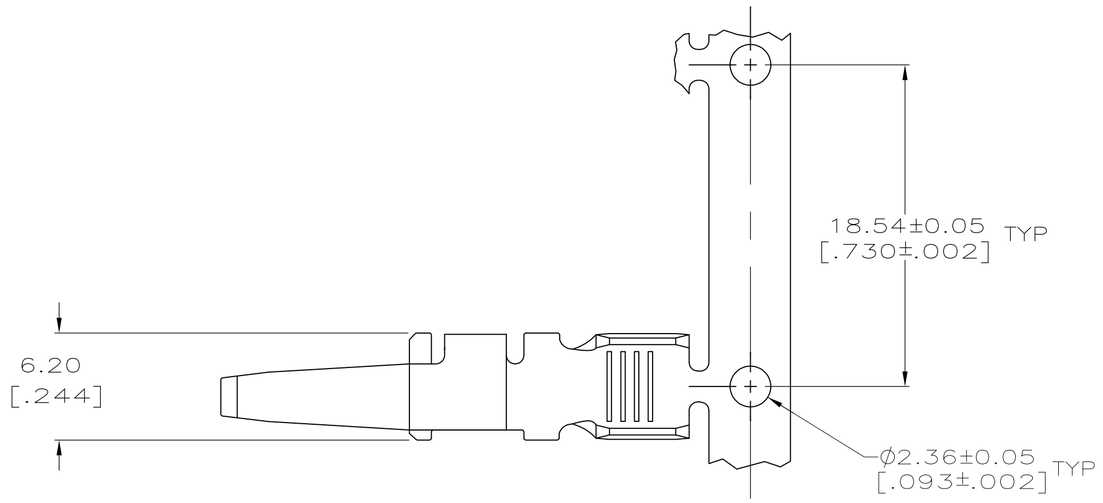
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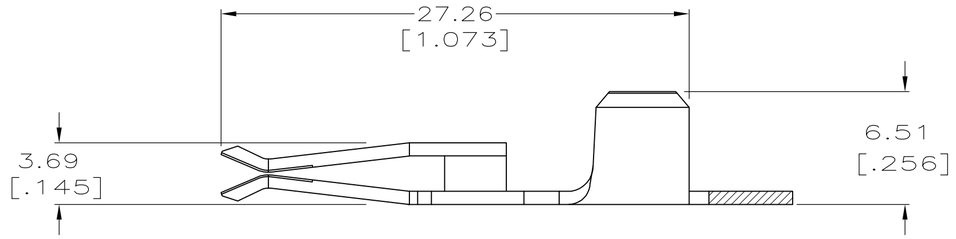
LOC	DIST
FT	60

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	C1	REVISED PER ECO-11-004917	11MAR11	RK	HMR

勝特力電材超市-龍山店 886-3-5773766
勝特力電材超市-光復店 886-3-5729570
胜特力电子(上海) 86-21-34970699
胜特力电子(深圳) 86-755-83298787
http://www.100y.com.tw





1. ALL DIMENSIONS SHOWN ARE MAXIMUM UNLESS OTHERWISE SPECIFIED.

2. MATERIAL: 2.54μm [.000100] MINIMUM TIN PLATED COPPER ALLOY, 0.74-0.79 [.030±.001] THICK.

3. WIRE BARREL ACCEPTS ONE 10 OR 12 AWG STRANDED COPPER WIRE.

4. CONTACTS ON REEL SHALL BE CRIMPED USING APPLICATOR TOOL 567256.

5. LOOSE PIECE CONTACTS SHALL BE CRIMPED USING TOOLS AND DIE SETS LISTED BELOW.
HAND TOOL: AMP PART NO. 69710
PNEUMATIC TOOL: AMP PART NO. 69365
DIE SET 10 AWG: AMP PART NO. 58491-1
DIE SET 12 AWG: AMP PART NO. 58490-1

DESCRIPTION	PART NO
2000/REEL 4	556880-2
LOOSE PIECE 200/BOX 5	556880-1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm [INCHES]

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ± -
1 PLC ± -
2 PLC ± -
3 PLC ± -
4 PLC ± -
ANGLES ± -

MATERIAL 2 FINISH 2

DWN D. STRAUSSER 5-30-91
CHK B. FOX 8-23-91
APVD M. MILLER 8-26-91
PRODUCT SPEC 108-1349
APPLICATION SPEC 114-6044
WEIGHT -

