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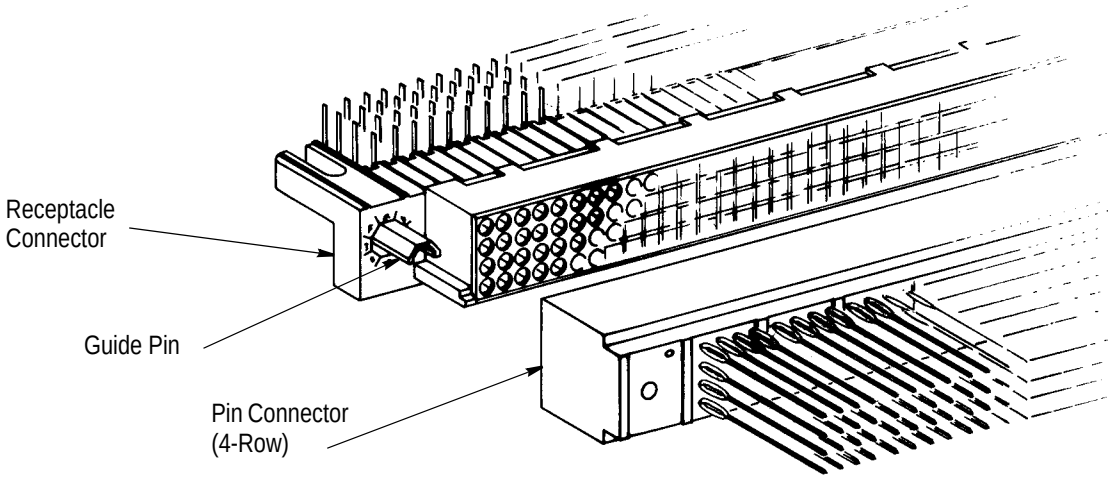
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CONNECTORS		
TYPE		PART NUMBER
4-Row	Pin	532435, 532448, 532818, 532837, 532841, 532921, 532933, 533056, 533254, 533270, 533404
	Receptacle	532434, 532840, 532903, 532920
3-Row	Pin	532432, 532438, 532447, 532839, 532919, 533061, 533092, 533093, 533094, 533294, 533296
	Receptacle	532431, 532838, 532918, 533268
2-Row	Pin	532429, 532446, 533060, 533090, 533091
	Receptacle	532428, 532825

Figure 1

1. INTRODUCTION

This instruction sheet covers the contacts, accessories, mounting procedures, and pc board layout dimensions recommended for the AMP-HDI connectors listed in Figure 1.

Read these instructions carefully before installing or assembling the connectors.

NOTE

Figures and illustrations are for reference only and are not drawn to scale.

2. DESCRIPTION

AMP-HDI pin and receptacle connectors are available with two, three, or four rows of contacts, on a .100-in. grid, totaling a maximum of 684 positions.

The connectors feature pin headers with ACTION PIN* contacts; four-point, box-type receptacle contacts; and a 64-combination keying arrangement. One or two guide pins are used to facilitate reliable mating of long connectors.

3. INSTALLING AMP-HDI CONNECTORS

3.1. Pin Connectors

NOTE

When installing a pin connector into a pc board, use of an insertion fixture is recommended to protect the posts of the ACTION PIN contacts and to support the connector and pc board in the machine base. The insertion fixture is designed by the customer for the specific connector size.

