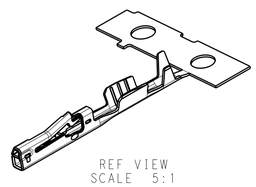
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勝特力電材超市-龍山店 886-3-5773766
勝特力電材超市-光復店 886-3-5729570
胜特力电子(上海) 86-21-34970699
胜特力电子(深圳) 86-755-83298787
http://www.100y.com.tw

REVISIONS

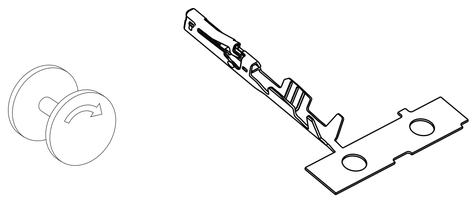
P	LTR	DESCRIPTION	DATE	DWN	APVD
	C	REV PER ECO-17-010161	12JUL2017	FK	WW
	C1	REV PER ECO-17-014203	27SEP2017	FK	CR
	D	REV PER ECO-18-000672	15FEB2018	HM	CR
	E	REV PER ECO-19-XXXXX	1MAY2019	CR	CR

1. MATERIAL: COPPER ALLOY, PRE-PLATED WITH 0.80µm MIN TIN
2. TERMINAL HAS LUBRICANT APPLIED. THIS IS A WHITISH COLORED LUBE. AMOUNT AND VISIBILITY MAY VARY.
3. DATE CODE (WEEK/YEAR)
4. BARREL SIZE ID, SEE TABLE
5. MAX 7 TERMINAL MISSING PER REEL PERMITTED
6. 3 LOOSE SPLICES PER REEL ALLOWED
7. DIE IDENTIFICATION NUMBER
8. OPTIONAL FEATURE
9. OPTIONAL INDENTATION PERMISSIBLE IN THIS GENERAL LOCATION.
10. THIS TERMINAL INTENDED FOR TEMPERATURE CLASS T2 (-40°C TO +105°C) AND VIBRATION CLASS V1
11. RECOMMENDED MATING PIN TIP GEOMETRY PER USCAR EWCAP-001, 0.75-1.5µm TIN OVER 0.76µm MIN NICKEL
12. QUALIFIED PER GMW3191, JUNE 2012 FOR T2 (-40°C TO 105°C) / V1 (ON BODY OR CHASSIS) APPLICATIONS.
13. ARROWS SHOW RECOMMENDED SECONDARY LOCK MATING DIRECTION. ALL OTHER DIRECTIONS ARE NOT RECOMMENDED.

