

AMPAMP INCORPORATED
Harrisburg, Pa. 17105**AMP ★ 1001 SERIES BOX CONNECTORS**
(Using Crimp, Snap-In Contacts)

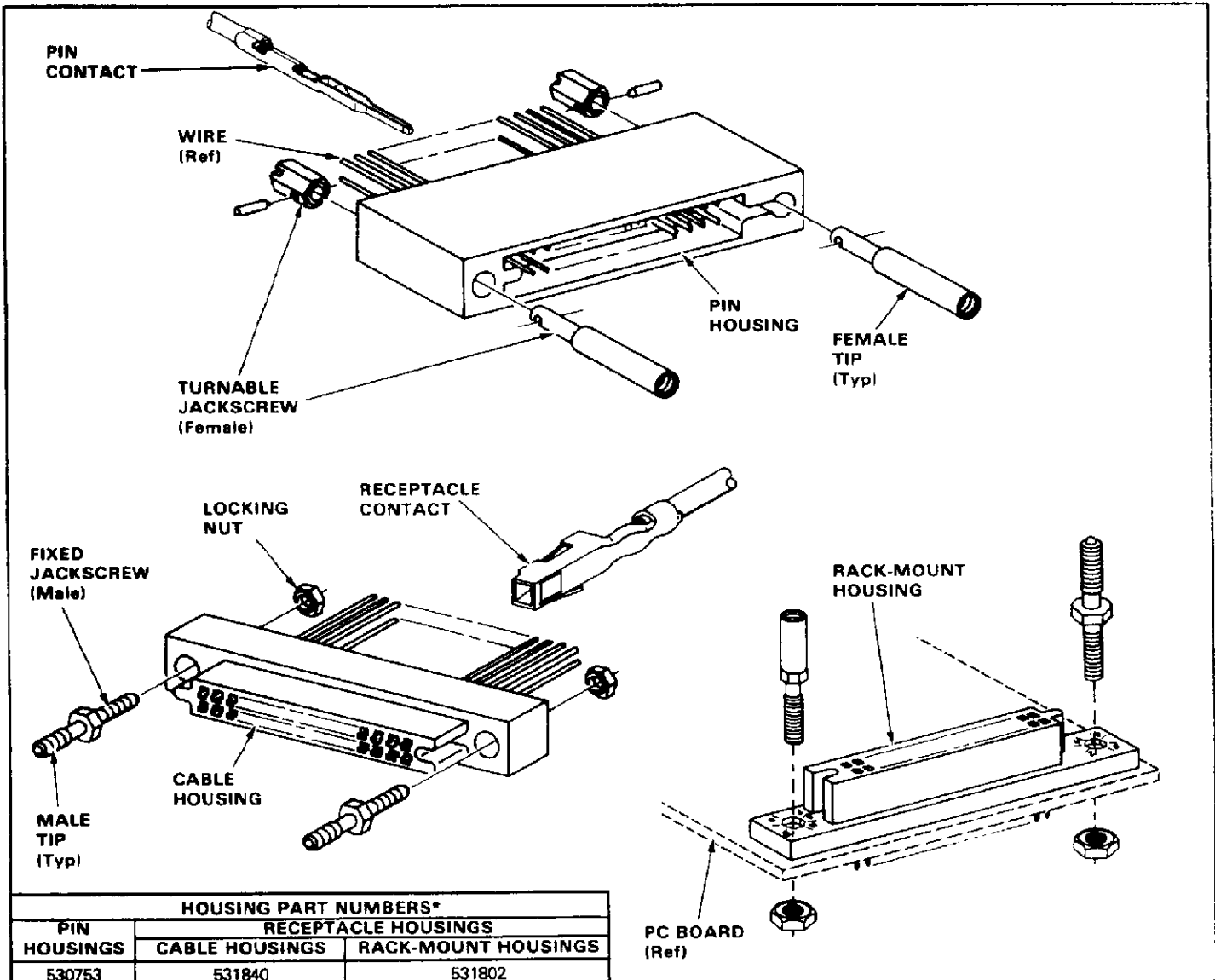
Instruction Sheet

IS 6623

RELEASED

8 - 4 - 87

CUSTOMER HOTLINE 1 800 722-1111



* SUPPLIED IN SIZES OF 30 THROUGH 110, INCREMENTS OF 10 POSITIONS

1. INTRODUCTION

AMP 1001 Series pin and receptacle box connectors, using crimp, snap-in contacts, are designed for two-piece discrete-wire interconnect applications. The connectors feature pin and receptacle contacts which are crimped to wires and loaded into their respective housings, and a variety of jackscrew hardware which is used to fasten the two connectors together.

