Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2)

AMP Eurocard Connectors are a highly reliable system incorporating the numerous design advantages of the internationally recognized DIN 41612-IEC 603-1/2 connectors.

Applicable to all types of connection such as board-to-board and wire-to-board applications, this product line has already proven to be most useful in a wide range of electronic equipment and has now been greatly expanded to include ACTION PIN products, compact connectors and many

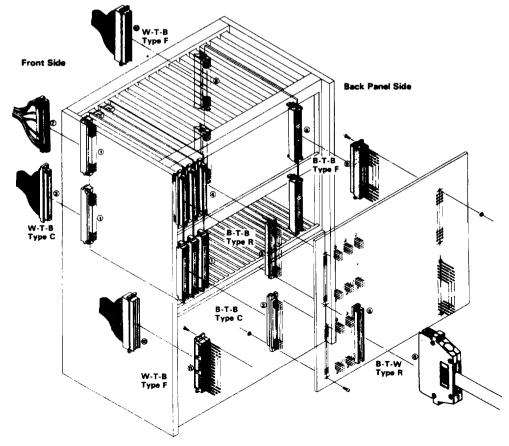
AMP Eurocard Connectors are intermateable with all DIN41612-IEC 603-1/2 connectors of similar style and contact arrangement.

others.

Product Specification: 108-5227

- ①Type C Pin Assembly
- ②Type C Receptacle Assembly
- ③Type C Crimp Snap-In Receptacle Connector
- 4 Type R Receptacle Assembly
- ⑤Type R Pin Assembly
- ® Type R Crimp Snap-In Receptacle Connector (with Cacle Clamp)
- Type C and R MT Type
 Receptacle Connector
- Type F Pin Assembly
- Type F Receptacle Assembly
- Type F Crimp Snap-In Receptacle Connector
- ①Type F Interface I Pin Assembly





Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) ACTION PIN* Connectors and Application Tools

Feature of ACTION PIN Because the diagonal dimension of its action portion is larger than the hole diameter of the printed circuit board, the ACTION PIN, when inserted into the plated through hole, acts as two spring members compressing in opposite directions to exert sufficient force against the wall of the hole. To prevent damage to the plated through hole, the ACTION PIN is designed with rounded corners at the action portion in contact area between the pin and the hole wall is increased so as to provide excellent electrical and mechanical characteristics. Rupturing just one hole of a multilaver board can render the entire board useless. Since there are usually as many as 10,000 plated through holes in such boards, the the importance of using

a rupture-free pin joining method like this is quite

evident.

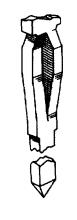


Relaxed Tolerances

The ACTION PIN method allows printed circuit boards to be processed more economically than any other method for it permits relaxed tolerances for the hole dimension. The finished plated through hole diameter is 0.94 to 1.09mm for press fit.



The springback properties of the ACTION PIN assures a constant supply of stored energy to keep the pin securely within the hole and the electrical contact with the hole wall perfectly gas tight.



Repairability

There is no broaching of the plated through hole caused by the insertion of the pin. Damaged pins can be easily removed and replaced with new ones without any sacrifice to mechanical and electrical performance.

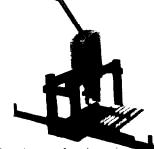
Multiple Insertion

Because insertion forces are by far lower with the ACTION PIN than those of other types of forced interference fit pin, it is possible to mass-insert the connector into the panel with a simple tool. By design, the ACTION PIN has an insertion force of less than 18.1kg.

Application Tooling

Insertion Tool (Hand-operation)

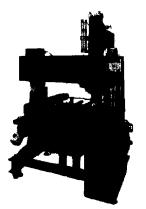
Part Number: 911578-□



Consisting of an insertion tool head attached to the general-purpose arbor press, this tool can manually do most of the processes required.

Place the printed circuit board onto the press table and insert the connector tentatively. Then, pushing down the press handle completes the insertion of the connector

AMP H Frame Connector Insertion Machine Part Number: 918000



This machine automatically inserts the connector into the printed circuit board when the ACTION PIN connector and the board are set in the index table.

Dimension: 1,090mm(W) ×

1,200mm(D) × 1,860 mm(H)

SM-3 Connector Insertion Machine Part Number: 814700-1



An air-driven connector applicator, this machine has a capacity of 2,722kg (capable of applying 120 contacts). Using a 19.05mm thick template, the machine can adjust fixing forces on the connector above the board.