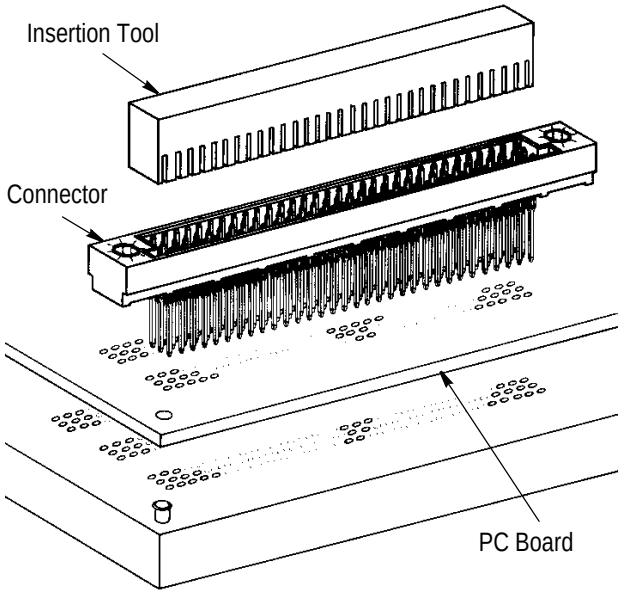
The connectors can be inserted into the pc board by using the insertion tool listed in Figure 2 and by using a power unit which is required for larger connectors and larger pc boards.

Proceed as follows:

1. Place the pc board on top of the insertion fixture.
2. Align pc board holes with insertion fixture holes, and loosely press connector contact posts through holes in pc board and insertion fixture.
3. Select the appropriate insertion tool, and position the tool in the top of the connector. See Figure 2.
4. Adjust the power unit to correct shut-height.

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CONNECTOR ROWS	INSERTION TOOL NUMBER
2	58172-1 thru 59172-7
3	58172-8 thru 1-58172-9
4	2-58172-0 thru 3-58172-7

Figure 2

5. Center connector under power unit and cycle machine to insert connector.

6. Remove connector from power unit.

NOTE

The maximum allowable gap between seated connector and pc board is 0.25 mm [.010 in.].

3.2. Receptacle Connectors (Figure 3)

NOTE

Receptacle connectors are installed into pc boards by using Alignment Tool 532925 which aids in the insertion of the connector into the pc board. The tool is available in three lengths which incorporate 75, 135, and 180 contact positions, and the tool features a cam-actuated lever to "open" and "close" the tool on the receptacle contacts.

Refer to Figure 3 and proceed as follows:

1. Determine number of contact positions in the assembly being mounted. Make a layout on the pc board, using the recommended dimensions provided in Figure 7.

2. Select proper tool, and adjust cam lever to vertical position to place tool in "open" position.

3. Place contacts in alignment holes of tool, and adjust lever to horizontal position to "close" the alignment tool on contacts.

