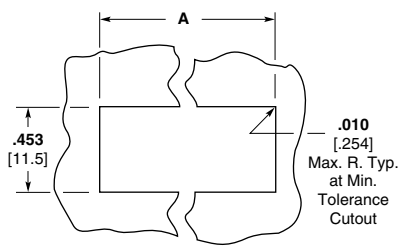
No. of Positions	Dim. A
3	**.736** 18.69
4	**.892** 22.66
6	**1.204** 30.58
9	**1.672** 42.47
12	**2.140** 54.36
15	**2.608** 66.24
24	**4.012** 101.9

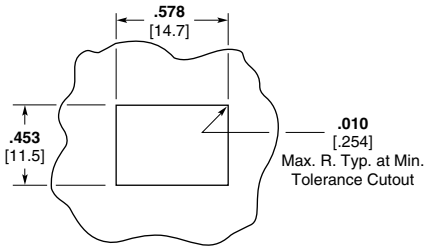


3- thru 24-Position
Part Number 641440-1
See Note 1



2-Position Only
Part Number 641533-1





Recommended Panel Cutout
(Recommended Panel Thickness .062 [1.57] to .067 [1.70] max.)

For complete product information, order Catalogue 82056

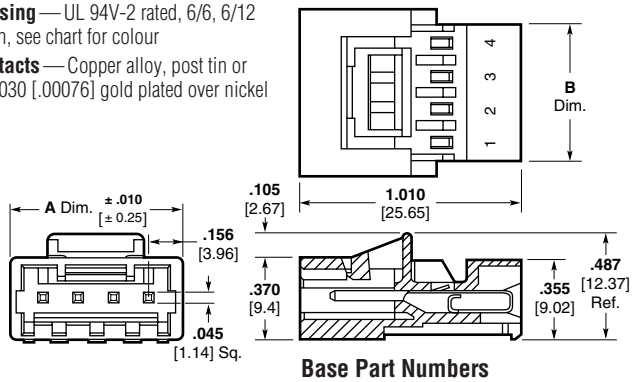
IDC Posted Connectors (Wire-to-Wire) — Closed End, Feed-Thru

Material and Finish:

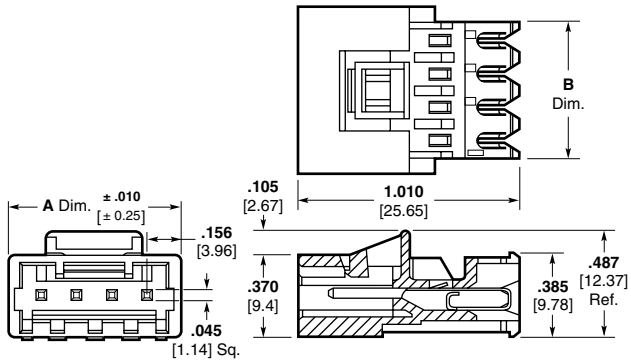
Housing — UL 94V-2 rated, 6/6, 6/12 nylon, see chart for colour

Contacts — Copper alloy, post tin or .000030 [.00076] gold plated over nickel

Closed End



Feed-Thru



Notes:
1. Mating half visuals - pages 2134 thru 2135.
2. Strain relief & dust covers - page 2136.
3. Approved wire listing - page 2151.

Base Part Numbers

Connector Type & Wire Size	Closed End Connector		Feed-Thru Connector	
	Part Numbers	No. of Circuits	Part Numbers	No. of Circuits
Standard UL 94V-2, Tin Plated				
18 AWG 0.8-0.9 mm²	641435	2, 3, 4, 6, 9, 12, 15, 24	641522	2, 3, 4, 6, 9, 12, 15, 24
20 AWG 0.5-0.6 mm²	641436	2, 3, 4, 6, 9, 12, 15, 24	641523	2, 3, 4, 6, 9, 12, 15, 24
22 AWG 0.3-0.4 mm²	641437	2, 3, 4, 6, 9, 12, 15, 24	641524	2, 3, 4, 6, 9, 12, 15, 24
24 AWG 0.2 mm²	641438	2, 3, 4, 6, 9, 12, 15, 24	641525	2, 3, 4, 6, 9, 12, 15, 24
26 AWG 0.12-0.15 mm²	641439	2, 3, 4, 6, 9, 12, 15, 24	641526	2, 3, 4, 6, 9, 12, 15, 24
Standard UL 94V-2, .000030 [0.00076] Gold Plated				
18 AWG 0.8-0.9 mm²	644807	2, 3, 4, 6, 9, 12, 15, 24	644812	2, 3, 4, 6, 9, 12, 15, 24
20 AWG 0.5-0.6 mm²	—[2]	—	—[2]	—
22 AWG 0.3-0.4 mm²	644809	2, 3, 4, 6, 9, 12, 15, 24	644814	2, 3, 4, 6, 9, 12, 15, 24
24 AWG 0.2 mm²	—[2]	—	—[2]	—
26 AWG 0.12-0.15 mm²	—[2]	—	—[2]	—

[1] MTA-156 Posted Connectors (Closed End and Feed-Thru) **will Only mate** with MTA-156 connectors with locking ramp and without polarising tabs. They **will NOT mate** with MTA-156 Quad Connectors.

[2] Parts can be made available upon request. Minimums may apply.

Connector Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described connectors.

Prefixes and suffixes are determined by the number of circuit positions in the connector. For example, the complete part number for a 12-position closed end connector for 18 AWG wire would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -2

The correct ordering number is

1-xxxxxx-2

No. of Circuits	Dim. A	Dim. B	Suffix
2	**.468** 11.89	**.316** 8.03	-2
3	**.624** 15.85	**.472** 11.99	-3
4	**.780** 19.81	**.628** 15.95	-4
6	**1.092** 27.74	**.940** 23.88	-6

No. of Circuits	Dim. A	Dim. B	Prefix/ Suffix
9	**1.560** 39.62	**1.408** 35.76	-9
12	**2.028** 51.51	**1.876** 47.65	1- -2
15	**2.496** 63.40	**2.344** 59.54	1- -5
24	**3.900** 99.06	**3.748** 95.20	2- -4

Colour Coding by Wire Size for UL 94V-2 Connectors

18 AWG — Orange
20 AWG — Yellow
22 AWG — Red
24 AWG — White
26 AWG — Blue

Performance Data:

Voltage Rating — 600 VAC

Current Rating — 7 amp max.

Low-Level Resistance — 7 mΩ max. initial

Dielectric Withstanding Voltage — 1500 VAC/1 min.

Insulation Resistance — 5000 MΩ min. initial

Operating Temperature — -55° C to +105° C

Technical Documents:

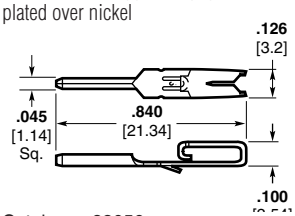
Product Specification
108-1065 MTA-156 Posted Connector

Application Specification
114-1020 MTA-156 Connectors, Posted Connectors and Card Edge Connectors

Replacement IDC Contacts

Material and Finish:

Contacts — Copper alloy, post tin plated over nickel



Wire Size AWG	Wire Size mm²	Part Numbers
18	0.8-0.9	641425-1
20	0.5-0.6	641426-1
22	0.3-0.4	641427-1
24	0.2	641428-1
26	0.12-0.15	641429-1

For complete product information, order Catalogue 82056

Flat Headers — Straight

Material and Finish:

Housing — UL94V-0 rated, polyester, white

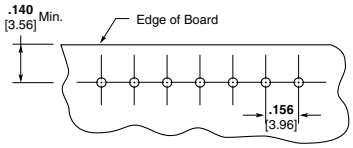
Posts — Copper alloy, tin plated, .000030 [0.00076] or .000015 [0.00038] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Gold headers are duplex plated, gold on mating end of post and tin on the soldertail.
3. .125 [3.18] soldertail lengths are for .062 [1.57] thick printed circuit board and .175 [4.45] soldertail lengths are for .093-.125 [2.36-3.18] thick printed circuit boards.
4. To determine header overall length (Dim. A), multiply .156 x the number of posts. Example: .156 x 10 posts equals 1.560 inches [39.62 mm].

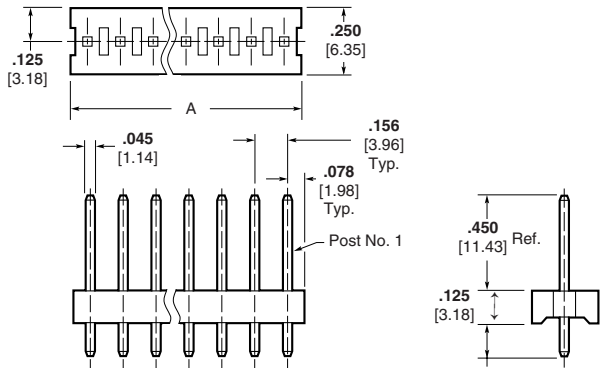
For mateability options, see matrix on pages 2132, 2133, 2144 and 2146.

For mating half visuals, see pages 2134, 2135, 2146, 2148 and 2149.

PC Board Hole Diameters	
Square Post	Round Post
.080/.070 [2.03/1.78]	.070/.060 [1.78/1.52]



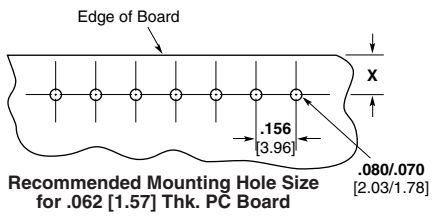
Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board



Base Part Numbers

Square Posts				Round Posts			
.125 [3.18] Soldertail		.175 [4.45] Soldertail		.125 [3.18] Soldertail		.175 [4.45] Soldertail	
Header Part Nos.	No. of Posts	Header Part Nos.	No. of Posts	Header Part Nos.	No. of Posts	Header Part Nos.	No. of Posts
Standard UL94V-0, Tin Plated							
640383	2-24	644749	2-24	640384	2-24	644750	2-24
Standard UL94V-0, .000030 [0.00076] Gold Plated							
641202	2-24	644756	2-24	641203	2-24	644757	2-24
Standard UL94V-0, .000015 [0.00038] Gold Plated							
641113	2-24	644763	2-24	641114	2-24	644764	2-24

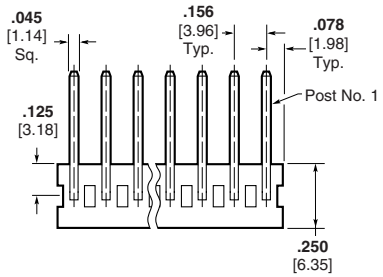
Flat Headers — Right-Angle

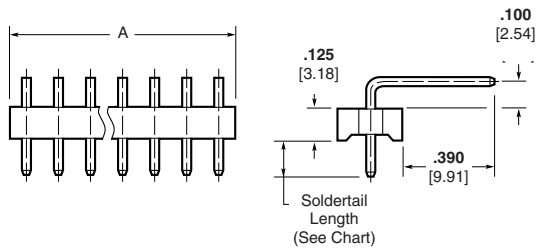


Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board

X = .140 [3.56] Min., .430 [10.92] Max. when mated with MTA-156 Connector
X = .140 [3.56] Min. when mated with SL-156 Wire-to-Board Connector.

Note: Consult Product Drawing for details on placing headers onto pc boards.





Base Part Numbers

Square Posts			
.125 [3.18] Soldertail		.175 [4.45] Soldertail	
Header Part Nos.	No. of Posts	Header Part Nos.	No. of Posts
Standard UL94V-0, Tin Plated			
640385	2-24	644751	2-24
Standard UL94V-0, .000030 [0.00076] Gold Plated			
641204	2-24	644758	2-24
Standard UL94V-0, .000015 [0.00038] Gold Plated			
641115	2-24	644765	2-24

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with square posts and a .125 [3.18] soldertail length would be:

Base number **xxxxxx** plus

prefix-and-suffix

1- — -0

The correct ordering number is

1-xxxxxx-0

Note:
Select load headers (omitted pin headers) are available upon request. Please contact product engineer or product manager for details.

For complete product information, order Catalogue 82056

Material and Finish:

Housing — UL94V-0 rated, polyester, white

Posts — Copper alloy, tin plated, .000030 [0.00076] or .000015 [0.00038] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Gold headers are duplex plated, gold on mating end of post and tin on the soldertail.
3. .125 [3.18] soldertail lengths are for .062 [1.57] thick printed circuit board and .175 [4.45] soldertail lengths are for .093-.125 [2.36-3.18] thick printed circuit boards.
4. To determine header overall length (Dim. A), multiply .156 x the number of posts. Example: .156 x 10 posts equals 1.560 inches [39.62 mm].

For mateability options, see matrix on pages 2132, 2133, 2144 and 2146.

For mating half visuals, use connectors with a locking ramp for polarisation/retention purposes, see pages 2134, 2135, 2145, 2148 and 2149.

For polarising purposes only use connectors without a locking ramp. See pages 2133, 2134, 2144, 2147 and 2148.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with square posts and a .125 [3.18] soldertail length would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

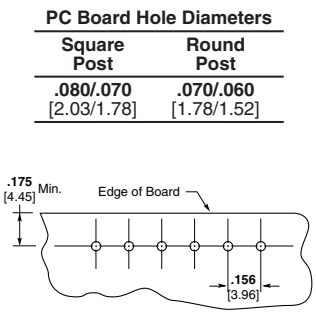
The correct ordering number is

1-xxxxxx-0

Note:
Select load headers (omitted pin headers) are available upon request. Please contact product engineer or product manager for details.

Friction Lock Headers — Straight

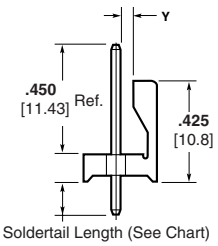
PC Board Hole Diameters	
Square Post	Round Post
.080/.070 [2.03/1.78]	.070/.060 [1.78/1.52]



Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board

Y = .068 [1.73] 2-8 position tin plated and 2-24 position gold plated headers.

Y = .073 [1.85] 9-24 position tin plated headers.



Soldertail Length (See Chart)

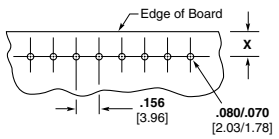
Base Part Numbers

Square Posts				Round Posts			
.125 [3.18] Soldertail		.175 [4.45] Soldertail		.125 [3.18] Soldertail		.175 [4.45] Soldertail	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated							
640445	2-24	644752	2-24	640388	2-24	644753	2-24
643495-2	5[1]						
Standard UL94V-0, .000030 [0.00076] Gold Plated							
641208	2-24	644759	2-24	641209	2-24	644760	2-24
Standard UL94V-0, .000015 [0.00038] Gold Plated							
641119	2-24	644766	2-24	641120	2-24	644767	2-24

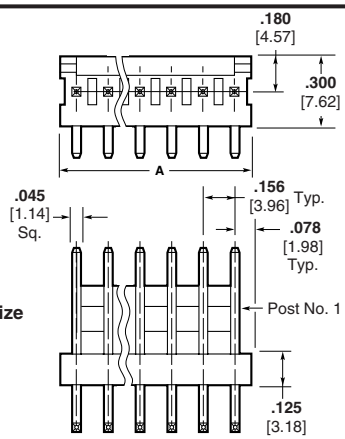
[1] Post Numbers 2 and 4 Omitted

Friction Lock Headers — Right-Angle

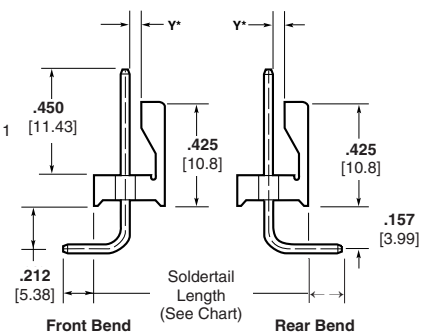
When using Rear Bend Headers — use connectors without a locking ramp.



Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board



*See Y dimension above.



Note: Consult Product Drawing for **X** Dim. and details on placing headers onto pc boards.

Base Part Numbers

Square Posts					
Front Bend				Rear Bend	
.125 [3.18] Soldertail		.175 [4.45] Soldertail		.125 [3.18] Soldertail	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated					
640389	2-24	644754	2-24	640387	2-24
Standard UL94V-0, .000030 [0.00076] Gold Plated					
641210	2-24	644761	2-24	641207	2-24

For complete product information, order Catalogue 82056

Material and Finish:

Housing — UL94V-0 rated, polyester, white

Posts — Copper alloy, tin plated or .000030 [0.00076] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Peg holes are not required in PC Boards when headers without pegs are used.
3. One peg only on a 2 position header, other position sizes have two pegs.
4. Headers with .00015 [0.00038] gold plated post are available upon request. Minimums may apply.
5. To determine header overall length (Dim. A), multiply .156 x the number of posts. Example: .156 x 10 posts equals 1.560 inches [39.62 mm].

For mateability options, see matrix on pages 2132, 2133, 2144 and 2146.

For mating half visuals, use connectors with a locking ramp for polarisation/retention purposes, see pages 2134, 2135, 2145, 2148 and 2149.

For polarising purposes only use connectors without a locking ramp. See pages 2134, 2135, 2148 and 2149.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with square posts with pegs would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

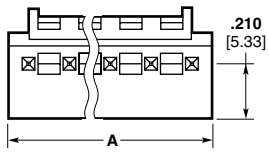
The correct ordering number is

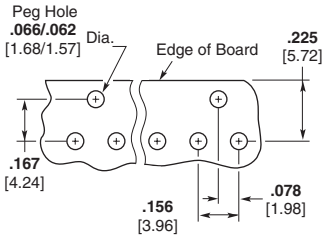
1-xxxxxx-0

Note:
Select load headers (omitted pin headers) are available upon request. Please contact product engineer or product manager for details.

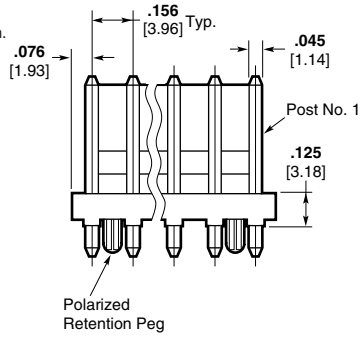
Polarised Lock Headers — Straight

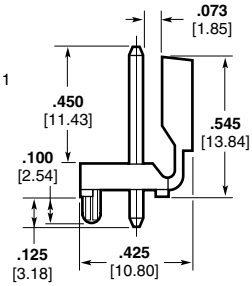
PC Board Hole Diameters
Square Post
.069/.065 [1.75/1.65]

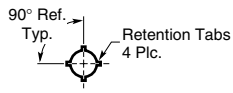




Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board







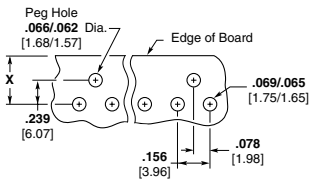
Polarised Retention Peg

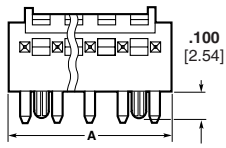
Base Part Numbers

Square Posts			
Without Pegs		With Pegs	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated			
644611	2-18	644615	2-18
Standard UL94V-0, .000030 [0.00076] Gold Plated			
644627	2-18	644631	2-18

Polarised Lock Headers — Right-Angle

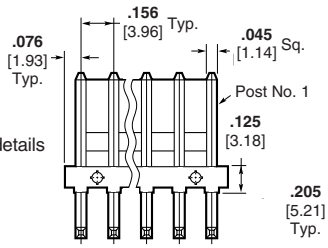
X = .350 [8.89] Min., .825 [20.96] Max. when mated with MTA-156 Connector
X = .350 [8.89] Min. when mated with SL-156 Connector.

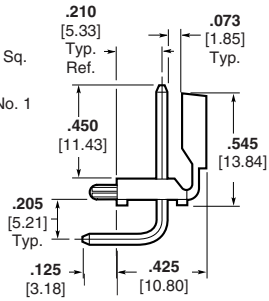




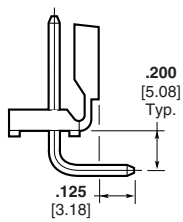
Recommended Mounting Hole Size for .062 [1.57] Thk. PC Board

Note: Consult Product Drawing for details on placing headers onto pc boards.



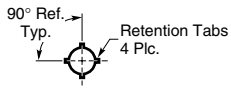


Front Bend



Rear Bend

Contact product engineer or product manager for details on Rear Bend.



Polarised Retention Peg

Base Part Numbers

Square Posts			
Front Bend			
Without Pegs		With Pegs	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated			
644613	2-18	644617	2-18
Standard UL94V-0, .000030 [0.00076] Gold Plated			
644629	2-18	644633	2-18

For complete product information, order Catalogue 82056

Friction Lock High Temperature Headers — Straight

For use with Infrared Reflow Process

Maximum Temperature Rating: 235°C

Material and Finish:

Housing — UL94V-0 rated, thermoplastic, polyester, black

Posts — Copper alloy, tin plated, .000015 [0.00038] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Gold headers are duplex plated, gold on mating end of post and tin tin on the soldertail.
3. Headers with straight and right angle square posts are available upon request. Minimums may apply.
4. To determine header overall length (Dim. A), multiply .156 x the number of posts. Example: .156 x 10 posts equals 1.560 inches [39.62 mm].

For mateability options, see matrix on pages 2132, 2133, 2144 and 2146.

For mating half visuals, use connectors with a locking ramp for polarisation/retention purposes, see pages 2134, 2135, 2145, 2148 and 2149.

For polarising purposes only use connectors without a locking ramp. See pages 2134, 2135, 2148 and 2149.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers.

Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with round tin plated posts:

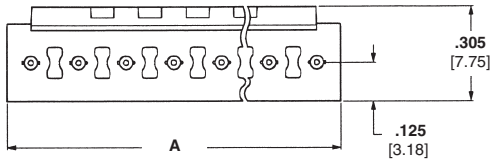
Base number **xxxxxx** plus prefix-and-suffix

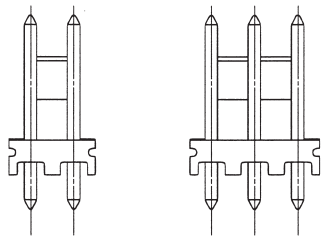
1- — -0

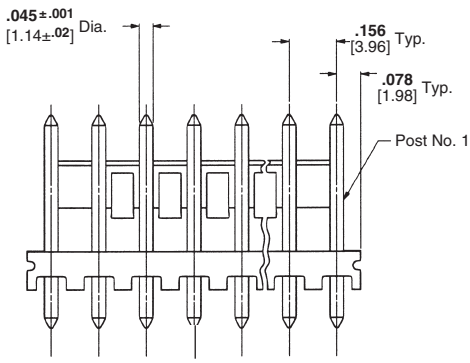
The correct ordering number is

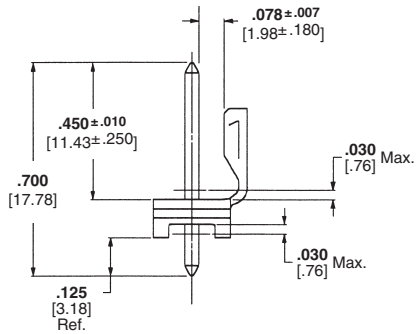
1-xxxxxx-0

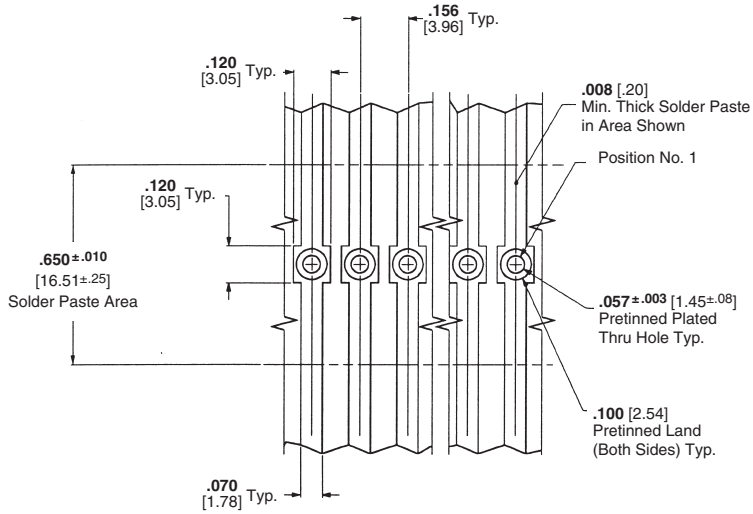
Note:
Select load headers (omitted pin headers) are available upon request. Please contact product engineer or product manager for details.











Recommended Mounting Hole Pattern for .062 [1.57] Thick PC Board

Base Part Numbers

Round Post	
Header Part Numbers	**No. of Posts**
Standard UL94V-0, Tin Plated	
647260	2-11
Standard UL94V-0, .000015 [0.00038] Gold Plated	
647261	2-11
Tube Loaded UL94V-0, Tin Plated	
647262	2-11
Tube Loaded UL94V-0, .000015 [0.00038] Gold Plated	
644322	2-11

For complete product information, order Catalogue 82056

Shrouded Headers — Straight and Right-Angle

Material and Finish:

Housing — UL94V-0 rated, polyester, black

Posts — Copper alloy, tin plated; or .000030 [0.00076] or .000015 [0.00038] gold over nickel

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted using the figure to identify Post No. 1.
2. Gold headers are duplex plated, gold on mating end of post and tin on the soldertail.
3. Peg holes are not required in PC boards when headers without pegs are used.
4. One peg only on a 2 position header, other position sizes have two pegs.
5. Right angle front and rear bend headers with retention pegs can be made available upon request. Minimums may apply.

For mateability options, see matrix on pages 2132, 2133, 2144 and 2146.
For mating half visuals, see pages 2134, 2135 and 2145.

Header Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of posts available for the described headers. Prefixes and suffixes are determined by the number of post positions in the header. For example, the complete part number for a 10-position header with straight, square posts and with pegs would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

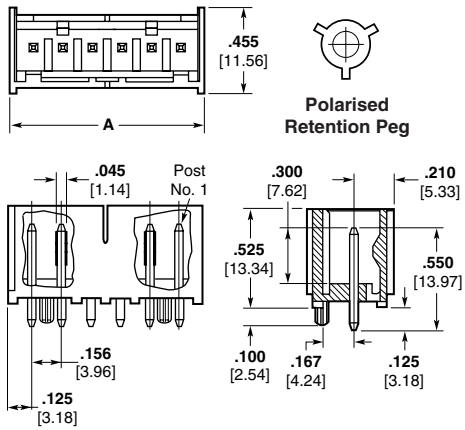
The correct ordering number is

1-xxxxxx-0

Header Length

No. of Circuits	Dim. A	Prefix/ Suffix
2	**.406** 10.31	-2
3	**.562** 14.27	-3
4	**.718** 18.24	-4
5	**.874** 22.20	-5
6	**1.030** 26.16	-6
7	**1.186** 30.12	-7
8	**1.342** 34.09	-8
9	**1.498** 38.05	-9
10	**1.654** 42.01	1--0
11	**1.810** 45.97	1--1
12	**1.966** 49.94	1--2

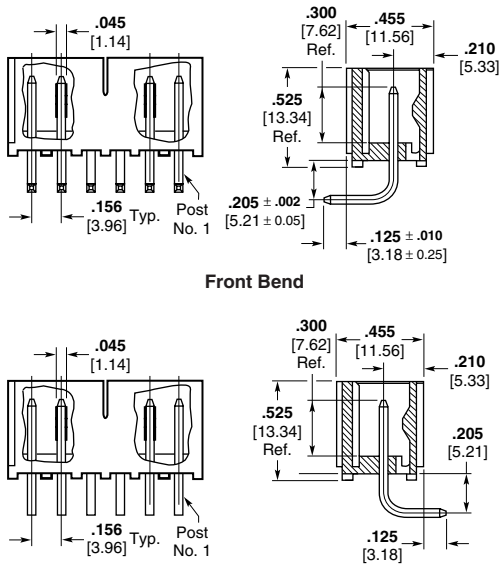
Straight Post (.045 [1.14] Square or Round)

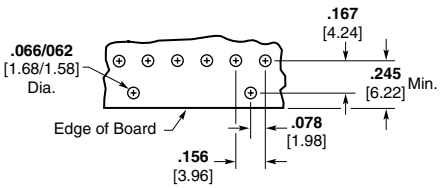


PC Board Hole Diameters

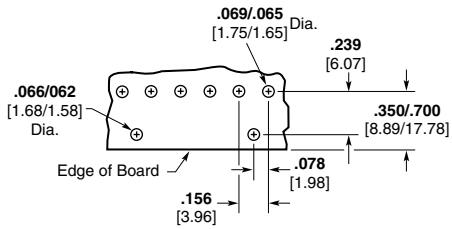
Square Post	Round Post
.069/.065 [1.75/1.65]	**.054/.050** [1.37/1.27]

Right-Angle Post (.045 [1.14] Square)





Recommended Mounting Hole Size for .062 [1.57] Thick PC Board Using a Straight Post Header



Recommended Mounting Hole Size for .062 [1.57] Thick PC Board Using a Right-Angle Header

Base Part Numbers

Note: Consult Product Drawing for details on placing headers onto pc boards.

Straight Square Posts				Straight Round Posts			
Without Pegs		With Pegs		Without Pegs		With Pegs	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated							
647123	2-12	647127	2-12	647124	2-12	647128	2-12
Standard UL94V-0, .000030 [0.00076] Gold Plated							
647131	2-12	647135	2-12	647132	2-12	647136	2-12
Standard UL94V-0, .000015 [0.00038] Gold Plated							
647139	2-12	647143	2-12	647140	2-12	647144	2-12

Square Posts			
Right-Angle Posts, Front Bend Without Pegs		Right-Angle Posts, Rear Bend Without Pegs	
Header Part Numbers	No. of Posts	Header Part Numbers	No. of Posts
Standard UL94V-0, Tin Plated			
647125	2-12	647126	2-12
Standard UL94V-0, .000030 [0.00076] Gold Plated			
647133	2-12	647134	2-12
Standard UL94V-0, .000015 [0.00038] Gold Plated			
647141	2-12	647142	2-12

Note: Select load headers (omitted pin headers) are available upon request. Please contact product engineer or product manager for details.

Product Facts

- **Provides four points of contact**
- **Greater current carrying capability**
- **Connector styles include both closed end and feed-thru with locking ramp, with and without polarising tabs in 2 through 12 positions**
- **Available for wire ranges of 18 – 22 AWG [0.9– 0.3 mm²]**
- **Contacts are lubricated to prevent fretting corrosion**
- **Complies with AMP Specification 109-151, "Current Rating Verification"**
- **Uses existing MTA application tooling for termination**
- **Quad connectors preloaded with contacts**
- **All contacts are slotted for insulation displacement (IDC) termination technique**
- **Connectors and headers are end to end stackable**
- **AWG size is "frosted" on the side of the connector**
- **Recognised under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**
- **Satisfies the VDE requirements according to VDE 110, Insulation Group B, 250 vac for air and creepage paths**

The MTA-156 Quad Connector provides a connection with four points of contact. The UL94V-0 rated connector with multi-point contacts provides greater current carrying capability. These connectors comply with AMP Specification 102-6* and satisfy the VDE requirements according to VDE 110.

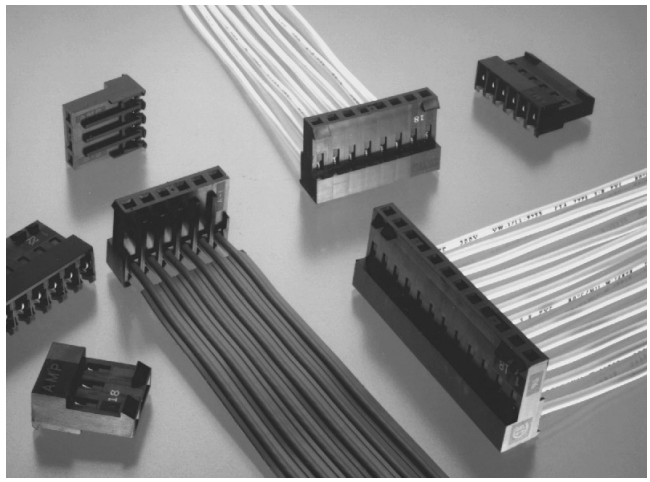
The connectors are available for wire ranges of 18 – 22 AWG [0.9– 0.3 mm²] and in a variety of styles including closed end and feed-thru with locking ramp, with and without polarising tabs.

Only one wire to be terminated into an IDC contact slot.

*The 102-6 Test Specification is the new AMP Current Rating Verification Procedure. Its purpose is to provide a means for verifying the maximum current carrying capacity of the device.

Note: Refer to page 2151 for approved wire listings.

This matrix has been prepared to assist you, our customer, in defining the correct mating halves for the MTA-156 header and connector combination. Where a "Y" is indicated the combination is a valid mating pair.



The MTA-156 Quad Connectors only mate with standard MTA-156 square post headers and use existing MTA application tooling for termination.

Performance Data:

Voltage Rating — 600 vac

Current Rating — 12.5 amp max. on a single circuit

For Multiple Circuit Loading — refer to Product Specification for current rating chart.

Low-Level Resistance — 3.0 mΩ max. initial

Dielectric Withstanding Voltage — 1500 vac/1 min.

