

## 1. SCOPE

This specification covers the requirements for application of .110", .250", .312" and .375" series FASTIN-FASTON\* Tab & Receptacle contacts. These requirements are applicable to automatic machine crimping tools. For specific wire and insulation ranges relative to the products covered in this specification, see Figure 4.

### 1.1 Reference Specification

For applicable performance requirements, see AMP Product Specification 108-20020.

### 1.2 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. NOMENCLATURE

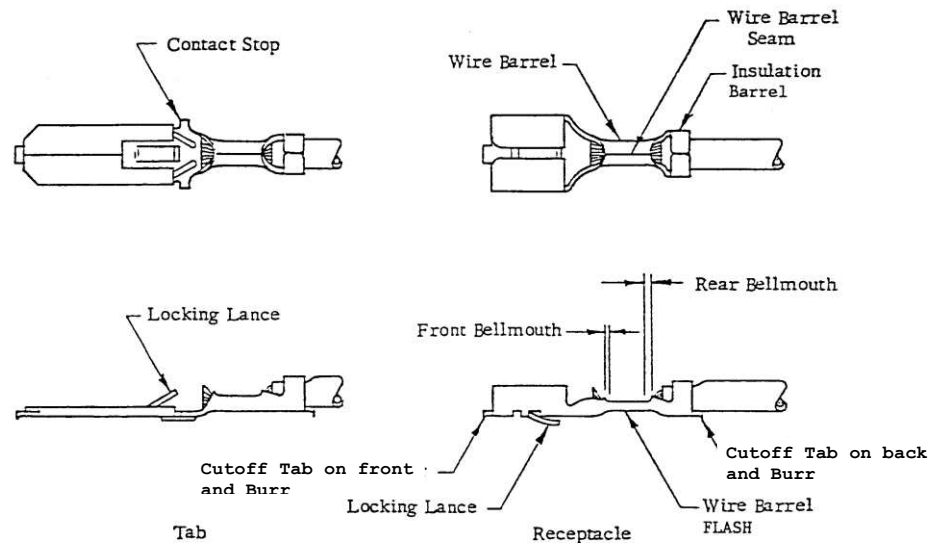


Figure 1

## 3. CRIMP AND DIMENSIONAL REQUIREMENTS

### 3.1 Wire Preparation

A- **Strip Length:** Insulation shall be stripped as indicated in Figure 4.

B- **Workmanship:** Reasonable care shall be taken not to nick, scrape or cut any strands during the stripping operation.

### 3.2 Carrier Cutoff Tab and Burr.

A- **Cutoff Tab on front:** Cutoff tab on front shall not exceed 0.38 mm [.015 in.].

B- **Cutoff Tab on back:** Cutoff tab on back shall not exceed 0.38 mm [.015 in.] and only for contacts P/N 280756-2 and 280756-4 shall not exceed 0.64 mm [.025 in.].

C- **Burr:** Burr on cutoff shall not exceed 0.13 mm [.005 in.].

### 3.3 Barrel Crimp.

- A- **Crimp Dimensions and Type:** Crimp height, width and type shall be as shown in Figure 4.
- B- **Wire Barrel Flash:** Shall not exceed 0.13 mm [.005 in.].
- C- **Wire Barrel Seam:** Shall be completely closed and there shall be no evidence of loose wire strands or wire strands visible in the seam.
- D- **Bellmouth:**
  - (1) Rear bellmouth length shall be 0.25 to 0.76 mm [.010 to .030 in.].
  - (2) Front bellmouth length shall be 0.13 to 0.64 mm [.005 to .025 in.].
- E- **Conductor location:**
  - (1) End of the wire shall be flush with the front end of the wire barrel or extend 0.76 mm [.030 in.] maximum after crimping.
  - (2) Both insulation and conductor shall be visible between the insulation barrel and wire barrel. Care shall be taken not to allow insulation to be crimped in the wire barrel.

### 3.4 Insulation Barrel Crimp.

- A- **Crimp Dimensions and Type:** Crimp width and type shall be as shown in Figure 4.
- B- **Workmanship:** Reasonable care shall be taken not to cut or break the insulation during the crimping operation.

### 3.5 Locking Lance.

Locking lance shall not be deformed and shall meet requirements of product drawing after crimping.