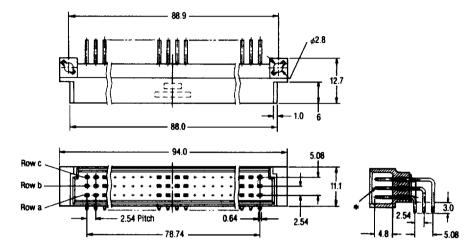
The cycle time is 4 seconds and the machine processes boards up to 508mm wide.

Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type C Pin Assemblies (Loaded with Solder Post Contacts)

For PC Board Mount Horizontal Type

Material and Finish:

Housing—Thermoplastic, polyester, grey
Contact—Brass, plated tin-lead on solder tine area and gold on contact area(see chart for thickness) with nickel underplate on entire contact.
No pinhole.



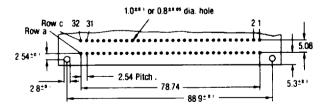
*64-position connector has row a and c only loaded (P/N: 174112)

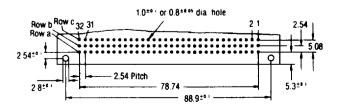
No. of Pos.**	Rows Loaded	Gold Thickness in Contact Area (μm)	Part Number
		0.2	174112-1
64 a+c	a+c	0.4	174112-4
			0.8
		0.2	174111-1
96	a+b+c	0.4	
		0.8	174111-2

^{**}For other positions and platings, contact our Sales Department.

PC Board Layout

Rows Loaded a+c (Connector mounting side)







Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type C Pin Assemblies (Loaded with Solder Post Contacts)

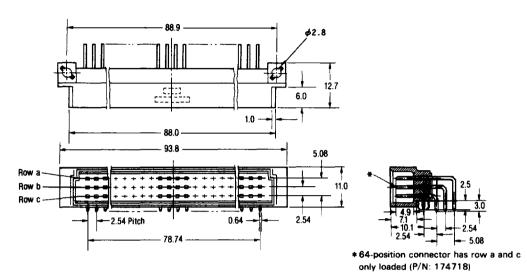
For PC Board Mount Horizontal Type (With Retention Leg)

Meterial and Finish: Housing—Tharmoplastic, polyester, grey

Contact — Brass, plated tin-lead on solder tine area, gold solder tine area, gold (see chart for thickness) on contact area, with nickel underplate on entire contact.

No pinhole.

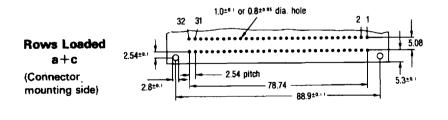
Retention Leg—Brass, plated tin-lead with nickel underplated entire leg.

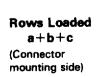


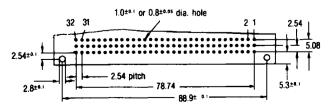
No. of Position**	Rows Loaded	Gold Thickness in Contact Area (μm)	Part Number
0.4	- 1 -	0.2	174718-1
64	a+c	0.8	174718-2
		0.2	174717-1
96	a+b+c	0.8	174717-2

^{**}For other positions and platings, contact our Sales Department.

PC Board Layout









Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2)

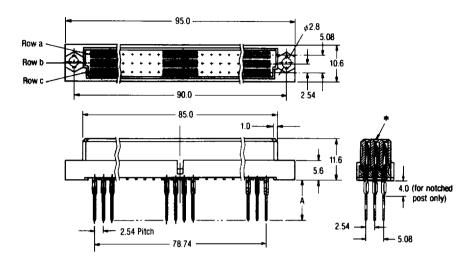
Type C Pin Assemblies (Loaded with ACTION PIN Post Contacts)

For PC Board Mount Vertical Type

Material and Finish:

Housing — Thermoplastic, polyester grey
Contact — Phosphor bronze, plated tin-lead on action area and tin-lead or gold (see chart for thickness) on tine tip area, gold plated on contact area (see chart for thickness) with nickel underplate on entire contact.

No pinholé.