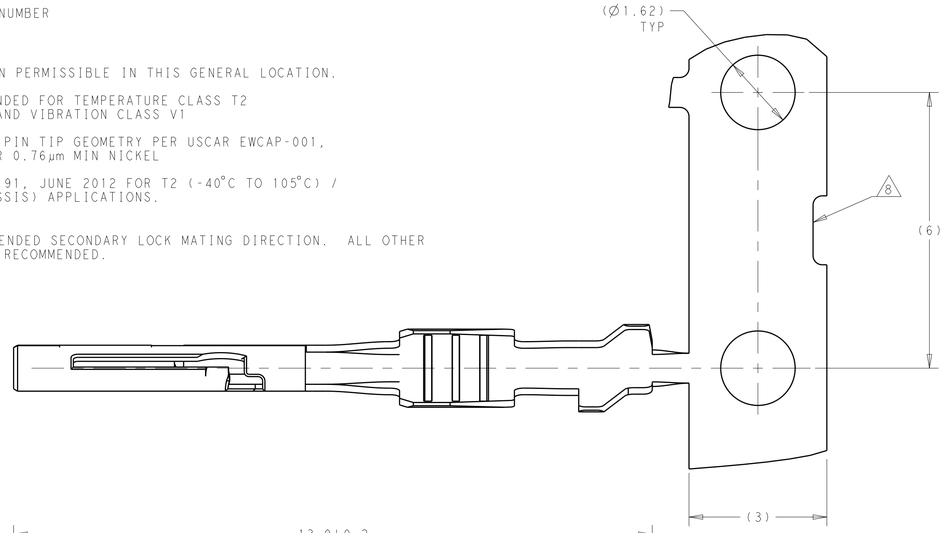


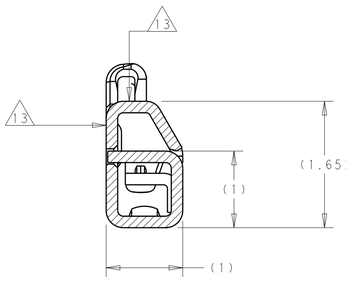
REF VIEW
SCALE 5:1

REQUIRED REELING DIRECTION FOR TE APPLICATORS

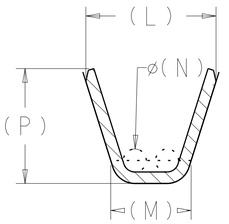


DETAIL Z
SCALE 5:1

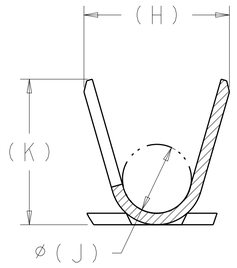




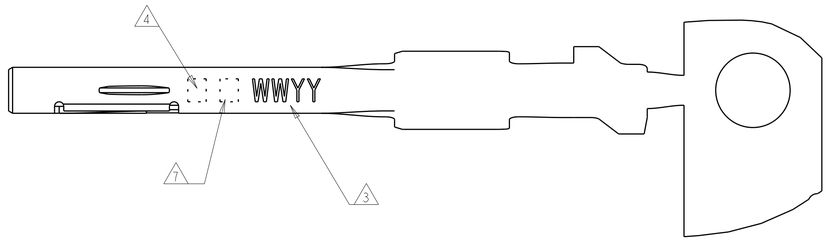
SECTION E-E
SCALE 25:1



SECTION A-A
SCALE 25:1



SECTION B-B
SCALE 25:1



N	SEE DETAIL Z	1.5	0.3	1.05	1.7	1.9	0.9	1.9	1.00 TO 1.40	0.35mm², 7 STRAND	2272196-2
S	SEE DETAIL Z	1.25	0.3	0.9	1.6	1.8	0.9	1.9	0.85 TO 1.05	0.13mm², 7 STRAND	2272196-1
MARKING 4	REELING	P	N	M	L	K	J	H	INSULATION O.D.	CONDUCTOR	PART NO
									WIRE		

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL 1

FINISH - - -

DWN H. MOLL 20FEB2014
CHK J. MYER 25FEB2014
APVD J. MYER 25FEB2014
PRODUCT SPEC 108-32200
APPLICATION SPEC 114-32153
WEIGHT 0.08 g

TE Connectivity

NAME RECEPTACLE, TERMINAL, UNSEALED, GENERATION 50, LOCKING LANCE

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	-	C-2272196	-

CUSTOMER DRAWING | SCALE 15:1 | SHEET 1 OF 1 | REV E

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TE Connectivity:
2272196-2

Generation 50 LL Unsealed Female Terminals

NOTE
All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of ±0.13 and angles have a tolerance of ±2°. Figures are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of Generation 50 LL unsealed female terminals. The terminal features a wire barrel with serrations that help hold the wire in place after termination, insulation barrel, and locking lance. The locking lance secures the terminal in the housing after insertion. The terminals are supplied on reels for terminating using an automatic machine.

Basic terms and features of this product are provided in Figure 1.