4. Place receptacle contacts through pc board holes to position connector on pc board.

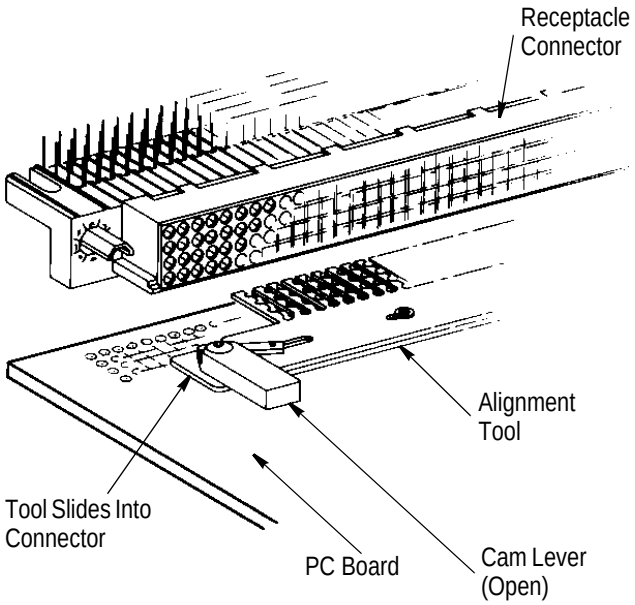


Figure 3

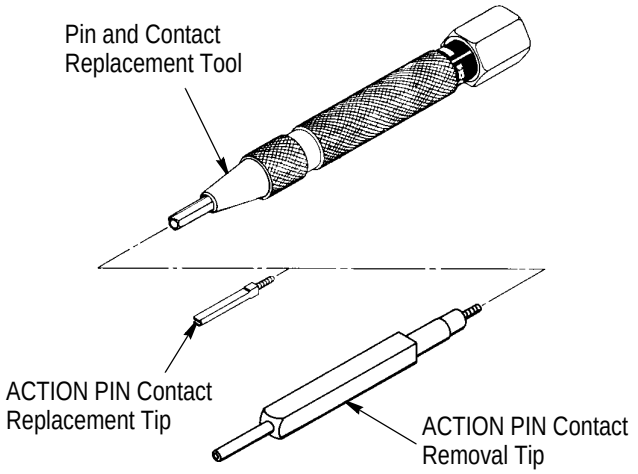
5. Adjust lever of tool to "open" position and slide alignment tool from between the connector and pc board.

6. Fasten connector to the pc board with appropriate hardware.

7. Solder contacts to pc board using a standard soldering technique.

4. REPLACING DAMAGED CONTACT

The pin and contact replacement tool, shown in Figure 4 is used to replace ACTION PIN contacts on pc boards and panels.



REPLACEMENT TOOL	REPLACEMENT TIP	REMOVAL TIP	KIT PART NUMBER
380392-8	308554-1	265964-1	265871-7

Figure 4

The tool features a spring-loaded, internally-threaded tip. The removal and replacement tips are designed to remove or replace contacts of specific types and sizes.

The replacement tool tip is threaded into the tip of the standard tool and fits onto the appropriate contact to be replaced.

NOTE

For proper removal and replacement of the contact, the specified tool tips must be used. Replacement tips can be obtained through your local TE Connectivity Representative.

4.1. Contact Removal (Figure 5)

1. Thread the contact removal tip into the tip of the replacement tool.

2. Position contact removal tip over square post of contact.

3. Holding replacement tool and pc board firmly, push contact out of the pc board and housing.

NOTE

If the pc board or panel has been soldered, contact removal requires use of a soldering iron along with the replacement tool for Steps 2 and 3. Hold hot tip of soldering iron against the pin to be removed, NOT against the pc board or panel. After the contact is removed, use a .038-in. drill bit to clean and size the hole for contact replacement. Do NOT re-use ACTION PIN contacts that have been removed.

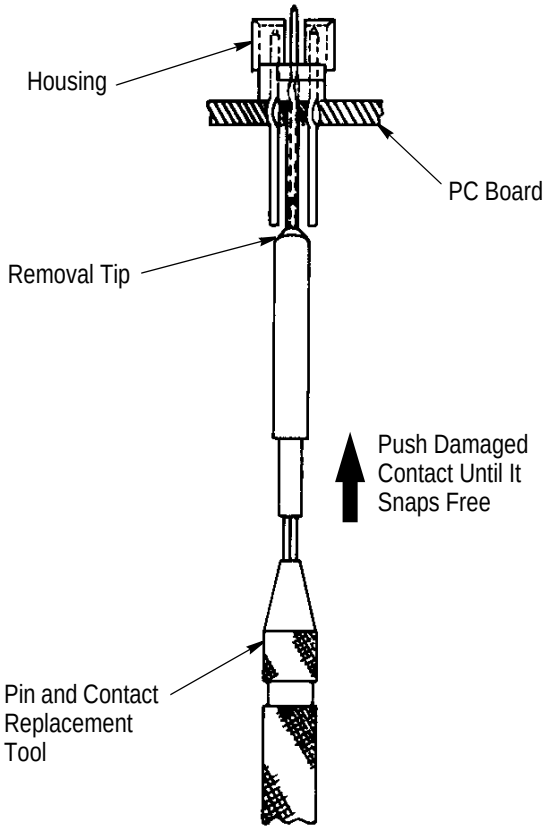


Figure 5

4.2. Replacing Pin Contacts (Figure 6)

1. Thread appropriate ACTION PIN contact replacement tip into tip of replacement tool.

2. After removing damaged contact, insert replacement contact.

3. Fit hole in replacement tip over contact, rotate tool 90° to locate contact in position, and apply force in direction of arrow. See Figure 6.