TE Connectivity

NAME CONTACT, DUAL BEAM, 10-12 AWG, WTB, AMPINNERGY TM

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	00779	C-556880	-

CUSTOMER DRAWING | SCALE 4:1 | SHEET 1 OF 1 | REV C1

556880

AMPINNERGY* Modular Wiring System

NOTE

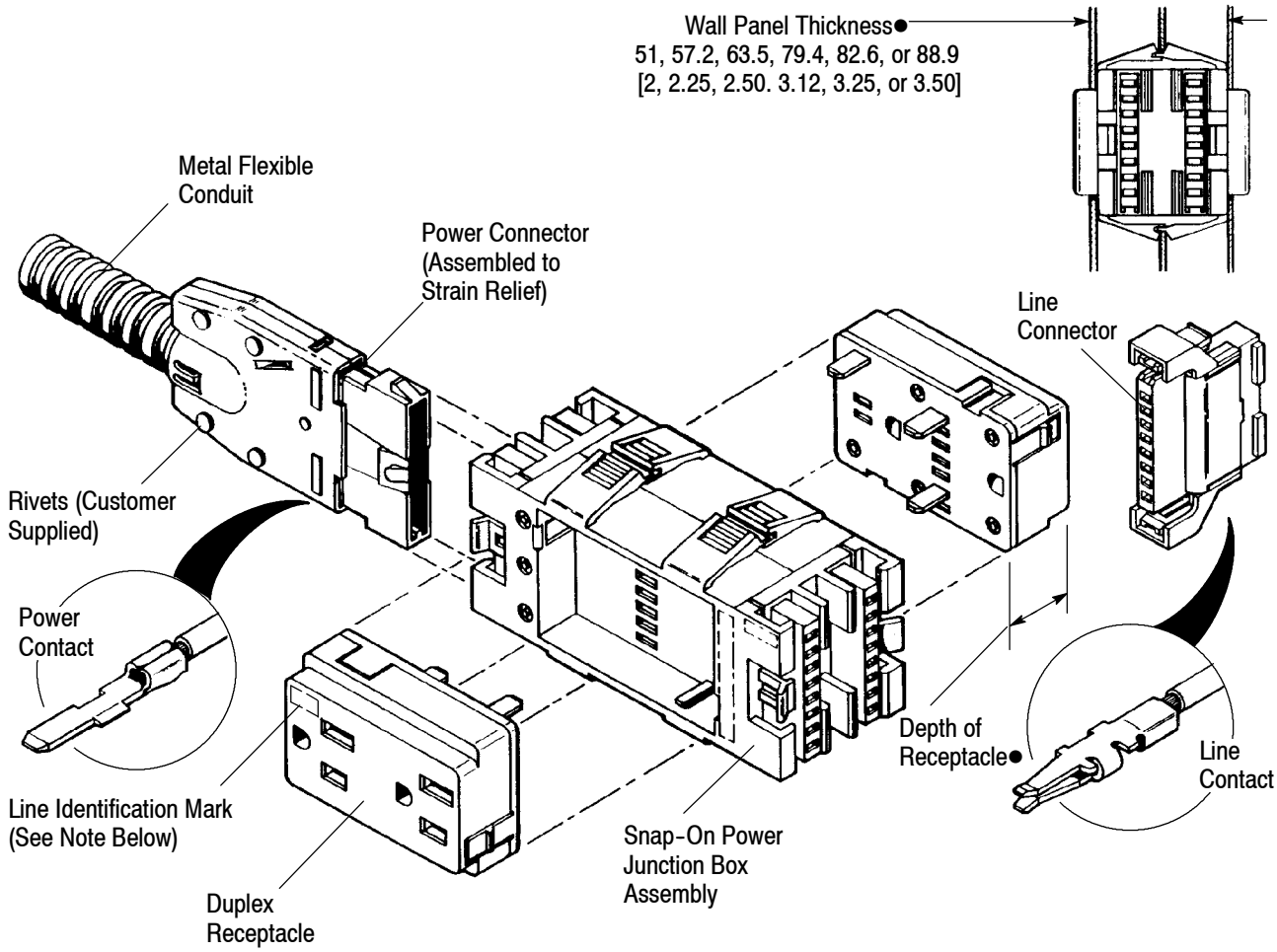
All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of ±0.13 [±.005] and angles have a tolerance of ±2°. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of AMPINNERGY modular wiring system. The system consists of connectors and harness assemblies. The system has the capability of providing electrical service outlets to both sides of a workstation wall panel by installing pluggable duplex receptacles into a mounted junction box assembly.

When corresponding with personnel, use the terminology provided in this specification to facilitate your inquiries for information. Basic terms and features of this product are provided in Figure 1.

Receptacle Wall Panel Installation



● Depth of Receptacle Selected on Basis of Desired Wall Panel Thickness

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, 4G, or 5G with an orange colored triangle (▲) under the designated line marking indicator number.

Figure 1

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The power junction box assembly has two main functions at each workstation: it provides electrical service, and it supplies feed-thru capabilities to and from other workstations. The assembly uses power junction box connector contacts, and it provides four circuit options.