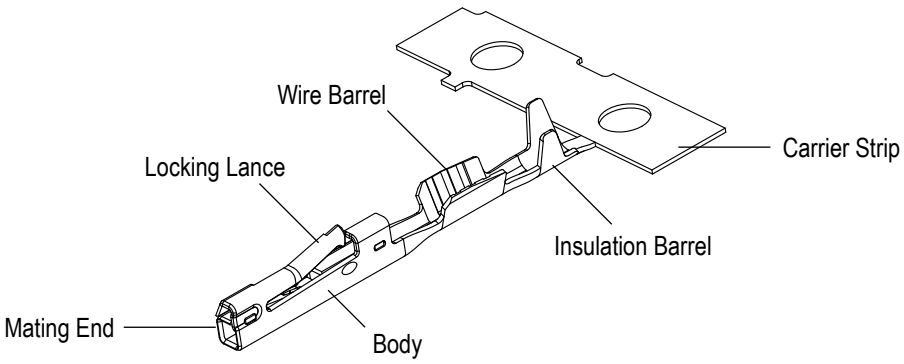


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

Initial release of application specification

2.2. Customer Assistance

Reference Product Base Part Number 2272196 and Product Code M068 are representative of Generation 50 LL unsealed female 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 108-32200 provides product performance and test results.

2.5. Instructional Material

Instruction sheets (408- and 411-series) provide product assembly instructions or tooling setup and operation procedures and customer manuals (409-series) provide machine setup and operating procedures. Instructional material that pertains to this product are:

408-7424	Checking Terminal Crimp Height and Gaging Die Closure
408-10389	Ocean Side-Feed Applicators

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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.

Alkalis	Ammonia	Citrates	Phosphates Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur Nitrites	Tartrates

3.3. Wire Selection and Preparation

Wire sizes, type, and strip length for these terminals is given Figure 2. For advice on other wire, contact the number at the bottom of page 1.

CAUTION
Individual wire strands must not be bent or cut off during the stripping operation.

WIRE				
SIZE	INSULATION DIAMETER	TYPE		STRIP LENGTH
		DESCRIPTION	MARKING	
0.13 mm^2	0.85-1.05	LV112-4 Meeting Requirements of Delphi M5647 (CuMg02 Wire)●	FLR 0.13	3.75±0.15
		ISO 6722-1 Thin Wall● or Ultra-Thin Wall	FLU 0.13	
0.35 mm^2	1.20-1.40	DIN 72551-6 Type A or LV112-1 Type A	FLR 0.35	
	1.00-1.20	ISO 6722-1●	FLU 0.35	

● Recommended

Figure 2

3.4. Crimp

The application tooling given in Section 5 must be used to apply these terminals. Only single termination applies. The crimped terminal must conform to the following requirements.

