

867052-[], 87124-[], 87165-[],
87190-[], 87191-[]
Locking Clip Contact

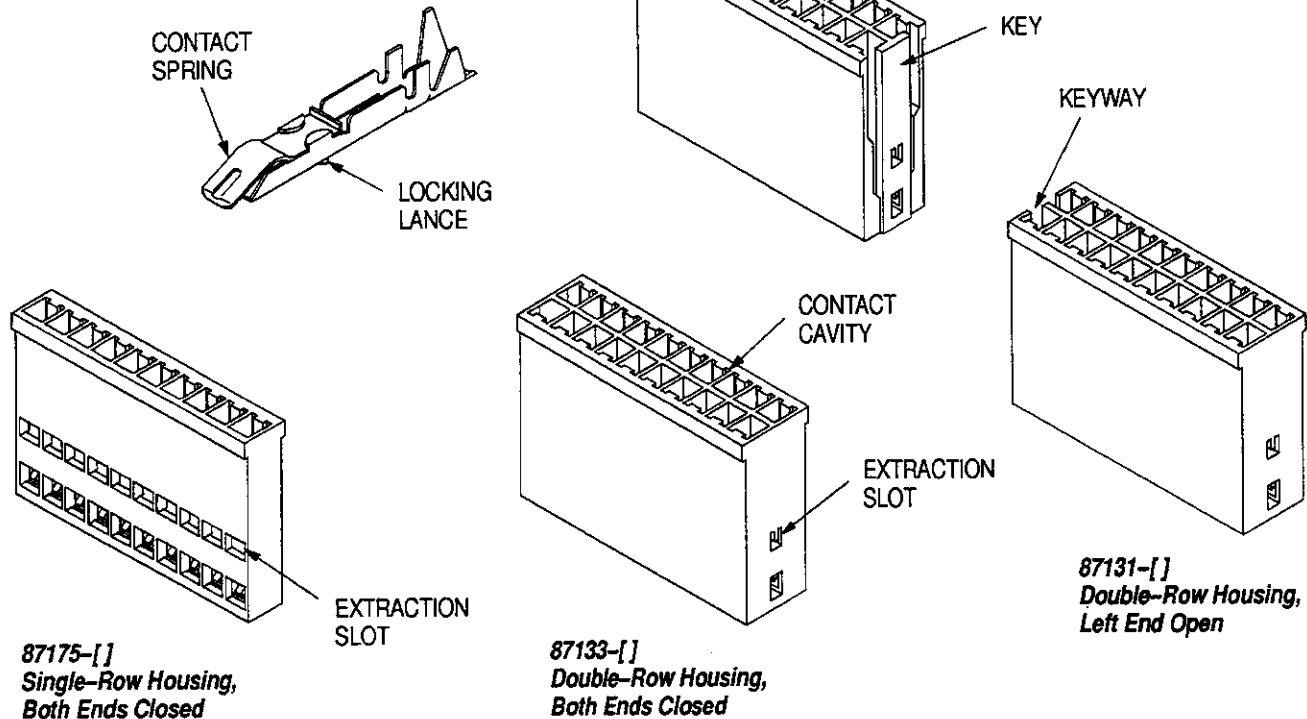


Figure 1

1. INTRODUCTION

This instruction sheet covers the installation of AMP AMPMODU Locking Clip Contacts and Housings (shown in Figure 1) onto 0.64-mm [.025-in.] square posts. The contacts are designed to be crimped onto wire size 20-30 AWG with an insulation diameter of 0.97 to 2.54 mm [.038 to .100 in.] and installed directly onto posts or inserted into the housings and then installed onto posts.

For additional product part number information, refer to AMP Catalog 82187. AMP Application Specification 114-25006 provides specific requirements for selecting and preparing the contacts, housings, and pc boards. Read this material, and all referenced material, before installing any contacts or housings.

NOTE

Dimensions are in millimeters [followed by inch equivalents in brackets].

Reasons for reissue are provided in Section 7, REVISION SUMMARY.

2. DESCRIPTION (Figure 1)

The locking clip contacts feature a locking lance and a contact spring. The locking lance retains the contact in the housing. The contact spring provides high contact-to-post retention, and as a result, fastening devices are not needed to hold the contact or housing on the posts.

Housings are available in various sizes (number of contact positions) with single- and double-row contact cavities on 2.54 [.100] centerlines. Double-row housings are available in three configurations: both ends closed, right end open, and left end open. Single-row housings are available only with both ends closed.

Right end open configurations are designed with a key and left end open configurations are designed with a keyway. This design enables these housings to be stacked end-to-end on the pc board for circuit grouping. Each housing features an extraction slot which is used to removed individual contacts from the housing.

