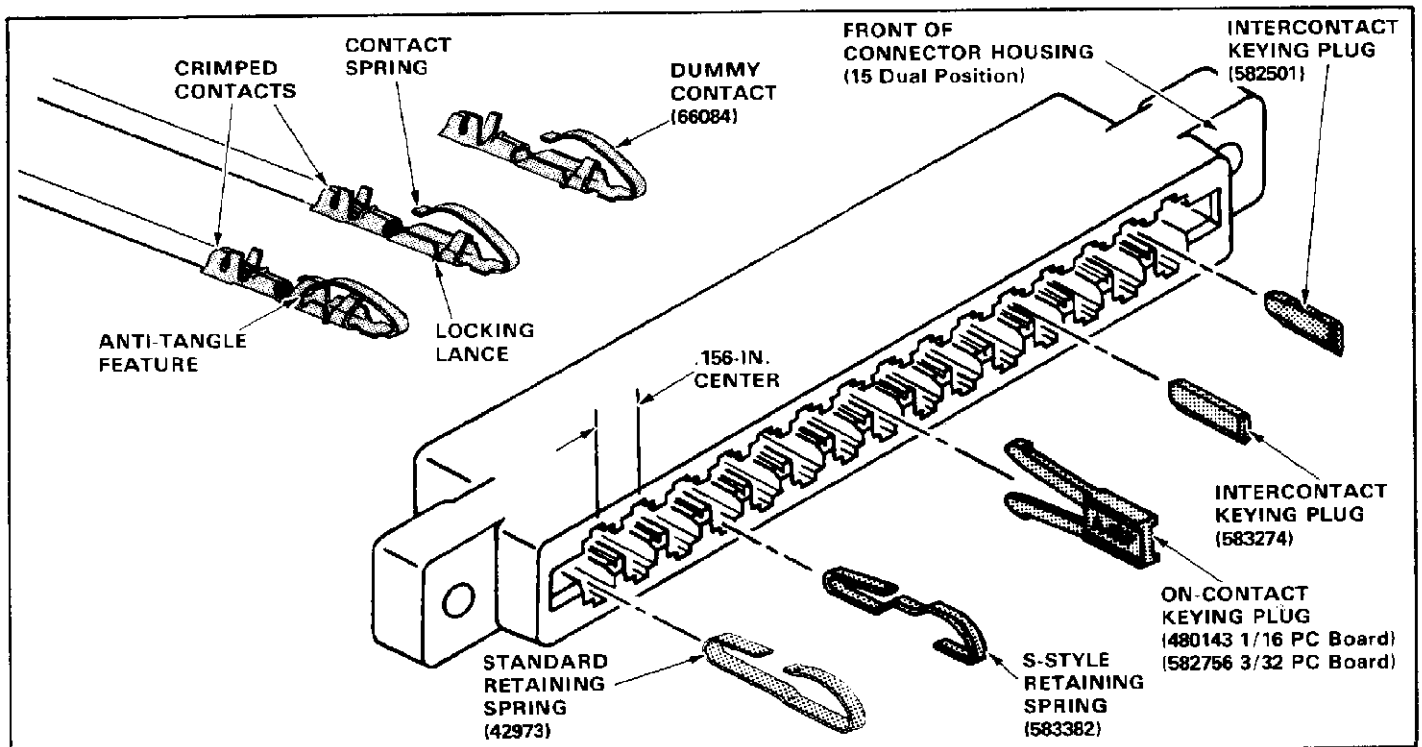
AMP INCORPORATED
Harrisburg, Pa. 17105

AMP-LEAF★ ONE-PIECE PRINTED CIRCUIT EDGE CONNECTORS WITH CRIMP CONTACTS

Instruction Sheet
IS 7037
RELEASED 8-28-81



WIRE SIZE (AWG)	CONTACTS			HAND TOOLING
	LOOSE PIECE		STRIP	
	WITHOUT ANTI-TANGLE FEATURE	WITH ANTI-TANGLE FEATURE	STANDARD AND MINIATURE APPLICATORS	
26 to 22	42839	583990	42702 and 583204	90028-2 (IS 7623)
↓	60081†	--	60029†	↓
	583268	583992	583267	
22 to 20 (2) 22, or (1) 18	42840	583989	42717 and 583361	90017-2 (IS 7622)
	60082†	--	60030†	↓
	583272	583994	583271	
20 to 18 (2) 24, or (2) 22	42840	583989	42717 and 583361	90028-2
	60082†	--	60030†	↓
	583272	583994	583271	
20	42840	583989	42717 and 583361	90101-2 (IS 7626)
↓	60082†	--	60030†	↓
	583272	583994	583271	
(2) 20	66028	583991	60151	90101-2
(2) 20	583270	583993	583269	90101-2
(2) 18	66028	583991	60151	90031-6 (IS 7624)
(2) 18	583270	583993	583269	90031-6
16	66028	583991	60151	90031-7 (IS 7625)
16	583270	583993	583269	90031-7

† CONTACTS DESIGNED FOR HOUSINGS THAT ACCEPT 3/32 PC BOARD. CONTACTS DO NOT INCORPORATE ANTI-TANGLE FEATURE.

Fig. 1

1. INTRODUCTION

This instruction sheet covers the use of the AMP-LEAF Connector Housings which accept AMP-LEAF Crimp Contacts. Read these instructions carefully before starting.

NOTE *All dimensions on this instruction sheet are in inches.*

2. DESCRIPTION (Figure 1)

Connector housings are available with 6 through 36 dual contact positions on .156-in. centers. Empty housings are supplied so contacts and accessories can be installed to meet specific circuit requirements.

