

# AMP

AMP INCORPORATED  
Harrisburg, Pa. 17105

## AMP\* CHAMP\* CABLE-TO-CABLE AND CABLE-TO-PANEL CONNECTORS

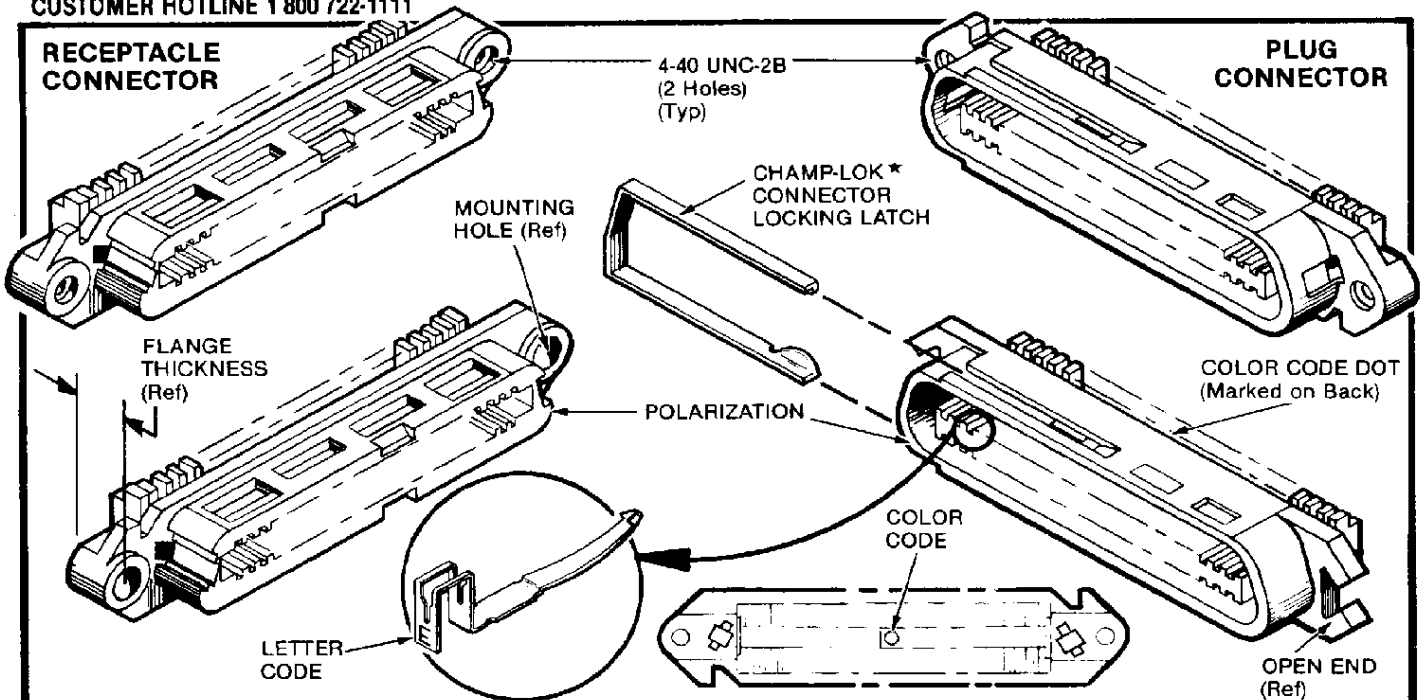
Instruction Sheet

# IS 7564

RELEASED

8-11-88

CUSTOMER HOTLINE 1 800 722-1111



WIRE SIZE* (AWG)	CONTACT				CONNECTORS					
	FOR RCPT	FOR PLUG	LTR CODE	COLOR DOT	CONT POSN	RECEPTACLE			PLUG	
						THREADED HOLES	THICK FLANGE	THIN FLANGE	THREADED HOLES	OPEN ENDS
22 Solid 22 Strd	553530-3	553531-3	C	Green	14	552304-1	-	2-552321-1	552300-1	552316-1
					24	552305-1	-	2-552322-1	552301-1	552317-1
					36	552306-1	-	2-552323-1	552302-1	552318-1
					50	552064-1	552324-1	2-552324-1	552173-1	552319-1
					64	552307-1	-	2-552325-1	552303-1	552320-1
24 and 26 Solid 24 Strd	553530-2	553531-2	B	Blue	14	552312-1	-	2-552271-1	552282-1	552270-1
					24	552313-1	552273-1	2-552273-1	552283-1	552272-1
					36	552314-1	552275-1	2-552275-1	552284-1	552274-1
					50	229975-1	552001-1	2-552001-1	229974-1	552032-1
					64	552315-1	-	2-552277-1	552285-1	552276-1
26, 27, or 28 Strd	553530-4	553531-4	E	Yel	14	552463-1	552473-1	2-552473-1	552442-1	552468-1
					24	552464-1	-	2-552474-1	552443-1	552469-1
					36	552465-1	552475-1	2-552475-1	552444-1	552470-1
					50	552391-1	552476-1	2-552476-1	552390-1	552471-1
					64	552469-1	-	2-552477-1	552488-1	552472-1
22 Solid 22 Strd	-	-	F	Brown	14	-	-	-	-	-
					24	555229-1	-	555228-1	-	-
					36	555037-1	-	555066-1	556040-1	-
					50	555227-1	-	555226-1	556039-1	-
					64	-	-	555151-1	-	-

\* Wire Insul Dia of .045 Max. is Acceptable for Contacts With Letter Codes C,B, and E.  
Wire Insul Dia of .056 Max. is Acceptable for Contacts With Letter Code F.

