Installation of AMPINNERGY* Power Junction Boxes Into Movable Modular Walls

1. INTRODUCTION

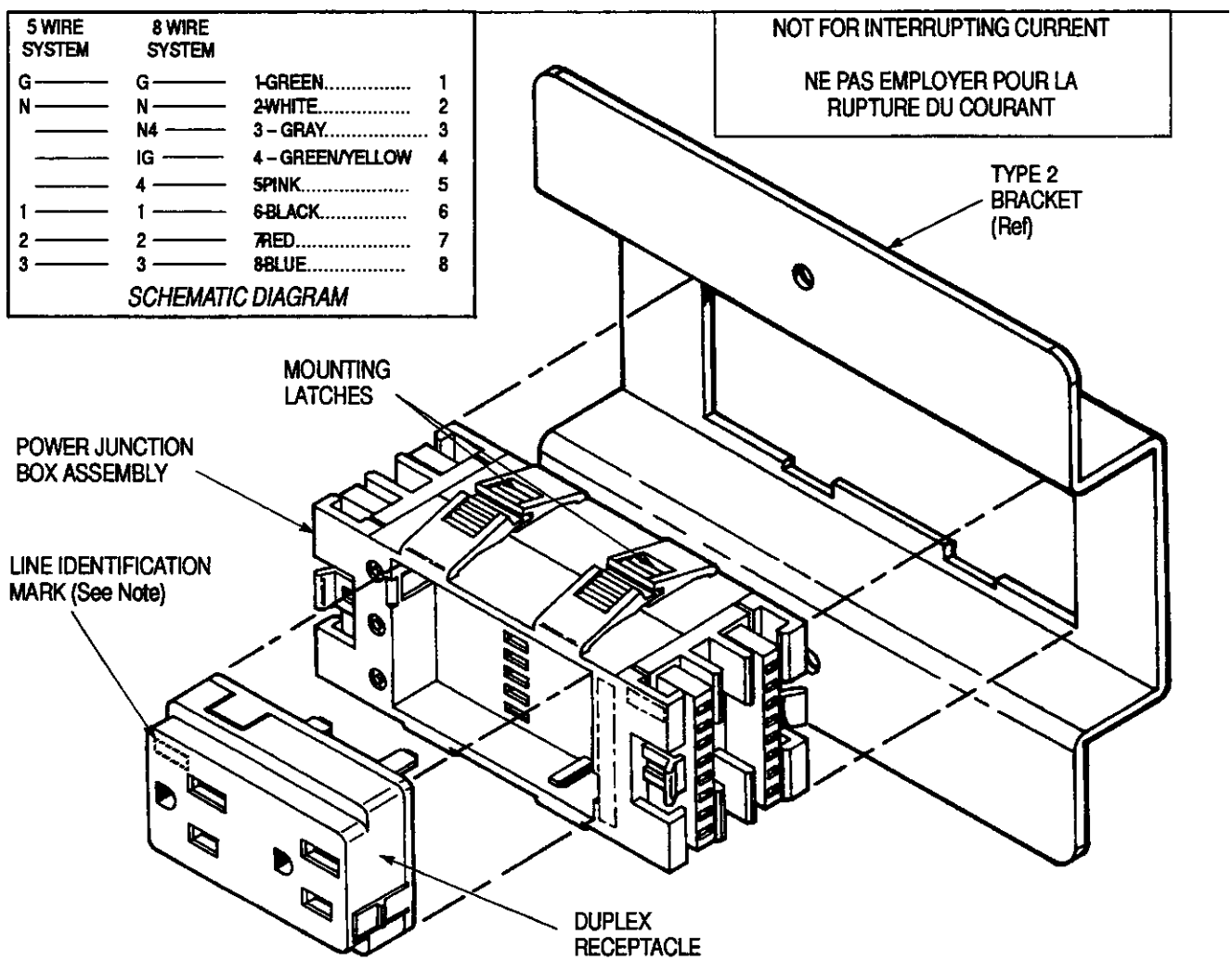
This instruction sheet covers the installation procedures for AMPINNERGY raceway mounting kits used to mount power junction boxes and multiplex assemblies in movable modular walls. Refer to the chart in Figure 1, Page 2, for raceway mounting kits, junction boxes, multiplex assemblies, and duplex receptacles.