The duplex receptacles are pluggable modules that snap into a power junction box assembly and function as Line 1, 2, 3, or 4 receptacles or as Line 1G, 2G, 3G, 4G, or 5G receptacle with isolated ground circuit. The receptacles are available in styles for six wall panel thicknesses.

The power contact and line contact are designed to be crimped onto wire size 12 or 10 AWG having stranded conductors.

The two-piece, unassembled power housing accepts power contacts crimped to wires and functions as a power connector. It mates with a line connector or power junction box assembly.

The two-piece, unassembled line housing accepts line contacts crimped to wires and functions as a line connector; it is compatible with the power connector only.

The unassembled strain relief is a metal component that is used with both the power and line connectors to provide strain relief when using flexible conduit.

2. REFERENCE MATERIAL

2.1. Revision Summary

Revisions to this application specification include:

- Replaced company logo

2.2. Customer Assistance

Reference Product Base Part Number 556124 and Product Code 2421 are representative of AMPINNERGY modular wiring system. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product and tooling information. Such information can be obtained through a local Representative or, after purchase, by calling PRODUCT INFORMATION at the number at the bottom of page 1.

2.3. Drawings

Customer Drawings for product part numbers are available from the service network. If there is a conflict between the information contained in the Customer Drawings and this specification or with any other technical documentation supplied, the information contained in the Customer Drawings takes priority.

2.4. Specifications

Product Specification 108-1234 provides product performance requirements and test information.

2.5. Instructional Material

Instruction Sheets (408-series) provide product assembly instructions or tooling setup and operation procedures and Customer Manuals (409-series) provide machine setup and operating procedures. There are no documents available that pertain to this product.

408-3198	Inspection of AMPINNERGY System Power Contacts
408-3210	Assembly and Installation of AMPINNERGY System Components
408-8040	Heavy Duty Miniature Quick-Change Applicators (Side-Feed Type)
409-5842	AMP-O-LECTRIC* Model “G” Terminating Machines 354500-[ ]

3. REQUIREMENTS

3.1. Wire

A. Wire Selection

Each contact accepts stranded copper wire size 12 or 10 AWG.

B. Wire Preparation

Care must be exercised to prevent cutting or nicking of the wire strands. Care must also be used when handling wire during crimping to prevent cracking or breaking of the wire strands and wire insulation. the wires must be stripped to the dimensions given in Figure 2.

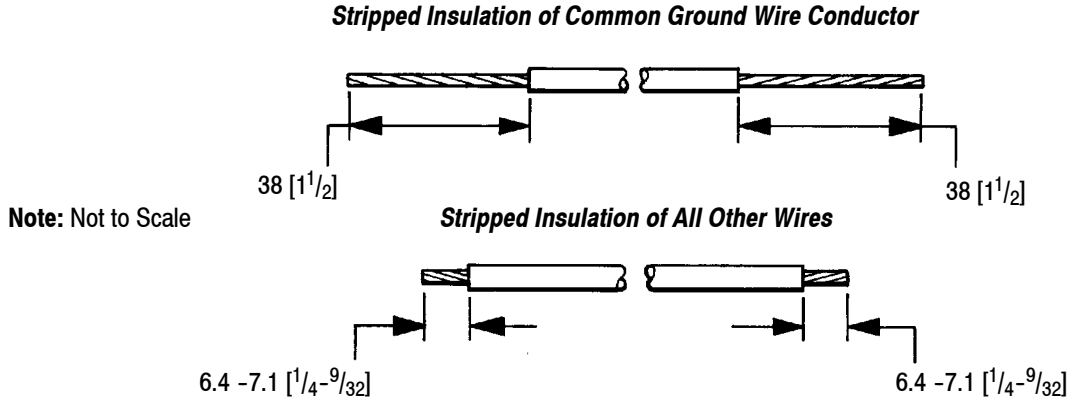
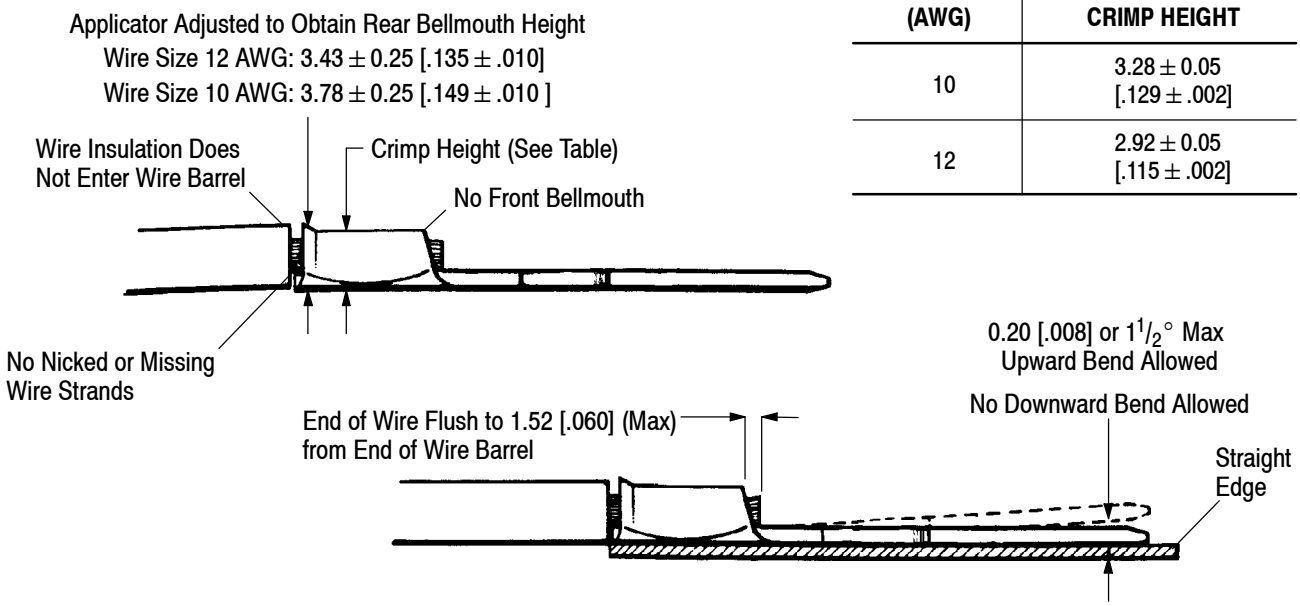