Connector housings may be front or back panel mounted, and will accept single- or double-sided printed circuit (pc) boards.

3. CONTACTS

Selection — Determine the size of the wire (or wires) to be crimped. Refer to Figure 1 and select a contact that accepts the wire size.

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NOTE *Contacts designed for 1/16 in. (.062) pc board housings are not interchangeable with contacts designed for 3/32 in. (.093) pc board housings.*

Crimping — The strip-form contacts listed in Figure 1 are designed to be crimped with standard or miniature applicators used in AMP automatic or semi-automatic machines. Consult your local AMP representative for assistance in selecting the machine that will best suit your needs.

Loose-piece contacts are designed to be crimped with the AMP hand crimping tools listed in Figure 1. Read the AMP instruction sheet packaged with the tool for specific crimping procedures.

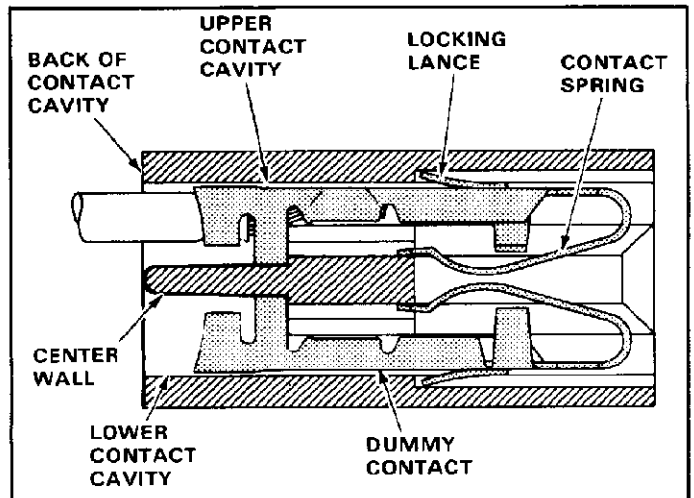
Insertion — An insertion tool is not required for inserting contacts into the connector housings. To insert a contact, proceed as follows:

1. Align the contact with the BACK of the applicable contact cavity.
2. Position contact so the spring is facing the center wall between the upper and lower cavity. See Figure 2.
3. Push contact straight in until it bottoms in cavity. Pull back lightly to be sure locking lance has locked in cavity.

