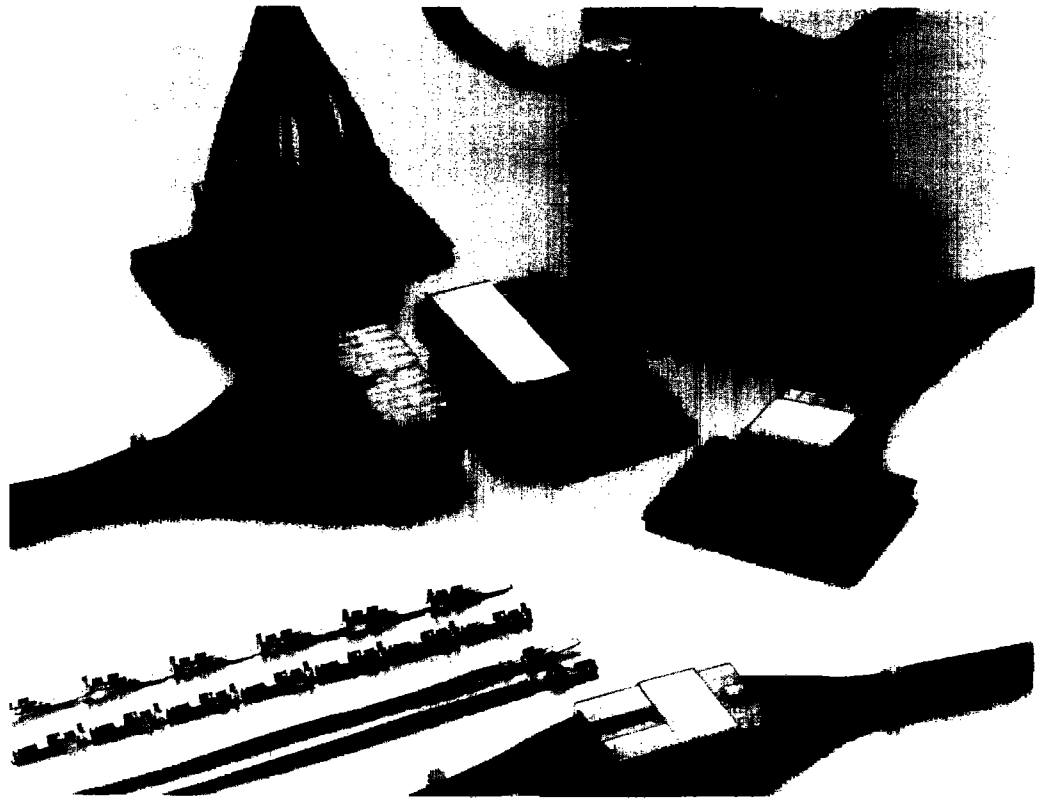


**Wire to Board Connectors
AMP Multiple Interlock Connectors (MIC)**



4

Features

- Versatile applications from low level circuits to power level circuits.
- Mark I, Mark II and board mount connectors
- Free-hanging and panel mount styles in both Mark I and Mark II
- A double-lock plate available to ensure positive loading and retention of contacts within housing (for Mark II)
- Housing has contact cavities in two rows and is easy to assemble.
- Contacts available in brass and phosphor bronze with pretinned plating. Selective gold plating is also available.
- Receptacle contacts are of cantilever beam design for low mating-unmating force
- Contacts accept 0.3~2.27 mm² wire and can accommodate combination of two wires
- 66 Nylon housing
- Sizes: 5, 7, 9, 11, 13, 17 and 21 positions, plus 22-position board mount split type connector to accept 9- and 13-position connectors for wire.

MIC Connectors are a family of versatile nylon connectors designed for use in a wide range of applications from low level circuits to power circuits. In addition to their versatility, MIC Connectors have many outstanding features including reliable housing construction with positive locking and anti-scooping mechanisms for connector engagement, dual-beam cantilever spring design built into receptacle contacts, high resistance to vibration and shock. Other features include polarized housing design and doublerow contact cavities for ease of assembling. MIC Connectors comprise plug and cap assemblies for wire termination (free-hanging and panel mount types), board mount cap assembly and tab/receptacle contacts used for wire termination. The connectors for wire termination are available in

two styles, Mark I and Mark II. These connectors employ exclusive snap-in contacts and are intermateable. In addition, a double-lock plate is provided for use with Mark II connectors which ensures positive loading and retention of contacts within the housing and also prevents connector halves from half-mating. This plate is applied after contacts have been loaded. The board mount cap assembly is available in two styles for vertical and horizontal mounting. It accepts either Mark I or Mark II connector.