Figure 2

3.2. Crimped Contacts

Crimping procedures are outlined in the material packaged with the applicator and in instruction sheet 408-3198. Inspect crimped contacts for conditions shown in Figure 3.

Crimp height dimension depends upon use of the proper selector setting on the applicator. See Section 5 for available applicators.



WIRE SIZE (AWG)	CONTACT WIRE BARREL CRIMP HEIGHT
10	3.28 ± 0.05 [.129 ± .002]
12	2.92 ± 0.05 [.115 ± .002]

Figure 3

3.3. Contact Insertion

Terminated power contacts must be loaded into the power housing and line contacts must be loaded into the line housing. The contacts will click into place and be held there by a built-in retention feature.

3.4. Harness Assemblies

A power harness assembly consists of two power connectors with strain relief halves fitted around the connectors and conduit ends. It is recommended that 305 [12] as the *minimum* overall length for a double-ended finished harness assembly.

A. Dimensional Considerations

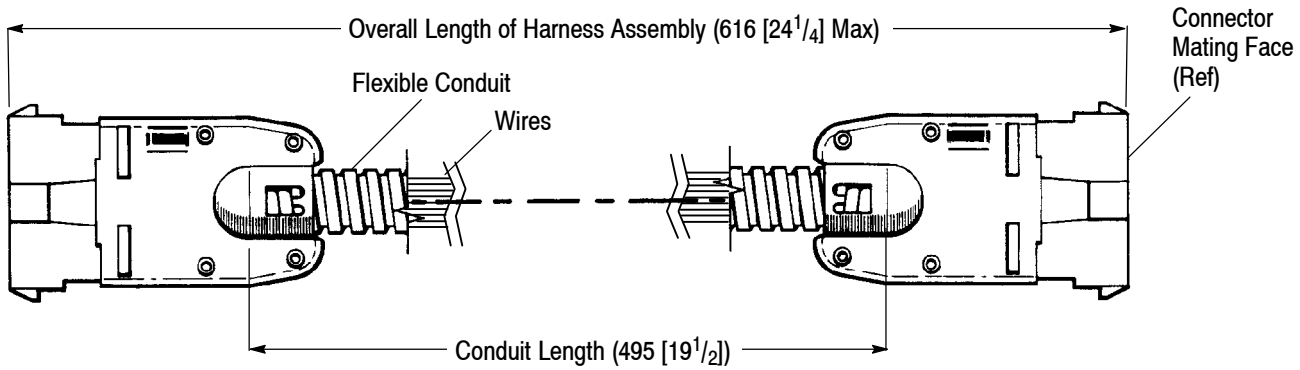
There are three important dimensional considerations when making a harness assembly: (1) the desired overall length of the harness assembly, which becomes the distance between the mating faces of attached connectors; (2) the length of the flexible metal conduit and; (3) the length of wire for each individual contact cavity.

NOTE

After crimping contacts to the wires, the contact with the appropriate wire length must be inserted into the predetermined cavity of the connector.

Figure 4 provides an example for calculating wire and conduit lengths for a 616 [24 1/4] long power-to-power cable harness assembly. The wire lengths are for a typical application; however, the application may require more wire. Adequate wire MUST BE ENSURED to prevent stress on the wires and contacts during handling.