* 64-position connector has row a and c only loaded (P/N: 174108)

No. of Pos.**	Rows Loaded	Dimension A	Plate on Tine Tip Area (µm)	Plate on Action Area (µm)	Gold Thickness in Contact Area (μm)	Part Number
Without	Notch					
					0.2	174108-1
		4.7	Tin-lead	Tin-lead (0.5~2.54)	0.4	174108-4
64	a+c			(0.5 2.54)	0.8	174108-2
			The board	Tin-lead	0.2	1-174108-1
	16.2	16.2	Tin-lead	$(0.5 \sim 2.54)$	0.8	1-174108-2
			Gold (0.8)	Gold Flash	0.8	1-174108-4
_					0.2	174107-1
		4.7	Tin-lead	Tin lead	0.4	174107-4
				$(0.5 \sim 2.54)$	0.8	174107-2
			-	Tin-lead	0.2	1-174107-1
96	a+b+c		Tin-lead	$(0.5\!\sim\!2.54)$	0.8	1-174107-2
		16.2	Gold (0.2)		0.2	1-174107-3
			Gold (0.4)	Gold Flash	0.4	1-174107-5
			Gold (0.8)		0.8	1-174107-4

^{**}For other positions and platings, contact our Sales Department.

PC Board Layout

Applicable Board Thickness:

1.6~3.2mm

Through Hole Dia. (D):

PC board drilled hole dia. 1.15⁺⁰ ezsmm

Copper plated thickness —— 25~75µm

Tin-lead plated thickness -

4~10µm

Plated hole dia. ----

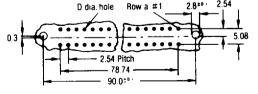
0.94~1.09mm

Finished hole dia. after solder reflowing -- 0.91~

1.09mm

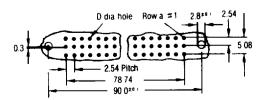
Rows Loaded

a+b+c (Connector mounting side)



Rows Loaded

a+c (Connector mounting side)



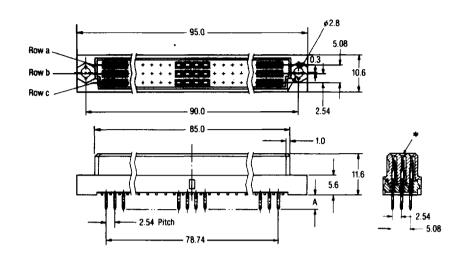


Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type C Receptacle Assemblies (Loaded with Solder Post Contacts)

For PC Board Mount Vertical Type

Material and Finish:

Housing—Thermoplastic, polyester, grey
Contact—Phosphor bronze; plated tin-lead on solder tine area, gold on contact area (see chart for plating thickness) with nickel under-plate on entire contact.
No pinhole.



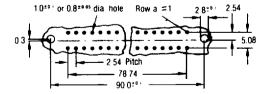
* 64-position connector has row a and c only loaded (P:N: 174110)

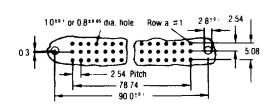
No. of Pos.**	Rows Loaded	PC Board Thickness	Dimension A	Gold Thickness in Contact Area (\(\alpha m)	Part Number
		1.6	2.5	0.2	174110-1
64	- 4 -	1.6	2.5	0.8	174110-2
64	a+c	24.22	4.0	0.2	1-174110-1
		2.4~3.2	4.0	0.8	1-174110-2
		1.0	2.5	0.2	174109-1
00		1.6	2.5	0.8	174109-2
96	a+b+c		4.0	0.2	1-174109-1
		2.4~3.2	4.0	0.8	1-174109-2

^{**}For other positions and platings, contact our Sales Department.

PC Board Layout

Rows Loaded a+c (Connector mounting side)





Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type C Receptacle Assemblies (Loaded with Solder Post Contacts)

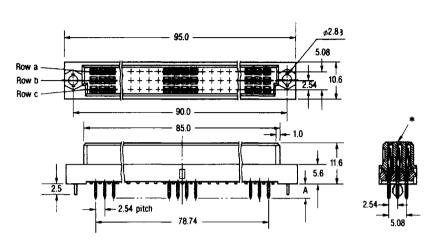
For PC Board Mount Vertical Type (With Retention Leg)

Material and Finish:

Housing—Thermoplastic, polyester, grey
Contact—Phosphor bronze; plated fin-lead on solder tine area, gold (see chart for thickness) on contact area, with nickel underplate on entire contact.

No pinhole.

Retention Leg—Brass, plated tin-lead with nickel underplated entire leg.

