

.090 TAB & RECEPTACLE CONTACTS (Un-sealed and Sealed Type)

- **NOTE** All numerical values are in metric units. Dimensions are in millimeters and have a tolerance of $\pm 0.13\text{mm}$ unless otherwise specified. Angles have a tolerance of $\pm 2^\circ$.

1. INTRODUCTION

This specification covers the requirements for application of TE 090 MLC Tab and Receptacle Contacts. The contacts are precision Formed, strip feed, for machine application. The contacts have been designed for commercially available pin and socket housings with locks that engage the contact fins.

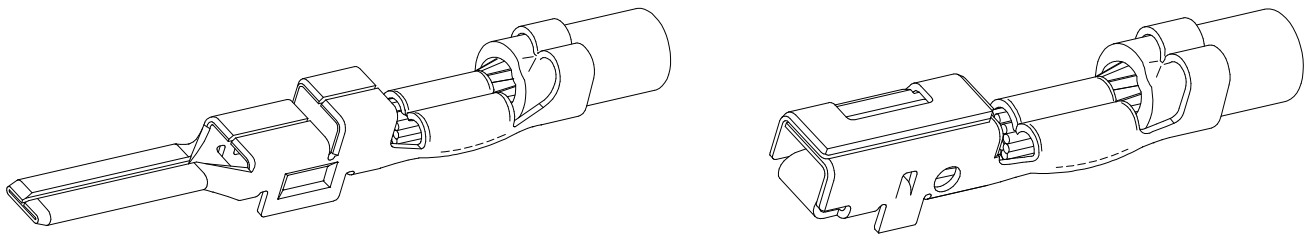


Figure 1

2. REFERENCE MATERIAL

2.1. Customer Drawing

-. 090 II Un-sealed Tab:	368086, 368087, 368088, 1897752
-. 090 II Un-sealed Rec:	368083, 368084, 368085
-. 090 III Un-sealed Rec:	1743654, 1743655, 1743656, 1897598, 1897753
-. 090 II Sealed Tab:	936260, 936261, 936262
-. 090 II Sealed Rec:	368287, 368288, 368289

In the case of a conflict between this document and the customer drawing, the customer drawing takes precedence.

2.2. Product Specification for .090 II Un-sealed Types; 108-61021

3. REQUIREMENTS

3.1. Material

Recep.: CuNiSi, Brass

Tab: Brass

Refer to customer drawing for detailed information.

3.2. Storage

The pin and socket contacts should remain in the shipping containers and on the reels until ready for use.

The coiled reels should be stored horizontally to prevent deformation during storage that could keep proper feeding through the applicator.

3.3. Crimped Contact Criteria

A. Crimp Height

The crimp applied to the wire barrel portion of the contact is the most compressed area and is most critical in assuring optimum electrical and mechanical performance of the crimped contact.

B. Bellmouths

The front and rear bellmouths are caused by the extrusion of metal during crimping and must be within the range specified in Figure 2.

C. Cutoff Tab and Burr

The cutoff tab and burr resulting from the contact being cut from the carrier strip must be within limits shown to allow the contact to be fully inserted and seated in the housing. See Figure 2.

D. Wire Barrel Flash

The wire barrel flash at the bottom of the wire barrel results from applied crimp pressure and must be within the dimension provided in Figure 2.

E. Insulation Barrel Crimp

The insulation barrel shall grip the insulation firmly without cutting into it. Care must be taken to prevent cutting, nicking, or scraping of the insulation.

F. Crimp Tensile Strength

Crimped contacts should hold firmly to the wire and have a pull-test tensile value meeting that specified in the chart in Figure 2.