Notice that specific elements have a minus factor. This factor is subtracted from the overall harness assembly dimension to obtain the length of the item (conduit or wire). The minus factor remains the same for all harness assemblies.



ITEM	ELEMENT		DIMENSION		
			MINUS FACTOR PER END	ITEM LENGTH	HARNESS ASSEMBLY OVERALL LENGTH
Conduit	2 Connectors		60.3 [2 3/8]	495.3 [19 1/2]	616 [24 1/4]
Wire	Connector Contact Cavity Identity (Refer to Figure 5 for Location; Markings Do Not Appear on Housing)	4 and IG	25.4 [1]	565.2 [22 1/4]	
		1 and N4	22.2 [7/8]	571.5 [22 1/2]	
		2 and N	20.6 [13/16]	574.7 [22 5/8]	
		3 and G	19.8 [25/32]	576.3 [22 11/16]	

Figure 4

Cavity Identification

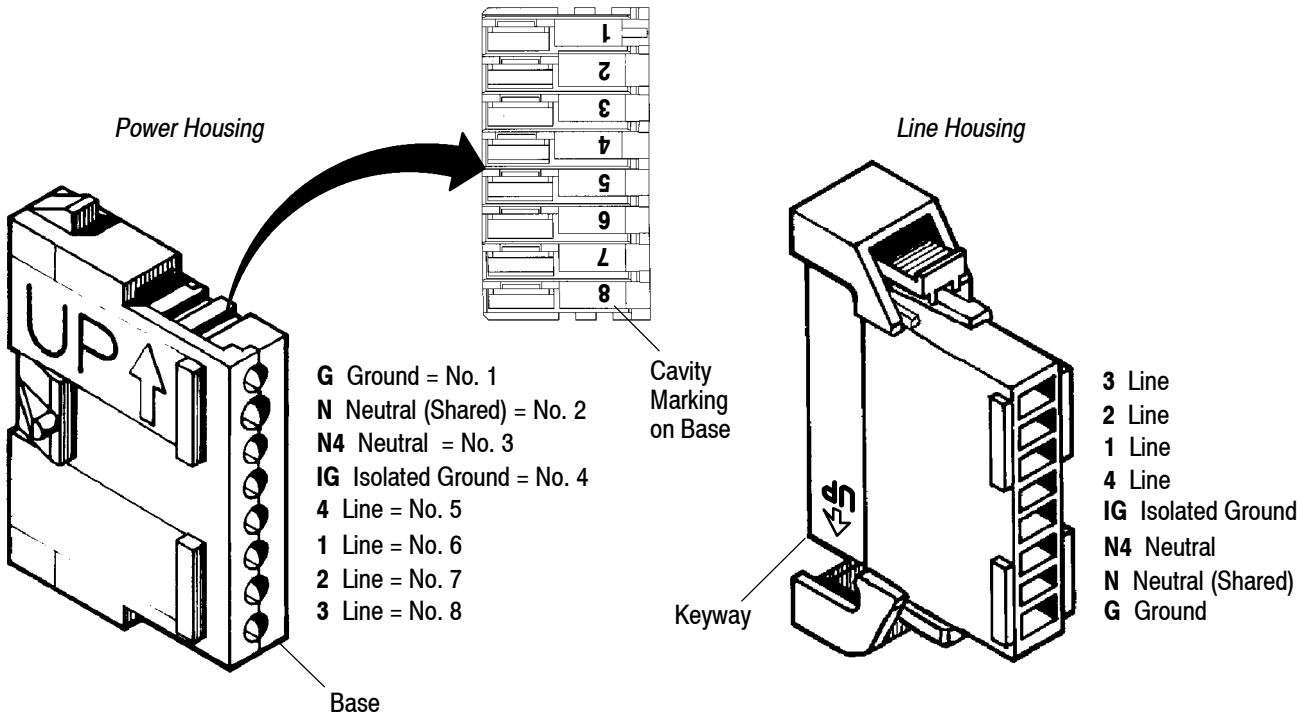


Figure 5

B. Required Tools and Materials

In addition to the harness connectors (consisting of housings, contacts, and wires), the following materials are required to assemble a power-to-power harness assembly:

— two right strain relief halves

— two left strain relief halves

— eight rivets (customer supplied)

NOTE

It is recommended that 3.18 [.125] diameter by 12.7 [.500] long semi-tubular steel rivets be used to assemble the strain relief halves to the power harness.