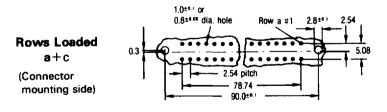


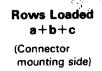
* 64-position connector has row a and c only loaded (P/N: 174720)

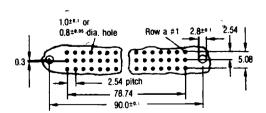
No. of Pos. "	Rows Loaded	PC Board Thickness	Dimension A	Gold Thickness in Contact Area (µm)	Part Number
		1.0	2.5	0.2	174720-1
	0.1	1.6 2.5	0.8	174720-2	
64	a+c		0.4.00	0.2	1-174720-1
		2.4~3.2	4.0	0.8	1-174720-2
		1.6 2.5 0+c 2.4~3.2 4.0	-	0.2	174719-1
96 a+b+c			2.5	0.8	174719-2
	a+b+c		4.0	0.2	1-174719-1
			4.0	0.8	

^{**}For other platings, contact our Sales Department.

PC Board Layout







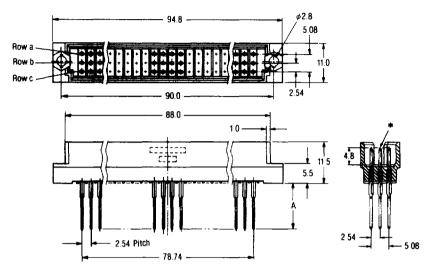


Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type R Pin Assemblies (Loarded with ACTION PIN Post Contacts)

For PC Board Mount **Vertical Type**

Material and Finish:

Housing——Thermoplastic, polyester, grey Contact -- Phosphor bronze; plated tin-lead on action area, tin-lead or gold (see chart for plating thickness) on tine tip area, gold on contact area (see chart for plating thickness) with nickel underplate on entire contact. No pinhole.



*64-position connector has row a and c only loaded (P/N: 174102)

No. of Pos."	Rows Loaded	Dimension A	Thickness of Plate on Tine Tip Area (µm)	Thickness of Plate on Action Area (µm)	Gold Thickness in Contact Area (μm)	Part Number
				Tim I and	0.2	174102-1
		4.7	Tin-lead	Tin-lead (0.5~2.54)	0.4	174102-4
				(0.5~2.54)	0.8	
		163	Tie lead	Tin-lead	0.2	1-174102-1
64	a+c	16.2	Tin-lead	$(0.5 \sim 2.54)$	0.8	
		Tin-lead Tin-lead (0.5~2.54)	0.2	2-174102-1		
				$(0.5 \sim 2.54)$	$(0.5 \sim 2.54)$	0.8
		21.0	Gold (0.2)	0 1451 4	0.2	2-174102-3
		Gold (0.8) Gold-Flash	0.8	2-174102-4		
		4.7	Tin tond	7'- 1 - 4	0.2	174101-1
		4.7	Tin-lead	Tin-lead Tin-lead	0.8	174101-2
			Tim In-al	T ., , ,	0.2	
		16.2	Tin-lead		0.8	
00	-161-	16.2 Gold (0.2)	0.115	0.2		
96	a+b+c		Gold (0.8)	Gold-Flash	0.8	
			Tie land	Tri- 1 1	0.2	
		24.2	Tin-lead	Tin-lead	0.8	
		21.0	Gold (0.2)	C. H. F (0.2	2-174101-3
			Gold (0.8)	Gold-Flash	0.8	2-174101-4

^{**}For other positions and platings, contact our Sales Department.

PC Beard Layout

Applicable Board Thickness:

1.6~3.2mm

Through Hole Dia.(D):

PC board drilled hole dia. 1.15^{+0.025}mm

Copper plated thickness ---25~75µm

Tin-lead plated thickness-

 $4 \sim 10 \mu m$

Plated hole dia. ---

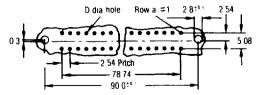
0.94~1.09mm

Finished hole dia. after solder reflowing --- 0.91

1.09mm

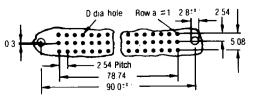
Rows Loaded a+c

(Connector mounting side)



Rows Loaded a+b+c

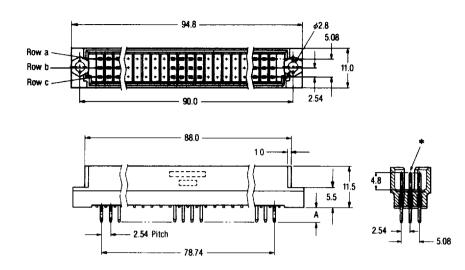
(Connector mounting side)



Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type R Pin Assemblies (Loaded with Solder Post Contacts)

For PC Board Mount Vertical Type

Material and Finish
Housing—Thermoplastic,
polyester, grey
Contact—Phosphor bronze;
plated tin-lead on solder
tine tip area, gold on
contact area (see chart for
plating thickness) with
nickel underplate on
entire contact.
No pinhole.



