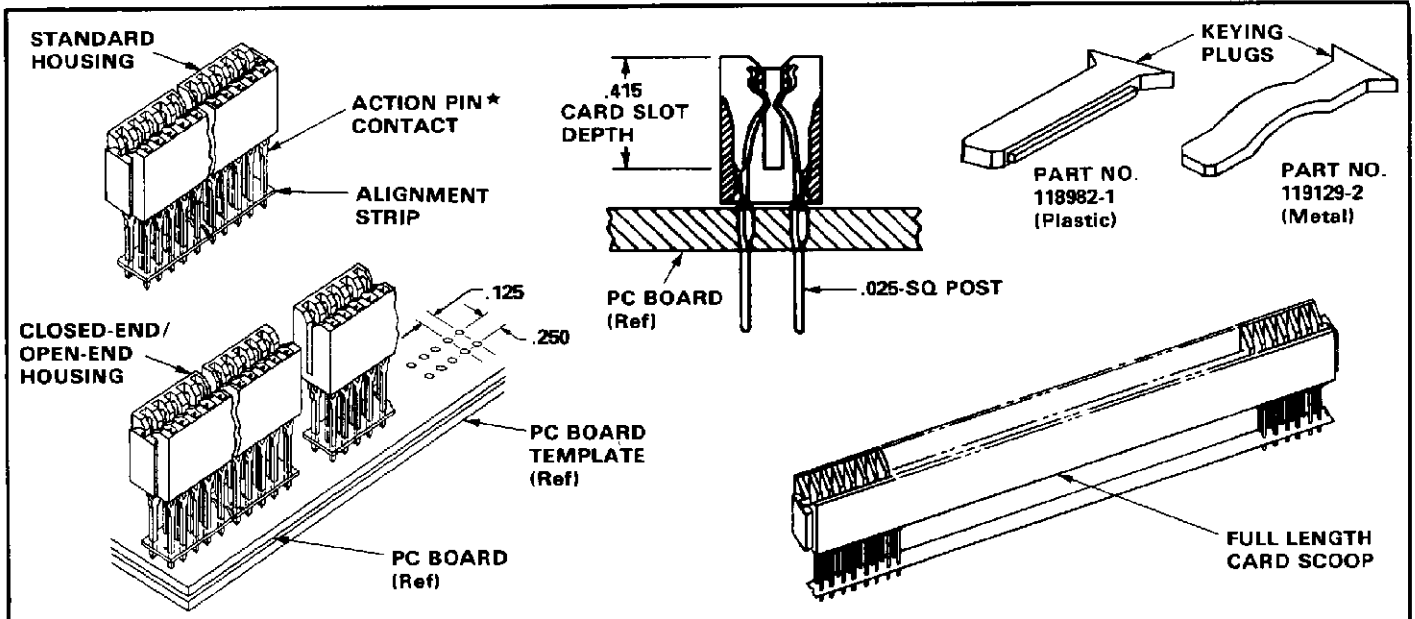




AMP PACE ★ .125- x .250-IN.-
CENTERLINE CONNECTORS,
ACCESSORIES, AND TOOLING

Instruction Sheet
IS 9093
RELEASED 10 · 25 · 84



TYPE	POSITIONS	CONNECTOR PART NO.	POST LENGTH		
Without Card Scoops	15, 18, 22, 25, 28, 30, 31, 32, 35, 36, 40, 43, 44, 48, 50, 60	119822	.180		
	22, 50	119480			
	40, 60	119786			
	15 thru 60	119199	.500		
	15 thru 60	119200			
	22, 40	119792			
	35	119730			
	43, 50	119666			
	50	119860			
	15 thru 60	119201	.702		
		119202			
		119453			
	15, 22, 28, 30, 32, 35, 40, 45, 60	119788			
	20, 25, 50	119914			
	45	119787			
Without Card Scoops, Open End/Closed End	48, 60	119572	.180		
	30, 35, 45, 60	119839			
	30 thru 60	119420			
		119421			
		119422			
With Card Scoops	59	119423	.500		
		119739			
	15, 18, 22, 25, 28, 30, 31, 32, 35, 36, 40, 43, 48, 50, 60	119814			
	15, 18, 22, 28, 30, 31, 32, 35, 36, 40, 43, 48, 50, 60	119841			
With Card Scoops, Open End/Closed End	15, 18, 22, 28, 30, 31, 32, 35, 36, 40, 43, 48, 50, 60	119843	.702		
	30, 35, 45, 60	119840			
		119842			
		119844			
TYPE CONNECTOR	TOOLING				
	APPLICATION		CONTACT REPLACEMENT		
	MANUAL	MACHINE	REMOVAL	INSERTION	COMBINED
Without Card Scoops	59944	59954	1-266871-7	266220-2	266227-2
	58142	58146		266220-2	266227-2
With Card Scoops	58137	58182		--	--
	58184	--		--	--