Insulation Resistance — 5000 MΩ min. initial

Operating Temperature — -55° C to +105° C

Technical Documents:

Product Specification
108-1219 Connector System, MTA-156, Quad

Application Specification
114-1048 MTA-156 Quad Connector

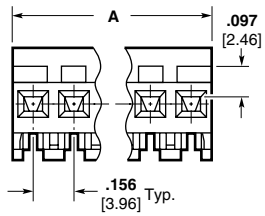
Headers

Connectors	640383	640385	640389	640445	644611	644613	644615	644617	644749	644751	644752	644754	647123	647125	647126	647127	647129	647130	647185	647187	647188	647190	647206	647208	647209	647211	647227	647229
644329	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644370	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644371	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644375	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644376	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644377	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644381	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644382	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644383	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644387	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644388	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
644389	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

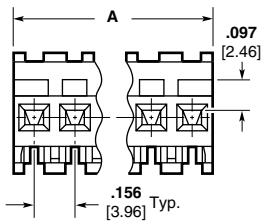
For complete product information, order Catalogue 82056

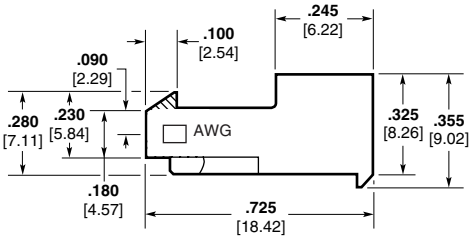
IDC Quad Connectors — Closed End and Feed-Thru

Closed End with Locking Ramp

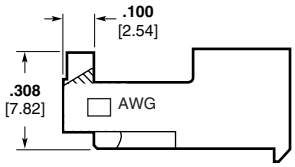


Feed-Thru with Locking Ramp

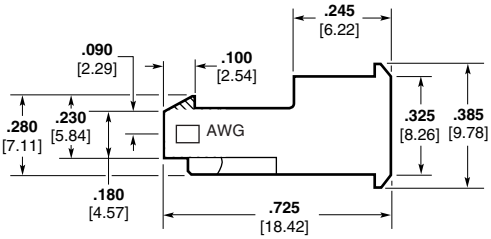




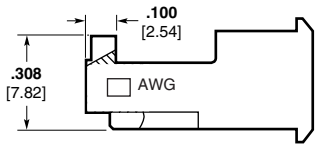
without Polarising Tabs



with Polarising Tabs



without Polarising Tabs



with Polarising Tabs

Material and Finish:

Housing — UL94V-0 rated, 6/6 nylon, black

Contacts — High conductivity copper alloy, post tin plated

For mateability options, see matrix on page 2144.

For strain relief and dust covers, see page 2137.

For mating half visuals, see pages 2139 thru 2143 (2140 and 2141 Front Bend Headers only). **Mates with tin-plated square posts only.**

Refer to pages 2151 for approved wire listing.

Note:
To determine connector overall length (Dim. A), multiply .156 x the number of circuits. Example: .156 x 10 circuits equals 1.560 inches [39.62 mm].

Base Part Numbers

Connector Type & Wire Size	Closed End with Locking Ramp				Feed-Thru with Locking Ramp			
	Without Tabs		With Tabs		Without Tabs		With Tabs	
	Connector Part Numbers	No. of Circuits	Connector Part Numbers	No. of Circuits	Connector Part Numbers	No. of Circuits	Connector Part Numbers	No. of Circuits
Standard UL94V-0, Tin Plated								
18 AWG 0.8-0.9 mm²	644329	2–12	644381	2–12	644375	2–12	644387	2–12
20 AWG 0.5-0.6 mm²	644370	2–12	644382	2–12	644376	2–12	644388	2–12
22 AWG 0.3-0.4 mm²	644371	2–12	644383	2–12	644377	2–12	644389	2–12

Connector Ordering Information

The "Base Part Numbers" Chart above shows the base part number and number of circuits available for the described connectors.

Prefixes and suffixes are determined by the number of circuit positions in the connector. For example, the complete part number for a 10-position closed end connector with locking ramp and without polarising tabs for 18 AWG wire would be:

Base number **xxxxxx** plus prefix-and-suffix

1- — -0

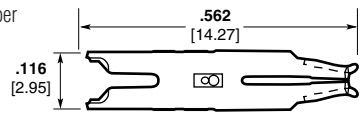
The correct ordering number is

1-xxxxxx-0

Replacement IDC Contacts

Material and Finish:

Contacts — High conductivity copper alloy post tin plated



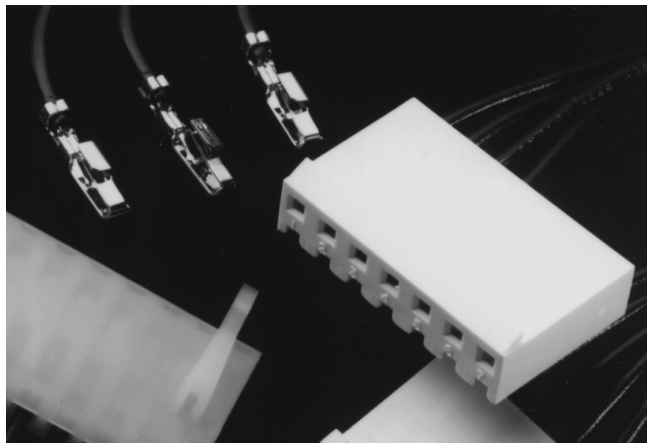
Note: Tyco Electronics does not recommend terminating an MTA contact more than one time. Use replacement contacts when required for field repairs or wire gage changes.

Wire Size		Part Numbers
AWG	mm²	
18	0.8-0.9	644508-1
20	0.5-0.6	644509-1
22	0.3-0.4	644510-1

For complete product information, order Catalogue 82056

Product Facts

- **Rugged wire-to-board interconnection to mate with .045 square or round post headers or staked posts on .156 centres**
- **Connectors accept wire range of 18–24 AWG [0.9–0.2 mm²]**
- **Two-piece interconnection system (connector/header)**
- **Housing made of flame retardant nylon**
- **Available in 1- through 24-position connector configurations**
- **Connectors are end-to-end stackable in Standard Housings**
- **Wire-to-board system offers polarisation with friction lock for positive mating**
- **Meets the material requirements of Table 23.1 of UL1410 Standard for High-Voltage Television Receivers and Video Productions**



- **Recognised under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR7189**

The AMP SL-156 connectors shown on the following pages are designed to mate with .045 [1.14] square or round post headers or staked posts on .156 [3.96] centres.

The wire-to-board connector is a two-piece connector system with the wire crimped to the contact, then inserted into the housing. This product mates with the MTA-156 flat, polarised and friction lock header, or staked posts (**not** MTA-156 shrouded headers).

Performance Data:

Voltage Rating — 250 vac

Current Rating — 10 amp max. at 250 vac

Low-Level Resistance — 3.0 mΩ max. initial

Dielectric Withstanding Voltage — 2000 vac/1 min.

Insulation Resistance — 1000 MΩ min. initial

Operating Temperature — −55° C to +105° C

Technical Documents:

Product Specifications
108-1049, 108-1049-1, 108-1049-2

Application Specification
114-1021

The Large Insulation Diameter (LID) Contacts and Housings are for use in applications where wire insulation exceeds .105 [2.67].

This chart represents only the housing and header combinations. You also need to consider the plating on the contacts and headers. Gold contact with gold headers and tin contacts with tin headers.

Headers

Housings * Standard	LID	640383	640384	640385	640387	640388	640389	640445	641202	641203	641204	641207	641208	641209	641210	644322	644611	644612	644613	644614	644615	644616	644617	644627	644628	644629	644630	644631	644632	644633	644749	644750
640250	647401	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
640251	647400	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
770849	647402	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y

Headers

Housings * Standard	LID	644751	644752	644753	644754	644755	644756	644757	644758	644759	644760	644761	644762
640250	647401	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
640251	647400	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
770849	647402	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N

Headers

Housings * Standard	LID	647210	647211	647212	647213	647214	647215	647216	647217	647218	647219	647227	647228	647229	647230	647231	647232	647233	647234	647260	647261	647262
640250	647401	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y
640251	647400	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
770849	647402	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y

*** Select contact plating to match header plating**

For complete product information, order Catalogue 82056

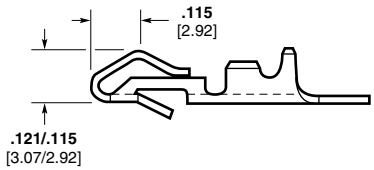
Crimp Contacts and Keying Plugs

Contacts

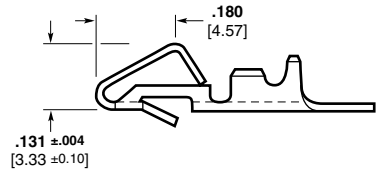
Material and Finish:

.012 [0.3] bright tin plated brass or phosphor bronze; .012 [0.3] pre-tin brass; or .012 [0.3] brass or phosphor bronze with .000030 [0.00076] gold over nickel (see chart)

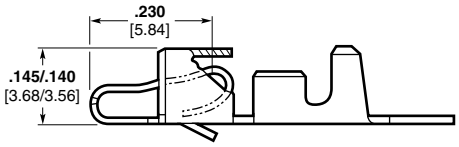
- All tin-plated contacts are post lubricated to resist fretting corrosion
- Recommended insulation diameter is .105 [2.67] max.
- Wire range is 18-24 AWG [0.9-0.2 mm²]



A
High Force
(6.5 Amp Max. Current Rating)



B
Low Force
(6.5 Amp Max. Current Rating)



C
Hooded (Dual Wipe)
(10 Amp. Max. Current Rating)

Contact	Material and Finish	Part Numbers	
		Strip	Loose Piece
A	brass, bright tin plated	640252-1	640706-1
	brass, pre-tin plated	640252-2	640706-2
B	brass, bright tin plated	350980-1	640707-1
	brass, pre-tin plated	350980-2	—
	brass, gold plated	350980-3	770258-1
C	phosphor bronze, bright tin plated	770476-1	770522-1
	phosphor bronze, gold plated	770476-2	770522-2

Application Note:

Part Number 640252 has a higher mating and un-mating force than **Part Number** 350980 and is recommended to be used only in housings with 1 through 12 positions. **Part Number** 350980 can be used in any size housing but is recommended to be used in housings with 13 through 24 positions. **Part Number** 770476 is recommended for use in any size housing. Its mating force is similar to **Part Number** 350980 while unmating force is similar to 640252.

For housings, see pages 2148 and 2150

Application Tooling

Extraction Tool
Part Number 90471-1

Loose Piece Contacts:

PRO-CRIMPER II Hand Tool
Part Number 58614-1 (408-4228)
[For Field Service Use Only]

CERTI-CRIMP Hand Tool
Contact Technical Support Centre

Strip Contacts:

AMP-O-LECTRIC Model "G" Termination Machine* Applicator 466468-4
(Request Catalogue 65828)

AMP-O-LECTRIC Model "K" Termination Machine* Applicator 466468-2

AMP-O-MATIC Stripper-Crimper Machine* SCA 466947-1 or 567828-1 (with CQM)
(Request Catalogue 65004)

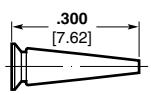
AMPOMATOR CLS IV+ Lead-Making Machine* Applicator 466468-1
(Request Catalogue 82659)

*Requires applicators. For part numbers, contact Tyco Electronics.

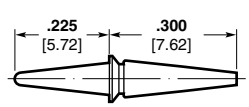
Keying Plugs

Material:

UL94V-2 rated, type 6/6 nylon, natural colour



Keying Plug
Part Number 640254-1



Keying Pin
Part Number 640255-1

For complete product information, order Catalogue 82056

Standard Housings — Wire-to-Board

Housings

Material:

UL94V-0 rated, nylon, white

Notes:

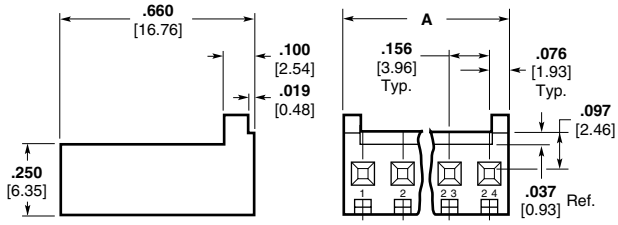
1. Accepts either .045 [1.14] square or round posts. Housings mate with flat and friction lock headers, or staked posts on .156 [3.96] centres.
2. Housings without ramp, with polarising tab, available upon request. Minimums may apply.
3. Recommend contact: Part No. 640252 for 1 thru 12 positions; Part No. 350980 for 13 thru 24 positions; Part No. 770476 for 1 thru 24 positions.
4. These parts are End-to-End stackable.

For contacts, see page 2147.

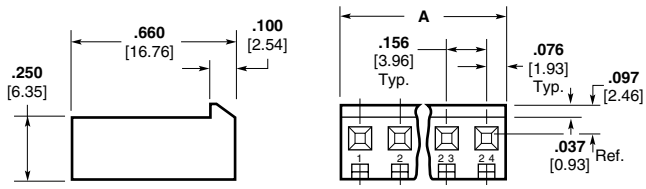
For mateability options, see matrix on page 2146.

For mating half visuals, for connectors with locking ramp, see pages 2139 thru 2142 (2140 and 2141 Front Bend Headers only.)

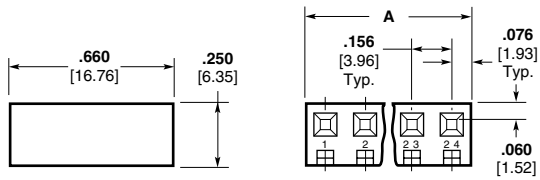
For mating half visuals, for connectors without locking ramp, see pages 2139 thru 2142.



With Locking Ramp/With Polarising Tabs



With Locking Ramp/Without Polarising Tabs



Without Locking Ramp/Without Polarising Tabs

No. of Positions	Dim. A	With Ramp/ With Tabs	With Ramp/ Without Tabs	Without Ramp/ Without Tabs
1	**.152** 3.86	—	640250-1	640251-1
2	**.308** 7.82	770849-2	640250-2	640251-2
3	**.465** 11.81	770849-3	640250-3	640251-3
4	**.621** 15.77	770849-4	640250-4	640251-4
5	**.777** 19.74	770849-5	640250-5	640251-5
6	**.933** 23.70	770849-6	640250-6	640251-6
7	**1.090** 27.69	770849-7	640250-7	640251-7
8	**1.246** 31.65	770849-8	640250-8	640251-8
9	**1.402** 35.61	770849-9	640250-9	640251-9
10	**1.558** 39.57	1-770849-0	1-640250-0	1-640251-0
11	**1.715** 43.56	1-770849-1	1-640250-1	1-640251-1
12	**1.871** 47.52	1-770849-2	1-640250-2	1-640251-2

No. of Positions	Dim. A	With Ramp/ With Tabs	With Ramp/ Without Tabs	Without Ramp/ Without Tabs
13	**2.027** 51.49	1-770849-3	1-640250-3	1-640251-3
14	**2.183** 55.45	1-770849-4	1-640250-4	1-640251-4
15	**2.340** 59.44	1-770849-5	1-640250-5	1-640251-5
16	**2.496** 63.40	1-770849-6	1-640250-6	1-640251-6
17	**2.652** 67.36	1-770849-7	1-640250-7	1-640251-7
18	**2.808** 71.32	1-770849-8	1-640250-8	1-640251-8
19	**2.965** 75.31	1-770849-9	1-640250-9	1-640251-9
20	**3.121** 79.27	2-770849-0	2-640250-0	2-640251-0
21	**3.277** 83.24	2-770849-1	2-640250-1	2-640251-1
22	**3.433** 87.20	2-770849-2	2-640250-2	2-640251-2
23	**3.590** 91.19	2-770849-3	2-640250-3	2-640251-3
24	**3.746** 95.15	2-770849-4	2-640250-4	2-640251-4

Note: Not for use with LID contacts.

For complete product information, order Catalogue 82056

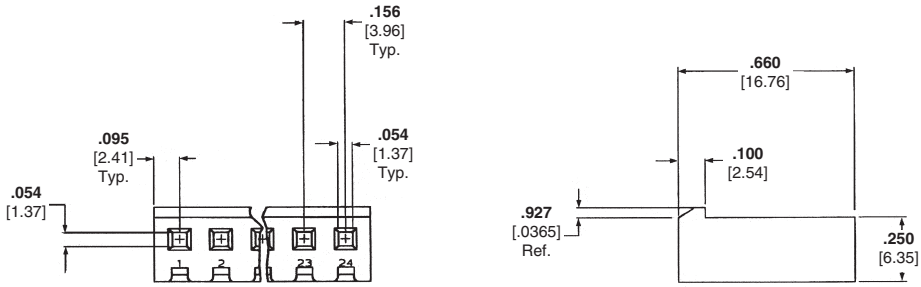
Housings and Contacts for Large Insulation Diameter (LID) Wire

Housings

Material:

UL 94V-0 rated, nylon, white

Notes:
1. Accepts Standard and LID contacts.
2. Larger opening in housings eases contact insertion when using wires that have large insulation diameters (.100-.112 [2.54-2.84]).
3. Housings are not End-to-End stackable.



No. of Positions*	Description	Part Numbers: Housings with Larger Openings for Oversize Wire
1-24	Without Locking Ramp or Polarisation Tabs	647400
	With Locking Ramp and without Polarisation Tabs	647401 (shown above)
2-24	With Locking Ramp and Polarisation Tabs	647402

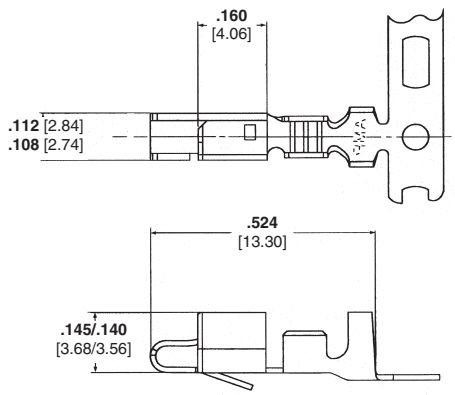
*Base Part Number Prefixes and Suffixes indicate number of contact positions, e.g. 2 Position = 0-xxxxxx-2 and 12 Position = 1-xxxxxx-2

Contacts

Material and Finish:

.012 [0.3] bright tin plated phosphor bronze; .012 [0.3] phosphor bronze with .000030 [0.00076] gold over nickel (see chart)

- All tin-plated contacts are post lubricated to resist fretting corrosion
- Maximum insulation diameter is .112 [2.85].
- Wire range is 18-24 AWG [0.9-0.2 mm²] and a limited 16 AWG (1.29-1.42 mm²) (2550-2800 CMA)



Hooded (Dual Wipe)
(10 Amp Max. Current Rating)

Product Specifications:

108-1049-1 and 108-1049-2

Application Tooling

AMP-O-LETRIC Model "G" Termination Machine*
Applicator 1385048-3 [18-24 AWG]
Applicator 1385219-3 [16 AWG]

AMP-O-LECTRIC Model "K" Termination Machine*
Applicator 1385048-2 [18-24 AWG]
Applicator 1385219-3 [16 AWG]

*For additional part numbers and information contact the Technical Support Centre at 1-800-522-6752

Wire Size	Material	Plating	Part Numbers For LID* Wire: Strip	Part Numbers For LID* Wire: Loose Piece
18-24 AWG	Phosphor Bronze	Tin	647406-1	647409-1
		Gold	647406-2	647409-2
16 AWG (2550-2800 CMA only)	Phosphor Bronze	Tin	647466-1	647485-1
		Gold	647466-2	647485-2

*Large Insulation Diameter (.100-.112 [2.54-2.84])
Notes: 1. For information on application tooling, call the Technical Support Centre 1-800-522-6752.
2. Can **not** be used with Standard SL-156 Housings, must be used with LID Housings only.

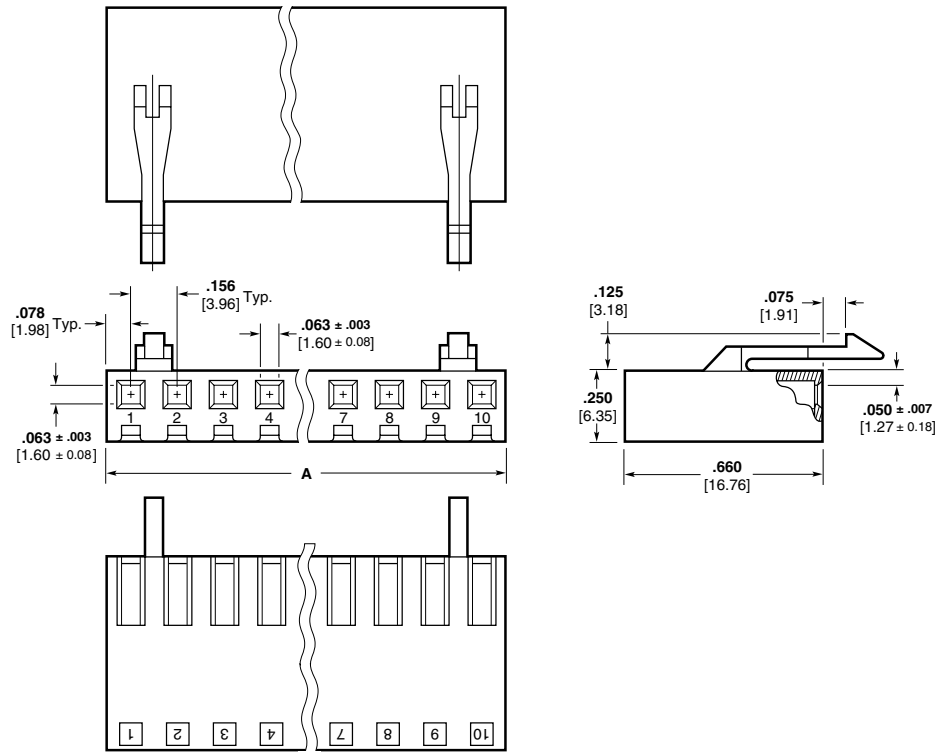
For complete product information, order Catalogue 82056

Housings With Through-Board Latch

Housings

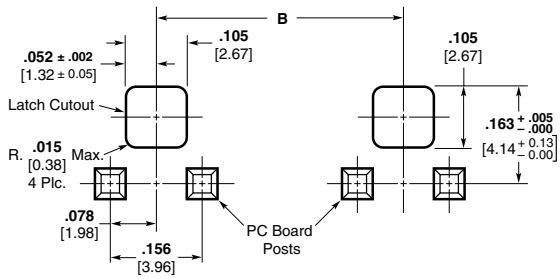
Material:

UL94V-2 rated, nylon, white



Mates with .045 square or round staked posts only.

For contacts, see page 2147



Recommended PC Board Cutout for .062 [1.57] Thick PC Board

No. of Positions	Dimensions A	Dimensions B	Latch Location Centred Between Pos.	Part Number
2	**.312** 7.92	—	1 and 2	770894-2
3	**.468** 11.89	—	1 and 2	770894-3
4	**.624** 15.85	—	2 and 3	770894-4
5	**.780** 19.81	—	2 and 3	770894-5
6	**.936** 23.77	—	3 and 4	770894-6
7	**1.092** 27.74	—	3 and 4	770894-7
8	**1.248** 31.70	—	4 and 5	770894-8
9	**1.404** 35.66	**1.092** 27.74	1 and 2 & 8 and 9	770894-9
10	**1.560** 39.62	**1.248** 31.70	1 and 2 & 9 and 10	1-770894-0

For complete product information, order Catalogue 82056

MTA Connectors Approved Wire Listing

Critical to the success of a wire-to-board application is the proper wire selection. The chart identifies wires that have been evaluated and approved by the product engineering section. If you plan to use a wire not on the approved list, please submit a sample 12" length of wire to Tyco Electronics for evaluation.

MTA-100 Connectors	Wall	Approved Wire AWG
UL 1007 PVC Insulation	.015" [0.381]	22, 24, 26, 28
UL 1061 Semi-Rigid PVC Insulation	.009" [0.229]	22, 24, 26, 28
UL 1095 Semi-Rigid PVC Insulation	.012" [0.305]	24
UL 1371 TEFLON Insulation — TFE	.006" [0.152]	22, 26
UL 1429 Irradiated PVC — X.L.P.V.C.	.010" [0.254]	22, 24, 26, 28
UL 2464 PVC	.013" [0.330]	24
UL 3265 Irradiated Polyethylene — X.L.P.E.	.010" [0.254]	22, 24
UL 3266 Irradiated Polyethylene — X.L.P.E.	.015" [0.381]	22, 24
MIL-W-16878, Type B-PVC Insulation	.010" [0.254]	22
UL 1213 TEFLON Insulation—T.F.E.	.010" [0.254]	22
MTA-156 Connectors		
UL 1007 PVC Insulation	.015" [0.381]	18, 20, 22, 24
UL 1061 Semi-Rigid PVC Insulation	.009" [0.229]	18, 20, 22, 24
UL 1180 TEFLON Insulation — T.F.E.	.015" [0.381]	22
UL 1213 TEFLON Insulation — T.F.E.	010" [0.254]	18, 22, 24
UL 1316 PVC/Nylon Wall	.015" [0.381]	18, 22
UL 1429 Irradiated PVC — X.L.P.V.C.	.010" [0.254]	18, 20, 22, 24
UL 1430 Irradiated PVC — X.L.P.V.C.	.015" [0.381]	18, 20, 22, 24
UL 1569 PVC	.015" [0.381]	18
UL 3265 Irradiated Polyethylene — X.L.P.E.	.010" [0.254]	22
UL 3266 Irradiated Polyethylene — X.L.P.E.	.015" [0.381]	18, 20, 22, 24

Note: When selecting approved wire styles noted on this list, the MTA Application Specifications guidelines must be followed. Also, due to wire variations in insulation wall thickness, hardness and wire stranding we would recommend evaluating the wire selected before final application approval.

AWG Metric Equivalents

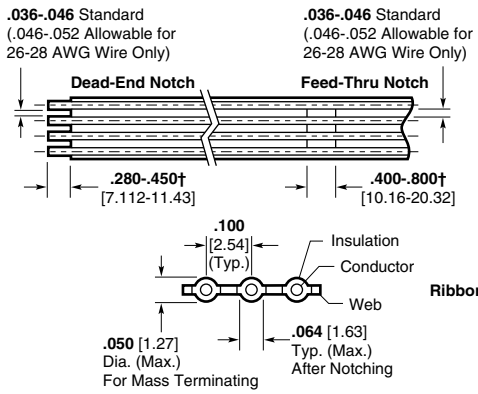
18 — 0.8 – 0.9 mm^2
20 — 0.5 – 0.6 mm^2
22 — 0.3 – 0.4 mm^2
24 — 0.2 mm^2
26 — 0.12 – 0.15 mm^2
28 — 0.08 – 0.09 mm^2

Technical Documents:

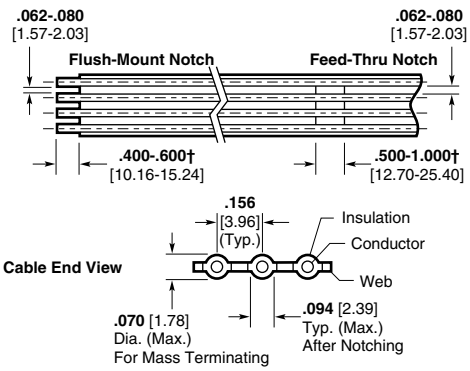
Product Specifications
108-1050 — MTA-100 Connectors
108-1050-1 — MTA-100 Posted Connectors
108-1051 — MTA-156 Connectors
108-1219 — MTA-156 Quad Connector System
108-1065 — MTA-156 Posted Connectors
108-1058 — MTA-156 Card Edge Connectors

Application Specifications
114-1019 — MTA-100 Connectors
114-1020 — MTA-156 Connectors
114-1031 — MTA-100 Ribbon Cable Connector Assembly
114-1032 — MTA-156 Ribbon Cable Connector Assembly
114-1048 — MTA-156 Quad Connector

MTA-100 Ribbon Cable Preparation



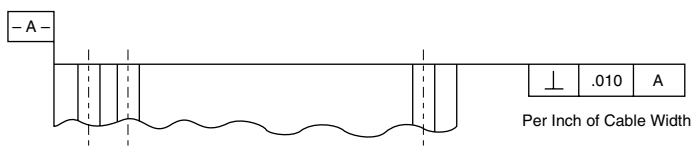
MTA-156 Ribbon Cable Preparation



† The dimensions shown represent the recommended minimum and maximum for notches; the actual dimension will depend on your application requirements.

Notes:
1. Cable shall be notched, as indicated in the individual ribbon cable connector assembly drawing, according to the requirements specified in these figures. Conductor shall not be exposed after notching, nor shall individual wire stands be cut or nicked.
2. U.L. Style #2651 ribbon cable is approved for use with MTA-100 and MTA-156 connectors per Application Specification 114-1031 and 114-1032.

Ribbon Cable



Cable Edge-to-End Alignment (Ends of the cable shall be prepared as indicated in this figure)

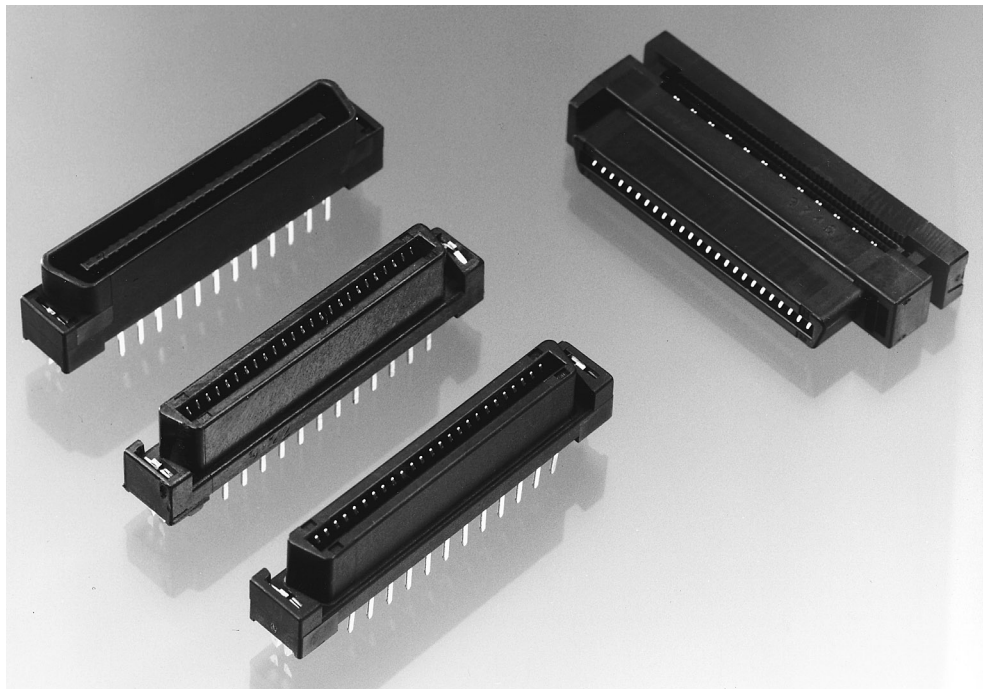
Notes:
1. For MTA Cable Assemblies Contact US Engineering Cable Assembly Group.
2. For IDC Cable, see pages 4036 - 4031.

For complete product information, order Catalogue 82056

CHAMP .050 Series I Connectors

Series I Connectors for Internal Applications

- All-plastic PC board mounting
- Vertical and right-angle plugs and receptacles
- Parallel, perpendicular, and in-line interconnections
- Single-spring contact design for high tolerance to mating depth variations
- Receptacle connectors will mate with .062 [1.57] printed circuit boards to allow service as card edge connectors
- 20 through 200 selected positions
- Recognised under the Component Program of Underwriters Laboratories Inc., File No. E-28476
- Certified by Canadian Standards Association File No. LR 7189C
- Produced under a quality management system certified to ISO 9001



Performance Specifications:

Operating Temperature Range — –55°C to +85°C for Standard
–55°C to +105°C for High Temp.

Current Rating — 1 Ampere Max.

Voltage Rating — 250 VAC Max.

Termination Resistance — 35 Milliohms Maximum Initial

Insulation Resistance — 1,000 Megohms Minimum Initial

Mating Force — 90 Grams Per Contact Maximum

Rated Cycle Life — 500 Cycles

Technical Documents:

Product Specification
108-5290 — Standard Temp
108-1367 — High Temp

Application Specification
114-6045

Instruction Sheet
411-5499

CHAMP .050 Series I Connectors

Right-Angle Plugs

Materials and Finish:

Housing and Tine Plate — Glass filled nylon, rated 94V-0, black for standard. LCP, rated 94V-0, black for High Temp.

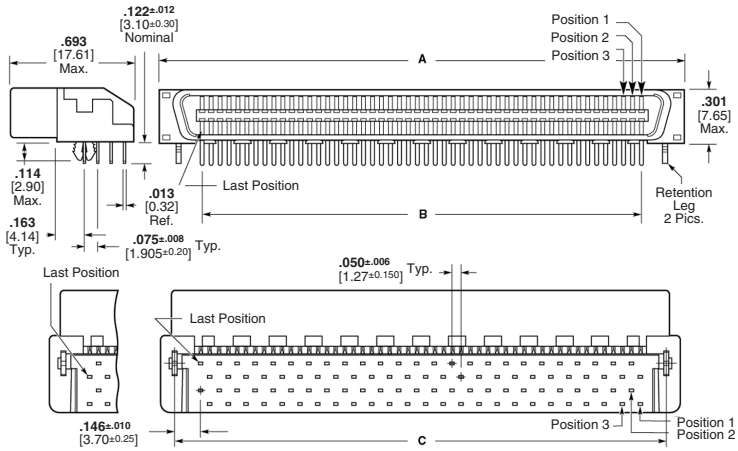
Contacts — Phosphor bronze selectively plated with minimum of .000030 [0.00076] gold in mating area and tin-lead in solder tail area.

Retention Leg (Board Lock) — Brass, tin-lead plated.

Performance Specifications — Page 2152

PC Board Accommodation — .031 [0.79] to .063 [1.60] nominal thickness

Mating Receptacle Connectors — Right-Angle — Below Vertical — Page 2154



No. of Positions	Dimensions A	Dimensions B	Dimensions C	Part Numbers High Temp.
40	**1.391** 35.33	**.950** 24.13	**1.241** 31.52	557100-5
50	**1.641** 41.68	**1.200** 30.48	**1.491** 37.87	557100-9
68	**2.091** 53.11	**1.650** 41.91	**1.941** 49.30	1-557100-7
80	**2.391** 60.73	**1.950** 49.53	**2.241** 56.92	2-557100-1
100	**2.891** 73.43	**2.450** 62.23	**2.741** 69.62	2-557100-5
120	**3.391** 86.13	**2.950** 74.93	**3.241** 82.32	2-557100-9

Right-Angle Receptacles

Materials and Finish:

Housing and Tine Plate — Glass filled nylon, rated 94V-0, black for standard. LCP, rated 94V-0, black for High Temp.