NOTE

The shoulder of contact must align with slot of replacement tip before applying force to replacement contact.

4. After applying force on contact to fully seat the contact, the contact shoulder should be flush with housing.

5. Remove replacement tool from contact.

5. REVISION SUMMARY

- Updated document to corporate requirements
- Deleted obsolete tool in Figure 2
- Deleted text in Paragraph 3.1
- New logo

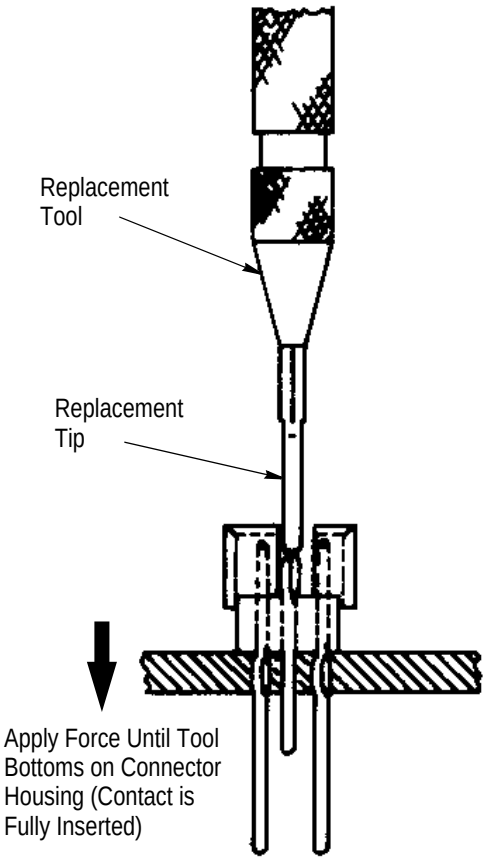
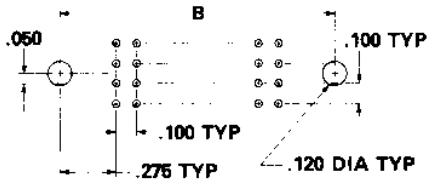
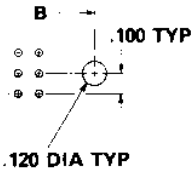


Figure 6

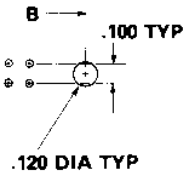
RECOMMENDED BOARD LAYOUTS



FOUR-ROW PIN ASSEMBLY

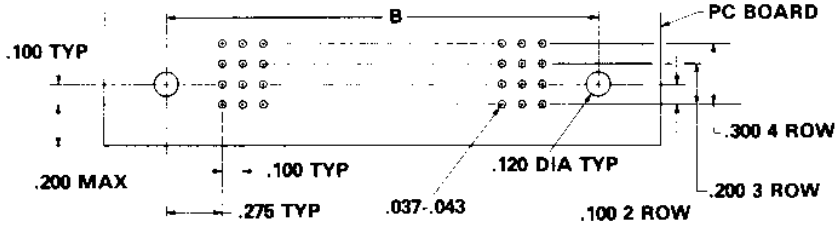


THREE-ROW PIN ASSEMBLY



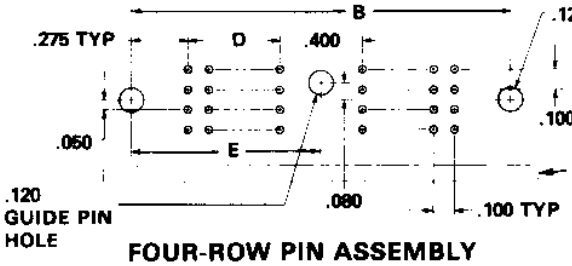
TWO-ROW PIN ASSEMBLY

CONNECTORS WITH NO GUIDES

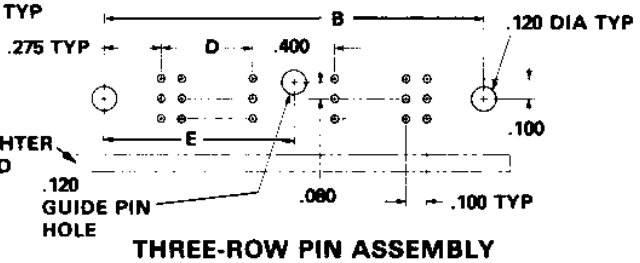


$$B = \left(\frac{\text{No. Posts}}{\text{No. Rows}} \times .1\right) + .45 + (.30 \times \text{No. Guides})$$