Fig. 1

1. INTRODUCTION

This instruction sheet (IS) provides assembly information for AMP PACE connectors on .125- x .250-in. centerlines, and describes their accessories and application, insertion, and repair tooling (see Figure 1).

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NOTE

All dimensions presented are in inches, unless otherwise indicated.

2. DESCRIPTION

Each AMP PACE connector includes: AMP ★ ACTION PIN contacts (current-rated at 3A) with .025-in.-square posts for mass insertion into .093-in.-thk (nom) double-sided or multilayered boards; a housing; and a pre-inserted clear plastic alignment strip that helps to align the contact posts with the board holes prior to insertion. During board insertion, the plastic strip moves up over the posts and finally nests between housing and board surface. It is not removed after assembly.

Each blue or black housing is made of glass-filled thermoplastic polyester, and is UL-rated at 94V-O. The chamfered edges of the housing permit entry of a .054- to .071-in.-thk board without damage to contacts or board pads. Typical card slot depth is .415 in.

NOTE

Housings do not need to be removed for contact replacement.

One end of a connector may be "open" to pair with the "open" end of another connector, allowing for insertion of longer-than-usual daughterboards. Some connector ends are dovetailed to accept card guides (see Figure 2) that mount to the pc board. Along with card guides, connectors with full or partial card scoops are available; both types of locational devices facilitate insertion of the daughterboard into the connector.

3. ACCESSORIES (Figure 2)

Accessories for AMP PACE connectors include card

guides, power distribution modules, ground modules, contact repair combs, and keying plugs.

NOTE

Connectors with heights of more than .545 in. do not accept power modules.

Card Guides are available in several lengths. Refer to Figure 2.

Power Distribution Module, Part No. 119337, is a card edge connector that is inserted into a bus bar and is also plugged onto the end of an AMP PACE connector, transferring power from bus bar to daughtercard. The power distribution module has a current rating of 20A per contact, and it can be used for either power or ground.