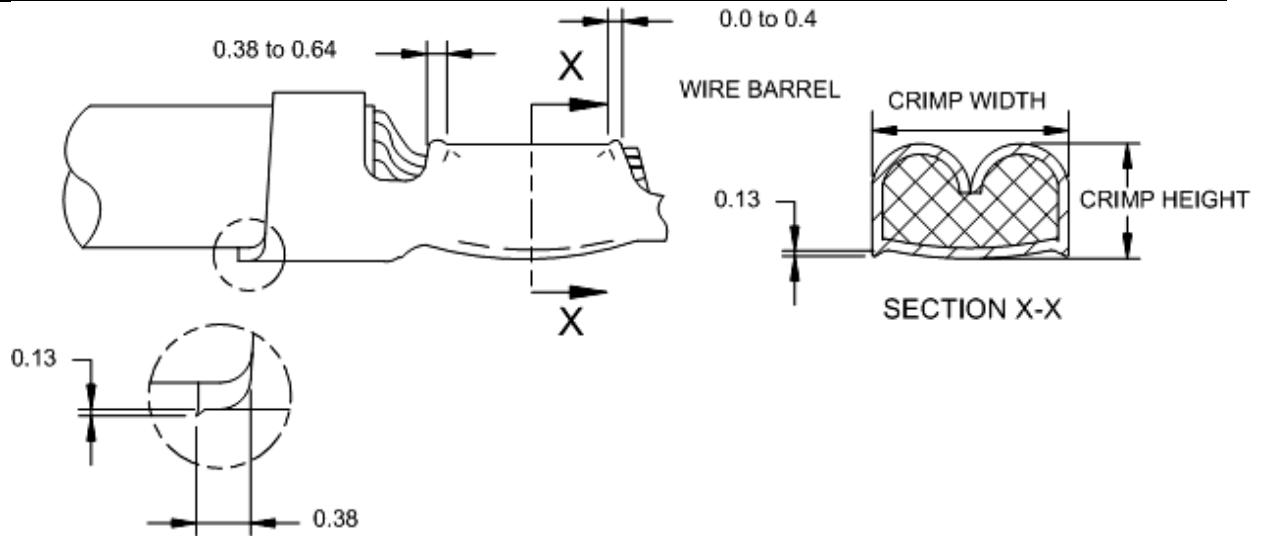


Figure 2

G. Wire Location

After Crimping the wire and insulation must be visible in the transition area between the wire and Insulation barrels. The wire end must be within the limit provided in Figure 3.

H. Wire Barrel Seam

The wire barrel seam shall be completely closed with no wire strands protruding from it. Figure 3

I. Twist or Roll

The crimped wire and insulation barrels must be aligned with the un-crimped portion of the contact to within the limit shown in Figure 3