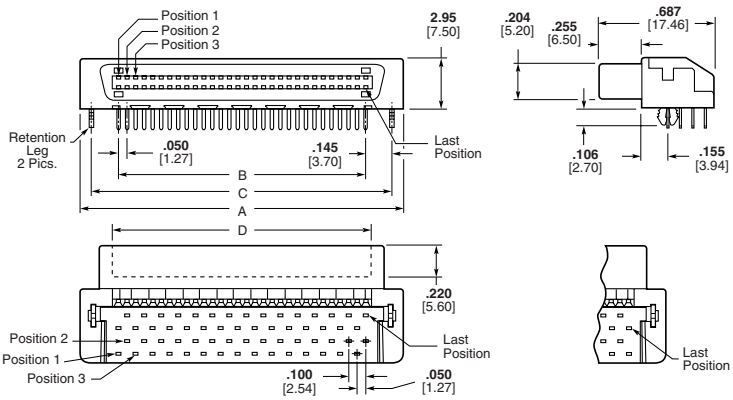
Contacts — Phosphor bronze selectively plated with minimum of .000030 [.00076] gold in mating area and tin-lead in solder tail area.

Retention Leg (Board Lock) — Brass, tin-lead plated.

Performance Specifications — Page 2152

PC Board Accommodation — .031 [0.79] to .063 [1.60] nominal thickness

Mating Plug Connectors — Right-Angle — Above Vertical — Page 2154



No. of Positions	Dimensions A	Dimensions B	Dimensions C	Dimensions D	Part Numbers High Temp.	Part Numbers Standard Temp.
40	**1.391** 35.33	**.950** 24.13	**1.241** 31.53	**1.024** 26.03	557101-5	5-175474-5
50	**1.641** 41.68	**1.200** 30.48	**1.491** 37.88	**1.274** 32.38	557101-9	—
68	**2.091** 53.11	**1.650** 41.91	**1.941** 49.31	**1.724** 43.81	1-557101-7	—
80	**2.391** 60.73	**1.950** 49.53	**2.241** 56.93	**2.024** 51.43	2-557101-1	5-175474-9
100	**2.891** 73.43	**2.450** 62.23	**2.741** 69.63	**2.524** 64.13	*2-557101-5	—
120	**3.391** 86.13	**2.950** 74.93	**3.241** 82.33	**3.024** 76.83	2-557101-9	—

*Part Number without board locks is available — Contact Tyco Electronics.

CHAMP .050 Series I Connectors

Vertical Plugs

Materials and Finish:

Housing — Glass filled nylon, rated 94V-0, black for standard. LCP, rated 94V-0, black for High Temp.

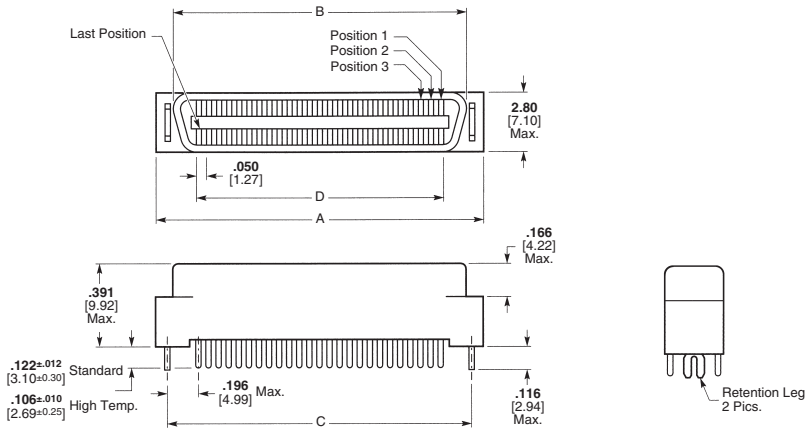
Contacts — Phosphor bronze selectively plated with minimum of .000030 [0.00076] gold in mating area and tin-lead in solder tail area.

Retention Leg (Board Lock) — Brass, tin-lead plated.

Performance Specifications — Page 2152

PC Board Accommodation — .031 [0.79] to .063 [1.60] nominal thickness

Mating Receptacles — Right Angle — Page 2153
Vertical — Below



No. of Positions	Dimensions					Part Numbers	
	A	B	C	D	E[3]	Keying Post[2]	Standard Temp. w/o Post[1]
40	**1.447** 36.75	**1.278** 32.47	**1.343** 34.11	**.950** 24.13	—	557102-5	—
68	**2.147** 54.53	**1.978** 50.25	**2.043** 51.89	**1.650** 41.91	—	1-557102-7	—
80	**2.447** 62.15	**2.278** 57.87	**2.343** 59.51	**1.950** 49.53	—	*2-557102-1	5-175473-9
100	**2.947** 74.85	**2.778** 70.57	**2.843** 72.21	**2.450** 62.23	—	2-557102-5	6-175473-0
120	**3.447** 87.55	**3.278** 83.27	**3.343** 84.91	**2.950** 74.93	**1.671** 42.44	2-557102-9	—

*Part Numbers without board locks are available, contact Tyco Electronics.

Vertical Receptacles

Materials and Finish

Housing — Glass filled nylon, rated 94V-0, black for standard. PPA, rated 94V-0 for High Temp.

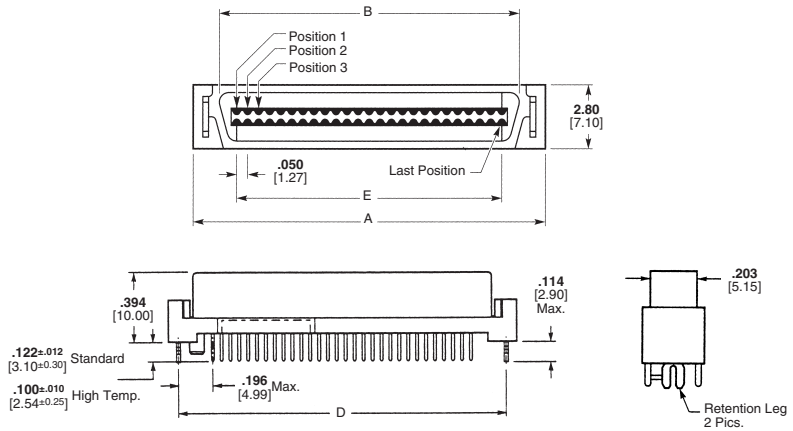
Contacts — Phosphor bronze selectively plated with minimum of .000030 [0.00076] gold in mating area and tin-lead in solder tail area.

Retention Leg (Board Lock) — Brass, tin-lead plated.

Performance Specifications — Page 2152

PC Board Accommodation — .031 [0.79] to .063 [1.60] nominal thickness

Mating Plug Connectors — Right-Angle — Page 2153
Vertical — Above



No. of Positions	Dimensions						Part Numbers	
	A	B	C	D	E	F[3]	Keying Post[2]	w/o Post[1]
40	**1.447** 36.75	**1.168** 29.67	**.985** 25.03	**1.343** 34.11	**.950** 24.13	—	557103-5	—
68	**2.147** 54.53	**1.868** 47.45	**1.724** 43.81	**2.043** 51.89	**1.650** 41.91	—	1-557103-7	1-786925-7
80	**2.447** 62.15	**2.168** 55.07	**2.024** 51.43	**2.343** 59.51	**1.950** 49.53	—	*2-557103-1	2-786925-1
100	**2.947** 74.85	**2.668** 67.77	**2.131** 54.13	**2.843** 72.21	**2.450** 62.23	—	*2-557103-5	—
120	**3.447** 87.55	**3.418** 86.82	**3.024** 76.83	**3.343** 84.91	**2.950** 74.93	**1.671** 42.44	2-557103-9	—
160	**4.447** 112.95	**4.160** 105.87	**4.024** 102.21	**4.343** 110.31	**3.950** 100.33	**2.171** 55.14	3-557103-7	—

[1] End Board Locks.
[2] End Board Locks and Keying Post.
[3] End and Centre Board Locks and Keying Post.
*Part Numbers without board locks are available, contact Tyco Electronics.

Product Facts

- **For parallel board stacking applications**
- **High density packaging on 0.8 [.031] centerline spacing**
- **Available sizes from 40 to 200 positions (in 20 position increments)**
- **Board stacking heights available from 5 [.197] to 16 [.630] (in 1 [.039] increments)**
- **Bellows type spring contacts are resistant to scooping and stubbing during mating and unmating**
- **Positioning bosses for proper on-board orientation**
- **Available packaged on"tape-and-reel" for automatic placement per EIA standards**
- **Recognised under the Component Program of Underwriter Laboratories Inc., File No. E28476**

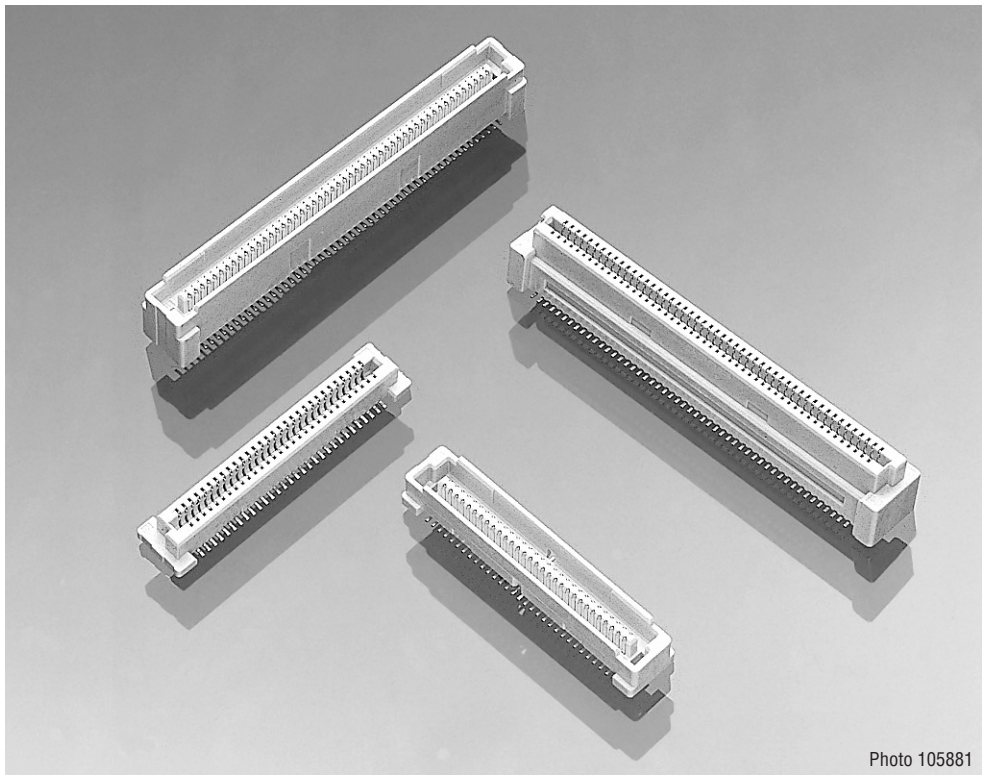


Photo 105881

AMP 0.8mm FH surface-mount connectors are designed for parallel board stacking applications using subminiature connectors to meet today's electronic industry requirements for high density packaging.

It is possible to save more than 50% of the required board space when compared to conventional 1.27 [.050] centerline connectors.

Vertical board-mount plugs and receptacles are available. By mating combinations of plug and receptacle housing heights, board-to-board stacking heights from 5 [.197] to 16 [.630] (in 1 [.039] increments) can be achieved.

The receptacles are preloaded with unique bellows-type spring contacts for reliable electrical connection with the plugs.

Surface-mount solder leads permit fast assembly operation.

Performance Characteristics:

Voltage Rating — 100 VAC

Current Rating — 0.5 ampere

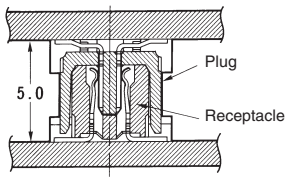
Contact Resistance — 30 milliohms max. (initial)

Dielectric Withstanding Voltage — 500 VAC (1 minute)

Operating Temperature — -40°C to +85°C (Including terminal temperature rise)

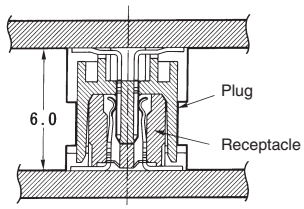
Board-to-Board Stacking Heights (By Plug/Receptacle Combinations)

Part Number: 177984-□
(Page 2157)



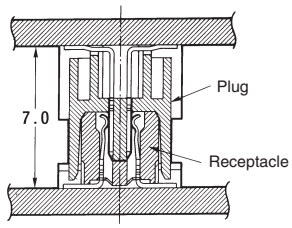
Part Number: 177983-□
(Page 2161)
5 [.197] Stacking Height

Part Number: 179029-□
(Page 2158)



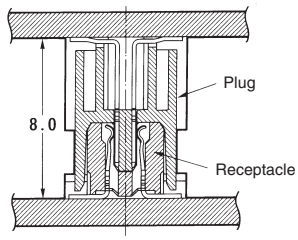
Part Number: 177983-□
(Page 2161)
6 [.236] Stacking Height

Part Number: 179030-□
(Page 2159)



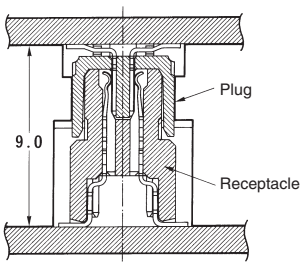
Part Number: 177983-□
(Page 2161)
7 [.276] Stacking Height

Part Number: 179031-□
(Page 2160)



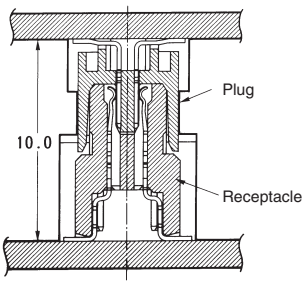
Part Number: 177983-□
(Page 2161)
8 [.315] Stacking Height

Part Number: 177984-□
(Page 2157)



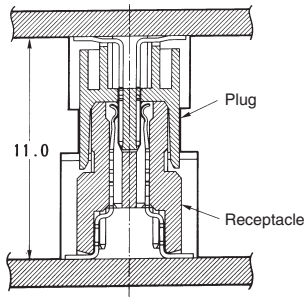
Part Number: 5-179009-□
(Page 2162)
9 [.354] Stacking Height

Part Number: 179029-□
(Page 2158)



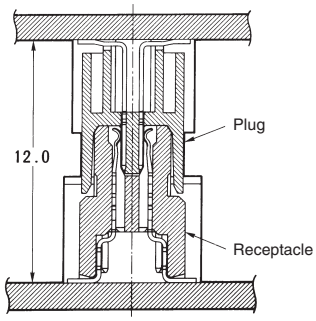
Part Number: 5-179009-□
(Page 2162)
10 [.394] Stacking Height

Part Number: 179030-□
(Page 2159)



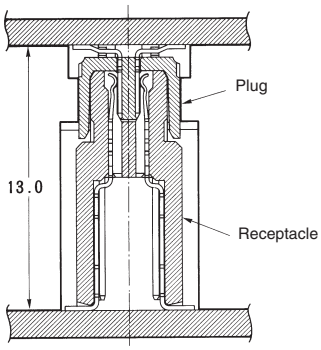
Part Number: 5-179009-□
(Page 2162)
11 [.433] Stacking Height

Part Number: 179031-□
(Page 2160)



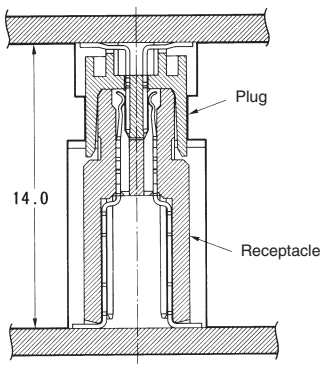
Part Number: 5-179009-□
(Page 2162)
12 [.472] Stacking Height

Part Number: 177984-□
(Page 2157)



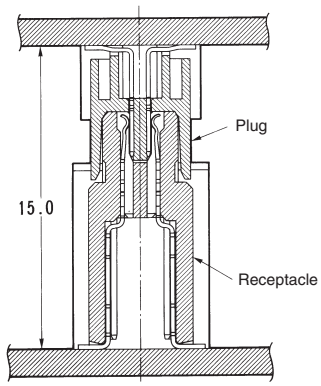
Part Number: 5-179010-□
(Page 2163)
13 [.512] Stacking Height

Part Number: 179029-□
(Page 2158)



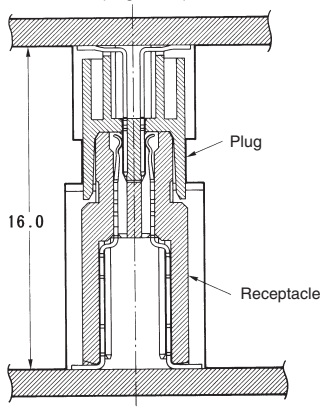
Part Number: 5-179010-□
(Page 2163)
14 [.551] Stacking Height

Part Number: 179030-□
(Page 2159)



Part Number: 5-179010-□
(Page 2163)
15 [.591] Stacking Height

Part Number: 179031-□
(Page 2160)



Part Number: 5-179010-□
(Page 2163)
16 [.630] Stacking Height

Note: For specific dash nos. of sizes 40 to 200 positions (in 20-position increments), see pages 2157-2163.

Vertical Plugs

5mm Plugs for 5 [.197], 9 [.354] and 13 [.512] Stacking Heights

Material and Finish:

Housing — High temperature thermoplastic, natural colour, 94V-0 rated

Contacts — Brass; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data:

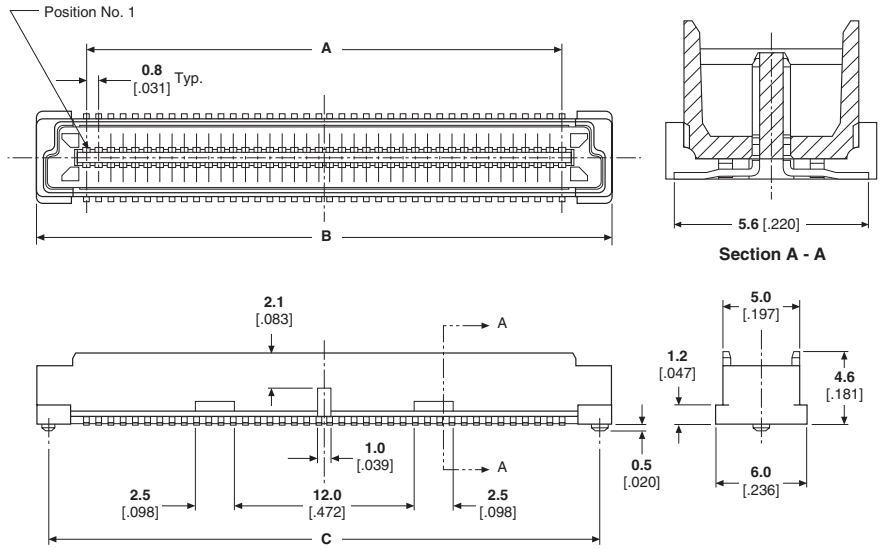
Performance Characteristics — Page 2155

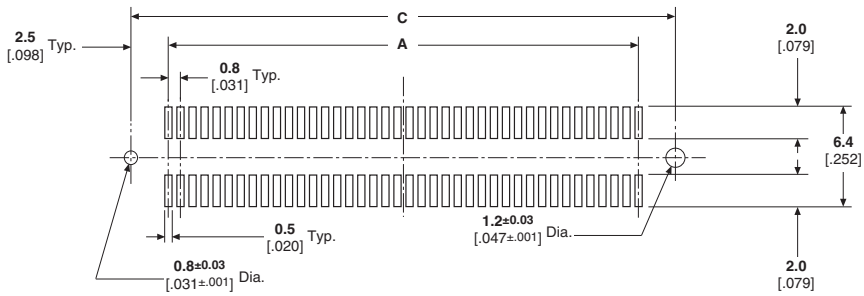
Stacking Height Combinations — Page 2156

Mating Receptacles — Pages 2161-2163

Technical Documents:

Product Specification
108-5390





Recommended PC Board Layout

No. of Positions	Dimensions			Plug Part Numbers	
	A	B	C	Tube Packaged	Tape Packaged*
40	**15.20** .598	**21.80** .858	**20.20** .795	177984-1	177986-1
60	**23.20** .913	**29.80** 1.173	**28.20** 1.110	177984-2	177986-2
80	**31.20** 1.228	**37.80** 1.488	**36.20** 1.425	177984-3	177986-3
100	**39.20** 1.543	**45.80** 1.803	**44.20** 1.740	177984-4	177986-4
120	**47.20** 1.858	**53.80** 2.118	**52.20** 2.055	177984-5	177986-5
140	**55.20** 2.173	**61.80** 2.433	**60.20** 2.370	177984-6	177986-6
160	**63.20** 2.488	**69.80** 2.748	**68.20** 2.685	177984-8	—
200	**79.20** 3.118	**85.80** 3.378	**84.20** 3.315	1-177984-0	—

*With steel cover for automatic placement.

Vertical Plugs

6mm Plugs for 6 [.236], 10 [.394] and 14 [.551] Stacking Heights

Material and Finish:

Housing — High temperature thermoplastic, natural colour, 94V-0 rated

Contacts — Brass; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data:

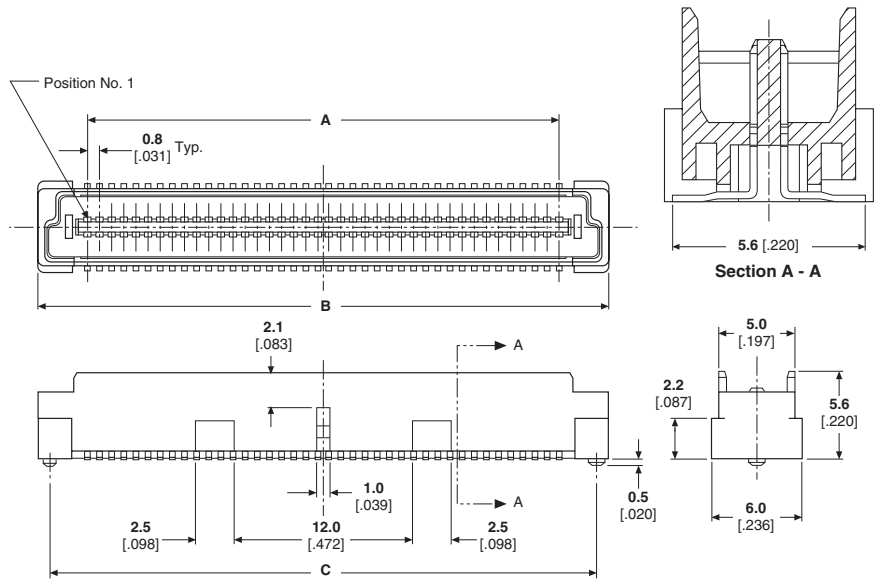
Performance Characteristics — Page 2155

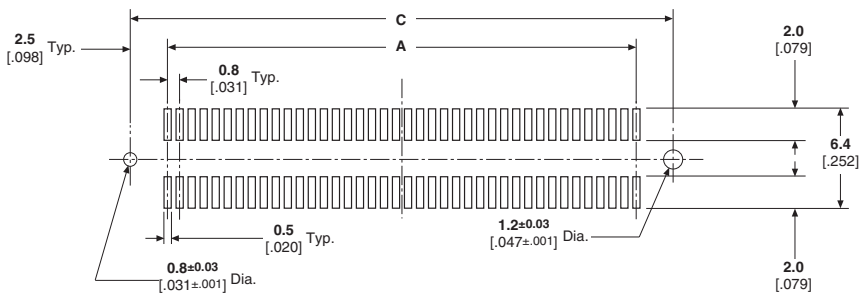
Stacking Height Combinations — Page 2156

Mating Receptacles — Pages 2161-2163

Technical Documents:

Product Specification
108-5390





Recommended PC Board Layout

No. of Positions	Dimensions			Plug Part Numbers	
	A	B	C	Tube Packaged	Tape Packaged*
40	**15.20** .598	**21.80** .858	**20.20** .795	179029-1	1-177986-1
60	**23.20** .913	**29.80** 1.173	**28.20** 1.110	179029-2	1-177986-2
80	**31.20** 1.228	**37.80** 1.488	**36.20** 1.425	179029-3	1-177986-3
100	**39.20** 1.543	**45.80** 1.803	**44.20** 1.740	179029-4	1-177986-4
120	**47.20** 1.858	**53.80** 2.118	**52.20** 2.055	179029-5	1-177986-5
140	**55.20** 2.173	**61.80** 2.433	**60.20** 2.370	179029-6	—
160	**63.20** 2.488	**69.80** 2.748	**68.20** 2.685	179029-8	—
180	**71.20** 2.803	**77.80** 3.063	**76.20** 3.000	179029-9	—
200	**79.20** 3.118	**85.80** 3.378	**84.20** 3.315	1-179029-0	—

*With steel cover for automatic placement.

Vertical Plugs

7mm Plugs for 7 [.276], 11 [.433] and 15 [.591] Stacking Heights

Material and Finish:

Housing — High temperature thermoplastic, natural colour, 94V-0 rated

Contacts — Brass; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data:

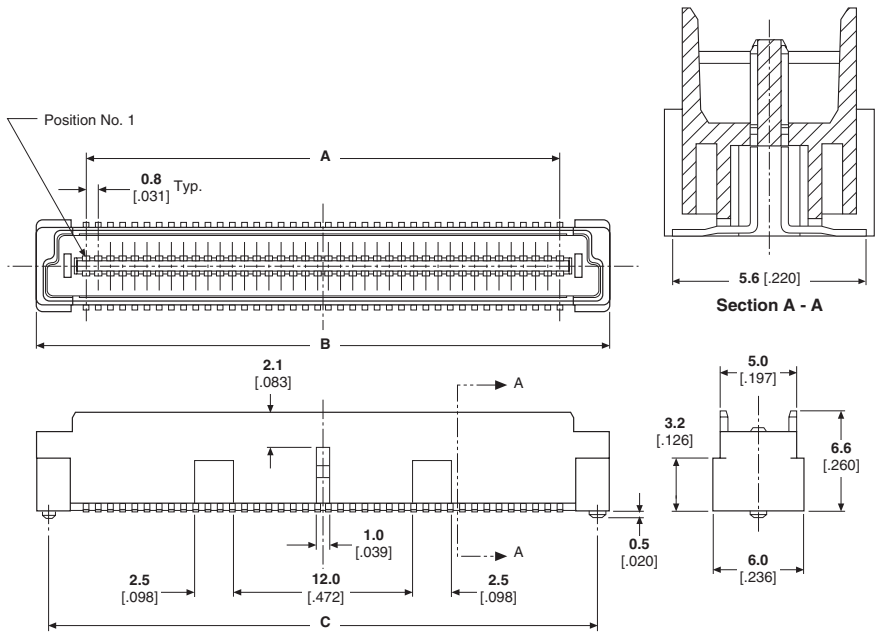
Performance Characteristics — Page 2155

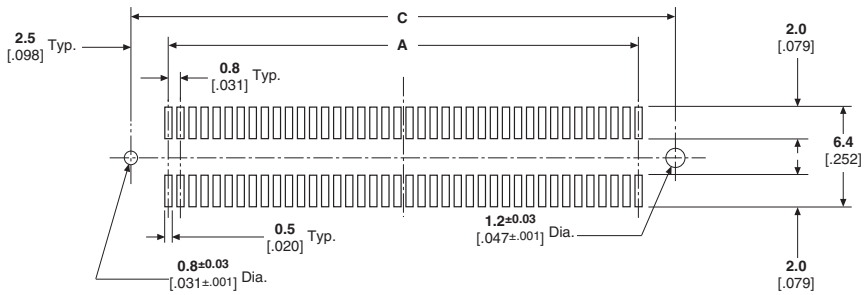
Stacking Height Combinations — Page 2156

Mating Receptacles — Pages 2161-2163

Technical Documents:

Product Specification
108-5390





Recommended PC Board Layout

No. of Positions	Dimensions			Plug Part Numbers	
	A	B	C	Tube Packaged	Tape Packaged *
40	**15.20** .598	**21.80** .858	**20.20** .795	179030-1	2-177986-1
60	**23.20** .913	**29.80** 1.173	**28.20** 1.110	179030-2	2-177986-2
80	**31.20** 1.228	**37.80** 1.488	**36.20** 1.425	179030-3	2-177986-3
100	**39.20** 1.543	**45.80** 1.803	**44.20** 1.740	179030-4	2-177986-4
120	**47.20** 1.858	**53.80** 2.118	**52.20** 2.055	179030-5	2-177986-5
140	**55.20** 2.173	**61.80** 2.433	**60.20** 2.370	179030-6	—
160	**63.20** 2.488	**69.80** 2.748	**68.20** 2.685	179030-8	—
200	**79.20** 3.118	**85.80** 3.378	**84.20** 3.315	1-179030-0	—

*With steel cover for automatic placement.

Vertical Plugs

8mm Plugs for 8 [.315], 12 [.472] and 16 [.630] Stacking Heights

Material and Finish:

Housing — High temperature thermoplastic, natural colour, 94V-0 rated

Contacts — Brass; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data:

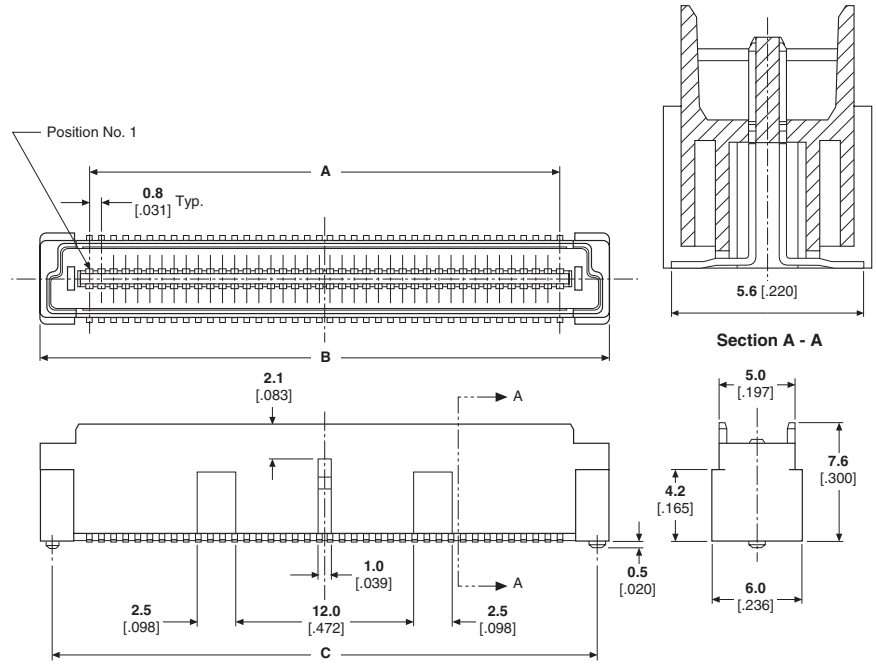
Performance Characteristics — Page 2155

Stacking Height Combinations — Page 2156

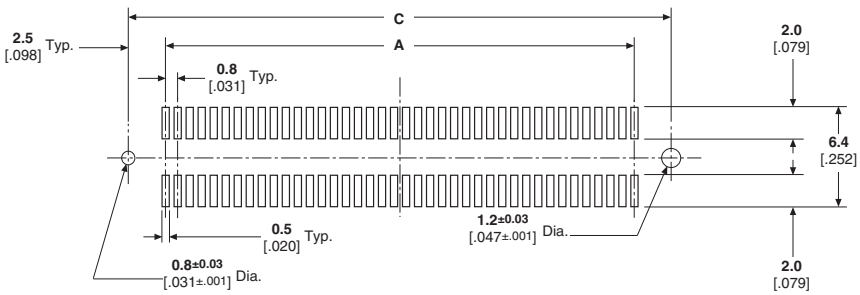
Mating Receptacles — Pages 2161-2163

Technical Documents:

Product Specification
108-5390



Section A - A



Recommended PC Board Layout

No. of Positions	Dimensions			Plug Part Numbers	
	A	B	C	Tube Packaged	Tape Packaged*
40	**15.20** .598	**21.80** .858	**20.20** .795	179031-1	3-177986-1
60	**23.20** .913	**29.80** 1.173	**28.20** 1.110	179031-2	3-177986-2
80	**31.20** 1.228	**37.80** 1.488	**36.20** 1.425	179031-3	3-177986-3
100	**39.20** 1.543	**45.80** 1.803	**44.20** 1.740	179031-4	3-177986-4
120	**47.20** 1.858	**53.80** 2.118	**52.20** 2.055	179031-5	3-177986-5
140	**55.20** 2.173	**61.80** 2.433	**60.20** 2.370	179031-6	—
160	**63.20** 2.488	**69.80** 2.748	**68.20** 2.685	179031-8	—
180	**71.20** 2.803	**77.80** 3.063	**76.20** 3.000	179031-9	—
200	**79.20** 3.118	**85.80** 3.378	**84.20** 3.315	1-179031-0	—

*With steel cover for automatic placement.

