

**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  $\pm 0.13$  [.005] and angles have a tolerance of  $\pm 2^\circ$ . Figures and illustrations are for identification only and are not drawn to scale.*

## 1. INTRODUCTION

This specification covers the requirements for application of AMP Ultra-Fast, Ultra-Fast Flag, Ultra-Fast Tab, Ultra-Fast Plus, and Ultra-Fast Plus Tab Series 110/125, 187, 205, and 250 fully-insulated FASTON terminals. These terminals are designed for use in 600-V applications. The translucent nylon 6/6 insulated housing on the terminals provides protection from short circuits and shock hazard. Ultra-Fast family products are color coded by wire size. Many of these products are available with either a standard or large insulation diameter (LID) barrel. Each terminal has the series number and wire size molded into the insulation. Internal serrations in the wire barrel permit "F" crimp reliability. Ultra-Fast Plus terminals feature a co-molded housing produced from two different nylon materials. This insulation barrel is crimpable and provides wire strain relief in extreme wire dress situations or where vibration is present.

The terminals are available in strip form for terminating with semi-automatic or fully-automatic powered machines, and in loose-piece for terminating with manual hand-held tools.

When corresponding with Tyco Electronics 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.

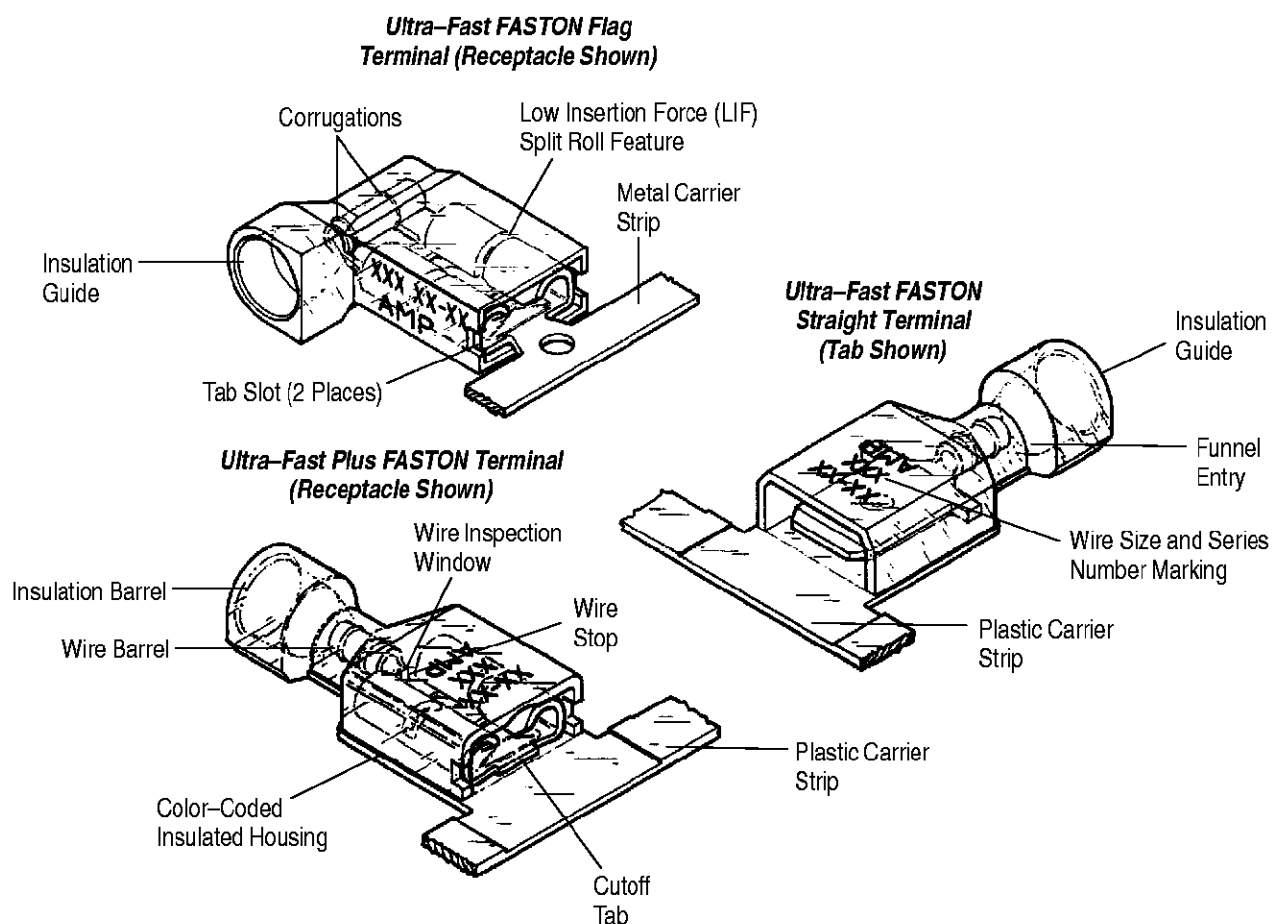


Figure 1

## 2. REFERENCE MATERIAL

### 2.1. Revision Summary

Revisions to this application specification per EC 0990-0492-01 include:

- Updated document to corporate requirements
- Added Series 205 information to Figures 4, 6, and 10
- Deleted obsolete and non-active tooling from Paragraph 2.5 and Section 5

### 2.2. Customer Assistance

Product Part Number 520261 and Product Code 1117 are representative of Ultra-Fast fully-insulated FASTON terminals. 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 Tyco Electronics Representative (Field Service Engineer, Field Applications Engineer, etc.) or, after purchase, by calling the Product Information Center 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 by Tyco Electronics, call the Product Information Center at the number at the bottom of page 1.

### 2.4. Specifications

The following Product Specifications cover test and performance requirements:

108-2017	Ultra-Fast tabs
108-2043	Ultra-Fast receptacles and Ultra-Fast flag receptacles
108-2044	Ultra-Fast Plus receptacles

### 2.5. Instructional Material

The following list includes available instruction sheets (408-series) that provide assembly procedures for product, operation, maintenance and repair of tooling; and customer manuals (409-series) that provide setup, operation, and maintenance of machines.