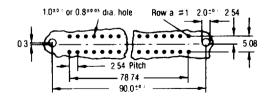
* 64-position connector has row a and c only loaded (P'N: 174104)

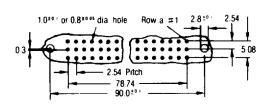
No. of Pos.**	Rows Loaded	PC Board Thickness	Dimension A	Gold Thickness in Contact Area (\(\ampli \)m)	Part Number
		1.6	2.5	0.2	174104-1
0.4	. 1	1.6	2.5	0.8	174104-2
64	a+c		4.0	0.2	1-174104-1
		2.4~3.2	4.0	0.8	1-174104-2
		4.0	2.5	0.2	174103-1
		1.6	2.5	0.8	174103-2
96	a+b+c		4.0	0.2	1-174103-1
		2.4~3.2	4.0	0.8	1-174103-2

^{**}For other positions and platings, contact our Sales Department.

PC Board Layout

Rows Loaded a+c (Connector mounting side)







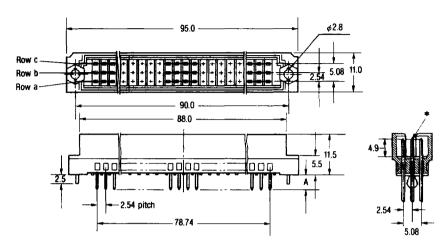
Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type R Pin Assemblies (Loaded with Solder Post Contacts)

For PC Board Mount Vertical Type (With Retention Leg)

Material and Finish:

Housing—Thermoplastic, polyester, grey
Contact—Phosphor bronze; plated tin-lead on solder tine tip area, gold (see chart for thickness) on contact area, with nickel underplate on entire contact. **
No pinhole.

Retention Leg—Brass, plated tin-lead with nickel underplated entire leg.



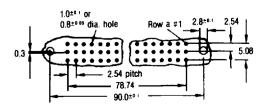
*64-position connector has row a and/c only loaded (P N: 174714)

No. of Pos. **	Rows Loaded	PC Board Thickness	Dimension A	Gold Thickness in Contact Area (μm)	Part Number
64 a+c		1.0	2.5	0.2	174714-1
	1.6 2.5	0.8	174714-2		
	a+c	2.4~3.2	4.0	0.2	1-174714-1
				0.8	1-174714-2
		1.0	2.5	0.2	174713-1
96 a+b+c		1.6		0.8	174713-2
	a+p+c		4.0	0.2	1-174713-1
		2.4~3.2	2.4~3.2 4.0	8.0	1-174713-2

^{**}For other platings, contact our Sales Department.

PC Board Layout

1 ()±0.1 or



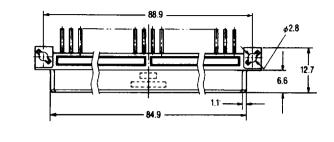
Board to Board Connectors

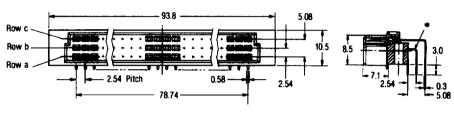
AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type R Receptacle Assemblies (Loaded with Solder Post Contacts)

For PC Board Mount Horizontal Type

Material and Finish:

Housing—Thermoplastic, polyester, grey
Contact—Phosphor bronze; plated tin-lead on solder tine area, gold on contact area (see chart for plating thickness) with nickel underplate on entire contact.
No pinhole.





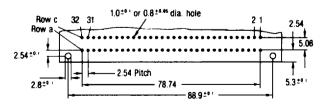
*64-position connector has row a and c only loaded (P/N: 174106)

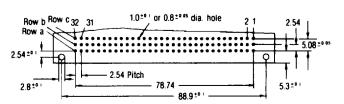
No. of Pos.**	Rows Loaded	Gold Thickness in Contact Area (µm)	Part Number
		0.2	174106-1
64 a+c	a+c	0.4	
		0.8	174106-2
		0.2	174105-1
96	a+b+c	0.4	174105-4
		0.8	174105-2

^{**}For other positions and platings, contact our Sales Department.