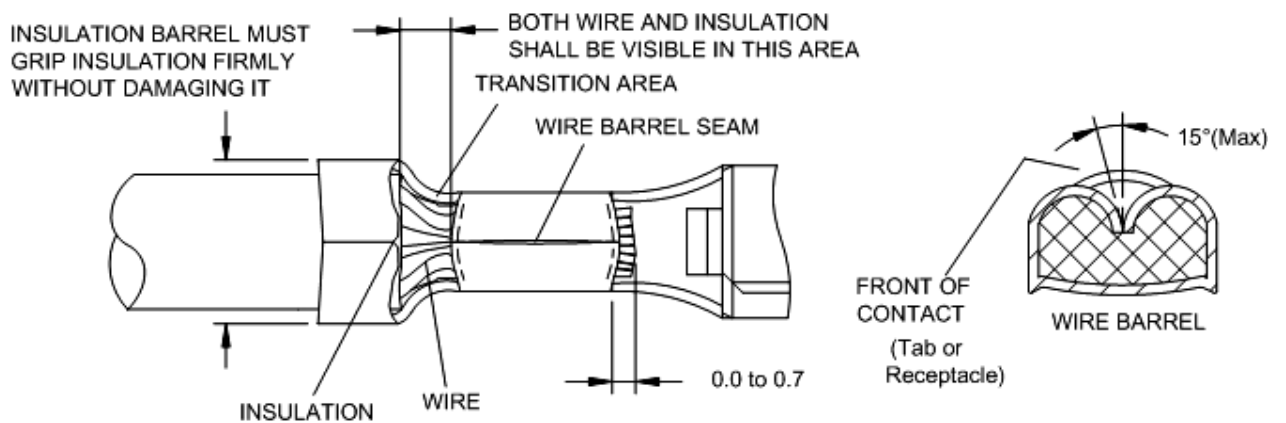


Figure 3

J. Straightness

The force applied during crimping may cause some bending between the crimped wire barrel and the un-crimped tab or receptacle portion of the contact.

1) Up and Down

The crimped contact, including cutoff tab and burr, shall not be bent above or below the datum line more than the amount shown in Figure 4.

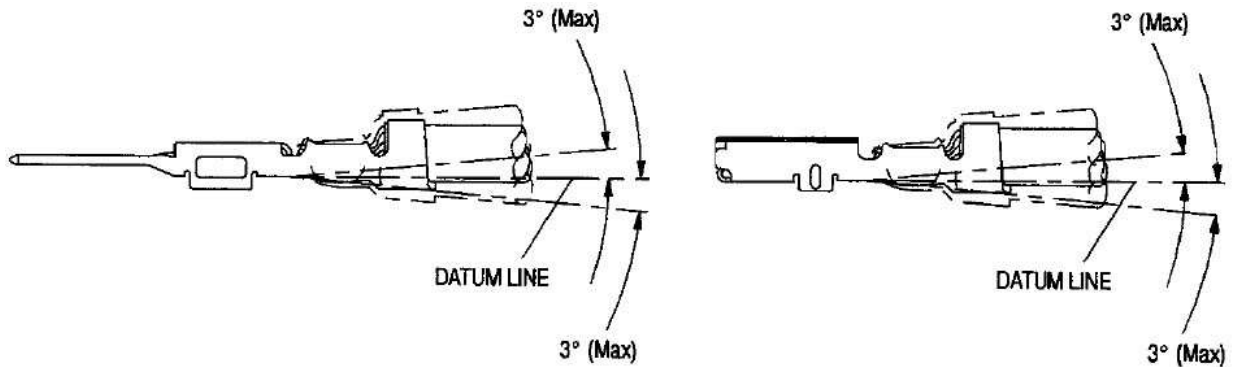


Figure 4

2) SIDE to SIDE

The side-to-side bending of the contact may not exceed the limits provided in Figure 5.

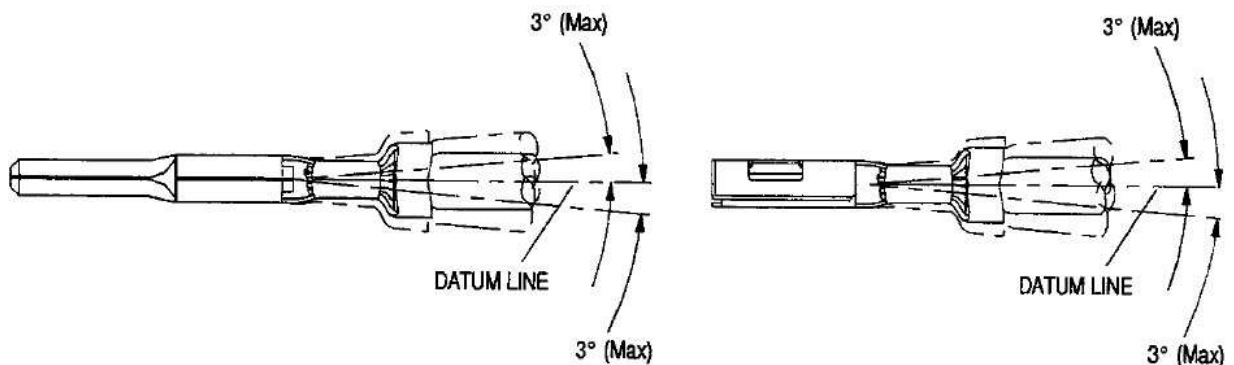
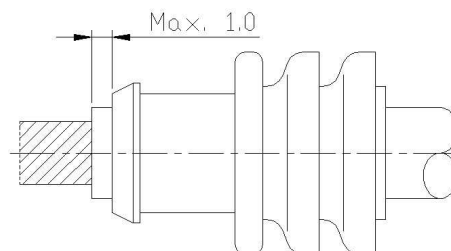


