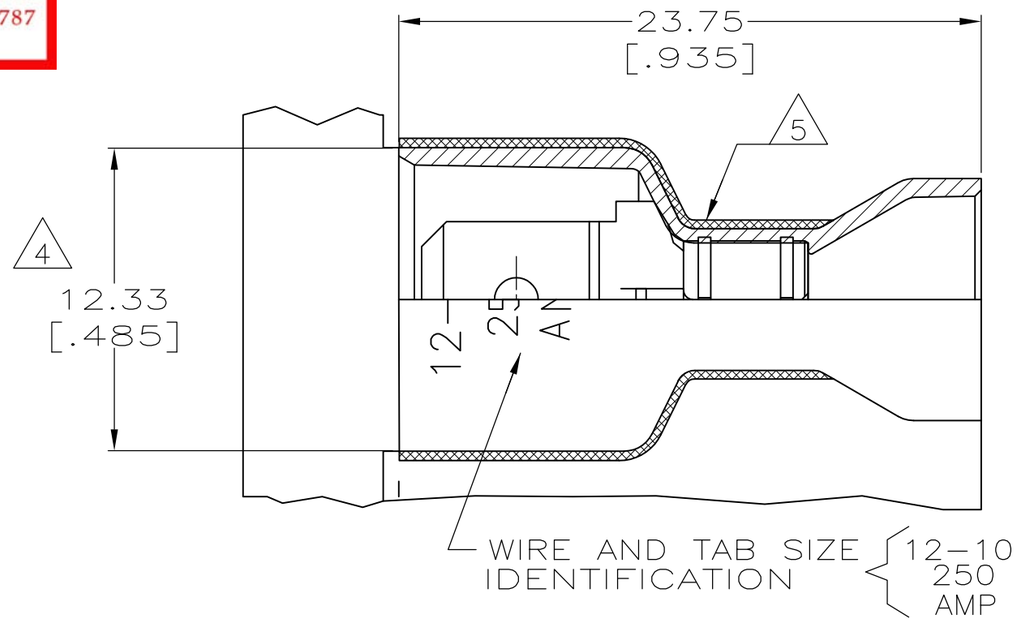
THIS DRAWING IS UNPUBLISHED. RELEASED FOR PUBLICATION –,– .
© COPYRIGHT – By – ALL RIGHTS RESERVED.

LOC	DIST
AF	50

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	F	REVISED PER ECR–13–004343	30JUL13	KH	KR

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 TAB DIMENSIONS $0.81^{+.025}_{-.050}$ x 6.35 $[.032^{+.001}_{-.002}$ x .250]

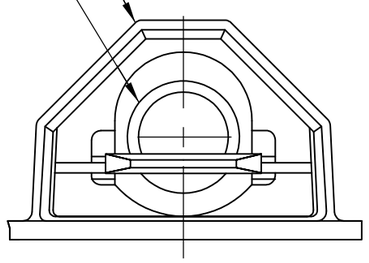
2 WIRE STRIP LENGTH 7.92 [.312].

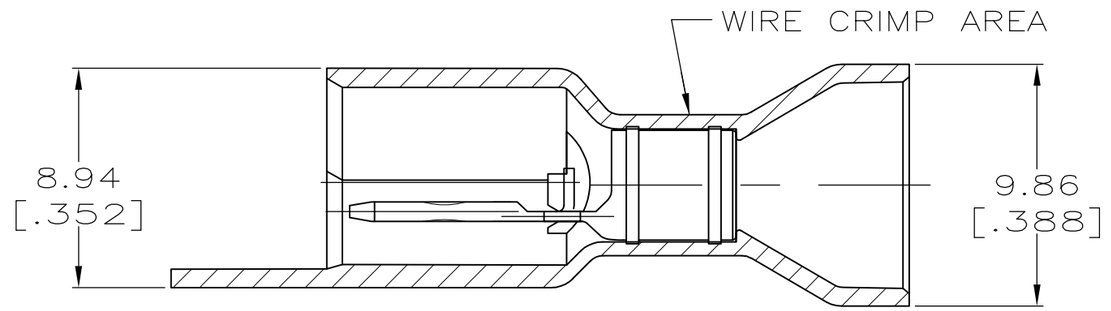
3 CONTINUOUS STRIP ON REELS.

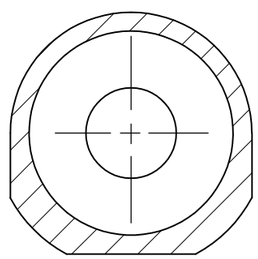
△4 DIMENSION DOES NOT INCLUDE TRIM BURR.

△5 0.38 [.015] MAX CARRIER TRIM BURR PER SIDE IS ALLOWABLE IN THE SHADED AREA.

6 INSULATION SIZE IS .320 MAX DIA.







HOUSING: NYLON,COLOR–YELLOW TAB: BRASS, TIN	4–521097–2
MATERIAL & FINISH	PART NO

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: INCHES

TOLERANCES UNLESS OTHERWISE SPECIFIED:

0 PLC	± –
1 PLC	± –
2 PLC	± 0.38 [.015]
3 PLC	± –
4 PLC	± –
ANGLES	± –

MATERIAL: SEE TABLE

FINISH: SEE TABLE

DWN JR RUTH	9/25/95
CHK P FORTNEY	9/25/95
APVD D BRATINA	9/25/95
PRODUCT SPEC	108–2017
APPLICATION SPEC	114–2123
WEIGHT	–

TE Connectivity

NAME: TAB ASSEMBLY, ULTRA–FAST, [6.35] .250 SERIES, 12–10 AWG

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A3	00779	C–521097	–

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

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 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 600V applications. The translucent nylon 6/6 insulated housing on the terminals provides protection from short circuits and shock hazard. Ultra-Fast Terminal 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 TE Connectivity 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.

