



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 FG receptacle contacts.

2. REFERENCE MATERIAL

2.1. Revision Summary

Revisions to this application specification include:

- ◆ Updated Figure 2 to include “OV” insulation barrel crimp for part number 1743728 and 1743729.
- ◆ Updated document to corporate standards.
- ◆ Updated Figure 2 and Figure 5 to include applicator part numbers 2151072 and 2151074.

2.2. Customer Assistance

Reference Product Base Part Number 1743728, 1743729 and Product Code 2166 are representative FG receptacle contacts. 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 [108-61082](#) provides product performance and test results.

2.5. Instructional Material

Instruction material that pertains to this product is:

- [408-10389](#) Ocean Side-Feed Applicator 2151072-1, 2151074-1
- [411-5638](#) Instruction Sheet – Power Double Lock Connector System
- [501-61086](#) Validation Test Report – FG Terminal

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. 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.

C. 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

3.3. Wire Selection and Preparation

The contacts accept 1 stranded copper wire sizes 0.14 to 1.38 mm² [26 AWG to 16 AWG] with an insulation diameter range of 1.3 to 3.1.

Each wire must be stripped to the dimension given in Figure 1.



CAUTION

Care must be taken not to nick, scrape, or cut any part of the wire during the stripping operation.

Note: Not to Scale

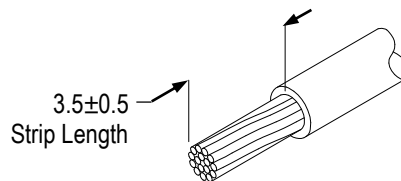


Figure 1

3.4. Contact Crimp

A. Cutoff Tab

The cutoff tab is the remaining portion of the carrier strip after the contact is cut from the strip. The cutoff tab must not exceed the dimension given in Figure 2.

B. Wire Barrel Crimp

The crimp applied to the wire barrel portion of the contact is the most compressed area and is most critical in ensuring optimum electrical and mechanical performance of the crimped contact. The crimp must be centered on the closed wire barrel. The crimp must result in an “F” crimp where the wire barrel forms a closed seam with no evidence of loose wire strands or wire strands visible in the seam. The crimp height and width must be within the dimension provided in Figure 2.

C. Wire Barrel Flash

Wire barrel flash is the formation that may appear on both sides of the wire barrel as a result of the crimping process. It must not exceed the dimensions given in Figure 2.

D. Twist and Roll

There should be no twist or roll of the wire barrel or mating portion of the crimped contact that would cause overstress or impair usage. It must not exceed the limits given in Figure 2.

E. Bend Allowance

The bend allowance between the wire barrel and the cable is acceptable within the limits given in Figure 2

F. Wire End Extrusion Length and Height

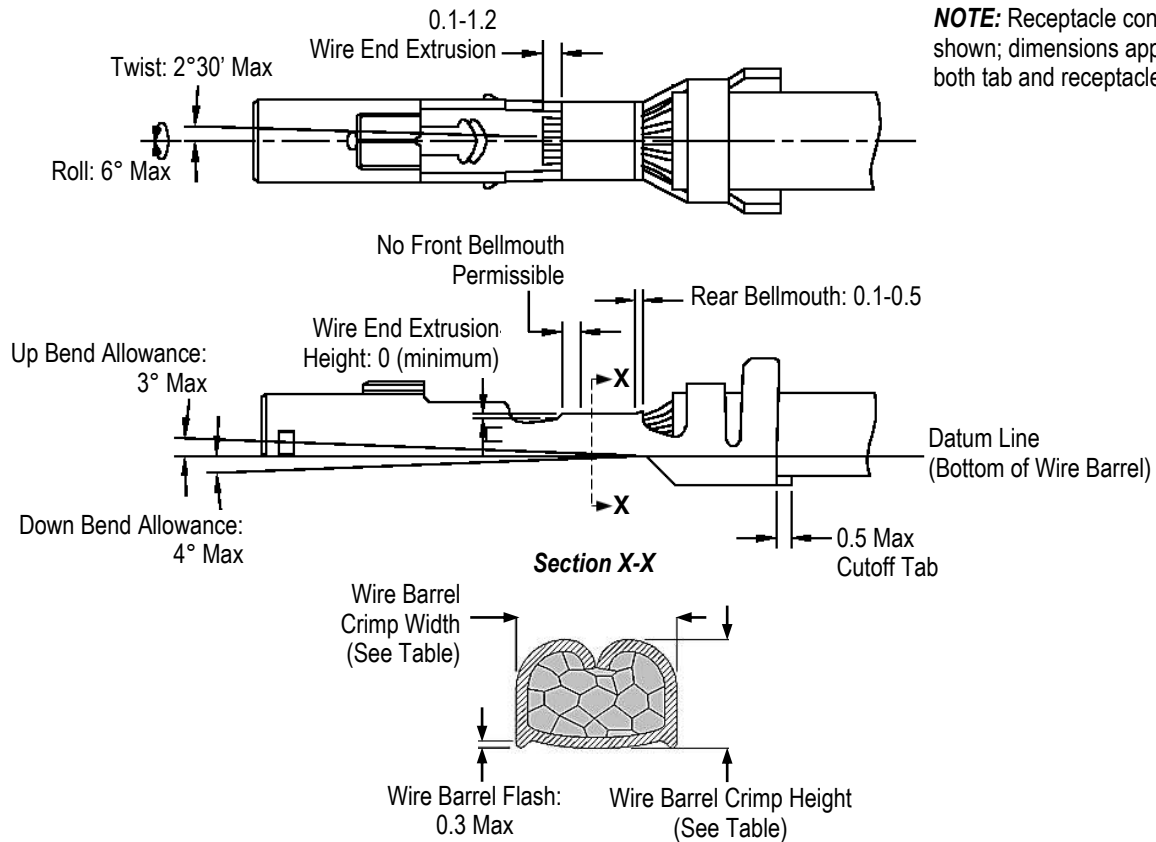
The wire conductor ends must extend beyond the end of the wire barrel within the dimensions given in Figure 2. The wire end extrusion height may not exceed the limits given in Figure 2.