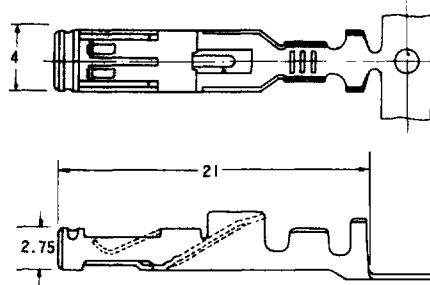
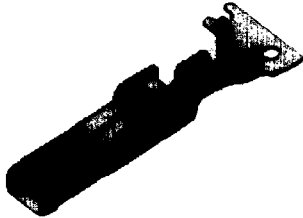
Product specifications

- Current and voltage ratings:**
10A, 350VDC or 250VAC
- Dielectric withstanding strength:**
1,800VAC, 1 minute
- Insulation resistance:**
100MΩ min. at 500VDC
- Termination resistance:**
3mΩ Max. (Initial)
6mΩ Max. (After test)
- Operating temperature:**
-30~+105°C
- <Mark I>**
- Product specifications:**
108-5093, 108-5099
- Crimp specifications:**
114-5004, 114-5018
- Instruction Sheet: CM-056J**
- <Mark II>**
- Product specifications:**
108-5165, 108-5166
- Crimp specifications:**
114-5071, 114-5072
- Instruction sheet: CM-193J**

Wire to Board Connectors AMP Multiple Interlock Connectors (MIC) Mark I

Receptacle Contacts

Material: Phosphor bronze and brass



Wire Size Range mm ²	Ins. Dia. Range	Material and Finish	Receptacle Nos.		Hand Tool Nos.
			Strip Form	Loose Piece	
0.3~0.89	1.5~2.6	Phosphor bronze/Pretin	170307-1	170458-1	724682-1
		Phosphor bronze with selective gold plating over nickel	170307-2	170458-2	
		Brass/Pretin	170487-1†	—	
0.5~2.27	2.2~3.4	Phosphor bronze/Pretin	170286-1	170289-1	755338-1* and 755339-1*
		Phosphor bronze with 0.38μm selective gold plating over nickel	170286-2	170289-2	
		Phosphor bronze with 0.76μm selective gold plating in addition to gold flash over nickel	170286-4	170289-3	
		Brass/Pretin	170177-1†	170189-1	

† Contacts marked with † are of end feed type. All other contacts are of side feed type.

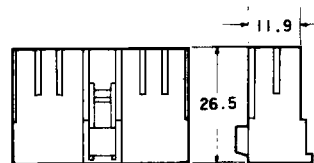
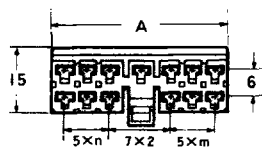
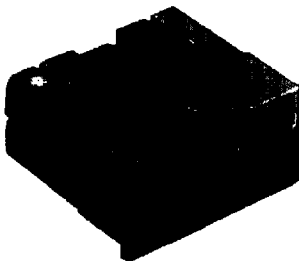
* 755338-1 is used with automotive wires. 755339-1 is used with all wires excluding automotive wires.

Extraction Tool No. 723735-1 (Instruction Sheet No. IS-089J)

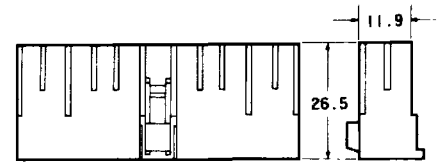
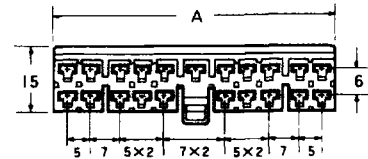
Crimp Instruction Sheet No. IS-112J (724682-1), IS-369J (755338-1), IS-370J (755339-1)

Plug Housings 5, 7, 9, 11, 13, 17 and 21 Positions

Material: 66 Nylon



5, 7, 9, 11, 13 and 17 Positions



21 Positions

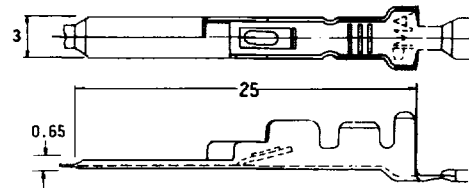
No. of Positions	Dimensions			Plug Housing Nos.*
	A	n	m	
5	20.1	—	—	172026-1
7	25.1	—	1	172025-1
9	30.1	1	1	171892-1
11	35.1	1	2	172024-1
13	40.1	2	2	171358-1
17	50.1	3	3	171354-1
21	64.1	See figure		171364-1

* Housing colour is natural. Other colors, black (-2), brown (-3), green (-4), blue (-5), gray (-6) and yellow (-7) are also available.

