

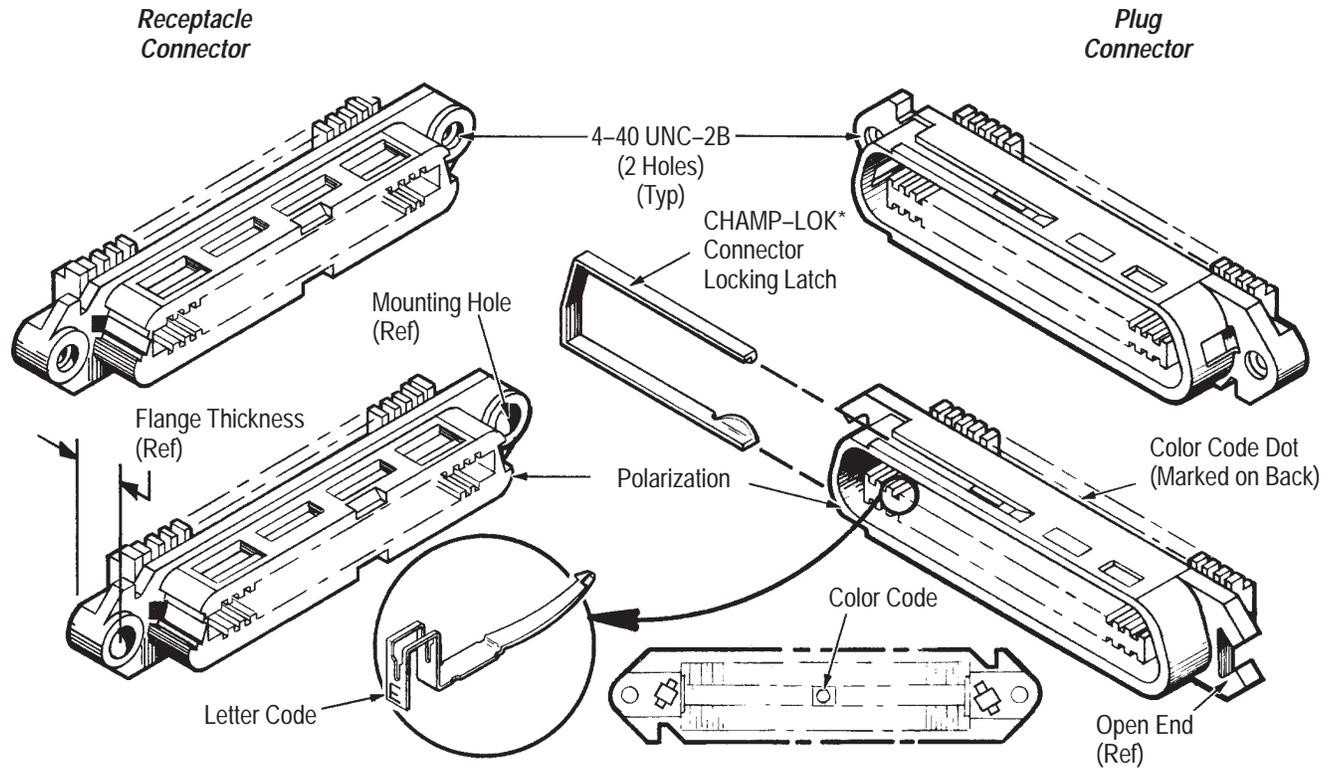
1. INTRODUCTION

This instruction sheet covers the 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

Dimensions in this instruction sheet are in millimeters [with inches in brackets]. Figures are for reference only and are not drawn to scale.

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



WIRE SIZE●, AWG	CONTACT		CONNECTORS					
	LTR CODE	COLOR DOT	CONT POSN	RECEPTACLE			PLUG	
				THREADED HOLES	THICK FLANGE	THIN FLANGE	THREADED HOLES	OPEN ENDS
22 Solid 22 Strd	C	Green	14	---	---	---	552300-1	---
			24	552305-1	---	2-552322-1	---	552317-1
			36	552306-1	---	---	---	552318-1
			50	552064-1	---	2-552324-1	552173-1	552319-1
			64	552307-1	---	---	552303-1	552320-1
24 and 26 Solid 24 Strd	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	2-552275-1	2-552275-1	552284-1	552274-1
			50	229975-1	2-552001-1	2-552001-1	229974-1	552032-1
			64	552315-1	---	2-552277-1	---	552276-1

