

**50-Ohm and Non-Impedance Matched  
Straight Pin and Socket Contact Kits**

**Non-Impedance Matched  
Right-Angle Socket Contact Kit**

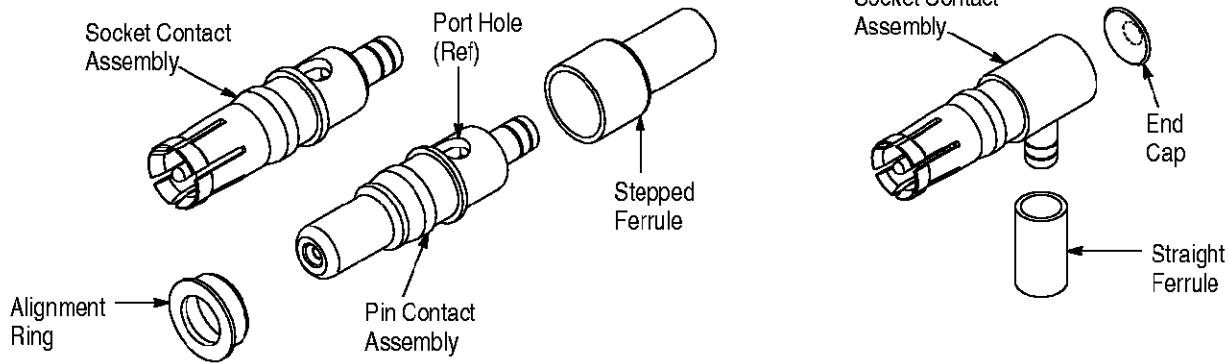


Figure 1

**1. INTRODUCTION**

These instructions cover the assembly of AMP\* size 8 coaxial RF 50-ohm and non-impedance matched straight pin and socket contact kits and right-angle socket contact kit (shown in Figure 1) used with AMP-HDI\* (high density interconnection) connectors and AMPLIMITE\* Series 109 connectors. The contacts are crimped onto various sizes of RG/U cable. Refer to Figure 2 for contact kit part numbers and cable sizes. For contact kits and cable sizes not listed, contact AMP Product Engineering for recommendations.

The contacts are crimped using AMP Hand Tool 69710-1 (408-2095) or 626 Pneumatic Tooling Assembly 189721-[ ] (409-5862) fitted with C-Head Pneumatic Adapter 318161-1 (408-4190). The appropriate die assembly needed for the tooling is listed in Figure 2. For additional information concerning tooling, refer to instruction sheet (408-series) or customer manual (409-series) packaged with the tooling.

Read these instructions carefully before assembling the contact kits.

**NOTE**

*Dimensions in this instruction sheet are in metric units [with U.S. customary units in brackets]. Figures are not drawn to scale.*

Reasons for reissue of this instruction sheet are provided in Section 5, REVISION SUMMARY.

**2. DESCRIPTION**

The straight pin and socket contact kit consists of a pin contact assembly or socket contact assembly and stepped ferrule. An alignment ring is provided with the pin contact kit. The ring is inserted into the connector contact cavity for stabilization of the pin contact. The right-angle socket contact kit consists of a socket contact assembly, straight ferrule, and end cap.

**3. CONTACT ASSEMBLY**

**NOTE**

*These contacts require contact float (overall side play within the cavity of the connector housing) to permit self-alignment of mating contacts. A heavy cable dress could prevent the required float and cause stubbing of the contacts.*

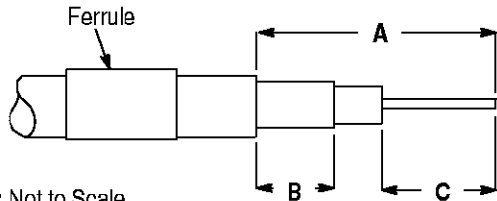
**3.1. Straight Contacts**

1. Slide ferrule onto cable (small end first); then strip cable using the dimensions in Figure 3.
2. Flare cable braid so that it will slide easily over support sleeve of contact body.
3. Twist wire strands; then insert center conductor into contact body, making sure that the center conductor is FULLY seated in the contact and that no wire strands are visible in the two port holes of the contact.
4. Position contact assembly in the indenter of the die assembly, making sure that the contact port holes align with the indenter. Crimp contact according to instructions packaged with tooling. Remove contact assembly from tool.

CONTACT			CABLE SIZE (RG/U)	DIE ASSEMBLY▪	
IMPEDANCE	TYPE	KIT PART NUMBER			
Non-Impedance Matched	Right-Angle Socket	228604-1	174, 188, 316	58094-1	
Non-Impedance Matched	Straight Pin	228618-1	174, 188, 316	59993-1	
		415369-1			
		228618-2	179, 187		
		415369-3			
		228618-3	174, 188, 316 (Double Braid)		
		415369-2			
		228618-4	142		58212-1
		228618-5	178		59993-1
	228618-6	174, 188, 316			
	Straight Socket	228596-1	174, 188, 316		
		415368-1			
		228596-2	179, 187		
		415368-3			
		228596-3	174, 188, 316 (Double Braid)		
415368-2					
228596-4	142	58212-1			
228596-5	174, 188, 316	59993-1			
50-Ohm	Straight Pin	221980-1	174, 188, 316	59993-1	
		415367-1			
		221980-2	142		58212-1
		221980-3	179		59993-1
		221980-4	402		58212-1
		221980-5	174, 188, 316 (Double Braid)		59993-1
		415367-2			
		415367-3	58, 58A, 58B, 58C		58212-1
1274377-1	62 Mod.	91335-1			
50-Ohm	Straight Socket	221981-1	174, 188, 316	59993-1	
		415366-1			
		221981-2	142		58212-1
		221981-3	179		59993-1
		221981-4	402		58212-1
		221981-5	174, 188, 316		59993-1
		415366-2			
		415366-3	58, 58A, 58B, 58C		58212-1
1274378-1	62 Mod.	91335-1			