Extraction — AMP Extraction Tools 465195-1, -2, and -4 are designed to extract contacts from AMP-LEAF connector housings. Refer to AMP Instruction Sheet IS 7045, which is packaged with the tools, for proper extraction procedures.

4. DUMMY CONTACTS (Figure 2)

Dummy contacts are precrimped standard contacts designed for double-sided pc board applications. These contacts provide additional mechanical pressure for partially loaded connectors. Recommendations call for a dummy contact to be placed in each empty cavity that is opposite a standard working contact.



CROSS-SECTION SIDE VIEW OF CONNECTOR WITH STANDARD CONTACT AND DUMMY CONTACT

Fig. 2

Dummy contacts are used only with housings that accept 1/16-in. pc board. These contacts are inserted and extracted the same way as standard contacts.

NOTE *Allow .010-in. clearance in each direction to allow the connector housing to clear cut-outs.*

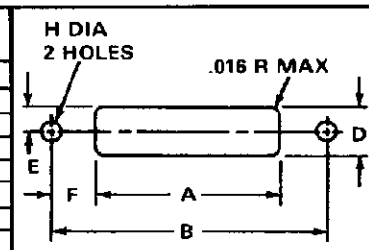
5. PANEL CUTOUT

The connector housings are designed to be FRONT or BACK panel-mounted. Refer to the layout shown in Figure 3 for the recommended panel cutout. The cutout for BACK panel mounting is larger than the cutout for FRONT panel mounting. After making the cutout, position the connector on the panel and secure it with No. 4-40 screws, lockwashers, and nuts.

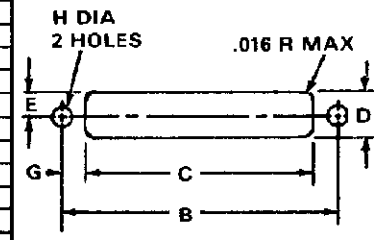
6. PRINTED CIRCUIT BOARD LAYOUT

The connector housings are designed to accept 1/16-in. (.055 to .070), or 3/32-in. (.084 to .104) pc boards. Refer to Figure 3 for the recommended pc board layout dimensions.