— suitable rivet staking equipment (customer supplied)

— flexible conduit, required length: 12.7 [$^{1}/_{2}$] trade size (for 5-wire) and having a nominal 16.5 [.65] outer diameter (OD) or 14.3 [$^{9}/_{16}$] trade size (for 8-wire) and having a nominal 18.29 [.720] OD (customer supplied)

NOTE

It is recommended that the flexible conduit be purchased from:
International Metal Hose Co.
520 Goodrich Road, Bellevue, OH 44811
(Part No. AFLS-1/2 in. for 12.7 [1/2]; AFLS-9/16 in. for 14.3 [9/16])

NOTE

It is recommended that a flexible conduit cutting tool be purchased from:
Seatek Company, Inc.
392-T Pacific Street, Stamford, CT 06902
(Roto Split Tool)

— two insulating bushings (one for each cable end) (customer supplied)

— stranded wire size 12 and stranded wire size 10 AWG (customer supplied)

C. Assembly

Generally, the steps required to complete a finished assembly are somewhat detailed and should be followed in sequence. They include wire cutting and stripping, crimping the contacts, sliding the flexible conduit over the crimped contacts, matching each crimped contact with the correct housing cavity, and assembling the strain reliefs to the power harness. The length of the finished harness assembly should be determined by using the information contained in Figure 4.

NOTE

Wire size 10 AWG is used in the neutral position (second slot from the top). There is a difference in slot width for the strain relief in the second position to compensate for this.

3.5. Connector Installation

Some of the various ways AMPINNERGY modular wiring system can be used is illustrated in Figure 6. The power junction box assembly can also be used as a pass-through assembly in applications where outlet service is not needed or prohibited.

A. Flexible Conduit

A power connector using flexible metal conduit is shown in Figure 6, Detail A.

B. Multiple Junction Box

The multiple junction box is designed to provide power in modular furniture walls. See Figure 6, Detail B.

C. Raceway Configuration

The raceway provides a means of mechanical support, electrical grounding, and locating for the modular wiring system. The raceway should be mounted to the structure or panel with the power connector installed. See Figure 6, Detail C.

It is recommended that the raceway configuration be grounded to the wiring by using a self-mounting wire insulation displacement clip. The clips are commercially available from spring-clip manufacturers.

D. Line to Power Using Flexible Conduit

This arrangement shown in Figure 6, Detail C consists of a line connector assembly mating with a power connector assembly using flexible metal conduit. It is designed to serve as a quick-disconnect, power feed-thru connector assembly. These arrangements are normally used where the power junction box assembly is not needed.

Typical Installation Configurations

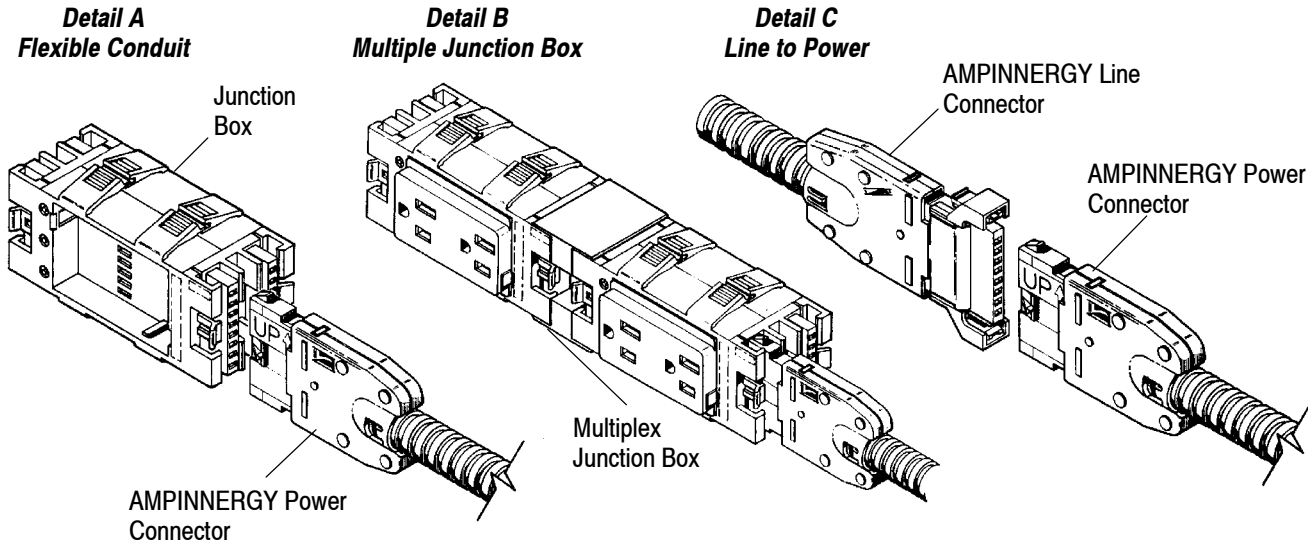


Figure 6

3.6. Duplex Receptacles

Any of the duplex receptacles are compatible with the power junction box assembly. No tooling is needed for insertion. Two flat-bladed screwdrivers should be used to extract a duplex receptacle from a power junction box assembly.