▪ For information on die assembly insertion and crimping procedures, refer to the instructions packaged with the tool.

Figure 2



Note: Not to Scale

CABLE SIZE (RG/U)	STRIP-LENGTH DIMENSION (mm [in.]) (±0.41 [±.016])		
	A (JACKET)	B (BRAID)	C (INSULATION)
<b>Straight Contacts</b>			
174, 188, 316	10.3 [406]	4.76 [.188]	3.58 [.141]
142			
179			
178			
187			
58			
62 Mod.	9.53 [.375]	5.94 [.234]	3.58 [.141]
402			
<b>Right-Angle Contacts</b>			
174, 188, 316	9.12 [.359]	4.76 [.188]	1.98 [.078]

Figure 3

5. Slide ferrule over cable braid and contact support sleeve until the ferrule bottoms against the contact body.

6. Crimp ferrule according to instructions packaged with tooling. Remove contact assembly from tool.

7. After the pin contact is inserted into the connector, position the alignment ring (large diameter end first) over the pin contact. Using a hollow-tubed tool with an outside diameter of 5.08 mm [.200 in.], push the alignment ring into the housing contact cavity until the ring bottoms. See Figure 4.

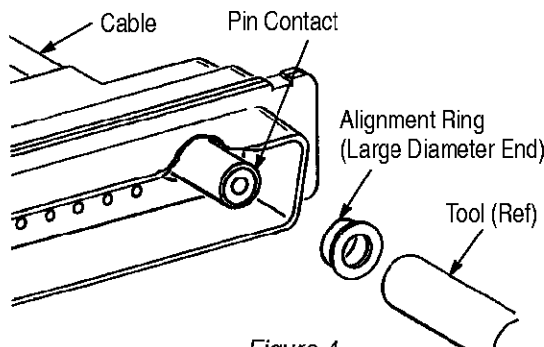


Figure 4

**3.2. Right-Angle Contacts**

- Slide ferrule over cable; then strip the cable using the appropriate strip-length dimensions in Figure 3.
- Flare cable braid so that it will slide easily over support sleeve of the contact.
- Twist wire strands; then insert center conductor into contact body, making sure center conductor is FULLY seated in the contact body. No wire strands should be sticking out around the wire barrel of the contact assembly, as shown in Figure 5.

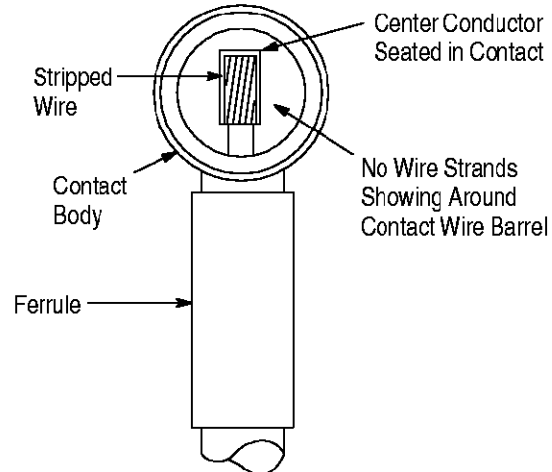


Figure 5

4. Solder or crimp the contact to the cable center conductor according to instructions packaged with tooling. Remove contact assembly from tool.

**NOTE**

For right-angle contacts that use Die Assembly 58212-1 or 59993-1 for crimping the ferrule, the contact must be soldered to the cable center conductor; crimp contacts that use Die Assembly 58094-1.

5. Slide ferrule over cable braid and contact support sleeve until the ferrule bottoms against the contact body.

6. Position contact assembly in the ferrule crimping chamber of the die assembly, making sure that the contact is FULLY seated in the hole of the movable die and the ferrule is positioned properly in the crimping chamber. Crimp the ferrule according to the instructions packaged with the tooling. Remove contact assembly from tool.

7. Position the end cap (dome side up) over the center contact opening.

8. Position contact assembly into the end cap insertion section of the movable die of the die assembly. Activate the tool; then remove crimped assembly from the tool.

#### **4. CONTACT REMOVAL**

To remove contacts from housing contact cavities, use Extraction Tool 318813-1. Refer to 408-4374 for detailed extraction procedures. This tool can also be used to insert alignment rings.

#### **5. REVISION SUMMARY**

Revisions to this instruction sheet per EC 0990-1295-99 include:

- Updated document to corporate requirements
- Added new part numbers to Figure 2
- Added new cable sizes to Figure 3