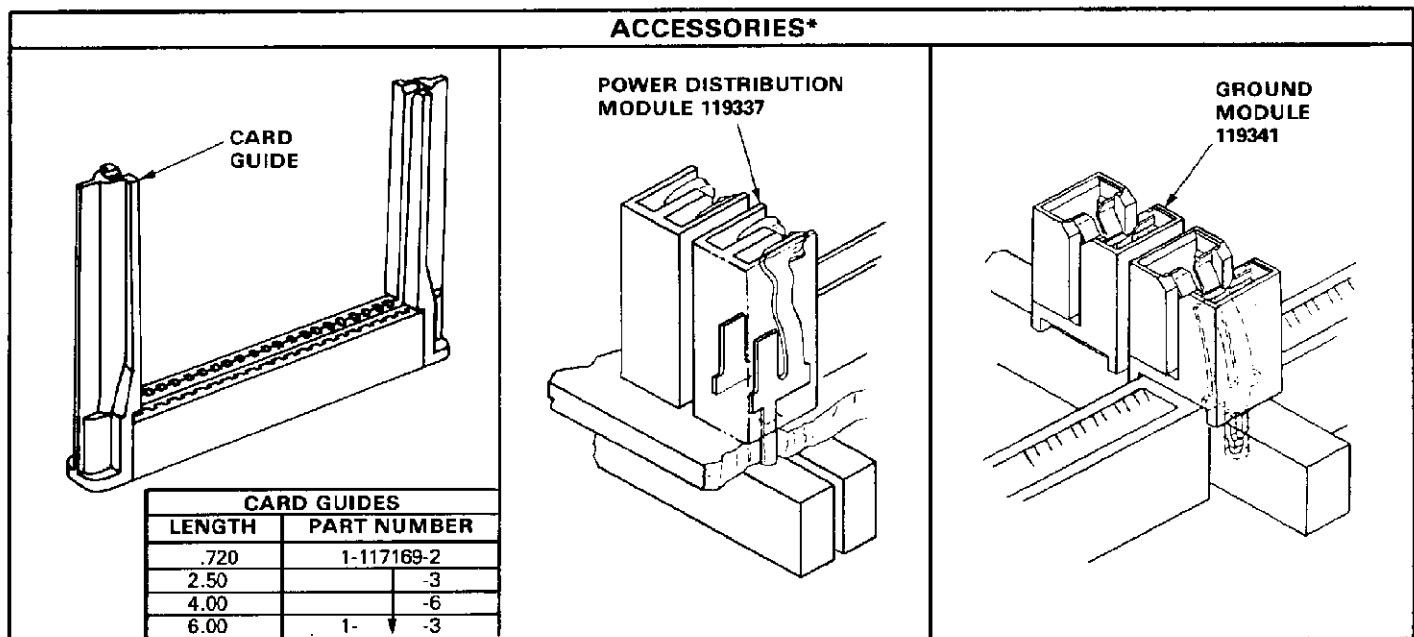
Ground Module, Part No. 119341, is a free-standing card edge connector plugged into a bus bar. The ground module has a current rating of 20A per contact and can be used for either power or ground.

Contact Repair Comb, Part No. 119712, (not shown in Figure 2) is a strip of replacement contacts used to replace faulty contacts in pc board-inserted AMP PACE connectors.

Keying Plugs, Part No. 118982-1 (plastic) and Part No. 119129-2 (metal), are used on connectors to aid in orientation and to prevent mismatching. (See Figure 1.)

4. APPLICATION TOOLING (Figures 1 and 3)

AMP PACE connectors can be inserted into pc boards by using insertion tooling and a hand-operated press; eg, an arbor frame unit; or by using insertion tooling mounted to an automatic unit; eg, a hydraulic H-frame machine that is part of a fixed insertion system. Either type of unit must be capable



* CONTACT REPAIR COMBS AND KEYING PLUGS NOT SHOWN.