408-2095	Hand Crimping Tools 69710-1
408-3295	Preparing Reel of Contacts for Applicator Tooling
408-4105	Straight Action Crimper 217200-1
408-4153	Crimping Die Assemblies 224027-1 and -2
408-6976	Hand Crimping Tool Frame 58078-3
408-7867	Selection Chart for Ultra-Fast, Ultra-Fast Plus, and PIDG* Insulated FASTON Terminals and Applicable Crimp Tooling
408-8051	Miniature Quick-Change Applicators (Side-Feed Type)
408-8053	Conversion Guide for Miniature Quick-Change Applicators
408-8058	Miniature Quick-Change Applicators (End-Feed Type)
408-8079	Miniature Quick-Change Applicators (Side-Feed Type with Insulation Crimper)
408-8092	Applicator 818058-2 for AUTO-PRO* Terminating Machine 818380-1
408-8093	Applicator 818058-3 for AUTO-PRO Terminating Machine 818380-1
408-9225	Crimping Die Assemblies 58269-2 through 58269-5
408-9227	Crimping Die Assemblies 58268-1 and 58268-2
408-9277	Crimping Die Assembly 58052-3
408-9278	Crimping Die Assemblies 58079-3 and 58080-3
408-9279	Crimping Die Assemblies 90390-3 and 90391-3
408-9296	Crimping Die Assemblies 58308-1 and 58308-2
408-9816	Handling of Reeled Products
408-9866	Terminal Reel Flange Removal Tool 354030-1
408-9902	Applicator Tooling Matrix (for Applicators 466778-4, 466779-4, 567041-2, 567082-2, 567117-2, and 567142-2)
409-5128	AMP-O-LECTRIC* Model "K" Terminating Machine 565435-5
409-5842	AMP-O-LECTRIC Model "G" Terminating Machine 354500-1
409-5862	626 Pneumatic Tooling Assemblies 189721-1 and 189722-1
409-5878	AMPOMATOR* CLS IV+ Lead-Making Machine 356500-[ ]

### 3. REQUIREMENTS

#### 3.1. Storage

##### A. Ultraviolet Light

Prolonged exposure to ultraviolet light will attack and break down the nylon used in the terminal insulation.

##### B. Reel Storage

When using reeled terminals, store coil wound reels horizontally and traverse wound reels vertically.

##### C. Shelf Life

The terminals should remain in the shipping containers until ready for use to prevent damage to the terminals. The terminals should be used on a first in, first out basis to avoid storage contamination that could adversely affect signal transmissions.

##### D. Chemical Exposure

Do not store terminals near any chemicals listed below, as stress corrosion cracking may occur.

Alkalies	Ammonia	Citrates	Phosphates	Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur Nitrites		Tartrates

#### NOTE

Where the above environmental conditions exist, phosphor-bronze terminals are recommended instead of brass.

#### CAUTION

Exposure to alcohol will break down the insulation barrel of Ultra-Fast Plus terminals.

#### 3.2. Terminal Selection

These terminals are easily matched to the correct wire size by their color-coded insulated housings. Terminal color and corresponding wire range are listed in Figure 2.

#### NOTE

Terminals are also designated by tab thickness and tab width (series number). Each product grouping offers a particular assortment of choices. Contact your local Tyco Electronics representative for current available choices.

TERMINAL COLOR	TERMINAL WIRE RANGE
Violet	26-22
Red	22-18
Blue	16-14
Yellow	12-10

Figure 2

#### 3.3. Wire Selection

The terminals will accept solid, fused, and stranded wire (except flag terminals which accept stranded wire only) sizes and insulation diameter shown in Figure 3.

TERMINAL TYPE	WIRE SIZE RANGE (AWG)	WIRE INSULATION DIAMETER
Ultra-Fast	26-10	8.13 [.320] Max
Ultra-Fast Flag	22-14	6.60 [.260] Max
Ultra-Fast Plus	22-14	1.52-4.06 [.060-.160]

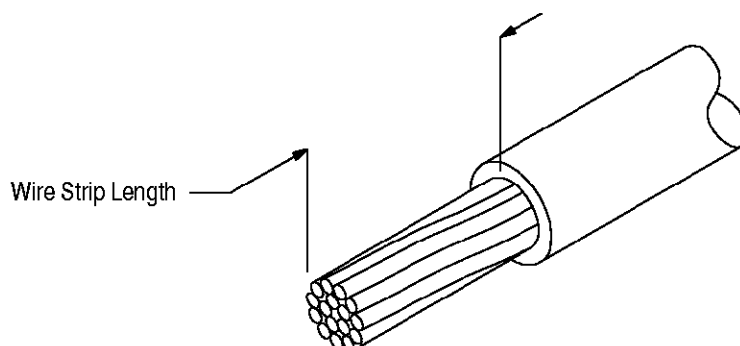
Figure 3

#### 3.4. Wire Preparation

Strip the wire to the dimensions given in Figure 4.

#### NOTE

DO NOT nick, cut, or scrape the wire conductor during the stripping operation.



**Note:** Not to Scale

TERMINAL SERIES	WIRE SIZE RANGE (AWG)	WIRE STRIP LENGTH ( $\pm 0.41$ [ $\pm .016$ ])	
		ONE WIRE	TWO WIRES
110/125	26-14	7.14 [.281]	7.92 [.312]
187	22-14	7.14 [.281]	7.92 [.312]
187 Flag Terminals LID (Large Insulation Diameter Wire)	16-14	7.92 [.312]	8.51 [.335]
205	22-18	7.14 [.281]	7.92 [.312]
205 Flag Terminals	22-18	7.92 [.312]	8.51 [.335]
250	22-14	7.14 [.281]	7.92 [.312]
	12-10	7.92 [.312]	9.52 [.375]
250 Flag Terminals	22-14	7.92 [.312]	8.51 [.335]

Figure 4

### 3.5. Crimp Requirements

The terminal must be crimped in the appropriate tooling according to the instructions packaged with the tooling.

**NOTE**

*Terminal insulation shall NOT be cut or broken during the crimping operation. Reasonable care should be taken by tooling operators to provide undamaged terminations.*

#### A. Dielectric Withstanding Voltage Test

During initial tooling setup or after any tooling change or replacement, five sample terminals shall be tested for dielectric withstanding voltage as follows:

Prepare samples by applying them to wire in accordance with the crimp requirements. Seal the mating end of the terminal with dielectric wax or other suitable material to prevent entrance of the lead shot. Embed the samples in lead shot no. 12 (1.27 [.050] in diameter). Apply a test potential of 3400 Vac to the wire at a rate of 500 V per second for one minute, with the lead shot acting as the other electrode.

The samples shall show no electrical breakdown or flash-over as a result of this testing procedure.

#### B. Crimp Height

Because these terminals are fully insulated, crimp height readings cannot be measured over the insulation. Proper crimp height must be measured using a slug of solid-core solder with a ratio of 60% tin to 40% lead; 50/50 solder is acceptable. Solder diameter according to wire size is listed in Figure 5.

WIRE SIZE RANGE (AWG)	SOLDER DIAMETER
26-18	3.18 [.125]
22-18 (Flag Terminals)	4.75 [.187]
16-14	4.75 [.187]
12-10	6.35 [.250]

Figure 5

The height of the crimped solder must meet the dimensions given in Figure 6.

