

Fig. 1

## 1. INTRODUCTION

This instruction sheet (IS) covers the assembly of the AMP HDR Series Connectors with 12, 24, 36, and 48 positions.

The applicable Type XI contacts, shield kits, jackscrews, and guide pins are listed in Figure 1. Read these instructions thoroughly before assembling the connectors.

NOTE

All dimensions on this instruction sheet are in inches.

## 2. DESCRIPTION

The connectors are available in diallyl phthalate (blue) or phenolic (black) and can be used with jackscrew assemblies. Each connector is polarized to ensure proper mating.

A shield kit is available for the connectors and can be attached to either plug or receptacle with guide pins and suitable hardware. The hardware is also used to attach the connector to a panel.

NOTE

Both plug and receptacle connectors will accept pin or socket contacts; however, it is recommended that pin contacts be installed in the receptacle connector to protect the contacts.

The shield kit consists of two symmetrical cable shields, a strain-relief clamp, and attaching hardware.

## 3. CONTACT CRIMPING

Contacts 203874 and 203875 accept wire sizes 30 AWG through 26 AWG with a maximum insulation range of .048 in., while Contacts 203802 and 203816 accept wire sizes 24 AWG through 20 AWG with a maximum insulation range of .062 in. These contacts are available in strip or loose piece.

AMP Hand Crimping Tools 90223-5 (IS 7400) and 90260-1 (IS 7484) are designed for crimping the loose-piece contacts. Read the instructions packaged with the tools for wire size, insulation diameter, wire crimp length, and proper crimping procedures.

#### 4. CONTACT INSERTION

AMP Insertion Tool 91042-1 is recommended for inserting pin and socket contacts into the connectors. Read the instructions (IS 7369) packaged with the tool for insertion procedures.

**NOTE**

*When the connector is not fully loaded, the contacts should be evenly distributed throughout the connector.*

#### 5. CONTACT EXTRACTION

AMP Extraction Tool 91038-3 is recommended for extracting pin and socket contacts from the connectors. Read the instructions (IS 7357) packaged with the tool for extraction procedures.

#### 6. GUIDE PINS AND SOCKETS

Guide pins and sockets are used to ensure proper mating of the connectors. The pins and sockets can be used on either the plug or receptacle connectors. The connectors can either be front- or back-panel mounted. If guide and socket pins are used when back-panel mounting, the panel thickness must NOT exceed .093 in. to ensure proper mating of the pins and sockets.

**NOTE**

*If a shield kit is used, the guide pins and sockets are used to secure the cable shields to the connector.*

#### 7. PANEL CUTOUT

Refer to Figure 2 and construct the panel layout using the appropriate dimensions.

#### 8. JACKSCREW INSTALLATION (Figure 3)

Install the fixed jackscrew to the connector mounted to the chassis or panel and the turntable jackscrew to the free-hanging connector.

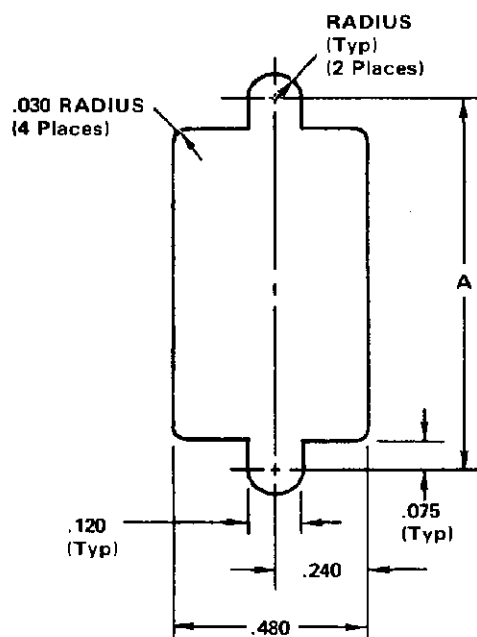
#### 9. KEYING PLUGS (Figure 1)

Keying plug 205120-1 is designed for use in plug connectors.

1. Determine applicable cavity to be keyed and align the tapered end of the keying plug with the FRONT of connector.
2. Insert keying plug straight into the cavity until it bottoms.
3. If removal of the keying plug is necessary, insert a thin tool into BACK of applicable cavity, and push the plug out the FRONT of connector.

#### 10. CONNECTOR MATING

The beveled corners of the connectors are designed to mate with each other. Orient the beveled corners and insert the plug connector into the receptacle connector until bottomed. Make sure the jackscrew assemblies are aligned before bottoming the connectors. Tighten the turntable jackscrew clockwise to secure the connectors.