G. Bellmouths

The front bellmouth and rear bellmouth shall conform to the dimensions given in Figure 2.

H. Insulation Barrel Crimp

The crimp applied to the insulation barrel of the contact must result in either an “F” crimp where the insulation barrel forms a closed seam with no evidence of wire insulation in the seam or an overlap crimp (“OV”) where the tips of the insulation barrel wraps overlap each other and wrap firmly around the wire insulation without cutting into the wire insulation. The crimp height and width must be within the dimensions provided in Figure 2.



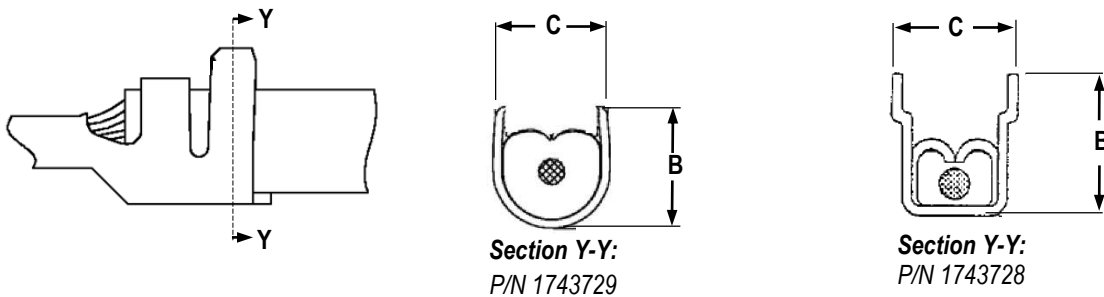
NOTE: Receptacle contact shown; dimensions apply to both tab and receptacle.

Part Number	Applicator Number	Wire Size (mm ² [AWG])	Insulation Diameter Range	Wire Crimp		Insulation Barrel Width	Crimp Tensile Strength [N]
				Width	Height		
1743728	2151072	0.14 [26]	1.3-2.0	1.4 ("F")	0.80±0.05	2.75 ("F" or "OV")	19.6
		0.22 [24]			0.85±0.05		29.4
		0.34 [22]			0.89±0.05		49.0
1743729	2151074	0.51 [20]	1.8-3.1	2.03 ("F")	1.05±0.05	3.3 ("F" or "OV")	58.8
		0.89 [18]			1.15±0.05		68.6
		1.27 [16]			1.29±0.05		78.5

Figure 2

I. Contact Stabilizer

The contact stabilizer must not be crimped or deformed in any way. The width of the stabilizer must be within the limits specified in Figure 3.



Part Number	Dimension B	Dimension C
1743729	3.7 (REF)	3.4-2.86
1743728		

Figure 3

J. Contact Length

The contact length measured on the upper portion of the contact at the back of the contact stabilizer (not including the carrier strip cutoff tab) must be within the dimensions given in Figure 4.

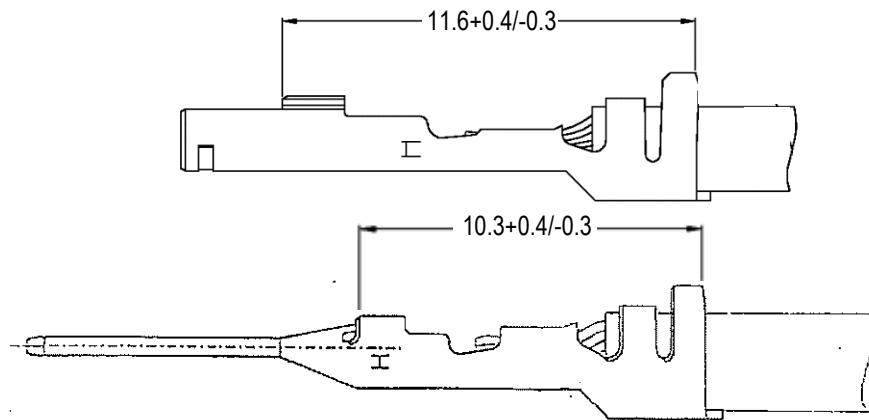


Figure 4

4. TOOLING

4.1. Applicator

The applicators are designed to crimp tape-mounted contacts onto pre-stripped wire. The applicators accept interchangeable die assemblies and must be installed onto a power unit. See Figure 5.

Part Number	Applicator
1743728	2151072
1743729	2151074

Figure 5