3.7. Panel Cutout

A. Panel Thickness

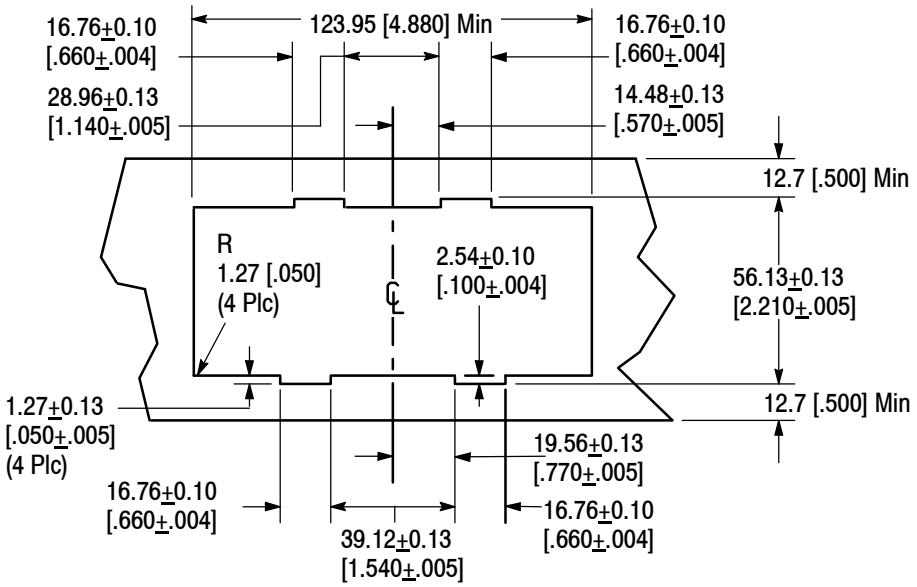
The power junction box requires a panel thickness range of 1.27 through 2.03 [.050 through .080].

B. Mounting Cutout

No mounting hardware is required for mounting the power junction box. The mounting cutout is shown in Figure 7.

Mounting Cutout

Snap In Power Junction Box



Multiplex Power Junction Box

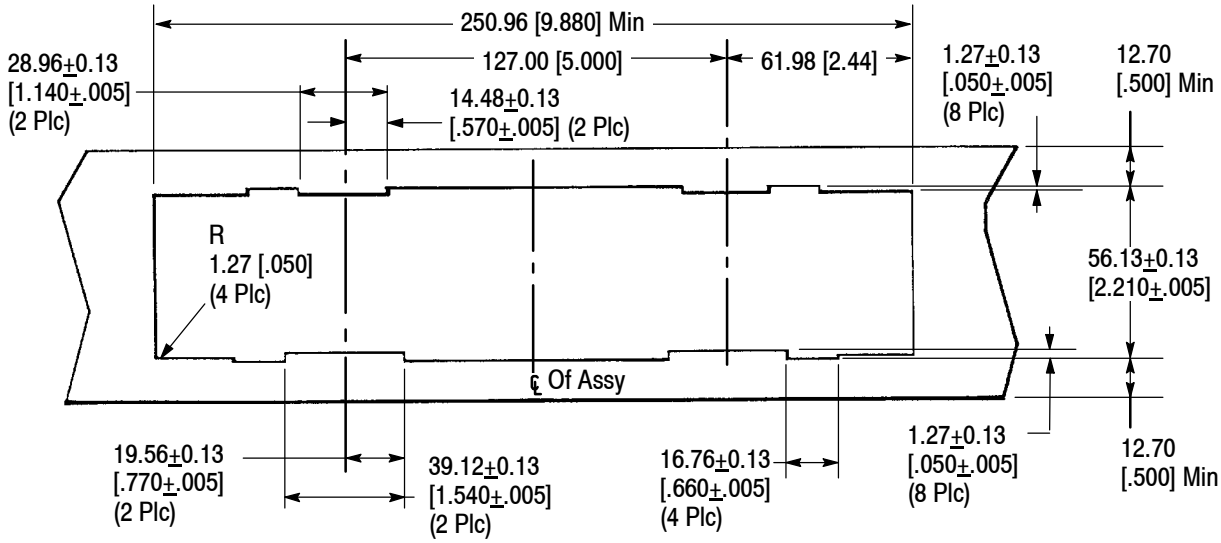


Figure 7

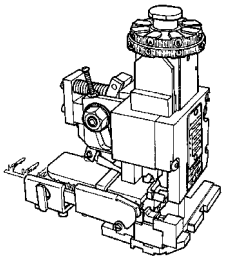
4. QUALIFICATIONS

The connectors for AMPINNERGY modular wiring system are Listed by Underwriters Laboratories Inc. (UL) under File E132626 and UL183 and Certified by Canadian Standards (CSA) under File LR 7189.

