88-409 to 392.

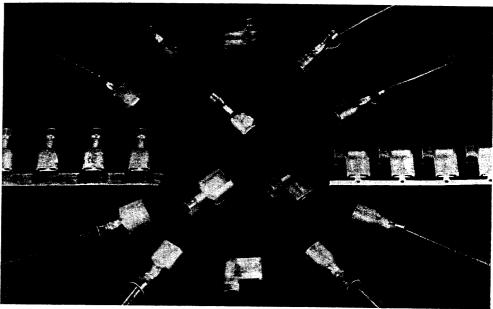
FASTON RECEPTACLES AND

# Performance 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)



TABS

The Ultra-Fast Fully Insulated FASTON Receptacle and Tab offers the advantage of a completely protected terminal and a wire crimp with comparable electromechanical 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 tinplated 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-0-LECTRIC terminating machine and fully automatic AMPOMATOR, CLS II and CLS III leadmaking 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.



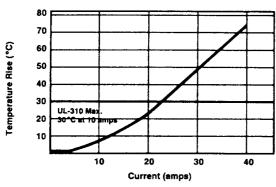


# ULTRA-FAST FULLY INSULATED FASTON RECEPTACLES AND TABS (CONTINUED)

#### Test Specifications

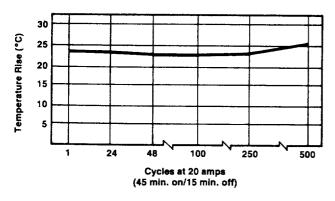
The following information and accompanying graphs are taken from AMP Product Qualification Testing of Ultra-Fast product. Tests were conducted on representative production samples, and all values shown are averages of group results. The values shown are typical results and may vary due to differences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

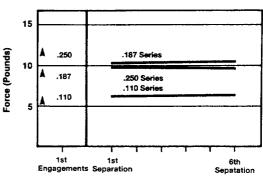


Maintaining a safe temperature rise during cyclic applications of excessive current is the toughest challenge for the crimp-thru-plastic concept. The ability of the Ultra-Fast product line to meet this goal sets it apart from other preinsulated terminations. AMP's experience in crimp development results 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.

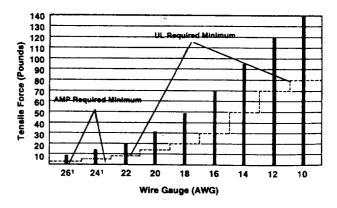
### Engagement/Separation



Number of Engagements/Separations

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



<sup>1</sup>UL 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-0-LECTRIC Machine 565435-5.
For AMPOMATOR Machine and other machines not listed, contact AMP Incorporated.

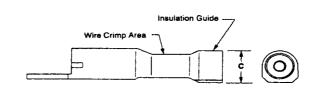
# Ultra-Fast Fully Insulated FASTON Receptacles

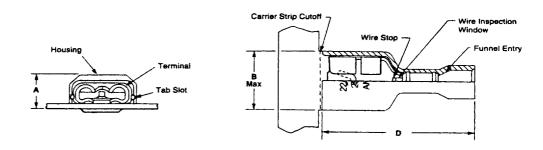
# Material

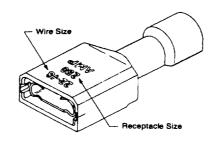
Housing—Nylon Type 6/6 Terminal-Tin-plated. copper alloy