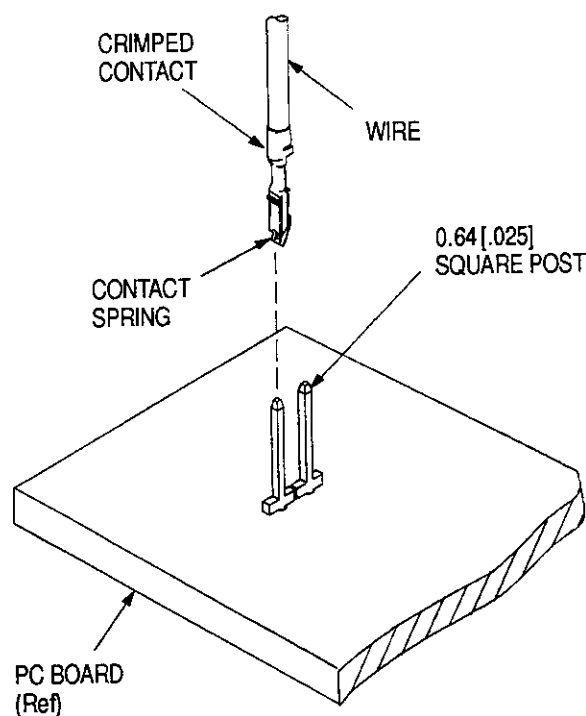


Figure 2

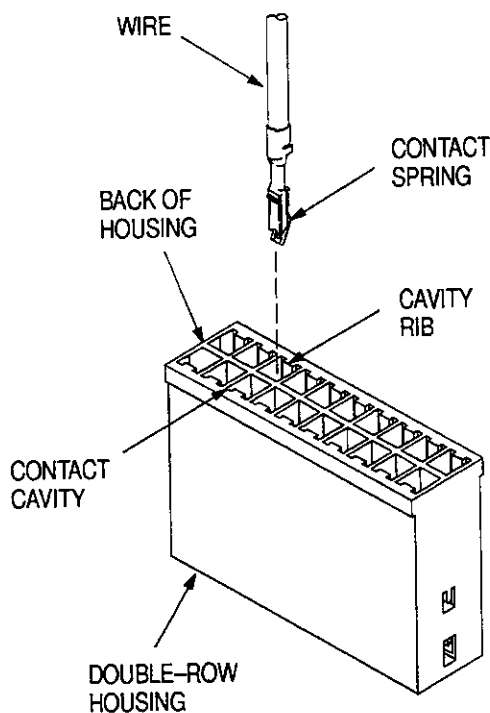


Figure 3

3. INSTALLATION

Crimp the contacts onto properly stripped wire according to the instructions packaged with the appropriate machine or hand tool. For applicable machines and hand tools, refer to 114-25006 or contact your AMP Representative for assistance in selecting the machine or tool that will best suit your needs. Then proceed as follows:

3.1. Installing Contacts onto Posts (Figure 2)

1. Align center of contact spring with post.
2. Slide contact over post until it bottoms on the pc board.
3. Pull back lightly on the wire to ensure that the contact spring retains the contact on the post.

3.2. Inserting Contacts into Housings (Figure 3)

Select the appropriate housing according to application requirements (size, single- or double-row, and housing configuration).

1. Locate the desired contact cavity on the back of the housing.
2. Align the contact with the cavity. **Make sure** the contact spring faces the housing cavity rib. Insert the contact straight into the cavity until it bottoms.
3. Pull back lightly on the wire to ensure that the contact locking lance retains the contact in the housing.

3.3. Inserting Keying Plugs into Housings (Figure 4)

Keying plugs provide housing identification and polarization by not allowing the post to enter the contact cavity in which a keying plug is installed. Select AMP Keying Plug 87179 and proceed as follows:

