



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 [± 0.005] and angles have a tolerance of $\pm 2^\circ$. Figures and illustrations are for identification only and are not drawn to scale.

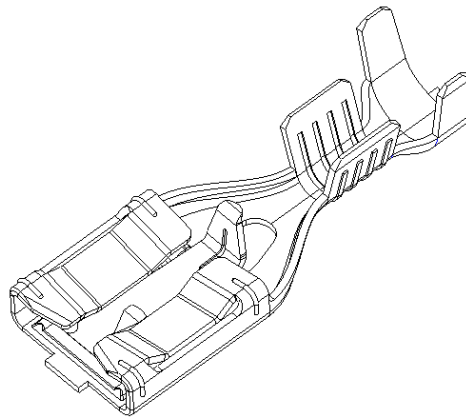
1. INTRODUCTION

This specification covers the requirements for application of X-LIF F-Spring POSITIVE LOCK receptacle.

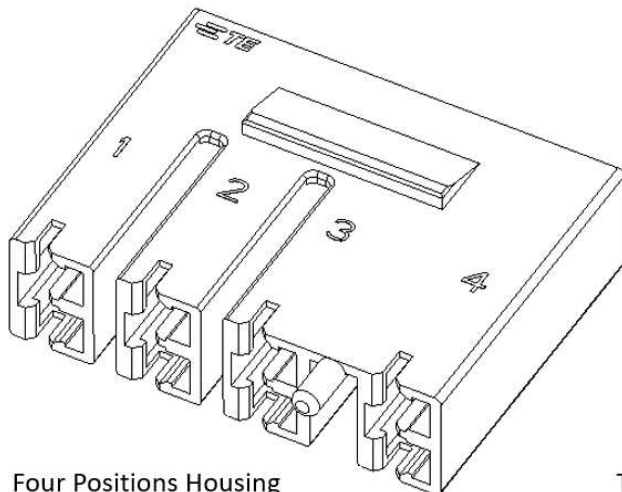
This F wire barrel crimp feature provides reliable electrical and mechanical performance.

Three and four position housings are available for your production requirements. The contacts are designed to be mated with tabs containing holes for proper locking. These receptacle contacts are terminated by automatic or semi-automatic machines.

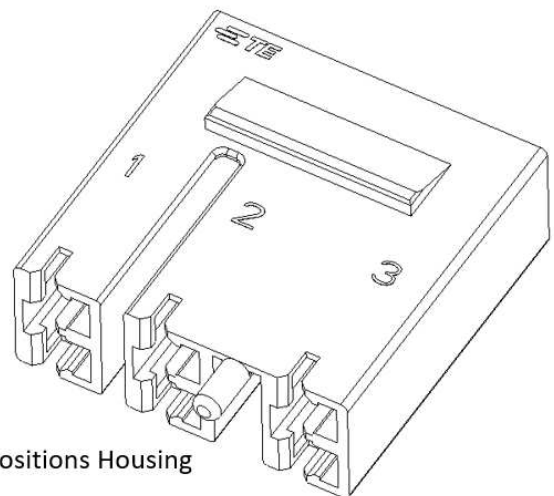
When corresponding with TE Connectivity Personnel, use the terminology provided in this specification to facilitate your inquiries for information.



X-LIF F-Spring



Four Positions Housing



Three Positions Housing

Housing

2. REFERENCE MATERIAL

2.1. Revision Summary

- Preliminary release.
- Update 2379911-1 to 2379911-X
- Update to add housing
- Added reference part number on page 8

2.2. Drawings

Customer drawings for product part numbers are available from www.te.com. Information contained in the customer drawing takes priority.

2.3. Specifications

These terminals are designed to perform to the test described by 108-106568.

2.4. Instructional Material

The following available Instruction Sheets (408-series) are customer documents that provide application tooling information.

408-10390 Instruction Sheet for Ocean End-Feed Applicators

3. REQUIREMENTS

3.1. Storage

A. 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 above environmental conditions exist, use phosphor-bronze receptacles instead of brass.