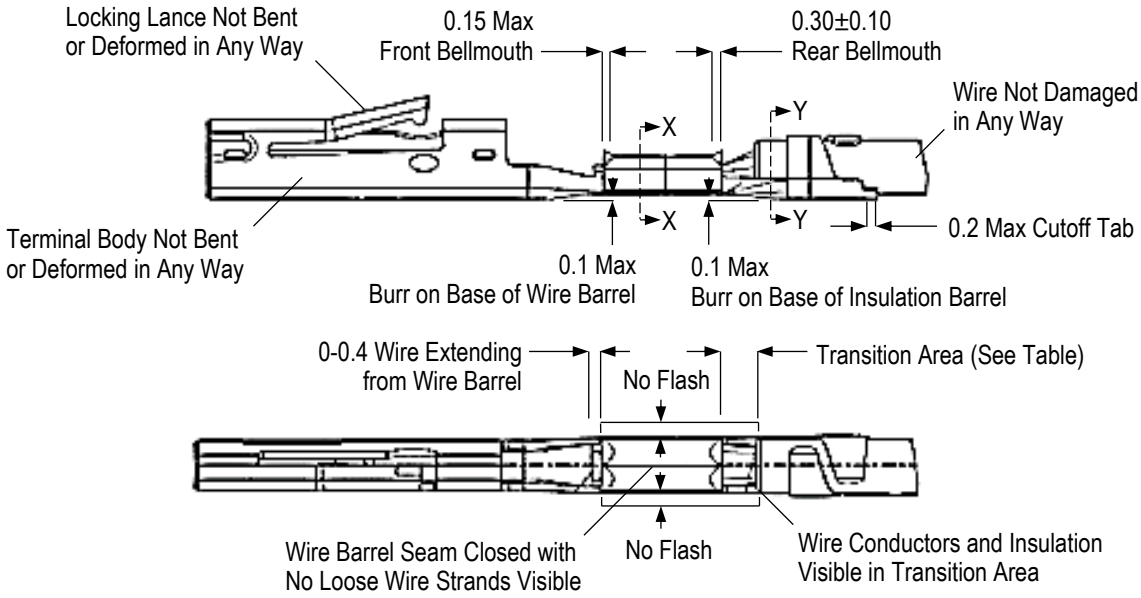
A. Cutoff Tab

The cutoff tab is the remaining portion of the carrier strip after the terminal is cut from the strip. The cutoff tab must not be bent away from the wire insulation and must not exceed the dimension given in Figure 3.

B. Burr

Any burr on the base of the wire barrel crimp or insulation barrel crimp must not exceed the dimension given in Figure 3.

Delphi is a trademark.





Detail A

WIRE		TERMINAL						
SIZE	INSULATION DIAMETER	WIRE BARREL CRIMP DIMENSION			INSULATION BARREL CRMIP DIMENSION			TRANSITION AREA WIDTH (Max)
		A HEIGHT ±0.02	B WIDTH	TYPE	C (Ref) HEIGHT MAX	D WIDTH	TYPE	
0.13 mm²	0.85-1.05	0.59	0.89	F-Crimp	1.35	1.07	Wrap	1.2
0.35 mm²	1.0-1.2	0.70	1.07		1.45	1.07		1.2
	1.2-1.4■	0.70	1.07		1.45	1.27		1.4

■ May require housing having large circuit pitch and modified cavities.

Figure 3

C. Wire Barrel Crimp

The wire barrel must have an F-crimp termination. All conductors must be held firmly inside the wire barrel. The crimped area must be symmetrical on both sides of the wire barrel. The crimp may be off center on the wire barrel but not off the end of the wire barrel. The crimp height and width must be within the dimensions provided in Figure 3.

D. Insulation Barrel Crimp

The wire insulation shall not be cut or broken during the crimping operation. For wires having insulation diameter greater than 1, partial damage of the insulation from the terminal crimp may occur. This is allowed so long as there is no damage to the wire strands. Refer to Figure 3, Detail A.

No strands can be folded back over the wire insulation. The insulation barrel must have a wrap crimp termination. The wire insulation must be inside the insulation barrel and must not enter the wire barrel. The crimp height and width must be within the dimensions provided in Figure 3.

NOTE
The insulation barrel crimp width and height should be measured using a standard micrometer with flat surfaces. A bend test in accordance with DIN standard 41611, "Solderless Electrical Connections," is recommended. The insulation must not come loose after one bend cycle.

E. Terminal Body and Locking Lance

The terminal body and locking lance must not be bent or deformed in any way.

F. Bellmouths

The front and rear bellmouths must be within the dimensions given in Figure 3.

G. Flash

A bulging of the terminal material at the outside of the terminal from the terminal body to the insulation barrel is not allowed.

H. Transition Area

Both wire conductors and insulation must be visible in the transition area (between the wire barrel and insulation barrel). The width of the transition area must be no more than the dimension given in Figure 3.

I. Wire Barrel Seam

The seam between the two sides of the wire barrel must be completely closed and there must be no evidence of loose wire strands or wire strands visible in the seam.

J. Wire Extension

Wire ends must be flush with the end of the wire barrel or extend no more than the dimension given in Figure 3.

K. Bend Allowance

The bend allowance between the wire barrel and wire is acceptable within the limits given in Figure 4.