Vertical Receptacles

5mm Receptacles for 5 [.197], 6 [.236], 7 [.276] and 8 [.315] Stacking Heights

Material and Finish:

Housing — High temperature thermoplastic, natural colour, 94V-0 rated

Contacts — Beryllium copper; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data:

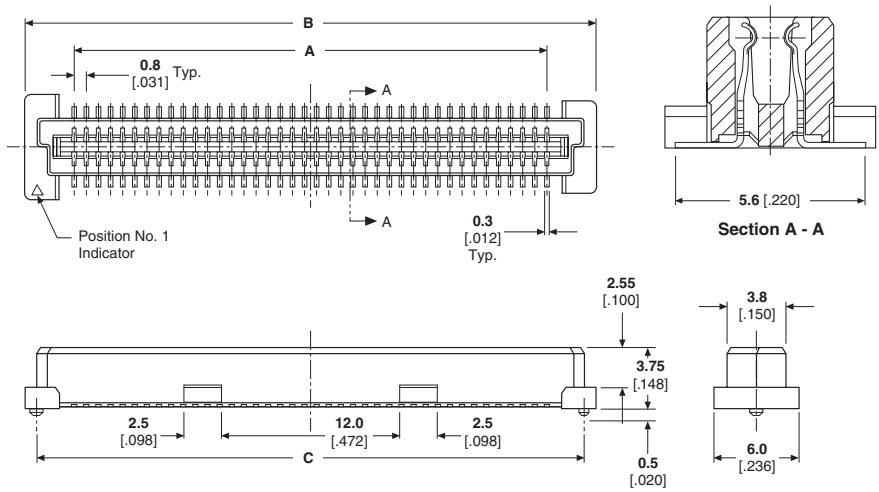
Performance Characteristics — Page 2155

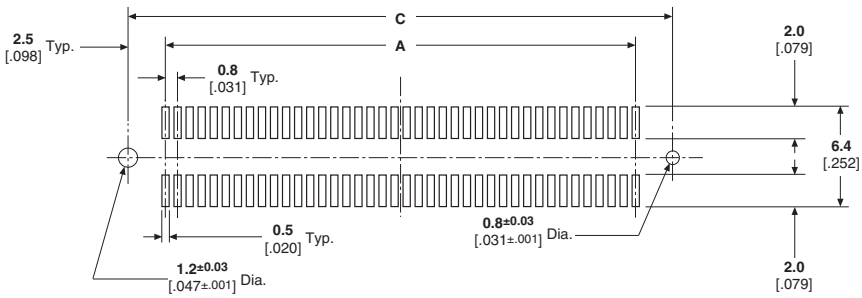
Stacking Height Combinations — Page 2156

Mating Plugs — Pages 2157-2160

Technical Documents:

Product Specification
108-5390





Recommended PC Board Layout

No. of Positions	Dimensions			Receptacle Part Numbers	
	A	B	C	Tube Packaged	Tape Packaged*
40	**15.20** .598	**21.80** .858	**20.20** .795	177983-1	177985-1
60	**23.20** .913	**29.80** 1.173	**28.20** 1.110	177983-2	177985-2
80	**31.20** 1.228	**37.80** 1.488	**36.20** 1.425	177983-3	177985-3
100	**39.20** 1.543	**45.80** 1.803	**44.20** 1.740	177983-4	177985-4
120	**47.20** 1.858	**53.80** 2.118	**52.20** 2.055	177983-5	177985-5
140	**55.20** 2.173	**61.80** 2.433	**60.20** 2.370	177983-6	—
160	**63.20** 2.488	**69.80** 2.748	**68.20** 2.685	177983-8	—
200	**79.20** 3.118	**85.80** 3.378	**84.20** 3.315	1-177983-0	—

*With steel cover for automatic placement.

Vertical Receptacles

9mm Receptacles for 9 [.354], 10 [.394], 11 [.433] and 12 [.472] Stacking Heights

Material and Finish:

Housing — High temperature thermoplastic, natural colour, 94V-0 rated

Contacts — Beryllium copper; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data:

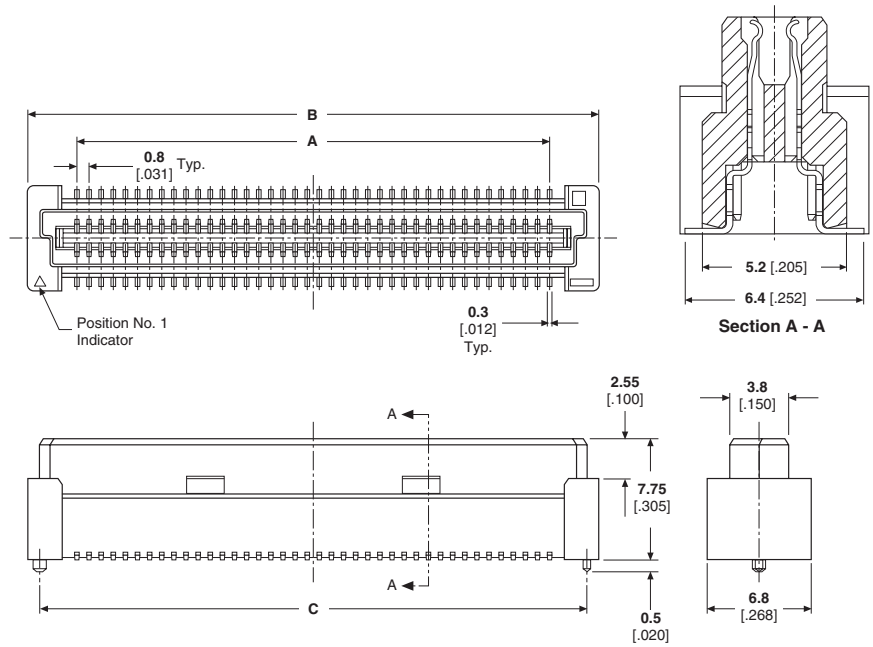
Performance Characteristics — Page 2155

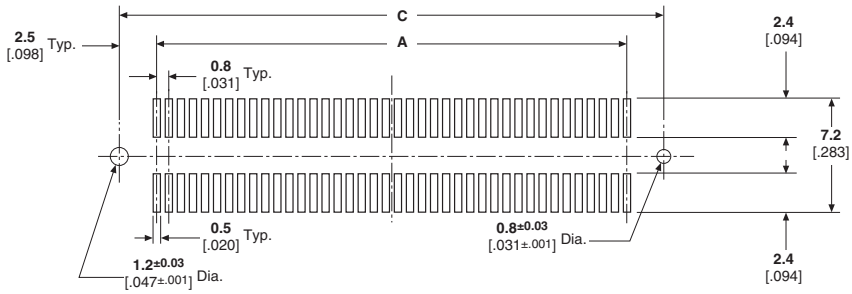
Stacking Height Combinations — Page 2156

Mating Plugs — Pages 2157-2160

Technical Documents:

Product Specification
108-5390





Recommended PC Board Layout

No. of Positions	Dimensions			Receptacle Part Numbers	
	A	B	C	Tube Packaged	Tape Packaged*
40	**15.20** .598	**21.80** .858	**20.20** .795	5-179009-1	5-179180-1
60	**23.20** .913	**29.80** 1.173	**28.20** 1.110	5-179009-2	5-179180-2
80	**31.20** 1.228	**37.80** 1.488	**36.20** 1.425	5-179009-3	5-179180-3
100	**39.20** 1.543	**45.80** 1.803	**44.20** 1.740	5-179009-4	5-179180-4
120	**47.20** 1.858	**53.80** 2.118	**52.20** 2.055	5-179009-5	—
140	**55.20** 2.173	**61.80** 2.433	**60.20** 2.370	5-179009-6	—
160	**63.20** 2.488	**69.80** 2.748	**68.20** 2.685	5-179009-8	—
180	**71.20** 2.803	**77.80** 3.063	**76.20** 3.000	5-179009-9	—
200	**79.20** 3.118	**85.80** 3.378	**84.20** 3.315	6-179009-0	—

*With steel cover for automatic placement.

Vertical Receptacles

13mm Receptacles for 13 [.512], 14 [.551], 15 [.591] and 16 [.630] Stacking Heights

Material and Finish:

Housing — High temperature thermoplastic, natural colour, 94V-0 rated

Contacts — Beryllium copper; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data:

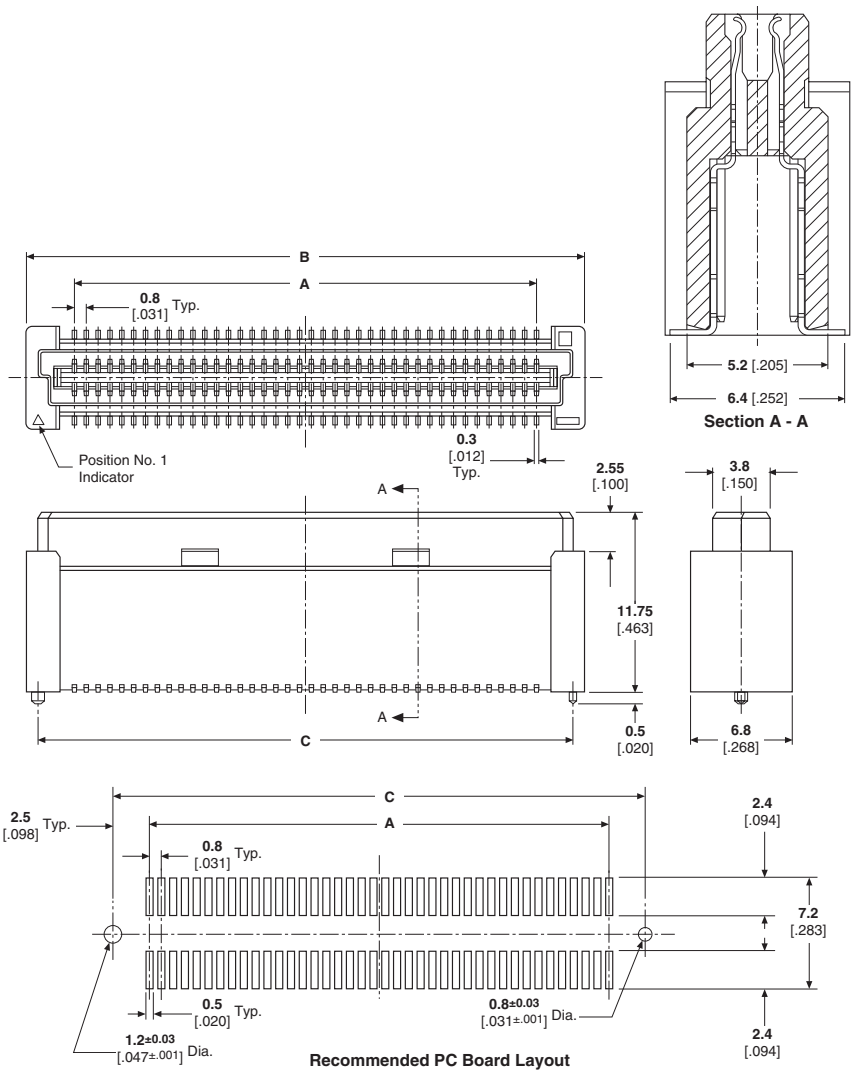
Performance Characteristics — Page 2155

Stacking Height Combinations — Page 2156

Mating Plugs — Pages 2157-2160

Technical Documents:

Product Specification
108-5390

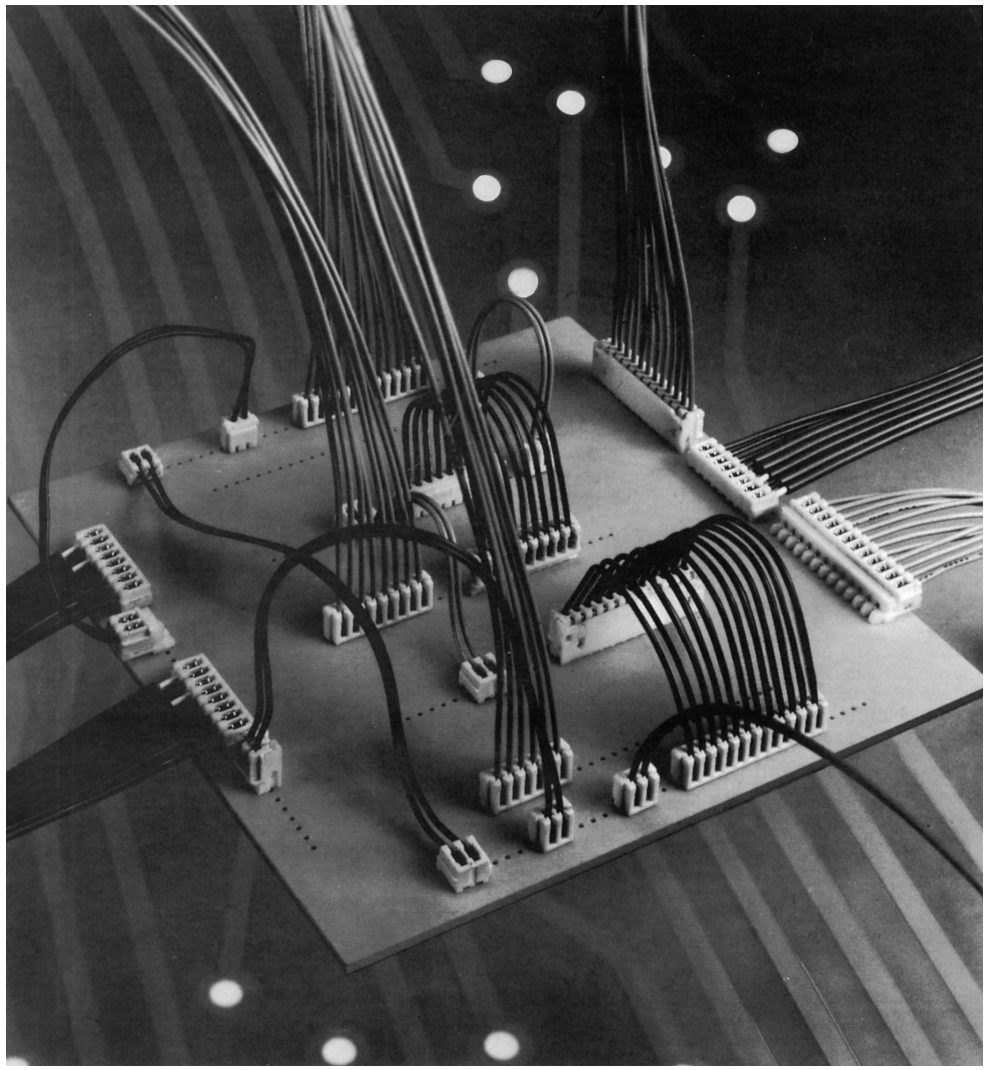


No. of Positions	Dimensions			Receptacle Part Numbers	
	A	B	C	Tube Packaged	Tape Packaged*
40	**15.20** .598	**21.80** .858	**20.20** .795	5-179010-1	84616-1
60	**23.20** .913	**29.80** 1.173	**28.20** 1.110	5-179010-2	84616-2
80	**31.20** 1.228	**37.80** 1.488	**36.20** 1.425	5-179010-3	84616-3
100	**39.20** 1.543	**45.80** 1.803	**44.20** 1.740	5-179010-4	84616-4
120	**47.20** 1.858	**53.80** 2.118	**52.20** 2.055	5-179010-5	84616-5
140	**55.20** 2.173	**61.80** 2.433	**60.20** 2.370	5-179010-6	—
160	**63.20** 2.488	**69.80** 2.748	**68.20** 2.685	5-179010-8	—
180	**71.20** 2.803	**77.80** 3.063	**76.20** 3.000	5-179010-9	—
200	**79.20** 3.118	**85.80** 3.378	**84.20** 3.315	6-179010-0	—

*With steel cover for automatic placement.

Product Facts

- A connector system to assemble multiple connectors to both ends of wire simultaneously by the combined use of AMP high-speed automatic insulation displacement crimping machine and mass-termination connectors.
- Provides substantial labour-savings as well as improved quality and stability in harness assembly.
- The assembling machine can be adapted to all harness configurations without the need to change machine parts.
- Applicable connectors include MT connectors as well as MT AMP-IN header assemblies that can be directly inserted into printed circuit boards.
- A crimping receptacle connector is also available.
- Board-mount post headers are offered in two types, SMT-type and DIP-types, each usable for vertical mounting and horizontal mounting.
- In addition, a relay post header is available that mates with receptacle connectors both at front and at rear when mounted on panel.
- Both MT receptacle connectors and crimp-type receptacle connectors can share the same post headers when mated.
- MT AMP-IN header assemblies are secured onto boards with posts inserted directly into board holes and soldered.
- Both DIP-type post headers and MT AMP-IN headers are provided with kinks for self-retention on boards.
- Mini-Drawer connectors that mate with each other with CT receptacle connectors inserted on the wire side are also available.



- Recognised under the Component Program of Underwriters Laboratories Inc., File No. E 28476
- Certified by Canadian Standards Association, File No. LR 7189-133

MT Connectors (2mm Pitch)

Insulation Displacement Receptacle Assemblies (Wire Application Side)

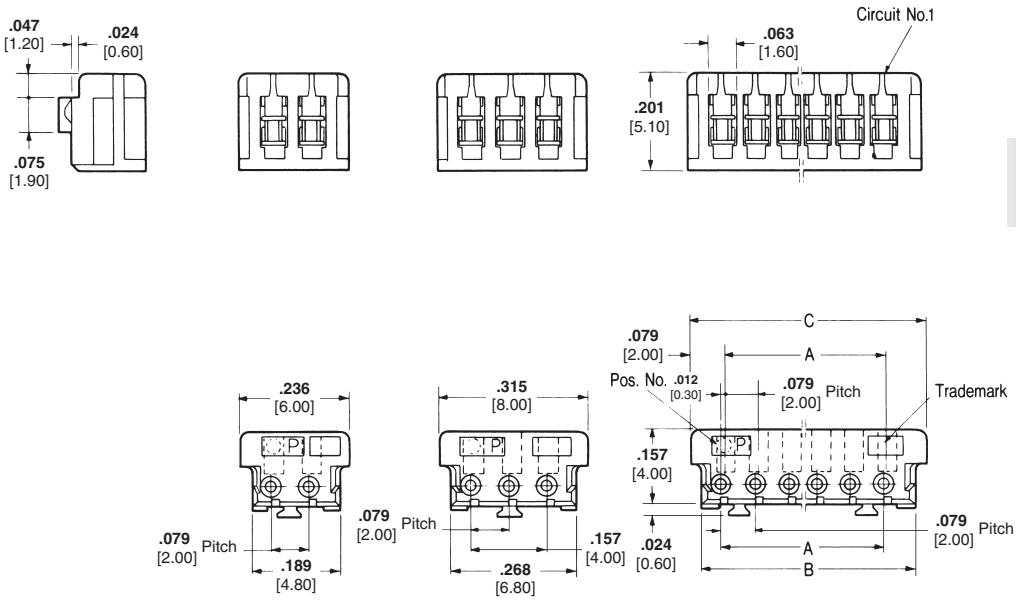
Material and Finish:

Housing — UL94V-0 rated, glass-filled P.B.T.,
see note below for colour

Contact — Pre-tinned phosphor bronze

Wire Size — AWG #28-26 (0.08~0.15mm^2)
AWG #24 (0.20~0.22mm^2)

Insulation Dia. —
AWG #28-26 (0.85~1.05mm)
AWG #24 (0.9~1.05mm)



2 Position **3 Position** **4-15 Position**

No. of Positions	Dimensions			Part Numbers of Receptacle Assembly*	
	A	B	C	AWG #28-26*	AWG #24**
2	**.079** 2.00	**.189** 4.80	**.236** 6.00	173977-2	2-179694-2
3	**.157** 4.00	**.268** 6.80	**.315** 8.00	173977-3	2-179694-3
4	**.236** 6.00	**.346** 8.80	**.394** 10.00	173977-4	2-179694-4
5	**.315** 8.00	**.425** 10.80	**.472** 12.00	173977-5	2-179694-5
6	**.394** 10.00	**.504** 12.80	**.551** 14.00	173977-6	2-179694-6
7	**.472** 12.00	**.583** 14.80	**.630** 16.00	173977-7	2-179694-7
8	**.551** 14.00	**.661** 16.80	**.709** 18.00	173977-8	2-179694-8
9	**.630** 16.00	**.740** 18.80	**.787** 20.00	173977-9	2-179694-9
10	**.709** 18.00	**.819** 20.80	**.866** 22.00	1-173977-0	3-179694-0
11	**.787** 20.00	**.898** 22.80	**.945** 24.00	1-173977-1	3-179694-1
12	**.866** 22.00	**.976** 24.80	**1.024** 26.00	1-173977-2	3-179694-2
13	**.945** 24.00	**1.055** 26.80	**1.102** 28.00	1-173977-3	3-179694-3
14	**1.024** 26.00	**1.134** 28.80	**1.181** 30.00	1-173977-4	3-179694-4
15	**1.102** 28.00	**1.213** 30.80	**1.260** 32.00	1-173977-5	3-179694-5

*The colour of housing is natural. Other colours available include blue, yellow and black.
**The colour of the housing is grey only.

Post Header Assemblies (For MT Connectors)

Standard Type Post Header Assemblies (PC Board Application Side)

Horizontal Mount Type

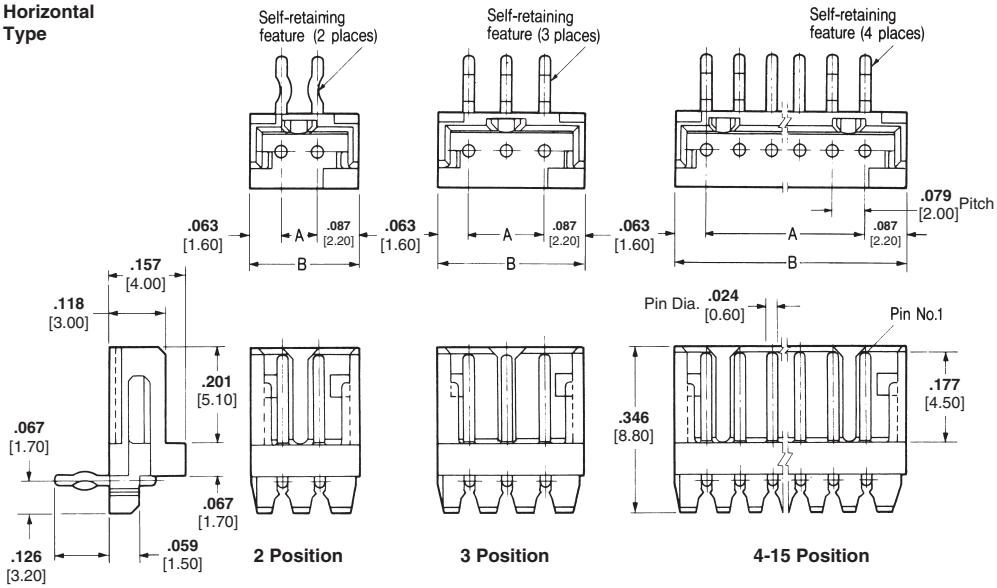
Material and Finish:

Housing — UL94V-0 rated, 6/6 nylon, see note below for colour

Post Contact — Tin-lead plated brass

(Acceptable board thickness: .031~.063 [0.8~1.6mm])

Horizontal Type



Vertical Mount Type

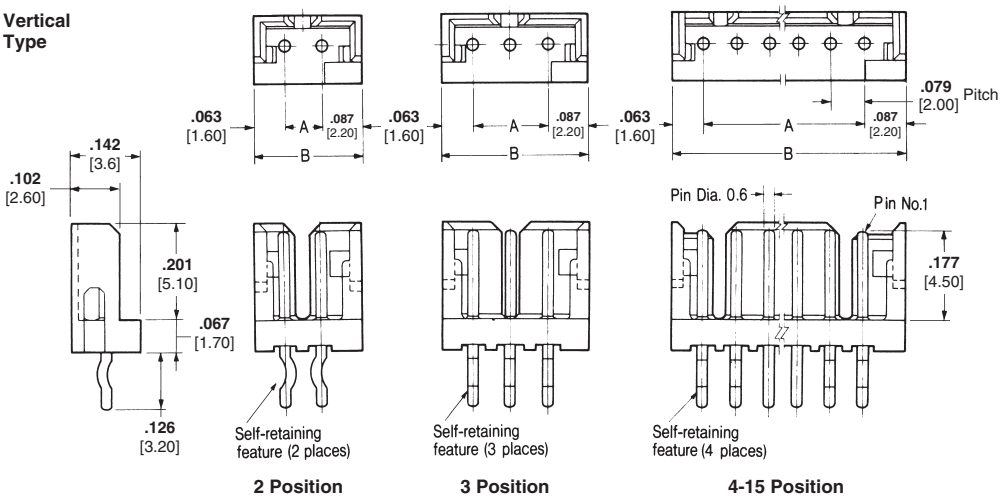
Material and Finish:

Housing — UL94V-0 rated, 6/6 nylon, see note below for colour

Post Contact — Tin-lead plated brass

(Acceptable board thickness: .031~.063 [0.8~1.6mm])

Vertical Type



No. of Positions	Dimensions A	Dimensions B	Part Numbers of Post Header Assembly* Horizontal Mount	Part Numbers of Post Header Assembly* Vertical Mount
2	**.079** 2.00	**.228** 5.80	173979-2	173981-2
3	**.157** 4.00	**.307** 7.80	173979-3	173981-3
4	**.236** 6.00	**.386** 9.80	173979-4	173981-4
5	**.315** 8.00	**.465** 11.80	173979-5	173981-5
6	**.394** 10.00	**.543** 13.80	173979-6	173981-6
7	**.472** 12.00	**.622** 15.80	173979-7	173981-7
8	**.551** 14.00	**.701** 17.80	173979-8	173981-8
9	**.630** 16.00	**.780** 19.80	173979-9	173981-9
10	**.709** 18.00	**.858** 21.80	1-173979-0	1-173981-0
11	**.787** 20.00	**.937** 23.80	1-173979-1	1-173981-1
12	**.866** 22.00	**1.016** 25.80	1-173979-2	1-173981-2
13	**.945** 24.00	**1.094** 27.80	1-173979-3	1-173981-3
14	**1.024** 26.00	**1.173** 29.80	1-173979-4	1-173981-4
15	**1.102** 28.00	**1.252** 31.80	1-173979-5	1-173981-5

*The colour of housing is natural. Other colours available include blue, yellow, black, and red. For details consult Tyco Electronics.

Post Header Assemblies (For MT Connectors)

DIP Box Type
Post Header Assembly
(PC Board Application Side)

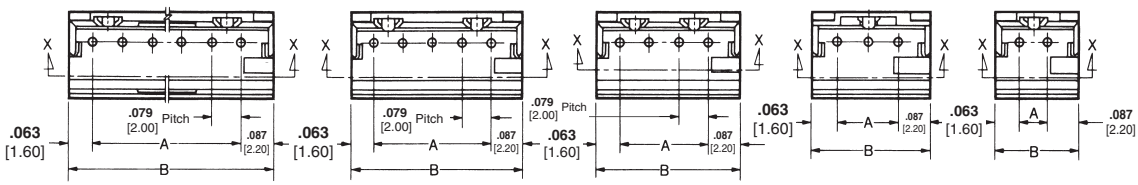
Vertical Mount Type

Material and Finish:

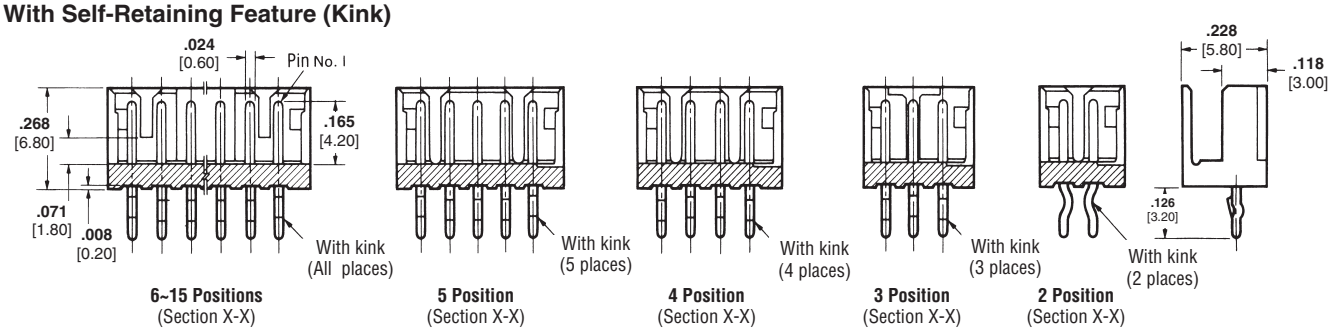
Housing — UL94V-0 rated, 6/6 nylon, see note below for colour

Post Contact — Tin-lead plated brass

(Acceptable board thickness: .031~.063 [0.8 ~ 1.6mm])



With Self-Retaining Feature (Kink)



No. of Positions	Dimensions A	Dimensions B	Part Numbers of Post Header Assembly* With Kink Loose Piece
2	**.079** 2.00	**.228** 5.80	175487-2
3	**.157** 4.00	**.307** 7.80	175487-3
4	**.236** 6.00	**.386** 9.80	175487-4
5	**.315** 8.00	**.465** 11.80	175487-5
6	**.394** 10.00	**.543** 13.80	175487-6
7	**.472** 12.00	**.622** 15.80	175487-7
8	**.551** 14.00	**.701** 17.80	175487-8
9	**.630** 16.00	**.780** 19.80	175487-9
10	**.709** 18.00	**.858** 21.80	1-175487-0
11	**.787** 20.00	**.937** 23.80	1-175487-1
12	**.866** 22.00	**1.016** 25.80	1-175487-2
13	**.945** 24.00	**1.094** 27.80	1-175487-3
14	**1.024** 26.00	**1.173** 29.80	1-175487-4
15	**1.102** 28.00	**1.252** 31.80	1-175487-5

*The colour of housing is natural. Other colours available include blue, yellow and black.

MT AMP-IN Header (2mm Pitch)

Horizontal Mount Type

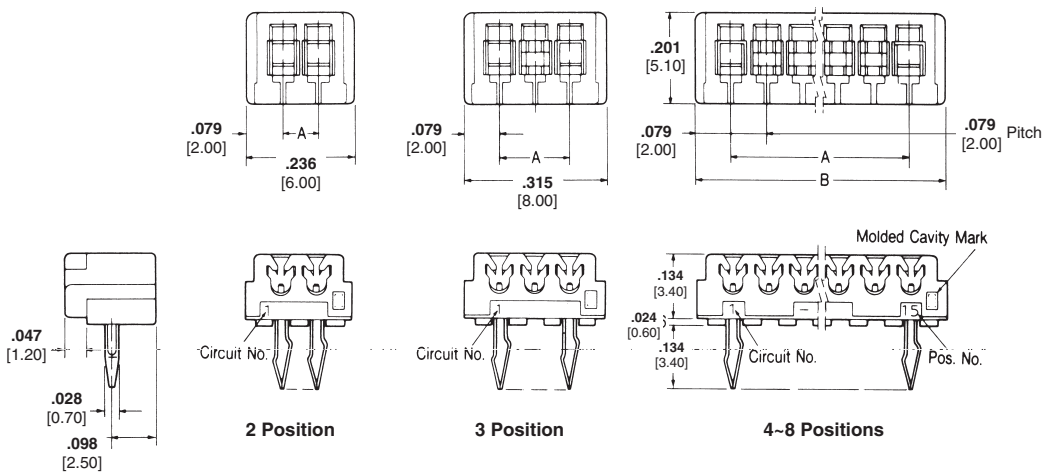
Material and Finish:

Housing — UL94V-0 rated, glass-filled P.B.T., cream yellow

Contact — Pre-tinned phosphor bronze

Wire Size — AWG #28-26 (0.08~0.15mm²)

Insulation Dia. — .033~.041 [0.83~1.05mm]



Vertical Mount Type

Material and Finish:

Housing — UL94V-0 rated, glass-filled P.B.T., light blue

Contact — Pre-tinned phosphor bronze

Wire Size — AWG #28-26 (0.08~0.15mm²)

Insulation Dia. — .033~.041 [0.83~1.05mm]

(Acceptable board thickness: .031~.063 [0.8~1.6mm])

No. of Positions	Dimensions		Part Numbers of AMP-IN Header
	A	B	Horizontal Mount
2	**.079** 2.00	**.236** 6.00	2-173983-2
4	**.236** 6.00	**.394** 10.00	2-173983-4
5	**.315** 8.00	**.472** 12.00	2-173983-5
6	**.394** 10.00	**.551** 14.00	2-173983-6
7	**.472** 12.00	**.630** 16.00	2-173983-7
8	**.551** 14.00	**.709** 18.00	2-173983-8

Application Tooling

For Insulation Displacement

Pistol Grip Hand Tool

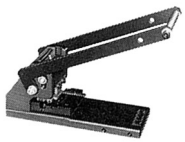
Crimp Kit **Part Number** 911790-1

Manual Pistol Grip Tool:
Handle Assembly Part Number
58074-1
with Modular Head Part Number
58372-1

Bench Mount Power Assembly
Part Number 58338-1 **with Modular Head Assembly Part Number**
58372-1

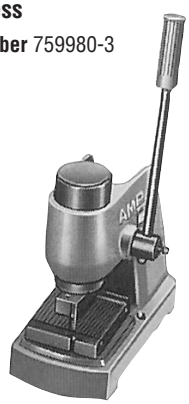
Hand Press

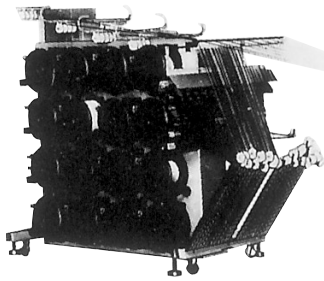
Crimp Part Number 909372-1

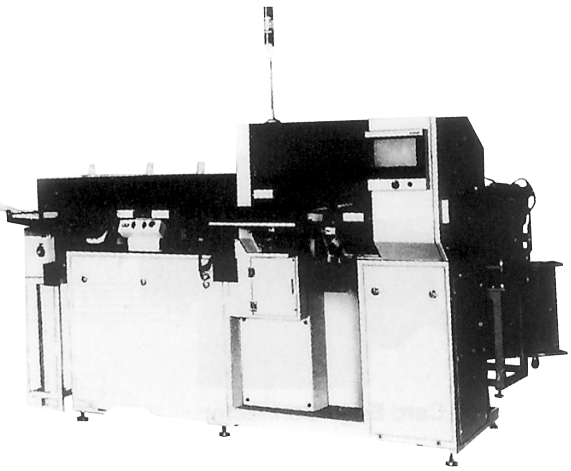


Mini Press

Part Number 759980-3







Insulation Displacement
Automatic Tooling

Contact Tyco Electronics for automatic tooling options.