Figure 1 (cont'd)

WIRE SIZE ●, AWG	CONTACT		CONNECTORS					
	LTR CODE	COLOR DOT	CONT POSN	RECEPTACLE			PLUG	
				THREADED HOLES	THICK FLANGE	THIN FLANGE	THREADED HOLES	OPEN ENDS
26, 27, or 28 Strd	E	Yellow	14	---	---	---	---	---
			24	---	---	2-552474-1	552443-1	552469-1
			36	---	---	2-552475-1	552444-1	552470-1
			50	552391-1	---	2-552476-1	552390-1	552471-1
			64	---	---	---	552488-1	---
22 Solid 22 Strd	F	Brown	14	---	---	---	---	---
			24	---	---	---	---	---
			36	---	---	---	556040-1	---
			50	555227-1	---	---	556039-1	---
			64	---	---	555151-1	---	---

●Wire insulation diameter of 1.14 [.045] max is acceptable for contacts with letter codes C, B, and E. Wire insulation diameter of 1.42 [.056] max is acceptable for contacts with letter code F.

Figure 1 (end)

2. DESCRIPTION

Plug (male) and receptacle (female) connectors consist of polarized housings which are preloaded with contacts on 2.16 [.085] 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 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 4.75 [.187] flanges for free-hanging applications and thin 1.98 [.078] 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 Tyco Electronics Engineering for evaluation.

A full complement of strain-relief covers, strain reliefs, and attaching hardware is available for each connector. Refer to Instruction Sheet 408-3159 for the selection and installation procedures of strain-relief hardware. Refer to Instruction Sheet

408-3160 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 409-5411 for operating instructions.

Frame Assembly and Tooling Assembly – Tooling Assembly 231593-2 is designed for mass termination of discrete wire, see Instruction Sheet 408-3133 for operating instructions. Tooling Assembly 231592-2 is designed for laminated cable, see Instruction Sheet 408-3137. Tooling Assembly 230506 is designed for back-to-back connectors, see Instruction Sheet 408-6503.

MI-1 – The portable Hand Operated Tool 229378 is intended for production line and field terminations of all connectors. See Instruction Sheet 408-7559 for operating instructions.

Palm Grip – The single wire Insertion Tool 229451-1 is intended for field service and repair terminations of all connectors. See Instruction Sheet 408-7642 for operating instructions.

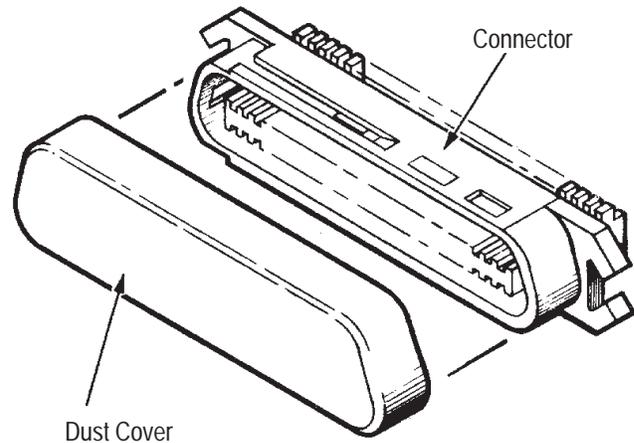
T-Handle – The single wire Insertion Tool 229384-1 is intended for repair terminations of all connectors. See Instruction Sheet 408-7558 for operating instructions.

4. CONTACT REPLACEMENT TOOL

Damaged contacts should not be used and can be removed and replaced with the use of Extraction/Insertion Tool 230238-1. Refer to Instruction Sheet 408-7787, 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 table in Figure 1 and select the applicable connectors.



NO. OF POSITIONS	PLUG (BLUE)	RECEPTACLE (RED)
14	229968-5	229969-5
24	229968-4	229969-4
36	229968-3	229969-3
50	229968-1	229969-1
64	229968-2	229969-2

Figure 2

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 table 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.

7. REVISION SUMMARY

Revisions to this instruction sheet per EC 0990-1242-03 include:

- Updated document to corporate requirements
- Updated document to current format
- Deleted obsolete part numbers in Figure 1