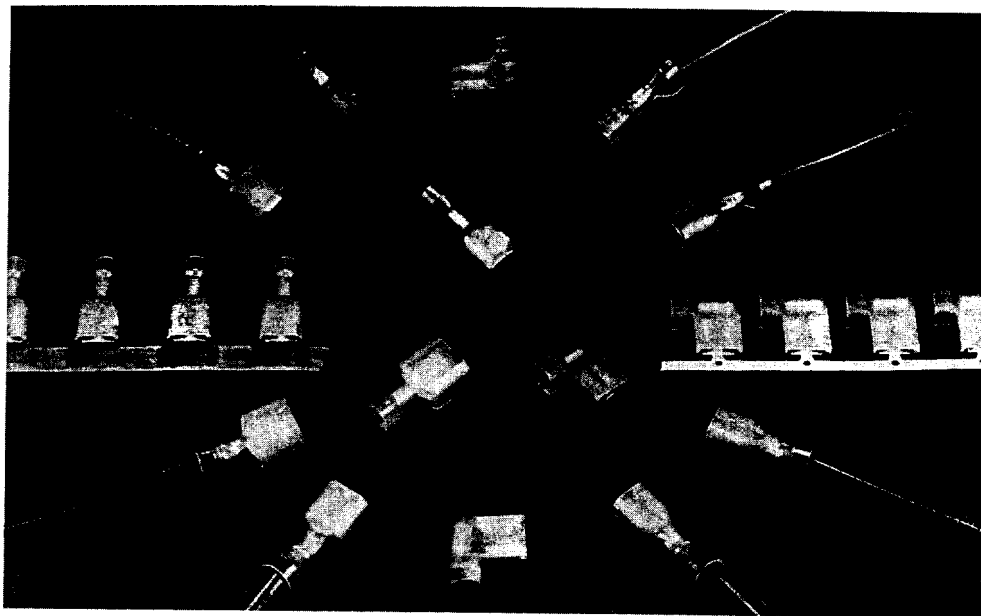


ULTRA-FAST FULLY INSULATED
FASTON RECEPTACLES AND TABS4488-409 to 392
446-133 to 444-203Performance
Capabilities

- Meets UL-310 specification for quick connect terminals
- Meets CSA C22.2 No. 153 Specification for quick connect terminals
- Meets NEMA DC-2 Standard for quick connect terminals (Flag meets mechanical standard only)
- 600 volt application capability (1000 volts for signs and fixtures)

Product Facts

- One-piece Fully Insulated Premier quality FASTON Receptacle prevents shock and short hazards
- Designed to ensure correct lead-in of tab
- Designed to ensure full mating with a variety of tab styles including those with shoulders
- Funnel wire entry
- Wire stop
- Visual inspection of crimp and wire brush
- Assemblies are color coded by wire size
- Assemblies contain wire size and tab size designation
- Tab thickness marked on terminal and visible through housing
- Standard and large insulation diameter product
- Application tooling available to meet production requirements
- Tin-plated copper alloy terminals
- UL rated at +105°C
- Terminates 26-10 AWG solid, fused and stranded wire (Flags terminate stranded wire only)



The Ultra-Fast Fully Insulated FASTON Receptacle and Tab offers the advantage of a completely protected terminal and a wire crimp with comparable electro-mechanical performance to open barrel "F" crimp FASTON Terminals. The "User-Friendly" design combines easy mating with rounded corners. The .187 and .250 series receptacles incorporate a two-stage roll configuration and a cantilever mounted dimple which provides easy insertion and multiple independent points of contact for reduced tab interface resistance.

Ultra-Fast Fully Insulated FASTON Receptacles, Flag Receptacles and Tabs preclude the need for costly electrical safety interlocks or special protective shields to prevent shock hazards. In addition, electrical short circuits from exposed leads are eliminated, even in equipment requiring close contact spacing.

The Ultra-Fast Receptacle, Flag Receptacle and Tab are preinsulated assemblies featuring a

housing molded from type 6/6 nylon material with a +125°C UL temperature rating.