Wire to Board Connectors AMP Multiple Interlock Connectors (MIC) Mark I

Tab Contacts

Material: Phosphor bronze and brass
Tab Thickness — 0.65mm



Wire Size Range mm ²	Ins. Dia. Range	Material and Finish	Tab Nos.		Hand Tool Nos.
			Strip Form	Loose Piece	
0.3~0.89	1.5~2.6	Phosphor bronze/Pretin	170308-3	170459-4	724682-1
		Brass/Pretin	170308-1	170459-1	
0.5~2.27	2.2~3.4	Phosphor bronze/Pretin	170221-3	170222-4	755338-1*
		Brass/Pretin	170221-1	170222-1	and
		Brass/Selective gold (1) over nickel	170221-4	170222-3	755339-1*

Finish Code(1): 0.76μm gold

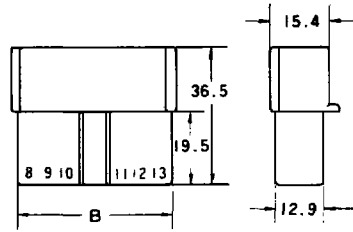
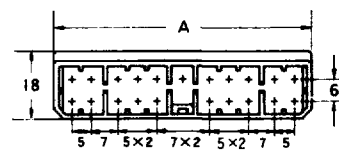
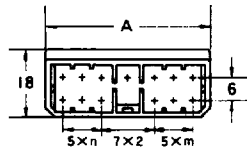
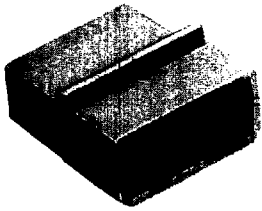
* 755338-1 is used with automotive wires. 755339-1 is used with all wires excluding automotive wires.

Extraction Tool No.: 724763-1 (Instruction Sheet No. IS-144J)

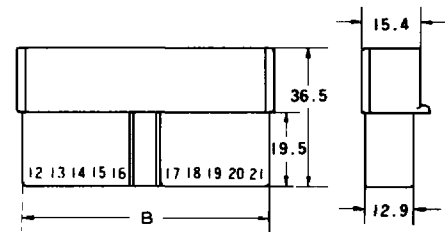
Crimp Instruction Sheet No.: IS-112J (724682-1), IS-369J (755338-1), IS-370J (755339-1)

Free Hanging Cap Housings 5, 7, 9, 11, 13, 17 and 21 positions

Material: 66 Nylon



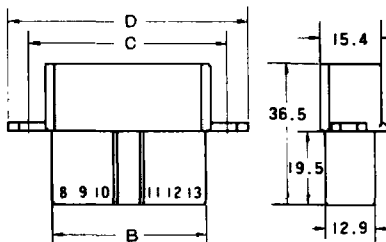
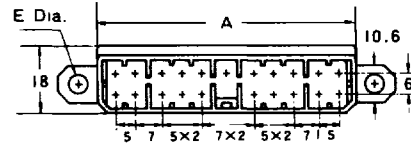
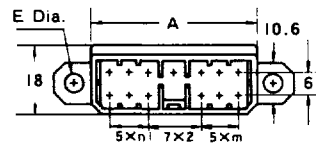
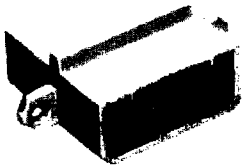
5, 7, 9, 11, 13 and 17 Positions