3.2. Wire Selection and Preparation

A. Selection

The receptacle designs to accommodate a wire size range of 18 through 14 AWG and an insulation diameter range of 2.3 through 3.4mm. Selection is based on the application requirements (i.e., electric or signal carrying parameters).

B. Preparation

Strip the wire insulation according to the dimension provided in Figure 1.

RECEPTACLE SERIES	STRIP LENGTHS (±0.5 [.020])	
	WITH INSULATION SUPPORT	
250	5.17-4.39[.203-.173]	

Figure 1



CAUTION

Do NOT nick, scrape, or cut the wire conductor during the stripping operation.

3.3. Crimped Requirements

Locate the receptacle to be crimped in the appropriate tooling and perform the crimping operation according to the instructions packaged with that tooling. Check the appearance and crimping dimensions of the crimped terminal as follows.

A. Crimp Dimensions

The applied crimp dimension (within the functional range of the product) is dependent on the termination tooling being used.

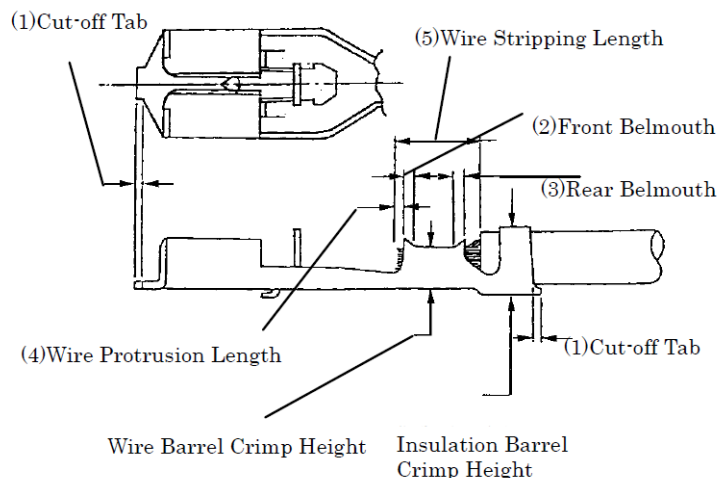
Terminal P/N	Wire crimping Data			Insulation crimp	
	Wire Size [AWG]	Crimp Width (Ref)	Crimp Height(mm) ± 0.05 [.002]	INSULATION DIAMETER	Crimp width (Ref)
2379911-X	18	2.79 [.110]	1.32 [.052]	2.29-3.4 [.090-.134]	4.57 [.180]
	16		1.37 [.054]		
	14		1.57 [.062]		



NOTE

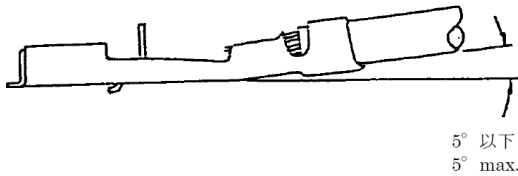
The applied crimp dimension (within the functional range of the product) is dependent on the termination tooling being used. For all other products, refer to the documentation (applicator logs and instruction sheets) supplied with the termination tooling for the applied crimp height.

B. Crimp Requirement

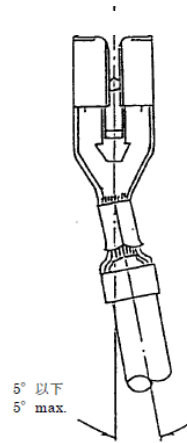
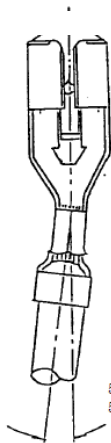
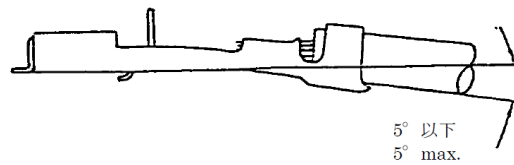


No.	Item	Specified Limit
1	Cut-off tab length	0.5mm max.
2	Front bell mouth	0.4mm max.
3	Back bell mouth	0.2-0.6mm
4	Wire End Protrusion Length	Tip of wire shall protrude from wire barrel crimp, but shall not exceed 1.0mm
5	Wire stripping length	4.0+/-0.50mm
6	Bend-up	5° max.
7	Bend-down	5° max.
8	Twisting	5° max.
9	Rolling	10° max.