The Ultra-Fast Receptacle housing completely encloses a tin-plated copper alloy Premier FASTON receptacle which has been stress-relieved for increased durability and resistance to abuse. The FASTON receptacle is recessed sufficiently within the housing to allow its use in 600-volt applications. The front end of the terminal is designed for positive mating with a variety of tabs, including those with shoulders. The housing has a slotted membrane which is displaced by two tab shoulders allowing proper engagement of tab and receptacle while maintaining the fully insulated characteristic.

Positive entry and lead-in of the tab is assured by the inner housing wall and the lead-in on the terminal rolls. This permits positive engagement, even in blind mating locations.

The Ultra-Fast Tab housing completely encloses a tin-plated copper alloy

FASTON tab. The FASTON tab is recessed sufficiently within the housing to allow its use in 600-volt applications. The housing is designed to completely encapsulate the tab and receptacle when the two are mated.

Quality control is easily maintained. The nylon housing is translucent, allowing visual inspection of the termination. In addition, a crimp code on the hand tool is indented into the housing during the crimping operation which identifies that the proper crimp dies were used.

Depending on production requirements, AMP provides a complete selection of terminating equipment including the AMP-O-ELECTRIC terminating machine and fully automatic AMPOMATOR, CLS II and CLS III lead-making machines.

■ UL Listed under File No. E66717



■ CSA Certified under File No. LR 7189



■ VDE tested according to DIN VDE Reg. No. 0627/9.91, VDE Reg. No.



■ Quick-Change Applicator for AMP-O-ELECTRIC Machine 565435-5.
For AMPOMATOR Machine and other machines not listed, contact AMP Incorporated.

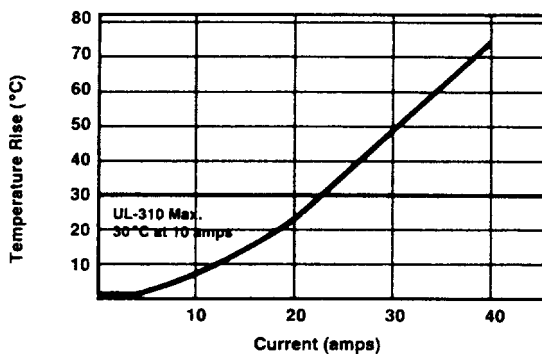
Ultra-Fast

ULTRA-FAST FULLY INSULATED FASTON RECEPTACLES AND TABS (CONTINUED)

Test Specifications

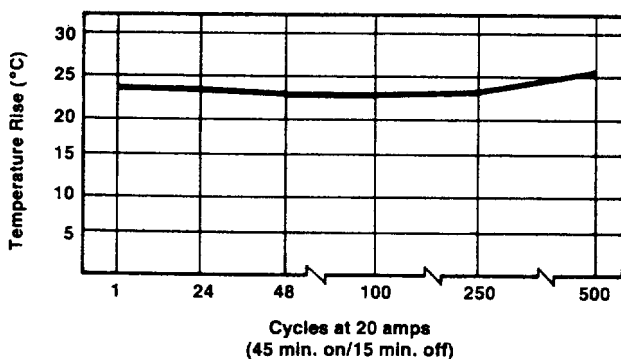
The following information and accompanying graphs are taken from AMP Product Qualification Testing of Ultra-Fast product. Tests were conducted on representative production samples, and all values shown are averages of group results. The values shown are typical results and may vary due to differences in processing, application and methods of testing.

Current vs. Temperature Rise (16 AWG)



The heat generated by the current passing through a termination is a primary limit to the load-carrying capabilities of the application. A low termination resistance will produce a lower temperature rise as current is applied. In order to evaluate this characteristic, UL has established current ratings for each wire size and set a maximum temperature rise to assure safe operation. For example, 16 AWG stranded wire has a UL 310 maximum temperature rise of 30°C above ambient temperature at the rated current of 10 amps. In the testing of the Ultra-Fast product applied to 16 AWG wire, the temperature rise was found to be below 10°C at the rated current. In fact, the temperature rise did not exceed 30°C until the current was above 20 amps, more than twice the rated current.

