

Wire to Board Connectors

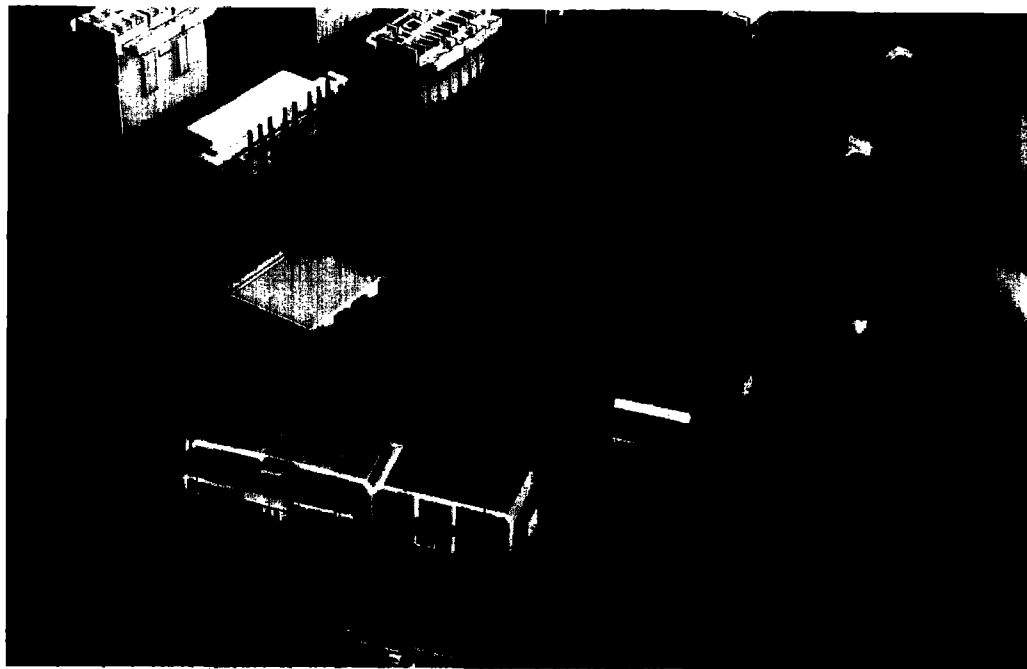
AMP 070 Series MULTILOCK Connectors

Receptacle Contact and Plug Housing for Wire Application

Features

- Small yet durable wire-to-wire and wire-to-board connectors
- Housing lance design
- Contacts have no lance and do not tangle with one another, making handling easier
- Consist of plug and cap connectors for wire termination and cap housing assembly for horizontal and vertical mounting on the printed circuit board
- Receptacle contact has a leaf with contacting points protected by a box-shaped shroud; highly resistant to damage from outside.
- Both of plug and cap housings have an integral double-lock mechanism, on the wire side.
- Board-mount cap housing assembly available in two types, vertical mount and horizontal mount. Preloaded with posted tab contacts.
- Mark II plug connector is also available which has a double-lock plate assembled into the body.
- Hybrid type connector (wire-to-wire) is also available with signal and power circuits mixed within one housing.

AMP 070 Series MULTILOCK Connectors are a miniaturized high-density wire-to-wire and wire-to-board connector of a unique housing lance design derived from highly durable and reliable MIC connectors. They are smaller by approximately 30% (volume ratio) than conventional connectors of similar design, yet extremely rugged in construction. The connectors consist of



a plug housing with receptacle contacts and a cap housing with tab contacts for wire termination, and a cap housing assembly which can be mounted onto the printed circuit board either vertically or horizontally. The plug and cap connectors for wire termination are of housing lance design. The receptacle and tab contacts used in these connectors have no lance and therefore there is no possibility of contacts being tangled with one another or of contact lances being deformed. Contacts are of crimp, snap-in type. The receptacle contact has a leaf with contacting points protected by a box-shaped shroud. It is strong and highly resistant to damage from outside. The insulation support of each contact serves as a double-lock stopper when it is loaded in the housing. The insulation support is also provided with a notch to ensure wire retention

as it presses the support from both sides. Both of the plug and cap housings have an integral double-lock mechanism for positive contact loading. Despite their small size, the housings are durable and dependable, and prevent contacts from being damaged by rocking (KOJIRI Action) at mating/unmating. For the plug housing, there is a Mark II version which has a two-piece type double-lock plate embedded into the body. This Mark II plug housing uses the same receptacle contacts, and the same mating cap housing, as the conventional standard plug housing. The cap housing assembly for board mounting is available in two types, vertical mount and horizontal mount. To this 070 Series MULTILOCK Connectors a hybrid type wire-to-wire connector containing a mixture of signal circuits (070 Series) and power circuits in one housing has

now been added. Standard 070 Series contacts are used for signal circuits, while 250 Series contacts without latch are used for power circuits.

Note:
For performance specifications of the hybrid type connector, contact our Sales Department.

Performance Data

Low level termination resistance: 3m Ω max.(initial)
10m Ω max.(final)

Overall termination resistance: 3m Ω max.(initial)
10m Ω max.(final)

Insulation resistance:
100M Ω min.

Withstanding voltage:
1,800V AC/one minute
Contact retention force:
8kg min.

Operating temperature:
-30 ~ +105°C

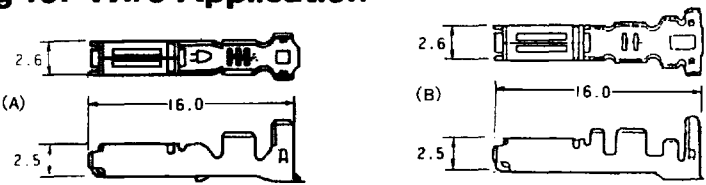
Product specifications:
108-5216
108-5264

Crimp specifications:
See Contact table
contact

Wire to Board Connectors AMP 070 Series MULTILOCK Connectors Receptacle Contact and Plug Housing for Wire Application

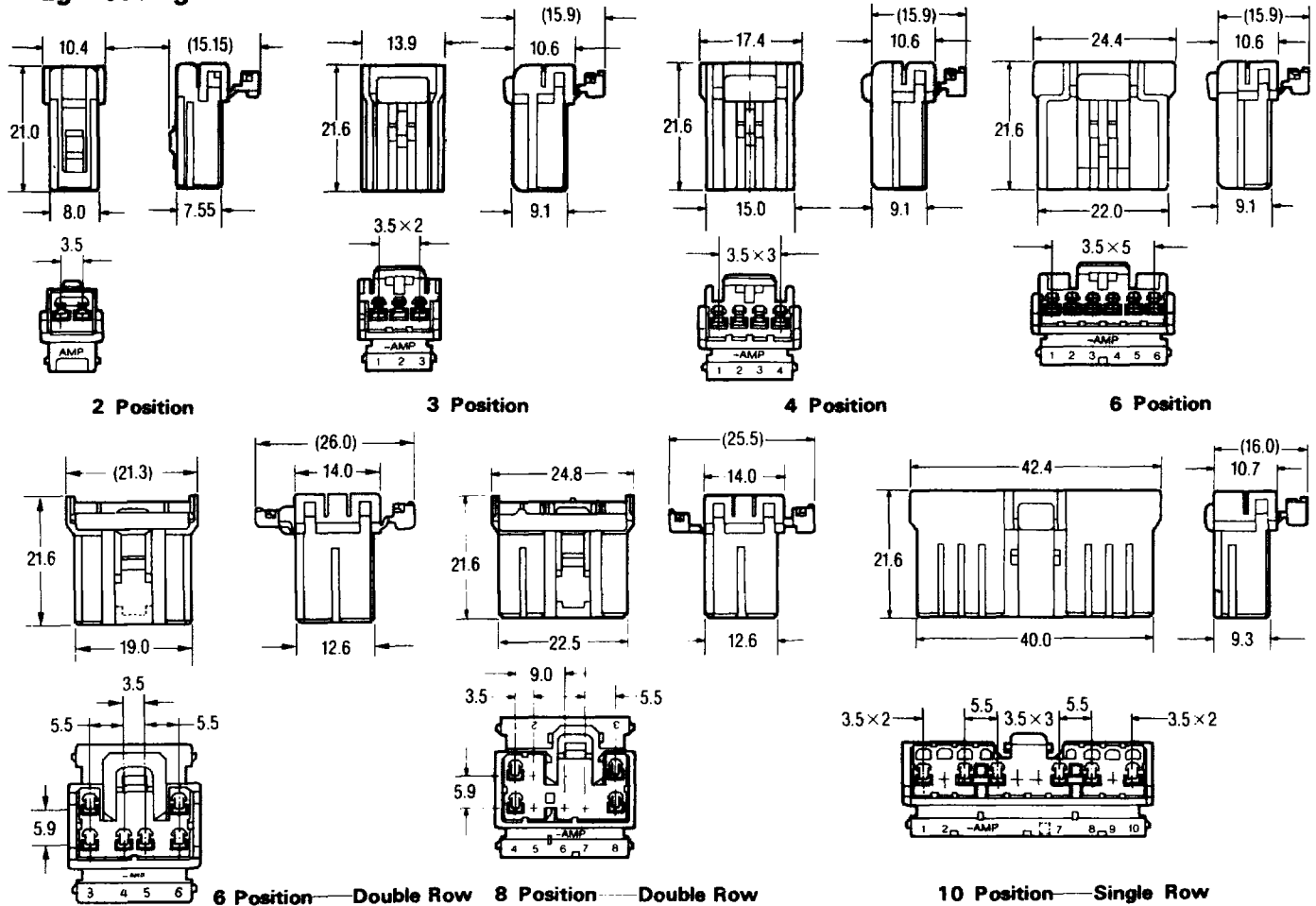
Receptacle Contact (For Plug Housing)