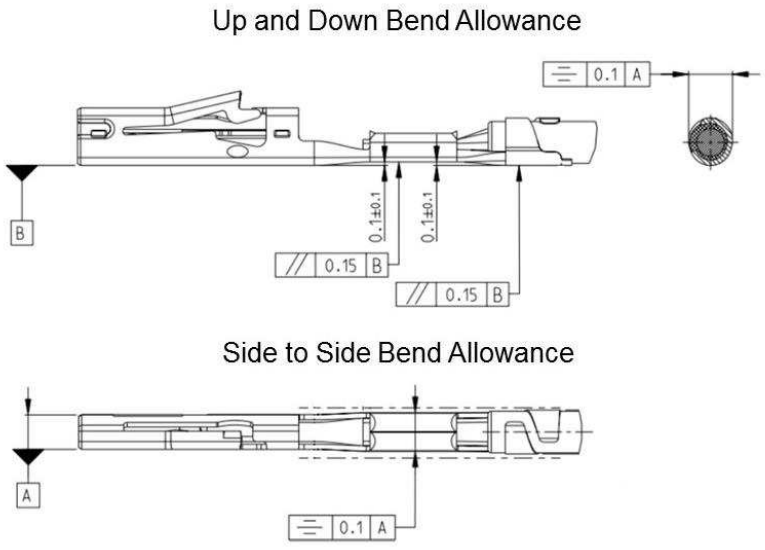


Figure 4

3.5. Replacement and Repair

Damaged or defective terminals must be replaced. These terminals cannot be repaired.

4. QUALIFICATION

Agency evaluation for Generation 50 LL Unsealed female terminals was not defined at the time of publication of this application specification.

5. TOOLING

Tooling part numbers and instructional material packaged with the tooling are given in Figure 5.

5.1. Hand Tool

There are currently no hand tools available for this terminal.

5.2. Applicator

The applicators are designed to crimp strip-fed contacts onto pre-stripped wire. These applicators accept interchangeable crimping dies and must be installed onto a power unit.

5.3. Power Unit

These power units provide the force required to drive the applicator. They can be set up to automatically measure, cut, strip, and terminate wire.

5.4. Precision Controller

The precision controller attaches to the power unit to provide the means for feeding terminals into the applicator for crimping.

5.5. Crimp Force Monitor (CFM)

The CFM is a device used to detect crimping errors during processing.

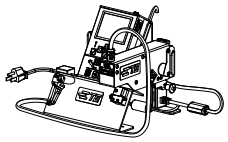
For semi- and fully automatic crimp application preferably a crimp force monitoring should be used to detect and separate bad parts. The sensitivity of the crimp monitor needs to be set that a failure is detected - if the conductor cross-section, caused by cut strands, is reduced by more than 9%. - if insulation inside the wire crimp barrel covers more than ½ of the wire crimp length (length measured before crimping). To determine the necessary tolerance settings, testing on bench press is allowed. The crimps done for teaching the crimp force monitor should be checked especially for conformance to the application demands, at least for the attributes that can be checked non-destructive.

WIRE		OCEAN APPLICATOR	PRECISION CONTROLLER	POWER UNIT
SIZE	INSULATION DIAMETER			
0.13 mm²■	0.85-1.05	2151332-2	—	
		2151332-5	1976800-1	Komax Gamma 333
			1976800-5	Komax Alpha 356 or 433
0.35 mm²	1.0-1.2	2151523-2		
		2151523-7		
	1.2-1.4	2266703-2		
		2266703-5	1976800-1	Komax Gamma 333
			1976800-5	Komax Alpha 356 or 433

■ A small wire gauge kit for wire handling may be necessary. Contact the power unit manufacturer for advice.



Ocean Side-Feed Applicators (Refer to Table) (408-10389)



System III Precision Controller with Servo Terminal Feeder (Retrofit Kit) 1976800-[ ] (Refer to Table)



Komax CFA

Figure 5

Komax is a trademark.

6. VISUAL AID

The illustration below shows a typical application of Generation 50 LL female terminals. 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.