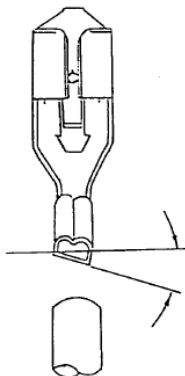
Bend Up



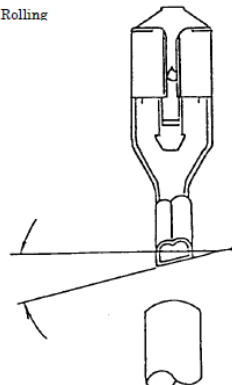
Bend Down,



Rolling



Rolling



3.4. Crimp Pull-Out Test

Crimped receptacles shall not separate from wires when subjected to forces specified in Figure 2. **These performance verifications are a crimp integrity set-up REQUIREMENT.**



NOTE

Adjust tensile testing machine for head travel of 24.5 mm [1.00 in] per minute. Directly and gradually apply force for 1 minute. (Hold the receptacle so that the force is applied straight-parallel to the crimp.)

WIRE SIZE (AWG)	MINIMUM FORCE	
	NEWTONS (N)	POUNDS (LBS)
18	89	20
16	133	30
14	223	50

Figure 2

3.5. Mating Tab Dimensions

Features and dimensional requirements for tab terminals to be mated FASTON and positive lock are shown in Figure 3.

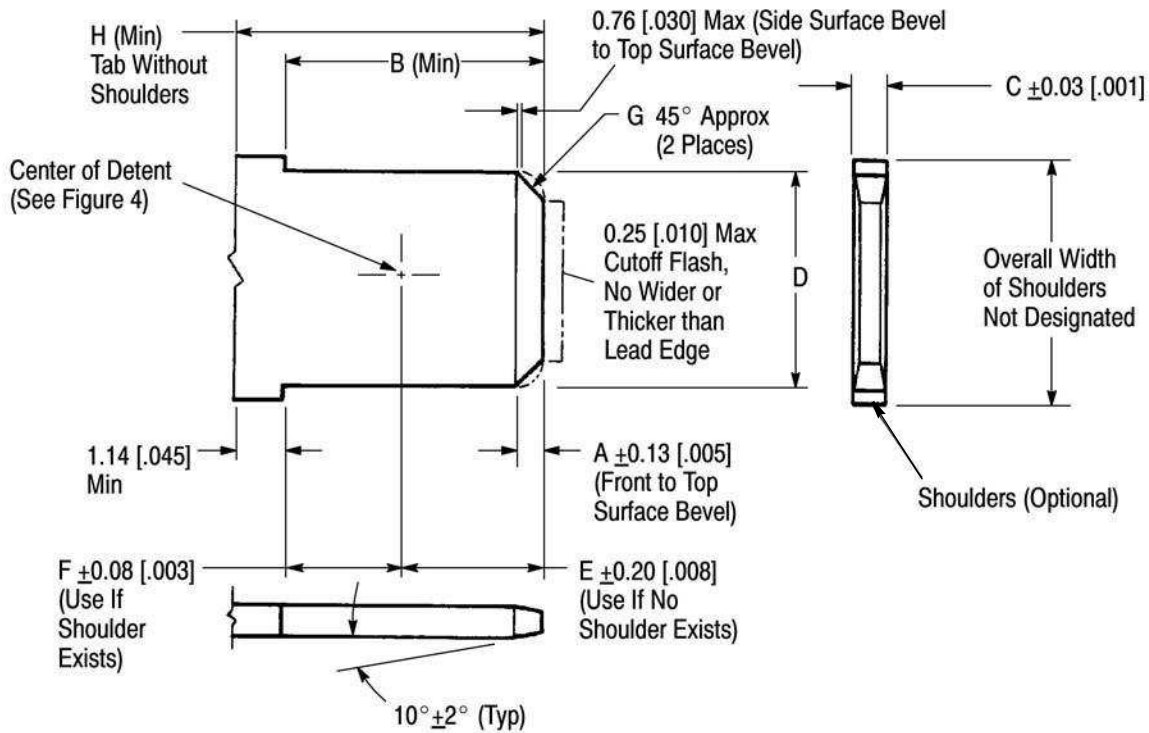


Figure 3 (continued)

