

**NOTE**

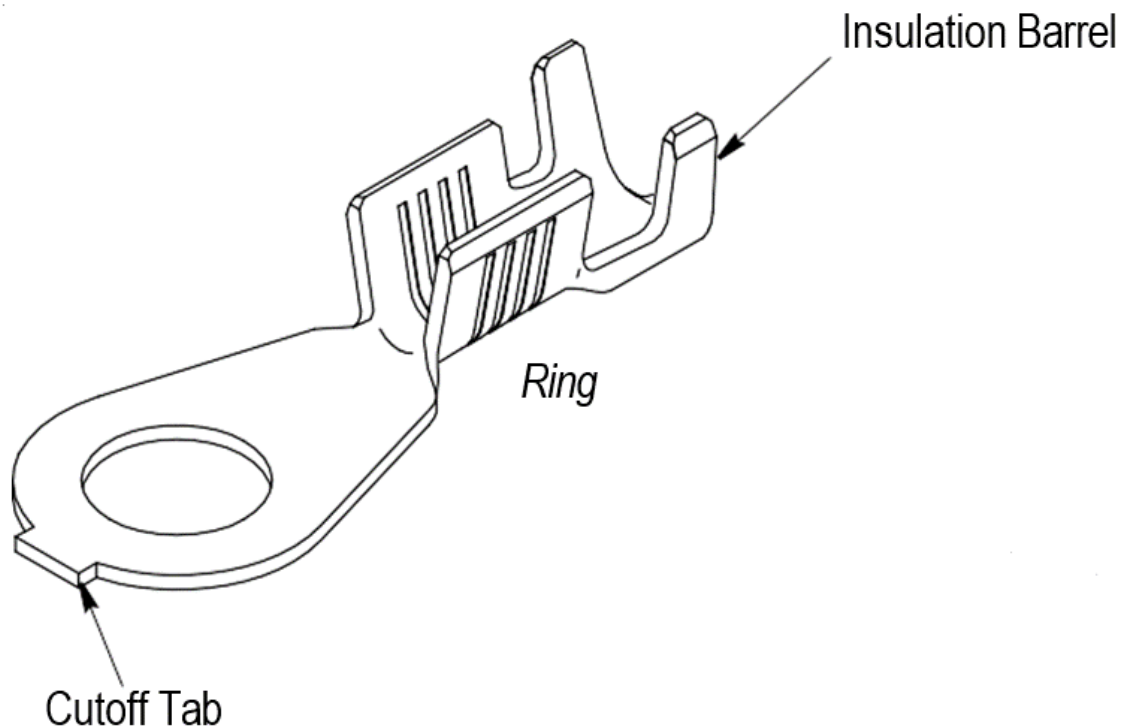
All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of ± 0.13 [$\pm .005$] and angles have a tolerance of $\pm 2^\circ$. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of Standard Ring Terminals. These requirements are applicable to hand or automatic machine crimping 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****2. REFERENCE MATERIAL****2.1. Revision Summary**

Initial release of application specification.

2.2. Customer Assistance

Reference Product Base Part Numbers 2430243, 2429931, 2430010, 2432196, 2432197, 2432198 and Product Code 1170 are representative of Ring 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

Product Specification 108-106465 provides product performance and test results.

2.5. 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. Generic Instructional materials that pertain to this product are:

<u>Document Number</u>	<u>Document Title</u>
408-3295	Preparing Reel of Contacts for Application Tooling
408-7424	Checking Terminal Crimp Height or Gaging Die
Closure 408-8053	Conversion Guide for Miniature Quick-Change
Applicators 408-8059	General Preventative Maintenance for Applicators
408-9816	Handling of Reeled Products

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. Reeled Terminals

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 contacts are recommended instead of brass if available.

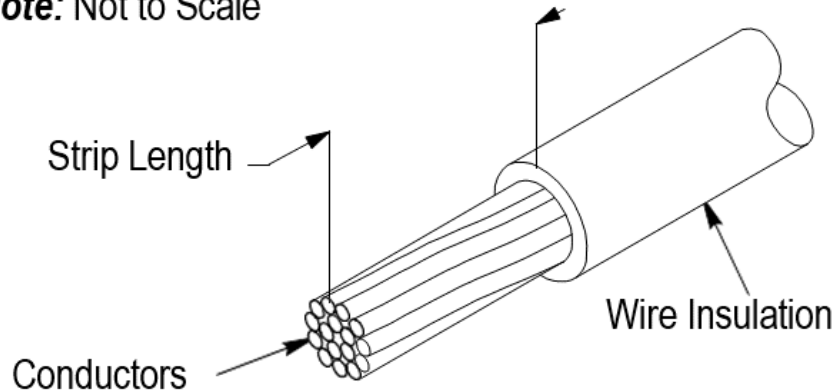
3.3. Wire Size and Preparation

The terminal shall be used with appropriate tooling and crimped according to the instructions packaged with that tooling. See Section 5, TOOLING, of this document for details on tooling options.