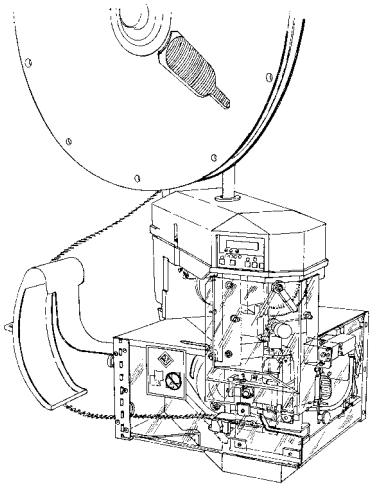
5. TOOLING

Tooling part numbers and instructional material packaged with the tooling are shown in Figure 8.

For high-volume production, a semi-automatic machine fitted with an applicator is available.



Heavy-Duty Miniature
Applicator 567256-3
(408-8040)



AMP-O-LECTRIC Model "G"
Terminating Machine 354500-1
(409-5842)

Figure 8

6. VISUAL AID

The illustration below shows a typical application of AMPINNERGY modular wiring system. This illustration should be used by production personnel to ensure a correctly applied product. Applications which DO NOT appear correct should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.

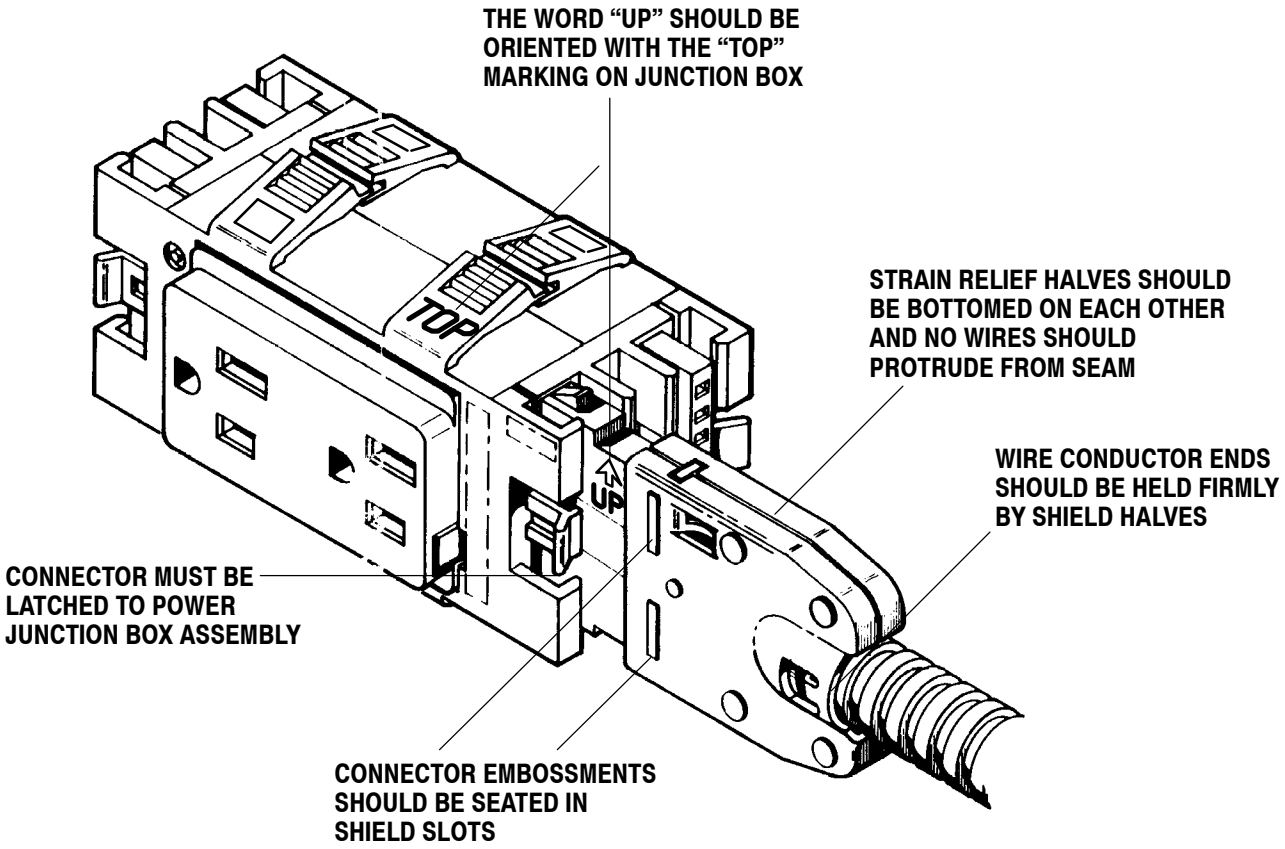


FIGURE 9. VISUAL AID