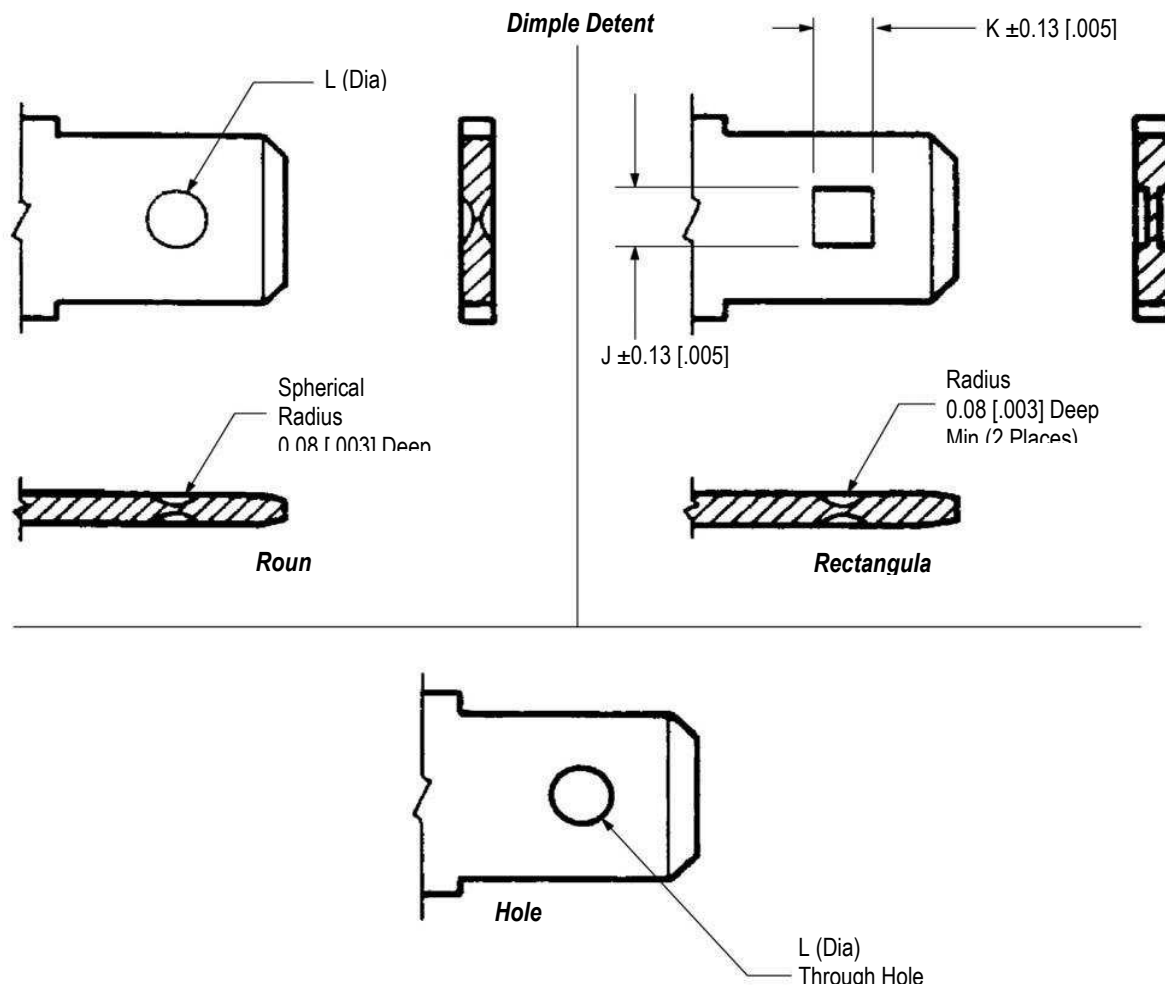
TAB SIZE (Nominal)	DIMENSION							
	A	B	C	D	E	F	G	H
6.35 x 0.81 [.250 x .032] w/Hole	0.89 [.035]	7.80 [.307]	0.81 [.032]	6.35 [.250]	4.52 [.178]	3.40 [.134]	1.27 [.050]	8.94 [.352]