### Color Code (Translucent)

Violet-26-22 AWG Red-22-18 AWG Blue-16-14 AWG Yellow-12-10 AWG







Description V	Vire Range	e Ins.		Dimensions		S	Mating	Terminal Ba	se Pa	rt No.
Descripcion	AWG	Dia. Max	. д	В	C	D	Tab	Material	Strip	Loose Piece
	26-22	.100	.145	.275	.138	.735	.020 x .110/.	125 Brass	7-520365-21	7-520366-2
							.016 x .110/.	125 Brass	2-520080-21	2-520081-2
.110/.125		.120	.160	.275	.167	.735	.020 x .110/.	125 Brass	2-520083-2	2-520084-2
Series	22-18						.032 x .110/.	125 Brass	2-520272-2	2-520273-2
		.230	.155	075	005	OCE	.020 x .110/.	125 Brass	2-520306-2	
		.230	. 100	.2/3	.293	.665	.032 x .110/.	125 Brass	2-520310-2	
	16-14	.260	.175	.275	.325	.865	.020 x .110/.	125 Brass	3-520370-22	_
		405	ACE	220	200	OFF	.020 x .18	7 Brass	2-520181-2	2-520182-2
	22-18	. 133	.165	.336	.200	.000	.032 x .18	7 Brass	2-520193-2	2-520194-2
		.230	.165	.336	.295	.935	.020 x .18	7 Brass	2-520261-2	
.187							.032 x .18	7 Brass	2-520274-2	2-520275-2
Series	16-14	.160	.185	.336	.225	.855	.020 x .18	7 Brass	3-350815-2	3-350816-2
							032 x .18	7 Brass	3-520124-2	3-520125-2
		.260	.185	.336	.325		.020 x .18	7 Brass	3-520150-2	3-520151-2
						.ಆವರ	.032 x .18	7 Brass	3-520276-2	_
		405		400	000	OFF	000 05	Bress	2-520183-2	2-520184-2
	00.40	.135	כפוי	.409	.200	.855	.032 x .25	Phos. Brz	2-520183-4	2-520184-4
	22-18	000	40E	400	00E	OOF	000 05	Brass	2-520263-2	2-520264-2
	* *	.230	.195	.409	.295	.ಆವರ	.032 <sub>x</sub> .25	Phos. Brz	2-520263-4	
.250 Series		400	405	400	OOF	OFF	000 05	Brass	3-350819-2	3-350820-2
OCI ICS	16-14	.160	.195	.405	.223	.600	.032 <sub>x</sub> .25	Phos. Brz	3-520116-2	3-520117-2
	10-14	200	405	400	205	025	020 × 05	_ Brass	3-520140-2	3-520141-2
		.260	.195	.409	.323	.ಶವರ	.032 x .25	Phos. Brz	3-520140-4	_
•	12-10	.320	.250	.409	.388	.935	.032 x .25	O Brass	4-520447-2	4-520448-2

<sup>&</sup>lt;sup>1</sup>UL Recognized, CSA Certified. <sup>2</sup>UL Recognized 8 AMPS Max. CSA Certified.

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

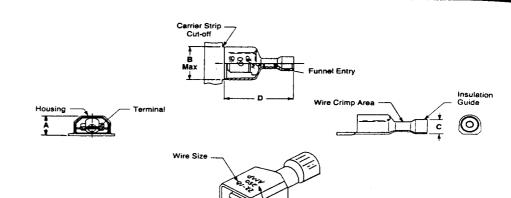
### Ultra-Fast Fully Insulated FASTON Tabs

#### Material

Housing—Nylon Type 6/6 Terminal—Tin-plated, copper alloy

### Color Code (Translucent)

Red—22-18 AWG Blue—16-14 AWG



							and the second second			
Decemention	Wire Range AWG	Ins. Dia	Dimensions	1781	Tab Ter	minal Base	e Par	Part No.		
Description	AWG	Max.	A B C	D	Size	Material	Strip	Loose Piece		
.250 Series	22-18	.135	.290 .522 .205	.855	.032 x .250	Brass 2	-520102-2	2-520103-2		
		.230	.290 .522 .295	.935	.032 x .250	Brass 2	-521144-2	2-521192-2		
	16-14	.160	.290 .522 .230	.855	.032 x .250	Brass 3	-520106-2	3-520107-2		
		.260	.290 .522 .325	.935	.032 x .250	Brass 3	-521142-2	3-521191-2		
	12-10	.320	.352 .687 .388	.935 .	032 x .250	Brass 4	-521097-2	4-521098-2		
.187 Series	22-18	.135	.255 .413 .205	.793 .	020 x .187	Brass 2	-521102-2	2-521103-2		
	22-18	.135	.255 .413 .205	.793 .	032 x .187	Brass 2	-521104-2	2-521105-2		