PC Board Layout

Rows Loaded a+c (Connector mounting side)







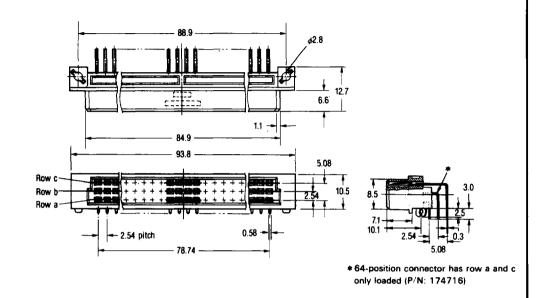
Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type R Receptacle Assemblies (Loaded with Solder Post Contacts)

For PC Board Mount Horizontal Type (With Retention Leg)

Material and Finish:

Housing—Thermoplastic, polyester, grey
Contact—Phosphor bro bronze; plated tin-lead on solder tine area, gold (see chart for thickness) on contact area, with nickel underplate on entire contact.

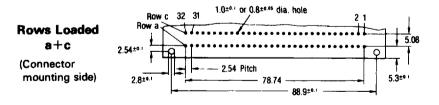
No pinhole.
Retention Leg—Tin-lead over nickel underplate

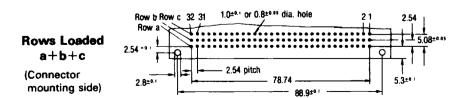


No. of Pos.**	Rows Loaded	Gold Thickness in Contact Area (μm)	Part Number
		0.2	174716-1
64	a+c	0.8	174716-2
	-	0.2	174715-1
96	a+b+c	0.8	174715-2

^{**}For other platings, contact our Sales Department.

PC Board Layout





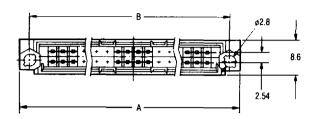


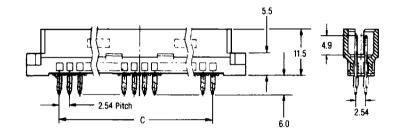
Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type Q Pin Assemblies (Loaded with ACTION PIN Post Contacts)

For PC Board Mount Vertical Type

Material and Finish:

Housing—Thermoplastic, polyester, grey
Contact—CA-725; plated tin-lead on solder tine area and action area,
0.2 µm gold on contact area with nickel underplate on entire contact.
No pinhole.





No. of			Door Street on
A	В	С	Part Number
54.1	49.30	38.10	174252-1
94.8	90.00	78.74	174252-2
	54.1	54.1 49.30	A B C 54.1 49.30 38.10

^{**}For other positions and platings, contact our Sales Department.

PC Board Layout (Connector mounting side)

Applicable Board Thickness:

2.4mm

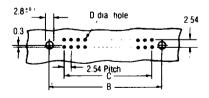
Through Hole Dia. (D):

PC board drilled hole dia. - 0.9±0.025 mm

Copper plated thickness — 25~75 µm

Plated hole dia. — $0.8^{\pm 0.05}$ mm Tolerance of hole pitch:

±0.05mm (non accumulate)



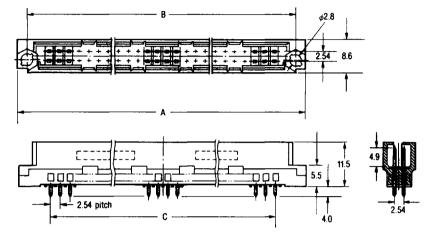


Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type Q Pin Assemblies (Loaded with Solder Post Contacts)

For PC Board Mount Vertical Type (Screw Mount)

Material and Finish:

Housing—Thermoplastic, polyester, grey
Contact—Brass, plated tin-lead on solder tine area, 0.2μm gold (for 64 position) or 0.1μm gold (for 80 position) on contact area.
No pinhole.

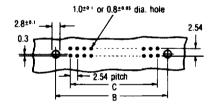


No. of		Dimensions		David Marrie an
Pos. **	A	A B C	С	Part Number
32	54.1	49.3	38.10	174254-1
64	94.8	90.0	78.74	174254-2
80	115.1	110.3	99.06	<u> </u>

^{**}For other platings, contact our Sales Department.