Current Cycling vs. Temperature Rise (16 AWG)

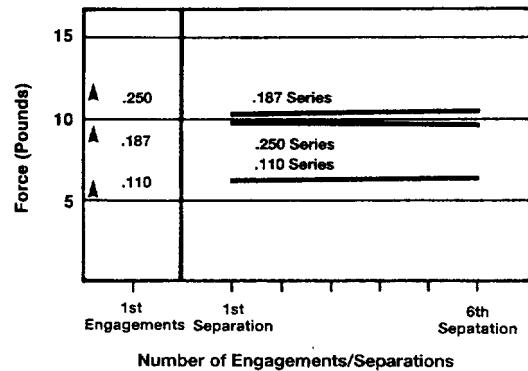


Maintaining a safe temperature rise during cyclic applications of excessive current is the toughest challenge for the crimp-thru-plastic concept. The ability of the Ultra-Fast product line to meet this goal sets it apart from other preinsulated terminations. AMP's experience in crimp development results in a termination that exhibits stable heating characteristics which are well within the safety requirements of the industry.

To test a product, it must be subjected to 500 on and off cycles at twice the rated current for the particular

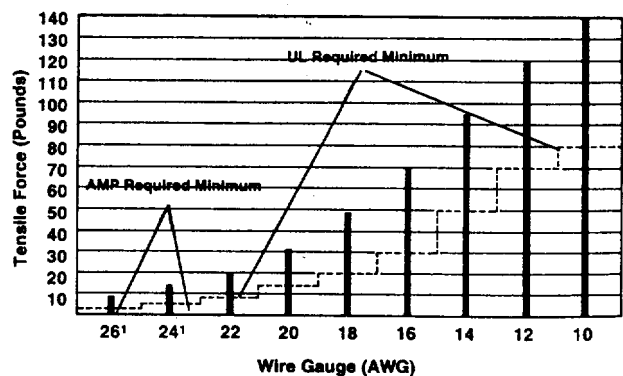
wire size. The temperature rise is measured on the 24th cycle and the 500th cycle. The maximum temperature rise is limited to 85°C above ambient temperature with a maximum of 15°C increase on any sample between the 24th and 500th cycles. Our testing of 16 AWG wire application indicated a 25.5°C maximum temperature rise thru 500 cycles, with a maximum increase of 0.8°C from the 24th to the 500th cycle for one sample in the test group.

Engagement/Separation



The forces caused by the rolls of FASTON style terminals determine the contact interface integrity of a mated receptacle and tab. These forces must be high enough to prevent oxidation and corrosion from forming inside the contact area. As these forces are raised to increase the electrical performance, the engagement and separation forces for mating the contacts are significantly increased. For this reason, the Premier Low Insertion Force FASTON concept of receptacle design has been carried over to the Ultra-Fast products. This feature ensures consistent engagement and separation forces while maintaining a high standard of electrical reliability.

Crimp Tensile



¹UL does not have requirements for wire gauges below 22 AWG.
Note: Minimum requirements are per AMP specifications.

The crimp tensile strength of a wire-to-terminal connection is important in guarding against such hazards as wire flexing, vibration and wire strain. However, maximum tensile strength does not insure maximum electrical performance. An acceptable compromise between tensile strength and electrical performance must always be reached, using recommended crimp heights.

■ Quick-Change Applicator for AMP-O-ELECTRIC Machine 565435-5.
For AMPOMATOR Machine and other machines not listed, contact AMP Incorporated.

For drawings, technical data or samples, contact your AMP sales engineer or call the AMP Product Information Center: 1-800-522-6752. Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Specifications subject to change. Consult AMP for latest specifications.