NOTES: (1) Bevel may be a straight line or a radius within G ±0.51 mm [±.020 in.]. (2) Tab shall be flat (.001 inch/inch); and free from burrs greater than 10% of tab thickness, or raised plateaus, except as noted in Paragraph 3.8. (3) Measurements shall not include plating, burrs, or flatness tolerance.

Figure 3

3.6. Tab Retention and Detent Configurations

A tab configuration having no locking feature may be used for applications where low mating retention forces are desirable. Where higher forces are sought, a tab with a detent meeting specific requirements should be used. Hole detents provide the greatest retention forces, while dimples provide acceptable medium-range forces.



TAB WIDTH (Nominal)	DIMENSION		
	J (See Note 1)	K (See Note 1)	L
6.35 [.250]	2.36 [.093]	1.90 [.075]	1.78 +0.25/-0.13 [.070 +0.10/-0.005]

Figure 4

3.7. Repair

These receptacles are not repairable once termination has been made. Any defective receptacles should be removed and replaced with a new one.

3.8. Housings

Series 250 Positive Lock X-LIF Housings are available in three or four positions. These housings perform an insulation function as well as protecting the mating tabs and receptacles. See Figure 5

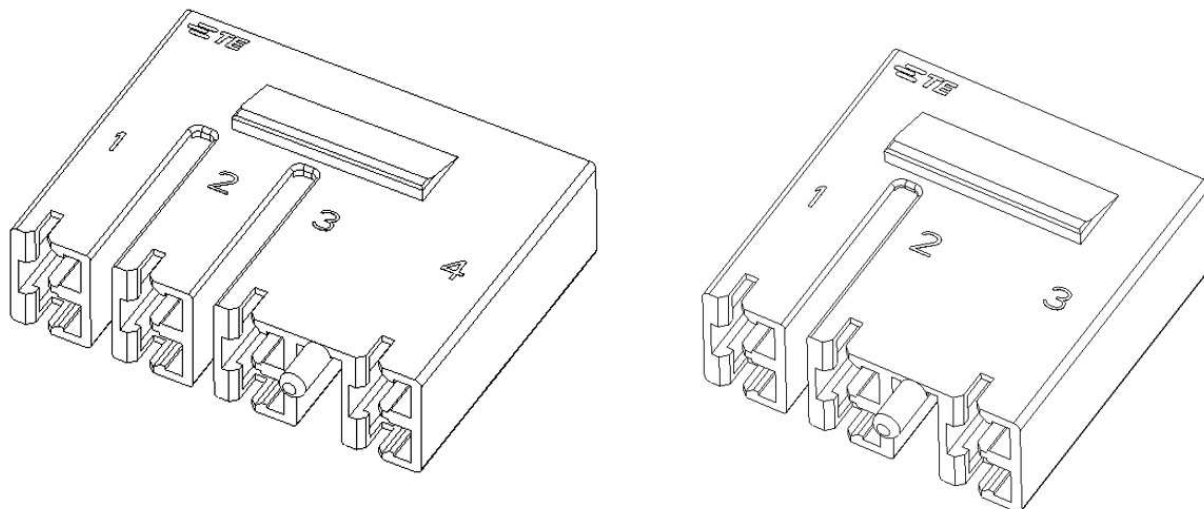


Figure 5

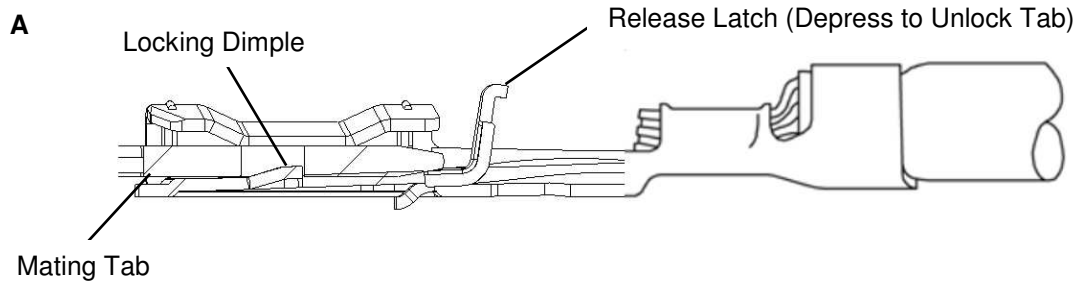
3.9. Assembly/Disassembly Procedures

A. Assembling Connector

The contacts are retained in the housings by the shoulder of the contact that straddles two latches in the housing. See Figure 6B. To achieve the straddle position, the latches must be displaced by the receptacle when inserted into the housing. To achieve this displacement, the housing must flex. A special feature designed to make latches no damaged when receptacle inserting.