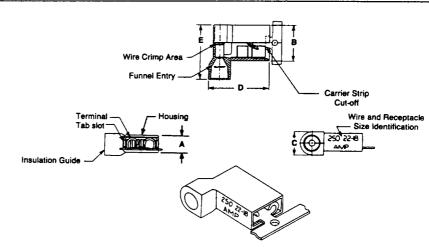
# Ultra-Fast Fully Insulated FASTON Flag Receptacles

### Material

Housing—Nylon Type 6/6 Terminal—Tin-plated, copper alloy

### Color Code (Translucent)

Red—22-18 AWG Blue—16-14 AWG



Decorieties	Wire Range <sup>1</sup> AWG	Ins. Dia.	Dimensions					Mating Te	rminal Ba	se Pa	Part No.	
Description	AWG	Max.	Α	В	C	D	E	Tab	Material	Strip	Loose Piece	
-	22-18	105	107	.320	.235	cae	E4E	.020 x .187	Brass :	2-520334-2	2-520335-2	
407	22-10	. 165	. 107			.000.	.5 15	.032 x .187	Brass :	2-520336-2	2-520337-2	
.187 Series	16-14	.185	.187	.320	.255	.632	2.515	.020 x .187	Brass :	3-520338-2	3-520339-2	
								.032 x .187	Brass :	3-520340-2		
		.260	.187	.320	.325	.668	.565	.020 x .187	Brass 3	3-520997-2		
	22-18	.165	.187	.385	.235	.636	.580	.032 x .250	Brass 2	2-520128-2	2-520129-2	
.250		.230	.187	.385	.295	.665	.630	.032 x .250	Brass 2	2-520856-2		
Series	16-14	.185	.187	.385	.255	.632	.580	.032 x .250	Brass 3	3-520132-2	3-520133-2	
	10-14	.260	.187	.385	.325	.668	.630	.032 x .250	Brass 3	3-521013-2		

<sup>&</sup>lt;sup>1</sup>Stranded wire only.

# 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.

		Strip	Form Term		Loose	Piece Terr	ninals
Description	Wire Range	Quick C	ARADORAAT	eator for		ert Set 🔥	
	AWG 7	Machine 565435-5		Model IV B, 🐍	for Har 58078-3	d Tool	Pro-Crimper
	26-22	567082-2	_	567082-11	58052-3	_	58628-1
.110/.125 Receptacles	22-18	567041-2	567039-7	567041-1	90390-3		58628-1
neceptacies	16-14	567117-2	_	567117-1	90391-3		58628-1
.187	22-18	466779-4	567039-1	466779-3	90390-3	_	58628-1
Receptacles	16-14	466778-4	567039-2	466778-3	90391-3		58628-1
.187 Tab	22-18		_	_	_	_	58628-1
	22-18	466779-4	567039-3	466779-3	90390-3		58628-1
.250	16-14	466778-4	567039-4	466778-3	90391-3		58628-1
Receptacles	12-10	567142-2	567039-8	_	_	58267-1 <sup>3</sup> 58267-2 <sup>2</sup>	58630-1
	22-18	466779-4	567039-5	466779-3	90390-3		58628-1
.250 Tab	16-14	466778-4	567039-6	466778-3	90391-3	_	58628-1
	22-18	567083-2	567121-1	567083-1	90390-3		_
.187 Flag STI Receptacles —	16-14	567085-2	567122-1	567085-1	90391-3	_	_
UE UE	4 16-14	567460-2	_	567460-1	_		
STI	22-18	466784-2	682317-1	466784-1	90390-3		_
250 Flag	16-14	466785-2	682317-2	466785-1	90391-3		
Receptacles	22-18	567228-2		567228-1			
LIL	16-14	567494-2	-	567494-1		_	

<sup>122</sup> AWG only. 212 AWG only. 310 AWG only.

<sup>&</sup>lt;sup>4</sup>Large Insulation Diameter.