NO. OF DUAL POSN	HOUSING NUMBER	HOUSING MATERIAL*	PANEL CUTOUT								PC BOARD LAYOUT	
			A	B	C	D	E	F	G	H	J	K
6	583722	GFN	1.008	1.535	1.296	.382	.191	.264	.119	.125	1.087	.154
8	582140-2	DP	1.322	1.770	1.584	.372	.186	.224	.093	.125	1.398	.153
	582140-5	GFP	1.322	1.770	1.584	.372	.186	.224	.093	.125	1.395	.152
	582825 ①		--	--	--	--	--	--	--	--	1.275	.092
10	582963-2		1.632	2.160	1.920	.392	.196	.264	.120	.128	1.709	.151
	582963-4	DP	1.632	2.160	1.920	.392	.196	.264	.120	.128	1.711	.152
	583280 ①	GFP	--	--	--	--	--	--	--	--	1.709	.151
	583463	GFP	1.632	2.160	1.920	.392	.196	.264	.120	.128	1.711	.152
	583723	GFN	1.632	2.160	1.920	.392	.196	.264	.120	.128	1.711	.152
	583960		1.632	2.160	1.920	.392	.196	.264	.120	.125	1.687	.142
12	583724		1.944	2.472	2.232	.382	.191	.264	.120	.125	2.023	.154
12	583950	GFP	1.938	2.465	2.226	.382	.191	.264	.120	.125	2.018	.151
15	480110-2	DP	2.412	2.857	2.657	.382	.191	.223	.100	.187	2.491	.153
	480110-5	GFP	2.412	2.857	2.657	.382	.191	.223	.100	.187	2.487	.152
	1-582147-2	DP	2.412	2.857	2.657	.382	.191	.223	.100	.128	2.491	.153
	1-582147-5	GFP	2.412	2.857	2.657	.382	.191	.223	.100	.128	2.487	.152
	582500-2	DP	2.412	2.936	2.657	.382	.191	.262	.140	.128	2.491	.153
	582500-5	GFP	2.412	2.936	2.657	.382	.191	.262	.140	.128	2.487	.152
	583512 ①	DP	--	--	--	--	--	--	--	--	2.491	.153
	583554 ①	GFN	--	--	--	--	--	--	--	--	2.485	.151
	583662 ①	GFP	--	--	--	--	--	--	--	--	2.360	.088
	583680	GFN	2.412	2.939	2.700	.382	.191	.264	.120	.128	2.485	.151
	583952 ②	GFN	2.412	2.939	2.700	.382	.191	.264	.120	.125	2.485	.151
18	480133-2	DP	2.880	3.404	3.125	.407	.204	.262	.140	.156	2.940	.144
	480133-5	GFP	2.880	3.404	3.125	.407	.204	.262	.140	.156	2.935	.142
	1-582191-2	DP	2.880	3.404	3.125	.407	.204	.262	.140	.120	2.940	.144
	1-582191-5	GFP	2.880	3.404	3.125	.407	.204	.262	.140	.120	2.935	.142
	583279		2.880	3.404	3.125	.407	.204	.262	.140	.156	2.741	.045
	583360		2.880	3.404	3.125	.407	.204	.262	.140	.156	2.940	.144
	583399-1 †	DP	2.905	3.528	3.126	.517	.259	.312	.201	.281	2.942	.145
	583399-3 †	GFP	2.905	3.528	3.126	.517	.259	.312	.201	.281	2.937	.143
	583663 ①	GFP	--	--	--	--	--	--	--	--	2.830	.089
	583716 ③	DP	2.880	3.404	3.125	.407	.204	.262	.140	.125	2.940	.144
	583725	GFN	2.880	3.407	3.168	.382	.191	.264	.120	.125	2.959	.154
	583731	GFP	2.880	3.404	3.125	.407	.204	.262	.140	.156	2.952	.150
22	480142-2	DP	3.504	4.028	3.792	.382	.191	.262	.118	.125	3.583	.153
	480142-3	GFP	3.504	4.028	3.792	.382	.191	.262	.118	.125	3.578	.151
	582358-2	DP	3.504	4.028	3.792	.382	.191	.262	.118	.150	3.583	.153
	582358-3	GFP	3.504	4.028	3.792	.382	.191	.262	.118	.150	3.578	.151
	582535	DP	3.504	4.028	3.792	.382	.191	.262	.118	.180	3.583	.153
	582536 ②		3.504	4.028	3.792	.382	.191	.262	.118	.125	3.583	.153
	582627 ③		3.504	4.028	3.792	.382	.191	.262	.118	.125	3.583	.153
	583273 ③	GFP	3.504	4.028	3.792	.382	.191	.262	.118	.125	3.583	.153
	583553 ①	GFN	--	--	--	--	--	--	--	--	3.583	.153
	583617	GFN	3.504	4.028	3.792	.382	.191	.262	.118	.125	3.583	.153
	583982 ②	DP	3.504	4.055	3.766	.382	.191	.275	.145	.125	3.583	.153
25	583167-1	DP	3.972	4.496	4.260	.382	.191	.262	.118	.125	4.050	.153
	583167-3	GFP	3.972	4.496	4.260	.382	.191	.262	.118	.125	4.043	.150
	583726	GFN	3.972	4.496	4.260	.382	.191	.262	.118	.125	4.050	.153
28	583637	GFP	4.434	4.961	4.722	.382	.191	.264	.120	.128	4.512	.150
30	480146-2	DP	5.032	5.625	5.344	.469	.235	.297	.141	.178	5.093	.150
	480146-7	GFP	5.032	5.625	5.344	.469	.235	.297	.141	.178	5.085	.146
	583428	GFP	5.032	5.625	5.344	.469	.235	.297	.141	.178	5.093	.150
	583631	GFN	5.032	5.625	5.344	.469	.235	.297	.141	.178	5.085	.146
	583685		4.752	5.279	5.040	.382	.191	.264	.120	.125	4.828	.152
	583695 ①		--	--	--	--	--	--	--	--	4.828	.152
32	582264-2 †	GFP	5.112	5.932	5.332	.517	.258	.410	.300	.187	5.117	.140
	582264-5 †	DP	5.112	5.932	5.332	.517	.258	.410	.300	.187	5.125	.144
	583449 †	GFP	5.112	5.932	5.332	.517	.258	.410	.300	.187	5.125	.144
	583742	GFN	5.112	5.932	5.332	.469	.235	.410	.300	.187	5.117	.140
36	583552		5.754	6.578	5.974	.469	.235	.410	.302	.156	5.767	.154
36	583964 ①		--	--	--	--	--	--	--	--	5.767	.154