NOTE *Dimensions on this sheet are in metric units [with U.S. customary units in brackets].*

2. DESCRIPTION

AMPINNERGY System connectors consist of a five-wire system with Lines 1, 2, and 3; a common ground; and a shared neutral; with the eight-wire system having an additional Line 4; an isolated ground; and an individual neutral. The system has the capability of providing service on both sides of a modular wall panel simply by installing pluggable duplex receptacles into a mounted junction box.

A system with an isolated ground circuit is needed because sensitive electronic equipment is often affected by transient signals from other equipment connected to the common ground. These currents can often cause delicate circuits in equipment to malfunction. Systems connected to the isolated ground circuit have a "clean" grounding circuit. The isolated circuit is connected directly with the service entrance panel.



NOTE: LINES 1, 2, 3, AND 4 DUPLEX RECEPTACLES ARE MARKED BY EITHER 1, 2, 3, OR 4. DUPLEX RECEPTACLES WITH THE ISOLATED GROUND ARE MARKED 1G, 2G, 3G, OR 4G WITH AN ORANGE COLORED TRIANGLE (▲) FOLLOWING IT.

Figure 1 (cont'd)

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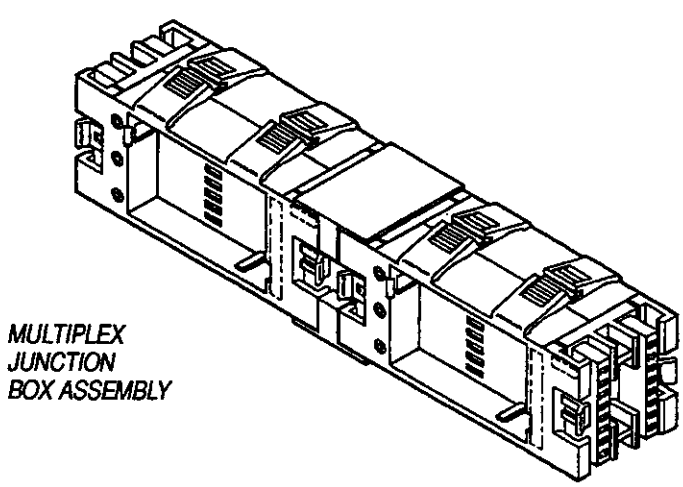
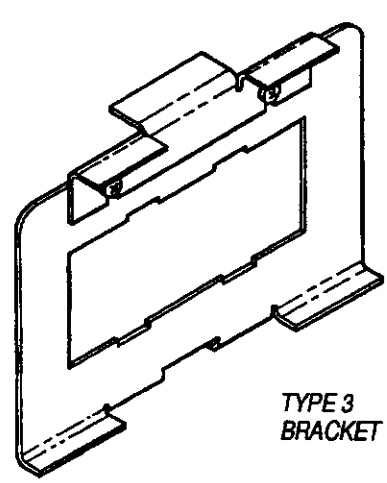
PART NO.	DESCRIPTION	REMARKS
556952-1	Type 2 Raceway Kit for Junction Box	Accepts Junction Box Assy 556209-1 or 556124-1
557669-1	Type 3 Raceway Kit for Junction Box	
557670-1	Type 3 Raceway Kit for Multiplex Assy	Accepts Junction Box Assy 555844-1 or 555843-1
556209-1	5- Wire Power Junction Box Assy, Snap-in	Mates with Cable Assy† 556212-( )
555844-1	5-Wire Multiplex Junction Box Assy, Snap-in	
556124-1	8-Wire Power Junction Box Assy, Snap-in	Mates with Cable Assy† 556127-( )
555843-1	8-Wire Multiplex Junction Box Assy, Snap-in	
556100-1	Duplex Receptacle Assy, 55 [2] Wall Thickness	Used with Power Junction Boxes and Multiplex Junction Boxes listed above.
556101-1	5- and 8-Wire System, Line 1, Double Key	
556102-1	Line 2, Double Key	
556103-1	Line 3, Double Key	
556104-1	8-Wire System, Line 4, Double Key	
556105-1	Line 1, Isolated Ground	
556106-1	Line 2, Isolated Ground	
556107-1	Line 3, Isolated Ground	
	Line 4, Isolated Ground	
556108-1	Duplex Receptacle Assy, 57.15 [2.25] Wall Thickness	
556109-1	5- and 8-Wire System, Line 1, Double Key	
556110-1	Line 2, Double Key	
556111-1	Line 3, Double Key	
556112-1	8-Wire System, Line 4, Double Key	
556113-1	Line 1, Isolated Ground	
556114-1	Line 2, Isolated Ground	
556115-1	Line 3, Isolated Ground	
	Line 4, Isolated Ground	
556116-1	Duplex Receptacle Assy, 63.5 [2.5] Wall Thickness	
556117-1	5- and 8-Wire System, Line 1, Double Key	
556118-1	Line 2, Double Key	
556119-1	Line 3, Double Key	
556120-1	8-Wire System, Line 4, Double Key	
556121-1	Line 1, Isolated Ground	
556122-1	Line 2, Isolated Ground	
556123-1	Line 3, Isolated Ground	
	Line 4, Isolated Ground	