# La Sankar

# 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 colorcoded 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

#### 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.

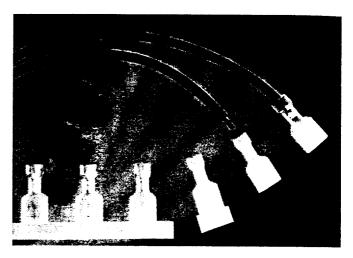
- Meets NEMA DC-2 standard for quick connect terminals
- 600-volt application capability (1,000 volts for signs and fixtures)
- Tested by TUV File No. E9071003 as suitable for end product certification to the following standards:

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



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.

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-LECTRIC terminating machine and the fully automatic AMPOMATOR, CLSII and CLSII leadmaking machines.

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

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

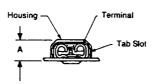
# Ultra-Fast Plus—Fully Insulated FASTON Receptacles

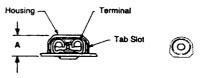
#### Material

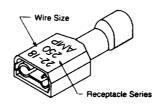
Housing—Nylon Terminal—Tin plated, copper alloy

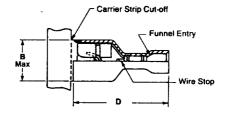
# Color Code (Translucent)

Red—22-18 AWG Blue—16-14 AWG









	Vire Ranç	ge Ins. Dia.	Dimensions	Mating Te	rminel Be	sse Pa	rt No.
2 2 2 2 2 2 C C C C	AWG	Range	A B C D	Tab 📜 🌤	Material	Strip	Loose Piece
.110/.125	22-18	060 120	160.275.167.735	.032 x .110/.125	Brass	2-520979-2	
Series	EE-10	.000120 .	160.275.167.735	.020 x .110/.125	Brass	2-520932-2	· · · · · · · · · · · · · · · · · · ·
	22-18	060 136	165.336.200.855	.020 x .187	Brass	2-520401-2	2-520409-2
.187		.000135 .	103.336.200.033	.032 x .187	Brass	2-520403-2	2-520411-2
Series	16-14	000 460	185.336.225.855	.020 x .187	Brass	3-520402-2	3-520410-2
		.030160 .	103.330.223.833	.032 x .187	Brass	3-520404-2	3-520412-2
.250	22-18	.060135 .	195.409.200.855	.032 x .250	Bress	2-520405-2	2-520407-2
Series	16-14	.090160 .	195.409.225.855	.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

# Color Code (Translucent)

Red—22-18 AWG Blue—16-14 AWG

Housing	Terminal Wire	e Crimp Area	Insulation Crimp Area
Wire Size	Carrier Strlp — Cut-off	C T	
Tab Series	Max Social	- Funnel Entry	
└── Tab Series	D	<b>→</b>	

Description	Wire Rang	je Ins. Dia.	Dimensions				Mating	<b>Terminal Bas</b>	:e <u> </u>	Part No.	
Description	AWG	Range	A	В	C	D	Tab	Material	Strip	Loose Piece	
.250	22-18	.060135	.290	.522	.205	.855	.032 x .250	Brass	2-521055-2		
Series	16-14	.090160	.290	.522	.230	.855	.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.

		Str	Loose Piece Terminals			
Barrier 1	Wire Range	Quick (				
Description	AWG	AMP-O-LECTRIC	AMPOMAT	OR Machines	Die Insert Set	
		Machine 565435-5	Model IV A	Model IV B, CLSII, and CLSIII	for Hand Tool 58078-3	
.110/.125 Series	22-18	567276-2	-	567276-1	-	
.187 Series	22-18	567111-2	567201-1	567111-1	58079-3	
. 107 Series	16-14	567112-2	567202-1	567112-1	58080-3	
.250 Series	22-18	567111-2	567201-1	567111-1	58079-3	
.230 Series	16-14	567112-2	567202-1	567112-1	58080-3	



## 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.



### 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.



# H88-H95.

### 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.



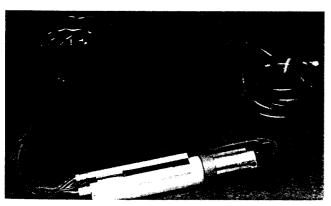
# PRO-CRIMPER II

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 handor 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.

Quick-Change Applicator for AMP-0-LECTRIC Machine 565435-5.
For AMPOMATOR Machine and other machines not listed, contact AMP Incorporated.