Fig. 2

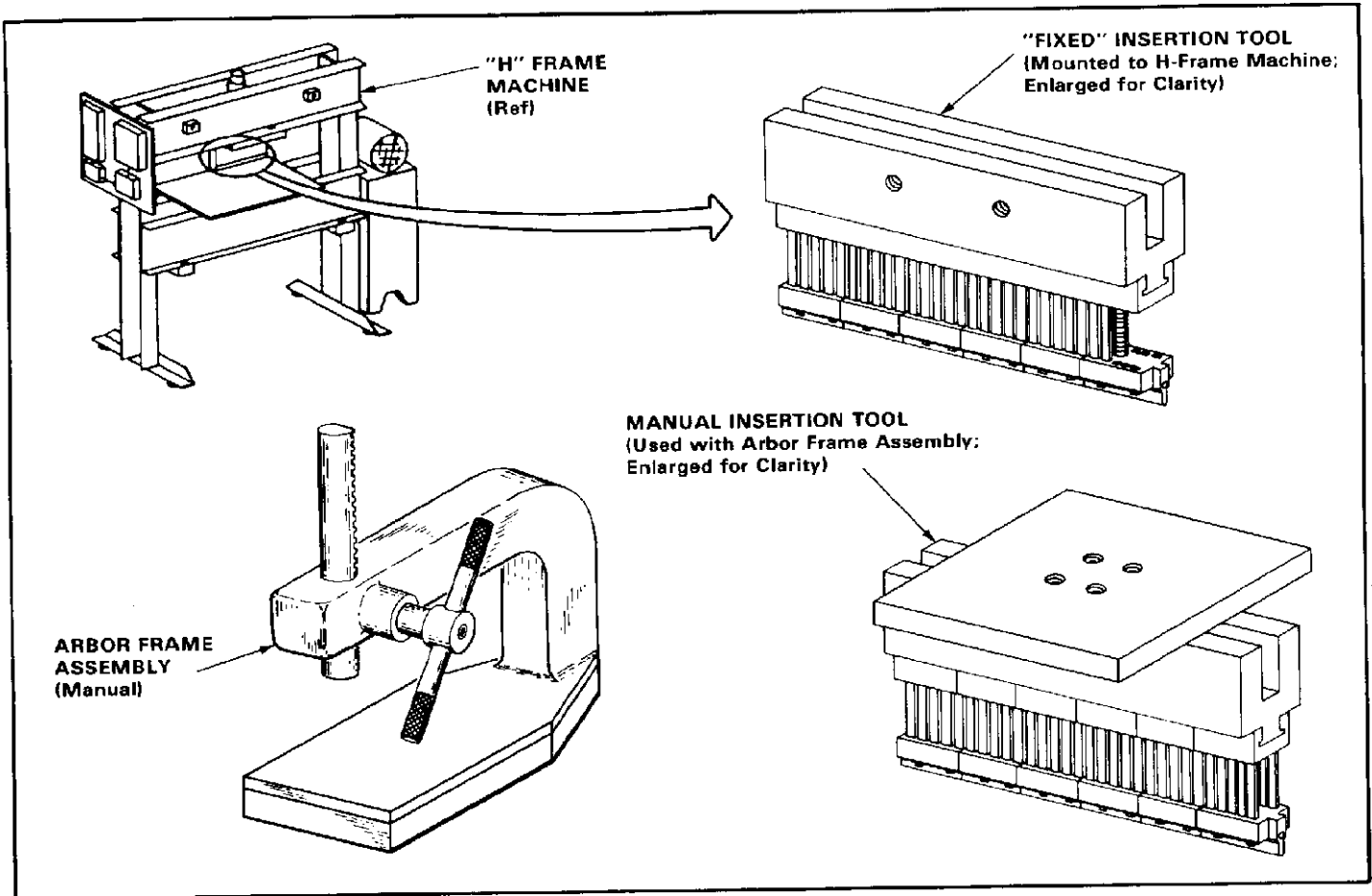


Fig. 3

of applying an insertion force of 50 lb per contact post (max) at a pre-determined shut-height.

Refer to Figure 1 for tooling numbers, and to Figure 3 for illustrations.

A. Fixed Insertion System

Besides the AMP H-Frame Machine, the fixed insertion system also includes: a pc board fixture assembly, made up of a pc board template; a straight-edge bar and detent subassembly; and an indexing rack. See Application Specification 114-26002 for details on the fixed insertion system for automatic insertion of AMP PACE connectors, or consult AMP Engineering, Wiring Products Division.

B. Shut-Height

Ram shut-height — the distance between the bottom surface of the ram and the top surface of the pc board when the ram is fully bottomed — must be adjusted, if necessary, to the dimension specified on the instruction sheet packaged with the insertion tool.

Refer to the instructions packaged with the insertion tooling for information on tooling installation, insertion procedure, and tooling maintenance.

5. HOLE SPECIFICATIONS

Refer to Figure 4 for recommended pc board hole specifications.

6. DAUGHTERCARD LAYOUT

Refer to Figure 5 for recommended dimensions for finger patterns and spacing on daughtercard.