This instruction sheet (IS) covers the housings and contacts shown in Figure 1 which are used in cable-to-cable, cable-to-rack-mount/pc board, free-hanging cable, and right-angle cable applications. Jackscrew hardware (also shown in Figure 1) is covered in IS 6624. It is suggested that you read these instructions and those referenced before assembling

Fig. 1

the housings, contacts, and jackscrew hardware.

2. DESCRIPTION

The 1001 Series pin and receptacle box connectors are polarized connectors molded from glass-filled polyester. Polarization is accomplished by a tongue and groove feature on each housing. The tongue of the pin housing fits into the groove of the receptacle housing, etc. This is shown in Figure 2, along with other main features of the product line.

The housings are marketed in a variety of sizes ranging from 30 through 110 positions in increments of 10. Cavity identification is stamped on the mating face (FRONT) of the receptacle housing and on the wire-entry (REAR) face of the pin housing.

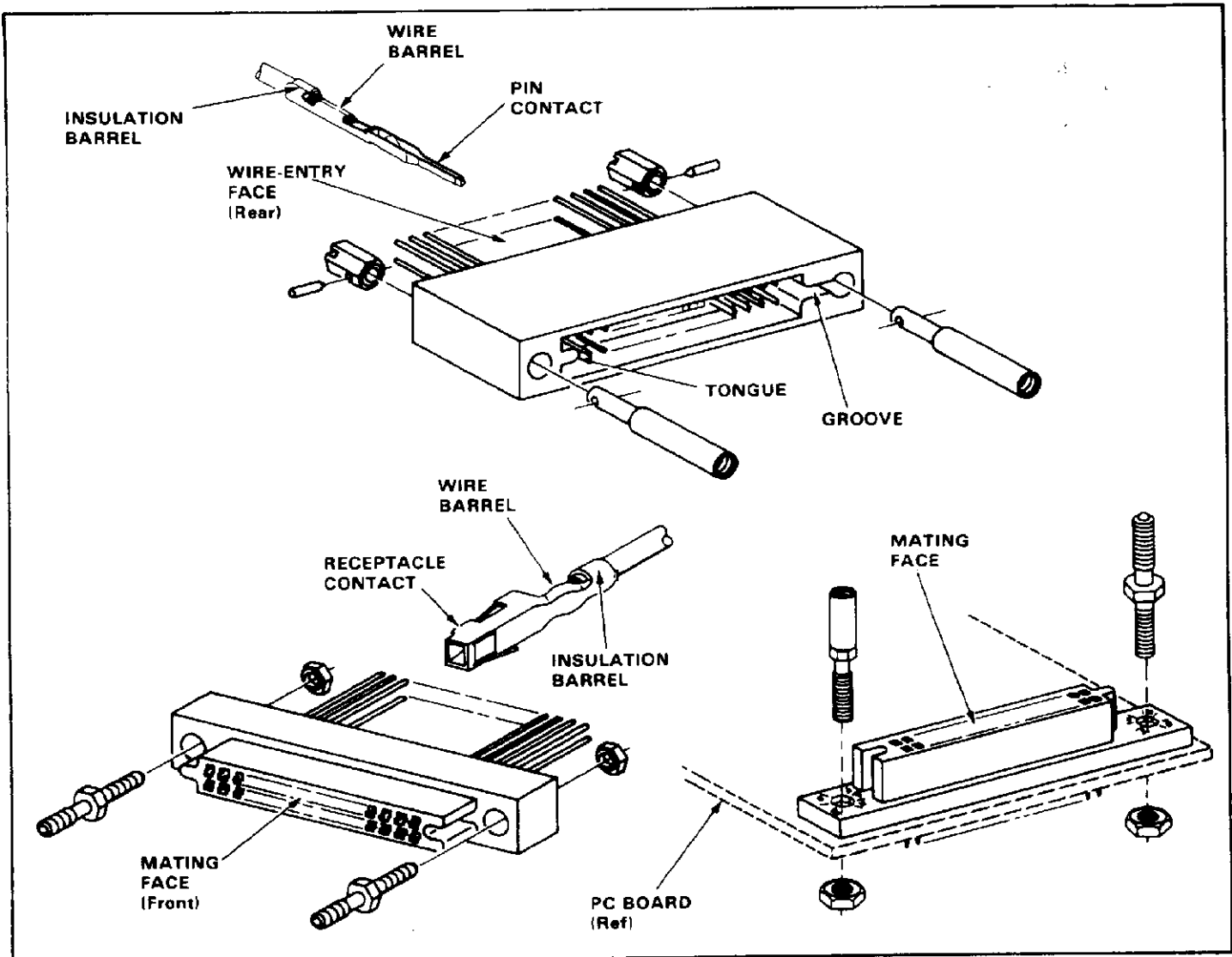


Fig. 2

3. CONTACTS AND HOUSINGS

Only one wire range of pin contacts is marketed. Receptacle contacts are marketed in two wire ranges. Both sizes are compatible with any cable or rack-mount housing.