ULTRA-FAST FULLY INSULATED
FASTON RECEPTACLES AND TABS (CONTINUED)

Ultra-Fast Fully
Insulated FASTON
Receptacles

Material

Housing—Nylon Type 6/6

Terminal—Tin-plated,
copper alloy

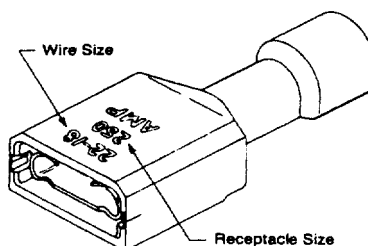
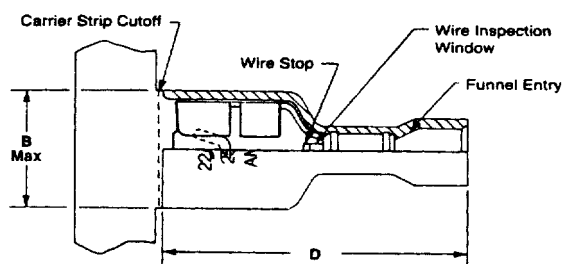
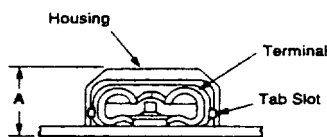
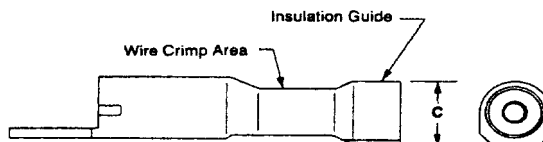
Color Code
(Translucent)

Violet—26-22 AWG

Red—22-18 AWG

Blue—16-14 AWG

Yellow—12-10 AWG



Description	Wire Range AWG	Ins. Dia. Max.	Dimensions				Mating Tab	Terminal Base Material	Part No.	
			A	B	C	D			Strip	Loose Piece
.110/.125 Series	26-22	.100	.145	.275	.138	.735	.020 x .110/.125	Brass	7-520365-2 ¹	7-520366-2 ¹
	22-18						.016 x .110/.125	Brass	2-520080-2 ¹	2-520081-2 ¹
							.020 x .110/.125	Brass	2-520083-2	2-520084-2
							.032 x .110/.125	Brass	2-520272-2	2-520273-2
							.020 x .110/.125	Brass	2-520306-2	—
							.032 x .110/.125	Brass	2-520310-2	—
16-14	.260	.175	.275	.325	.865	.020 x .110/.125	Brass	3-520370-2 ²	—	
.187 Series	22-18						.020 x .187	Brass	2-520181-2	2-520182-2
							.032 x .187	Brass	2-520193-2	2-520194-2
							.020 x .187	Brass	2-520261-2	—
	16-14						.032 x .187	Brass	2-520274-2	2-520275-2
							.020 x .187	Brass	3-350815-2	3-350816-2
							.032 x .187	Brass	3-520124-2	3-520125-2
						.020 x .187	Brass	3-520150-2	3-520151-2	
						.032 x .187	Brass	3-520276-2	—	
						.250 Series	22-18			
Phos. Brz.	2-520183-4	2-520184-4								
Brass	2-520263-2	2-520264-2								
16-14							Phos. Brz.	2-520263-4	—	
							Brass	3-350819-2	3-350820-2	
							Phos. Brz.	3-520116-2	3-520117-2	
							Brass	3-520140-2	3-520141-2	
							Phos. Brz.	3-520140-4	—	
12-10	.320	.250	.409	.388	.935	.032 x .250	Brass	4-520447-2	4-520448-2	

¹UL Recognized, CSA Certified.

²UL Recognized 8 AMPS Max. CSA Certified.

Ultra-Fast

ULTRA-FAST FULLY INSULATED
FASTON RECEPTACLES AND TABS (CONTINUED)

Application Tooling

For the exact application tooling to meet your production requirements, see the applicator recommendations in this data sheet or call the Customer Assistance Hotline 1-800-722-1111.