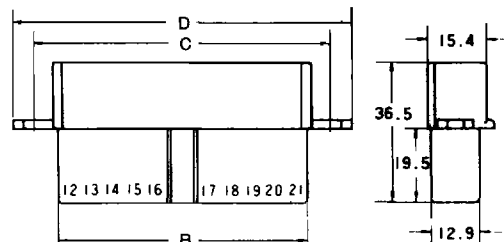
21 Positions

Panel Mount Cap Housings 9, 11, 13, 17 and 21 Positions

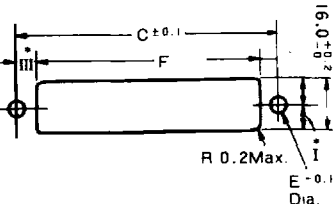
Material: 66 Nylon



9, 13 and 17 Positions



21 Positions



Panel Cutout

No. of Positions	Dimensions								Cap Housing Nos.*	
	A	B	C	D	E	F ^{+0.5} ₋₀	n	m	Free Hanging	Panel Mount
5	23.6	20.0	—	—	—	—	—	—	172044-1	—
7	28.6	25.0	—	—	—	—	1	—	172043-1	—
9	33.6	30.0	42.0	50.0	4.5	34.0	1	1	172042-1	172096-1
11	38.6	35.0	47.0	55.0	4.5	39.0	2	1	172041-1	—
13	43.6	40.0	53.0	63.0	5.5	44.0	2	2	171725-1	172347-1
17	53.6	50.0	63.0	73.0	5.5	54.0	3	3	171827-1	171828-1
21	67.6	64.0	77.0	87.0	5.5	68.0	See figure		171829-1	171830-1

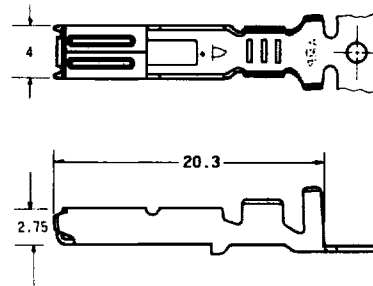
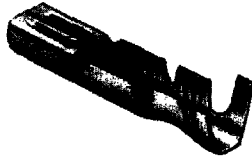
* Housing color is natural. Other colors, black (-2), brown (-3), Green (-4), blue (-5), gray (-6), and yellow (-7) are also available.



**Wire to Board Connectors
AMP Multiple Interlock Connectors (MIC)
Mark II**

Receptacle Contacts

Material: Brass

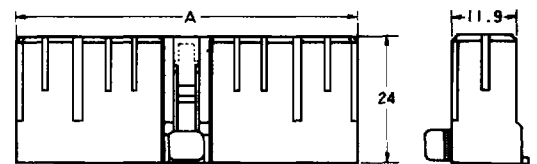
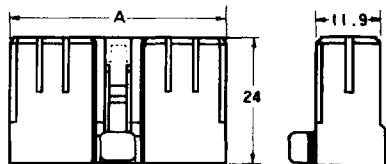
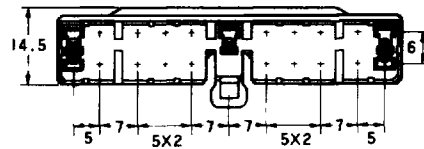
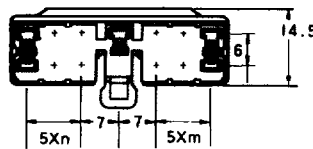
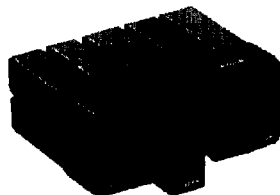


Wire Size Range mm ²	Ins. Dia. Range	Material and Finish	Receptacle Nos.		Hand Tool No.
			Strip Form	Loose Piece	
0.3-0.89	1.5-2.6	Brass/Pretin	172775-1	172776-1	755401-1
		Brass/Sel. Gold	172775-2	172776-2	
		Phosphor Bronze /Pretin	172775-4	172776-4	
0.5-2.27	2.1-3.4	Brass/Pretin	172773-1	172774-1	755400-1
		Brass/Sel. Gold	172773-2	172774-2	
		Phosphor Bronze /Pretin	172773-4	172774-4	

Extraction Tool No. 753787-1 (Instruction Sheet No. IS-219J)
Crimp Instruction Sheet No. IS-259J (755401-1), IS-260J (755400-1)

**Plug Housings and
Double Lock Plate
5, 7, 9, 11, 13, 17 and
21 Positions**

Material:
Housing—Nylon
Double Lock Plate—P. B. T.