Figure 5

K. Position of the single wire seal on the wire (Sealed Type only)

The end of the wire insulation must at least be flush with the front face of the seal and may extend not more than 1.0mm beyond this.



4. VISUAL AID

The following illustrations are to be used by production personnel to ensure properly applied product. The views suggest requirements for good terminations. Applications that appear visually incorrect should be inspected using the information in the main body of this document.

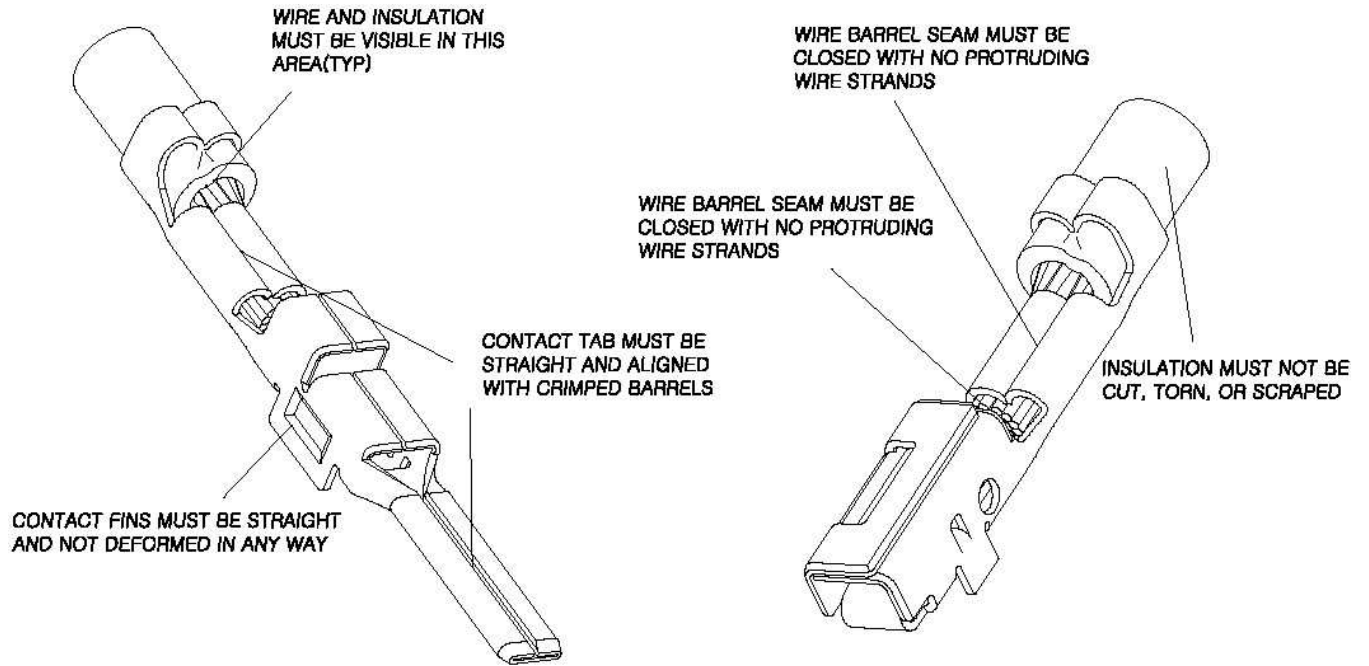


Figure 6

6. Crimp Data:

1) Application Crimp: 090 II Tab & Receptacle (Un-sealed Type)