PC Board Layout

(Connector mounting side)



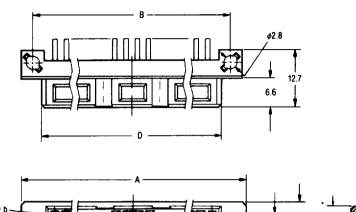
Board to Board Connectors

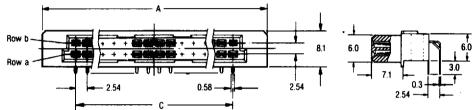
AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type Q Receptacle Assemblies (Loaded with Solder Post Contacts) with Grounding Circuits

For PC Board Mount Horizontal Type

Material and Finish:

Housing—Thermoplastic, polyester, grey
Contact—Phosphor bronze; plated tin-lead on tine tip area, 0.2 µm gold on contact area with nickel underplate on entire contact.**
No pinhole.

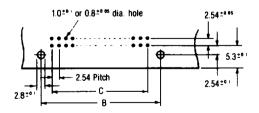




No. of Pos.**		Part Number			
	A	В	С	D	Part Number
	FO 4	40.00	20.40	44.0	174253-3
32	53.1	48.20	38.10	44.2	174253-1*
64	93.8	88.90	78.74	84.9	174253-2

Note: Location of grounding circuits—— Both ends of raw b and 5b (3 in all) with 32-position assembly, both ends of raw b (2) with (*) 32-position assembly and both ends of raw b (2) with 64-position assembly.

PC Board Layout (Connector mounting side) Applicable Board Thickness: 1.6mm



^{**}For other platings, contact our Sales Department.



Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Receptacle Assemblies (Loaded with Solder Post Contacts) 2 Rows DIN Type S-2 Connectors

For PC Boart Mount Vertical Type (Without Retention Leg)

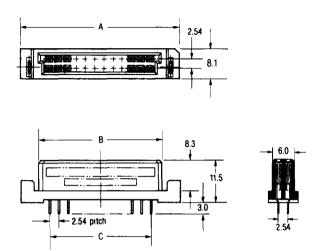
Material and Finish:

Housing—Glass-filled thermoplastic, polyester, black

Contact—Phosphor bronze; plated tin-lead on tine area, 0.3µm min. gold on contact area, with nickel underplate on entire contact.*

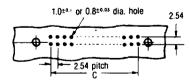
PC Board Layout

(Connector mounting side)



No. of	Dimensions			B . A
Pos.**	Α	В	С	Part Number
22*	44.0	34.1	07.04	1-174887-3*
24			27.94	
32	54.2	44.3	38.10	3-174887-3
44	69.4	59.5	53.34	4-174887-3
64	94.8	84.3	78.74	-

^{*22-}position connector with No.6 circuit in each row removed. Uses housing for 24 positions.



^{**}For other platings, contact our Sajes Department.

Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Pin Assemblies (Loaded with Solder Post Contacts) 2 Rows DIN Type S-2 Connectors

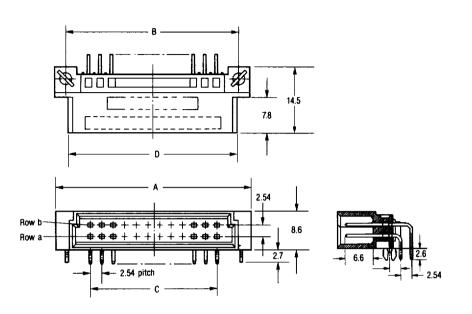
For PC Board Mount Horizontal Type (With Retention Leg)

Material and Finish:

Housing—Glass-filled thermoplastic, polyester, black

Contact—Phosphor bronze; plated tin-lead on solder tine area, 0.3 µm min. gold on contact area, with nickel underplate on entire contact.

Retention Leg—Brass; plated tin-lead with nickel underplate on entire contact.

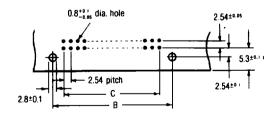


No. of Pos.**		Dant Number			
	A	В	С	D	Part Number
22*	43.2	38.1	27.04	36.4 -	1-174886-3*
24			27.94		2-174886-3
32	53.4	48.3	38.10	46.6	3-174886-3
44	68.6	63.5	53.34	61.8	4-174886-3
64	94.0	88.9	78.74	87.2	

^{*22-}position connector with No.6 circuit in each row removed. Uses housing for 24 positions.

PC Board Layout

(Connector mounting side)



^{**}For other platings, contact our Sales Department.