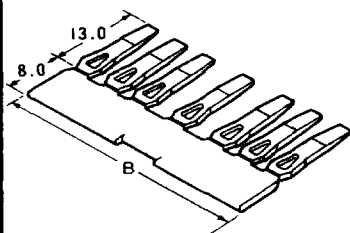


5, 7, 9, 11, 13 and 17 Positions

21 Positions

No. of Positions	Dimensions				Part Number	
	A	n	m	B	Plug Housing*	Double Lock** Plate
5	20.0	—	—	17.4	172494-1	174395-2
7	25.0	—	1	22.4	172495-1	174396-2
9	30.0	1	1	27.4	172496-1	174397-2
11	35.0	1	2	32.4	172497-1	174398-2
13	40.0	2	2	37.4	172498-1	174399-2
17	50.0	3	3	47.4	172500-1	174400-2
21	64.0	See Figure		61.4	172501-1	174401-2

* Housing color is natural. Other colors, black (-2), brown (-3), green (-4), blue (-5), gray (-6) and yellow (-7) are also available.
** Double lock plate color is black.

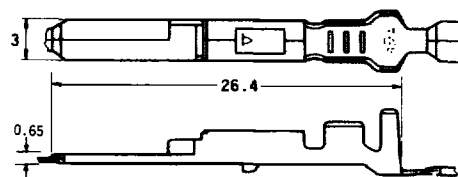
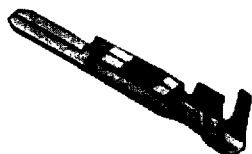


Double Lock Plate

Wire to Board Connectors AMP Multiple Interlock Connectors (MIC) Mark II

Tab Contacts

Material: Brass

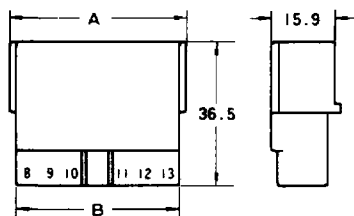
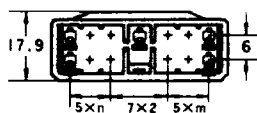
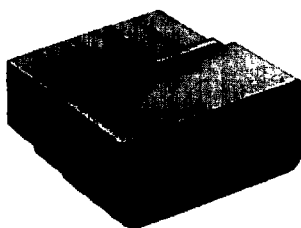


Wire Size Range mm ²	Ins. Dia. Range	Material and Finish	Tab Nos.		Hand Tool No.
			Strip Form	Loose Piece	
0.30~0.89	1.5~2.6	Brass/Pretin	172779-1	172780-1	724682-1
		Brass/Sel. Gold	172779-2	172780-2	
		Phos. Brz./Pretin	172779-4	172780-4	
0.50~2.27	2.2~3.4	Brass/Pretin	172777-1	172778-1	755402-1
		Brass/Sel. Gold	172777-2	172778-2	
		Phos. Brz./Pretin	172777-4	172778-4	

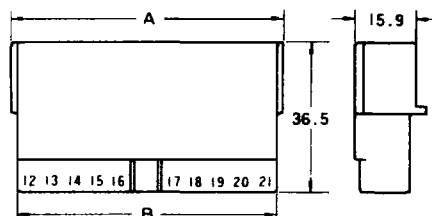
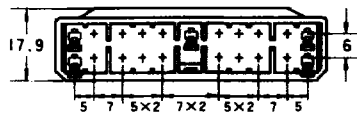
Extraction Tool No.753787-1(Instruction Sheet No.IS-219J)
Crimp Instruction Sheet No.IS-112J(724682-1), IS-280J(755402-1)

Free Hanging Cap Housings 5, 7, 9, 11, 13, 17 and 21 Positions

Material: Nylon



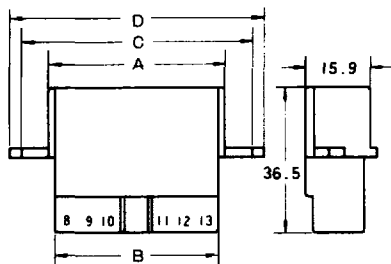
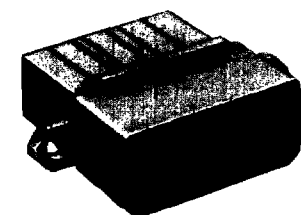
5, 7, 9, 11, 13 and 17 Positions