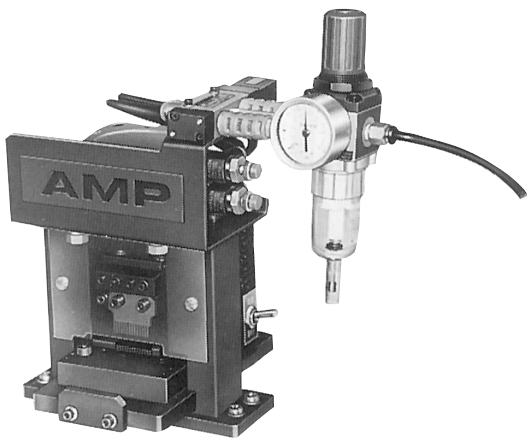
Air Mini Press

Part Number 909190-1
(works by butting wires)

Part Number 909190-2
(works by cutting off wires)

Harness Circuit Numbers:
Random

Applicable Cable:
Discrete Wire



AMP EI Series Connectors are wire-to-board and wire-to-wire connectors. Small in size, precision-built and very economical to use, the connectors are ideally suited for compact, high density connection of wirings inside electric equipment, as well as for labour saving.

Types

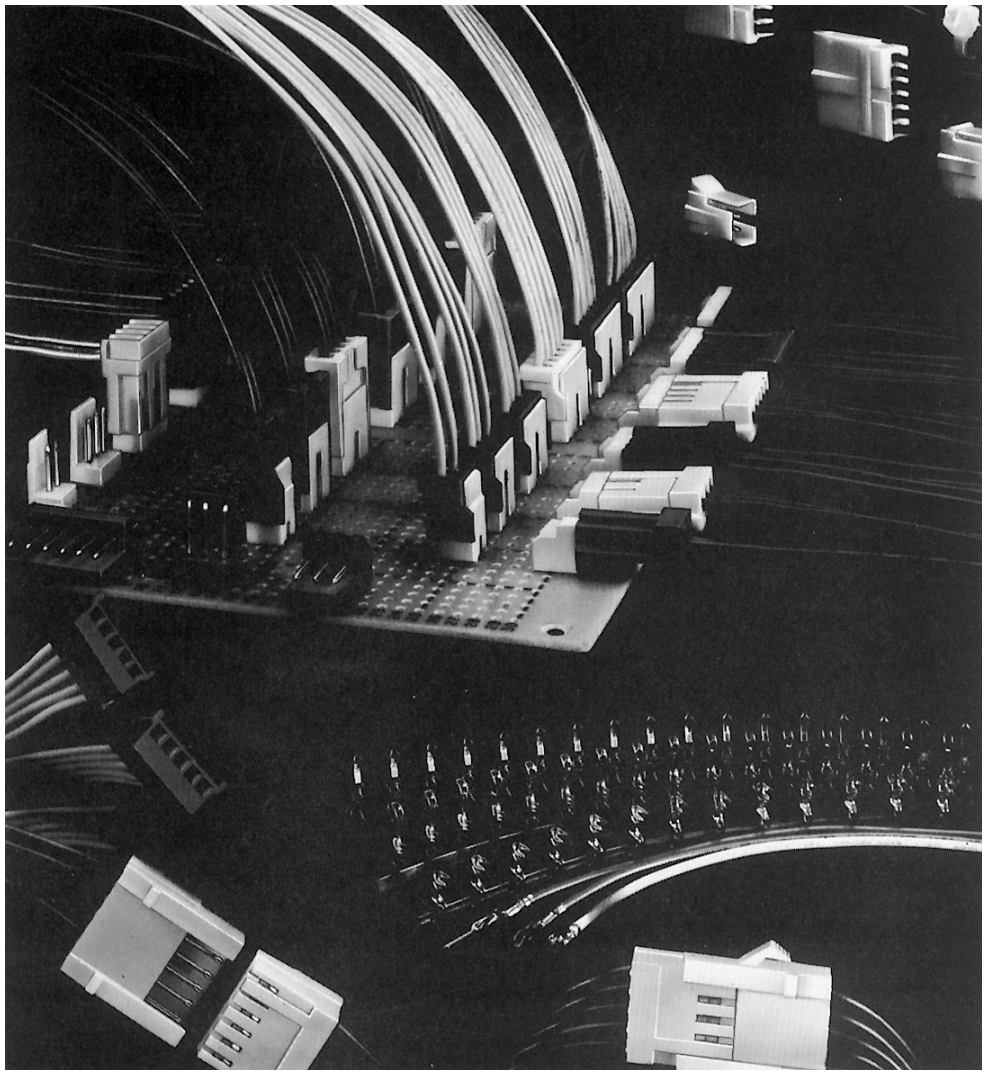
There are two types of connectors available from the product line – Standard and Low Profile. In addition, a Board Mount Post Header is also available which can be used in common with both of the standard and low profile connectors.

Connectors for Wire Termination

The standard type connector consists of a receptacle connector and a plug connector. The receptacle connector is used for wire-to-wire termination when mated with the cap connector and for wire-to-board connection when mated with the post header. The plug connector is available in two styles of free-hanging and panel mounting. The low profile connector consists of a receptacle connector which, when mated with the post header, is used for wire-to-board connection. Compared with the standard type, this type of connector is .25" [6mm] shorter in its mated height.

Housing with Many Features

The housing is designed with many outstanding features. These include a locking mechanism to promote positive mating, polarisation to prevent mismating, and a guide for correct alignment of contacts.



Post Header for Board Mount

The post header is available with posts on .098 [2.50] centres. There are two styles of post header; one can be mounted on the board horizontally and the other vertically. The post header is provided with devices to help prevent the wicking and splashing of flux during soldering operations. It can accommodate boards of .063 [1.60] thick.

Contacts

The receptacle contacts have a large contacting area to mate with posts or pin contacts and are of a stable, two-sided contact design. When mated, the contacting area provides a consistently high contact pressure and provides a clean surface through wiping action. As a result, it can provide a highly reliable electrical connection even when used in small current circuitry.

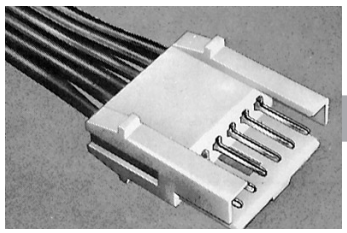
Wire Size Range

Standard type –
AWG #30 – 20
(0.05~0.52mm^2)

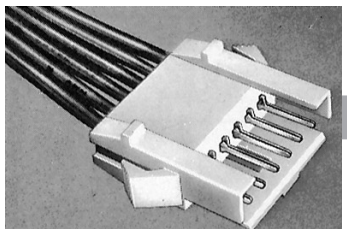
Low Profile type –
AWG #30 – 22
(0.05~0.35mm^2)

Introduction

Cap Connector (Wire Applied)

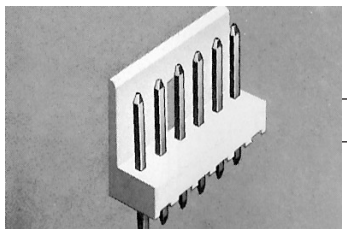


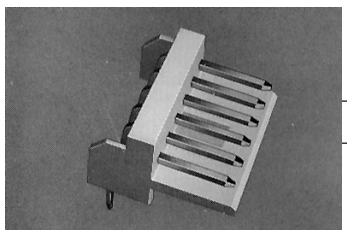
Free Hanging Type



Panel Mount Type

Post Header (Board Applied)





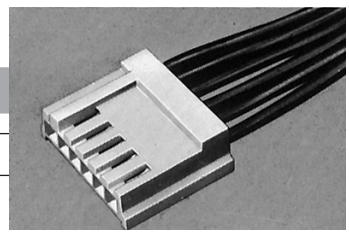
Horizontal Mount Type

<Mating Styles>

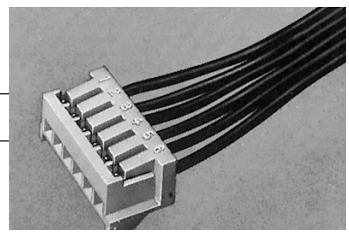
Wire-to-wire termination

Wire-to-board connection

Receptacle Connector (Wire Applied)



Standard Type



Low Profile Type

Product Specifications:

Voltage ratings —

UL 250V
(Spacing .047 [1.2] min.)

UL 600V
(Spacing .126 [3.2] min.)

CSA 250V

TÜV 125V AC/150V DC (.098 [2.5] pitch)

TÜV 250V AC/300V DC (.197 [5.0] pitch)

Current ratings:

AWG	UL	CSA	TUV
30	—	2	2
26	—	—	3
22	—	4	4
20	—	5	5

Low level resistance — 10mΩ max.

Insulation resistance — 500MΩ min. at 500V DC

Dielectric withstanding voltage — 750V AC for one minute

AMP-specified maximum operating temperature — -20~+95°C

UL-recognised operating temperature — +105°C

CSA-certified maximum operating temperature — +105°C

TÜV-specified operating temperature — -20~+85°C

TÜV-specified insulation group — B

Product Specification
108-5118

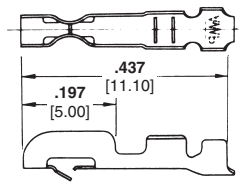
Application Specifications
114-5035 (for connectors except Low Profile types)
114-5051 (for Low Profile type connectors)

Instruction Sheets
IS-123J (Pin contacts)
IS-073J (Standard type receptacle contacts)
IS-109J (Low Profile type receptacle contacts)

Receptacle Connectors (Wire Applied)

Standard Type Receptacle Contacts

Material:
Pre-Tin Brass

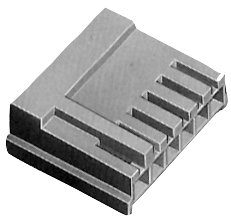


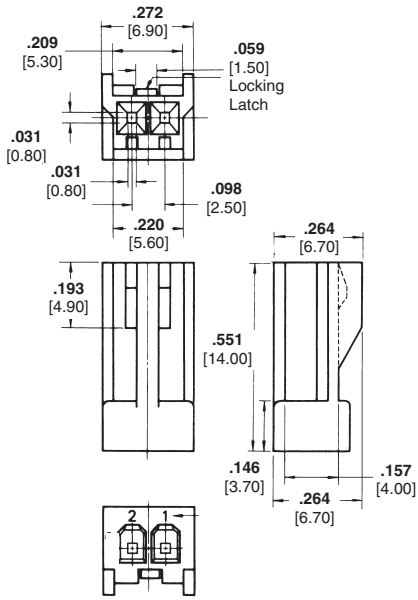
Wire Size AWG (mm^2)	Wire Ins. Diameter	Contact Part Numbers Brass/Pre-Tin S.T.	Contact Part Numbers Brass/Pre-Tin L.P.	Hand Tool Part Numbers
30-26 (0.05~0.15)	**.039~.055** 1.00~1.40	—	170205-1	722561-1
26-20 (0.14~0.52)	**.043~.075** 1.10~1.90	170262-1	170204-1	722560-1

Hand Tool Instruction Sheet: IS-071J.

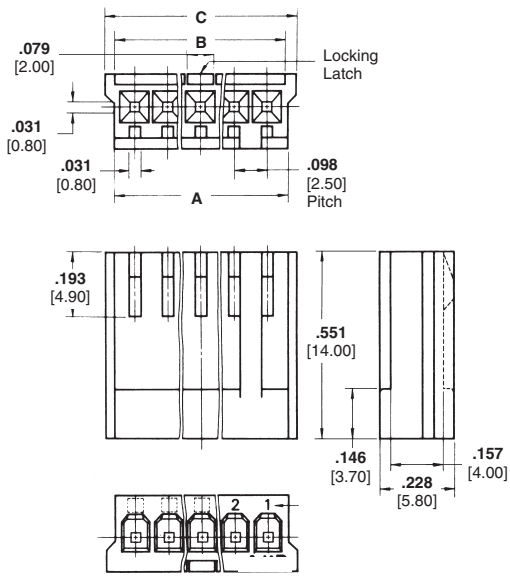
Standard Type Receptacle Housings for Standard Circuit .098 [2.50]

Material:
UL 94V-0 rated, 6/6 nylon





2 Position Housing



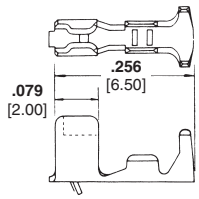
3~5 Position Housing

No. of Positions	Dimensions A	Dimensions B	Dimensions C	Part Numbers Natural
2	—	—	—	171822-2
3	**.319** 8.1	**.307** 7.8	**.370** 9.4	171822-3
4	**.417** 10.6	**.406** 10.3	**.469** 11.9	171822-4
5	**.516** 13.1	**.504** 12.8	**.567** 14.4	171822-5

Receptacle Connectors (Wire Applied)

Low Profile Type Receptacle Contacts

Material:
Pre-Tin Phosphor Bronze

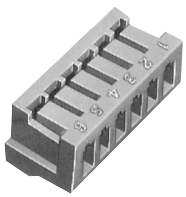


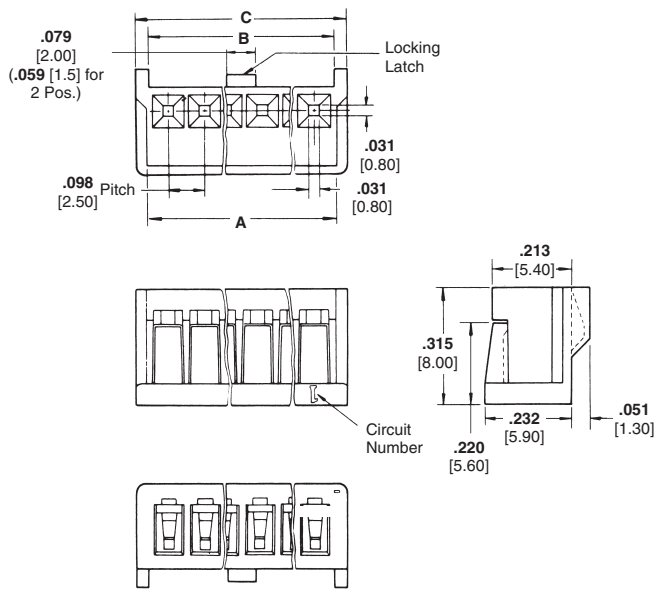
Wire Size		Wire Ins. Dia.	Contact Part No.		Hand Tool Part Numbers
AWG	mm²		S.T.	L.P.	
30-26	0.05~0.15	**.039~.059** 1.00~1.50	—	170370-1	724663-1
26-22	0.12~0.35	**.043~.075** 1.10~1.90	170354-1	170369-1	755332-1

Hand Tool Instruction Sheet: IS-099J (724663-1), IS-364J (755332-1).
Insertion Tool Number 724674-1. Extraction Tool Number 724676-1.

Low Profile Type Receptacle Housings .098 [2.50]

Material:
UL 94V-0 rated, 6/6 nylon





No. of Positions	Dimensions A	B	C	Part Numbers Natural
2	**.217** 5.50	**.205** 5.20	**.276** 7.00	172142-2
3	**.315** 8.00	**.303** 7.70	**.374** 9.50	172142-3
4	**.413** 10.50	**.402** 10.20	**.472** 12.00	172142-4

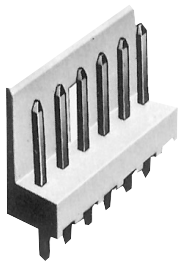
Post Headers (Board Applied)

Vertical Mount Type .098 [2.50]

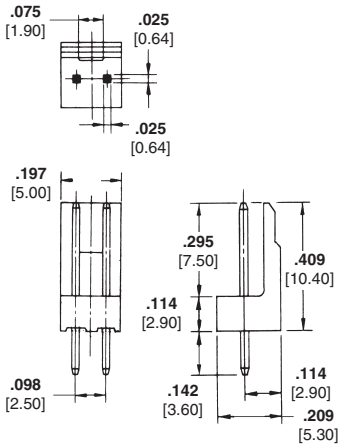
Material & Finish:

Header — Recognised by UL, flame retardant grade, UL 94V-0 rated, 6/6 nylon

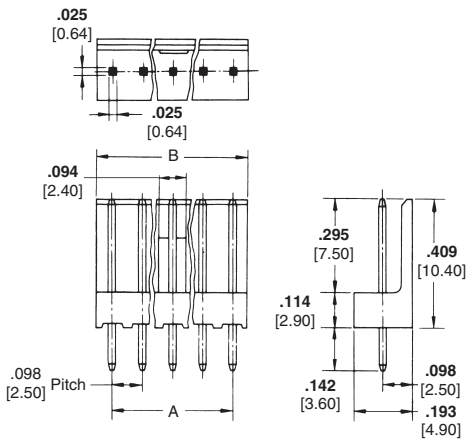
Post — Brass, Tin over copper plated



2 Positions



3 ~ 5 Positions



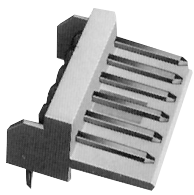
No. of Positions	Dimensions A	Dimensions B	Part Numbers Natural
2	—	—	171825-2
3	**.197** 5.00	**.295** 7.50	171825-3
4	**.295** 7.50	**.394** 10.00	171825-4
5	**.394** 10.00	**.492** 12.50	171825-5

Horizontal Mount Type .098 [2.50]

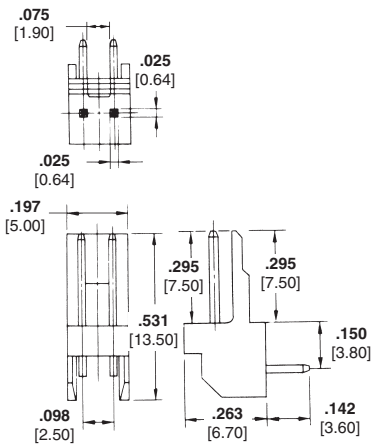
Material & Finish:

Header — Recognised by UL, flame retardant grade, UL 94V-0 rated, 6/6 nylon

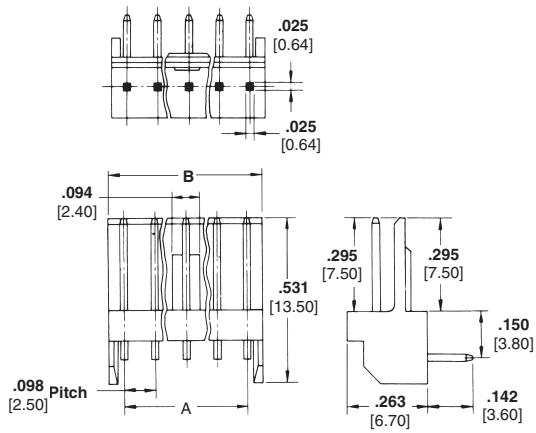
Post — Brass, Tin



2 Positions



3 ~ 5 Positions



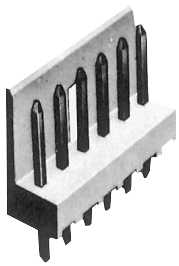
No. of Positions	Dimensions A	Dimensions B	Part Numbers Natural
2	—	—	171826-2
3	**.197** 5.00	**.295** 7.50	171826-3
4	**.295** 7.50	**.394** 10.00	171826-4
5	**.394** 10.00	**.492** 12.50	171826-5

Post Headers (Board Applied)

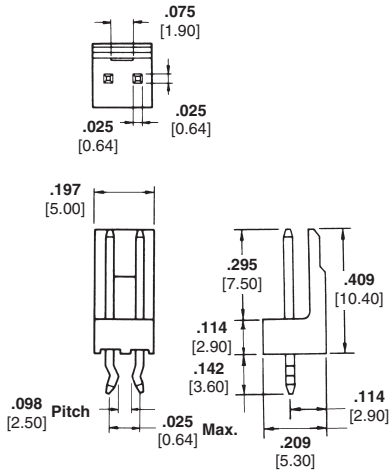
Vertical Mount Type with Self-Retaining Feature Posts .098 [2.50]

Material & Finish:

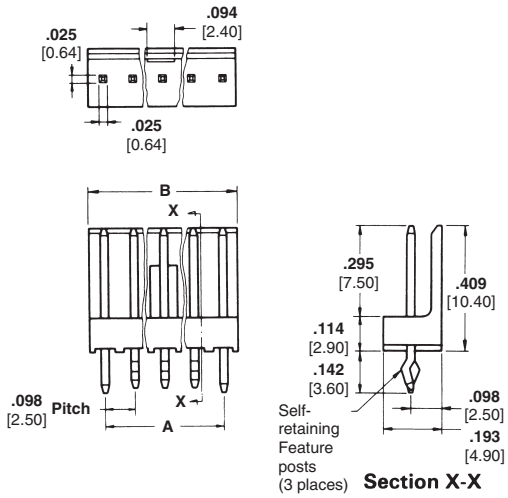
Header — UL 94V-0 rated, 6/6 nylon
Post — Brass, Tin-lead over copper plated



2 Positions



3 ~ 5 Positions



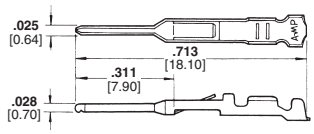
No. of Positions	Dimensions A	Dimensions B	Part Numbers Natural
2	—	—	172732-2
3	**.197** 5.00	**.295** 7.50	172732-3
4	**.295** 7.50	**.394** 10.00	172732-4
5	**.394** 10.00	**.492** 12.50	172732-5

Plug Connectors (Wire Applied)

Standard Type Pin Contacts

Material:

Pre-Tin Brass



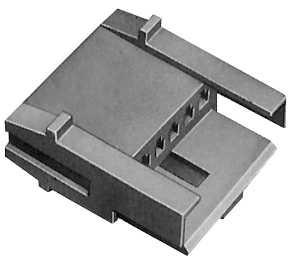
Wire Size AWG	Wire Size mm²	Wire Ins. Dia.	Contact Part Numbers Brass/Pre-Tin S.T	Contact Part Numbers Brass/Pre-Tin L.P.
30-26	0.05~0.15	**.394~.055** 1.00~1.40	170377-1	170430-1
26-20	0.14~0.52	**.043~.075** 1.10~1.90	170376-1	170429-1

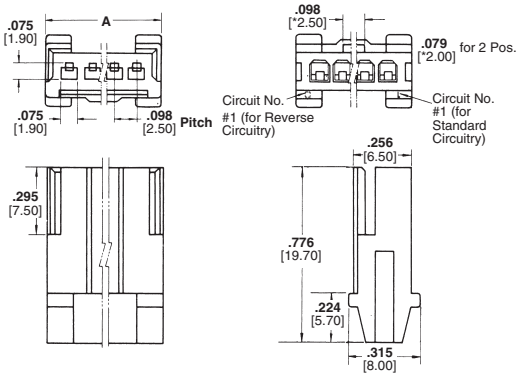
Hand Tool Part Number 724687-1 (for AWG#30-26), 755333-1 (IS-365J) (for AWG #26-20)
Extraction Tool Part Number 724762-1

Free Hanging Style Plug Housings .098 [2.50]

Material:

UL94V-0 rated, 6/6 nylon





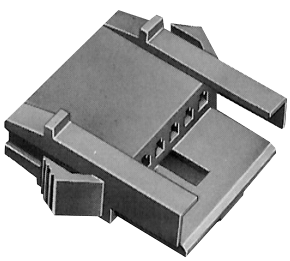
No. of Positions	Dimensions A	Part Numbers For Standard Circuit Natural
2	**.311** 7.90	172211-2
3	**.409** 10.40	172211-3
4	**.508** 12.90	172211-4
5	**.606** 15.40	172211-5

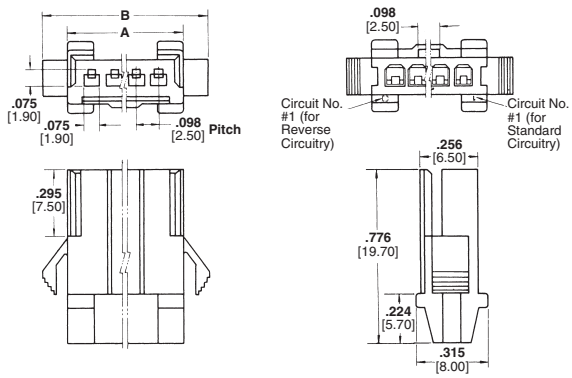
Note: Cap housing for standard circuitry Part Number 172211 mates with receptacle housing for standard circuitry Part Number 171822

Plug Housings for Panel Mount .098 [2.50]

Material:

UL 94V-0 rated, 6/6 nylon





No. of Positions	Dimensions A	Dimensions B	Part Numbers For Standard Circuit Natural
3	**.409** 10.40	**.630** 16.00	172213-3
5	**.606** 15.40	**.827** 21.00	172213-5

Note: Cap housing for standard circuitry Part Number 172213 mates with receptacle housing for standard circuitry Part Number 171822

Technical Data:

Centerline— 1.27mm (staggered)
Number of Positions—4, 6, 8, 10, 12, 14, 16, 18 and 20 positions
Contact Material— Phosphor bronze
Contact Finish— Tin-lead
Housing Material— Thermoplastic polyester, red, glass-filled - for surface mount versions polyamide 4.6

Flammability rating— per UL 94 V-0
UL-recognised— File E28476 Vol. 23 Section 4
Contact Resistance— 10 MΩ max.
Insulation Resistance— 1.000 MΩ min
Nominal Voltage— 230 V

Current Rating— 1.5 A max.
Temperature Range— -40°C to +105°C (operating)
Mating Force— 5N max. per contact
Unmating Force— 1N min. per contact
Minimum Contact Force— 2N min.

PC Board Connectors:

PC Board Thickness— 1.6mm nominal
PC Board Hole Diameter— 0.8mm for solder connectors

Ribbon Connectors:

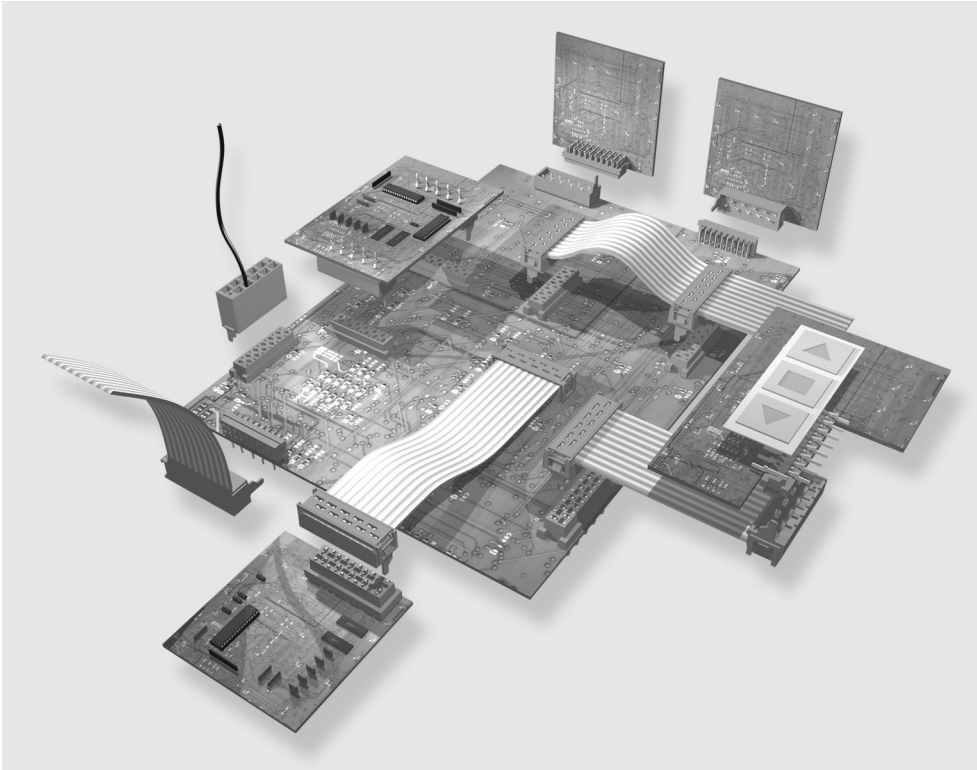
Cable Type— Ribbon Cable, UL Style 2651
Conductor Spacing— 1.27mm (.050")
Conductor Diameter— Solid - 0.30mm diameter
Stranded - 0.08mm²
7x0.12 - 0.13mm (other diameters and/or configurations on request)
Insulation Type— semi-rigid PVC
Insulation Diameter— 0.9 ± 0.1mm

Discrete Wire (COSI) Connectors:

Cable Type— AWG 28-24 and 24-20

Technical Specifications:

Product Specification
108-19052
Application Specification
114-19016, 114-19051



Miniaturisation and the trend towards higher density of electronic functions on a substrate led to the introduction of smaller interconnection systems. The AMP Micro-MaTch connector family, with it's contact spacing of 1.27mm, fully complies with the electronic packaging requirements of today and the future. The system offers a range of board and wire connectors, enabling a variety of wire-to-board and board-to-board interconnections. The AMP Micro-MaTch contact concept shown here is essentially different from other systems available.

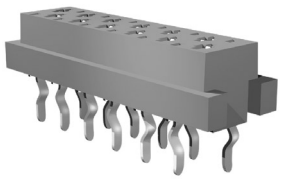
By its design the traditional failure mode in tinplated connections, fretting corrosion, is prevented. Due to an additional positioning spring in the female part, relative movements caused by vibrations/thermal expansion between male and female contacts are absorbed. By preventing movements on the contact spot, a gas tight connection can be guaranteed under all circumstances.

The contact spring is located in the board connector and not in the cable connector, which is usually the case. The counter part, incorporated in the cable connector, is a simple pin, either with an insulation displacement section, suitable for the mass-termination of cable or with a kinked solder leg to be soldered onto a PC Board. The separation of these two basic functions of the contact system - contact force generation and wire termination enables the independent optimisation of both functions and also leads to the relatively simple contact shapes.

Because of their shapes contacts can be post-plated, leaving no bare edges in the contact and wire slot area. The contact spring system features an additional spring member - the positioning spring - which compensates positional tolerances. In this way the spring contact can be fully optimised for its basic function, so that the relatively high contact force, required for tin-plated contact systems, can be guaranteed under all circumstances.

Female-on-Board Connectors

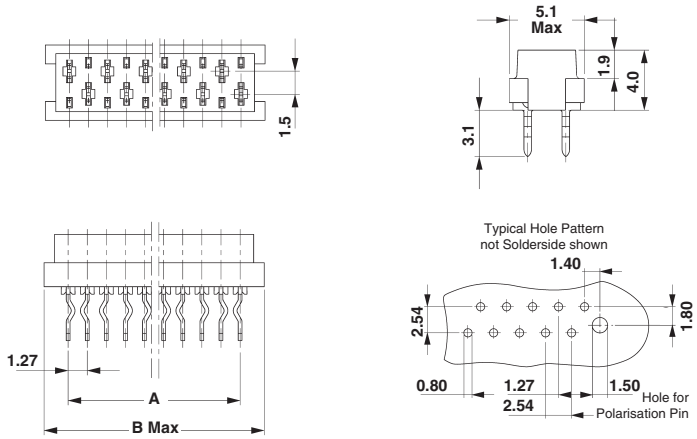
Top Entry



This connector version incorporates the patented AMP Micro-MaTch contact spring system and is designed to be soldered onto PC Boards with a nominal thickness of 1.6mm.

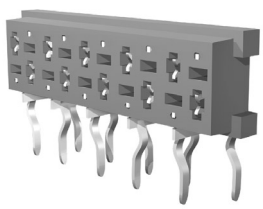
The solder legs are indented, providing firm retention of the connector before and during the solder operations.

As polarisation is accomplished directly between the AMP Micro-MaTch male connectors and the PC Board, this top entry female connector does not have any polarising features. Therefore, the orientation of the connector on the PC Board is irrelevant.



No. of Positions	Dimensions mm		Part Numbers	
	A	B	Connectors / Reel	Connectors / Box
4	3.81	7.1	215079-4	7-215079-4
6	6.35	9.7	215079-6	7-215079-6
8	8.89	12.2	215079-8	7-215079-8
10	11.43	14.7	1-215079-0	8-215079-0
12	13.97	17.3	1-215079-2	8-215079-2
14	16.51	19.8	1-215079-4	8-215079-4
16	19.05	22.4	1-215079-6	8-215079-6
18	21.59	24.9	1-215079-8	8-215079-8
20	24.13	27.4	2-215079-0	9-215079-0

Side Entry

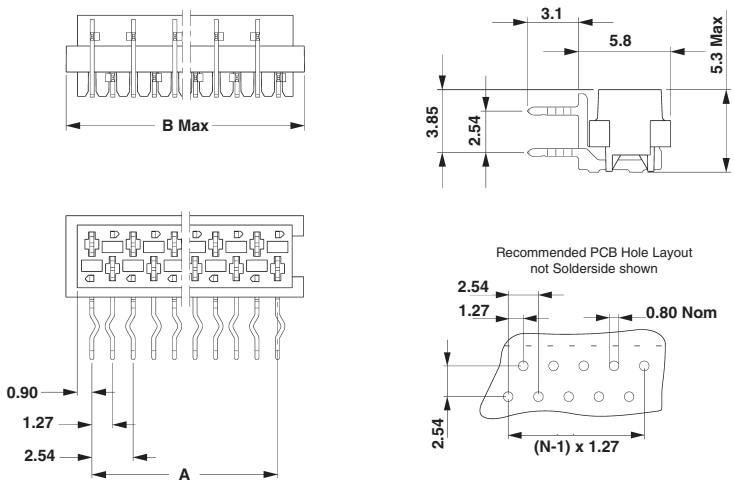


This connector version is identical to the top entry version with two exceptions:

- The solder legs are parallel to the mating face of the connector instead of perpendicular
- Its housing is polarised, so that polarisation is accomplished directly between the two mating connectors. Proper orientation of the connectors on the PC Board is relevant here

Notes:

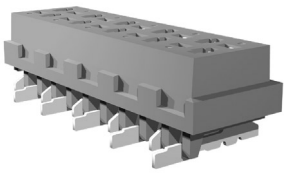
1. Connectors are always sideways mounted onto an adhesive tape
2. Standard packaging quantity is 2500 connectors on a reel with a diameter of 600mm
3. At additional charge a special packaging option is available: 250 connectors on a reel with a diameter of 250mm, packed in a dedicated dispenser box



No. of Positions	Dimensions mm		Part Numbers	
	A	B	Connectors / Reel	Connectors / Box
4	3.81	7.1	215460-4	7-215460-4
6	6.35	9.7	215460-6	7-215460-6
8	8.89	12.2	215460-8	7-215460-8
10	11.43	14.7	1-215460-0	8-215460-0
12	13.97	17.3	1-215460-2	8-215460-2
14	16.51	19.8	1-215460-4	8-215460-4
16	19.05	22.4	1-215460-6	8-215460-6
18	21.59	24.9	1-215460-8	8-215460-8
20	24.13	27.4	2-215460-0	9-215460-0

Female and Male-on-Board Connectors

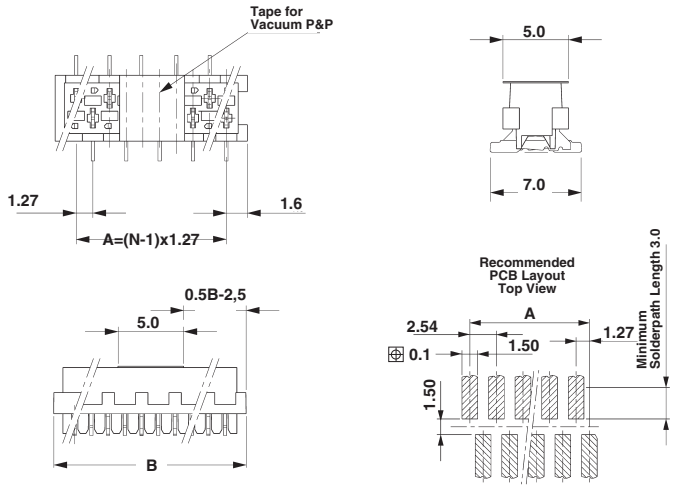
Female-on-Board Connector - Surface Mount Device (SMD)



This SMD connector version is designed for standard reflow and infrared solder processes ("FULL SMD"). Polarisation is accomplished by the housing, therefore no polarisation holes in the PC Board are required.