Material and Finish:
Brass, or phosphor bronze
pretinned or selective gold
plated



Wire Range AWG	Wire Ins. Diameter mm ²	Wire Ins. Diameter	Finish	Receptacle Part No.				Hand Tool Part No.	Crimp Specifications
				Strip Form		Loose Piece			
				Brass	Phos. Bro.	Brass	Phos. Bro.		
24-22	0.2-0.36	(A) 1.2-2.0	Pretin	173630-1	173630-6	175026-1	175026-6	911799-2 (IS-481-J)	114-5091
			Sel. gold	173630-2	173630-7	175026-2	175026-7		
22-20	0.3-0.5	(B) 1.0-1.5	Pretin	175124-1	—	—	—	—	114-5134
20-16	0.5-1.25	(A) 2.0-2.6	Pretin	173631-1	173631-6	175027-1	175027-6	911788-2 (IS-480J)	114-5091
			Sel. gold	173631-2	173631-7	175027-2	175027-7		
		(B) 1.2-2.2	Pretin	175095-1	—	—	—	—	114-5134

Plug Housing

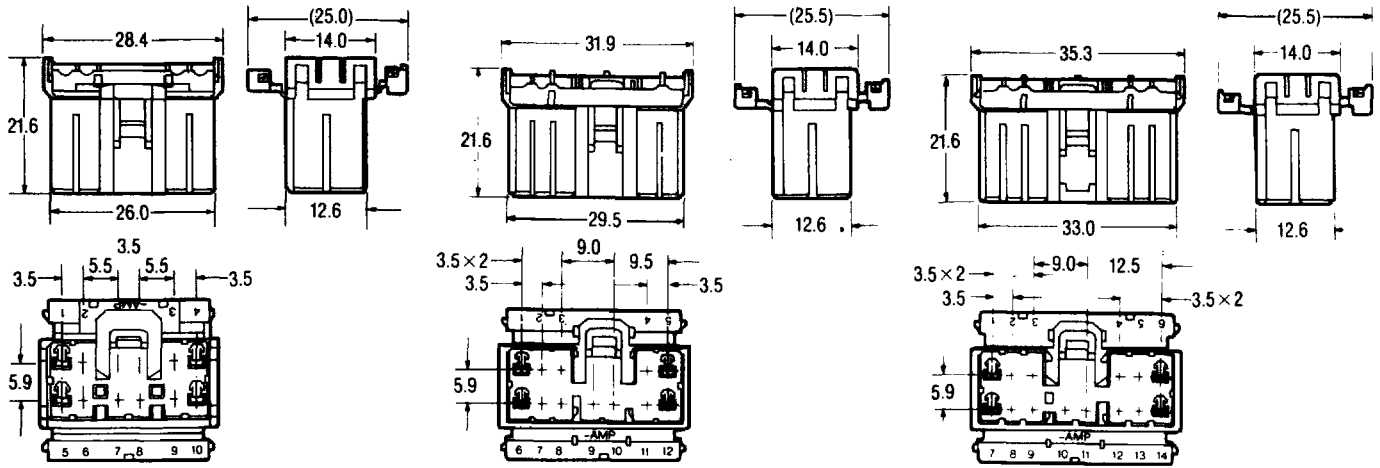


Material: P. B. T

No. of Pos.	Row	Part No. of Plug Housing
UL94HB		
2	1	174463-1
3	1	174921-1
4	1	174922-1
6	1	174923-1
	2	175658-1
8	1	173850-1
	2	173850-4
10	1	174464-1

Wire to Board Connectors AMP 070 Series MULTILOCK Connectors Plug Housing for Wire Application

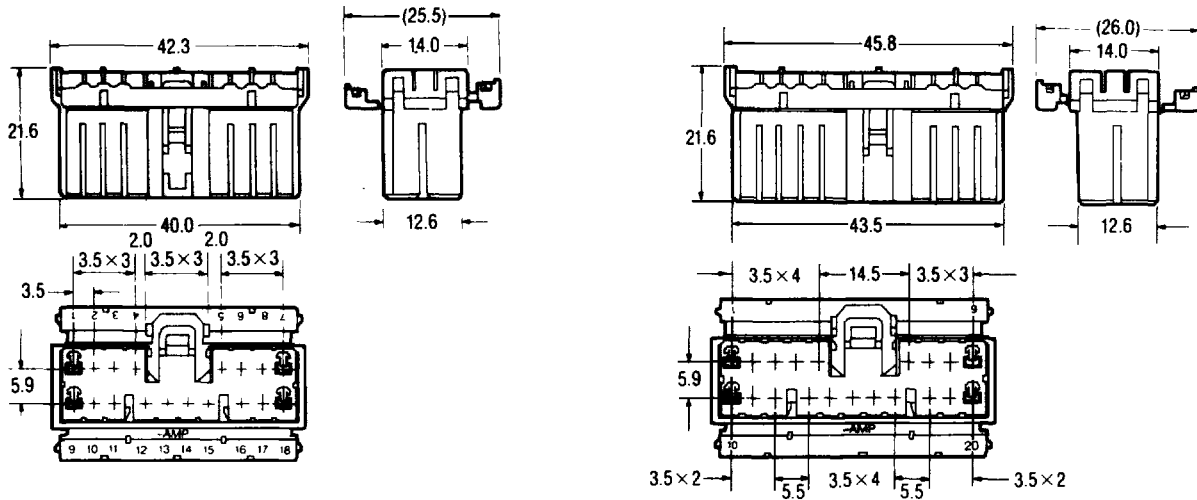
Plug Housing(Cont'd)



10 Position—Double Row

12 Position

14 Position



18 Position

20 Position

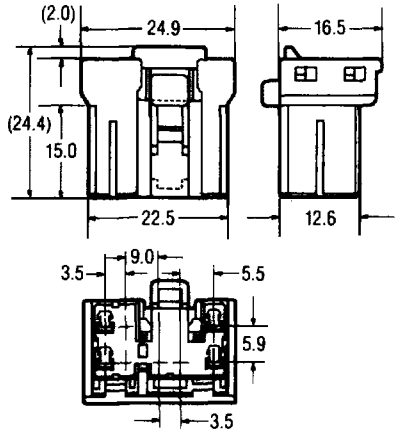
Material: P. B. T.

Note: Figure in □ after Part Number varies depending on material and color. For details, consult our Sales Department.