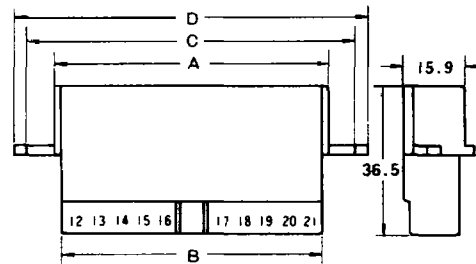
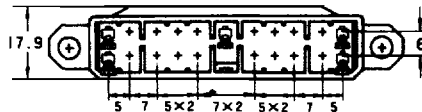
21 Positions

Panel Mount Cap Housings 9, 11, 13, 17 and 21 Positions

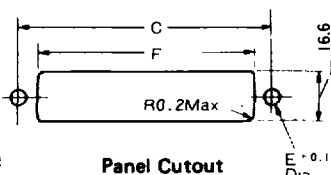
Material: Nylon



9, 11, 13 and 17 Positions



21 Positions



Panel Cutout

No. of Positions	Dimensions								Cap Housing Nos.*	
	A	B	C	D	E	F ^{+0.5} ₋₀	n	m	Free Hanging	Panel Mount
5	23.6	20.3	—	—	—	—	—	—	172504-1	—
7	28.6	25.3	—	—	—	—	—	—	172505-1	172827-1**
9	33.6	30.3	42.0	50.0	4.5	34.3	1	1	172506-1	172513-1
11	38.6	35.3	47.0	56.0	4.5	39.3	2	1	172507-1	172514-1
13	43.6	40.3	53.0	63.0	5.5	44.3	2	2	172508-1	172515-1
17	53.6	50.3	63.0	73.0	5.5	54.3	3	3	172509-1	172516-1
21	67.6	64.3	77.0	87.0	5.5	68.3	See figure	—	172510-1	172517-1

* Housing color is natural. Other colors, black (-2), brown (-3), green (-4), blue (-5), gray (-6), and yellow (-7) are also available.

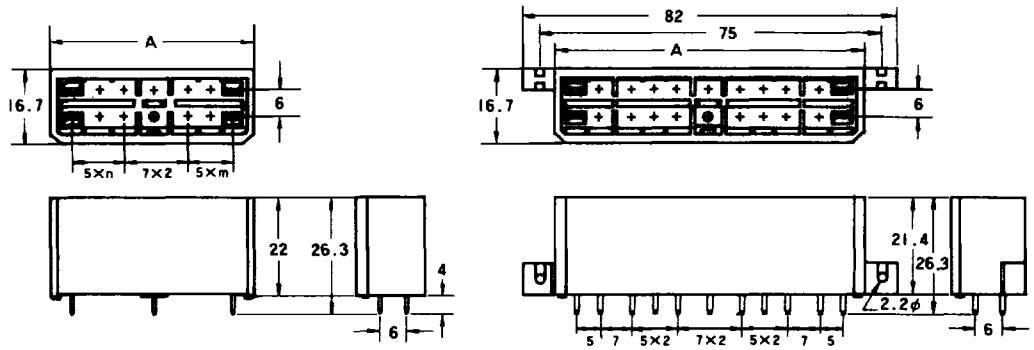
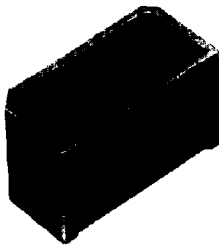
**These are special specifications(configurations);
Drawings are available on request(through type)



Wire to Board Connectors AMP Multiple Interlock Connectors (MIC) PC Board Mount Type (Accepts Both Mark I and Mark II)

Vertical Mount Cap Housings 5, 7, 9, 11, 13, 17 and 21 Positions

Material: Housing — 66 Nylon
Tab Contact — Brass
Finish: Refer to the list
Solder Tab Dimensions:
0.9 x 0.64mm



5, 7, 9, 11, 13 and 17 Positions

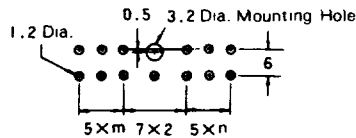
21 Positions

No. of Pos.	Dimensions			Housing Colors*	Vertical Mount Cap Housing Nos.		
	A	n	m		Contact Finish		
					Pretin	Selective gold (1)	Selective gold (2)
5	23.6	—	—	Natural	172037-1	—	1-172037-1
				Green	172037-4	—	—
7	28.6	1	—	Natural	172036-1	2-172036-1	1-172036-1
				Green	172036-4	—	—
9	33.6	1	1	Natural	172035-1	2-172035-1	1-172035-1
				Green	—	—	—
11	38.6	2	1	Natural	172034-1	—	1-172034-1
				Green	—	—	—
13	43.6	2	2	Natural	171362-1	1-171362-1	2-171362-1
				Green	171362-4	—	—
17	53.6	3	3	Natural	171363-1	1-171363-1	2-171363-1
				Green	171363-4	—	—
21	67.6	See Figure	—	Natural	171457-1	—	171457-5
				Green	171457-4	—	—