**NOTE**

Solder slug crimp heights are for applicators used in AMP-O-LECTRIC terminating machine and AMPOMATOR lead-making machine. Check instruction sheets (408-series) for crimp heights for die assemblies used in AUTO-PRO machine and hand tools. DO NOT measure terminal wire barrel to obtain crimp height. Follow these requirements for measuring crimp height. Refer to Figure 6 (solder slug crimp height).

**CAUTION**

Crimp height dimensions must not be applied directly to terminal. This practice will over-crimp the terminal, cracking the wire barrel, and possibly cause damage to tooling.

**C. Cutoff Tab and Burr**

Cutoff tabs are the remaining portion of the carrier strip after the terminal is cut from the strip. The cutoff tab and burr must be visible as shown in Figure 6.

**D. Effective Crimp Length**

Effective crimp length is defined as that portion of the wire barrel, excluding bellmouths, fully formed by the crimping tool. For optimum crimp effectiveness, the crimp must be within the area shown and must meet the crimp requirements provided in Figure 6.

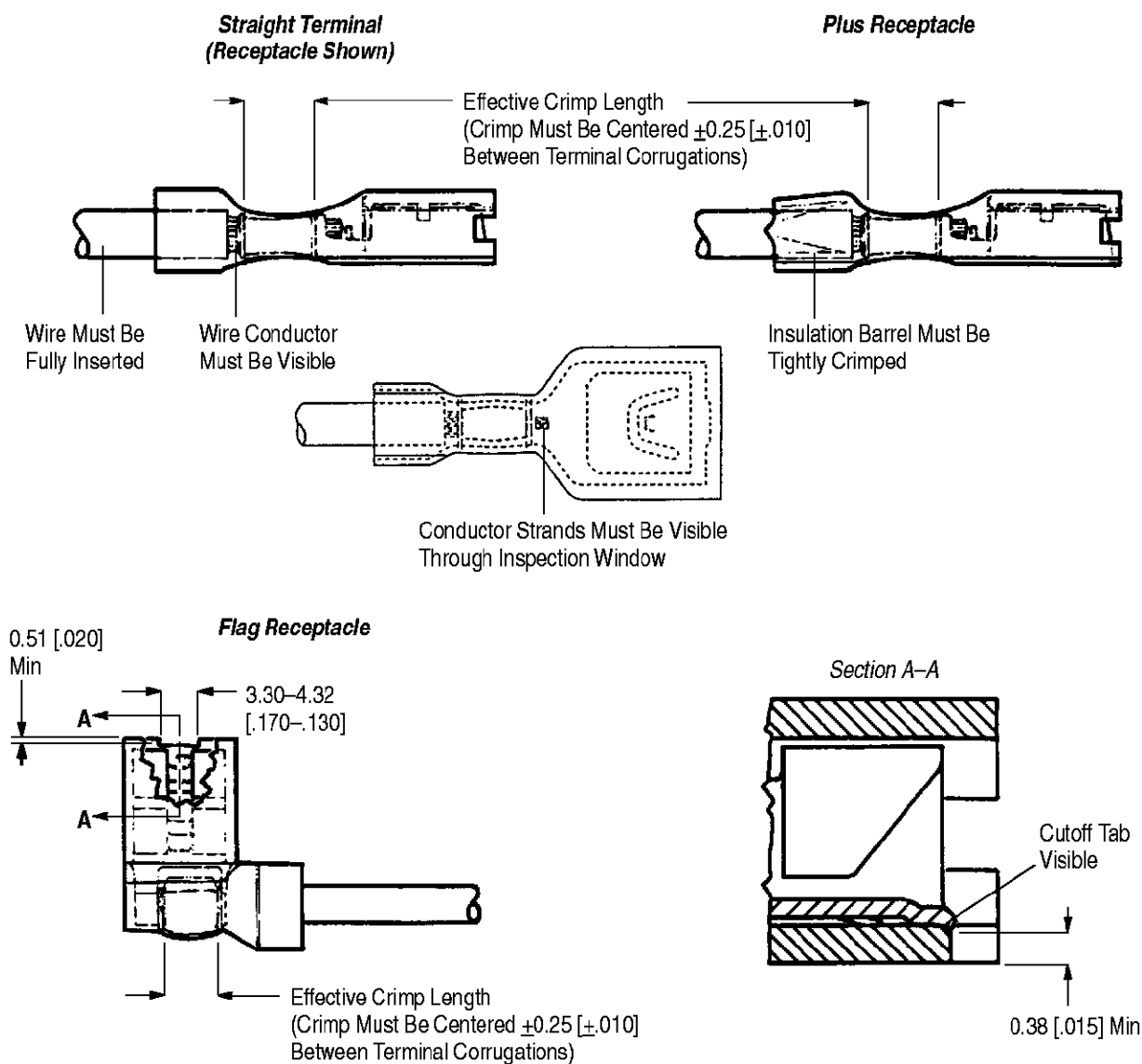


Figure 6 (cont'd)

**SERIES 110/125 STRAIGHT RECEPTACLES**

TERMINAL WIRE RANGE	TERMINAL INSULATION BARREL		WIRE		SOLDER SLUG CRIMP HEIGHT ■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	SIZE (AWG)		
26–22	Standard	2.54 [.100] Max	1	26	1.52 [.060]	17.8 [4]
				24	1.52 [.060]	26.7 [6]
				22	1.65 [.065]	44.5 [10]
22–18	Standard	3.05 [.120] Max	1	22	1.65 [.065]	44.5 [10]
				20	1.65 [.065]	71.2 [16]
				18	1.78 [.070]	89.0 [20]
	Large	5.84 [.230] Max	1	22	1.65 [.065]	44.5 [10]
				20	1.65 [.065]	71.2 [16]
				18	1.78 [.070]	89.0 [20]
			2	22	1.78 [.070]	44.5 [10]
				20	1.78 [.070]	71.2 [16]
16–14	Large	6.60 [.260] Max	1	16	1.78 [.070]	133.4 [30]
				14	1.90 [.075]	266.9 [60]
			2	18	1.78 [.070]	89.0 [20]

**SERIES 187, 205, AND 250 STRAIGHT RECEPTACLES AND TABS**

TERMINAL WIRE RANGE	TERMINAL INSULATION BARREL		WIRE		SOLDER SLUG CRIMP HEIGHT ■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	SIZE (AWG)		
22–18	Standard	3.43 [.135] Max	1	22	1.65 [.065]	44.5 [10]
				20	1.65 [.065]	71.2 [16]
				18	1.78 [.070]	89.0 [20]
			2	22	1.78 [.070]	44.5 [10]
				20	1.78 [.070]	71.2 [16]
	Large	5.84 [.230] Max	1	22	1.65 [.065]	44.5 [10]
				20	1.65 [.065]	71.2 [16]
				18	1.78 [.070]	89.0 [20]
			2	22	1.78 [.070]	44.5 [10]
				20	1.78 [.070]	71.2 [16]
16–14	Standard	4.06 [.160] Max	1	16	1.78 [.070]	133.4 [30]
				14	1.90 [.075]	266.9 [60]
			2	18	1.78 [.070]	89.0 [20]
	Large	6.60 [.260] Max	1	16	1.78 [.070]	133.4 [30]
				14	1.90 [.075]	266.9 [60]
			2	18	1.78 [.070]	89.0 [20]
12–10●	Large	8.13 [.320] Max	1	12	2.41 [.095]	311.4 [70]
				10	2.54 [.100]	355.9 [80]
			2	16	2.41 [.095]	133.4 [30]
				14	2.41 [.095]	266.9 [60]

● Series 250 (12–10) terminals are available with large diameter insulation barrel only.