Insulation shall be stripped as indicated in Figure 2 and is based on wire barrel length which can be found on the customer drawing.

i **NOTE**
 DO NOT nick, scrape, or cut the wire conductors during stripping operation. Filaments of insulation material remaining after stripping should be avoided and shall never extend among the bare conductors.

Note: Not to Scale



Standard Ring Terminals

Figure 2

TERMINAL STYLE	WIRE BARREL LENGTH	WIRE STRIP LENGTH
STANDARD RING TERMINALS	2.36-2.74 [.093-.108]	3.18 [.125]
	2.77-3.58 [.109-.141]	3.96 [.156]
	3.61-4.42 [.142-.174]	4.78 [.188]
	4.44-5.26 [.175-.207]	5.56 [.219]
	5.28-6.10 [.208-.240]	6.35 [.250]
	6.12-6.93 [.241-.273]	7.14 [.281]

Table 1 : Wire Stripping Length

i **NOTE**
 The applied crimp dimensions (within functional range of the product) are dependent on the termination tooling being used. Refer to the documentation (applicator logs and instruction sheets) supplied with the termination tooling for the applied crimp height

i **NOTE**
 Wire insulation shall NOT be fully cut or broken during the crimping operation, nor shall the insulation be crimped into the terminal wire barrel. Reasonable care should be taken by tooling operators to provide undamaged wire termination.

A. Wire Barrel Crimp

The crimp applied to the wire portion of the terminal is the most compressed area and is most critical in ensuring optimum electrical and mechanical performance of the crimped terminal. The terminal wire barrel crimp height must be within the dimension provided on the application tooling documentation.

B. Effective Crimp Length

For optimum crimp effectiveness, the crimp must be within the area shown in Figure 3 and must meet the crimp dimensions provided in the application tooling documentation. Effective crimp length shall be defined as that portion of the wire barrel, excluding bellmouth(s), fully formed by the crimping tool. Instructions for adjusting, repairing, and inspecting tools are packaged with the tools.

C. Bellmouths

Front and rear bellmouth shall be as shown and conform to the dimensions given in Figure 3.

D. Cutoff Tab

The cutoff tab shall be cut to the dimensions shown in Figure 3.

E. Burrs

The cutoff burr shall not exceed the dimensions shown in figure 3

F. Wire Barrel Flash

The wire barrel flash shall not exceed the dimensions shown in Figure 3, Section X-X.

G. Insulation Barrel Crimp

The insulation barrel shall grip the insulation firmly without fully cutting into it. Care must be taken to prevent cutting, nicking, or scraping of the insulation. Insulation crimp shall comply to width dimensions provided in the application tooling documentation.

H. Wire Location

The wire conductor and insulation must be visible in the transition area between the wire and insulation barrels as shown in Figure 3.

I. Conductor Extension

The conductor may extend beyond the wire barrel to the maximum shown. No strands may extrude over the height of the conductor crimp. See Figure 3.

J. Wire Barrel Seam

The wire barrel seam must be closed with no evidence of loose wire strands visible in the seam. See Figure 3.

K. Straightness

The force applied during crimping may cause some bending between the crimped wire barrel and the mating portion of the terminal. Such deformation is acceptable within the limits provided in Figure 4.

1. The up and down bend of the crimped terminal, including cutoff tab and burr, shall not be bent above or below the datum line more than the amount shown.
2. The side-to-side bend of the terminal may not exceed the limits provided.

**NOTE**

Damaged terminal may not be used. If a damaged terminal is evident, it must be removed from the wire and replaced with a new one.

**NOTE**

Periodic inspection must be made to ensure crimped terminal formation is consistent as shown.