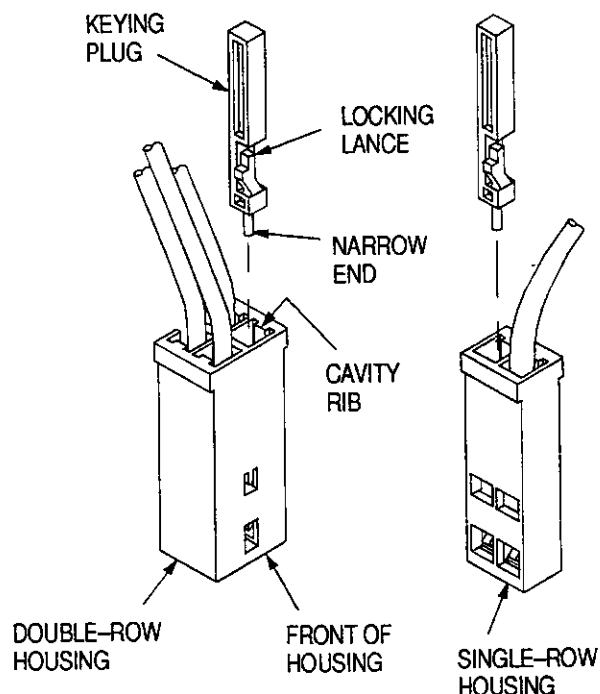


Figure 4

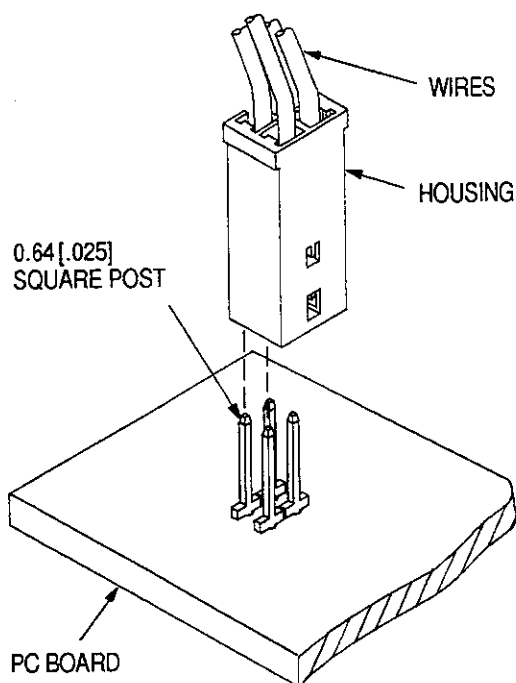


Figure 5

1. Locate the desired contact cavity on the back of the housing.
2. Orient the narrow end of the keying plug with the contact cavity. Align the plug locking lance opposite the housing cavity rib.

3. Insert the keying plug straight into the contact cavity until it bottoms.

4. Push back lightly on the keying plug from the *front* of the housing to ensure that the plug locking lance retains the plug in the housing.

3.4. Installing Housings onto Posts (Figure 5)

1. Align housing contact cavities with posts on pc board.
2. Slide the housing onto the posts evenly until the housing bottoms on the pc board.
3. Pull back lightly on the wires to ensure that the contact springs retain the housing on the posts.

4. STACKING HOUSINGS (Figure 6)

Make sure the appropriate housing configurations have been selected and properly loaded before stacking the housings. Use right end open (with key) for stacking housings to the left and left end open (with keyway) for stacking to the right.

NOTE

Single row housings cannot be stacked with double row housings. In order to stack housings, keys must be aligned with keyways.