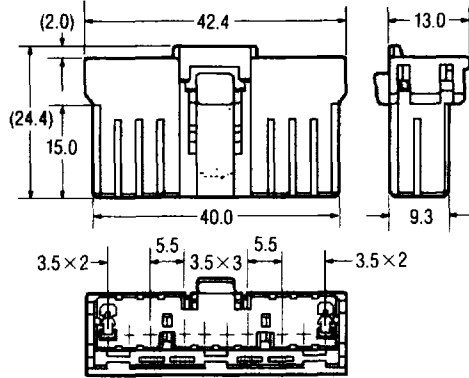
No. of Pos.	Row	Part No. of Plug Housing UL94HB
10	2	174465-□
12	2	173851-□
14	2	173852-□
18	2	173853-□
20	2	174952-□

**Wire to Board Connectors
AMP 070 Series MULTILOCK Connectors
Plug Housing for Wire Application/Mark II**

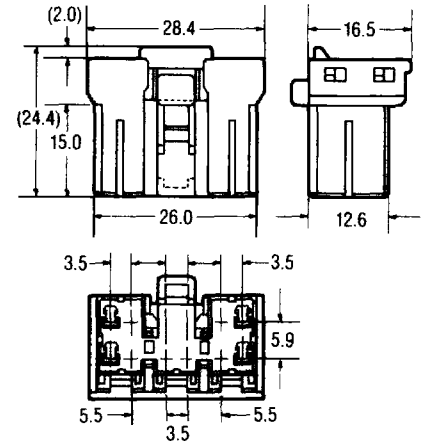
Plug Housing



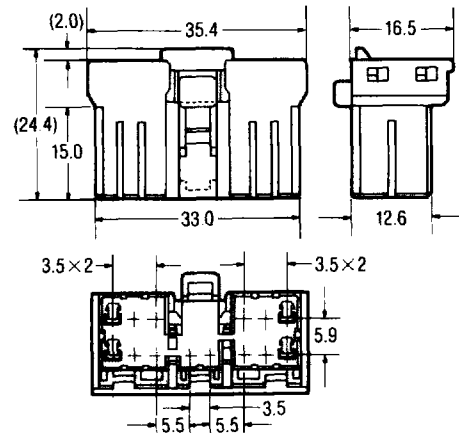
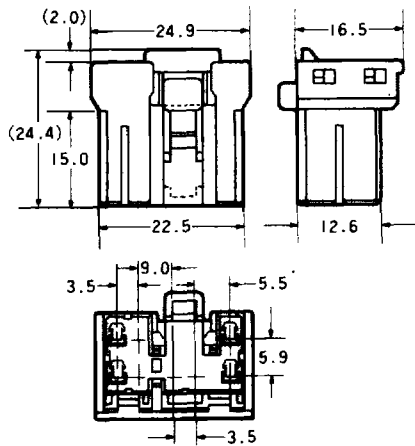
8 Position



10 Position — Single Row



10 Position — Double Row



14 Position

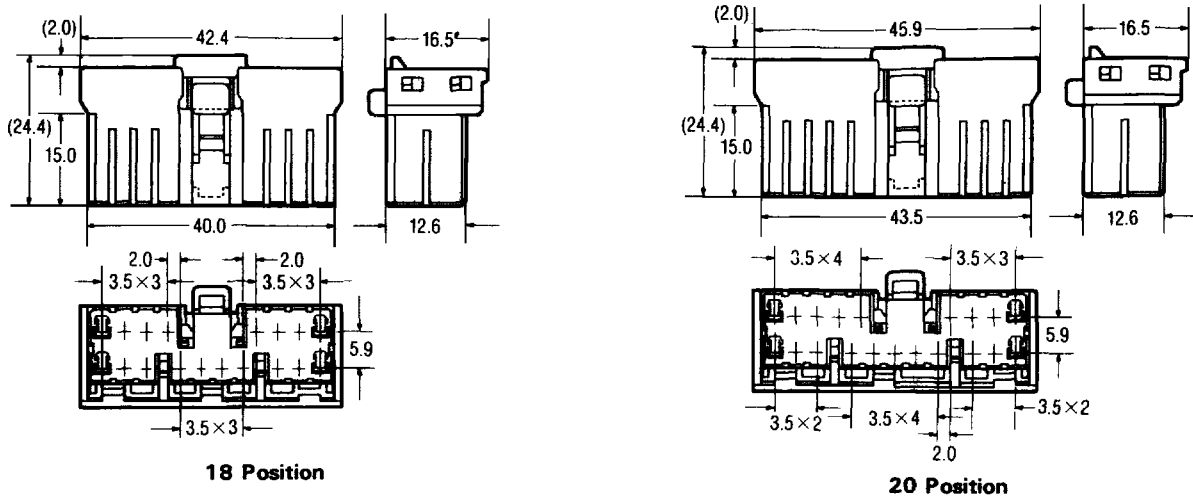
Material: P. B. T.

Note: Figure in □ after Part Number varies depending on material and color. For details, consult our Sales Department.

No. of Pos.	Row	Part No. of Plug Housing
8	2	176113-□
10	1	176115-□
	2	176114-□
12	2	176116-□
14	2	176117-□

**Wire to Board Connectors
AMP 070 Series MULTILOCK Connectors
Plug Housing for Wire Application/Mark II**

Plug Housing



18 Position

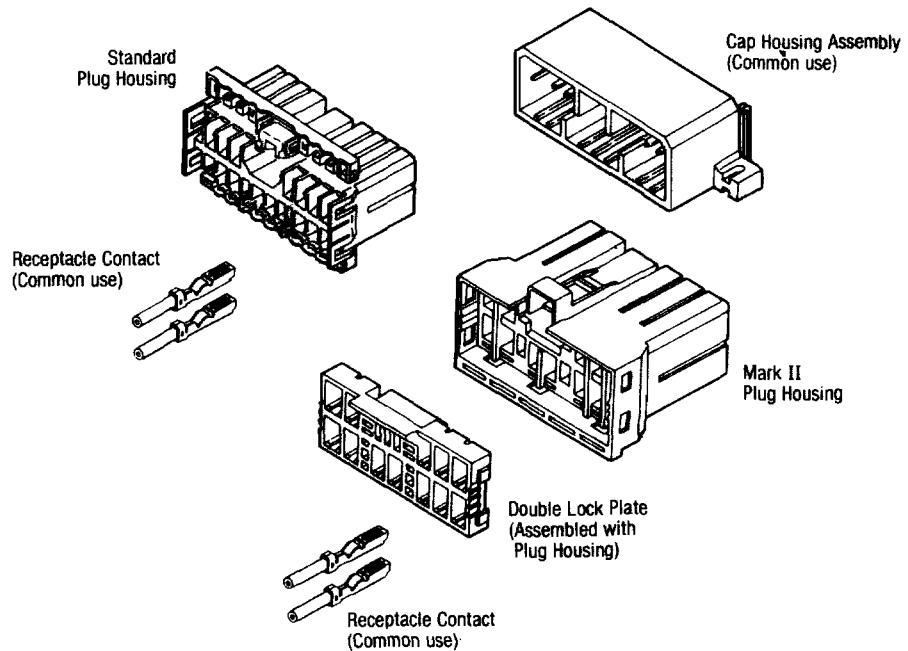
20 Position

Material: P. B. T.

Note: Figure in □ after Part Number varies depending on material and color. For details, consult our Sales Department.

No. of Pos.	Row	Part No. of Plug Housing
18	2	176118-□
20	2	176119-□

Configuration



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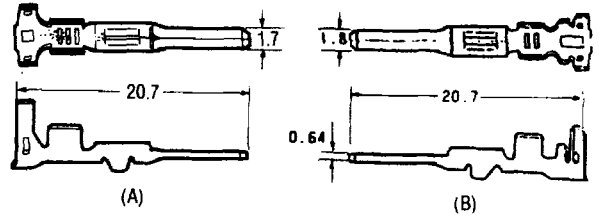
Wire to Board Connectors AMP 070 Series MULTILOCK Connectors Tab Contact and Cap Housing for Wire Application

Cap Housing

Material: P. B. T.
(See table for color)