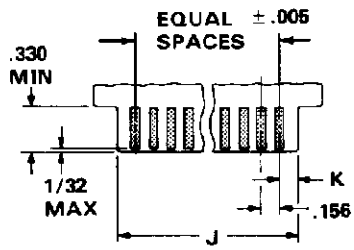


FRONT PANEL MOUNTING

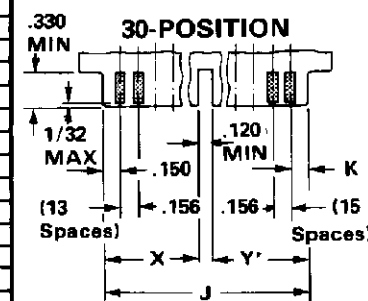


BACK PANEL MOUNTING

PC BOARD LAYOUT



EQUAL SPACES = (Total Number of Dual Contact Positions, Minus One) TIMES .156 IN.



X — FOR DP OR GFP — 2.330; GFN — 2.326
Y — FOR DP OR GFP — 2.640; GFN — 2.636

* HOUSING MATERIAL AND COLOR: DP — DIALLYL PHTHALATE (Blue), GFP — GLASS FILLED PHENOLIC (Black), AND GFN — GLASS FILLED NYLON (Black).

† HOUSINGS DESIGNED TO ACCEPT 3/32-IN. PC BOARD.

① HOUSINGS WITHOUT MOUNTING EARS.

② HOUSINGS WITH FLOATING BUSHINGS.

③ HOUSINGS WITH THREADED INSERTS.

Fig. 3

7. RETAINING SPRINGS (Figure 4)

Retaining springs are designed for use in single-sided pc board applications. They are used to increase or balance board retention capabilities of the unused side of the connector. The recommended ratio is one standard retaining spring to seven contacts, or one S-style retaining spring to five contacts.

To insert the retaining spring, orient and start the short end into the FRONT of the desired cavity. See Figure 4. Push straight in until the short end snaps in place behind cavity ridge.

To extract the retaining spring, use a suitable tool to depress the short end of the spring from BACK of connector. Push spring straight out FRONT of connector.

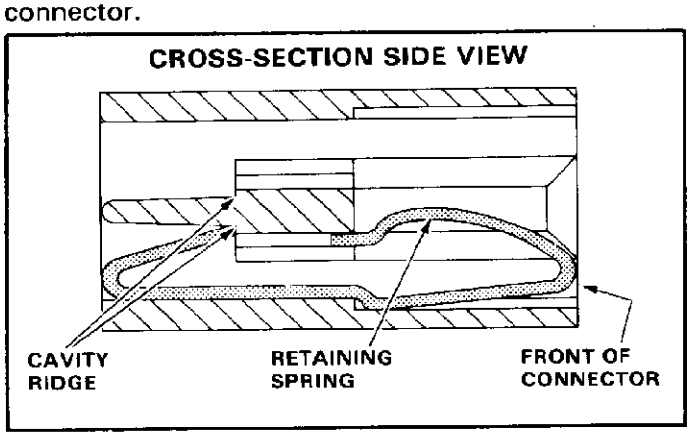


Fig. 4

NOTE

Retaining springs can be placed opposite a contact or an empty cavity, but are NOT to be placed on the same side of the connector with the contacts.