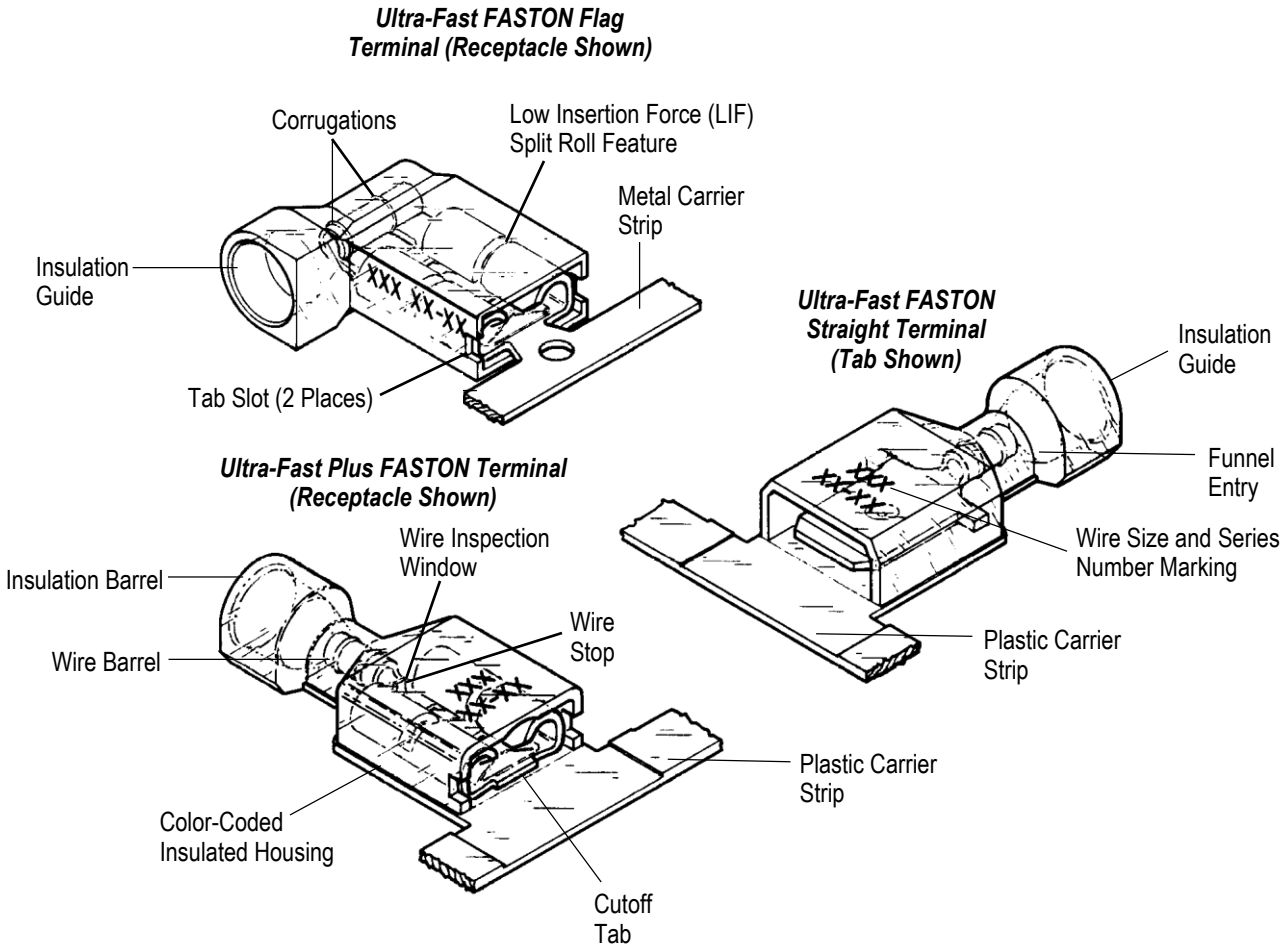


Figure 1

© 2023 TE Connectivity Ltd. family of companies.
All Rights Reserved.
*Trademark

TE Connectivity, TE connectivity (logo), and TE (logo) are trademarks. Other logos, product, and/or company names may be trademarks of their respective owners.

2. REFERENCE MATERIAL

2.1. Revision Summary

- Added new text to Paragraph 5.4.
- Updated format to TE corporate standards
- Updated Hand Tool information in Figure 11

2.2. Customer Assistance

To ensure consistent and high-quality terminations, TE Connectivity (TE) product engineering has analyzed and tested the design factors of numerous terminal crimp connections with varying wire ranges defined by the terminals. As a result, TE product engineering has defined five criteria necessary to achieve a reliable crimp: be sure to 1) use the TE product only for an application it was designed for, 2) always use the TE recommended application tooling, 3) use an appropriately selected and prepared wire, 4) adhere to the application specification described in the associated TE product print and application documentation (such as the TE 114-Application Specification, and TE Applicator "Log Sheet" print), and 5) have the product handled by trained operators only. TE product performance according to TE product specification can be achieved using the methods described in this application specification with the use of the recommended, properly maintained tooling and applicator.

If tooling or termination equipment is used other than what is recommended by TE, where such tooling or equipment was not used for agency validation and/or the product qualification process, TE does not make any representation or warranty, expressed or implied, and disclaims liability for non-performance per TE product specification. Customer accepts the sole responsibility for the evaluation, application, and use of the terminals in such circumstances.