Figure 6 (cont'd)

■ Refer to NOTE in Paragraph 3.4, B, Crimp Height

**SERIES 187, 205, AND 250 FLAG RECEPTACLES**

TERMINAL WIRE RANGE	TERMINAL INSULATION BARREL		WIRE		SOLDER SLUG CRIMP HEIGHT ■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	SIZE (AWG)		
22–18	Standard	4.19 [.165] Max	1	22	1.65 [.065]	44.5 [10]
				20	1.65 [.065]	71.2 [16]
				18	1.78 [.070]	89.0 [20]
			2	22	1.78 [.070]	44.5 [10]
				20	1.78 [.070]	71.2 [16]
	Large	5.84 [.230] Max	1	22	1.65 [.065]	44.5 [10]
				20	1.65 [.065]	71.2 [16]
				18	1.78 [.070]	89.0 [20]
			2	22	1.78 [.070]	44.5 [10]
				20	1.78 [.070]	71.2 [16]
16–14	Standard	4.70 [.185] Max	1	16	1.78 [.070]	133.4 [30]
				14	1.90 [.075]	266.9 [60]
			2	18	1.78 [.070]	89.0 [20]
	Large	6.60 [.260] Max	1	16	1.78 [.070]	133.4 [30]
				14	1.90 [.075]	266.9 [60]
			2	18	1.78 [.070]	89.0 [20]

**SERIES 110/125 PLUS RECEPTACLES**

TERMINAL WIRE RANGE	TERMINAL INSULATION BARREL		WIRE		SOLDER SLUG CRIMP HEIGHT ■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	SIZE (AWG)		
22–18	Standard	1.52–3.05 [.060–.120]	1	22	1.65 [.065]	44.5 [10]
				20	1.65 [.065]	71.2 [16]
				18	1.78 [.070]	89.0 [20]
		0.76–1.52 [.030–.060]	2	22	1.78 [.070]	44.5 [10]

**SERIES 187 AND 250 PLUS RECEPTACLES AND SERIES 250 PLUS TABS**

TERMINAL WIRE RANGE	TERMINAL INSULATION BARREL		WIRE		SOLDER SLUG CRIMP HEIGHT ■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	SIZE (AWG)		
22–18	Standard	1.52–3.43 [.060–.135]	1	22	1.65 [.065]	44.5 [10]
				20	1.65 [.065]	71.2 [16]
				18	1.78 [.070]	89.0 [20]
		0.76–1.70 [.030–.067]	2	22	1.78 [.070]	44.5 [10]
16–14	Standard	2.29–4.06 [.090–.160]	1	16	1.90 [.075]	133.4 [30]
				14	2.03 [.080]	266.9 [60]
		1.14–2.03 [.045–.080]	2	18	1.90 [.075]	89.0 [20]

Figure 6 (end)

■ Refer to NOTE in Paragraph 3.4, B, Crimp Height

### E. Straightness

The force applied during crimping may cause some bending between the wire barrel and the mating portion of the terminal. Such deformation is acceptable within the following limits. The crimped portion, including cutoff tab and burr, must not be bent beyond the limits shown in Figure 7.

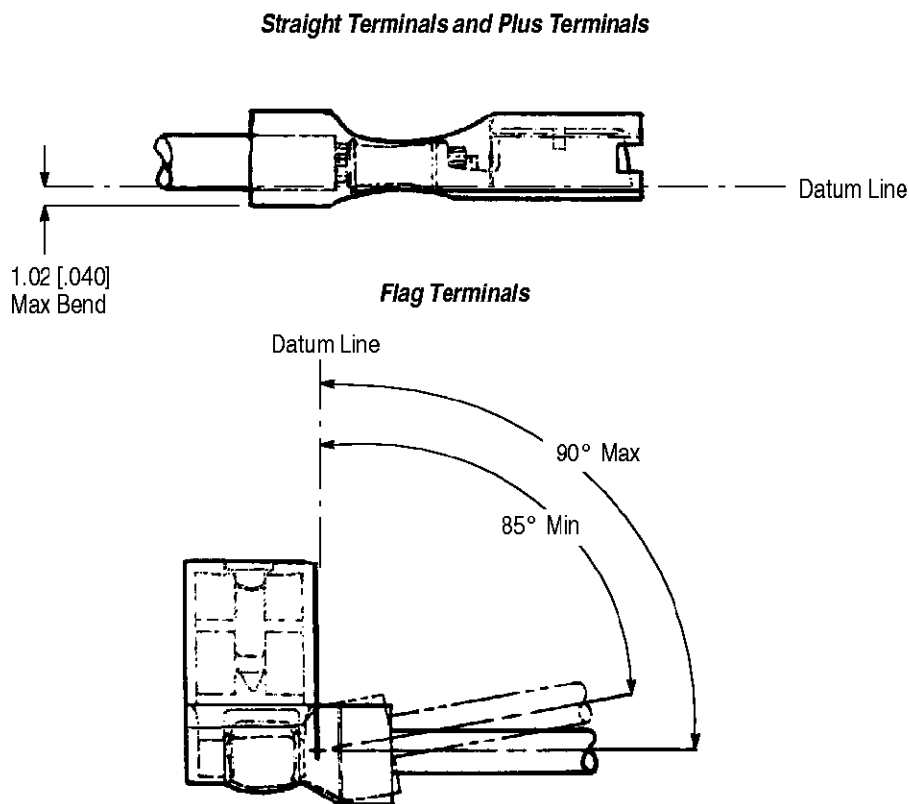


Figure 7

### F. Twist and Roll

There should be no twist or roll of the wire barrel or mating portion of the crimped terminal that would cause overstress or impair usage.

### 3.6. Mating Overcycle

The rolled shape of the receptacles determines the contact mating force. This design is NOT intended for a high number of mating cycles over the life of the product. Therefore, the maximum number of mating cycles (matings/un-matings) recommended is 10.