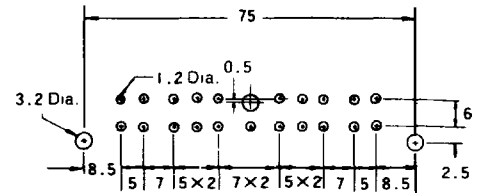
* Other colors than listed above are also available. Ask AMP sales division when you need.
Finish Code (1): 0.38μm selective gold at contacting area in addition to overall gold flash over nickel.
(2): 0.76μm selective gold at contacting area in addition to overall gold flash over nickel.

Recommended PC Board Layout

Compatible PC Board
Thickness: 1.6mm
Dimension Tolerance: ±0.1mm



5, 7, 9, 11, 13 and 17 Positions



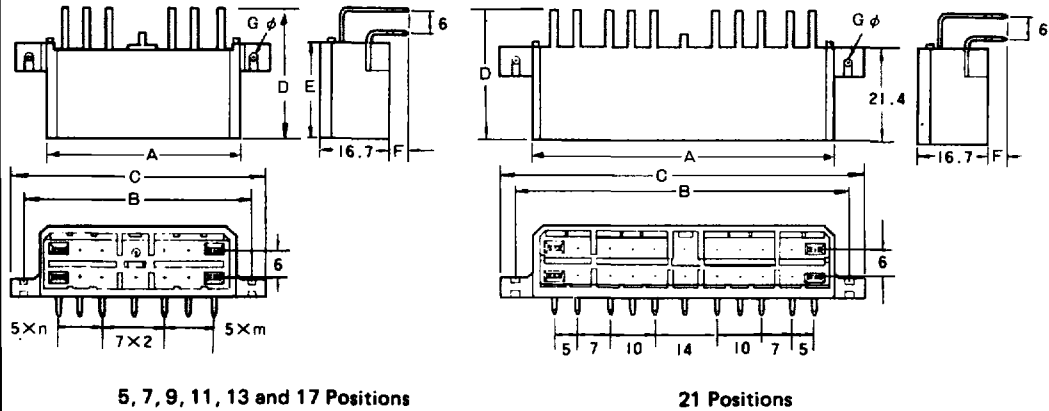
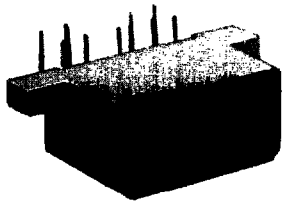
21 Positions

Remark: After the housing has been fastened to a board using M-3 size tapping screw (JIS-B-1115), it is soldered to the board.

Wire to Board Connectors AMP Multiple Interlock Connectors (MIC) PC Board Mount Type (Accepts Both Mark I and Mark II)

Horizontal Mount Cap Housings 5, 7, 9, 11, 13, 17 and 21 Positions

Material: Housing — 66 Nylon
Tab Contact — Brass
Finish: Refer to the list
Solder Tab Dimensions:
0.9 x 0.64mm