NOTE: Ring Terminal Shown, Other Terminals Have Same Dimensions

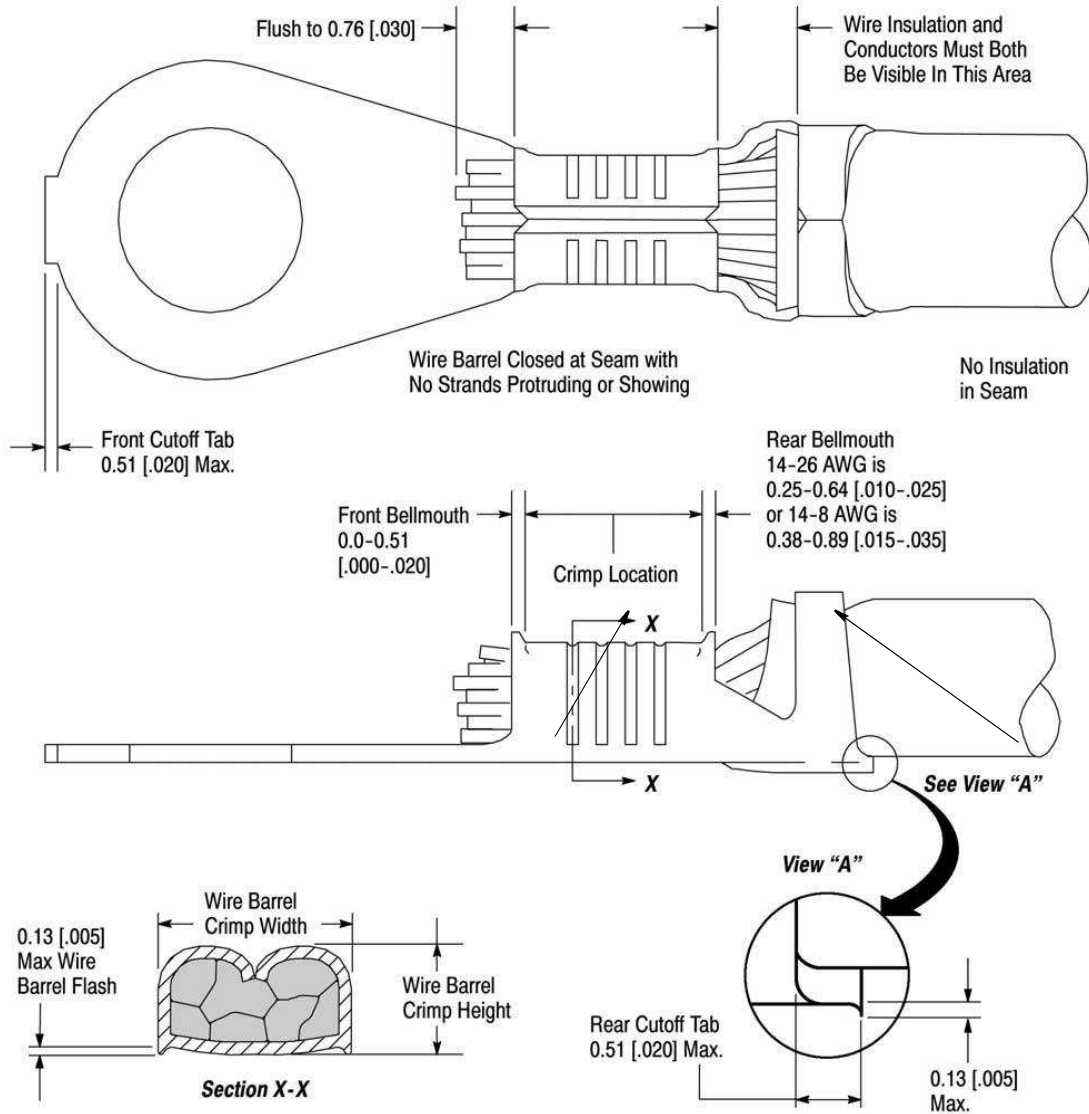


Figure 3

Contact Part No	Applicator No.	Wire size		Insulation Stripping Length	Wire barrel Crimp		Insulation Barrel Width (mm)
		No. of wires	AWG		Width (mm)	Crimp Height (mm)	
2430243	7-2150956-1 7-2150956-2	1	18	4.78 ± 0.5	3.05	1.65±0.05	4.57 "F"
2429931		1	16			1.79±0.05	
2430010		1	14			2.0±0.05	
2432196	TBD	1	24	3.96 ± 0.5	2.03	1.29±0.05	TBD "F"
2432197		1	22			1.33±0.05	
2432198		1	20			1.41±0.05	