The forces required to mate and unmate a test mating tab and receptacle are specified in the Product Specifications (108-series) listed in Paragraph 2.4. The force must be measured using a testing device capable of holding the reading. It must also provide accurate alignment with slow and steady mating and unmating of the test tab and receptacle.

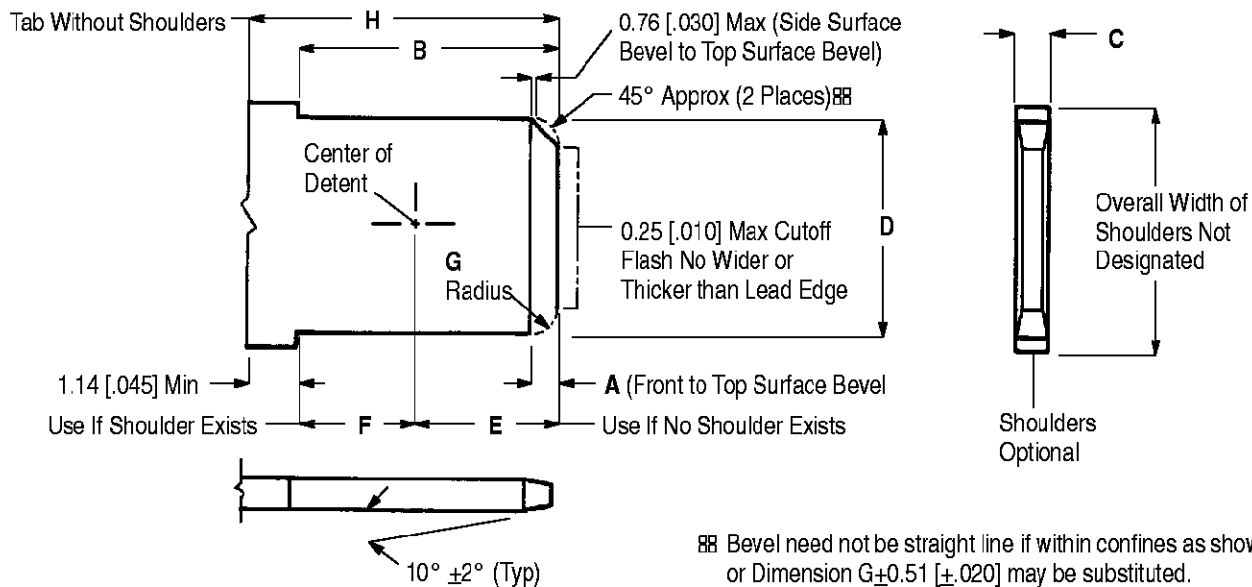
### 3.7. Mating Tab Dimensions

Features and dimensional requirements for tab terminals intended for mating with these receptacles is listed in Figure 8.

#### NOTE

Testing may be done using a gage as described in ANSI/NEMA DC2—1982 (Residential Controls—Quick-Connect Terminals). Test tabs shall have dimensions as shown in Figure 8, except Dimension “C” shall have a tolerance of  $\pm 0.008$  [ $\pm 0.0003$ ] for brass tabs and  $\pm 0.013$  [ $\pm 0.0005$ ] for steel, and raised plateaus around the detents shall be limited to a total of 0.03 [0.001] for both sides.





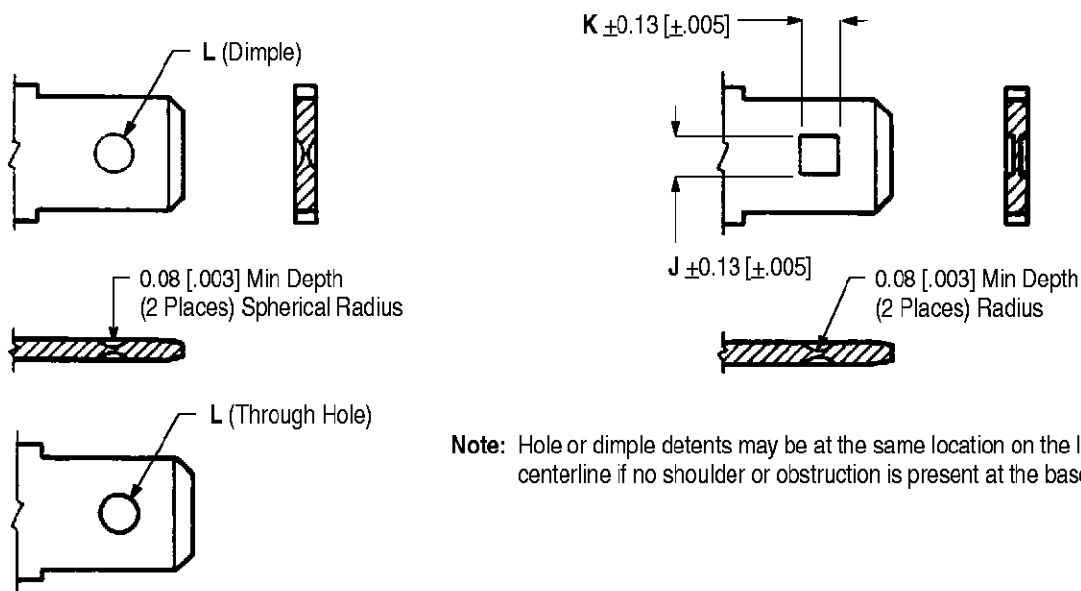
TAB SIZE (Nominal)	DIMENSION							
	A ±0.13 [±.005]	B (Min)	C ±0.03 [±.001]	D ±0.08 [±.003]	E ±0.20 [±.008]	F ±0.08 [±.003]	G ±0.51 [±.020]	H (Min)
6.35 × 0.81 [.250 × .032] With Dimple	0.89 [.035]	7.80 [.307]	0.81 [.032]	6.35 [.250]	3.86 [.152]	4.06 [.160]	1.27 [.050]	8.94 [.352]
6.35 × 0.81 [.250 × .032] With Hole	0.89 [.035]	7.80 [.307]	0.81 [.032]	6.35 [.250]	4.52 [.178]	3.40 [.134]	1.27 [.050]	8.94 [.352]
5.21 × 0.81 [.205 × .032] With Dimple	0.89 [.035]	6.20 [.244]	0.81 [.032]	5.20 [.205]	2.54 [.100]	3.81 [.150]	1.27 [.050]	7.29 [.287]
5.21 × 0.81 [.205 × .032] With Hole	0.89 [.035]	6.20 [.244]	0.81 [.032]	5.20 [.205]	3.18 [.125]	3.18 [.125]	1.27 [.050]	7.29 [.287]
4.75 × 0.81 [.187 × .032] With Dimple	0.89 [.035]	6.22 [.245]	0.81 [.032]	4.75 [.187]	2.54 [.100]	3.81 [.150]	1.27 [.050]	7.37 [.290]
4.75 × 0.81 [.187 × .032] With Hole	0.89 [.035]	6.22 [.245]	0.81 [.032]	4.75 [.187]	3.18 [.125]	3.18 [.125]	1.27 [.050]	7.37 [.290]
4.75 × 0.51 [.187 × .020] With Dimple	0.76 [.030]	6.22 [.245]	0.51 [.020]	4.75 [.187]	2.54 [.100]	3.81 [.150]	1.14 [.045]	7.37 [.290]
4.75 × 0.51 [.187 × .020] With Hole	0.76 [.030]	6.22 [.245]	0.51 [.020]	4.75 [.187]	3.18 [.125]	3.18 [.125]	1.14 [.045]	7.37 [.290]
3.18 × 0.81 [.125 × .032] With Dimple or Hole	0.51 [.020]	6.98 [.275]	0.51 [.020]	3.18 [.125]	1.57 [.062]	5.54 [.218]	0.89 [.035]	8.13 [.320]
3.18 × 0.51 [.125 × .020] With Dimple or Hole	0.51 [.020]	6.98 [.275]	0.51 [.020]	3.18 [.125]	1.57 [.062]	5.54 [.218]	0.89 [.035]	8.13 [.320]
2.79 × 0.81 [.110 × .032] With Dimple or Hole	0.51 [.020]	6.98 [.275]	0.81 [.032]	2.79 [.110]	1.57 [.062]	5.54 [.218]	0.89 [.035]	8.13 [.320]
2.79 × 0.51 [.110 × .020] With Dimple or Hole	0.51 [.020]	6.98 [.275]	0.51 [.020]	2.79 [.110]	1.57 [.062]	5.54 [.218]	0.89 [.035]	8.13 [.320]