### 3.6 Contact Stop.

Contact stop shall not be deformed and shall meet requirements of product drawing after crimping.

### 3.7 Alignment.

#### A- Straightness:

- (1) The contact, including the cutoff tab and burr shall not be bent above or below the datum line more than the amount shown in Figure 2.

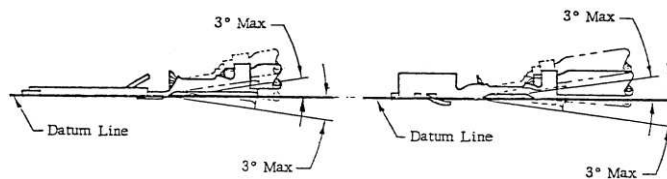


Figure 2

- (2) The side to side bending of the contact shall not exceed the limits specified in Figure 3.

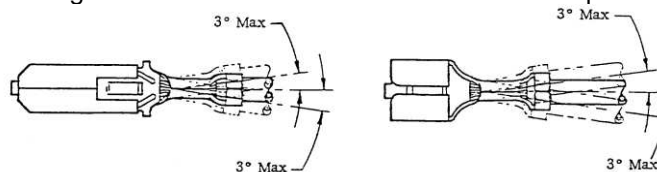


Figure 3

- B- **Twist or Roll:** There shall be no twist or roll in crimped portion that will impair usage of the contact.
- C- **Assembly.** The following list of do's and don'ts are to be followed when assembling contacts into housing cavities.

#### (1) do's:

- a) Do insert contacts fully.
- b) Do check for proper insertion by pulling back lightly.
- c) Do ensure proper handling of contacts to eliminate lance deformation.

#### (2) Don'ts:

- a) Don't insert contact into housing at an angle.
- b) Don't rock connectors while mating.
- c) Don't tie harness closer than 38.1 mm [1.50 inches] to back of housing.
- d) Don't dress wires sharply to one side of housing.

## AUTOMATIC MACHINE WIRE CRIMP DIMENSIONS

S E R I E S	L O G	PART N°		WIRES		INSULATION DIA.	STRIP LENGHT APPROX.	WIRE BARREL CRIMP			INSULATION BARREL CRIMP	
		TAB	REC.	N°	SIZE mm2			WIDTH	HEIGHT	T Y P E	WIDTH	T Y P E
.110"		188352		1	0.50	2.29-3.05 [.090-.120]	4.57 [.180]	2.29 [.090]	1.47 [.058]	F	3.30 [.130]	F
		160743		1	20 (AWG)				1.47 [.058]			
		160762		1	0.75				1.52 [.060]			
		1		18 (AWG)	1.58 [.062]							
		1		1.00	1.58 [.062]							
		1		16 (AWG)	1.75 [.069]							
		1		1.50	1.75 [.069]							
.110"		160887		1	0.50	1.40-2.29 [.055-.090]	4.50 [.177]	2.03 [.080]	1.42 [.056]	F	2.79 [.110]	O V
		1		0.70	1.50 [.059]							
		1		0.75	1.52 [.060]							
		1		0.85	1.55 [.061]							
		1		1.00	1.60 [.063]							
.110"		160926		1	1.50	2.11-3.10 [.083-.122]	4.57 [.180]	2.79 [.110]	1.70 [.067]	F	3.56 [.140]	O V
		1		2.00	1.83 [.072]							
		1		2.50	1.98 [.078]							
.110"		160888		1	1.00	1.91-2.29 [.075-.090]	4.57 [.180]	2.29 [.090]	1.55 [.061]	F	2.79 [.110]	O V
		1		1.25	1.65 [.065]							
		1		1.35	1.68 [.066]							
		1		1.50	1.73 [.068]							
.110"			160366	1	0.20	1.02-2.03 [.040-.080]	4.01 [.158]	1.58 [.062]	0.81 [.032]	F	2.03 [.080]	F
			1	24 (AWG)	0.81 [.032]							
			1	0.30	0.89 [.035]							
			1	22 (AWG)	0.89 [.035]							
			1	0.40	0.94 [.037]							
			1	0.50	0.99 [.039]							
			1	20 (AWG)	0.99 [.039]							
.110"			160864	1	0.50	1.40-2.29 [.055-.090]	4.01 [.158]	1.78 [.070]	1.04 [.041]	F	2.54 [.100]	O V
			1	0.70	1.14 [.045]							
			1	0.75	1.17 [.046]							
			1	0.85	1.19 [.047]							
			1	1.00	1.27 [.050]							
			1	1.00	1.27 [.050]							
.110"		160776		1	26 (AWG)	-	-	1.78 [.070]	F	-	-	
		1		24 (AWG)	0.97 [.038]							
		1		22 (AWG)	0.99 [.039]							
.110"		160923		1	0.20	1.02-1.6 [.040-.063]	4.57 [.180]	1.78 [.070]	1.09 [.043]	F	2.29 [.090]	F
		1		0.25	1.12 [.044]							
		1		0.35	1.17 [.046]							
		1		0.50	1.24 [.049]							
.250"	785314	280096		1	0.35	2.29-3.30 [.090-.130]	5.54 [.218]	2.03 [.080]	1.35 [.053]	F	3.30 [.130]	F
		1		0.50	1.40 [.055]							
		1		0.75	1.45 [.057]							
.250"	785316		280095	1	0.35	2.29-3.30 [.090-.130]	5.54 [.218]	2.03 [.080]	1.17 [.046]	F	3.30 [.130]	F
			1	0.50	1.24 [.049]							
			1	0.75	1.30 [.051]							
.250"	785129		282178	1	0.35	1.45-1.91 [.057-.075]	5.54 [.218]	2.03 [.080]	1.17 [.046]	F	3.05 [.120]	F
			1	0.50	1.24 [.049]							
			1	0.75	1.30 [.051]							
.250"	687839	42098		1	0.75	3.05-4.06 [.120-.160]	5.54 [.218]	2.79 [.110]	1.45 [.057]	F	4.06 [.160]	F
		1		1.00	1.52 [.060]							
		1		1.50	1.65 [.065]							
		1+1		0.75+0.75	1.65 [.065]							
		1		2.50	1.91 [.075]							