Contact P/N	Wire Range Nominal Size	Insulation Dia. Range	Wire Strip Length (mm)	Wire Barrel Crimp		Ins. Barrel Crimp Width (mm)	Crimp Tensile Strength (kgf) (min.)
				Width (mm) ^{A)}	Height (mm)		
368088	CAVUS 0.3	1.4 ~ 1.5	4.3	1.8 "F"	1.0 ~ 1.1	2.8 "F"	6
368085			4.3	1.8 "F"	0.75 ~ 0.85	2.8 "F"	6
368088	AVS 0.5	2.0 ~ 2.1	4.3	1.8 "F"	1.04 ~ 1.14	2.8 "F"	9
368085			4.3	1.8 "F"	0.84 ~ 0.94	2.8 "F"	9
368087	CAVUS 0.85	1.8 ~ 1.9	5.3	2.3 "F"	1.15 ~ 1.25	3.05 "F"	13
368084			5.3	2.3 "F"	0.98 ~ 1.08	3.05 "F"	13
368087	AVS 1.25	2.5 ~ 2.6	5.3	2.3 "F"	1.3 ~ 1.4	3.05 "F"	17
368084			5.3	2.3 "F"	1.2 ~ 1.3	3.05 "F"	17
368086	AVSS 2.0	2.6 ~ 2.7	5.3	2.6 "F"	1.62 ~ 1.72	3.05 "F"	20
368083			5.3	2.3 "F"	1.5 ~ 1.6	3.05 "F"	20
368086	AESSX 2.5F	2.9 ~ 3.1	5.3	2.8 "F"	1.77 ~ 1.87	3.05 "F"	25
1897752	CHFUS 0.22	1.0 ~ 1.05	4.0	1.57 "F"	0.89 ±0.03	2.28 "F"	4

*Note: (1) The width of wire barrel is not the actual width, but the width of wire crimper slot.

(2) Control the width of wire barrel within A)+0.2mm after crimp.

2) Application Crimp: 090 III Receptacle (Un-sealed Type)

Contact P/N	Wire Range Nominal Size	Calculated Cross Section Area (mm ²)	Wire Strip Length (mm)	Wire Barrel Crimp		Ins. Barrel Crimp Width (mm)	Crimp Tensile Strength (kgf) (min.)				
				Width (mm) ^{A)}	Height (mm)						
1743654	0.3 AVSF, AVXF, AEXF, AVSS, AVX, AEX, AVSSF	0.3054	4.3	1.4 "F"	0.92 ±0.03	2.29 "F"	6				
		0.3716			0.96 ±0.03		6				
		0.382			0.96 ±0.03		6				
	0.35 TXL, FLR	0.324			0.92 ±0.03		7				
		0.4156			0.98 ±0.03		7				
	0.5 FLX, FLY, TXL, AVSF, AEXF, FLR, AVSSF, AVSS, AEX, CAVS	0.5207			1.04 ±0.03		9				
		0.5089			1.04 ±0.03		9				
		0.5389			1.04 ±0.03		9				
		0.563			1.07 ±0.03		9				
1743655	0.75 FLX, FLY, AVSF, AVXF, AEXF, FLR, FLK	0.754	4.3	2.03 "F"	1.11 ±0.05	3.05 "F"	11				
		0.7634			1.11 ±0.05		11				
		0.8313			1.14 ±0.05		11				
	0.8 TXL, AVS	0.760			1.11 ±0.05		11				
		0.7757			1.11 ±0.05		11				
		0.8042			1.11 ±0.05		11				
	0.85 AVSS, AVSSF, AVSF, AVXF, AEXF, AVS, AEX, CAVS	0.8597			1.14 ±0.05		13				
		0.8652			1.14 ±0.05		13				
		0.8847			1.14 ±0.05		13				
	1.0 FLY, FLX, AVS, FLR, FLK, TXL	1.0053			1.21 ±0.05		13				
		1.045			1.21 ±0.05		13				
		1.1084			1.25 ±0.05		13				
		1.13			1.25 ±0.05		13				
	1.25 AVSS, AVSF, AVXF, AEXF, AVSSF, AEX, CAVS	1.255			1.31 ±0.05		17				
		1.272			1.31 ±0.05		17				
		1.286			1.31 ±0.05		17				
	1743656	1.5 AVS, FLR, FLK			1.528		4.5	2.29 "F"	1.42 ±0.05	3.05 "F"	17
					1.699				1.48 ±0.05		17
		2.0 TXL, FLY, AVSS, AVSSF			1.85				1.54 ±0.05		20
1.19644			1.58 ±0.05	20							
1897598	AESSX 2.5F	2.6546	4.8	2.54 "F"	1.95 ±0.05	3.05 "F"	25				
1897753	CHFUS 0.22	0.219	4.0	1.4 "F"	0.83 ±0.03	1.4 "F"	4				