Reference Product Base 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 help you to obtain product and tooling information when visiting www.te.com or calling the number at the bottom of page 1.

2.3. Drawings

Customer drawings for product part numbers are available from www.te.com. Information contained in the customer drawing takes priority.

2.4. Specifications

The following Product Specification provide product performance and test results.

108-2017	Ultra-Fast Tabs
108-2043	Ultra-Fast Receptacles and Ultra-Fast Flag Receptacles
108-2044	Ultra-Fast Plus Receptacles

2.5. Terminal Voltage Rating

Voltage rating is based upon dielectric strength between the terminal and other voltage potential conductors. For these un-insulated terminals, this dielectric strength is determined by 1) the wire insulation used, 2) the housing used (if any), and 3) the application spacings. These appliance business unit terminals with an insulation barrel crimp are designed for UL 1015 wire with insulation rated for 600 volts; so, this is the voltage rating assigned to these terminals. Clearly, if higher dielectric strength wire insulation, larger spacings, and possibly an optional housing are used, larger voltages can be used.

2.6. 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. Instructional material that pertain to this product are:

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
408-8051 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)
408-9225 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
408-9902 Applicator Tooling Matrix (for Applicators 466778-4, 766779-4, 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. Safety

Do not stack product shipping containers so high that the containers buckle or deform.

3.2. Storage

A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the product material.

B. Reel Storage

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

C. Shelf Life

The product should remain in the shipping containers until ready for use to prevent deformation to components. The product should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

D. Chemical Exposure

Do not store product near any chemical listed below as they may cause stress corrosion cracking in the material.

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

3.3. 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 TE Representative for current available choices.

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

Figure 2

3.4. 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.

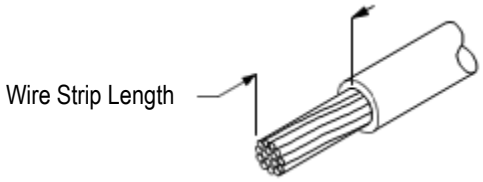
TERMINAL TYPE	TERMINAL WIRE RANGE	WIRE INSULATION DIAMETER
Ultra-Fast	26 AWG – 10 AWG	8.13 [.320] Max
Ultra-Fast Flag	22 AWG – 14 AWG	6.60 [.260] Max
Ultra-Fast Plus	22 AWG – 14 AWG	1.52 – 4.06 [.060 – .160]

Figure 3

3.5. Wire Preparation

Strip the wire to the dimensions given in Figure 4.

CAUTION
Do not nick, cut, or scrape the wire conductor during the stripping operation.



Note: Not to Scale

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

250 Flag Terminals	22 AWG – 14 AWG	7.92 [.312]	8.51 [.335]

Figure 4

3.6. Crimp Requirements

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

CAUTION
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 or tin “Lead-Free” version solder is acceptable. Solder diameter according to wire size is listed in Figure 5.

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

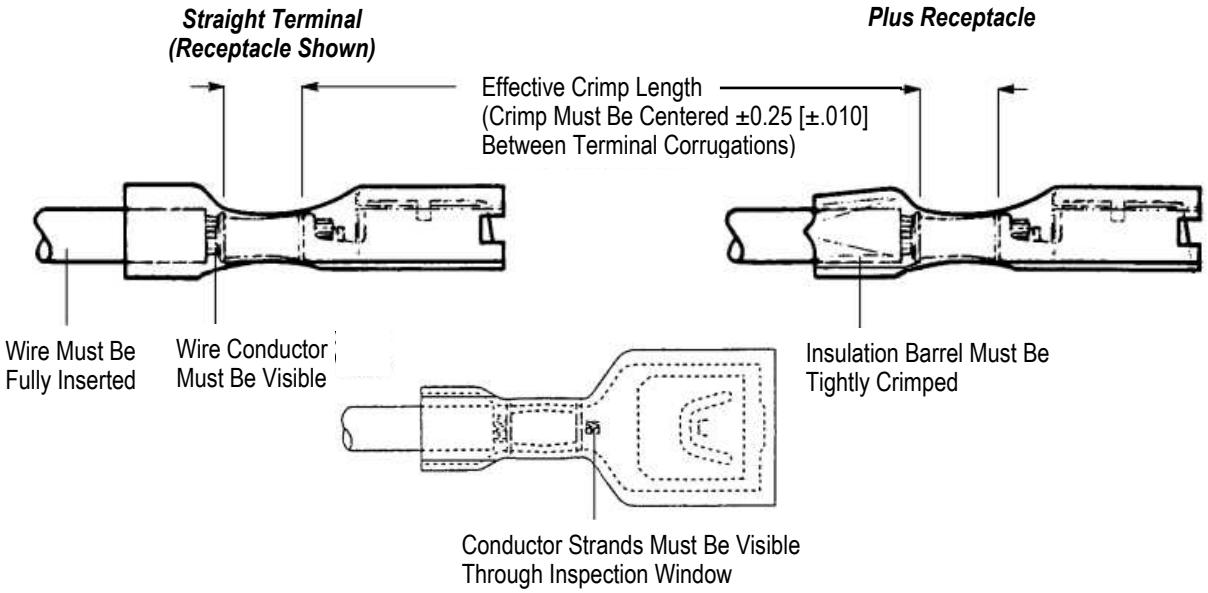
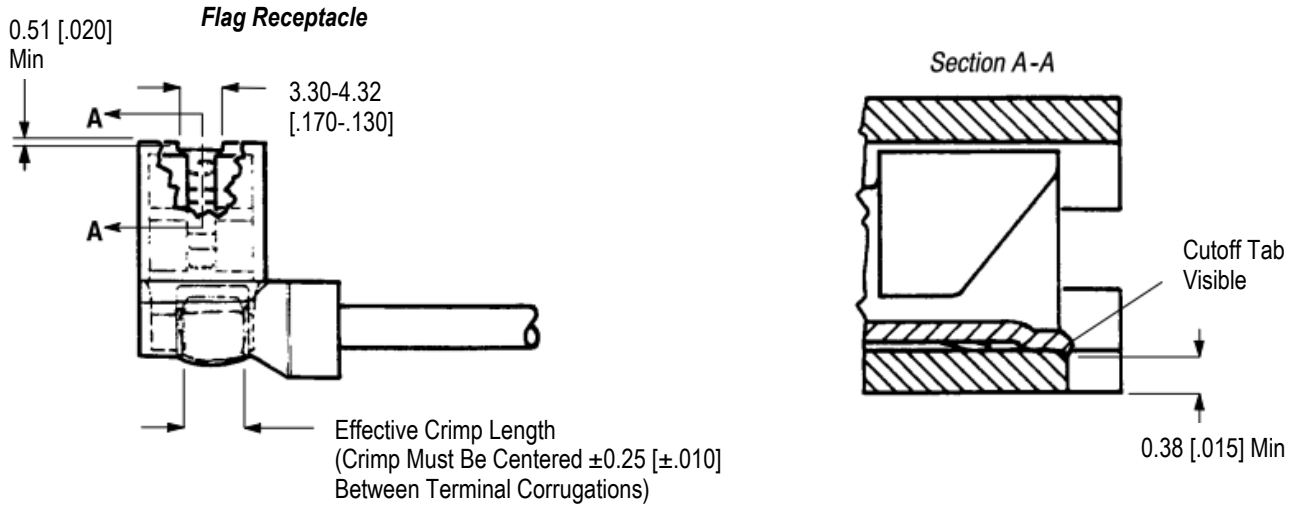