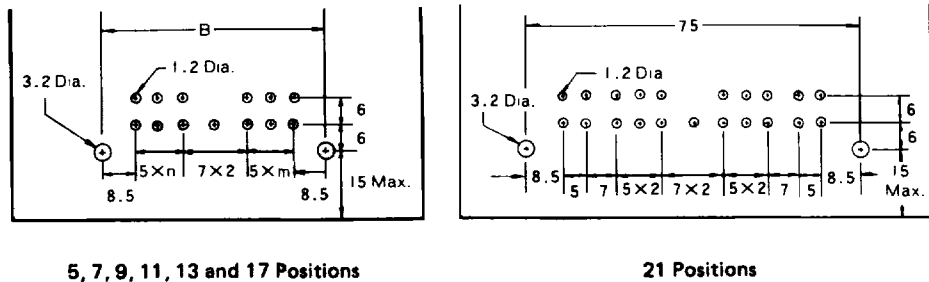


No. of Pos.	Dimensions								Housing Colors*	Horizontal Mount Cap Housing Nos.		
	A	B	C	D	E	F	G	n		Contact Finish		
										Pretin	Selective gold (1)	Selective gold (2)
5	23.6	31.0	38.0	31.0	22.0	3.4	2.3	—	Natural	172040-1	1-172040-5	172040-8
									Green	172040-4	—	—
7	28.6	36.0	43.0	31.0	22.0	3.4	2.3	1	Natural	172039-1	2-172039-1	1-172039-1
									Green	172039-4	—	—
9	33.6	41.0	48.0	31.0	22.0	3.4	2.3	1	Natural	171894-1	2-171894-1	1-171894-1
									Green	171894-4	—	—
11	38.6	46.0	53.0	31.0	22.0	3.4	2.3	1	Natural	172038-1	2-172038-1	—
									Green	172038-4	—	—
13	43.6	51.0	58.0	31.0	22.0	3.4	2.2	2	Natural	171882-1	2-171882-1	1-171882-1
									Green	171882-4	—	—
13 Without Ear	43.6	—	—	31.0	22.0	3.4	2.2	2	Natural	171819-1	—	—
									Green	171819-4	—	—
17	53.6	61.0	68.0	30.0	21.4	4.0	2.2	3	Natural	171366-1	2-171366-1	1-171366-1
									Green	171366-4	—	—
21	67.6	75.0	82.0	30.0	21.4	4.0	2.2	See Figure	Natural	171367-1	3-171367-1	2-171367-1
									Green	171367-4	—	—

* Other housing colors than those listed above are also available. Ask AMP sales division when you need.
Finish Code (1): 0.38μm selective gold in addition to overall gold flash over nickel.
(2): 0.76μm selective gold in addition to overall gold flash over nickel.

Recommended PC Board Layout

Compatible PC Board
Thickness: 1.6mm
Dimension Tolerance: ±0.1mm



Remark: After the housing has been fastened to a PC board using M-3 size tapping screw (JIS-B-1115), it is soldered to the board.



**Wire to Board Connectors
AMP Multiple Interlock Connectors (MIC)
PC Board Mount Type (Accepts Both Mark I and Mark II)**

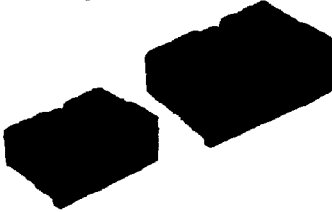
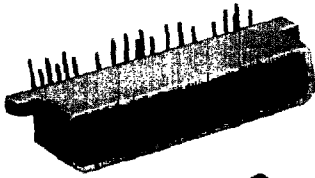
**Horizontal Mount
Cap Housings
22 Position Split Type**

It accepts two plugs, 9p plug and 13p plug.

Material: Housing—66 Nylon
Contact—Brass

Finish: Refer to the list

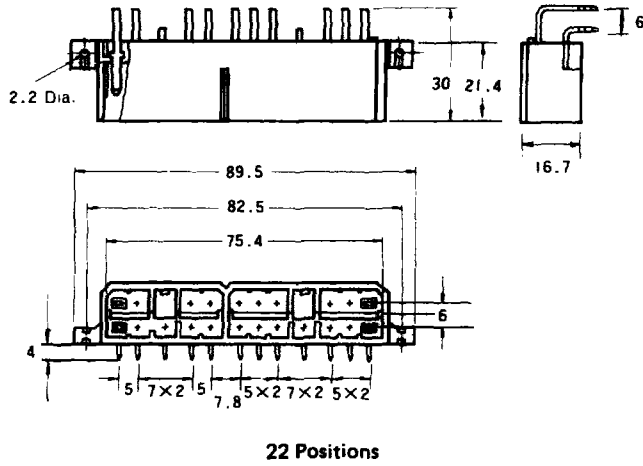
Solder Tab Dimensions:
0.9x0.64mm



**Recommended PC Board
Layout**

Compatible PC Board
Thickness: 1.6mm
Dimension Tolerance: ±0.1mm

Typical Application



Finish	22p Housing Nos.		Mating Plug Half
	Natural	Green	
Pretin	1-171896-1	1-171896-4	13Pos.(1 Ea.) 9 Pos.(1 Ea.)