AUTOMATIC MACHINE WIRE GRIMP DIMENSIONS  
(continuation)

S E R I E S	L O G	PART N°		WIRES		INSULATION DIA.	STRIP LENGHT APPROX.	WIRE BARREL CRIMP			INSULATION BARREL CRIMP	
		TAB	REC.	N°	SIZE mm2			WIDTH	HEIGHT	T Y P E	WIDTH	T Y P E
.250"	785320		42100	1	0.75	2.54-4.31 [.100-.170]	5.54 [.218]	2.54 [.100]	1.24 [.049]	F	4.57 [.180]	F
			280098	1	1.0				1.32 [.052]			
			280923	1	1.5				1.42 [.056]			
			180375	1	2.5				1.63 [.064]			
			284340	-	-				-			
			293212	-	-				-			
.250"	785127		282171	1	1.0	1.91-3.00 [.075-.118]	5.54 [.218]	2.54 [.100]	1.32 [.052]	F	3.56 [.140]	F
			282176	1	1.5				1.42 [.056]			
			282177	1	2.0				1.52 [.060]			
			282177	1	2.5				1.63 [.064]			
.250"	677705	180352		1+1	1.5+1.5	3.43-5.08 [.135-.200]	6.10 [.240]	4.06 [.160]	1.83 [.072]	F	5.33 [.210]	F
		280080		1	4.0				1.96 [.077]			
		280080		1	5.0				2.16 [.085]			
		280080		1	6.0				2.34 [.092]			
.250"	466675		180560	1+1	1.5+1.5	3.43-5.08 [.135-.200]	6.10 [.240]	4.06 [.160]	1.83 [.072]	F	5.33 [.210]	F
			180351	1	4.0				1.96 [.077]			
			180351	1	5.0				2.16 [.085]			
			180351	1	6.0				2.34 [.092]			
.250"	7- 1529168- 1		180351	1+1	1.5+1.5	3.43-5.08 [.135-.200]	6.10 [.240]	4.06 [.160]	1.83 [.072]	F	5.33 [.210]	F
				1+1	4.0				1.96 [.077]			
				1+1	2.5+1.5				1.96 [.077]			
				1+1	5.0				2.16 [.085]			
				1+1	2.5+2.5				2.16 [.085]			
				1+1	[10AWG]				2.21 [.087]			
				1+1	6.0				2.34 [.092]			
.250"	785126	282170		1	1.0	1.91-3.00 [.075-.118]	5.49 [.216]	2.79 [.110]	1.52 [.060]	F	3.94 [.155]	F
				1	1.5				1.65 [.065]			
				1	2.0				1.78 [.070]			
				1	2.5				1.91 [.075]			
.250"	785135	282186		1	0.35	1.45-1.91 [.057-.075]	5.49 [.216]	2.03 [.080]	1.35 [.053]	F	3.05 [.120]	F
				1	0.50				1.40 [.055]			
				1	0.75				1.45 [.057]			
.250"		160645		1	0.30(22AWG)	2.16-3.18 [.085-.125]	5.54 [.218]	2.29 [.090]	1.14 [.045]	F	3.56 [.140]	F
		160691		1	0.50(20AWG)				1.22 [.048]			
		160691		1	0.75(18AWG)				1.32 [.052]			