Figure 6 (continued)



SERIES 110/125 STRAIGHT RECEPTACLES

TERMINAL WIRE RANGE (AWG)	TERMINAL INSULATION BARREL			WIRE		SOLDER SLUG CRIMP HEIGHT■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	CMA	REFERENCE SIZE (AWG)		
26 – 22	Standard	2.54 [.100] Max	1	300	26	1.52 [.060]	17.8 [4]
				400	24	1.52 [.060]	26.7 [6]
				700	22	1.65 [.065]	44.5 [10]
22 – 18	Standard	3.05 [.120] Max	1	700	22	1.65 [.065]	44.5 [10]
				1000	20	1.65 [.065]	71.2 [16]

				1600	18	1.78 [.070]	89.0 [20]
	Large	5.84 [.230] Max	1	700	22	1.65 [.065]	44.5 [10]
				1000	20	1.65 [.065]	71.2 [16]
				1600	18	1.78 [.070]	89.0 [20]
			2	700	22	1.78 [.070]	44.5 [10]
				1000	20	1.78 [.070]	71.2 [16]
16 – 14	Large	6.60 [.260] Max	1	2600	16	1.78 [.070]	133.4 [30]
				4100	14	1.90 [.075]	266.9 [60]
			2	1600	18	1.78 [.070]	89.0 [20]

Figure 6 (continued)

SERIES 187, 205, AND 250 STRAIGHT RECEPTACLES AND TABS

TERMINAL WIRE RANGE (AWG)	TERMINAL INSULATION BARREL			WIRE		SOLDER SLUG CRIMP HEIGHT■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	CMA	REFERENCE SIZE (AWG)		
22 – 18	Standard	3.43 [.135] Max	1	700	22	1.65 [.065]	44.5 [10]
				1000	20	1.65 [.065]	71.2 [16]
				1600	18	1.78 [.070]	89.0 [20]
			2	700	22	1.78 [.070]	44.5 [10]
				1000	20	1.78 [.070]	71.2 [16]
	Large	5.84 [.230] Max	1	700	22	1.65 [.065]	44.5 [10]
				1000	20	1.65 [.065]	71.2 [16]
				1600	18	1.78 [.070]	89.0 [20]
			2	700	22	1.78 [.070]	44.5 [10]
				1000	20	1.78 [.070]	71.2 [16]
16 – 14	Standard	4.06 [.160] Max	1	2600	16	1.78 [.070]	133.4 [30]
				4100	14	1.90 [.075]	266.9 [60]
			2	1600	18	1.78 [.070]	89.0 [20]
	Large	6.60 [.260] Max	1	2600	16	1.78 [.070]	133.4 [30]
				4100	14	1.90 [.075]	266.9 [60]
			2	1600	18	1.78 [.070]	89.0 [20]
12 – 10●	Large	8.13 [.320] Max	1	6500	12	2.41 [.095]	311.4 [70]
				10,500	10	2.54 [.100]	355.9 [80]
			2	2600	16	2.41 [.095]	133.4 [30]
				4100	14	2.41 [.095]	266.9 [60]

SERIES 187, 205, AND 250 FLAG RECEPTACLES

TERMINAL WIRE RANGE (AWG)	TERMINAL INSULATION BARREL			WIRE		SOLDER SLUG CRIMP HEIGHT■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	CMA	REFERENCE SIZE (AWG)		
22 – 18	Standard	4.19 [.165] Max	1	700	22	1.65 [.065]	44.5 [10]
				1000	20	1.65 [.065]	71.2 [16]
				1600	18	1.78 [.070]	89.0 [20]
			2	700	22	1.78 [.070]	44.5 [10]
				1000	20	1.78 [.070]	71.2 [16]
	Large	5.84 [.230] Max		700	22	1.65 [.065]	44.5 [10]
				1000	20	1.65 [.065]	71.2 [16]