MULTIPLEX JUNCTION BOX ASSEMBLY



TYPE 3 BRACKET

Figure 1 (end)

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The system is UL recognized which allows use as follows: 125V and 15A for service outlets and 125/250V and 20A for pass-through power.

3. INSERTION OF DUPLEX RECEPTACLE

1. Select the appropriate duplex receptacle. See chart in Figure 1.

2. Insert receptacle into junction box by aligning the groove of the receptacle with the key of the box and snapping the receptacle firmly into place. Refer to Figure 2. No tooling is needed for insertion.

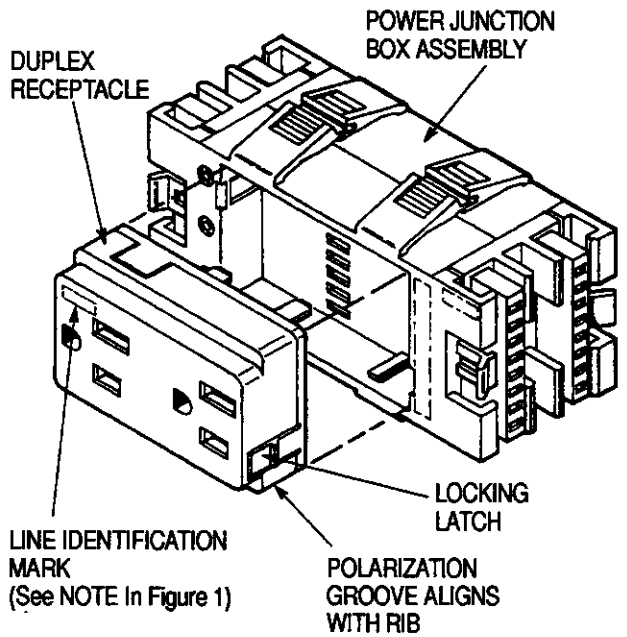


Figure 2 92-101

4. EXTRACTION OF DUPLEX RECEPTACLE

1. To extract a duplex receptacle, it is recommended that two flat-blade screwdrivers be used. Fit each screwdriver blade into the slot between the locking latch of the receptacle and the side of the junction box as shown in Figure 3. The screwdriver handles should be positioned at about 45° angles.

2. Rock each screwdriver handle simultaneously towards the face of the junction box. This will force the locking latches to open, releasing the receptacle and lifting it in an upward direction.

3. Extract the receptacle from the junction box by pulling it straight out by hand.

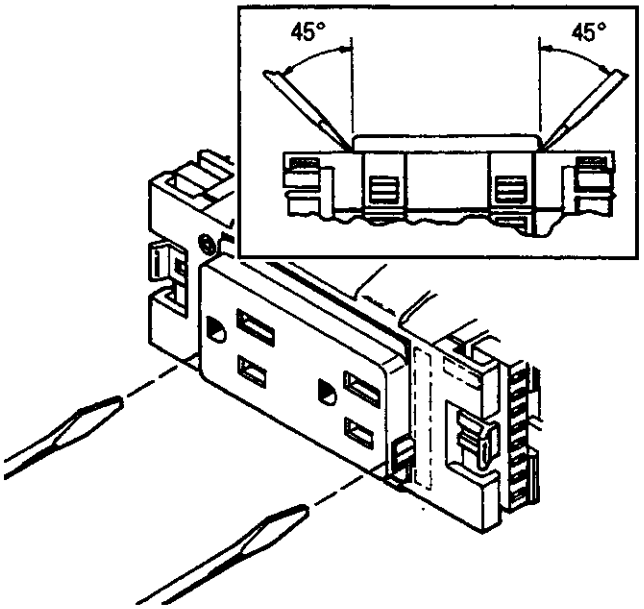


Figure 3 92-102

5. INSTALLATION OF MOUNTING BRACKET

Refer to the chart in Figure 1 and determine the type of raceway mounting kit to be installed.