B. Unmating Connector

To release the lock, an integrally-designed release latch must be depressed. See Figure 6B. This is accomplished either with a thumb (Figure 6A), or surface inside the housing. Unless the release latch is depressed either manually or with the optional designated area of the housing, the receptacle cannot be removed without damage force being applied. Tabs for use with X-LIF F-spring Receptacle Connectors must have a hole in the mating area. The proper tab configuration for mating with X-LIF F-spring Receptacle Connectors is shown in Figure 4. The basic tab dimensions are also found in UL Specification 310.



B

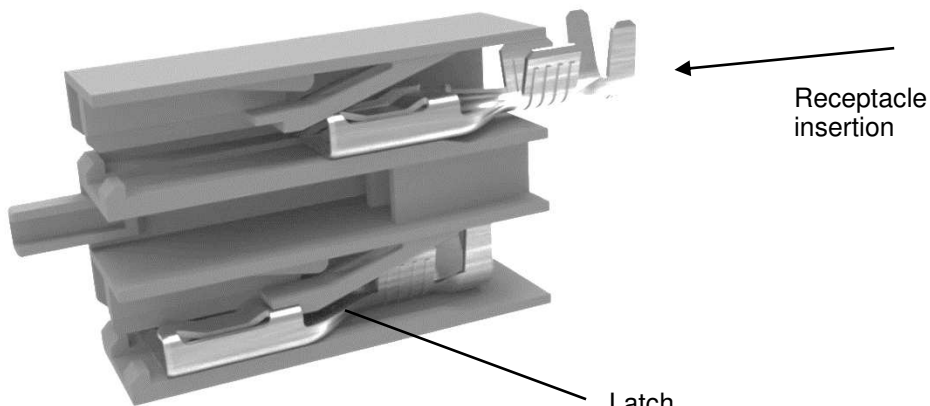


Figure 6

The terminal must work with related housing, housing PN listed below.

4. REFERENCE PART NUMBER

Here listed available part number for reference

PN	Description
2379911-X	250 FSPRING REC. 18-14AWG TPBR
2379907-X	250 HSG REC. F-SPRING 10MM 8MM 3P
2380041-X	250 HSG. F-SPRING REC 10MM 8MM 4P

5. TOOLING

Applicators and automatic machines are recommended for all applications. Applicators contain the tooling for feeding and crimping strip-form terminals. Automatic machines provide the power to operate the applicator. See figure 5 for representative images.

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.

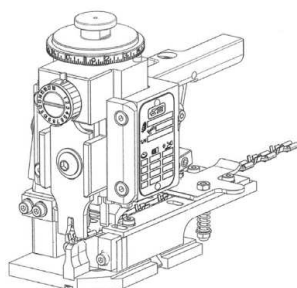


CAUTION

Tool life may be significantly reduced when crimping comparable steel/nickel plated steel terminals.

5.1. Applicators

Applicators for product part numbers are available from the [Applicator Search Portal](#) on www.te.com or by calling the Product Information Center at the bottom of page 1.



Applicator

