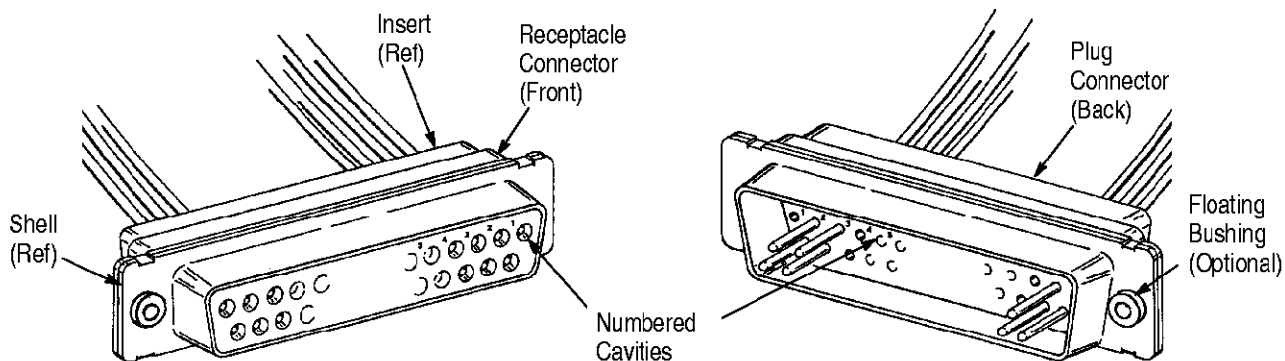


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CONNECTOR POSITIONS AND SHELL SIZES	CONNECTOR DESCRIPTION	HDP CONNECTORS		CONNECTOR POSITIONS AND SHELL SIZES	CONNECTOR DESCRIPTION	HDP CONNECTORS	
		W/FLOATING BUSHINGS	W/O FLOATING BUSHINGS			W/FLOATING BUSHING	W/O FLOATING BUSHING
9 POSITION SIZE 1	PLUG	205434-1	205204-1	37 POSITION SIZE 4	PLUG	—	205210-1
	RECEPTACLE	—	205203-1		RECEPTACLE	—	205209-1
15 POSITION SIZE 2	PLUG	—	205206-1	50 POSITION SIZE 5	PLUG	—	205212-1
	RECEPTACLE	—	205205-1		RECEPTACLE	—	205211-1
25 POSITION SIZE 3	PLUG	205436-1	205208-1				
	RECEPTACLE	—	205207-1				

Figure 1

**1. INTRODUCTION**

This instruction sheet covers contact and wire selection, application tooling, and attaching hardware for AMP AMPLIMITE High Density (HDP-20) Connectors listed in Figure 1. Read these instructions thoroughly before assembling any connectors.

**NOTE** All dimensions on this document are in metric units [with U.S. customary units in brackets].

Reasons for reissue of this document are provided in Section 6, REVISION SUMMARY.

**2. DESCRIPTION** (Figure 1)

The connectors are designed for rear insertion and extraction of size 20, screw-machined or precision formed contacts. The HDP-20 connectors feature steel shells and black nylon inserts with plastic contact retention tines.

**3. CONTACTS** (Figure 2)

**3.1. Selection**

Determine whether screw-machined or precision formed contacts are to be used. Refer to the table in Figure 2, and select strip or loose-piece pin and

socket contacts according to the wire size and insulation diameter to be used.

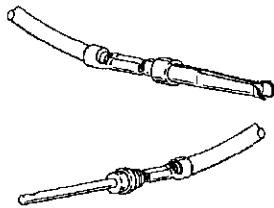
Notice that each contact cavity is number-coded (front and back). Make certain that the cavities of the plug are a mirror image of the receptacle. Insert pin contacts into the back of plug and mating socket contacts into the back of the receptacle. If all cavities are not used, distribute contacts evenly throughout connector.

**3.2. Crimping**

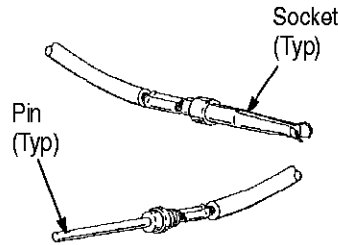
Tape-mounted contacts are designed to be crimped with AMP-TAPETRONIC\* 4/8 Indent Stripper Terminator 599406-7 and funnel set 125905-1. Refer to customer manual 409-5253, packaged with the machine, for specific crimping procedures.