NOTE *The following procedures illustrate a Type 2 raceway kit installation. These procedures also apply to the Type 3 raceway kits.*

1. Determine length of movable modular wall. Locate and mark center of wall. See Figure 4.

2. Use bracket as a template to determine vertical hole locations. Mark and drill two holes for 10/32 self-tapping screws.

3. Mount bracket inside raceway channel with 10/32 screws (customer supplied).

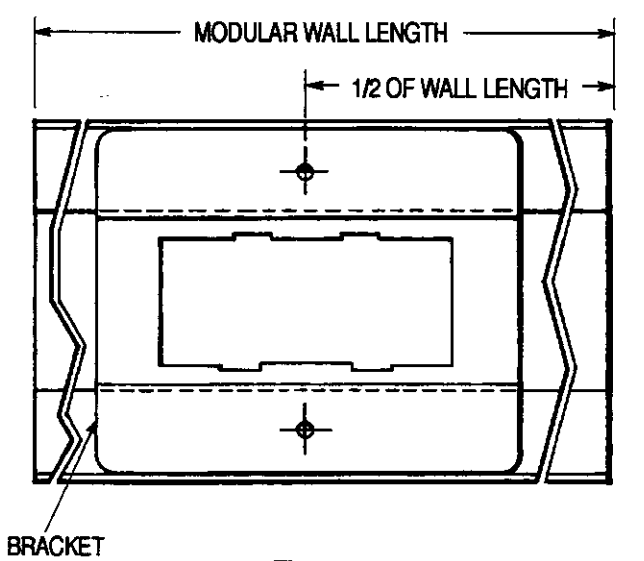


Figure 4 92-103

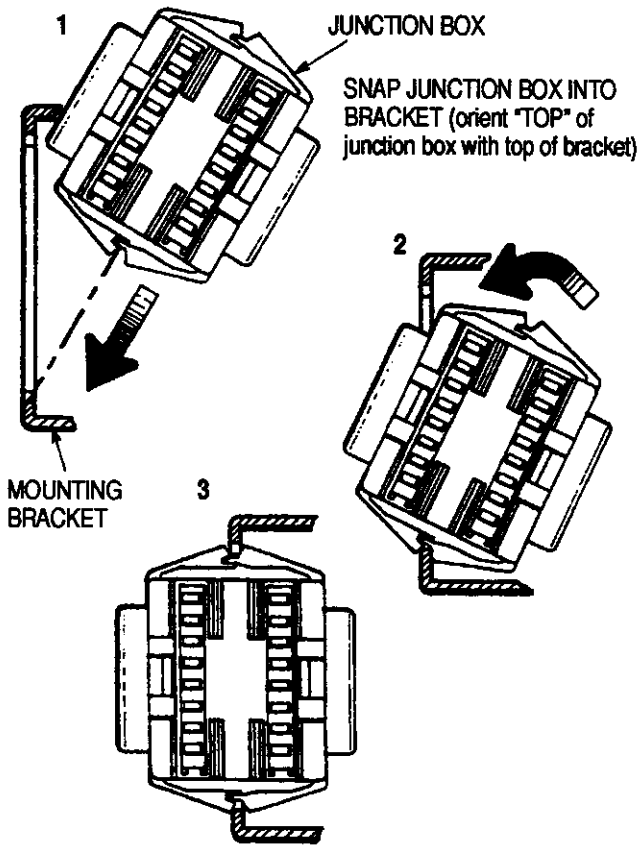


Figure 5 92-104

1. Drill a 12.7mm [.5 in.] hole in center of raceway cover (based on a 55.25mm [2.175 in.] raceway cover width. See Figure 6.

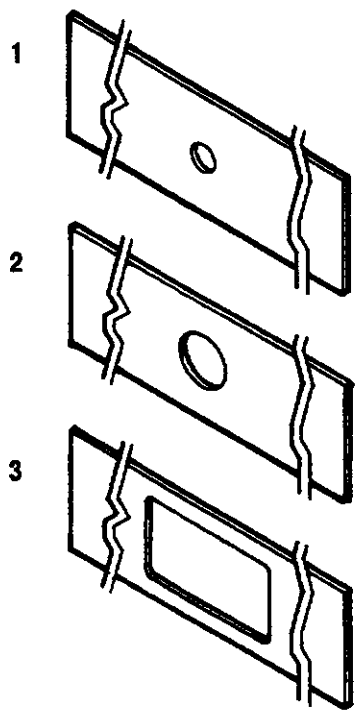


Figure 6 92-105

6. INSTALLATION OF POWER JUNCTION BOX (Figure 5)

1. Place bottom latches of the junction box into mounting bracket.
2. Push down on junction box (to depress bottom latches) and at the same time slowly rotate top of junction box toward and into bracket.