RECEPTACLE ASSEMBLY

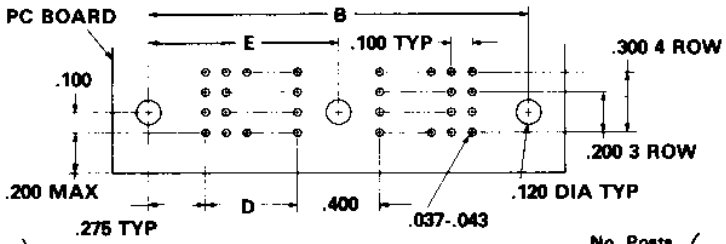


FOUR-ROW PIN ASSEMBLY



THREE-ROW PIN ASSEMBLY

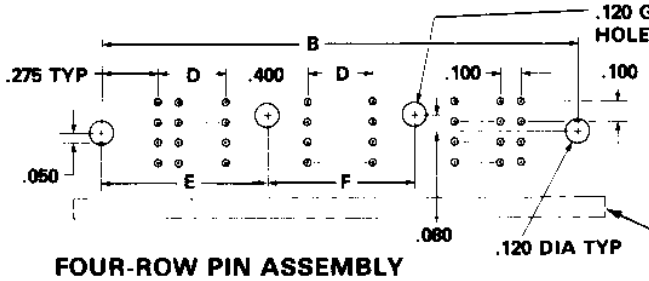
CONNECTORS WITH ONE GUIDE



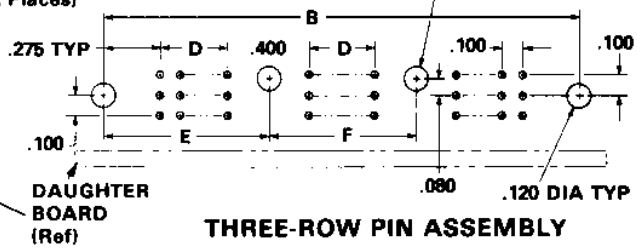
$$D = \frac{\text{No. Posts}}{\text{No. Rows}}\left(\frac{1}{10 \times (\text{No. Guides} + 1)}\right) - .1$$

RECEPTACLE ASSEMBLY

$$E = \frac{\text{No. Posts}}{\text{No. Rows}}\left(\frac{1}{10 \times (\text{No. Guides} + 1)}\right) + .375$$

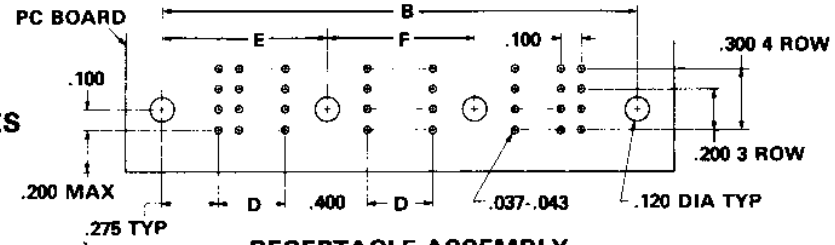


FOUR-ROW PIN ASSEMBLY



THREE-ROW PIN ASSEMBLY

CONNECTORS WITH TWO GUIDES



$$F = \frac{\text{No. Posts}}{\text{No. Rows}}\left(\frac{1}{10 \times (\text{No. Guides} + 1)}\right) + .3$$

RECEPTACLE ASSEMBLY

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