7. QUALITY CHECK (Figure 6)

Inspect the AMP PACE connector after it has been inserted into the pc board according to the following criteria:

1. Preloaded tabs of contacts are against preload barrier.
2. Contacts are behind preload barrier.

ACTION PIN CONTACT HOLE SIZE SPECIFICATIONS	
Required Drill Size:	.0453
Copper (Cu) Plating Thickness:	.001 to .003
Cu Plating Hardness:	150 Knoop (Max)
Tin/Lead Thickness:	.0003 (Min)
Finished Hole Size:	.037 to .043
Board Thickness (Min, Max):	.084, .125
Pad Hole Dia (Min):	.062

Fig. 4

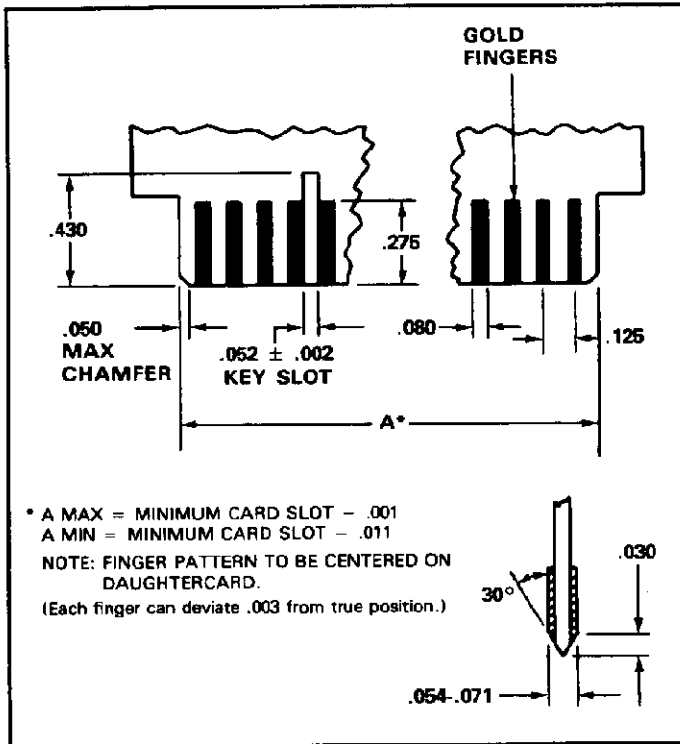


Fig. 5

3. Housing is flat and square on pc board.
4. Plastic alignment strip is flush with pc board.
5. Post height is dimension referenced in

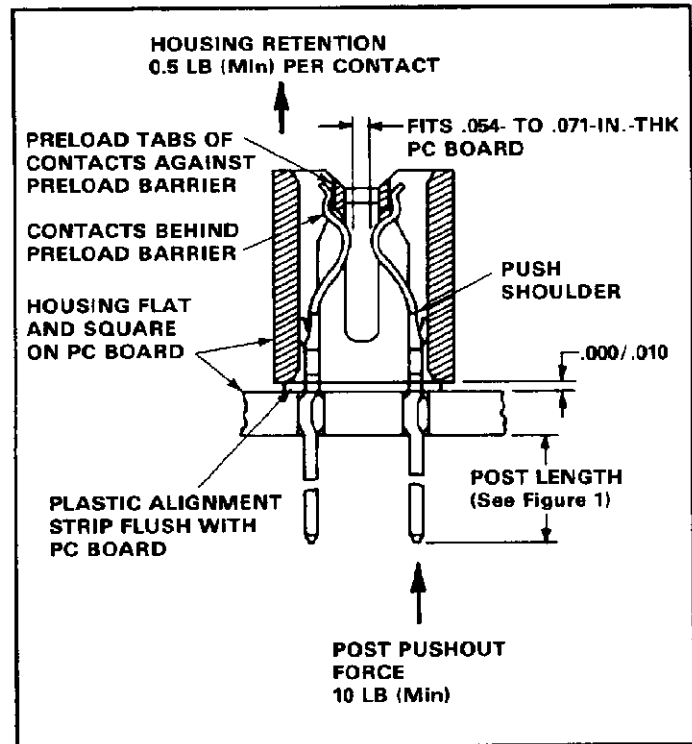


Fig. 6

- Figure 1.
6. Refer to Product Specification 108-14019 for more details on inspecting AMP PACE connectors.