1. Align key (or keyway) of additional housing with keyway (or key) of installed housing.

STACKING HOUSINGS

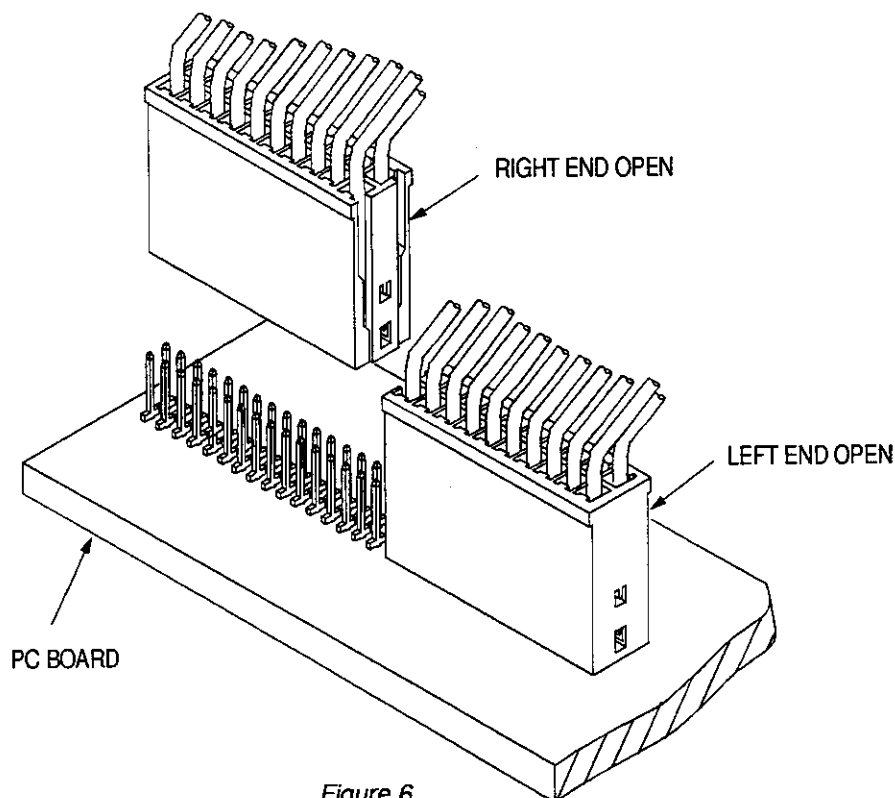


Figure 6

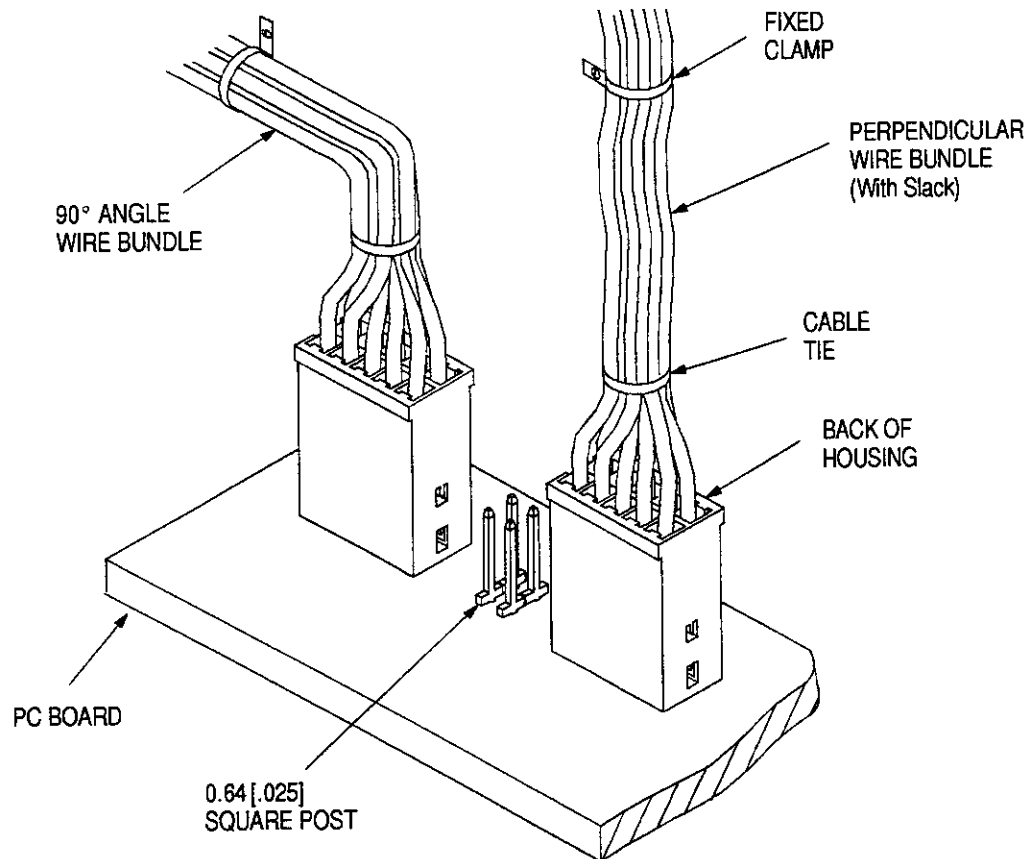


Figure 7

2. Slide additional housing along installed housing and onto the posts until the housing bottoms on the pc board. Make sure all posts enter contact cavities evenly.
3. Pull back lightly on the wires to ensure that the contact springs retain the housing on the posts.

5. WIRE HARNESSING (Figure 7)

If required, wires can be bundled together with cable ties and secured to a panel with fixed clamps. However, locking clip contacts must be free to float within the housings to ensure proper extraction. Therefore, the wires must not be confined in any way that would restrict the floating action of the contacts in the housing.

NOTE *There must be slack in perpendicular wire bundles when the housing is fully inserted.*

6. REMOVAL

6.1. Removing Housings from Posts

Grip the sides of the housing and pull straight away from the posts. The contact springs deflect with the housing and release the locking tension on the posts.

CAUTION

Do not confine or pull the wires during removal; otherwise, damage to the wires and/or contacts could result.

6.2. Extracting Contacts and Keying Plugs

Use AMP Extraction Tool 91084-1 for removing individual contacts from posts and extracting keying plugs and contacts from housings. Refer to AMP Instruction Sheet 408-7604, packaged with the tool, for extraction procedures.

7. REVISION SUMMARY

Revisions to this document include:

Per EC 0010-1437-94:

- Modified Figure 1
- Added wire size 20 AWG
- Removed information from Section 2, Paragraph 3.4, and Section 4

Per EC 0990-0252-93:

- Updated format
- Added metric units
- Added document reference to Section 1
- Added information to Section 2
- Combined previous Sections 3 and 4