3.1. Selection

Refer to Figure 3 and determine the size of contact and correct housing to be used. Select the wire within the specified range and insulation diameter, and select the appropriate strip or loose-piece contact.

3.2. Crimping

Strip-form contacts are designed to be crimped with a standard or miniature quick-change applicator used in an automatic or semi-automatic machine. Consult your local AMP representative for assistance in selecting the applicator or machine that will best suit your needs.

Loose-piece contacts are designed to be crimped with the AMP hand crimping tools listed in Figure 3. Refer to the instruction sheet (IS xxxx, Figure 3), packaged with the tool, for specific crimping instructions.

STYLE	WIRE RANGE (AWG)	INSUL DIA RANGE (In.)	PART NUMBERS		HAND TOOL
			STRIP	LOOSE PIECE	
Pin	26 to 22	.036 to .054	530750-4	530750-5	90346-1 (IS 7820)
Receptacle	↓	↓	531216-1	531216-2	90301-2 (IS 7909)
			531216-3	531216-4	
	32 to 28	.025 to .054	531215-1	531215-2	
↓	32 to 28	.025 to .054	531215-3	531215-4	↓

Fig. 3

3.3. Insertion

An insertion tool is NOT required for inserting a crimped contact into the housing. It is important to properly orient the crimped contact with the housing before insertion. To insert a crimped contact, proceed as follows (see Figure 4):

1. Align the contact with the REAR of the contact cavity. Use Step 2 to orient the pin contact and Step 3 to orient the receptacle contact.
2. Refer to the left portion of Figure 4, and orient the pin contact with the locking latch facing "UP" for insertion into the upper cavity. For insertion into the lower cavity, the locking latch should face "DOWN".
3. For the receptacle contact, refer to the right of Figure 4 and orient the contact as shown with its locking latch "DOWN" for insertion into *either* the upper or lower cavities. Note that this orientation also applies to the rack-mount housing, providing the tongue is on the left as

shown.

4. Grasp wire — directly behind contact insulation barrel — and push crimped contact straight into cavity until it bottoms (an audible click).

5. Pull back lightly on wire to be sure locking latch has locked in cavity. (A pull indicating a retention of 3 lb, max, is allowed.)

3.4. Extraction

AMP extraction tools are available to remove contacts from these connectors. Extraction Tool No. 91156-1 is designed to remove pin contacts, and Extraction Tool No. 91156-2 removes receptacle contacts. Insert releasing tip into FRONT (mating face) of cavity — between cavity and outer wall. Maintain pressure on the contact locking latch and partially remove contact from rear of contact cavity.

Next, remove tool and pull contact out from REAR of cavity. For specific extraction procedures, refer to AMP Instruction Sheet IS 6660, packaged with the tool.