CUTOUT TYPICAL EXCEPT  
FOR DIMENSION "A"

NO. OF POSN	DIM "A"
12	1.084
24	1.484
36	1.884
48	2.284

Fig. 2

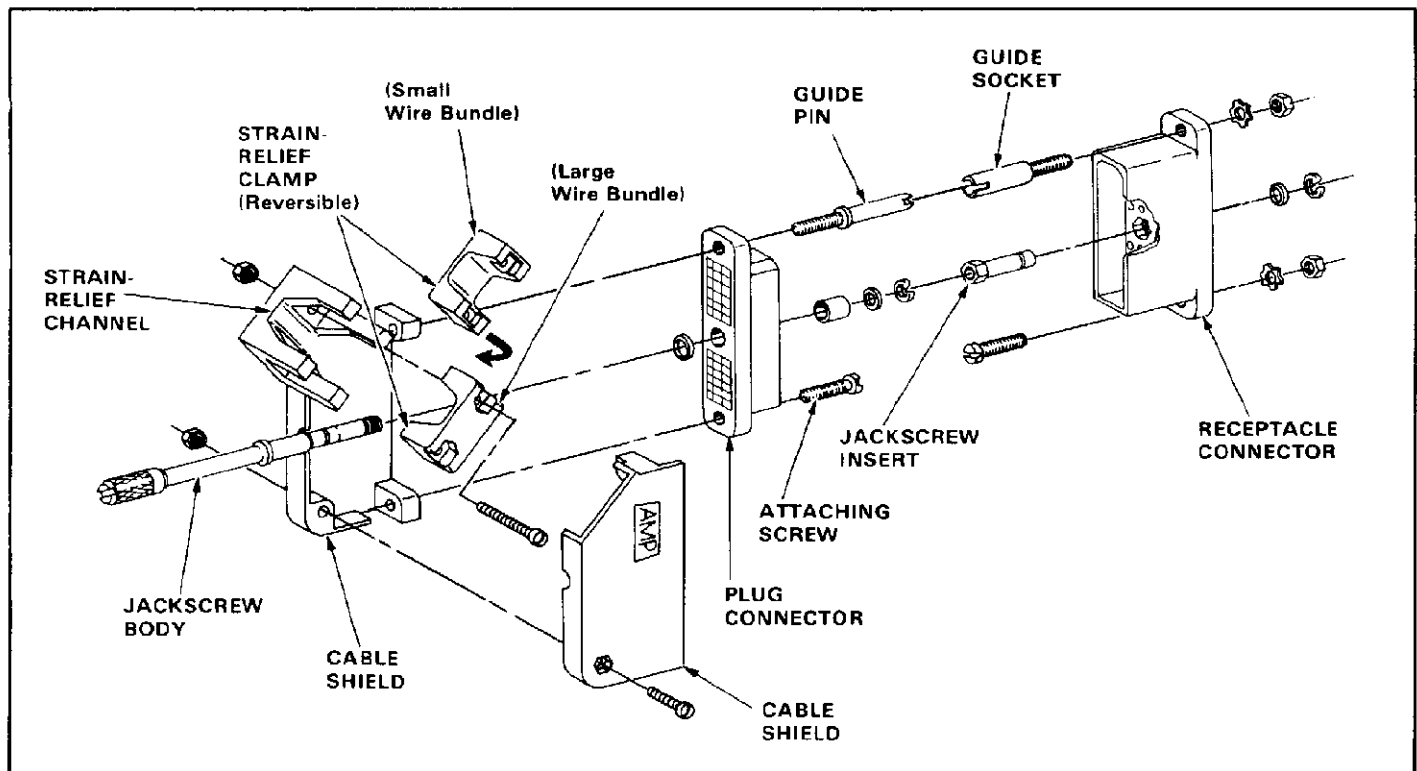


Fig. 3

**11. SHIELD KIT INSTALLATION (Figure 3)**

The shield kit is a three-piece assembly which is applicable to the free-hanging connector only.

Attach as follows:

1. Determine location of strain-relief clamp. Split wire bundle evenly on both sides of jackscrew body on plug connector.
2. Position the shield with the strain-relief section on connector and place wire bundle through the strain-relief channel.

3. Take the mating shield and position it on connector. Secure the two shields with guide pins.

4. While holding the wire bundle in place, insert the strain-relief clamp over the strain-relief channel. Push wires into the connector to allow sufficient slack and secure clamp with screws.

**NOTE**

*The strain-relief clamp can be reversed to accommodate various wire bundle thicknesses. See Figure 3.*