Description	Wire Range AWG	Strip Form Terminals			Loose Piece Terminals		
		Quick Change Applicator for			Die Insert Set		
		AMP-O-ELECTRIC Machine 565435-5	AMPOMATOR Machines		for Hand Tool		
			Model IV A	Model IV B, CLSI, and CLSII	58078-3	69710-1	Pro-Crimper
.110/.125 Receptacles	26-22	567082-2	—	567082-1 ¹	58052-3	—	58628-1
	22-18	567041-2	567039-7	567041-1	90390-3	—	58628-1
	16-14	567117-2	—	567117-1	90391-3	—	58628-1
.187 Receptacles	22-18	466779-4	567039-1	466779-3	90390-3	—	58628-1
	16-14	466778-4	567039-2	466778-3	90391-3	—	58628-1
.187 Tab	22-18	—	—	—	—	—	58628-1
.250 Receptacles	22-18	466779-4	567039-3	466779-3	90390-3	—	58628-1
	16-14	466778-4	567039-4	466778-3	90391-3	—	58628-1
	12-10	567142-2	567039-8	—	—	58267-1 ³ 58267-2 ²	58630-1
.250 Tab	22-18	466779-4	567039-5	466779-3	90390-3	—	58628-1
	16-14	466778-4	567039-6	466778-3	90391-3	—	58628-1
.187 Flag Receptacles	STD	22-18	567083-2	567121-1	567083-1	90390-3	—
	LID ⁴	16-14	567085-2	567122-1	567085-1	90391-3	—
	LID ⁴	16-14	567460-2	—	567460-1	—	—
.250 Flag Receptacles	STD	22-18	466784-2	682317-1	466784-1	90390-3	—
	LID ⁴	16-14	466785-2	682317-2	466785-1	90391-3	—
	LID ⁴	22-18	567228-2	—	567228-1	—	—
	LID ⁴	16-14	567494-2	—	567494-1	—	—

¹22 AWG only.

²12 AWG only.

³10 AWG only.

⁴Large Insulation Diameter.

ULTRA-FAST PLUS—FULLY INSULATED FASTON RECEPTACLES AND TABS

Product Facts

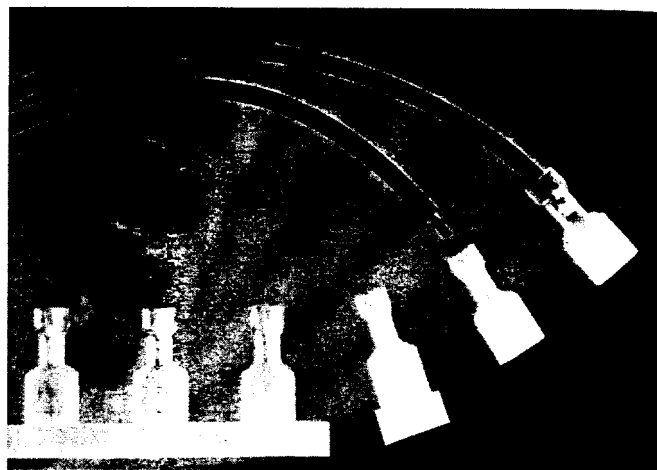
- One-piece Fully Insulated Premier quality FASTON Receptacle with insulation crimp prevents shock and short hazards
- Designed to ensure correct lead-in of tab
- Designed to ensure full mating with a variety of tab styles including those with shoulders
- Funnel wire entry
- Wire stop
- Visual inspection of crimp and wire brush
- Assemblies are color-coded by wire size
- Assemblies contain wire size and tab size designation
- Tab thickness marked on terminal and visible through housing
- Application tooling available to meet production requirements
- Tin-plated copper alloy terminals
- UL rated at +105°C
- Terminates 22-14 AWG solid, fused and stranded wire
- Complies with the IEC 380, 601, 950, and UL 1950 requirements for a secondary means of insulation fixing

- Meets NEMA DC-2 standard for quick connect terminals
- 600-volt application capability (1,000 volts for signs and fixtures)
- Tested by TUV File No. E9071003 as suitable for end product certification to the following standards:
EN 60 950/09.87
DIN IEC 380/VDE 0806/08.81
DIN IEC 601-1 Part 1/VDE 0750 T1/05.82
DIN VDE 0700 T1/02.81

Ultra-Fast Plus Fully Insulated FASTON Receptacles and Tabs offer all the advantages of the standard Ultra-Fast product plus an insulation crimp.