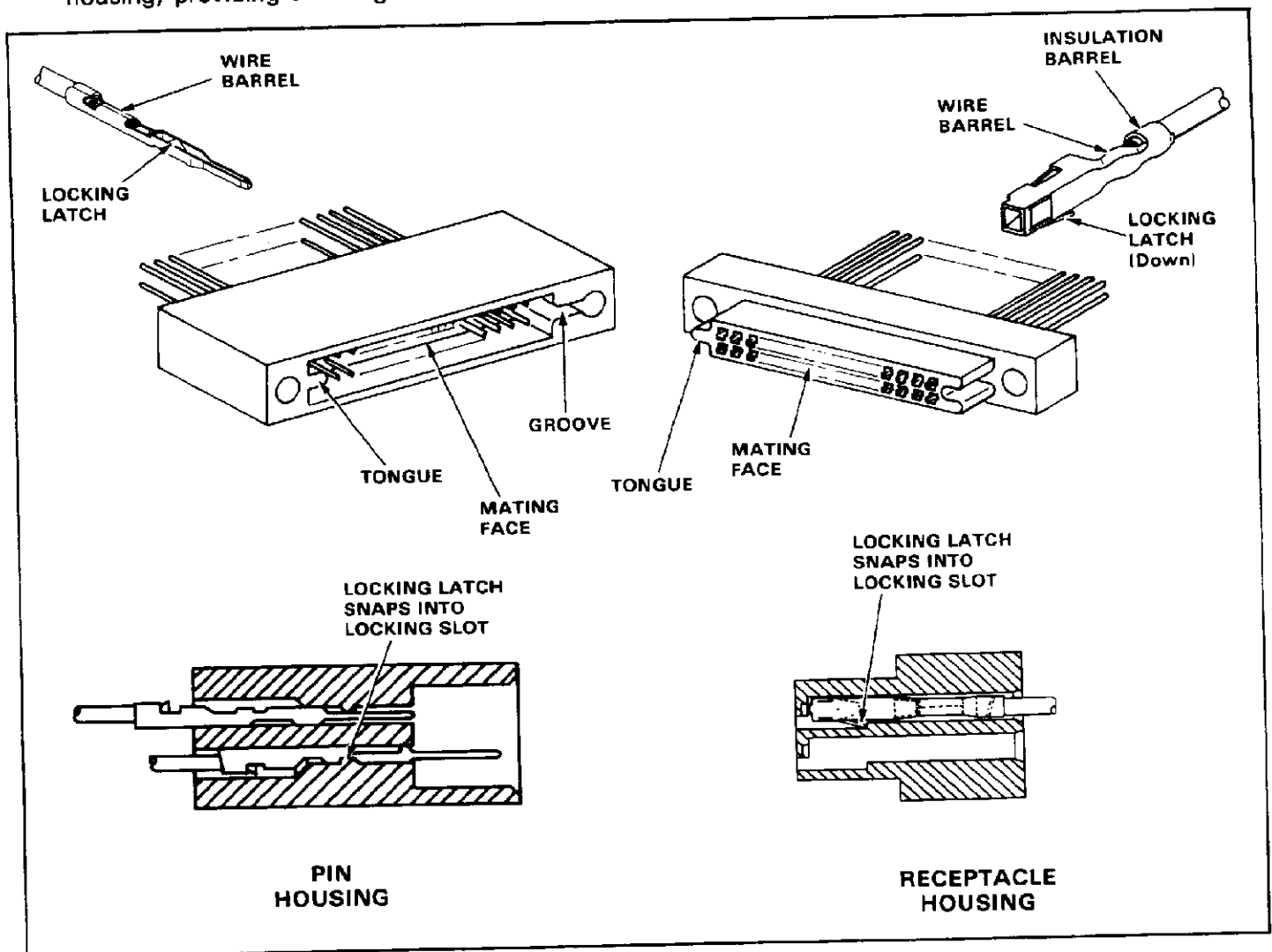
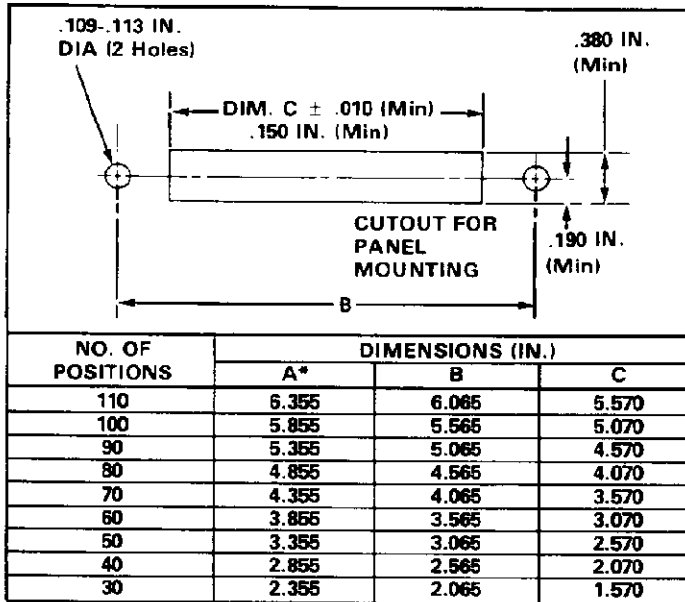


Fig. 4

4. JACKSCREW HARDWARE

Jackscrew hardware is available in turnable or fixed styles for most applications. Rack-mount/pc board applications (using housing 531802) require a cutout for mounting. This is shown in Figure 5.