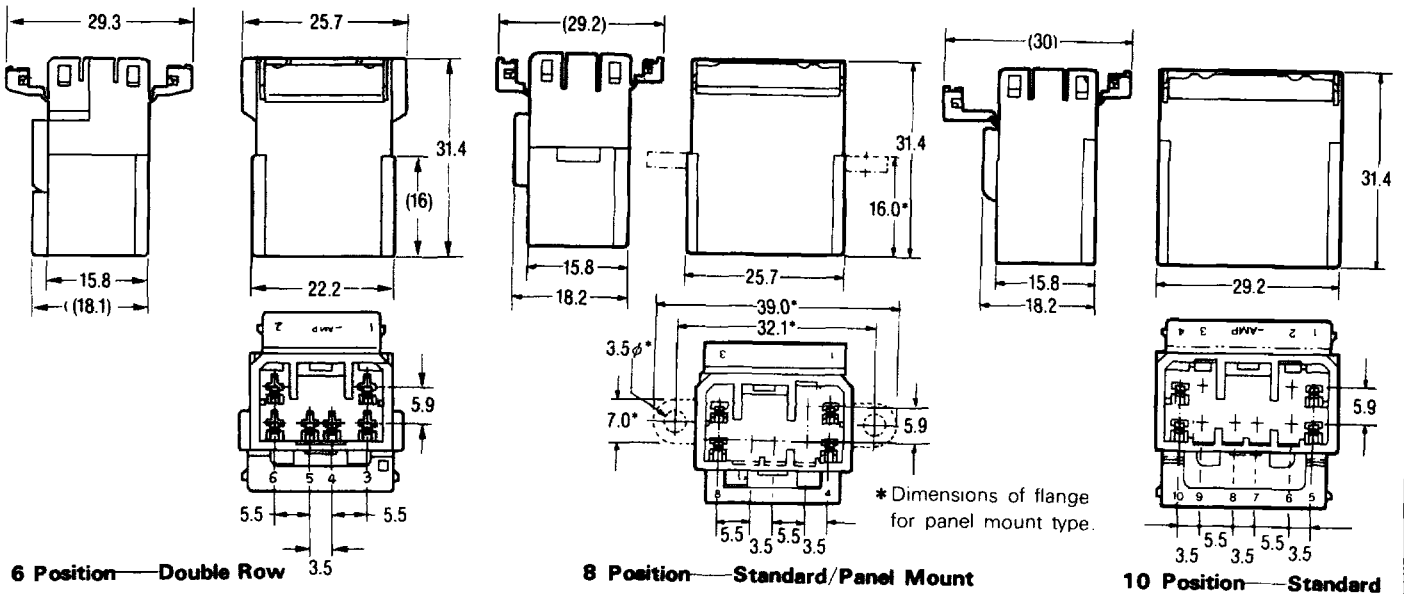
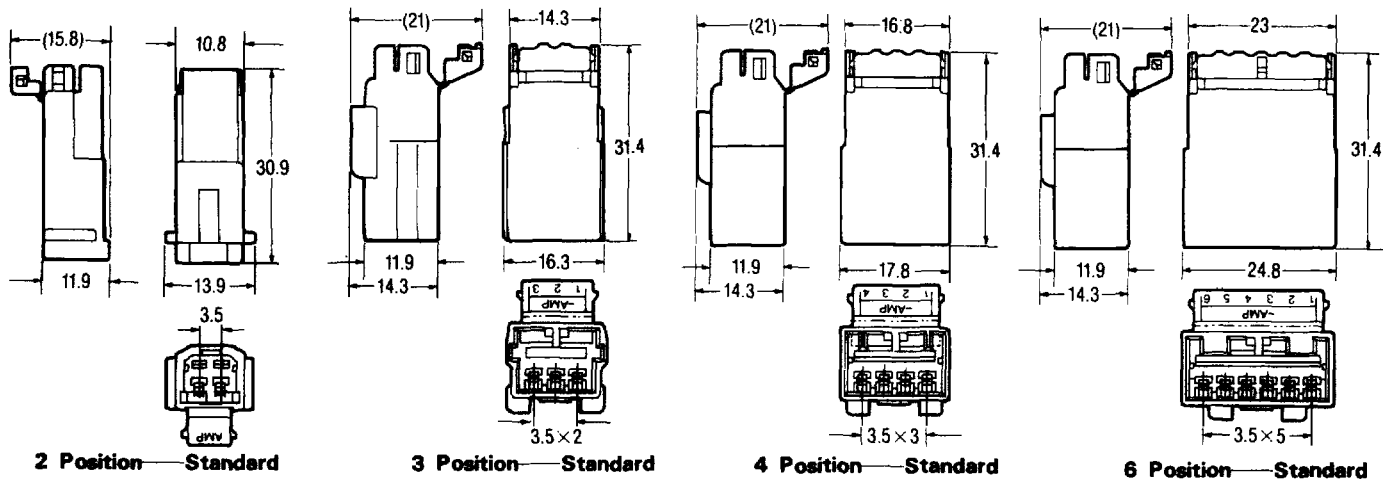
Tab Contact (For Cap Housing)

Material and Finish:
Brass or phosphor bronze,
pretinned or selective gold



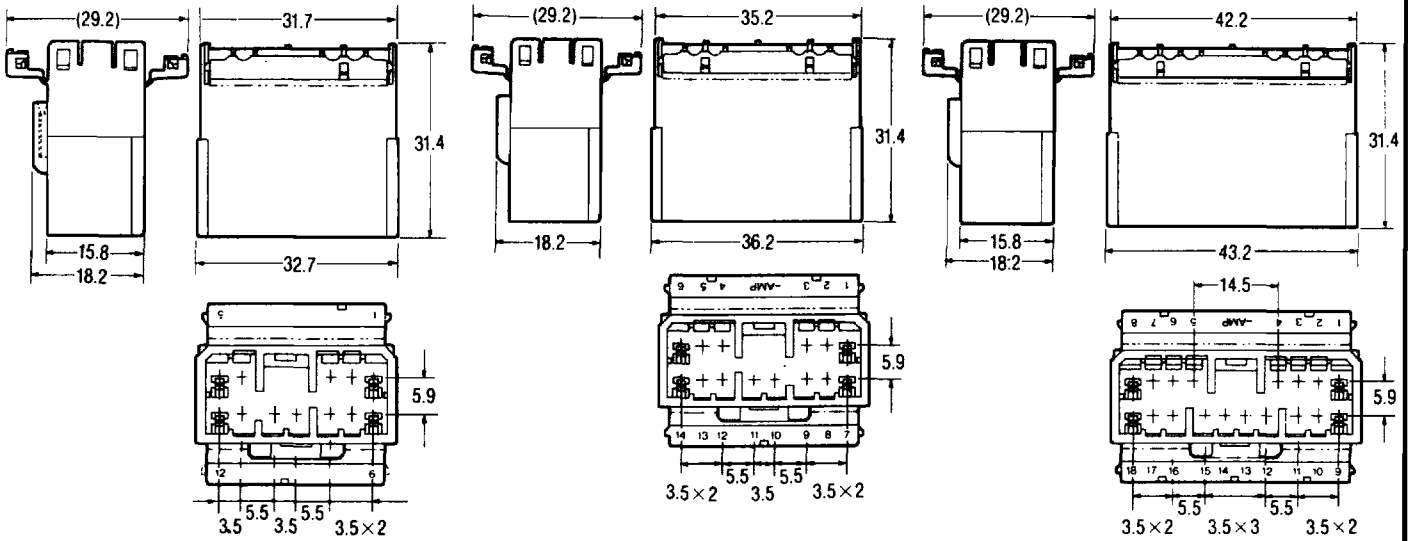
Wire Range AWG	Wire Ins. Diameter mm ²	Wire Ins. Diameter	Finish	Receptacle Part No.				Hand Tool Part No.	Crimp Specifications
				Strip Form		Loose Piece			
				Brass	Phos. Bro.	Brass	Phos. Bro.		
24-22	0.2~0.36	(A) 1.2~2.0	Pretin	173633-1	173633-2	175029-1	175029-2	911799-2 (IS-481-J)	
			Sel. gold		173633-3		175029-3		
		(B) 1.0~1.5	Pretin	175207-1					
20-16	0.5~1.25	(A) 2.0~2.6	Pretin	173645-1	173645-2	175030-1	175030-2	911788-2 (IS-480-J)	114-5092
			Sel. gold		173645-3		175030-3		
		(B) 1.2~2.2	Pretin	175208-1					

Cap Housing (See next page for Part Numbers)



Wire to Board Connectors AMP 070 Series MULTILOCK Connectors Cap Housing for Wire Application

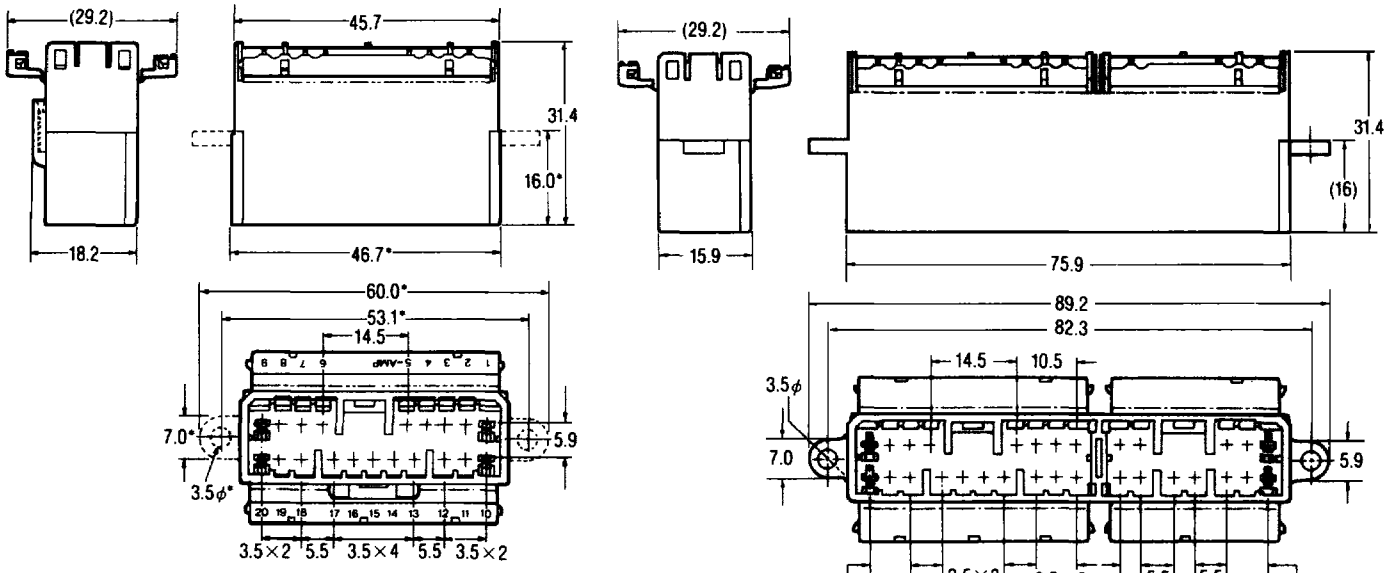
Cap Housing (Cont'd)