- Notes:**
1. For tab detent dimensions, see Paragraph 3.8.
  2. Top and bottom tab surfaces shall be within .1% and free from burrs greater than 10% of tab thickness or raised plateaus, except as noted in Paragraph 3.7.
  3. Dimensional measurements shall not include plating, burrs, or flatness tolerance.

Figure 8

### 3.8. Tab Detent Configurations

A tab having no locking feature may be used for applications where low mating retention forces are desirable. Where higher forces are sought, a tab with a detent meeting the requirements shown should be used. Hole detents provide the greatest retention forces, while dimples provide acceptable medium-range forces. Refer to Figure 9.



**Note:** Hole or dimple detents may be at the same location on the longitudinal centerline if no shoulder or obstruction is present at the base of the tab.

TAB WIDTH (Nominal)	DIMPLE DETENT DIMENSION ±0.13 [±.005]		DIMPLE OR THROUGH HOLE DETENT DIAMETER
	J	K	
6.35 [.250]	2.36 [.093]	1.90 [.075]	1.78 +0.25/-0.13 [.070 +.010/-0.005]
5.20 [.205]	2.36 [.093]	1.90 [.075]	1.75±0.15 [.069±.006]
4.75 [.187]	1.57 [.062]	1.37 [.054]	1.40±0.13 [.005±.005]
2.79 [.110]	1.57 [.062]	1.22 [.048]	1.22±0.08 [.048±.003]

Figure 9

## 4. QUALIFICATION

### NOTE

Because of the many variations of qualifications and performance capabilities within this product line, contact the Product Information Center at the number listed at the bottom of page 1 for specific requirements.

Ultra-Fast fully-insulated FASTON terminals are supported by the following commercial, military, and government qualification and specification organizations.

### 4.1. Underwriters Laboratories Inc. (UL) and Canadian Standards Association (CSA)

These terminals meet Specification UL-310 for quick-connect terminals and are Listed by UL under File E66717. These terminals meet CSA C22.2 Specification 153 for quick-connect terminals and are Certified to CSA under File LR 7189.

### NOTE

UL does not qualify this type of terminal when designed for application to wire size 24 AWG or smaller, 0.41 [.016]-thick tabs, or wire size 14 AWG applied to Series 110/125 terminals.

### 4.2. National Electrical Manufacturers Association (NEMA)

These terminals meet NEMA DC-2 mechanical requirements standard for quick-connect terminals. Flag terminals meet mechanical standard only.

#### 4.3. Verband Deutscher Electrotechniker (VDE)

These terminals are VDE tested according to DIN VDE 0627/9.91, VDE-Reg. 5193.

#### 4.4. TUV Rheinland

Ultra-Fast Plus terminals have been tested by TUV Rheinland of North America, Inc., TUV File E9071003 and has been found suitable for end product certification to:

EN 60 950/09.87

DIN IEC 601-1 Part 1/VDE 0750 T1/05.82

DIN IEC 380/VDE 0806/08.81

DIN VDE 0700 t1/02.81

### 5. TOOLING

Tooling that accommodates the full wire size range are designed for terminating these terminals. Tooling part numbers and instructional material packaged with the tooling are shown in Figure 10.

#### NOTE

*Tyco Electronics has designed machines for a variety of application requirements. For assistance in setting up prototype and production line equipment, contact Tool Engineering through your local Tyco Electronics Representative or call the Tooling Assistance Center at the number at the bottom of page 1.*

#### 5.1. Hand Crimping Tools

Hand crimping tools are designed for prototype and low-volume applications such as repair of damaged terminals.

#### 5.2. Applicators

Applicators are designed for the full wire size range of strip-fed, precision formed terminals, and provide for high volume, heavy duty production requirements. The applicators must be used in bench or floor model power units.

#### NOTE

*Each applicator is shipped with a metal identification tag attached. Also, a packet of associated paperwork is included in each applicator shipment. Some changes may have to be made to the applicators to run in all related power units.*

#### 5.3. Die Assemblies

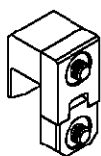
Dies assemblies are designed for easy installation and removal in hand tool frame assemblies or applicators.

#### 5.4. Power Units

Power units are fully-automatic or semi-automatic machines used to assist in the application of a product. Power units include the power source used to supply the force to an applicator.