Strip-form contacts are designed to be crimped with a semi-automatic or automatic machine and applicator. Consult your local Tyco Electronics representative for assistance in selecting the machine and applicator for your application. Loose-piece screw-machined contacts are designed to be crimped with 8-Indent Hand Crimping Tool M22520/2-01 and PN 601966-1 with positioner M22520/2-08 and PN 601966-5. Refer to instruction sheet 408-7516, packaged with the tool, for specific crimping procedure and tool certification information.

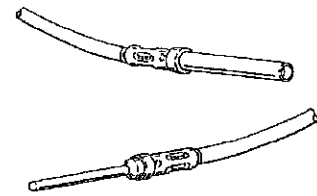
*Precision Formed  
With  
Insulation Support*



*Precision Formed  
Without  
Insulation Support*



*Screw Machined*



CONTACT DESCRIPTION	WIRE SIZE (AWG)	INSUL DIA (Max)	CONTACT NUMBER				HAND TOOL (Instruction Sheet)
			STRIP FORM		LOOSE PIECE		
			PIN	SOCKET	PIN	SOCKET	
PRECISION FORMED WITH INSULATION SUPPORT	28 to 24	1.02 [.040]	66507-2, -3, -4	66505-2, -3, -4	66507-9 and 1-66507-0	66505-8, -9, and 1-66505-0	90302-1 (408-7634) or 58448-2 (408-9357)
	24 to 20	1.52 [.060]	66506-2, -3, -4	66504-2, -3, -4	66506-8, -9, and 1-66506-0	66504-8, -9, and 1-66504-0	
PRECISION FORMED WITHOUT INSULATION SUPPORT	28 to 24	1.73 [.068]	205310-2, 1-205310-1	205311-3, -4	—	—	90265-1 (408-7521)
	24 to 20	1.73 [.068]	205202-2, -6	205201-3, -6	205202-7	205201-5 and -7	
SCREW MACHINED	24 to 20	1.73 [.068]	205089-2 (On Tape)	205090-2 (On Tape)	205089-1	205090-1	601966-1 (408-7516) 601966-5 POSITIONER

*Figure 2*

Loose-piece precision formed contacts are designed to be crimped with the hand crimping tools listed in the table in Figure 2. Refer to the instruction sheet packaged with the tool, for specific crimping procedure and tool inspection information.

**3.3. Insertion and Extraction**

Insertion/Extraction Tools 91067-2 (408-7508) and 91285-1 (408-9404) are designed for both pin and socket contacts. The 91067-2 tool is used with contacts for wire size 24 to 20 AWG and the 91285-1 tool is used with contacts for wire size 28 to 24 AWG.

**4. HARDWARE**

A shield and cable clamp assembly is used with the connector to house the cable or wire projecting from the rear of the connector and for strain relief of the

cable or wires. For additional information concerning the use of the shield and cable clamp assembly, refer to instruction sheet 408-7555.

Shielded cable clamp kits for AMPLIMITE HDP-20 connectors used with braid and foil-shielded cables are available in all connector sizes. The cable clamps may be used with latching blocks (208101, 745007, 745245, and 745286) and spring latches (745255-1) for panel-mounted or free-hanging applications. Refer to instruction sheet 408-6609 for additional information.

A male screw retainer kit (205980-1) and a female screwlock kit (205817-1) are used to secure mating connectors in panel-mounted or free-hanging applications. Refer to instruction sheet 408-7837 for information.

A slide latch post kit (206514-1) and a slide latch clip kit (206942-1) are also used to secure mating

connectors in panel-mounted or free-hanging applications. For additional information, refer to instruction sheet 408-7785.

Slide latch post kits and slide latches for all AMPLIMITE HDP-20 connector sizes are available for panel-mounted and free-hanging applications. Refer to instruction sheet 408-6551 for slide latch and slide latch post application procedure and information.

## **5. PANEL CUTOUT**

These connectors are designed for rack and panel applications. The plug should be mounted in the panel, and the receptacle in the rack.

Before making the panel cutout, refer to application specification 114-40030 to determine the number of

positions in the connector, whether it will be used with a cable clamp or side latch, whether it has floating bushings and what the required dimensions and clearances must be.

## **6. REVISION SUMMARY**

Since the previous release of this sheet, the following changes were made:

Per EC 0990-0418-01

- Updated document to corporate requirements
- Removed obsolete part numbers in Figures 1 and 2
- Replaced superseded Hand Tool 90312-1 (408-7694) with Hand Tool 58448-2 (408-9357) in Figure 2