Fig. 1

### 1. INTRODUCTION

This instruction sheet (IS) covers the AMP CHAMP Connectors listed in Figure 1. These connectors are designed for cable-to-cable (two free-hanging connectors) and cable-to-panel (one free-hanging and one panel-mounted connector) applications.

Read this and all referenced material before starting assembly.

#### NOTE

All dimensions on this instruction sheet are in inches.

### 2. DESCRIPTION

Plug (male) and receptacle (female) connectors consist of polarized housings which are preloaded with contacts on .085-in. centers. They are available with 14-, 24-, 36-, 50-, or 64-contact positions that are arranged in two opposing rows.

Each housing has a color-code dot which indicates the wire size to be terminated in the connector. The flanges on the plug housing have either 4-40 UNC-2B threads for screw mounting, or open ends for bail mounting. The flanges on the receptacle

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housing have either 4-40 UNC-2B threads for screw mounting, or mounting holes (which accept screw or bail mounting hardware — depending on type of plug flanges). Note that receptacles have thick (.187 in.) flanges for free-hanging applications and thin (.078 in.) flanges for panel-mounted applications.

Contacts have been designed for discrete wire with solid conductors and for laminated cable with seven stranded conductors (see Figure 1). A letter code, designating the wire size, has been stamped on each contact to assist in selecting replacement contacts.

**CAUTION** *Cables are manufactured to various specifications (material, tolerances, etc). All are NOT compatible with CHAMP connectors. Before making production assemblies, it is suggested that samples of your cable be submitted to AMP Engineering for evaluation.*

A full complement of strain-relief covers, strain reliefs, and attaching hardware is available for each connector. Refer to AMP Instruction Sheet IS 3159 for the selection and installation procedures of strain relief hardware. Refer to IS 3160 for the selection and installation procedures of mounting hardware.

### 3. TERMINATION TOOLING

There are five basic terminating tools — each designed for a specific purpose. The tool designator, part number, function, and referenced instruction material are provided in the following text.

- CHAMPOMATOR\* Machine — Control Module and Applicator Module. The semi-automatic power tool is intended for production line terminations of discrete wires to CHAMP connectors. See Customer Manual CM 5411 for operating instructions.
- Frame Assembly and Tooling Assembly — Tooling Assembly 231593-2 is designed for mass termination of discrete wire, see AMP Instruction Sheet IS 3133 for operating instructions. Tooling Assembly 231592-2 is designed for laminated cable, see IS 3137. Tooling Assembly 230506 is designed for back-to-back connectors, see IS 6503.
- MI-1 — The portable Hand Operated Tool 229378 is intended for production line and field terminations of all connectors. See AMP Instruction Sheet IS 7559 for operating instructions.
- Palm Grip — The single wire Insertion Tool 229451-1 is intended for field service and

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repair terminations of all connectors. See AMP Instruction Sheet IS 7642 for operating instructions.

- T-Handle — The single wire Insertion Tool 229384-1 is intended for repair terminations of all connectors. See AMP Instruction Sheet IS 7558 for operating instructions.

### 4. CONTACT REPLACEMENT TOOL

Damaged contacts can be removed and replaced with the use of AMP Extraction/Insertion Tool 230238-1. Refer to AMP Instruction Sheet IS 7787, packaged with the tool, for contact selection, removal, and replacement.

### 5. CONNECTOR SELECTION

1. Determine the size of the wire, and the number of contacts that are to be terminated.
2. Determine the type of application that is to be used (cable-to-cable or cable-to-panel).
3. Determine the hardware to be used (captive screw for semi-permanent assembly, and bail mounts for quick disconnect assembly).
4. Using the information established in Steps 1, 2, and 3, refer to the chart in Figure 1 and select the applicable connectors.

### 6. INSTALLING DUST COVER

Dust covers should be used to protect the mating face of connectors that are NOT mated. Determine the size and style of the connector requiring protection, then refer to the chart in Figure 2 and select the applicable cover. To install the cover, simply align it with the mating face of the connector, and press it into position.

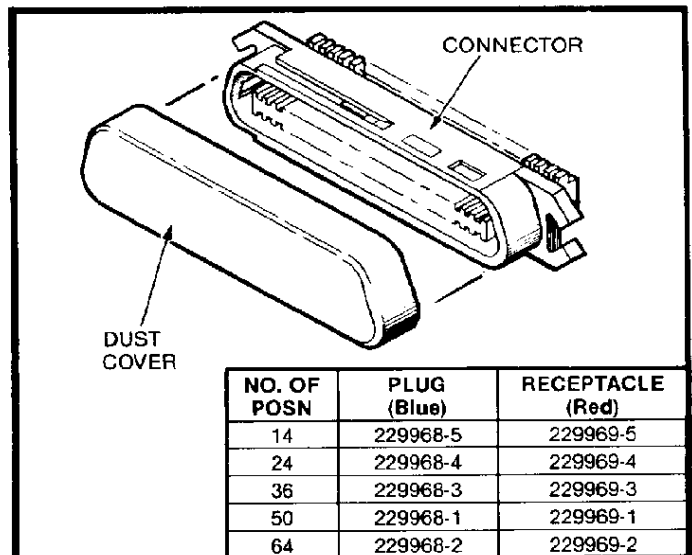


Fig. 2