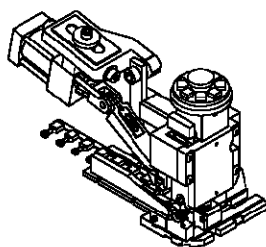
#### NOTE

*AMP-O-LECTRIC Model "K" Terminating Machine 565435-5 has been superseded by Model "G" Terminating Machine 354500-1 for new applications. For existing applications, the Model "K" can still be used because of the large number of installed machines.*

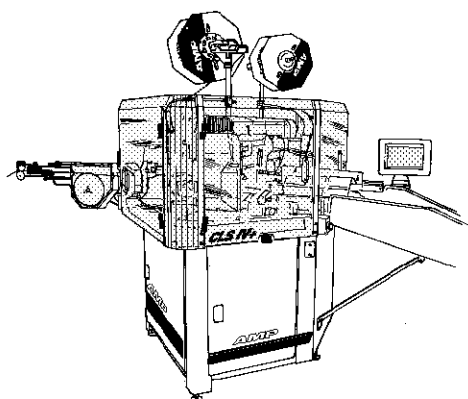


Typical Die Assembly  
(Refer to Table)

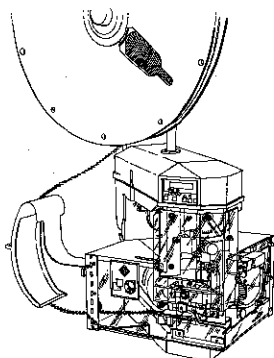
DIE ASSEMBLY (For Applicators)	(Document)
58268-1, 58268-2	408-9227
58269-2, 58269-3, 58269-4, 58269-5	408-9225
58308-1, 58308-2	408-9296



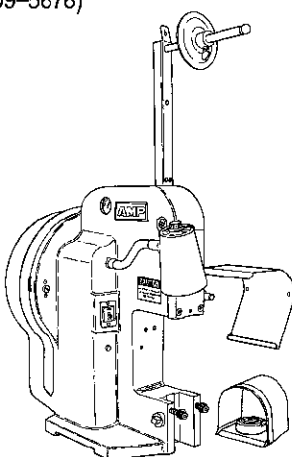
Typical Applicator  
(Refer to Table)



AMPOMATOR CLS IV+  
Lead-Making Machine  
356500-[ ] (409-5878)



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



AMP-O-ELECTRIC Model "K"  
Terminating Machine 565435-5  
(409-5128)

APPLICATOR	(Document)
466778-3	408-8051
466778-4	408-8051, 408-9902
466778-6	408-8051
466779-3	408-8051
466779-4	408-8051, 408-9902
466779-6	408-8051
466784-1	408-8058
466784-2	408-8058
466785-1	408-8058
466785-2	408-8058
567041-1	408-8051
567041-2	408-8051, 408-9902
567041-4	408-8051
567082-1	408-8051
567082-2	408-8051, 408-9902
567083-1	408-8058
567083-2	408-8058
567085-1	408-8058
567085-2	408-8058
567111-1	408-8079
567111-2	408-8079
567111-3	408-8051
567112-1	408-8079
567112-2	408-8079
567112-3	408-8051
567117-1	408-8051
567117-2	408-8051, 408-9902
567142-1	—
567142-2	408-8051, 408-9902
567142-4	408-8051
567228-1	408-8058
567228-2	408-8058
567276-1	—
567276-2	408-8079
567276-4	408-8051
567460-1	408-8058
567494-1	—
567494-2	408-8058
818058-2	408-8092
818058-3	408-8093

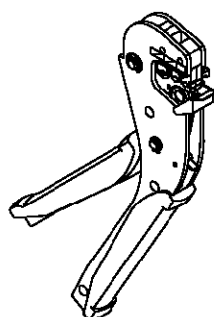
Figure 10 (cont'd)

TERMINAL			APPLICATOR <input type="checkbox"/> FOR POWER UNIT			DIE ASSEMBLIES FOR APPLICATOR	
SERIES	TYPE	WIRE RANGE	AMP-O-ELECTRIC Model "K" Machine 565435-5	AMP-O-ELECTRIC Model "G" Machine 354500-1	AMPOMATOR CLS IV+ Machine 356500-[ ]	818058-2	818058-3
110/125	Receptacle	26-22	567082-2	—	567082-1†	—	—
		22-18	567041-2	567041-4	567041-1	58269-2	—
		16-14	567117-2	—	567117-1	58269-3	—
	Plus Receptacle	22-18	567276-2	567276-4	567276-1	58268-1	—
187	Receptacle	22-18	466779-4	466779-6	466779-3	58269-2	—
		16-14	466778-4	466778-6	466778-3	58269-3	—
	Plus Receptacle	22-18	567111-2	567111-3	567111-1	58268-1	—
		16-14	567112-2	567112-3	567112-1	58268-2	—
	Tab	22-18	466779-4	466779-6	466779-3	58269-2	—
	Flag	22-18	567083-2	—	567083-1	—	58308-1
		16-14	567085-2	—	567085-1	—	58308-2
	Flag LID	16-14	—	—	567460-1	—	58308-2
205	Receptacle	22-18	466779-4	466779-6	466779-3	58269-2	—
	Flag	22-18	466784-2	—	466784-1	—	58308-1
250	Receptacle	22-18	466779-4	466779-6	466779-3	58269-2	—
		16-14	466778-4	466778-6	466778-3	58269-3	—
		12-10	567142-2	567142-4	567142-1	58269-4⚡	—
						58269-5⚡	—
	Plus Receptacle	22-18	567111-2	567111-3	567111-1	58268-1	—
		16-14	567112-2	567112-3	567112-1	58268-2	—
	Tab	22-18	466779-4	466779-6	466779-3	58269-2	—
		16-14	466778-4	466778-6	466778-3	58269-3	—
		12-10	567142-2	567142-4	567142-1	58269-4⚡	—
						58269-5⚡	—
	Plus Tab	22-18	567111-2	567111-3	567111-1	58268-1	—
		16-14	567112-2	567112-3	567112-1	58268-2	—
	Flag	22-18	466784-2	—	466784-1	—	58308-1
		16-14	466785-2	—	466785-1	—	58308-2
	Flag LID	22-18	567228-2	—	567228-1	—	58308-1
		16-14	567494-2	—	567494-1	—	58308-2

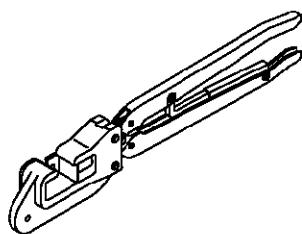
☐ Applicators may be convertible from one machine to another. Contact Tooling Assistance Center at the number at the bottom of page 1 for more information.

† Terminates wire size 22 AWG only.  
⚡ Terminates wire size 12 AWG only.  
⚡ Terminates wire size 10 AWG only.