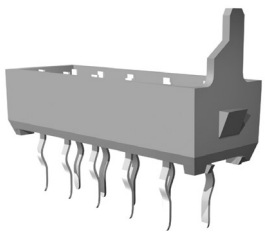
The contact is designed with an additional spring to compensate for differences in thermal expansion between housing and PCB. Due to this feature, tension on the solder joints is prevented.

Notes:
1. To enable automatic Pick & Placement, connectors are always packed in embossed tape according to EIA481 specification
2. Standard packaging quantity is 900 pcs on a reel with a diameter of 330mm
3. Connectors are supplied with or without a feature for vacuum Pick & Placement
4. For this connector no additional solder hold down is required



No. of Positions	Dimensions mm		Part Numbers	
	A	B	Without vacuum tape	With vacuum tape
4	3.81	7.1	188275-4	7-188275-4
6	6.35	9.7	188275-6	7-188275-6
8	8.89	12.2	188275-8	7-188275-8
10	11.43	14.7	1-188275-0	8-188275-0
12	13.97	17.3	1-188275-2	8-188275-2
14	16.51	19.8	1-188275-4	8-188275-4
16	19.05	22.4	1-188275-6	8-188275-6
18	21.59	24.9	1-188275-8	8-188275-8
20	24.13	27.4	2-188275-0	9-188275-0

Male-on-Board Connector

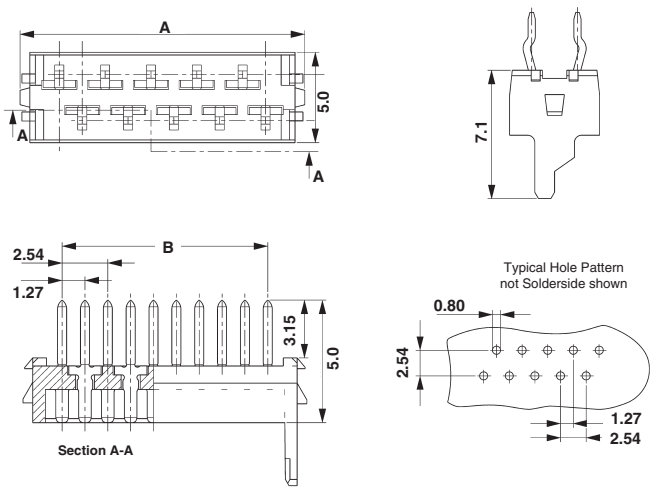


This male connector version is designed to be soldered onto PC Boards with a nominal thickness of 1.6mm.

The solder legs are indented for firm retention of the connector in the PC Board.

The connector housing features a polarising pin on one end for proper orientation of this connector version.

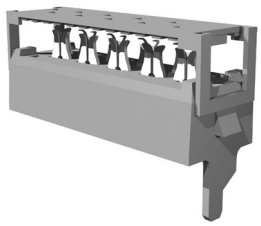
Notes:
1. Connectors are always sideways mounted onto an adhesive tape
2. Standard packaging quantity is 2500 connectors on a reel with a diameter of 600mm
3. At additional charge a special packaging option is available: 250 connectors on a reel with a diameter of 250mm, packed in a dedicated dispenser box



No. of Positions	Dimensions mm		Part Numbers	
	A	B	Connectors / Reel	Connectors / Box
4	3.81	7.1	215464-4	7-215464-4
6	6.35	9.7	215464-6	7-215464-6
8	8.89	12.2	215464-8	7-215464-8
10	11.43	14.7	1-215464-0	8-215464-0
12	13.97	17.3	1-215464-2	8-215464-2
14	16.51	19.8	1-215464-4	8-215464-4
16	19.05	22.4	1-215464-6	8-215464-6
18	21.59	24.9	1-215464-8	8-215464-8
20	24.13	27.4	2-215464-0	9-215464-0

Male-on-Wire and Paddle Board Connectors

Male-on-Wire Connector

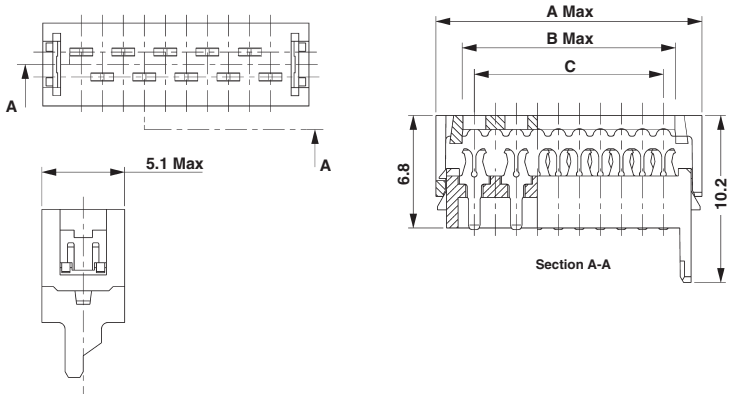


For the wire connection, a well-known AMP-LATCH type blade with a single slot is used. The insides of the slots are tin plated for stable and reliable connections.

The connector is supplied with a pre-assembled cover, providing excellent positioning of the ribbon cable before and during the insulation displacement process.

After termination the cover is held in place by each individual contact in addition to two plastic latches at both ends of the connector.

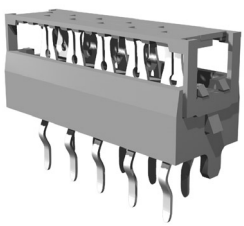
Remark: The AMP Micro-MaTch Male-on-Wire connector is specifically designed to be disengaged from its counterpart by pulling the cable in the appropriate direction.



No. of Positions	Dimensions mm			Part Numbers	
	A	B	C	Connectors / Reel	Connectors / Box
4	8.6	5.4	3.81	215083-4	7-215083-4
6	11.1	8.0	6.35	215083-6	7-215083-6
8	3.6	10.5	8.89	215083-8	7-215083-8
10	16.2	13.0	11.43	1-215083-0	8-215083-0
12	18.7	15.6	13.97	1-215083-2	8-215083-2
14	21.3	18.1	16.51	1-215083-4	8-215083-4
16	23.8	20.7	19.05	1-215083-6	8-215083-6
18	26.3	23.2	21.59	1-215083-8	8-215083-8
20	28.9	25.7	24.13	2-215083-0	9-215083-0
24	34.0	30.8	29.21	2-215083-4	9-215083-4

Notes:
1. Connectors are always sideways mounted onto an adhesive tape
2. Standard packaging quantity is 2500 connectors on a reel with a diameter of 600mm
3. At additional charge a special packaging option is available: 250 connectors on a reel with a diameter of 250mm, packed in a dedicated dispenser box

Paddle Board Connector

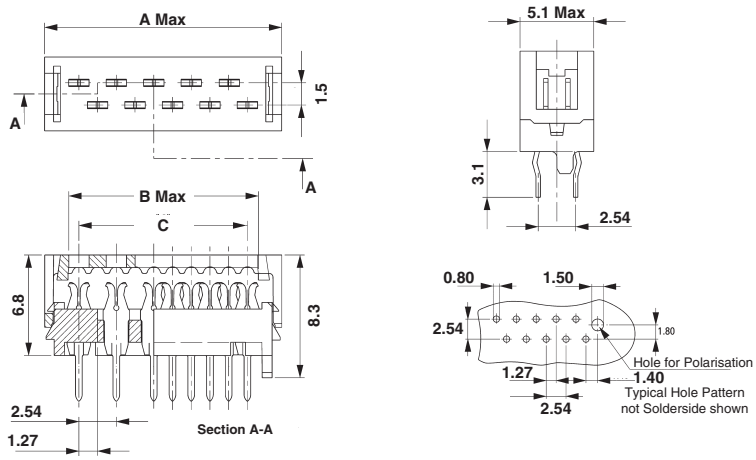


Direct soldering of a ribbon cable onto a PC Board is a very difficult job with the smaller sizes of ribbon cable. If such a permanent cable connection is required, the application can be facilitated by using this connector type.

The Paddle Board connector is applied to the ribbon cable with the same application tooling, available for the termination of the Male-on-Wire connector.

The solder legs are indented and provide mechanical retention of the connector/cable assembly in the PC Board before and during soldering.

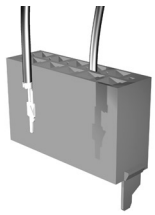
This Paddle Board connector version is designed to be soldered onto PC Boards with a nominal thickness of 1.6mm.



No. of Positions	Dimensions mm			Part Numbers	
	A	B	C	Connectors / Reel	Connectors / Box
4	8.6	5.4	3.81	215570-4	7-215570-4
6	11.1	8.0	6.35	215570-6	7-215570-6
8	3.6	10.5	8.89	215570-8	7-215570-8
10	16.2	13.0	11.43	1-215570-0	8-215570-0
12	18.7	15.6	13.97	1-215570-2	8-215570-2
14	21.3	18.1	16.51	1-215570-4	8-215570-4
16	23.8	20.7	19.05	1-215570-6	8-215570-6
18	26.3	23.2	21.59	1-215570-8	8-215570-8
20	28.9	25.7	24.13	2-215570-0	9-215570-0
24	34.0	30.8	29.21	2-215570-4	9-215570-4

Crimp On Snap In (COSI) and SMC Connectors

Crimp On Snap In (COSI) Connector



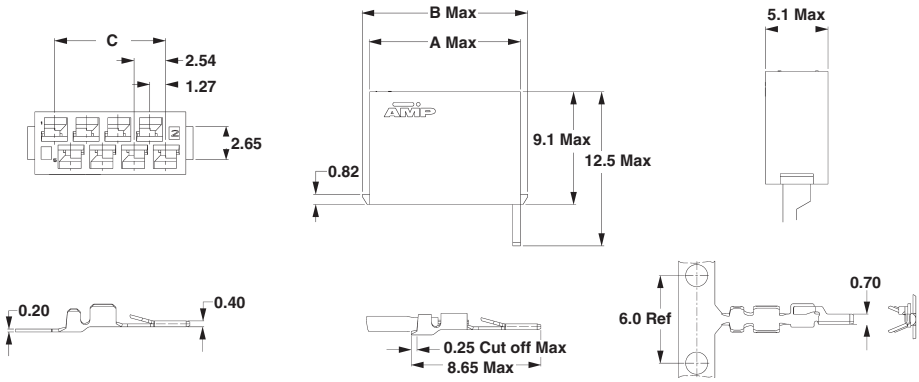
This crimp version for discrete Wire-to-Board applications is fully compatible with all female connectors of the Micro-MaTch family.

Insulation and wire crimp barrel are copies of the well proven AMPLIMITE contacts. After mating with a Micro-MaTch female connector the contacts are fully protected by isolating plastics. Contacts are made of a pretinned Phosphor bronze.

Contacts are supplied in a range for 24-20 AWG and 28-24 AWG. For repair operations an extraction tool is available; PN 734873-1.

Notes:

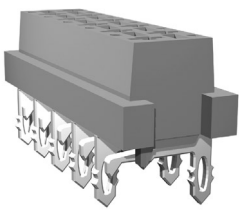
1. Contacts can be crimped using a G-terminator or mini stripper crimper based applicator.
2. For the contacts on strip the standard packaging quantity is 15.000 pcs on a reel with a diameter of 600mm.
3. For repair/service contacts are packaged 750 pcs per reel, to be used with handtools.
4. The housings are bulk packed in a box with a packaging quantity varying from 200 to 900 pcs per box



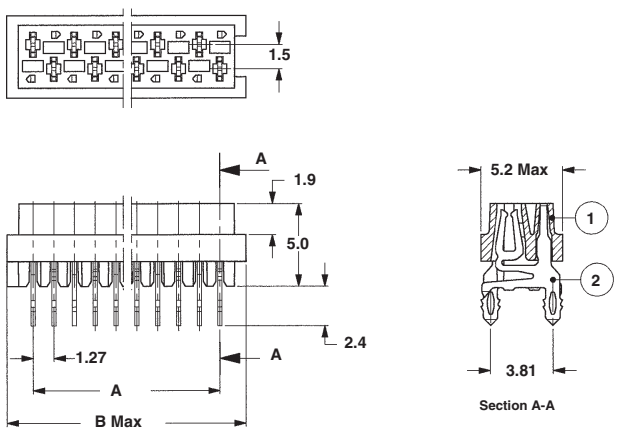
Wire Size Range		Insulation Diameter	Part Numbers		
(mm²)	(AWG)	(mm)	Large reel, 15.000	Small reel, 750	Hand Tool
0.08-0.20	28-24	0.76-1.00	338096-1	1-338096-1	734870-2
0.20-0.50	24-20	1.27-1.52	338097-1	1-338097-1	734870-1

No. of Positions	Dimensions mm			Part Number	Number of pcs/box
	A	B	C		
4	7.2	8.4	3.81	338095-4	900
6	9.8	10.9	6.35	338095-6	700
8	12.3	13.5	8.89	338095-8	500
10	14.9	16.0	11.43	1-338095-0	450
12	17.4	18.5	13.97	1-338095-2	400
14	19.9	21.1	16.51	1-338095-4	350
16	22.5	23.6	19.05	1-338095-6	300
18	25.0	26.2	21.59	1-338095-8	250
20	27.6	28.7	24.13	2-338095-0	200

SMC Connector



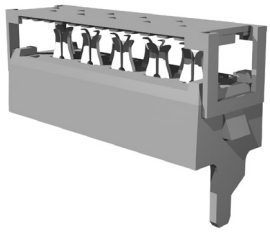
This connector type enables a solderless application to the circuit board. Contact is made on the surface of the PCB, enabling the use of paperphenol and epoxy boards with both drilled and punched holes. This connector is suitable for both Wire-to-Board connections. Because this connector is mounted on the solderside, the components of both PCBs in a parallel Board-to-Board application, will be in the same direction. By this, the stacking of two or more PCBs is possible. Application tooling available on request.



No. of Positions	Dimensions mm		Part Number Reel Packaging
	A	B max	
4	3.81	7.1	0-100411-4
6	6.35	9.7	0-100411-6
8	8.89	12.2	0-100411-8
10	11.43	14.7	1-100411-0
12	13.97	17.3	1-100411-2
14	16.51	19.8	1-100411-4
16	19.05	22.4	1-100411-6
18	21.59	24.9	1-100411-8
20	24.13	27.4	2-100411-0

Latching Versions

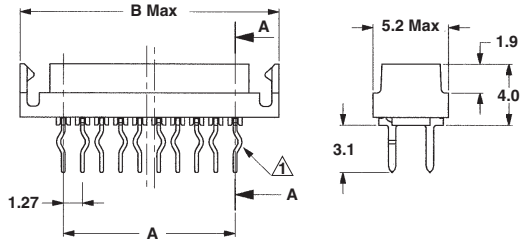
Latching Version



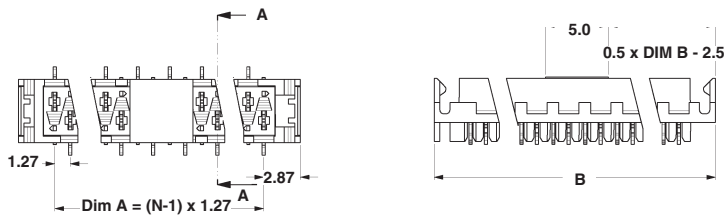
For Wire-to-Board applications this feature provides an audible click during mating. This feature is available for the standard Micro-MaTch female connectors. Cross reference is made by base part number:

x-338068-x instead of x-215079-x
x-338069-x instead of x-188275-x
x-338070-x instead of x-215460-x

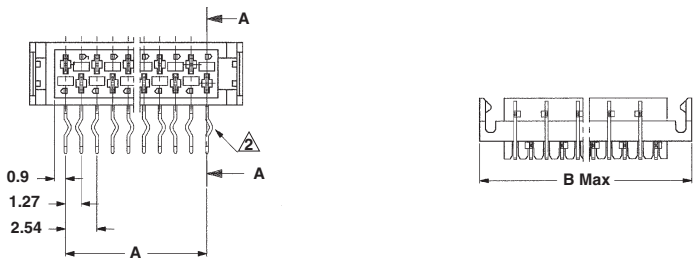
(standard large reel packaging only)



No. of Positions	Dimensions mm		Part Number Reel Packaging
	A	B max	
4	3.81	9.7	0-338068-4
6	6.35	12.2	0-338068-6
8	8.89	14.7	0-338068-8
10	11.43	17.3	1-338068-0
12	13.97	19.8	1-338068-2
14	16.51	22.4	1-338068-4
16	19.05	24.9	1-338068-6
18	21.59	27.4	1-338068-8
20	24.13	30.0	2-338068-0



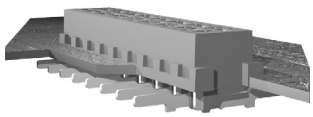
No. of Positions	Dimensions mm		Part Numbers	
	A	B max	with Vac. Tape	without Vac. Tape
4	3.81	9.7	7-338069-4	0-338069-4
6	6.35	12.2	7-338069-6	0-338069-6
8	8.89	14.7	7-338069-8	0-338069-8
10	11.43	17.3	8-338069-0	1-338069-0
12	13.97	19.8	8-338069-2	1-338069-2
14	16.51	22.4	8-338069-4	1-338069-4
16	19.05	24.9	8-338069-6	1-338069-6
18	21.59	27.4	8-338069-8	1-338069-8
20	24.13	30.0	9-338069-0	2-338069-0
24	29.21	35.0	9-338069-4	2-338069-4



No. of Positions	Dimensions mm		Part Number Packaging
	A	B max	
4	3.81	9.7	0-338070-4
6	6.35	12.2	0-338070-6
8	8.89	14.7	0-338070-8
10	11.43	17.3	1-338070-0
12	13.97	19.8	1-338070-2
14	16.51	22.4	1-338070-4
16	19.05	24.9	1-338070-6
18	21.59	27.4	1-338070-8
20	24.13	30.0	2-338070-0

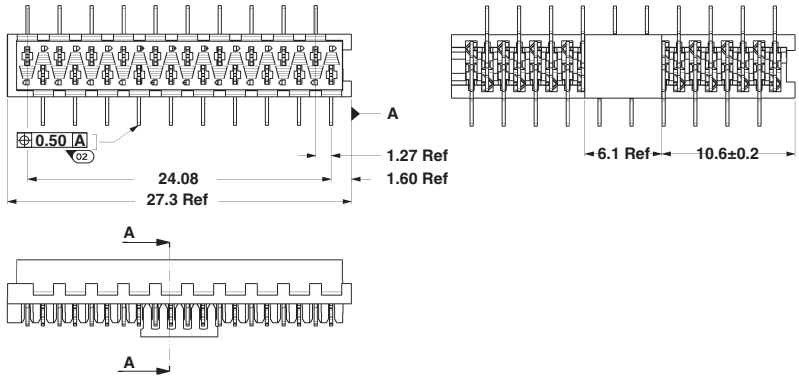
In-board SMD and Male SMD Connectors

In-board SMD Connector

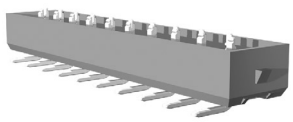


This connector is only tooled in 20 position (9-188431-0) and packaged in embossed tape according to EIA481 standards. The connectors are equipped with a feature for vacuum Pick & Placement. It enables the mounting of a PCB with the solderside direct behind e.g. a display. It is also possible to obtain a parallel BTB application with an extreme low PCB distance of 4.2mm.

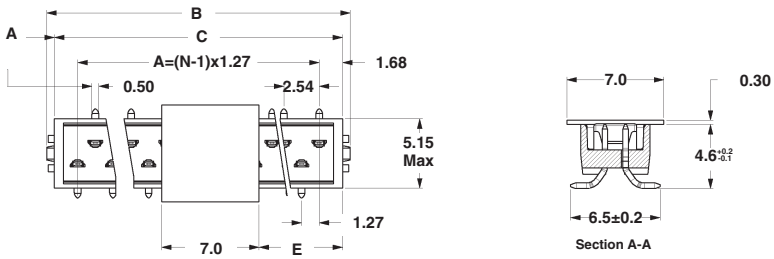
Mating Part Numbers are: 338728, 215083 and 215464



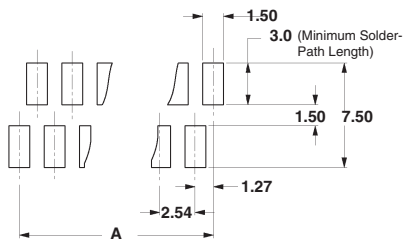
Male SMD



This connector enables the possibility to have a full SMD to SMD Board-to-Board application. It mates with all Micro-MaTch female connectors, and will be packaged according to EIA 481 standard. Consult Tyco Electronics-AMP for more information.



Recommended PCB Layout
Top View

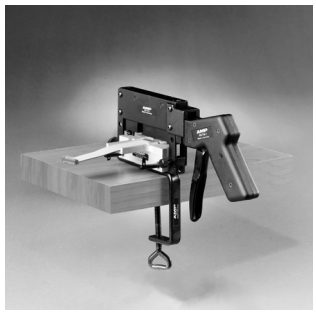


No. of Positions	Dimensions mm					Vacuum Pick and Place Feature	
	A	B	C	D*	E	Part Number with	Part Number without
4	3.8	8.3	7.2	24	0.1	7-338728-4	338728-4
6	6.4	10.8	9.7	24	1.3	7-338728-6	338728-6
8	8.9	13.4	12.2	24	2.6	7-338728-8	338728-8
10	11.4	15.9	14.8	24	3.9	8-338728-0	1-338728-0
12	14.0	18.5	17.3	44	5.1	8-338728-2	1-338728-2
14	16.5	21.0	19.9	44	6.4	8-338728-4	1-338728-4
16	19.0	23.5	22.4	44	7.7	8-338728-6	1-338728-6
18	21.6	26.1	24.9	44	8.9	8-338728-8	1-338728-8
20	24.1	28.6	27.5	44	10.2	9-338728-0	2-338728-0

* Tape Width

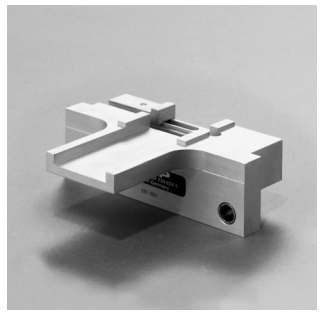
Application Tooling

Application Tooling



Pistol handgrip tooling. This is a handtool for terminating Micro-MaTch Male-on-Wire and Paddle Board connectors. Meant for small quantities or repair services. Pistol handgrip and adaptor must be ordered separately.

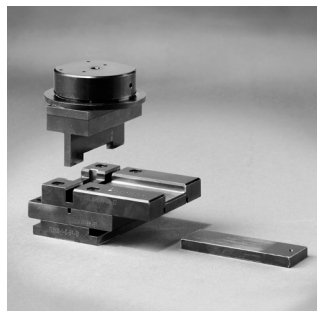
Standard pistol handgrip.
Part Number 734155-1
This basic tool can be used for both Micro-MaTch and AMP-LATCH applications.



Pistol handgrip adaptor set.
Part Number 734024-1
This adaptor can be used for Micro-MaTch terminations, together with the pistol handgrip.

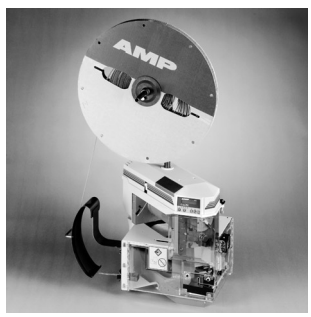
Bench press tooling.
Part Number 733280-3
This complete tool includes a Micro-MaTch dedicated tool set mounted on the bench press 654173-2.

Bench press tooling.
Part Number 91085-2
This basic press is a hand operated version. This press can also be obtained in a pneumatically operated version - **Part Number 91112-3**



Bench press tooling set.
Part Number 733278-2
This tool set is designed especially for Micro-MaTch. It fits both pneumatically and hand operated presses.

COSI Handtooling.
Part Number 734870-1 for 24-20 AWG,
Part Number 734870-2 for 28-24 AWG.
These dedicated tools can be obtained for services/repair applications



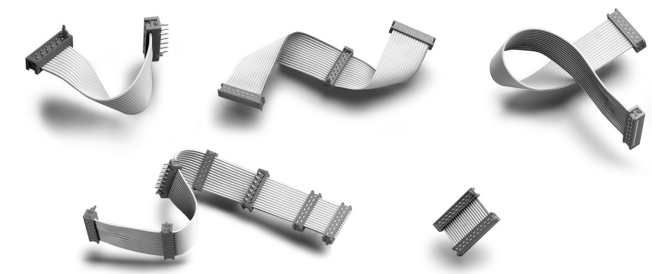
G-terminator.
Part Number 677-499-1

Applicators for G-terminator.
Part Number 677894-1 for AWG 28-24 (Part Number 338096-1).
Part Number 677895-1 for AWG 24-22 (Part Number 338097-1).

Lead Assembly and Sample Box

Lead Assembly

It is possible to deliver custom made Micro-MaTch lead assemblies, in all positions between 4 and 20 in all required cable lengths. All leads are 100% electrically tested on shortcut and connection before shipment. A flexible 7 stranded cable is used for easy assembly. Special cable available on request. For order information contact Tyco Electronics-AMP.



Sample Box

Part Number 1377074-1

This box includes samples of all connector types within the Micro-MaTch family, examples of leads, printed circuit boards and a CD-ROM. The CD-ROM includes an electronic version of this section, an animation of the contact principle and CAD files of all connector types.

The sample box is an aid in visualising the variety of applications where Micro-MaTch can be implemented.

AMP-BARREL Terminals

Product Facts

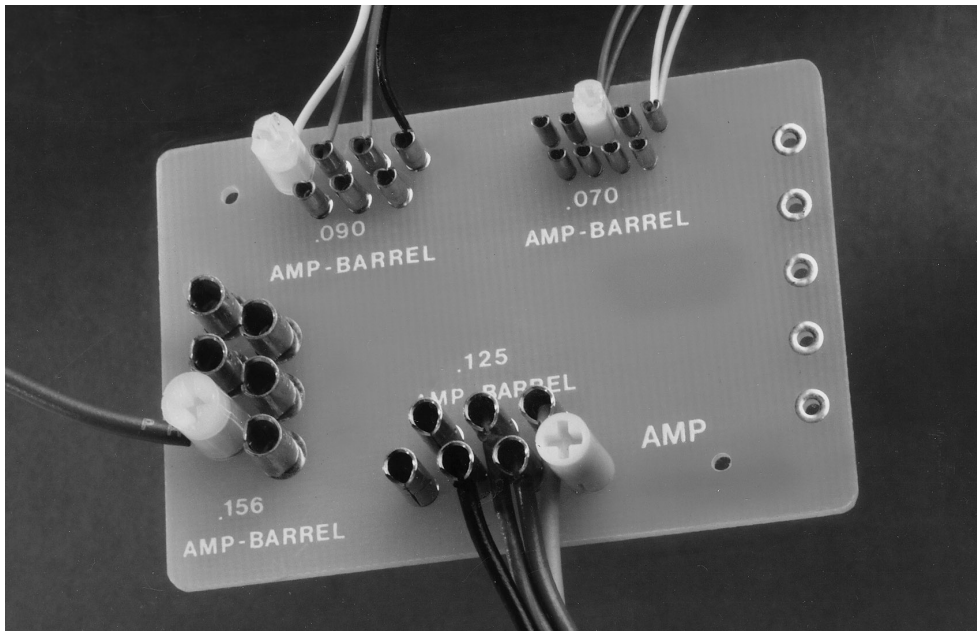
- **Unique insulation displacement technology**
- **Eliminates wire preparation—no stripping or soldering**
- **Capable of being wave-soldered to pc board with other components, enabling wires to be terminated at a more conducive time and location**
- **Anti-solder wicking design**
- **Accepts a wide range of wire sizes, solid or stranded**
- **Available in single and two-wire version**
- **Reusable terminal**
- **Available in loose-piece or strip version**
- **Semiautomatic insertion machine for strip version**
- **Simple, rugged low cost wire insertion tool**
- **Recognised under the Component Program of Underwriters Laboratories Inc., File No. E28476**

Technical Documents:

Product Specifications
108-6043 .070 [1.78] Diameter Terminal
108-6044 .090 [2.29] Diameter Terminal
108-6025 .125 [3.18] Diameter Terminal
108-6026 .156 [3.96] Diameter Terminal

Application Specification
114-6000 AMP-BARREL Terminals

Instruction Sheets
408-3187, 408-6505, 408-6553



AMP-BARREL Terminals solve the problem of interconnecting discrete wires to printed circuit boards without permanently soldering them in place, and provide cost savings by eliminating the need for two-piece terminal systems, terminal strips or expensive space-consuming modular connectors.

These unique insulation displacement terminals are suitable for most printed circuit boards from .047 [1.19] to .125 [3.18] thick and are mounted in a space-saving, free-standing manner wherever required.

AMP-BARREL Terminals are available in loose piece or strip form for semiautomatic machine insertion. Upon insertion, they may be hand or wave-soldered with other components without solder wicking into the wire termination area.

Termination is achieved by placing the end of a pre-cut unstripped wire horizontally to the board at the top of the AMP-BARREL Terminal. Insertion to the proper depth is accomplished by the use of a simple, low-cost screwdriver type tool or low cost plastic stuffer cap. These caps use a standard Phillips type screwdriver to terminate the wire. When left in place on the terminal they provide strain relief and insulation. They may be removed and reused for field changes and/or repairs. The high compliancy of the terminal provides for a highly reliable, stable interconnection and withstands most extreme temperature, vibration and shock.

AMP-BARREL Terminals offer the added benefit of accepting a wide wire range, solid or stranded, within the same terminal. The .125 [3.18] diameter AMP-BARREL Terminal accepts a wire range of 28-18 AWG [0.08-0.8 mm^2] with a maximum insulation diameter of .086 [2.18]. It is made of high strength, high ductility, pre-tinned phosphor bronze and accepts one or two wires of the same type that may vary in size by one wire gage. The C-shaped cross-slot provides for a reliable two-wire termination.

This product also offers a wire cutoff version which allows the wire to be placed across the top of the terminal where the hand tool terminates and trims the wire in one action.

Similarly constructed, but of smaller size, are the .070 [1.78] and .090 [2.29] diameter AMP-BARREL Terminals. These terminals accept, respectively, wire sizes of 28-26 AWG [0.08-0.15 mm^2] with a maximum insulation diameter of .036 [0.91] and 28-22 AWG [0.08-0.4 mm^2] with a maximum insulation diameter of .053 [1.35]. They also will accept two wires of the same gage and type.

The .156 [3.96] diameter AMP-BARREL Terminal accepts a wire range of 24-18 AWG [0.2-0.8 mm^2] with a maximum insulation diameter of .115 [2.92]. It is made of tin-lead plated brass and will accept one wire per terminal.

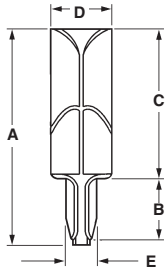
All AMP-BARREL Terminals are reusable. This feature is extremely important when correcting wiring errors, making field repairs or modifications.