■ Refer to NOTE in Paragraph 3.6, B, Crimp Height

Figure 6 (continued)

			1	1600	18	1.78 [.070]	89.0 [20]
			2	700	22	1.78 [.070]	44.5 [10]
				1000	20	1.78 [.070]	71.2 [16]
16 – 14	Standard	4.70 [.185] Max	1	2600	16	1.78 [.070]	133.4 [30]
				4100	14	1.90 [.075]	266.9 [60]
			2	1600	18	1.78 [.070]	89.0 [20]
	Large	6.60 [.260] Max	1	2600	16	1.78 [.070]	133.4 [30]
				4100	14	1.90 [.075]	266.9 [60]
			2	1600	18	1.78 [.070]	89.0 [20]

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

SERIES 110/125 PLUS RECEPTACLES

TERMINAL WIRE RANGE (AWG)	TERMINAL INSULATION BARREL			WIRE		SOLDER SLUG CRIMP HEIGHT■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	CMA	REFERENCE SIZE (AWG)		
22 – 18	Standard	1.52-3.05 [.060-.120]	1	700	22	1.65 [.065]	44.5 [10]
				1000	20	1.65 [.065]	71.2 [16]
				1600	18	1.78 [.070]	89.0 [20]
		0.76-1.52 [.030-.060]	2	700	22	1.78 [.070]	44.5 [10]

SERIES 187 AND 250 PLUS RECEPTACLES AND SERIES 250 PLUS TABS

TERMINAL WIRE RANGE (AWG)	TERMINAL INSULATION BARREL			WIRE		SOLDER SLUG CRIMP HEIGHT■ ±0.05 [±.002]	TENSILE STRENGTH (Min) N [lb]
	TYPE	DIAMETER	QUANTITY	CMA	REFERENCE SIZE (AWG)		
22 – 18	Standard	1.52-3.43 [.060-.135]	1	700	22	1.65 [.065]	44.5 [10]
				1000	20	1.65 [.065]	71.2 [16]
				1600	18	1.78 [.070]	89.0 [20]
		0.76-1.70 [.030-.067]	2	700	22	1.78 [.070]	44.5 [10]
16 – 14	Standard	2.29-4.06 [.090-.160]	1	2600	16	1.90 [.075]	133.4 [30]
				4100	14	2.03 [.080]	266.9 [60]
		1.14-2.03 [.045-.080]	2	1600	18	1.90 [.075]	89.0 [20]

Figure 6 (end)

■ Refer to NOTE in Paragraph 3.6, 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.

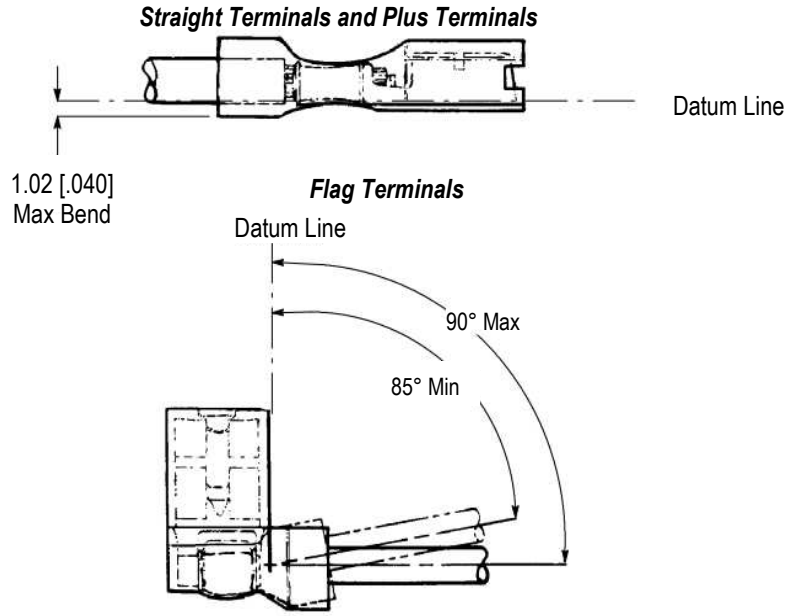


Figure 7

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.

3.7. 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.

3.8. Mating Tab Dimensions

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

NOTE
Test tabs shall have dimensions as shown in Figure 8, except Dimension "C" shall have a tolerance of ±0.008 [±.0003] for brass tabs and ±0.013 [±.0005] for steel, and raised plateaus around the detents shall be limited to a total of 0.03 [.001] for both sides.