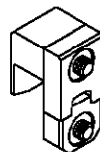
Figure 10 (cont'd)



Hand Tool Frame 58078-3  
(408-6976) with Typical  
Die Assembly



Hand Tool Frame  
69710-1 (408-2095)



Typical Die Assembly  
(Refer to Table)

DIE ASSEMBLY (For Hand Tool Frames)	(Document)
58052-3	408-9277
58079-3	408-9278
58080-3	408-9278
90390-3	408-9279
90391-3	408-9279
224027-1	408-4153
224027-2	408-4153

TERMINAL			DIE ASSEMBLY FOR HAND TOOL FRAME	
SERIES	TYPE	WIRE RANGE	58078-3	69710-1
110/125	Receptacle	26-22	58052-3	—
		22-18	90390-3	—
		16-14	90391-3	—
	Plus Receptacle	22-18	58079-3	—
187	Receptacle	22-18	90390-3	—
		16-14	90391-3	—
	Plus Receptacle	22-18	58079-3	—
		16-14	58080-3	—
	Flag Terminal	22-18	90390-3	—
		16-14	90391-3	—
	Tab Terminal	22-18	90390-3	—
		22-18	90390-3	—
250	Receptacle	22-18	90390-3 or 58079-3	—
		16-14	90391-3	—
		12-10	—	224027-1 ☐☐
	Plus Receptacle	16-14	58080-3	—
		22-18	90390-3	—
		16-14	90391-3	—
	Flag Terminal	22-18	90390-3	—
		16-14	90391-3	—
		22-18	90390-3	—
	Tab Terminal	16-14	90391-3	—
		12-10	—	224027-2 ☐☐◇
		12-10	—	224027-1 ☐☐

◇ This die assembly can also be used in 626 Pneumatic Tooling Assembly 189721-1 or 189722-1 (409-5862) when installed onto Straight Action Crimper 217200-1 (408-4105).

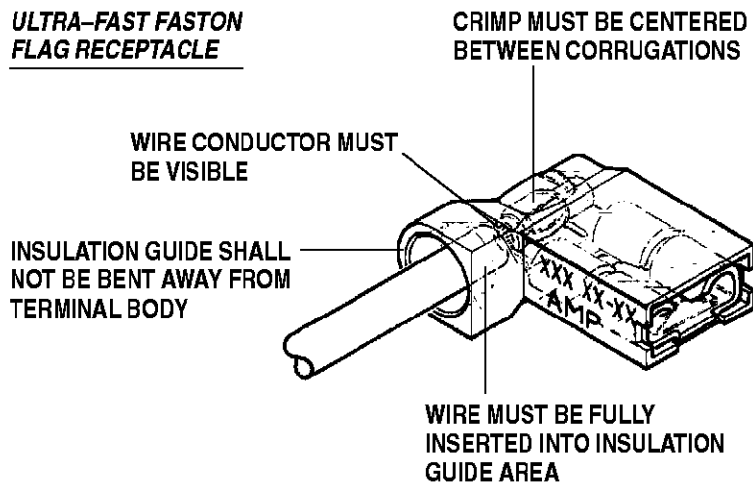
☐☐ Terminates wire size 12 AWG only.  
☐☐ Terminates wire size 10 AWG only.

Figure 10 (end)

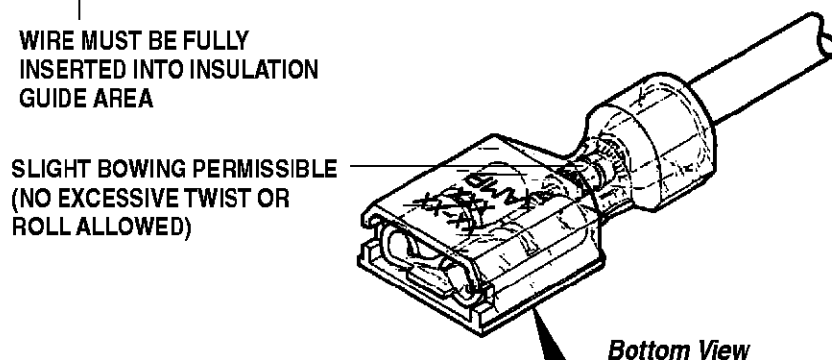
## 6. VISUAL AID

Figure 11 shows a typical application of Ultra-Fast fully-insulated FASTON terminals. 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.

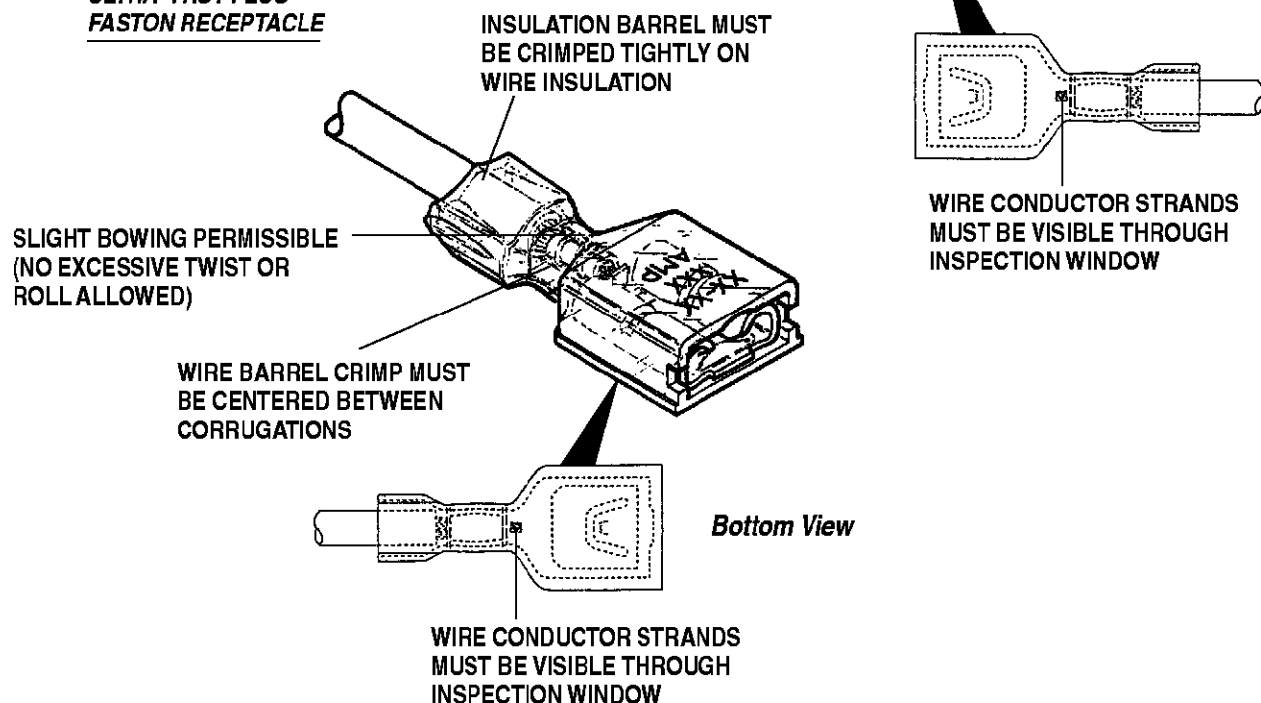
### ULTRA-FAST FASTON FLAG RECEPTACLE



### ULTRA-FAST FASTON STRAIGHT RECEPTACLE



### ULTRA-FAST PLUS FASTON RECEPTACLE



**FIGURE 11. VISUAL AID**