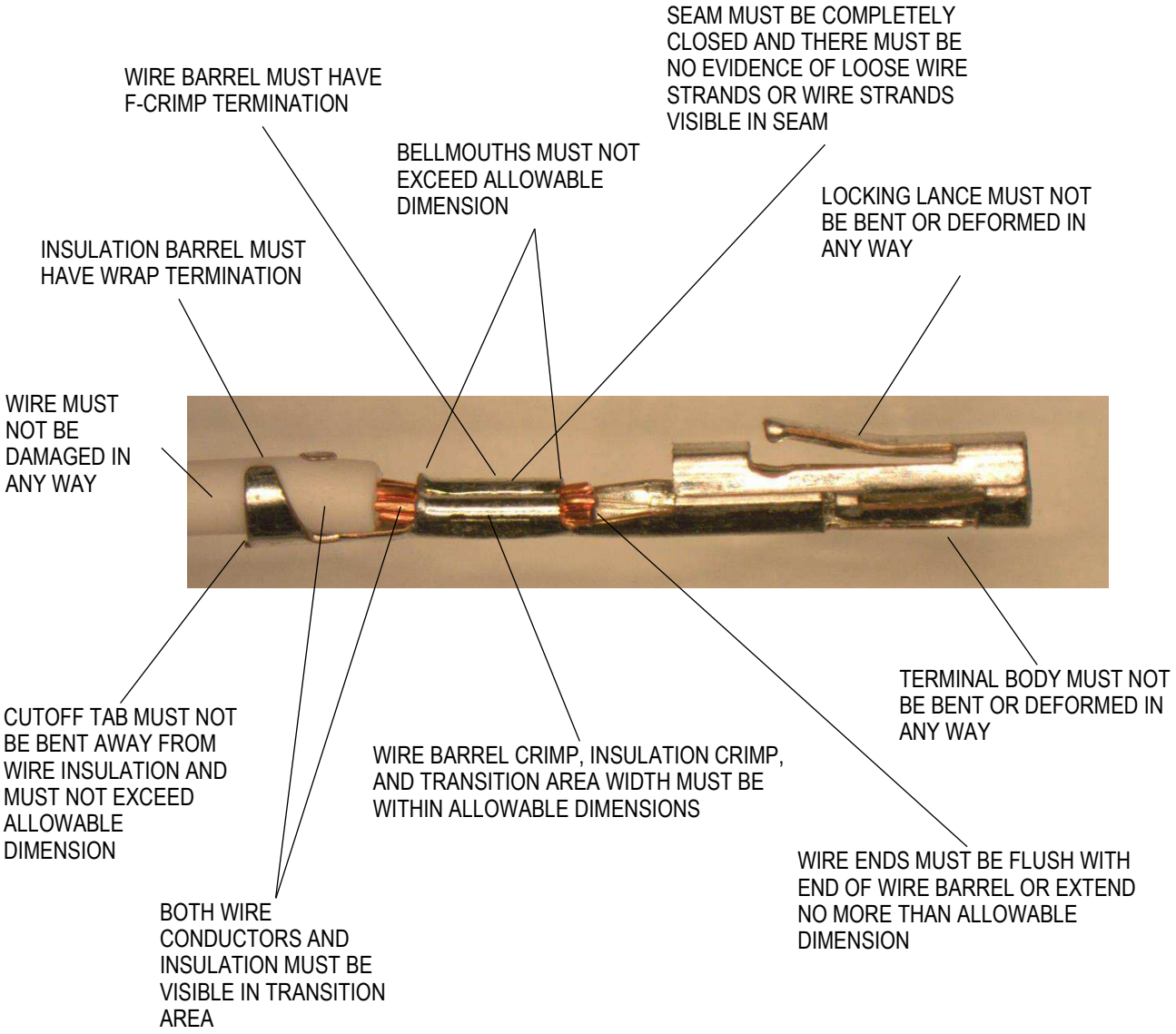


FIGURE 6. VISUAL AID