12 Position—Standard

14 Position—Standard

18 Position—Standard



*Dimensions of flange for panel mount type.

20 Position—Standard/Panel Mount

30 Position—Panel Mount

Material: P. B. T.

No. of Pos.	Row	Part No. of Cap Housing	
		Standard	Panel Mount
2	1	174460-□	—
3	1	174928-□	—
4	1	174929-□	—
6	1	174930-□	—
	2	175657-□	—
8	2	174931-□	174937-□

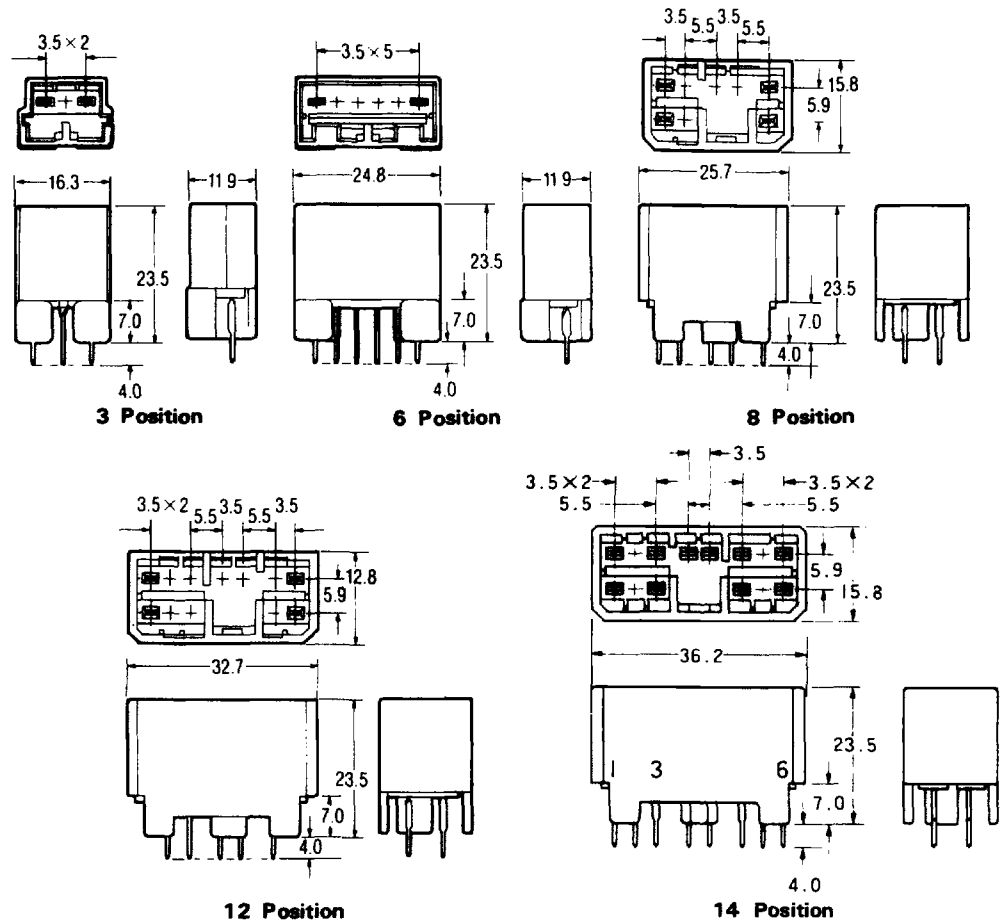
No. of Pos.	Row	Part No. of Cap Housing	
		Standard	Panel Mount
10	2	174932-□	—
12	2	174933-□	—
14	2	174934-□	—
18	2	174935-□	—
20	2	174936-□	174938-□
30*	2	—	174939-□

*Mating Plug: 12 and 18 positions.(Split type)

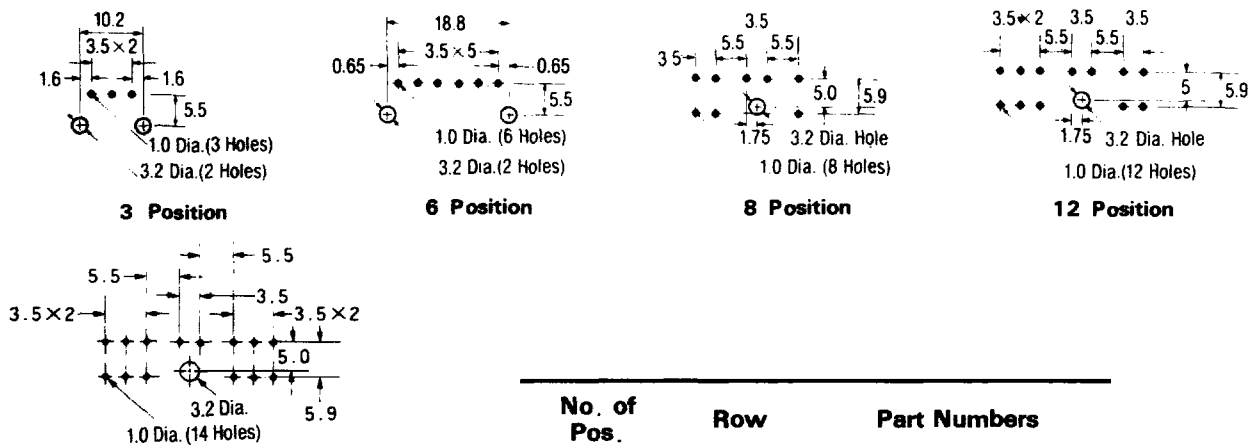
Note: Figure in □ before or after Part Number varies depending on Material and color. For details, consult our Sales Department.

Wire to Board Connectors AMP 070 Series MULTILOCK Connectors Cap Housing Assembly for PC Board Application/Vertical Mount Type

Cap Housing Assembly



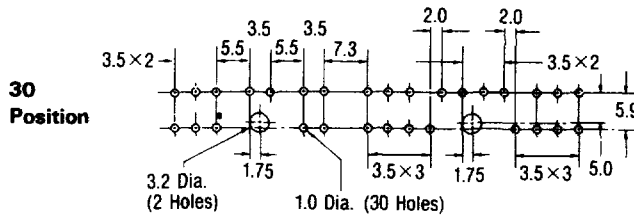
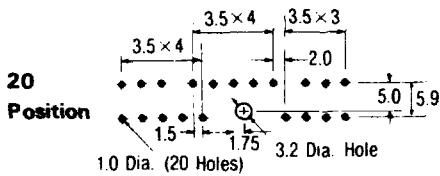
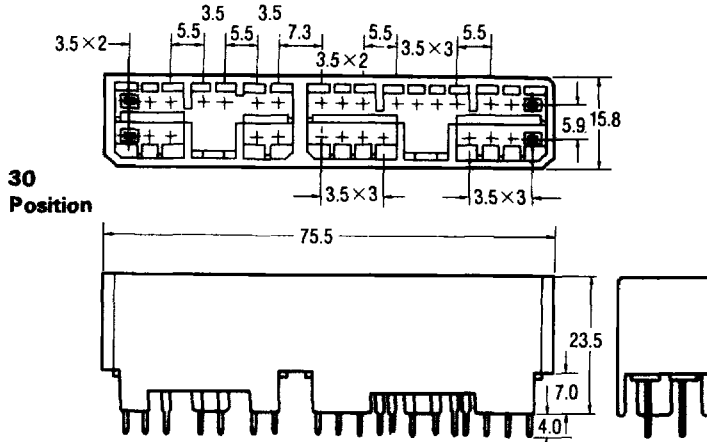
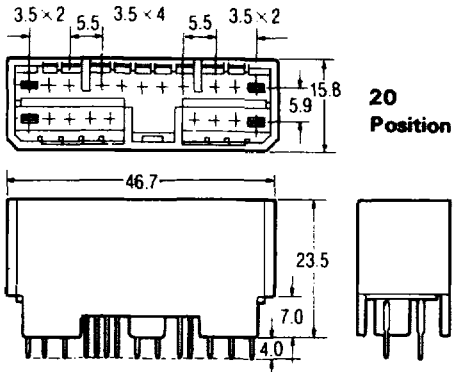
PC Board Layout