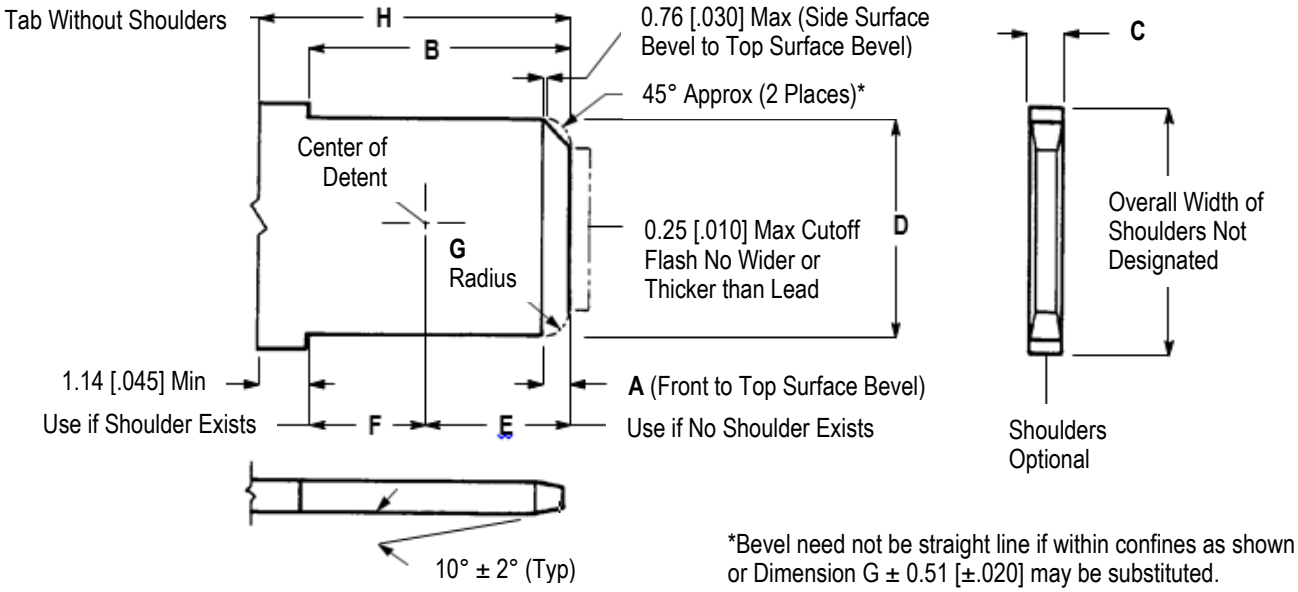


Figure 8 (continued)

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 X 0.81 [.250 X .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 X 0.81 [.250 X .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 X 0.81 [.205 X .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 X 0.81 [.205 X .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 X 0.81 [.187 X .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 X 0.81 [.187 X .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 X 0.51 [.187 X .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 X 0.51 [.187 X .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 X 0.81 [.125 X .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 X 0.51 [.125 X .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 X 0.81 [.110 X .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 X 0.51 [.110 X .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 3.9.

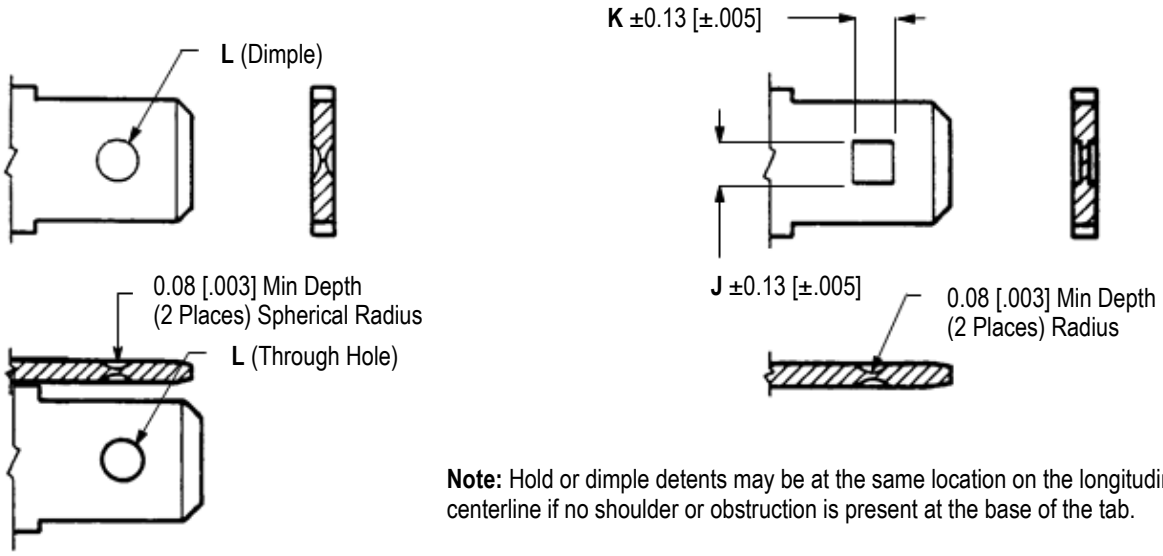
2. Top and bottom tab surfaces shall be within .1% and free from burrs greater than 10% of tab thickness or raised plateaus, except as noted in Paragraph 3.8.

3. Dimensional measurements shall not include plating, burrs, or flatness tolerance.

Figure 8 (end)

3.9. 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: Hold 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	L
6.35 [.250]	2.36 [.093]	1.90 [.075]	1.78 +0.25/–0.13 [.070 +.010/–.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 [.055±.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 CSA International

These terminals meet Specification UL-310 for quick-connect terminals and are listed by UL in File E66717. These terminals meet CSA C22.2 Specification 153 for quick-connect terminals and are certified to CSA International in 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. Verband der Elektrotechnik (VDE)

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

4.3. 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 11.

NOTE
TE 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 TE Representative or call Product Information at the number on 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

Die 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.

5.5. Press/Applicator Setup Side-Movement Wear-Limit Check

This product should only be crimped with press/applicator combinations that have less than 0.010" side crimper movement (axial to wire). See Figure 10. Measure crimper movement directly beside or above crimp. With the power off, apply pressure to move crimper axially with the wire (toward and away from dial indicator with 0.001" resolution or finer). *Less than 0.010" total side movement at the crimper is required for this Ultra-FAST product family.* If larger wear is present, use a different press or contact the TE Connectivity GATD Tooling Group about press repair or replacement.