AMP-BARREL Terminals

.070 [1.78] and .090 [2.29] Terminals

Material and Finish:

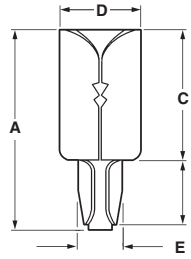
Pretinned phosphor bronze



.156 [3.96] Terminals

Material and Finish:

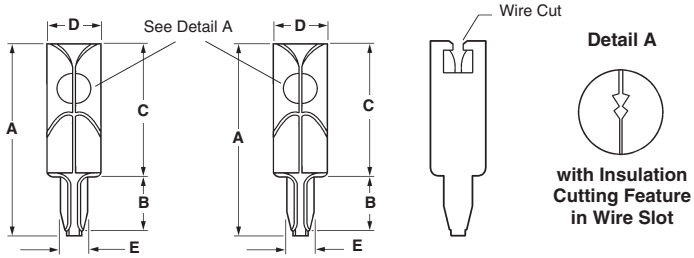
Tin-lead plated brass



.125 [3.18] Terminals

Material and Finish:

Pretinned phosphor bronze



Standard **with Wire Cutoff Feature**

Terminal Size	Conductor (solid or stranded)				PC Board		Terminal Dimensions					Part Numbers	
	Wire Size Range AWG	Wire Size Range mm²	Max. Ins. O.D.	Wire per Terminal	Thk. Range	Mtg. Hole Dia.	A	B	C	D	E	Loose Pc.	Strip
.090 2.29	28-22	0.08-0.4	**.053** 1.35	1 or 2	**.047-.094** 1.19-2.39	**.050-.054** 1.27-1.37	**.340** 8.64	**.120** 3.05	**.210** 5.33	**.090** 2.24	**.056** 1.42	552967-1	—
.125 3.18 Standard	28-18	0.08-0.8	**.086** 2.18	1 or 2	**.062-.094** 1.57-2.39	**.061-.065** 1.55-1.65	**.458** 11.63	**.118** 3.00	**.325** 8.26	**.125** 3.18	**.067** 1.70	552699-1*	—
					.062-.094 1.57-2.39	**.061-.065** 1.55-1.65	**.458** 11.63	**.118** 3.00	**.325** 8.26	**.125** 3.18	**.067** 1.70	552699-4	—
					.062-.125 1.57-3.18	**.061-.065** 1.55-1.65	**	**.118** 3.00	**.325** 8.26	**.125** 3.18	**.067** 1.70	—	552699-5
.156 3.96	24-18	0.2-0.8	**.115** 2.92	1	**.062-.094** 1.57-2.39	**.078-.082** 1.98-2.08	**.390** 9.91	**.125** 3.18	**.250** 6.35	**.156** 3.96	**.084** 2.13	552770-1	—

*Has tough insulation cutting feature in wire slot (see Detail A in illustration). These barrels are not recommended for smaller standard wires.
**Cutoff is adjustable depending on board thickness.

Notes: 1. .070 [1.78] and .090 [2.29] terminals accept two wires of the same gage and type.
2. The .125 [3.18] terminal accepts two wires of the same type that may vary in size by one wire gage.
3. .070 [1.78] and .090 [2.29] terminals have a solder resist material on the inside of barrel which prevents solder wicking.

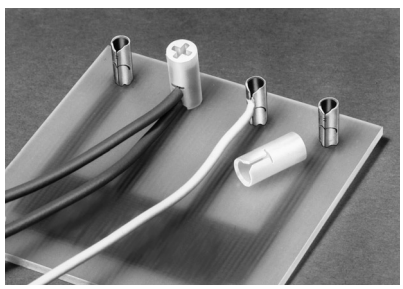
Wire Stuffer Caps

Product Facts

- **Insulates**
- **Provides strain relief**
- **Acts as field service repair tool**

Material and Finish:

Thermoplastic



Wire Size Range AWG	Wire Size Range mm²	Colour	For Use With Terminal Part Numbers	Wire Stuffer Cap Part Numbers
28-22	0.08-0.4	Natural	552967	553594-1
22-18	0.4-0.8	Yellow	552699	230707-1
28-24	0.08-0.2	Natural	552699	230707-3
24-18	0.2-0.8	Natural	552770	553595-1

Printed Circuit Board Disconnects

Product Facts

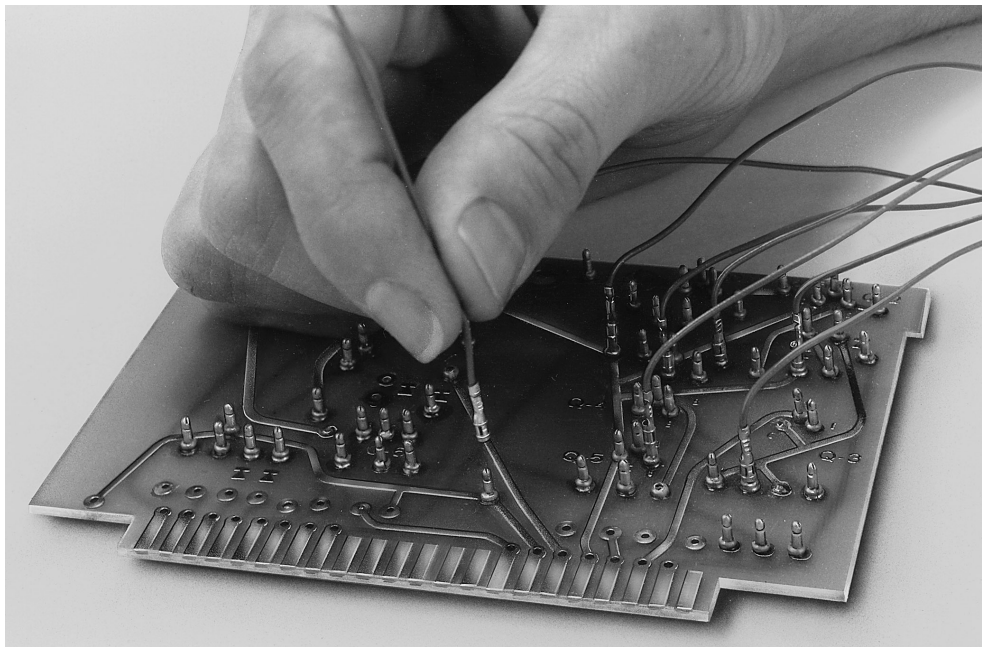
- **Quick connect or disconnect**
- **Automatic or semi-automatic application of strip form receptacles to wire**
- **Receptacles for wire size range 28 AWG [0.08] thru 17 AWG [1.0] and tinsel wire**
- **Automatic or semi-automatic insertion of strip form pins to printed circuit boards**
- **Solid or formed pins, single or double sided printed circuit board capability**
- **Choice of materials and platings**

Technical Documents

Product Specification—
108-1025
108-1059

Application Specification—
114-1008
114-1009
114-1023
114-1024

Instruction Sheets—
408-7850
408-7951
408-7963
408-7698
408-7850
408-7377
408-7345

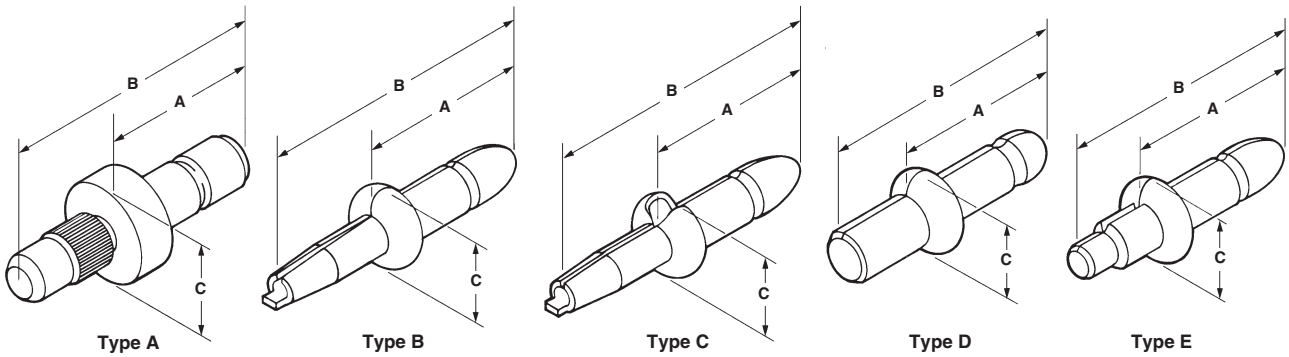


AMP printed circuit disconnect embodies the dual features of automation and the ability to make quick wiring changes. The special formed pins, available in .058 [1.47] and .093 [2.36] diameters, can be inserted in a printed circuit board quickly and reliably by fully automatic or semi-automatic machinery. The solid pin family, in .058 [1.47] diameter, is attached manually; its knurled edge retains it mechanically in the board until soldering is complete. All pins must be soldered to insure mechanical and electrical reliability. Pins may be used for either single or double-sided pc boards. The receptacles are applied quickly and efficiently to wire using semi-automatic AMP-O-LECTRIC or fully automatic AMPOMATOR machines.

All receptacles feature a precision wire crimp with an insulation crimp for high mechanical strength. A variety of wire and insulation ranges are available as listed. The combination of the pin and receptacle enables users to bring a variety of wires to a printed circuit board and offers the capability of a quick connect or disconnect. The product is ideal for use in prototype and production applications, particularly where wiring changes or rapid pc board inter-connections are required. Specific users include radio, television, test equipment, computer and business machine industries.

Printed Circuit Board Disconnects

.058 [1.47] Diameter Solid Pins



Type A Type B Type C Type D Type E

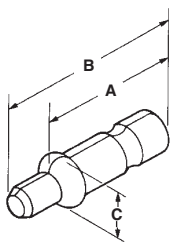
Type	Hole Diameter	Pc Board Thickness	Dimensions A	Dimensions B	Dimensions C	Material and Finish	Part Nos. Loose Form
A	**.062-.059** 1.57-1.50	**.125** 3.18	**.195** 4.95	**.385** 9.78	**.110** 2.79	Brass, Tin	60753-2
A	**.062-.059** 1.57-1.50	**.0312** 0.79	**.195** 4.95	**.260** 6.60	**.110** 2.79	Brass, Tin	60839-1

.058 [1.47] Diameter Formed Pins

Type	Hole Diameter	Pc Board Thickness	Dimensions A	Dimensions B	Dimensions C	Material and Finish	Part Nos. Strip Form	Part Nos. Loose Form[1]
B	**.050-.046** 1.27-1.17	**.063 or .094** 1.60 or 2.39	**.210** 5.33	**.360** 9.14	**.095** 2.41	Phos. Brz., Pre-Tin	60802-2	60803-2
						Phos. Brz., Gold[2]	60802-1	60803-1
B	**.062-.058** 1.57-1.47	**.063 or .094** 1.60 or 2.39	**.210** 5.33	**.360** 9.14	**.095** 2.41	Phos. Brz., Pre-Tin	60809-1	60874-1
						Phos. Brz., Gold[2]	60809-2	60874-2
B	**.070-.066** 1.78-1.68	**.063 or .094** 1.60 or 2.39	**.210** 5.33	**.360** 9.14	**.095** 2.41	Phos. Brz., Pre-Tin	60813-1	61018-1
C	**.050-.046** 1.27-1.17	**.063 or .094** 1.60 or 2.39	**.210** 5.33	**.360** 9.14	**.095** 2.41	Phos. Brz., Gold[3]	61038-1	61067-1
D	**.073-.067** 1.85-1.70	**.063** 1.60	**.210** 5.33	**.310** 7.87	**.095** 2.41	Phos. Brz., Pre-Tin	60824-1	61097-1
						Phos. Brz., Gold[2]	60824-2	61097-2
E	**.050-.046** 1.27-1.17	**.063** 1.60	**.210** 5.33	**.310** 7.87	**.095** 2.41	Phos. Brz., Gold[3]	640967-2	—
E	**.061-.055** 1.55-1.40	**.047** 1.19	**.210** 5.33	**.310** 7.87	**.095** 2.41	Phos. Brz., Pre-Tin	641944-1	—
E	**.061-.055** 1.55-1.40	**.063** 1.60	**.210** 5.33	**.310** 7.87	**.095** 2.41	Phos. Brz., Pre-Tin	60973-1	640394-1
						Phos. Brz., Gold[2]	60973-2	—

[1]Use Insertion Tool No. 689141-1 for Loose Form Pins
[2].000030 [0.00076] gold plated
[3].000030 [0.00076] gold plated in disconnect area
Note: All above formed pins are made from .010 [0.25] thick material

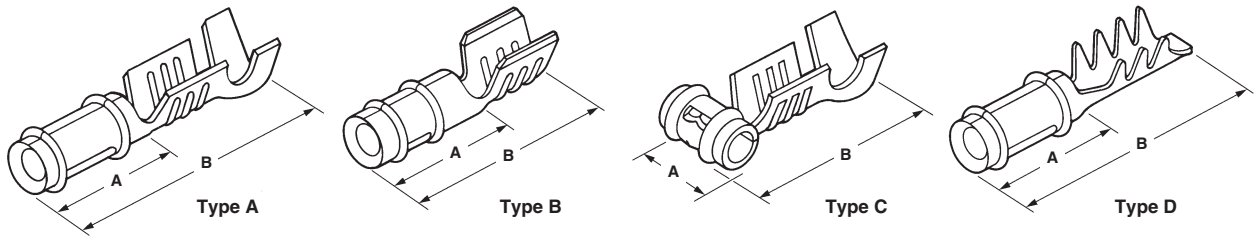
.093 [2.36] Diameter Formed Pins



Hole Diameter	Pc Board Thickness	Dimensions A	Dimensions B	Dimensions C	Material and Finish	Part Nos. Strip Form	Part Nos. Loose Form
.073-.067 1.85-1.70	**.063** 1.60	**.305** 7.75	**.410** 10.41	**.115** 2.92	Phos. Brz., Pre-Tin	61137-1	350491-1

Printed Circuit Board Disconnects

Receptacles



.058 [1.47] Diameter

Type	Wire Size Range AWG	Wire Size Range mm²	Insulation Diameter	Dimensions A	Dimensions B	Material and Finish	Part Nos. Strip Form[3]	Part Nos. Loose Form	Part Nos. Hand Tool	Part Nos. Insertion Tool
A	28-26	0.08-0.15	**.035-.045** 0.89-1.14	**.155** 3.94	**.380** 9.65	Phos. Brz., Pre-Tin	60354-7	—	—	
A	26-22	0.15-0.4	**.035-.065** 0.89-1.65	**.155** 3.94	**.380** 9.65	Phos. Brz., Gold[1]	60888-2	60983-1	90131-4	452383-1
						Phos. Brz., Pre-Tin	60888-1	60983-2		
						Be. Cu., Tin	60888-3	60983-4		
						Be. Cu., Gold[1]	60888-4	60983-3		
A	26-20	0.15-0.6	**.040-.110** 1.02-2.79	**.155** 3.94	**.395** 10.03	Be. Cu., Tin	350196-1[5]	—	—	—
A	24-20	0.2-0.6	**.045-.070** 1.14-1.78	**.155** 3.94	**.380** 9.65	Phos. Brz., Pre-Tin	60598-3	60789-1	91507-1	452383-1
						Be. Cu., Tin	60598-4	60789-2		
A	24-20	0.2-0.6	**.045-.070** 1.14-1.78	**.155** 3.94	**.380** 9.65	Phos. Brz., Gold	60598-7	60789-3		
						Be. Cu., Gold[2]	60598-9	60789-8		
A	24-20	0.2-0.6	**.060-.090** 1.52-2.29	**.155** 3.94	**.395** 10.03	Phos. Brz., Pre-Tin	60940-1	60986-1	90221-2	—
						Be. Cu., Tin	60940-2	—		
B	22-17	0.4-1.0	—	**.155** 3.94	**.300** 7.62	Be. Cu., Tin	640259-1	640024-1	90314-1	45350-1
C	26-22	0.15-0.4	**.035-.065** 0.89-1.65	**.160** 4.06	**.330** 8.38	Be. Cu., Gold[2]	61513-1	350189-2	90131-4	453850-1
						Phos. Brz., Pre-Tin	61513-2	350189-1		
C	24-20	0.2-0.6	**.045-.070** 1.14-1.78	**.160** 4.06	**.330** 8.38	Be. Cu., Gold[2]	61119-1	61276-1	91507-1	
						Phos. Brz., Pre-Tin	61119-2	61276-2		
						Be. Cu., Tin	61119-3	61276-3		
C	24-20	0.2-0.6	**.040-.100** 1.02-2.54	**.160** 4.06	**.335** 8.51	Be. Cu., Tin	61323-2[5]	—	—	
D	Tinsel Wire		**.030-.040** 0.76-1.02	**.155** 3.94	**.380** 9.65	Phos. Brz., Pre-Tin	350393-1	—	—	

.093 [2.36] Diameter

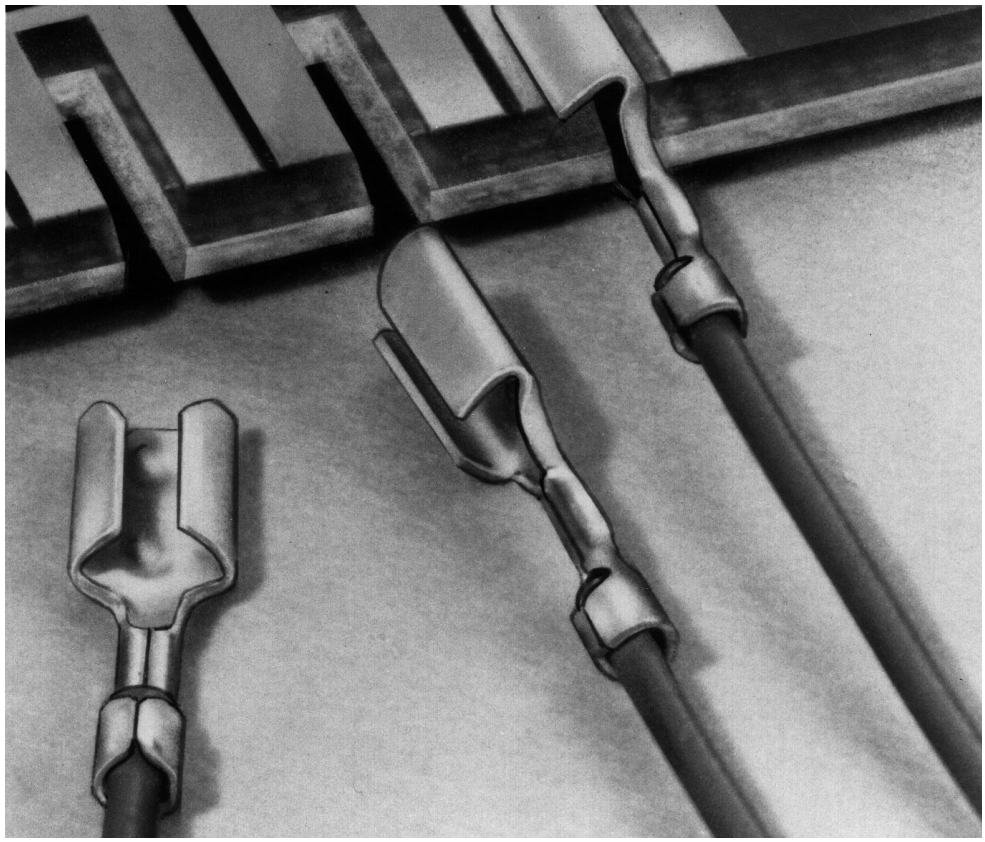
Type	Wire Size Range AWG	Wire Size Range mm²	Insulation Diameter	Dimensions A	Dimensions B	Material and Finish	Part Nos. Strip Form	Part Nos. Loose Form	Part Nos. Hand Tool	Part Nos. Insertion Tool
A	22-18	0.4-0.8	**.060-.110** 1.52-2.79	**.255** 6.48	**.550** 13.97	Phos. Brz., Tin	61291-1	61260-1	90135-2	452383-3

[1].000030 [0.00076] gold plated
[2].000015 [0.00038] gold plated
[3]Machine applied; applicator required. For machine and applicator part numbers, contact Tyco Electronics.
[5]These receptacles have an overlap insulation crimp.
Note: Part Nos. 61160-4, 350221-1,61291-1, 61291-2 and 61260-1 are made from .012 thick material. All other receptacles are made from .010 thick material

AMP EDGE Single Lead Printed Circuit Terminals

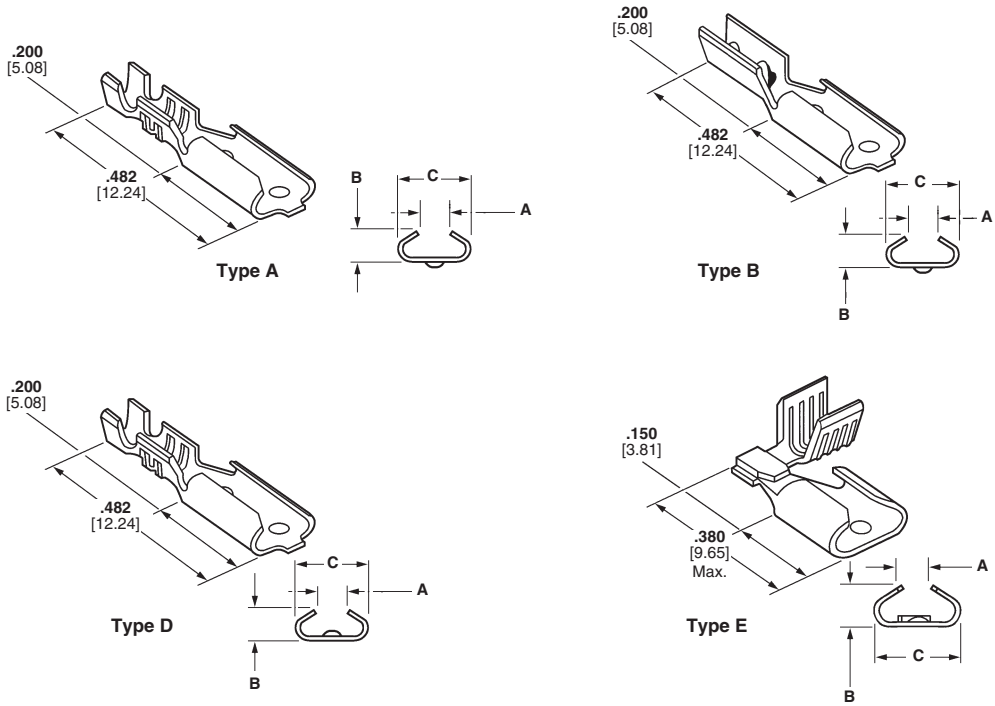
Product Facts

- **Friction fitting, quick connect/disconnects—no insertion nor extraction tools required**
- **Excellent vibration and shock resistance**
- **Accepts wire size range 32-16 AWG [0.03-1.4mm²]**
- **Wide choice of materials and finishes**
- **Terminal sizes accommodate .040 [1.02], .047 [1.19], .062 [1.57] and .093 [2.36] thick boards**
- **High-speed machine terminated for volume production at lowest installed cost**



AMP EDGE Terminals are quick connect/disconnect devices that adjust securely, through friction fitting, to machine slots in the type of board for which they are designed. Friction fitting not only precleans the contact areas, but also provides excellent vibration and shock resistance even under heavy stresses. Firm wire insulation support is a companion factor for positive retention in the board. These terminals, wholly aerated to eliminate moisture traps, may be applied anywhere on the perimeter of the board. They eliminate the need for eyelets and plated-through holes on two-sided boards and can be used back-to-back for commoning circuits.

AMP EDGE Single Lead Printed Circuit Terminals



Type	Wire Size Range AWG	Wire Size Range mm²	Material	Finish	Stock Thk.	Ins. Dia.	Board Thk.	Dimensions A	Dimensions B	Dimensions C	Strip Form Part Nos.[8]
A	32-24	0.03-0.2	Phos. Brz.	Tin	**.010** 0.25	**.020-.050** 0.51-1.27	**.062** 1.57	**.045** 1.14	**.080** 2.03	**.153** 3.89	61389-2[1]
A	30-22	0.05-0.4	Phos. Brz.	Tin	**.010** 0.25	**.075** 1.91	**.062** 1.57	**.046** 1.17	**.080** 2.03	**.153** 3.89	61455-2[1]
A	22-20	0.4-0.6	Phos. Brz.	Tin	**.010** 0.25	**.075** 1.91	**.062** 1.57	**.050** 1.27	**.080** 2.03	**.153** 3.89	42263-7[1]
B	—	—	Brass	Tin	**.010** 0.25	**.045-.060** 1.14-1.52	**.062** 1.57	**.050** 1.27	**.080** 2.03	**.153** 3.89	60606-1[1]
D	22-18	0.4-0.8	Phos. Brz.	Tin	**.010** 0.25	**.080-.100** 2.03-2.54	**.062** 1.57	**.052** 1.32	**.083** 2.11	**.153** 3.89	61561-2[3]
D	22-18	0.4-0.8	Phos. Brz.	Tin	**.010** 0.25	**.080-.100** 2.03-2.54	**.062** 1.57	**.050** 1.27	**.080** 2.03	**.153** 3.89	61561-2[3]
D	22-18	0.4-0.8	Brass	Tin	**.016** 0.41	**.080-.100** 2.03-2.54	**.062** 1.57	**.052** 1.32	**.088** 2.24	**.160** 4.06	60156-2[4]
D	22-18	0.4-0.8	Brass	Tin	**.016** 0.41	**.080-.100** 2.03-2.54	**.062** 1.57	**.056** 1.42	**.088** 2.24	**.160** 4.06	60704-1[5]
E	22-16	0.4-1.4	Brass	Tin	**.012** 0.30	**—** —	**.062** 1.57	**.046** 1.17	**.070** 1.78	**.200** 5.08	61782-1[6]
E	22-16	0.4-1.4	Brass	Tin	**.012** 0.30	**—** —	**.062** 1.57	**.046** 1.17	**.070** 1.78	**.200** 5.08	61782-2[7]

[1](2) dimples outside (.010 high) [0.25]
[2]No dimples
[3](2) dimples inside (.020 high) [0.51]
[4](2) dimples inside (.014 high) [0.36]
[5](2) dimples inside (.005 high) [0.13]
[6](2) dimples inside (.023 high) [0.58]
[7](2) dimples inside (.023 high) [0.58], reverse reeled
[8]Machine applied applicator required. For machine and applicator part numbers, contact Tyco Electronics.
Note: Refer to Section 13 for application tooling.

Miniature AMP-IN Terminals

Product Facts

- **Eliminates manual preparation of wires prior to soldering into pc boards**
- **Low applied cost**
- **Total height above pc board is less than most other components**
- **Available for 26-10 AWG, [0.15-5.5mm²]**
- **Terminal locking lance holds wire in pc board for flow soldering**
- **Design allows both wire and terminal to be soldered and assures proper solder flow**
- **Insulation support provides strain relief for wire and protection of solder joint**
- **Type A terminals will provide both a positive board stop and positive insulation stop**

The miniature AMP-IN Terminal is designed not as an electrical terminal but as a mechanical holding device to enhance soldering of hookup wires to printed circuit boards. The combination of terminal and application tooling eliminates costly manual preparation of wires prior to soldering, and positions the wire to achieve reliable solder joints. Movement of the wire during soldering is restricted, assuring proper solder flow.

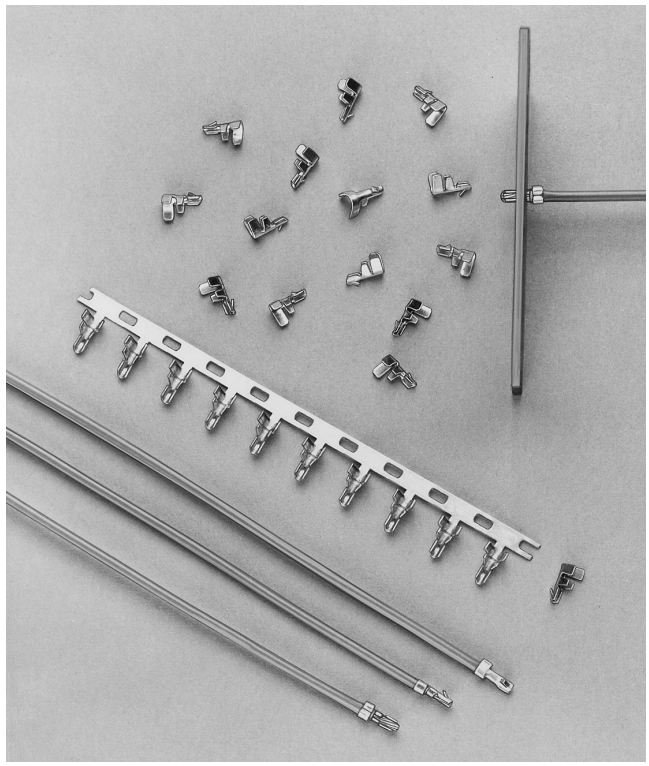
Technical Documents:

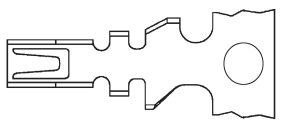
Product Specification—
108-1081 Contact, AMP-IN, Miniature

Application Specification—
114-1016 Mini AMP-IN Contacts

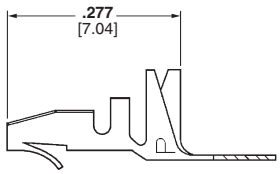
Material and Finish

008 phosphor bronze, Pre-tin plated, Pc Board Thickness: .062 [1.57]

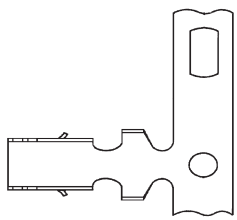


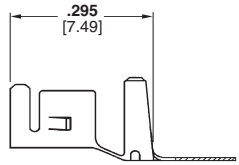


Type A



Type B





Type	Wire Size Range AWG	Wire Size Range mm²	Insulation Diameter	Board Hole Diameter	Extension Below Board (Ref.)	Strip Form Terminal Part Nos.[3]
A	22-18	0.3-0.9	**.060-.110** 1.52-2.79	**.072**$^{\pm .003}$ 1.83$^{\pm 0.08}$	**.100** 2.54	794121-1
	26-22	0.12-0.4	**.040-.110** 1.02-2.79	**.055**$^{\pm .004}$ 1.40$^{\pm 0.10}$	**.100** 2.54	794122-1
B	18-14	0.8-2.0	**.090-.150** 2.29-3.81	**.125**$^{\pm .003}$ 3.18$^{\pm 0.08}$	**.125** 3.18	770060-1
	12	0.3	**.090-.150**. 2.29-3.81	**.125**$^{\pm .003}$ 3.18$^{\pm 0.08}$	**.125** 3.18	794013-1
	10	5.5	**..200** 5.08	**.150** 3.81 REF	**.125** 3.18	794037-1

Notes: 1. Not available in loose piece.
2. No hand tools available.
3. Machine applied applicator required. For machine and applicator part numbers, contact Tyco Electronics.

Low Profile Miniature AMP-IN Connectors

Product Facts

- **Connector housing provides gang insertion into pc board**
- **Housing insulates and provides short-circuit protection between contacts**
- **Housings are available in 2 thru 15 positions for .079 [2.01] and 2 thru 20 for .098 [2.49] centerline spacing**
- **Low profile design—.200 [5.08]**
- **.079 [2.01] and .098 [2.49] centerlines available**
- **Contacts available for 30-26 AWG [0.05-0.15mm²] and 26-22 AWG [0.15-0.4mm²]**

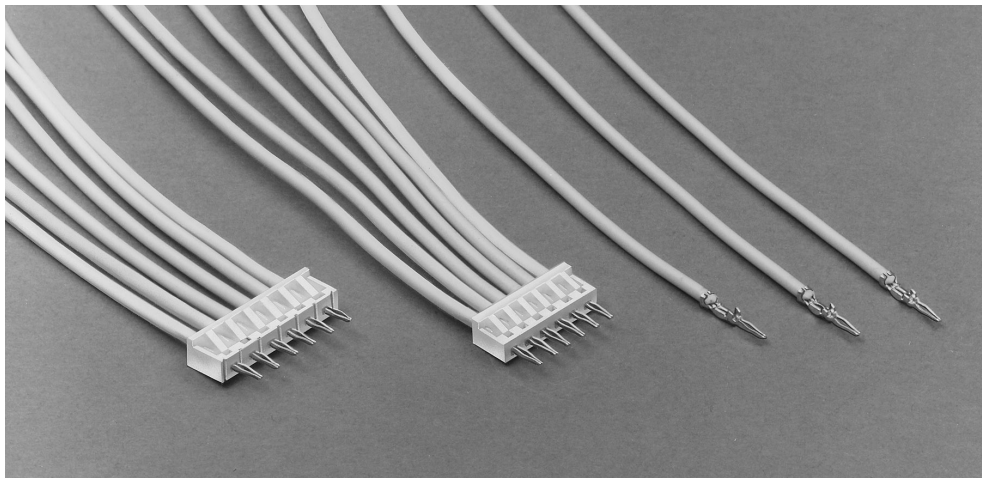
Technical Documents

Product Specification—
108-5163 Low Profile, Mini AMP-IN Header, Crimp Type

Application Specification—
114-5062 Crimping of Mini AMP-IN Terminals

Material and Finish

Housing—Nylon, 94V-0 rated
Contact—Brass, pre-tin plated
Pc Board Thickness Range—.047-.062 [1.19-1.57]



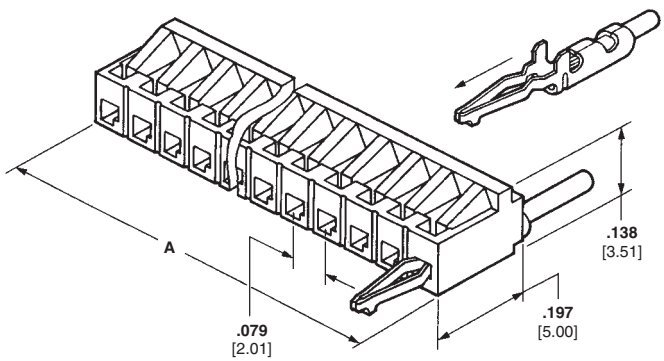
Low Profile Miniature AMP-IN Connectors provide an easy means of gang inserting leads into printed circuit boards. The design of the crimp snap-in contact aids in locating the pc board hole and inserting the contact into that hole.

The low profile housing allows compactness of leads while providing insulation between them to prevent short-circuits. Housings are available in 2 to 15 positions for .079 [2.01] centerline spacing and 2 to 20 positions for .098 [2.49] centerline spacing.

Contacts come in 26-22 AWG [0.15-0.4mm²] and 30-26 AWG [0.05-0.15mm²] with insulation support crimp to provide strain relief. They accommodate a board thickness of .047 [1.19] to .062 [1.57].