Table 2: Crimp Dimensions

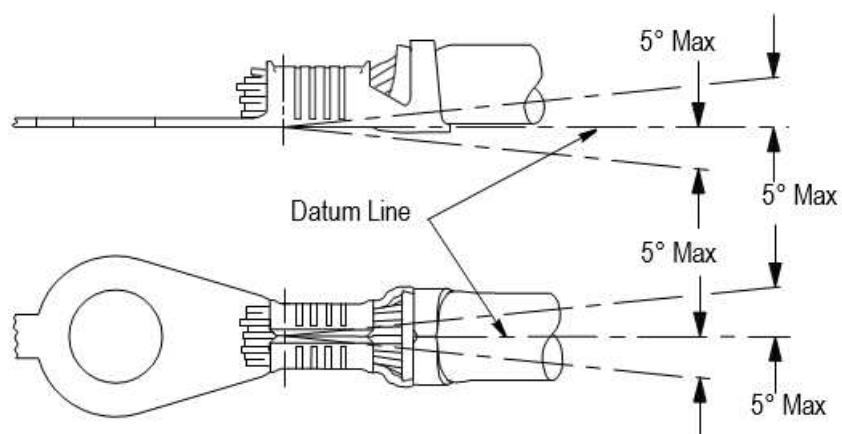


Figure 4

4. QUALIFICATION

Please Contact TE Product Engineering for agency approval information.

5. TOOLING

Tooling information for product part numbers is available from www.te.com or by calling the Product Information Center at the number at the bottom of page 1.

6. VISUAL AID

The illustration below shows a typical application of this product. 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.

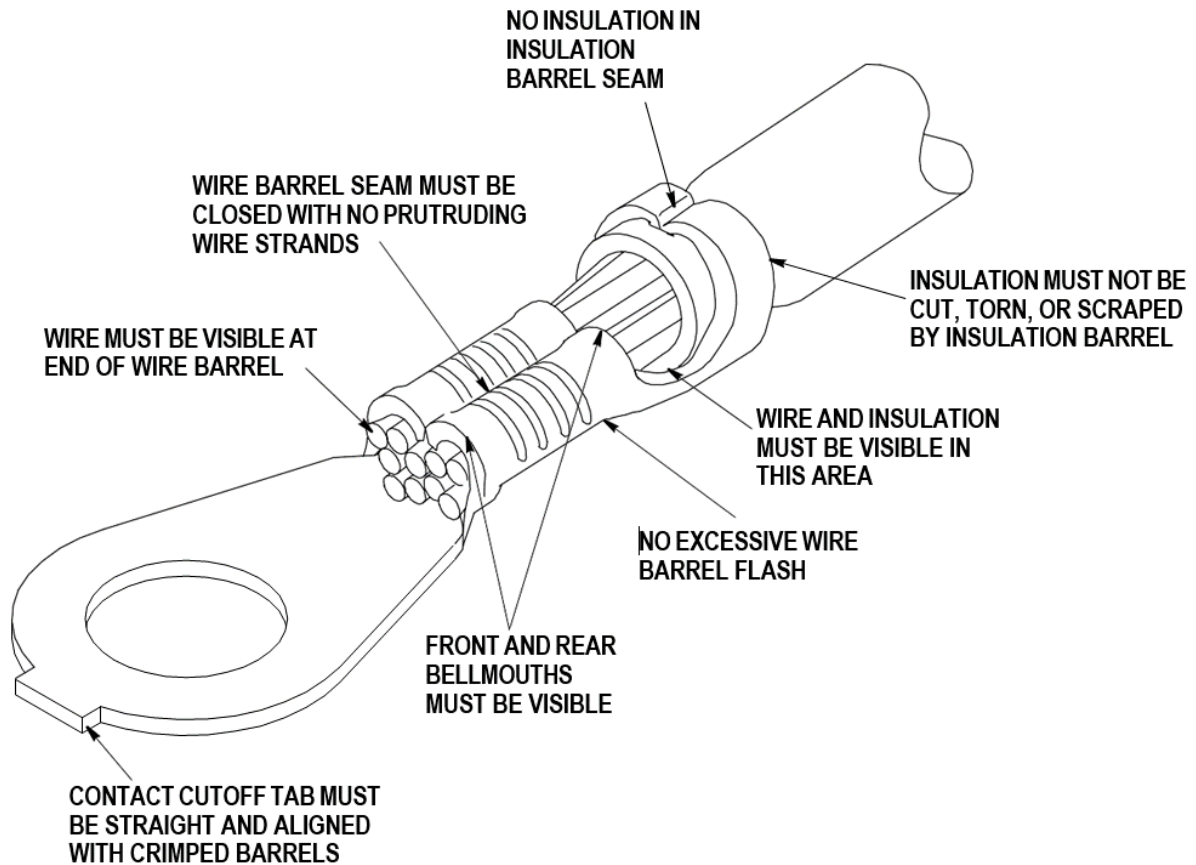


Figure 4: Visual Aid