No. of Pos.	Row	Part Numbers
3	1	□-174953-□
6	1	□-174954-□
8	2	□-174955-□
12	2	□-174957-□
14	2	1-179019-1

Wire to Board Connectors
AMP 070 Series MULTILOCK Connectors
Cap Housing Assembly for PC Board Application/Vertical Mount Type

Cap Housing Assembly



Material and Finish:
 Housing—P.B.T.
 Contact—brass

Note: Figure in □ before or after Part Number varies depending on material and color. For details, consult our Sales Department.

No. of Pos.	Row	Part Numbers
20	2	□-174960-□
30	2	□-174961-□*

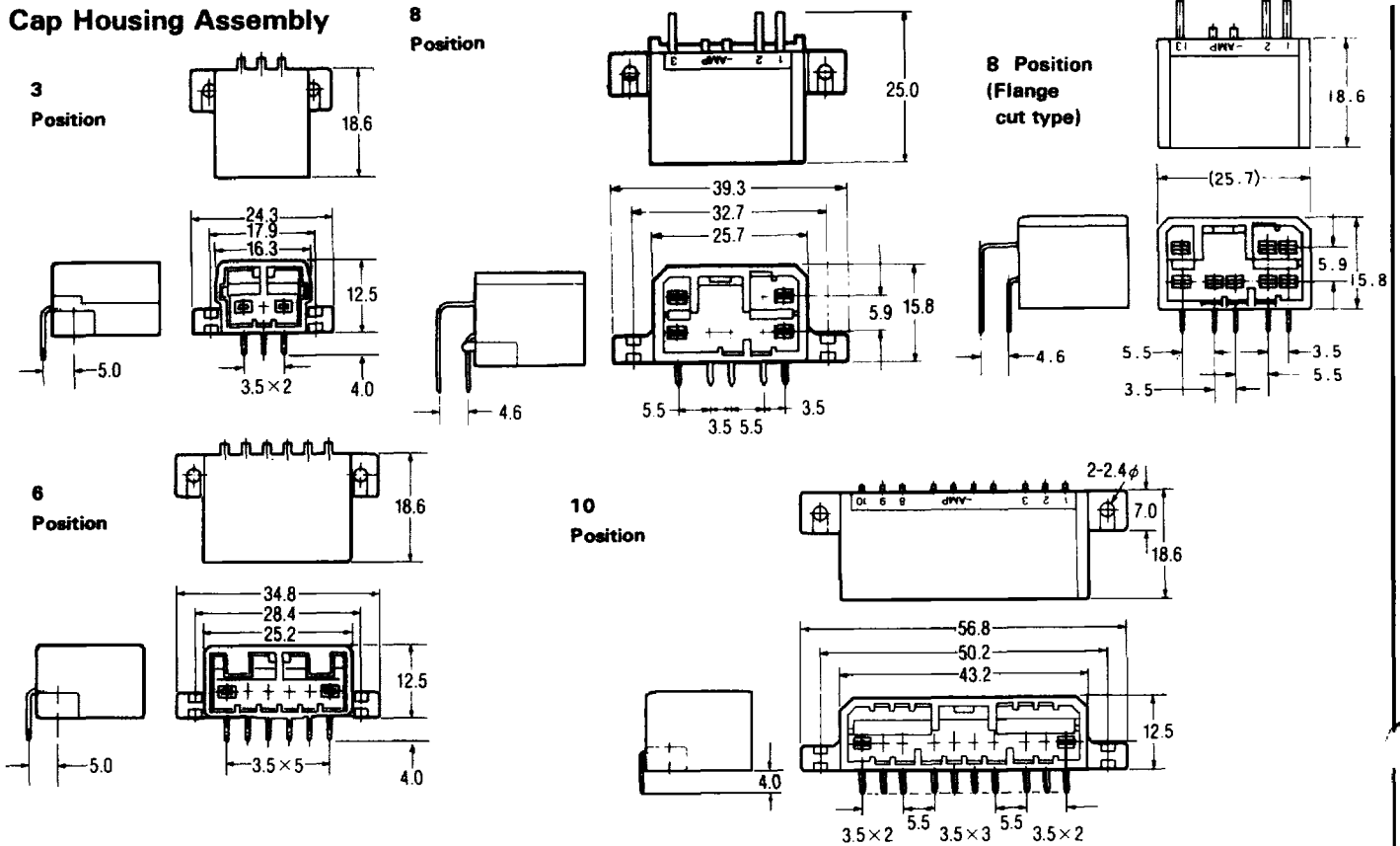
* Mating Plug: 12 and 18 positions.(Split type)