* Note: (1) The width of wire barrel is not the actual width, but the width of wire crimper slot.

(2) Control the width of wire barrel within A)+0.2mm after crimp.

(3) Check the Calculated Cross Section Area per wire.

3) Application Crimp: 090 II Tab & Receptacle (Selaed Type)

Contact P/N	Wire Range Nominal Size	Insulation Dia. Range	Wire Strip Length (mm)	Wire Barrel Crimp		Ins. Barrel Crimp	Applicable SWS P/N
				Width (mm) ^{A)}	Height (mm)	Width (mm)	
936260	AVSS 0.3 CAVUS 0.3	1.4 ~ 1.5	4	1.78 "F"	1.05±0.05	3.9 "O"	828904-1
368287			4	1.78 "F"	0.85 ±0.05	3.9 "O"	828904-1
936260	AVS 0.5	2.0 ~ 2.1	4	1.78 "F"	1.13±0.05	3.9 "O"	828904-1
368287			4	1.78 "F"	0.94 ±0.05	3.9 "O"	828904-1
936261	AVSS 0.85 CAVUS 0.85	1.8 ~ 1.9	4	2.28 "F"	1.25±0.05	4.2 "O"	828904-1
368288			4	2.28 "F"	1.07±0.05	4.2 "O"	828904-1
936261	AVS 1.25	2.5 ~ 2.6	4	2.28 "F"	1.41±0.05	4.2 "O"	828905-1
368288			4	2.28 "F"	1.19±0.05	4.2 "O"	828905-1
936262	AVSS 2.0	2.6 ~ 2.7	4	2.79 "F"	1.62±0.05	4.2 "O"	828905-1
368289			4	2.54 "F"	1.52±0.05	4.2 "O"	828905-1
936262	AESSXF 2.5	2.9 ~ 3.1	4	2.79 "F"	1.81±0.05	4.2 "O"	368299-1

*Note: (1) The width of wire barrel is not the actual width, but the width of wire crimper slot.
 (2) Control the width of wire barrel within A)+0.2mm after crimp.



7. Revision History

F1	REVISED (1897598 Crimp spec, Page 7)	14.APR.'16
F	REVISED (SEALED TYPE CRIMP DATA UPDATED)	21.NOV.'11
E	REVISED (CRIMP DATA UPDATED)	18.SEP.'09
D	REVISED (ADDED NEW WIRE SIZE 2.5 AND MODIFY THE ERROR)	
C	REVISED (CHANGED FRONT BELLMOUTH TO 0~0.4)	-
B	REVISED (CHANGED TENSILE STRENGTH 0.3SQ)	-
A	REVISED (UPDATE TO CORRECT FORMAT)	-
O	RELEASED	-
REV.	REVISION RECORD	DATE