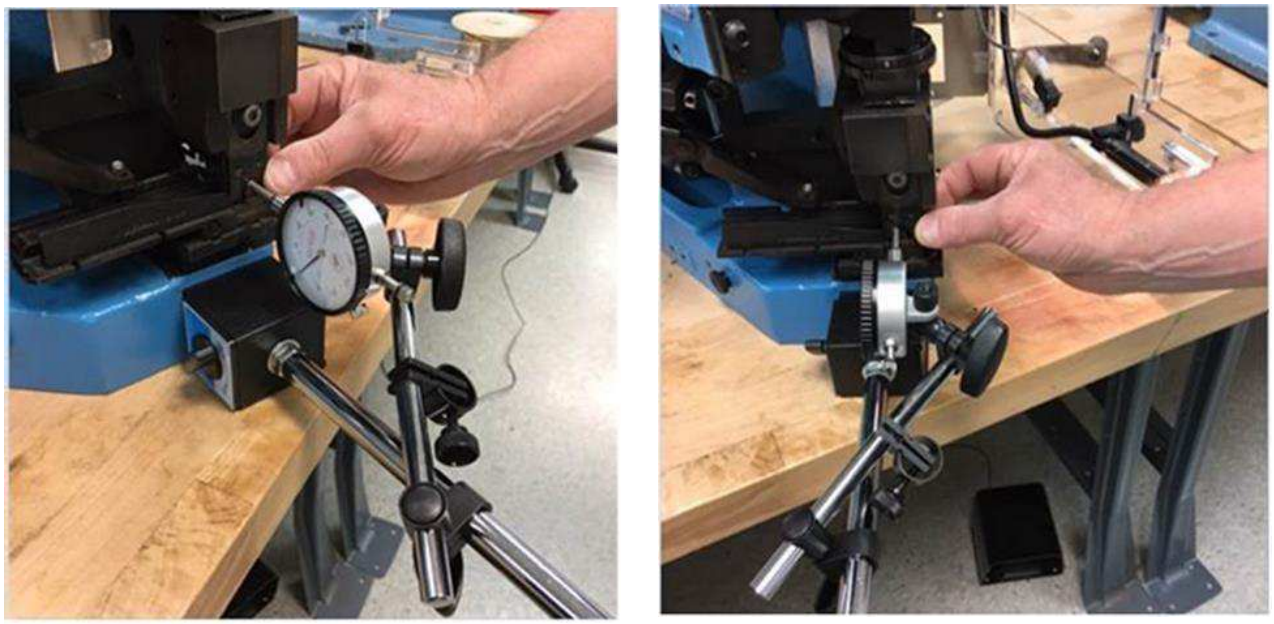
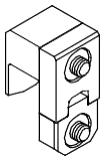
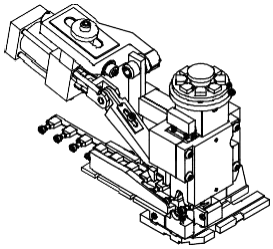


Figure 10

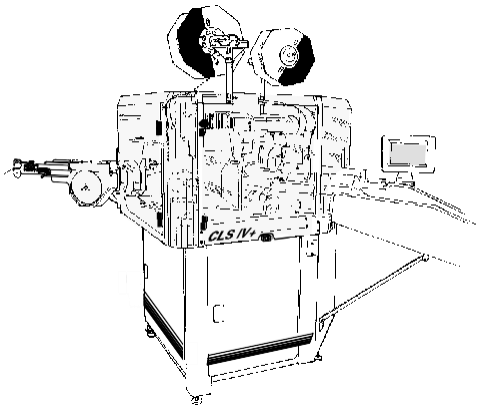


Typical Die Assembly
(Refer to Table)

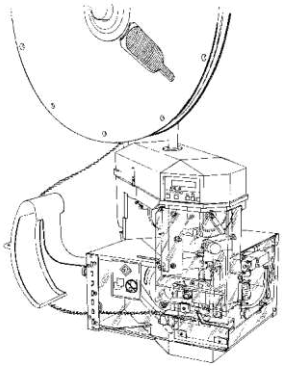
DIE ASSEMBLY (For Applicators)	INSTRUCTION SHEET
58268-1, 58268-2	408-9227
58269-2, 58269-3, 58269-4, 58269-5	408-9225
58308-1, 58308-2	408-9296



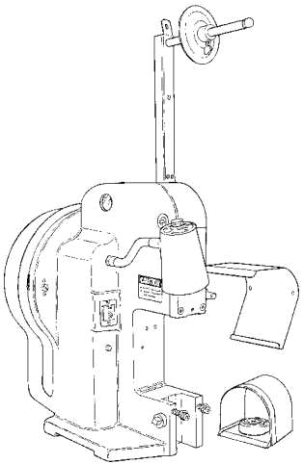
Typical Applicator
(Refer to Table)



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



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



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

APPLICATOR	INSTRUCTION SHEET
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

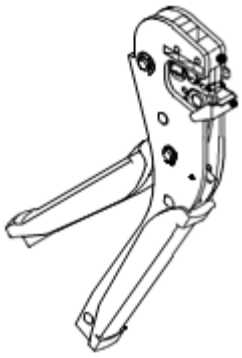
Figure 11 (continued)

TERMINAL			APPLICATOR☐ FOR POWER UNIT			DIE ASSEMBLIES FOR APPLICATOR	
SERIES	TYPE	WIRE RANGE (AWG)	AMP-O-LECTRIC Model "K" Machine 565435-5	AMP-O-LECTRIC 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

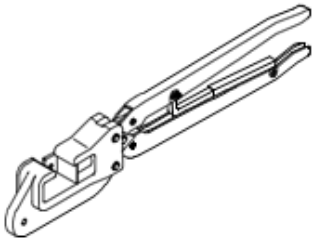
☐Applicators may be convertible from one machine to another. Contact the number at the bottom of page 1 for more information.