Ultra-Fast Plus Fully Insulated FASTON Receptacles and Tabs preclude the need for costly electrical safety interlocks or special protective shields to prevent shock hazards. In addition, electrical short circuits from exposed leads are eliminated, even in equipment requiring close contact spacing.

Ultra-Fast Plus Receptacles and Tabs are preinsulated assemblies featuring a co-molded housing produced from two different nylon materials. The receptacle/tab and wire barrel portions of the housing are molded from type 6/6 nylon material with a +125°C UL temperature rating. The insulation barrel is molded from a premium grade nylon selected to retain the insulation crimp shape. This premium nylon exhibits minimal springback, thus providing actual insulation crimp tensile strength as well as strain relief for



applications where extreme wire dressing and/or vibration are present.

The Ultra-Fast Plus Receptacle housing completely encloses a tin-plated copper alloy Premier FASTON receptacle which has been stress relieved for increased durability and resistance to

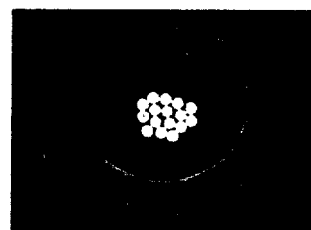
Positive entry and lead-in of the tab is assured by the inner housing wall and the lead-in on the terminal rolls. This permits positive engagement, even in blind mating locations.

The Ultra-Fast Plus Tab housing completely encloses a tin-plated copper alloy FASTON tab. The FASTON tab is recessed sufficiently within the housing to allow its use in 600-volt applications. The housing is designed to completely encapsulate the tab and receptacle when the two are mated.

Quality control is easily maintained. The nylon housing is translucent, allowing visual inspection of the termination.

Depending on production requirements, AMP provides a complete selection of terminating equipment including the AMP-O-ELECTRIC terminating machine and the fully automatic AMPOMATOR, CLSII and CLSIII lead-making machines.

operator abuse. The FASTON receptacle is recessed sufficiently within the housing to allow its use in 600-volt applications. The front end of the terminal is designed for positive mating with a variety of tabs, including those with shoulders. The housing has a slotted membrane which is displaced by two tab shoulders allowing proper engagement of tab and receptacle while maintaining the fully insulated characteristics.



Performance Capabilities

- Meets UL-310 specification for quick connect terminals; UL listed under File No. E-66717 
- Meets CSA C22.2, No.153 Specification for quick connect terminals; CSA Certified under File No. LR 7189 
- VDE tested according to DIN VDE 0627/9.91, VDE Reg. No. 

- Quick-Change Applicator for AMP-O-ELECTRIC Machine 565435-5.
For AMPOMATOR Machine and other machines not listed, contact AMP Incorporated.

For drawings, technical data or samples, contact your AMP sales engineer or call the AMP Product Information Center: 1-800-522-6752. Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Specifications subject to change. Consult AMP for latest specifications.

ULTRA-FAST PLUS—FULLY INSULATED FASTON RECEPTACLES AND TABS (CONTINUED)

Ultra-Fast Plus—Fully Insulated FASTON Receptacles

Material

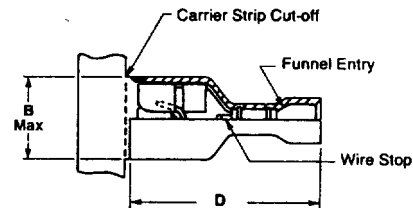
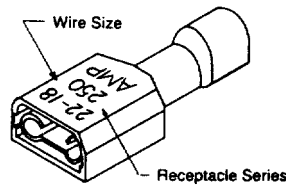
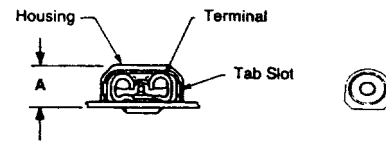
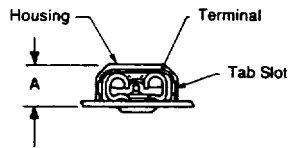
Housing—Nylon