7. REMOVAL OF POWER JUNCTION BOX (Figure 5)

1. Push down on the junction box (to depress bottom latches) and at the same time, push down the top latches to clear mounting bracket.
2. Rotate junction box out of bracket.

8. RACEWAY COVER

NOTE

Recommended tooling for creating an opening in the raceway cover for the junction box includes Greenlee Hydraulic Tool 7904SB, Greenlee Die Set 50722603, and a Greenlee Punch (25.4mm [1 in.] size).

Greenlee Textron Inc.
Subsidiary of Textron Inc.
4455-T Boeing Drive
Rockford, IL 61109

2. Punch a 25.4mm [1 in.] conduit size hole in center of cover using the Greenlee Punch.
3. Using a Greenlee Die Set, punch a rectangular-shaped hole in center of cover.

NOTE

The duplex receptacle(s) should be placed in the junction box before replacing the raceway cover.

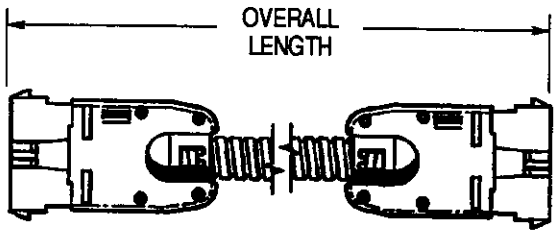
4. Replace cover on raceway of wall panel.

9. POWER CABLE ASSEMBLIES (Figure 7)

Each power cable assembly consists of two power connector assemblies connected by flexible conduit assembled by two strain reliefs.

The overall length of a power cable assembly must be determined by measuring the distance between the mating faces of each power connector.

Contact AMP Engineering to obtain lengths for the power cable assemblies.



POWER CABLE ASSEMBLIES		
TYPE OF POWER ENTRY	WIRE SYSTEM	PART NUMBER
SINGLE-ENDED	5	555858
SINGLE-ENDED	8	555856
DOUBLE-ENDED (Power-To-Power)	5	556212
DOUBLE-ENDED (Power-To-Power)	8	556127

NOTE: For more information on power cable assembly lengths, etc., contact AMP Engineering by calling the TOOLING ASSISTANCE CENTER: 1 800 522-6752.

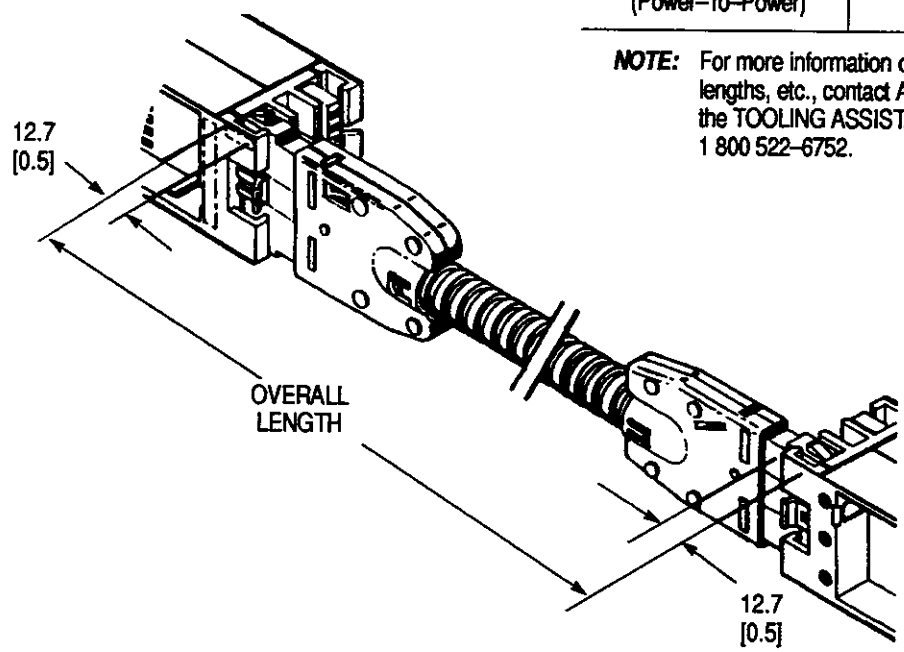


Figure 7

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