8. KEYING PLUGS (Figure 5)

Connectors can be polarized with intercontact or on-contact keying plugs. Intercontact keying plugs are designed to fit into slots between the contact cavities (connectors for 1/16-in. pc boards only), and on-contact keying plugs are designed to fit into an empty contact cavity and fit a connector which accepts either a 1/16 or 3/32-in. pc board.

Instruction sheets for insertion and extraction procedures for keying plugs are packaged with the plugs. Refer to AMP Instruction Sheet IS 7068 for keying plug 582501, IS 7339 for keying plug 583274-1, and to IS 7036 for keying plugs 480143 and 582756.

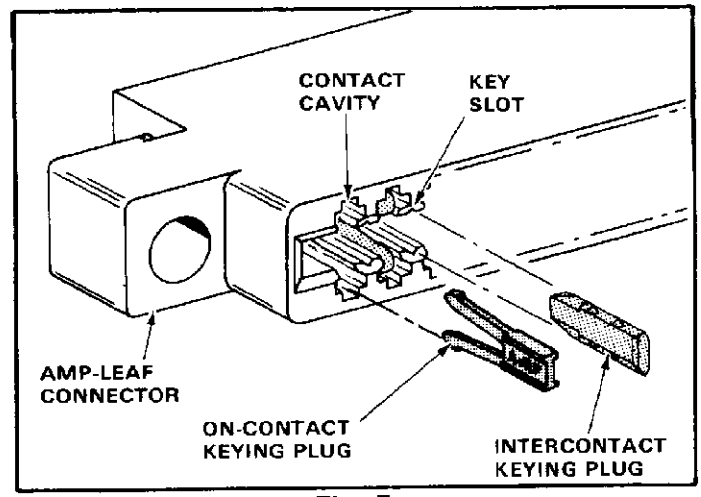
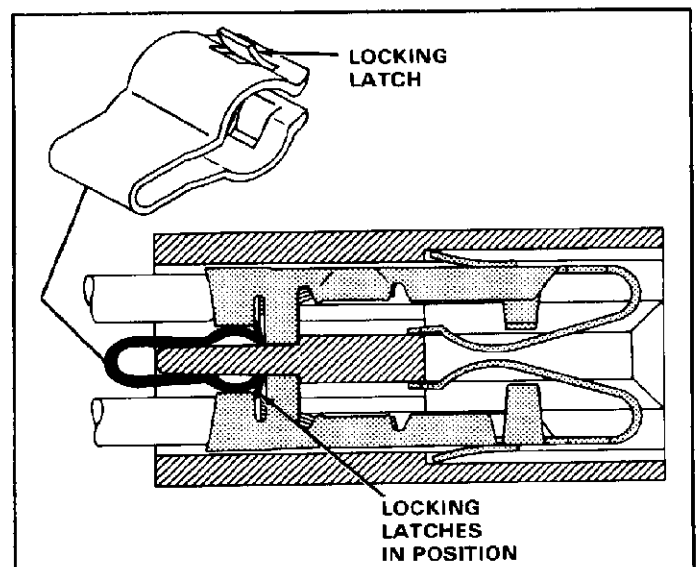


Fig. 5

9. COMMONING SPRINGS

Commoning springs are designed to bridge two opposing contacts to form a single circuit. The commoning springs are available with or without locking latches. See Figure 6.

Refer to AMP Instruction Sheet IS 7419 packaged with the commoning springs for specific applications.



COMMONING SPRINGS		
PART NO.	LOCKING LATCH	PC BOARD
583454	Yes	3/32 & 1/16
66064	No	3/32
66092	No	1/16

Fig. 6