Terminal—Tin plated,
copper alloy

Color Code (Translucent)

Red—22-18 AWG

Blue—16-14 AWG

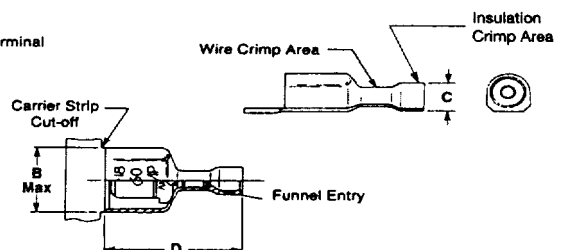
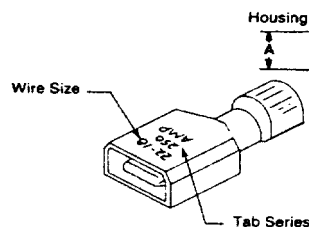


Description	Wire Range AWG	Ins. Dia. Range	Dimensions				Mating Tab	Terminal Base Material	Part No.	
			A	B	C	D			Strip	Loose Piece
.110/.125 Series	22-18	.060-.120	.160	.275	.167	.735	.032 x .110/.125	Brass	2-520979-2	—
							.020 x .110/.125	Brass	2-520932-2	—
.187 Series	22-18	.060-.135	.165	.336	.200	.855	.020 x .187	Brass	2-520401-2	2-520409-2
							.032 x .187	Brass	2-520403-2	2-520411-2
	16-14	.090-.160	.185	.336	.225	.855	.020 x .187	Brass	3-520402-2	3-520410-2
							.032 x .187	Brass	3-520404-2	3-520412-2
.250 Series	22-18	.060-.135	.195	.409	.200	.855	.032 x .250	Brass	2-520405-2	2-520407-2
							.032 x .250	Brass	3-520406-2	3-520408-2

Ultra-Fast Plus—Fully Insulated FASTON Tabs

Material

Housing—Nylon Type 6/6

Terminal—Tin plated,
copper alloy

Description	Wire Range AWG	Ins. Dia. Range	Dimensions				Mating Tab	Terminal Base Material	Part No.	
			A	B	C	D			Strip	Loose Piece
.250 Series	22-18	.060-.135	.290	.522	.205	.855	.032 x .250	Brass	2-521055-2	—
							.032x .250	Brass	3-521057-2	—

Application Tooling

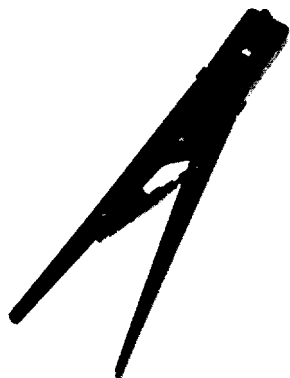
For the exact application tooling to meet your production requirements, see the applicator recommendations in this data sheet or call the Customer Assistance Hotline 1-800-722-1111.

Description	Wire Range AWG	Strip Form Terminals			Loose Piece Terminals
		Quick Change Applicators for			Die Insert Set for Hand Tool 58078-3
		AMP-O-ELECTRIC Machine 565435-5	AMPOMATOR Machines		
			Model IV A	Model IV B, CLSII, and CLSIII	
.110/.125 Series	22-18	567276-2	—	567276-1	—
.187 Series	22-18	567111-2	567201-1	567111-1	58079-3
	16-14	567112-2	567202-1	567112-1	58080-3
.250 Series	22-18	567111-2	567201-1	567111-1	58079-3
	16-14	567112-2	567202-1	567112-1	58080-3

■ Quick-Change Applicator for AMP-O-ELECTRIC Machine 565435-5.
For AMPOMATOR Machine and other machines not listed, contact AMP Incorporated.