Wire to Board Connectors

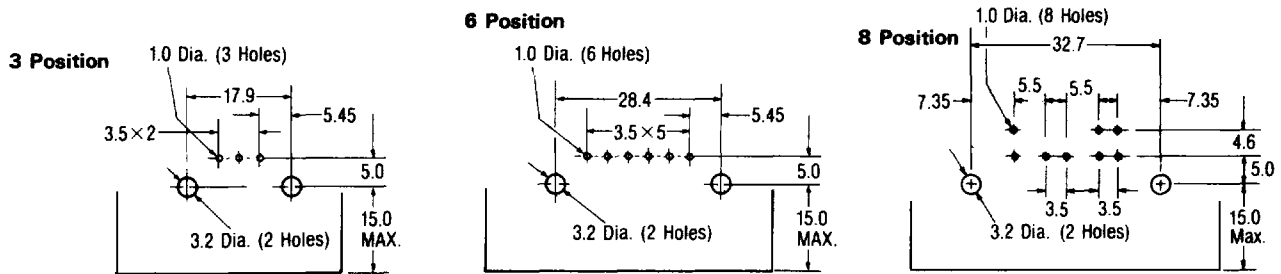
AMP 070 Series MULTILOCK Connectors

Cap Housing Assembly for PC Board Application/Horizontal Mount Type

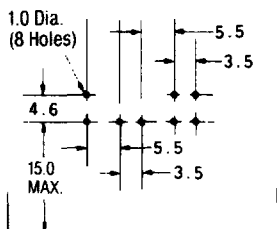
Cap Housing Assembly



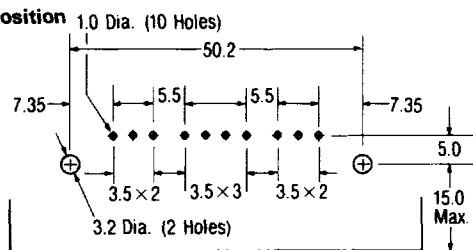
PC Board Layout



8 Position (Flange cut type)



10 Position



Material and Finish:
Housing—P. B. T.
Contact—brass

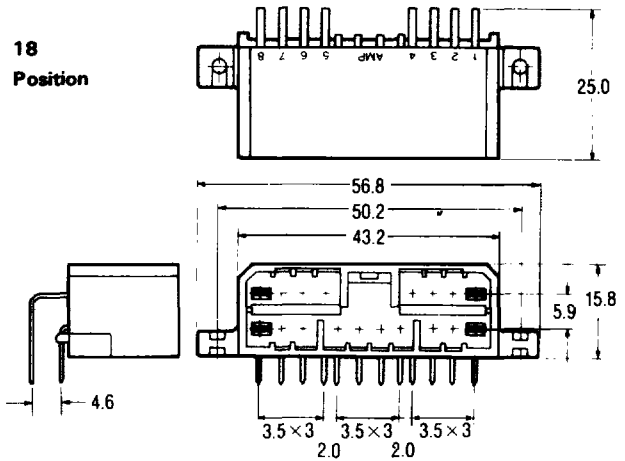
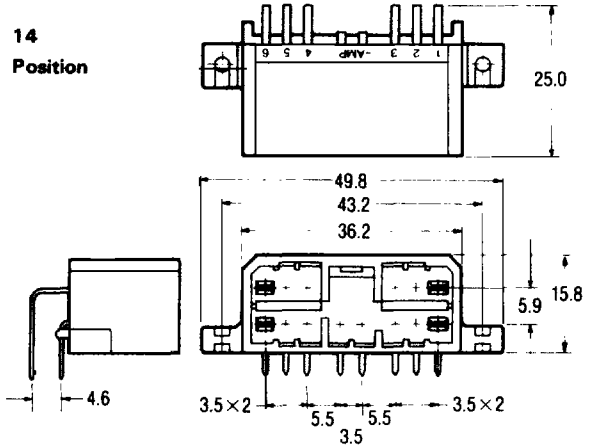
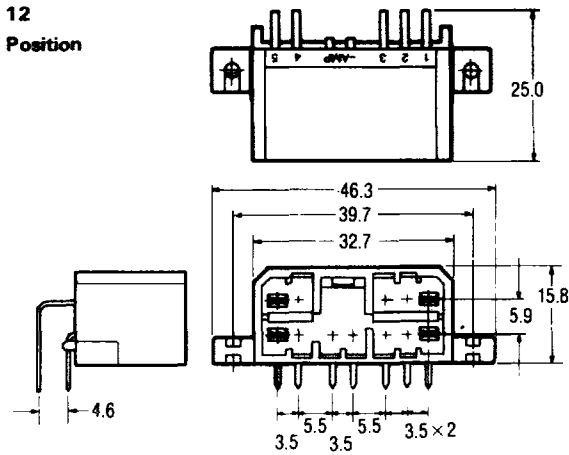
Note: Figure in □ before or after Part Number varies depending on material and color. For details, consult our Sales Department.

No. of Pos.	Row	Part No. of Cap Housing
3	1	□-175781-□
6	1	□-175783-□
8	2	□-173856-□
		□-179096-□*
10	1	□-174467-□

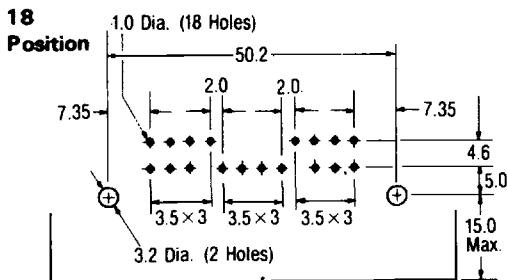
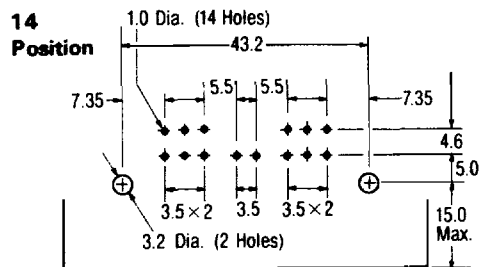
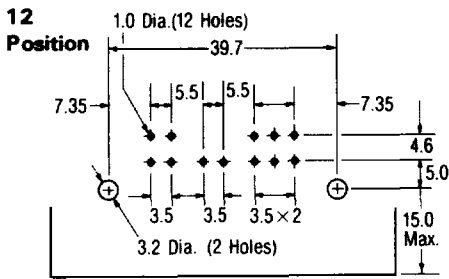
* Frange cut type.

Wire to Board Connectors
AMP 070 Series MULTILOCK Connectors
Cap Housing Assembly for PC Board Application/Horizontal Mount Type

Cap Housing Assembly (Cont'd)



PC Board Layout



Material and Finish:

Housing—P. B. T.
 Contact—brass

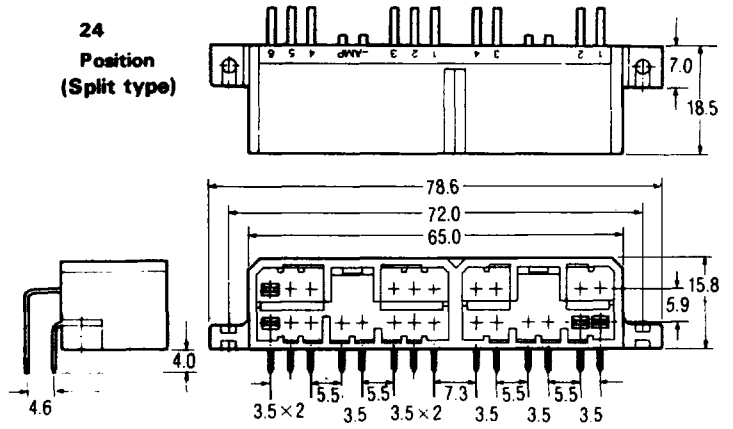
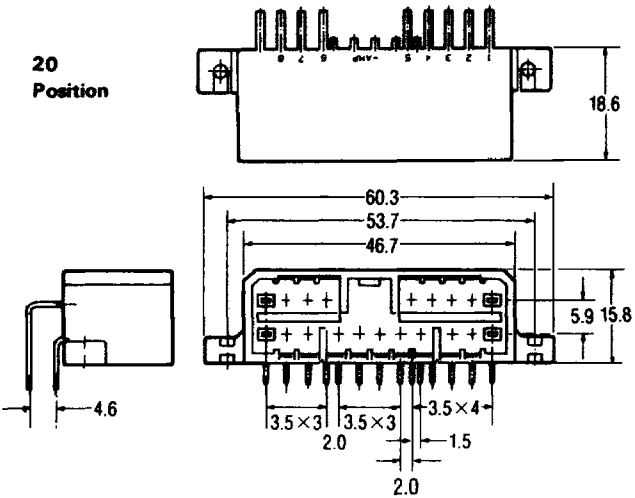
Note: Figure in □ before or after Part Number varies depending on material and color. For details, consult our Sales Department.

No. of Pos.	Row	Part No. of Cap Housing
12	2	□-173858-□
14	2	□-173860-□
18	2	□-173862-□

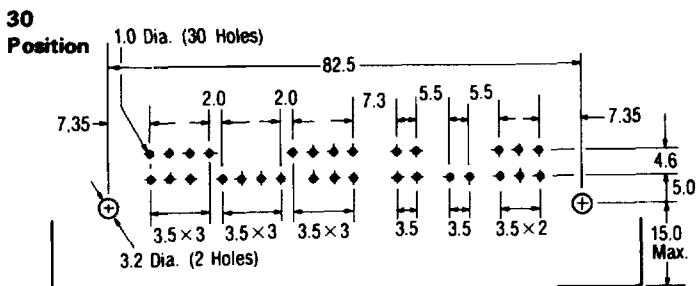
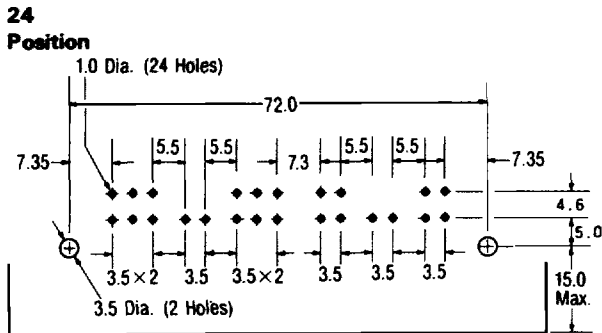
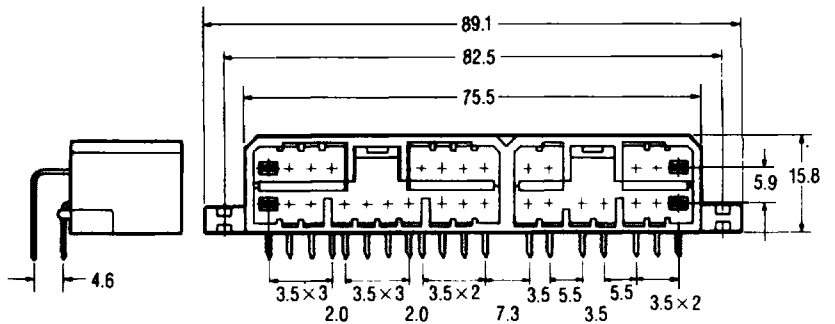
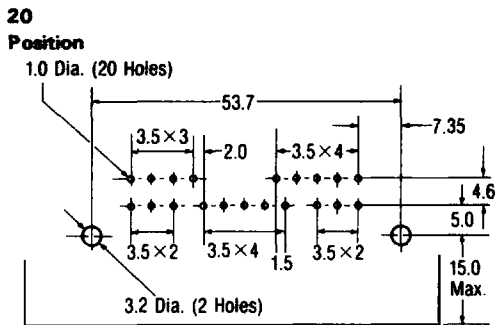
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**Wire to Board Connectors
AMP 070 Series MULTILOCK Connectors
Cap Housing Assembly for PC Board Application/Horizontal Mount Type**