* OVERALL LENGTH OF CONNECTOR

Fig. 5

The jackscrew kits are selected according to the application. The kits used for cable-to-cable applications differ from those designed for cable-to-rack-mount/pc board connector applications, etc. Procedures on how to assemble each jackscrew kit to the respective connector are contained in IS 6624.

Regardless of the application, opposite-style jackscrews *must* be used with the mating counterparts (for example, male jackscrews must mate with female jackscrews, etc). Note that two jackscrews of the same style, as well as different styles, can be used on one connector.

For cable-to-cable applications, the kits will be supplied as requested with either the pin housing

ASSEMBLY STYLES	JACKSCREW HARDWARE			
	INSTALLED ON PIN HSG 530753		MATING HARDWARE FOR RCPT HSG 531840	
	TONGUE END	GROOVE END	TONGUE END	GROOVE END
530752-()	Female 530754-2	Female 530754-2	Male 530751-3	Male 530751-3
	Male 530754-1	Female 530754-2	Female 530751-4	Male 530751-3
	Female 530754-2	Male 530754-1	Male 530751-3	Female 530751-4
	Male 530754-1	Male 530754-1	Female 530751-4	Female 530751-4

* IF ORDERED AS 530752 (), EACH ASSEMBLY CONTAINS A PIN HOUSING WITH TURNABLE JACKSCREWS INSTALLED ON THE PIN HOUSING. THE FOUR COMBINATIONS OF JACKSCREWS AVAILABLE ARE LISTED UNDER "INSTALLED ON PIN HOUSING" IN THE TABLE ABOVE.

Fig. 6

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(530753) or the receptacle cable housing (531840). Before starting to assemble these products, it is suggested that they be checked to ensure that the correct products are being used.

Two assembly styles are available for use with the pin housing; each is identified by a part number. Part No. 530752-() is a pin housing assembly (a pin housing with turnable hardware installed on that housing). Part No. 530755-() consists also of a pin housing assembly in addition to loose-piece fixed hardware to be installed on the mating receptacle housing and a quantity of loose-piece contacts. Figures 6 and 7 list the hardware combinations which are factory-installed on the pin housings and the compatible hardware for the mating receptacle connector.

ASSEMBLY STYLES	JACKSCREW HARDWARE			
	INSTALLED ON PIN HSG 530753		MATING HARDWARE FOR RCPT HSG 531840	
	TONGUE END	GROOVE END	TONGUE END	GROOVE END
530755-()	Female 530754-2	Female 530754-2	Male 530751-3	Male 530751-3
	Male 530754-1	Female 530754-2	Female 530751-4	Male 530751-3
	Female 530754-2	Male 530754-1	Male 530751-3	Female 530751-4
	Male 530754-1	Male 530754-1	Female 530751-4	Female 530751-4

* IF ORDERED AS 530755-(), EACH ASSEMBLY CONTAINS A PIN HOUSING WITH TURNABLE JACKSCREWS INSTALLED ON THE PIN HOUSING IN ADDITION TO THE FOLLOWING: FIXED JACKSCREWS (and nuts) TO BE INSTALLED ON THE MATING RECEPTACLE HOUSING AND A QUANTITY OF LOOSE PIECE CONTACTS (five more than the size of the housing).

Fig. 7

The assembly style available for use with the receptacle cable housing 531840-() is receptacle cable housing assembly 531841-(). It consists of one receptacle cable housing with turnable jackscrew hardware installed on that housing. Figure 8 lists the hardware combinations available for the receptacle housings and the compatible hardware to be installed on the mating pin housings.

ASSEMBLY STYLES	JACKSCREW HARDWARE			
	INSTALLED ON RCPT HSG 531840		MATING HARDWARE FOR PIN HSG 530753	
	TONGUE END	GROOVE END	TONGUE END	GROOVE END
531841-()	Male 530754-3	Male 530754-3	Female 532483-2	Female 532483-2
	Male 530754-3	Female 530754-4	Female 532483-2	Male 532484-1
	Female 530754-4	Male 530754-3	Male 532484-1	Female 532483-2
	Female 530754-4	Female 530754-4	Male 532484-1	Male 532484-1

* IF ORDERED AS 531841-(), EACH ASSEMBLY CONTAINS A RECEPTACLE CABLE HOUSING WITH TURNABLE JACKSCREWS INSTALLED ON THE RECEPTACLE HOUSING. THE FOUR COMBINATIONS OF JACKSCREWS AVAILABLE ARE LISTED UNDER "INSTALLED ON RECEPTACLE HOUSING" IN THE TABLE ABOVE.

Fig. 8