APPLICATION TOOLING (CONTINUED)

488 495

**CERTI-CRIMP Straight Action Hand Tool (SAHT)**

Our premium line of hand tools featuring ratchet control to help eliminate partial crimps. This style also features straight-line die closure, terminal locator and support, and insulation crimp adjustment. They are used to apply selected 110 and 187 Series FASTON Terminals.

**CERTI-CRIMP Double Action Hand Tool (DAHT)**

The dies on these tools travel in an arc-like path. The tools feature ratchet control, a locator, and an insulation crimp adjustment pin. They are used to apply selected 250 Series FASTON Terminals.

488-495

**TETRA-CRIMP Hand Tool Part Number 59824-1**

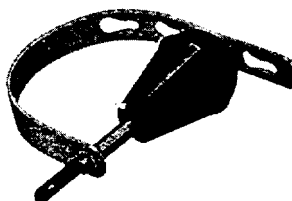
Similar to DAHT, the dies travel in an arc-type path. The tool features ratchet control with emergency release, multiple color-coded crimping cavities, and a terminal locator and wire stop. It is used to apply PIDG FASTON Receptacles, part number series 6409xx only as shown on page 80.

**Platform Die Hand Tool, Part Number 58078-3**

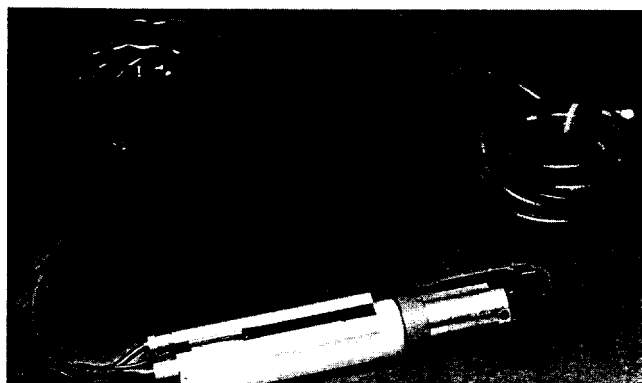
This tool has the same frame configuration as the TETRA-CRIMP Hand Tool. The dies are interchangeable, and the terminal locator is adjustable. It is used to apply Ultra-Fast and Ultra-Fast Plus FASTON Terminals.

**PRO-CRIMPER II Hand Tool**

Using interchangeable dies, this mid-priced, commercial tool can crimp a vast array of AMP products. It also features ratchet control with emergency release. The new design is more durable, and requires dramatically less hand force. Currently, it can be used to apply selected FASTON Receptacles.

**AMP Universal Handle, Part Numbers 465629-1 (Short) and 465629-2 (Long)**

This tool with interchangeable tips is used to mate standard and Tab-Lok Flag FASTON Receptacles to tabs. It features an adjustable strap. The short tip holder is 1.87 [47.5], the long is 5.87 [149]. For further information, request Instruction Sheet 408-7141.

**Model 626 Pneumatic Tool**

This unique, modular system consists of a hand- or foot-actuated power unit plus interchangeable tool holders, crimp head assemblies, and die sets, when applicable. It is light weight, and features an optional positive-cycle control that helps eliminate partial crimps. The tool can be easily held or bench mounted.

Specifications

Weight—2.3-3.3 lb [1.0-1.5 kg]
Length—11.6-12.9 [295-327]
Outside Diameter—1.83 [46.5]
Grip Span—2.19 [55.6] over button or handle
Air—90-100 psi [6.21-6.89 bar], 11.4 in³ [0.00018 m³] displacement
Cycle Time—0.7-0.8 sec [16-14 AWG [1.3-2 mm²] PIDG Terminals]

For further information, request Catalog 124208.