Cap Housing Assembly (Cont'd)



PC Board Layout



Material and Finish:

Housing—P. B. T.
Contact—brass

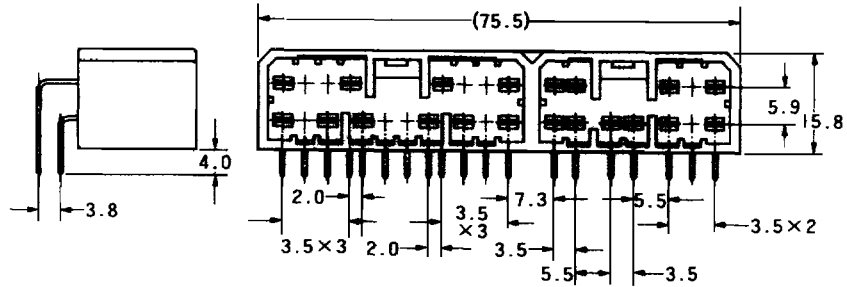
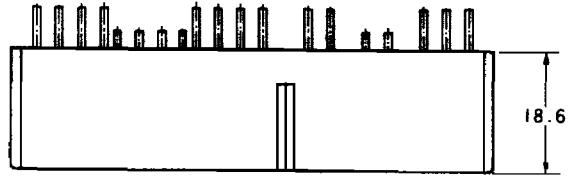
Note: Figure in □ before or after Part Number varies depending on material and color. For details, consult our Sales Department.

No. of Pos.	Row	Part No. of Cap Housing	Mating Plug Positions
20	2	□-175785-□	20
24	2	□-173864-□	10 and 14
30	2	□-173866-□	12 and 18

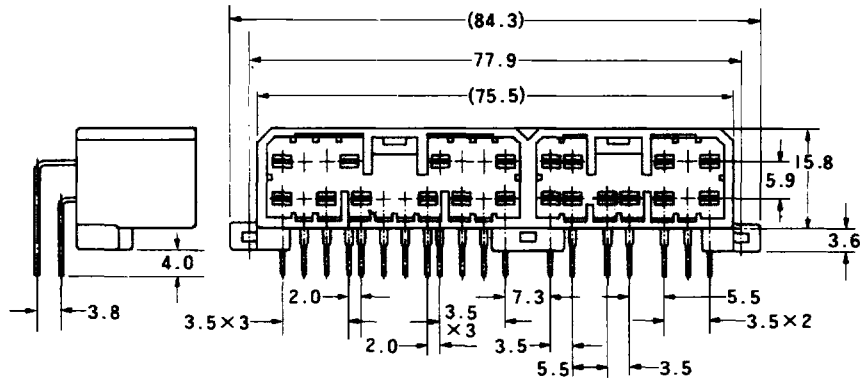
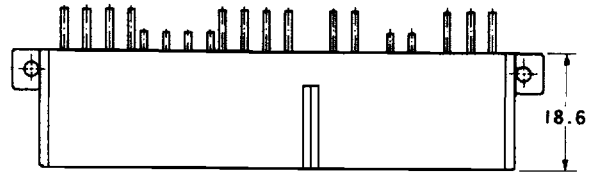
Wire to Board Connectors
AMP 070 Series MULTILOCK Connectors
Cap Housing Assembly for PC Board Application/Horizontal Mount Type

Cap Housing Assembly
(Cont'd)

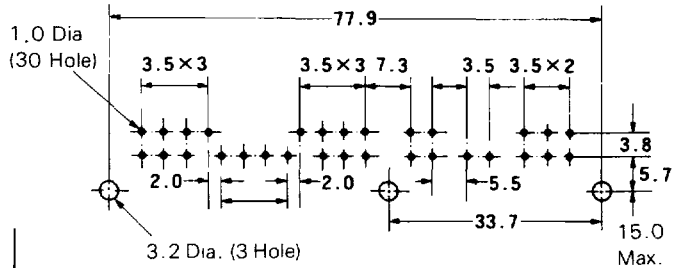
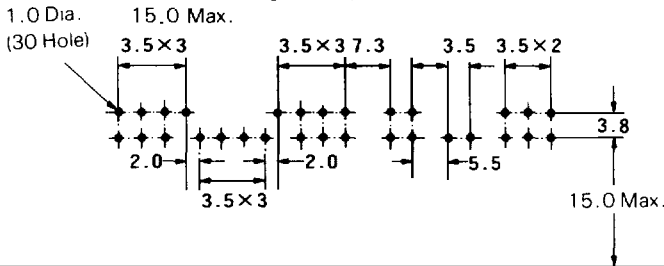
30 Position
 (Flange cut type)



30 Position



30 Position (Flange cut type)



Material and Finish:
 Housing—P. B. T.
 Contact—brass

Note: Figure in □ before or after Part Number varies depending on material and color. For details, consult our Sales Department.

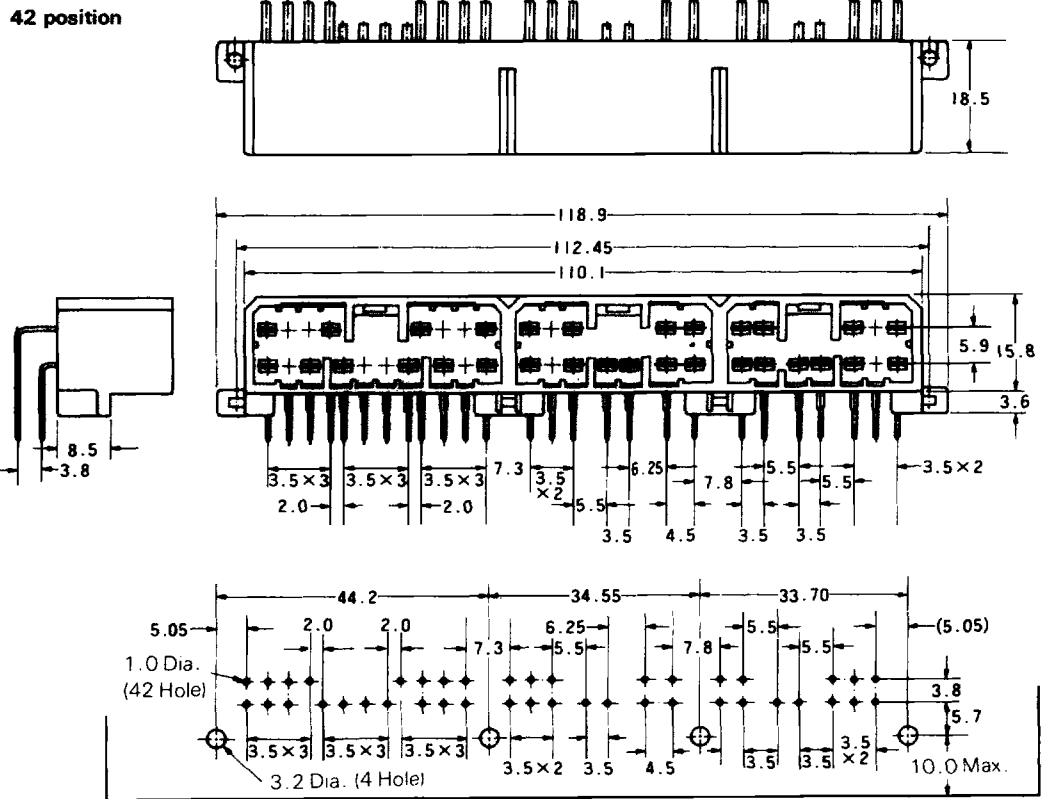
No. of Pos.	Row	Part Numbers	Mating Plug Positions
30	2	□-179098-1* □-174458-□**	12 and 18

* Flange cut type.
 ** 3 Mounting screw type.

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Wire to Board Connectors
AMP 070 Series MULTILOCK Connectors
Cap Housing Assembly for PC Board Application/Horizontal Mount Type

Cap Housing Assembly(Cont'd)



Material and Finish:

Housing—P. B. T.
 Contact—brass

Note: Figure in □ before or after Part Number varies depending on material and color. For details, consult our Sales Department.

No. of Pos.	Row	Part Numbers	Mating Plug Positions
42	2	□-174480-□	12×2 and 18