† Terminates wire size 22 AWG only.
‡ Terminates wire size 12 AWG only.
■ Terminates wire size 10 AWG only.

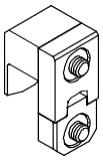
Figure 11 (continued)



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)	INSTRUCTION SHEET
58052-3	408-9277
58079-3	408-9278
58080-3	408-9278
58628-2	408-4452
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 (AWG)	58078-3	69710-1	354940-1 *
110/125	Receptacle	26 – 22	58052-3	—	58628-2 ♦
		22 – 18	90390-3	—	58628-2 ♦
		16 – 14	90391-3	—	58628-2 ♦
	Plus Receptacle	22 – 18	58079-3	—	—
187	Receptacle	22 – 18	90390-3	—	58628-2 ♦
		16 – 14	90391-3	—	58628-2 ♦
	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	—	58628-2 ♦
250	Receptacle	22 – 18	90390-3	—	58628-2 ♦
		16 – 14	90391-3	—	58628-2 ♦
		12 – 10	—	224027-1 ■	—
			—	224027-2 ‡ □	—
	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	—	58628-2 ♦
		16 – 14	90391-3	—	58628-2 ♦
		12 – 10	—	224027-2 ‡ □	—
			—	224027-1 ■	—

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

* Die assembly also compatible with other Standard Die Envelope (SDE) frames.

Figure 11 (end)

‡ Terminates wire size 12 AWG only.

■ Terminates wire size 10 AWG only.

♦ Complete tool number 58628-1 can also be used.

6. VISUAL AID

Figure 12 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.

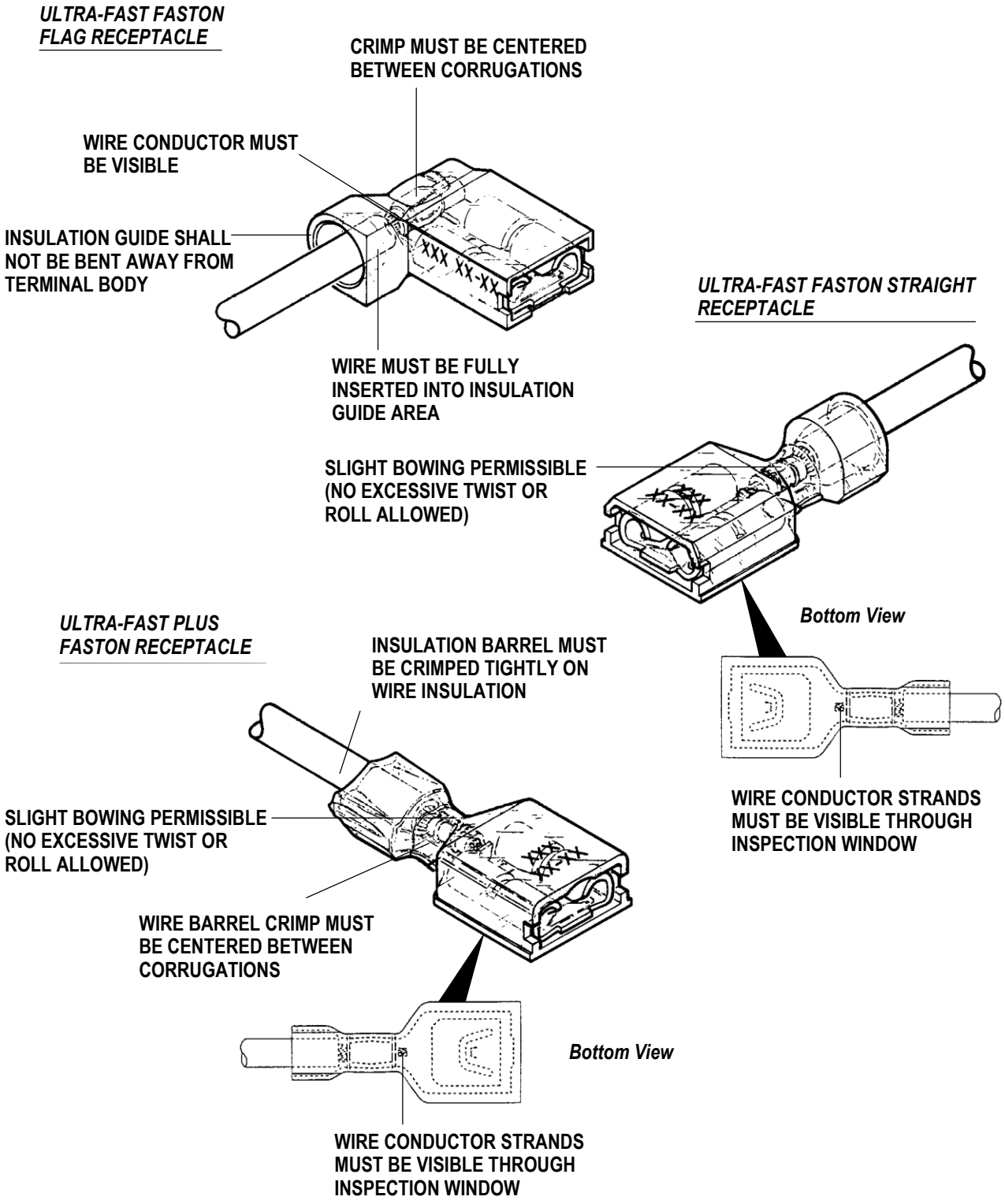


Figure 12: Visual Aid