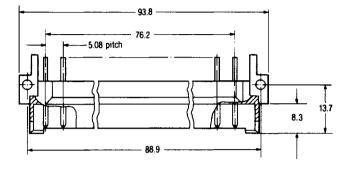


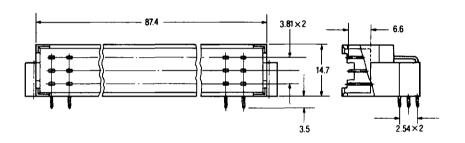
Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN41612-IEC603-1/-2) Type F Pin Assemblies (Loaded with Solder Post Contacts) 3 Rows DIN Type

For PC Board Mount Horizontal Type

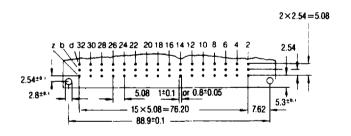
Material and Finish:
Housing—Thermoplastic,
polyester, grey
Contact—Brass; plated
tin-lead on solder tine
area, 0.4μm min. gold
on contact area, with
nickel underplate on
entire contact.

48 Position Part Number: 175439-1

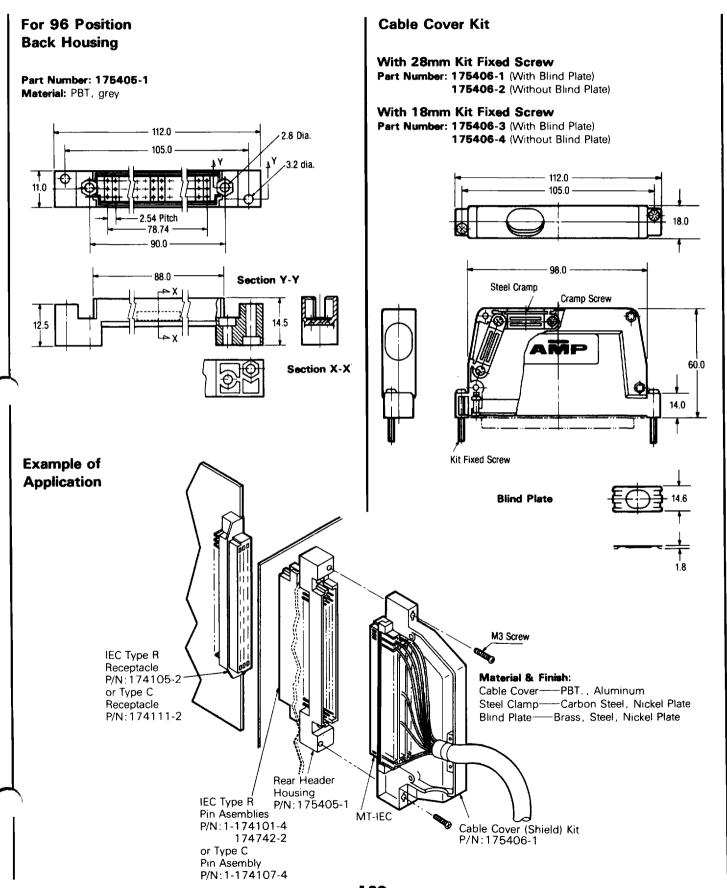




PC Board Layout (Connector mounting side)



Board to Board Connectors AMP Eurocard PC Board Connectors (Per DIN 41612-IEC603-1/-2) Rear Header Housing and Cable Cover



Board to Board Connectors Accessories for Eurocard PC Board Connectors

Dust Cover For 64 Pos. and 96 Pos.

Connector Size:

64 and 96 Pos. of Type C

and Type R

Material:

Thermoplastic, milk white color

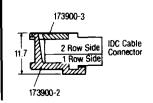
Cover Housing For MT Connector

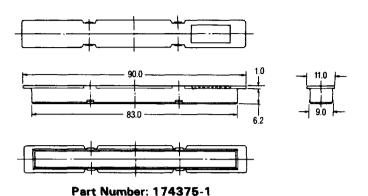
Kit Part Number: 173900-1

94V-0 rated, glass-filled P.B.T., white grey

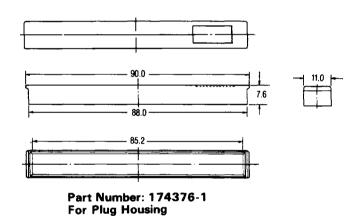
Applicable Connector

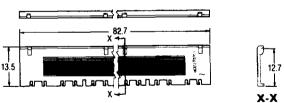
Part Number: 215697 or 215683



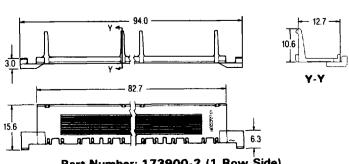


For Cap Housing





Part Number: 173900-3 (2 Row Side)



Part Number: 173900-2 (1 Row Side)