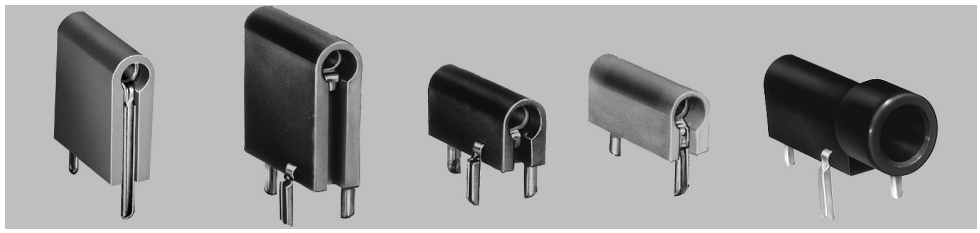
Wire Size Range AWG	Wire Size Range mm²	Insulation Diameter	Hole Diameter	Contact Part No. Strip Form[3]	Contact Part No. Loose Form	Hand Tool Nos.
30-26	0.05-0.15	**.043-.055** 1.09-1.40	**.031** 0.79 **.039** 0.99	172781-1	172797-1	755405-1
				172781-2	172797-2	
26-22	0.15-0.4	**.055-.059** 1.40-1.50	**.031** 0.79 **.039** 0.99	—	172798-1	755405-1
				—	—	

Notes: 1. Refer to Section 13 for application tooling.
2. Use Extraction Tool No. 753760-1.
3. Machine applied applicator required. For machine and applicator part numbers, contact Tyco Electronics.



No. of Positions	.079 [2.01] Centerline A	.079 [2.01] Centerline Part Nos.	.098 [2.49] Centerline A	.098 [2.49] Centerline Part Nos.
2	**.189** 4.80	172890-2	**.236** 5.99	172520-2
3	**.268** 6.81	172890-3	**.335** 8.51	172520-3
4	**.346** 8.79	172890-4	**.433** 11.00	172520-4
5	**.425** 10.80	172890-5	**.532** 13.51	172520-5
6	**.504** 12.80	172890-6	**.630** 16.00	172520-6
7	**.583** 14.81	172890-7	**.729** 18.52	172520-7
8	**.661** 16.79	172890-8	**.827** 21.01	172520-8
9	**.741** 18.82	172890-9	**.926** 23.52	172520-9
10	**.820** 20.83	1-172890-0	**1.024** 26.01	1-172520-0
11	—	—	**1.123** 28.52	1-172520-1
12	**.977** 24.82	1-172890-2	**1.221** 31.01	1-172520-2
13	—	—	**1.320** 33.53	1-172520-3
14	—	—	**1.418** 36.02	1-172520-4
15	**1.214** 30.84	1-172890-5	**1.517** 38.53	1-172520-5
20	—	—	**2.010** 51.05	2-172520-0

Test Probe Receptacles



Product Facts

- **Leg mounts are "V" shaped to promote solder wicking and consistent fillets**
- **Receptacle is recessed in housing to prevent shorting or flashover**
- **Probe may be inserted in either end of test probe receptacle, except Type C**
- **Housing colour is moulded, not dyed**
- **Accepts .080±.001 [2.03±0.025] probes**

Material and Finish:

Housing—Nylon type 6/6

Contact—Beryllium copper

Receptacle and Legs—Brass, ASTM B36, Alloy 6

Contact Plating—See table below

Technical Document:

Product Specification
108-1082 Receptacle, Test Probe

Performance Characteristics:

Insulation Resistance — 10,000 megohms

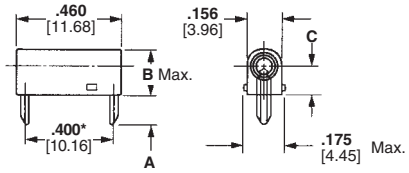
Retention Value — 16 oz. [4.45 N]

Operating Temperature — 55°C to 85°C

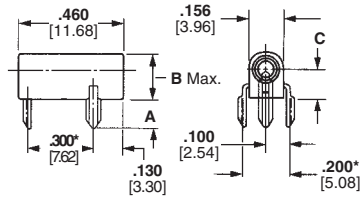
The Tyco Electronics line of Test Probe Receptacles is designed to provide low-cost test probe capability of circuits on pc boards, without interruption of operating currents, with precise reliability.

Receptacles are available with either two or three mounting legs. Two legs of a tri-leg mount are not part of the live testing circuit. Receptacles are also available either in the standard height, or in a taller height (to permit probing at any position on the board where clearance to probe is necessary). The three-leg mount gives maximum stability. The two-leg mount yields maximum density.

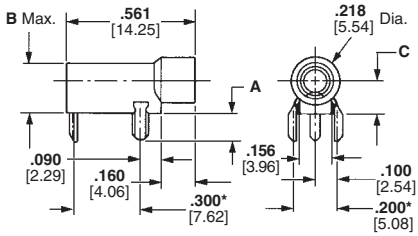
The present line of test probe receptacles fits a range of board thicknesses from 1/32 to 1/8 depending on the length of the receptacle legs. The legs mount in .052 [1.32] diameter holes.



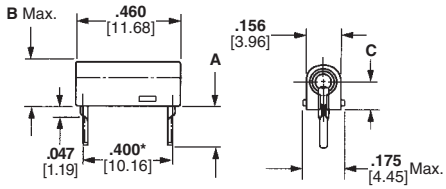
Type A



Type B



Type C



Type D

*Mounting hole location for .050-.054 [1.27-1.37] dia. holes.

Colour Suffix Table

Suffix Dash Number	Housing Colour
-0	Black
-1	Brown
-2	Red
-3	Orange
-4	Yellow
-5	Green
-6	Blue
-7	Violet
-8	Gray
-9	White

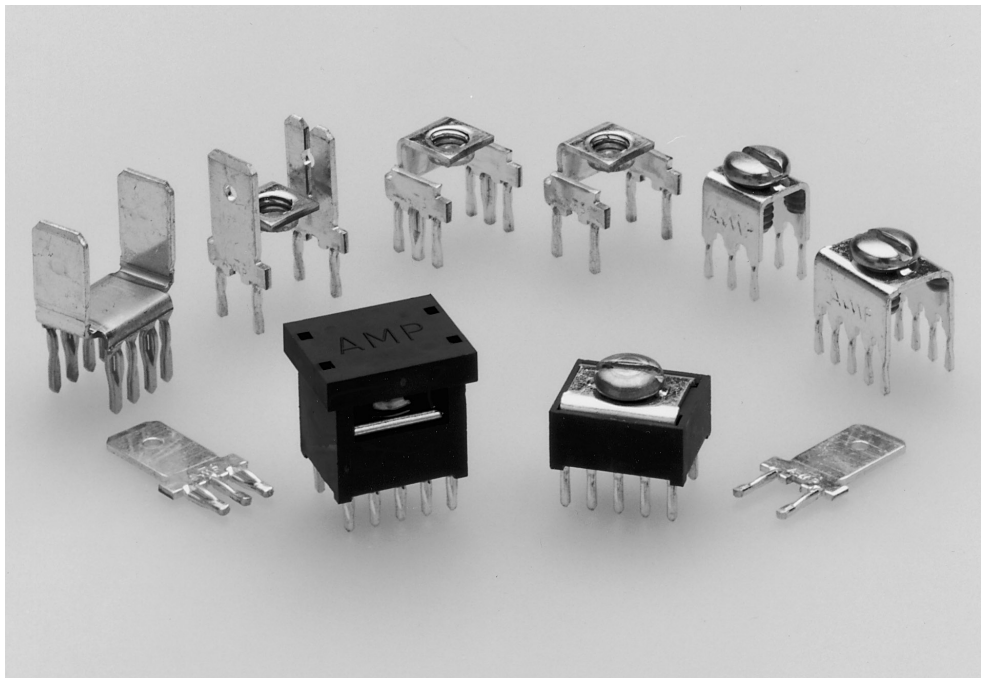
Type	Contact Finish	Dimensions A	Dimensions B	Dimensions C	Housing Colours	Part Numbers**
A	Bright Tin-Lead	.130 3.30	.230 5.84	.138 3.51	See Table	1-582118-x
	Silver	.130 3.30	.230 5.84	.138 3.51	See Table	2-582118-x
	Gold	.130 3.30	.230 5.84	.138 3.51	See Table	3-582118-x
	Gold	.130 3.30	.467 11.86	.375 9.53	See Table	3-582340-x
B	Gold	.130 3.30	.230 5.84	.138 3.51	See Table	3-582119-x
C	Gold	.130 3.30	.230 5.84	.138 3.51	See Table	350180-x
D	Gold	.180 4.57	.230 5.84	.138 3.51	See Table	1-380736-x
	Bright Tin-Lead	.180 4.57	.230 5.84	.138 3.51	Green	3-380736-5

**Part numbers with a numerical suffix are only for the specific colour listed in the chart.

Power Taps

Product Facts

- **ACTION PIN contacts eliminate soldering**
- **Provides high current, separable connection to pc board traces**
- **Wire-to-board connection using common terminals**
- **All metal-to-metal assembly for long-term integrity**
- **Standard DIP outlines (.300 x .100 [7.62 x 2.54]), 10 positions, and .250 x .125 [6.35 x 3.18], 6 and 10 positions, plus high current versions on .400 x .200 [10.16 x 5.08] footprint in 4 and 6 positions, .300 x .100 [7.62 x 2.54] in 8 positions, and both 2 and 3 position in-line .100 [2.54] tab taps**
- **Low resistance interface**
- **Internally threaded tap to secure screw to terminal**
- **Anti-rotational embossments hold wire and terminal in place**
- **Standard Power Taps rated at 2.5 amps per pin— 6 position 15 amps, 10 position 25 amps current carrying capability**
- **High Current Power Taps rated at up to 5 amps per pin— 2 position 10 amps, 3 position 15 amps, 4 and 6 position 20 amps and 8 position 40 amps**



AMP Power Taps are designed for the growing need for power to printed circuit board applications required in today's electronic industry. The taps provide a high current, separable connection to a pc board. Pin configuration is of the standard DIP outline with .300 x .100 [7.62 x 2.54] or .250 x .125 [6.35 x 3.18] for the Standard versions, plus .400 x .200 [10.16 x 5.08], .300 x .100 [7.62 x 2.54] and in-line spacing for the High Current versions.

ACTION PIN contacts provide a low resistance interface with tin-plated through holes in the pc board, thereby eliminating the need for soldering.

The variety of available power taps allow for various installation schemes. The Uninsulated Tap and Low Profile Tap can be used in bus bar pattern. The High Profile and Low Profile Taps offer insulation protection from other components. The High Current versions provide a greater power density option with current ratings from 10 amps on the 2 position in-line .250 [6.35] tab tap up to 40 amps on the 8 position dual .250 [6.35] tab tap.

All AMP Power Tap configurations are easily inserted into the pc board with a simple Tyco Electronics or customer supplied tool.

Standard Power Taps

Standard Insulated Power Taps

Material and Finish:

Connector Body and Lid—Nylon, 105°C, 94V-0 rated

Contact—Copper alloy, bright tin-lead plated

Screw—Plated steel

Electrical and Mechanical Characteristics:

Resistance—2 milliohms, max. (stud hole to ACTION PIN contact)

Insertion Force—40 lbs. [177.9 N], max. per pin

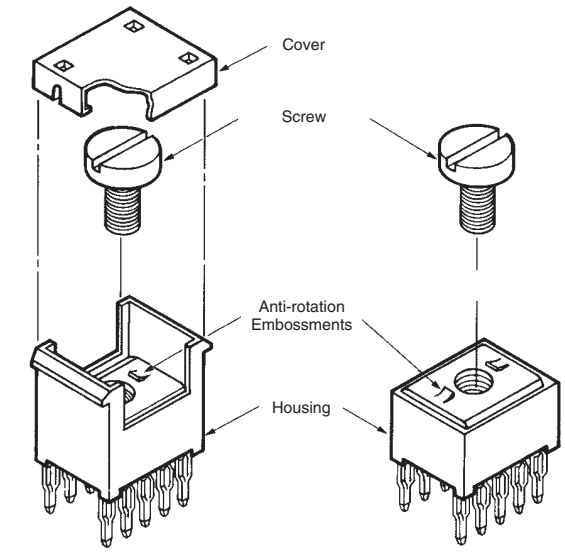
Retention Force—7 lbs. [31.1 N], min. per pin

Technical Documents:

Product Specification
108-11030 Tap, Power Distribution

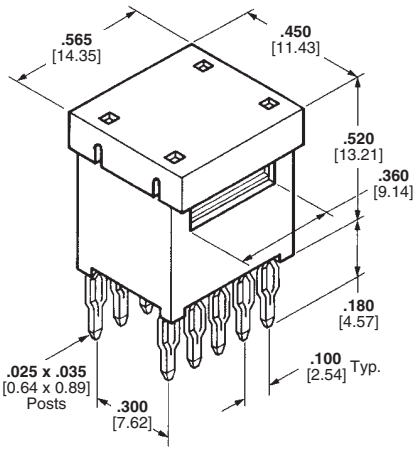
Application Specification
114-11000 Tap, Power Distribution

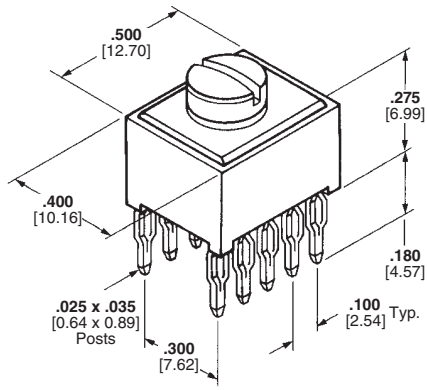
Handbook
5697 Guide to Application of ACTION PIN Connectors



.300 x .100 [7.62 x 2.54]
High Profile Tap
10 Position

.300 x .100 [7.62 x 2.54]
Low Profile Tap
10 Position





No. of Positions	Tap Version	Pcb Thickness	Description	Screw Hole Size	Part Numbers
10	High Profile	**.062-.125** 1.57-3.18	Housing and contact assembled without screw[1]	6-32	55557-3
	High Profile	**.062-.125** 1.57-3.18	Housing and contact assembled with screw[1,2]	6-32	55557-4
	Low Profile	**.062-.125** 1.57-3.18	Housing and contact assembled with screw[2]	6-32	55556-4
	Low Profile	**.062-.125** 1.57-3.18	Housing and contact assembled with screw[2,3]	6-32	55673-2
	Low Profile	**.062-.125** 1.57-3.18	Housing and contact assembled without screw	6-32	55556-3
	Low Profile	**.062-.125** 1.57-3.18	Housing and contact assembled without screw	M4	55556-9
6	Low Profile	**.062-.125** 1.57-3.18	Housing and contact assembled with screw[2]	4-40	796131-2

[1] Cover not assembled
[2] Screw not assembled
[3] No anti-rotational embossments

Standard Power Taps

Standard Uninsulated Power Taps

Material and Finish:

Contact—Copper alloy, post plated bright tin-lead

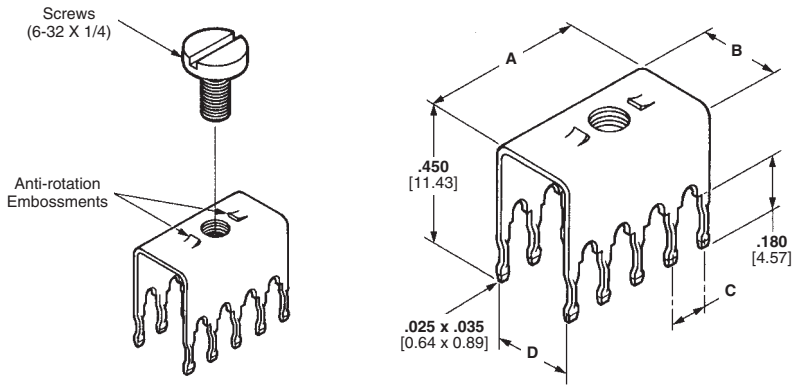
Screw—Stainless steel, passivated

Electrical and Mechanical Characteristics:

Resistance—2 milliohms, max. (stud hole to ACTION PIN contact)

Insertion Force—40 lbs. [177.9 N] max. per pin

Retention Force—7 lbs. [31.1 N] min. per pin



Size	Pcb Thickness	Dimensions A	B	C	D	Description	Screw Size	Part Numbers
.300 x .100 7.62 x 2.54 10 Position	**.062-.125** 1.57-3.18	**.440** 11.18	**.325** 8.26	**.100** 2.54	**.300** 7.62	Without Screw	6-32	55558-3
						With Screw	6-32	55558-4
						Without Screw	6-32	55558-7[1]
.250 x .125 6.35 x 3.18 6 Position	**.062-.125** 1.57-3.18	**.320** 8.13	**.275** 6.99	**.125** 3.18	**.250** 6.35	Without Screw	6-32	55323-5
						With Screw	6-32	55323-9
.250 x .125 6.35 x 3.18 10 Position	**.062-.125** 1.57-3.18	**.570** 14.48	**.275** 6.99	**.125** 3.18	**.250** 6.35	Without Screw	6-32	55323-6

[1] No Anti-rotation Embossments

High Current Power Tap

6 Position High Current* Power Tap

*Up to 20 amps

Material and Finish:

Contact—Phosphor bronze, tin-lead plated

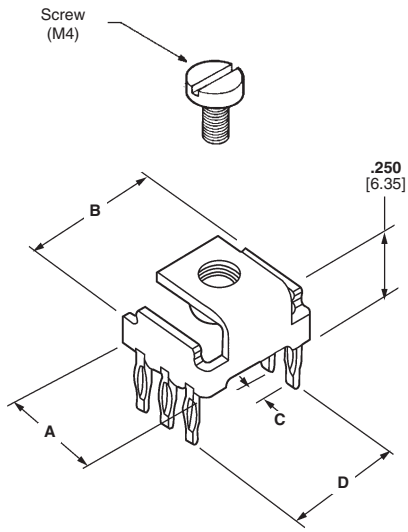
Screw—Stainless steel, passivated

Electrical and Mechanical Characteristics:

Current Rating—20 amperes max.

Insertion Force—40 lbs. [180 N] max. per pin

Retention Force—7 lbs. [30 N] min. per pin



Size	Pcb Thickness	Dimensions A	B	C	D	Description[1]	Part Number
6 Position	**.062-.125** 1.57-3.18	**.358** 9.09	**.431** 10.95	**.100** 2.54	**.400** 10.16	With Screw	213816-1

[1] No Anti-rotation Embossments featured on High Current Taps. Therefore, if application requires, use of Bellville lockwashers with a high surface contact area are strongly recommended.

High Current* Power Taps

8 Position Dual .250 Tab Taps (with ACTION PIN Posts)

*Up to 5 amps per pin

Material and Finish:

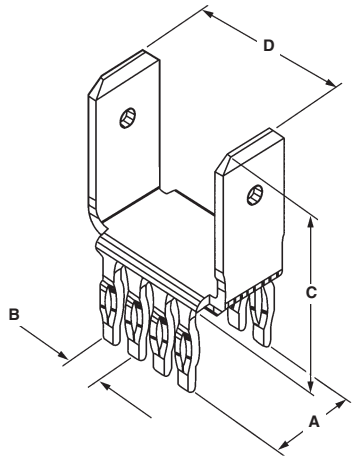
Contact—Phosphor bronze, post plated tin-lead
Screw—Stainless steel, passivated
Washer—Stainless steel

Electrical and Mechanical Characteristics:

Current Rating—5 amps max. per pin
Insertion Force—40 lbs. [180 N] max. per pin

Related Product Data:

Mates with — .250 FASTON Receptacles



Style IV

Style	Pcb Thickness	Dimensions A	B	C	D	Tab Configuration	Part Number	Mates With
IV	**.125** 3.18	**.300** 7.62	**.100** 2.54	**.485** 12.32	**.500** 12.7	Two **.250 x .032** 6.35 x 0.81 Tabs With Dimple	167892-2[1] / 167892-3	FASTON Receptacles

[1] Selective tin-lead plating on mating surface of both tabs.

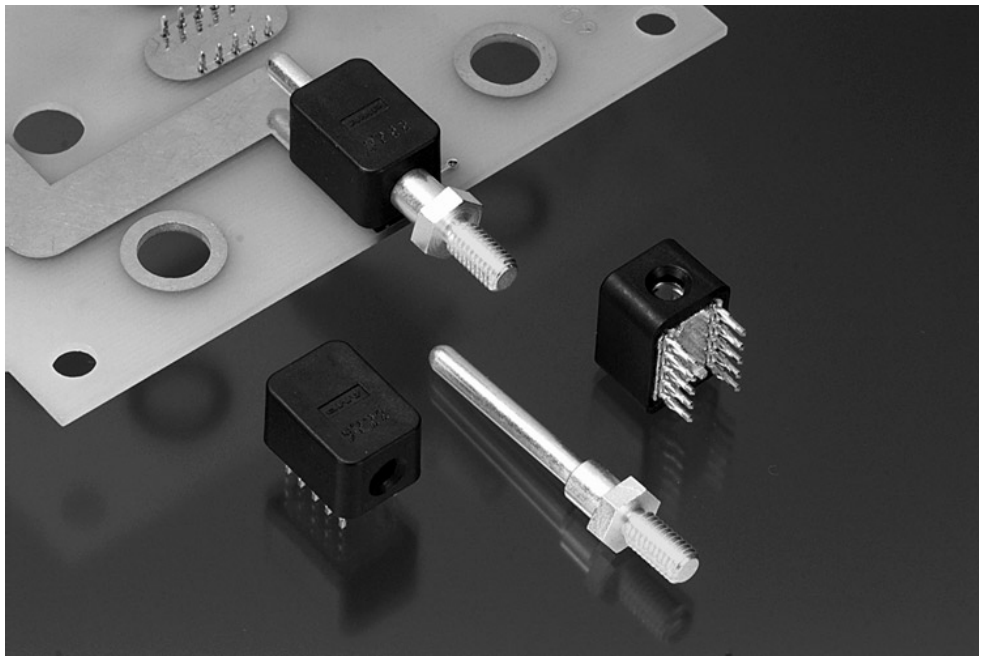
Insertion Tooling

Manual Arbor Tool

Part Number	Upper Tool	Lower Tool
677430-1	432849-1	433600-2 or 432130-2

Product Facts

- **Excellent for power distribution**
- **To be used for board-to-board and board-to-bus bar applications**
- **Louvertac high current contact used in receptacle**
- **Receptacle fits onto standard DIP .300 x .100 footprint**
- **Press-fit receptacle needs simple “flat-rock” tooling to install**
- **Accommodates board thickness from .054 to .125**
- **Insulation body rated 105°C, 94V-0**
- **Blind mate capability (tolerance ± .125 in X and Y axes)**
- **Perpendicular board stacking**



The AMP Right-Angle Power Tap connector provides a high current power distribution system, which gives reliable, consistent performance while allowing quick connect/disconnect of motherboard/daughtercard and bus bar/board combinations. Applications are found primarily in the networking and mass storage industries.

Designed with ACTION PIN contacts, each Right-Angle Power Tap connector has a 10 pin DIP footprint for convenient, industry standard mounting to .300 x .100 dimensions. A discrete pin and discrete socket are mounted on opposing halves (receptacles mounted on printed circuit boards, pins mounted on either printed circuit boards or bus bars) providing perpendicular board-to-board or board-to-bus bar mating. The Tap is insulated to provide shorting protection from other components and is easily inserted into the printed circuit board using simple, AMP Electric Servo Presses or customer supplied “flatrock” tooling.

Each Right-Angle Power Tap receptacle incorporates the highly reliable Louvertac contact for high current carrying capacity.

Technical Documents:

Application Specification
114-11000

Receptacle Assembly

10 Position

Part Number 580132-1

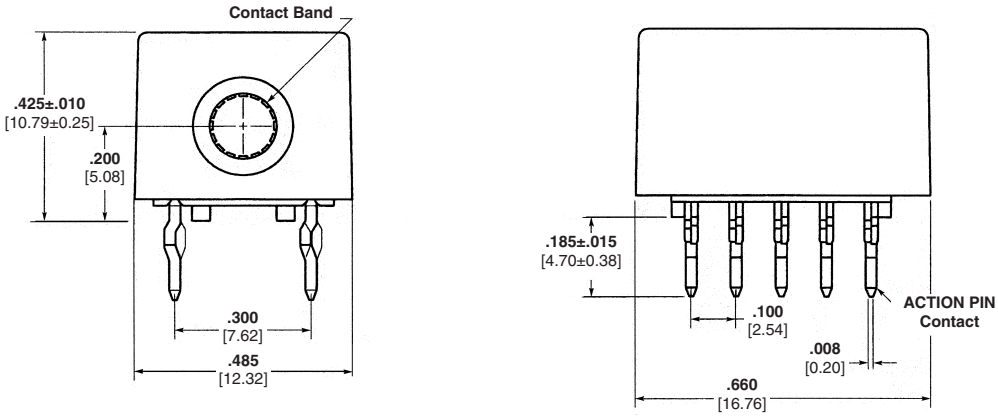
Material:

Connector Body — Polyester, 105°C, 94V-0 rated

Contact — Phosphor bronze, silver plated

Related Product Data:

Mates With — Threaded Power Pin (below)

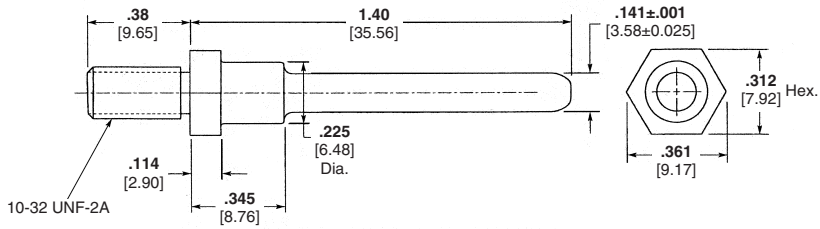


Threaded Power Pin

Part Number 580133-5

Material:

Brass, silver plated



Product Facts

- **Single-ended cable leads available with straight or right-angle connectors**
- **Overmolded cable leads more resistant to various oils and chemicals in harsh environments**
- **PVC or PUR cable insulation material**
- **Standard cable lead lengths are: 2, 3, 5, 7, and 10 meters [6.6, 9.8, 16.4, 23 and 32.8 ft]**
- **LED version of Female Connectors available for status information**
- **Field serviceable Male and Female Connectors available for on-site connections**
- **Double-ended, overmolded cable leads in M8/M8, M8/M12, and M12/M12 configurations available upon request**
- **Used in Industrial Equipment, Machinery, and Automation applications (e.g. fieldbus systems)**
- **Compatible with most machinery using capacitive, inductive or optical sensors**

M8/M12 sensor connectors were specifically developed for Industrial Equipment, Machinery, and Automation applications (e.g. fieldbus systems); but, they can be applied on many types of machinery using capacitive, inductive or optical sensors.

Overmolded cable makes it more resistant against various oils and chemicals. Optional cable materials are polyvinyl chloride (PVC) or polyurethane (PUR). Other cable and/or overmolding colours are possible upon request.

Cable leads with straight or right-angle connectors overmolded on one end are available in different lengths. Standard lengths are 2, 3, 5, 7 and 10 meters [6.6, 9.8, 16.4, 23 and 32.8 ft]. (Other lengths are possible upon request).

Double-ended, overmolded cable leads in various configurations (M8/M12, M8/M8 or M12/M12) with straight or right-angle connectors are possible upon request.

Female Connectors are also available in a LED version for status information. Moreover, M8 and M12 connectors are available in field serviceable versions for easy configuration on site as well.

Technical Documents

Product Specification

108-18662 M8/M12 Sensor Connectors

Need more information?

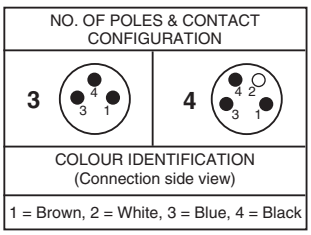
Call Technical Support.

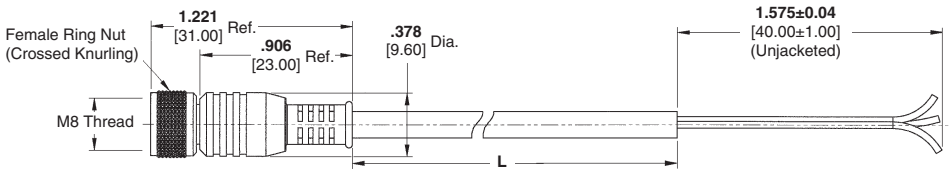
Technical Support is staffed with specialists well versed in Tyco Electronics products. They can provide you with:

- Technical Support
- Catalogues
- Technical Documents
- Product Samples
- Tyco Electronics Fax Service – Product information faxed immediately
- Tyco Electronics Authorised Distributor Locations

M8 Connector Cable Leads – 24 AWG [0.25 mm²]

Female Connector, Straight





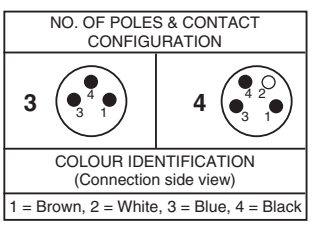
No. of Pos.	Colour (Connector & Cable)	Insulation Material	Cable Length (L) m	Cable Length (L) ft	Qty/box	Part Number†
3	Gray	PVC	2	6.6	55	284790-2
			3	9.8	35	284790-3
			5	16.4	25	284790-5
			7	23.0	15	284790-7
			10	32.8	12	1-284790-0
	Black	PUR	2	6.6	55	284791-2
			3	9.8	35	284791-3
			5	16.4	25	284791-5
			7	23.0	15	284791-7
			10	32.8	12	1-284791-0
4	Gray	PVC	2	6.6	55	284785-2
			3	9.8	35	284785-3
			5	16.4	25	284785-5
			7	23.0	15	284785-7
			10	32.8	12	1-284785-0
	Black	PUR	2	6.6	55	284786-2
			3	9.8	35	284786-3
			5	16.4	25	284786-5
			7	23.0	15	284786-7
			10	32.8	12	1-284786-0

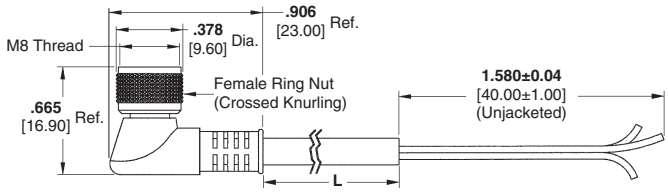
†Prefix (X-) and suffix (-X) indicate cable length in meters (e.g. 1-284790-0 = 10 m).

Related Product Data

Mating Male Connectors —pages 2204 and 2205

Female Connector, Right-Angle





No. of Pos.	Colour (Connector & Cable)	Insulation Material	Cable Length (L) m	Cable Length (L) ft	Qty/box	Part Number†
3	Gray	PVC	2	6.6	55	284792-2
			3	9.8	35	284792-3
			5	16.4	25	284792-5
			7	23.0	15	284792-7
			10	32.8	12	1-284792-0
	Black	PUR	2	6.6	55	284793-2
			3	9.8	35	284793-3
			5	16.4	25	284793-5
			7	23.0	15	284793-7
			10	32.8	12	1-284793-0
4	Gray	PVC	2	6.6	55	284787-2
			3	9.8	35	284787-3
			5	16.4	25	284787-5
			7	23.0	15	284787-7
			10	32.8	12	1-284787-0
	Black	PUR	2	6.6	55	284788-2
			3	9.8	35	284788-3
			5	16.4	25	284788-5
			7	23.0	15	284788-7
			10	32.8	12	1-284788-0

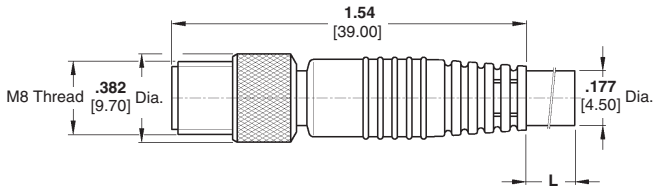
†Prefix (X-) and suffix (-X) indicate cable length in meters (e.g. 1-284792-0 = 10 m).

Related Product Data

Mating Male Connectors — pages 2204 and 2205

M8 Connector Cable Leads – 24 AWG [0.25 mm²] (Continued)

Male Connector, Straight



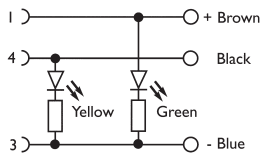
NO. OF POLES & CONTACT CONFIGURATION	
3 	4 
COLOUR IDENTIFICATION (Connection side view)	
1 = Brown, 2 = White, 3 = Blue, 4 = Black	

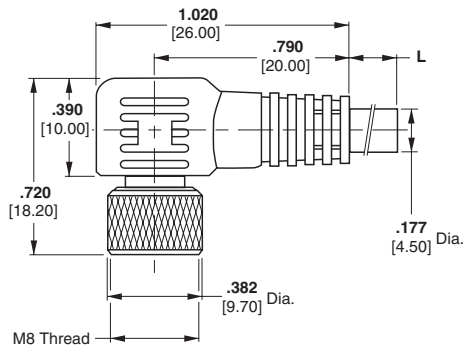
No. of Pos.	Colour (Connector & Cable)	Cable: Insulation Material	Cable: Length (L) m	Cable: Length (L) ft	Qty/box	Part Number
3	Black	PVC	2	6.6	100	1241242-1
			5	16.4	50	1241242-2
		PUR	2	6.6	100	1241242-3
			5	16.4	50	1241242-4
4	Black	PVC	2	6.6	100	1241242-5
			5	16.4	55	1241242-6
		PUR	2	6.6	100	1241242-7
			5	16.4	55	1241242-8

Related Product Data

Mating Female Connectors — pages 2203-2205

Female Connector, LED PNP, Right-Angle





NO. OF POLES & CONTACT CONFIGURATION
3 
COLOUR IDENTIFICATION (Connection side view)
1 = Brown, 3 = Blue, 4 = Black

No. of Pos.	Colour (Connector & Cable)	Cable: Insulation Material	Cable: Length (L) m	Cable: Length (L) ft	Qty/box	Part Number
3	Transparent & Black	PVC	2	6.6	100	1241260-1
			5	16.4	50	1241260-2
		PUR	2	6.6	100	1241260-3
			5	16.4	50	1241260-4

Related Product Data

Mating Male Connectors — pages 2204, 2205