.312"			160920	1	3.00	3.30-4.50 [.130-.177]	6.48 [.255]	3.30 [.130]	2.16 [.085]	F	5.33 [.210]	F
			160920	1	3.50				5.26 [.089]			
			160920	1	4.00				2.36 [.093]			
.312"			160557	1	0.50	2.29-3.30 [.090-.130]		2.29 [.090]	1.42 [.056]	F	3.30 [.130]	F
			160557	1	0.75				1.47 [.058]			
			160557	1	1.00				1.54 [.060]			
.375"		280075		1+1	0.75+2.50	3.81-5.08 [.150-.200]	6.86 [.270]	4.06 [.160]	2.69 [.106]	F	6.35 [.250]	F
				1+1	4.00				3.00 [.118]			
				1+1	6.00				3.20 [.126]			
.375"	785489		280077	1	3.00	3.00-5.08 [.118-.200]	6.86 [.270]	4.06 [.160]	2.79 [.110]	F	6.35 [.250]	F
			280756	1	4.00				3.00 [.118]			
				1	6.00							

.375"	1529063		280756	1	4.00	3.00-5.08 [.118-.200]	6.86 [.270]	4.06 [.160]	2.59 [.102]	F	6.35 [.250]	F
	1339559			1	6.00				2.79 [.110]			
.375"	1529095		280756	1	4.00	3.00-5.08 [.118-.200]	6.86 [.270]	4.57 [.180]	2.41 [.095]	F	6.35 [.250]	F
				1	5.00				2.59 [.102]			
				1	6.00				2.77 [.109]			
.375"	783282	280074		1	6.00	5.08-6.99 [.200-.275]	7.11 [.280]	4.57 [.180]	3.23 [.127]	F	7.62 [.300]	F
				1	10.0				3.63 [.143]			
.375"	782678		280755	1	6.00	5.08-6.99 [.200-.275]	7.11 [.280]	4.57 [.180]	3.23 [.127]	F	7.62 [.300]	F
			281089	1+1	6.00+2.50				3.50 [.138]			
			280076	1	10.0				3.63 [.143]			
			281091									
.375"	1529136		280755	1	6.00	5.08-6.99 [.200-.275]	6.60 [.260]	4.57 [.180]	3.23 [.127]	F	7.62 [.300]	F
			280076	1	8.00				3.43 [.135]			
			281091	1	8.50				3.50 [.138]			
				1	10.0				3.63 [.143]			

<b>D16</b>	REVISED PER ECR-23-181224	DB	31AUG2023	DH	04SEP2023
<b>D15</b>	REVISED PER ECR-21-105754	SS	24 JUN 2021	EW	06 JUL 2021
<b>D14</b>	REVISED: Addition of metric units	SS	27 MAR 2020	DL	27MAR2020
<b>D13</b>	REVISED: - cut off exception for P/Ns 280756-2 and 280756-4 - allowed overlap insulation crimp for parts 180351 with 4mm <sup>2</sup> or 6mm <sup>2</sup> single wire	D.C.	22 AUG 2014	D.C.	22 AUG 2014
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