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**AS39029/14**

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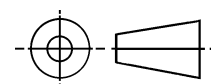
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THIRD ANGLE PROJECTION



ISSUED 2000-06

PREPARED BY SAE SUBCOMMITTEE AE-8C1

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## **AEROSPACE STANDARD**

CONTACTS, ELECTRICAL CONNECTOR,  
SOCKET, CRIMP REMOVABLE, SHIELDED,  
(FOR MIL-C-81511 SERIES 2 CONNECTORS)

**AS39029/14**  
SHEET 1 OF 7

The drawing illustrates the dimensions and components of a shield crimp sleeve assembly. The main view shows a cross-section of the sleeve with various dimensions and labels. Detail A shows the inner contact and insulator subassembly, and Detail B shows the shield crimp sleeve.

**Main View Dimensions:**

- Overall length: (18.24)
- Reference length: .718(REF)
- Dimensions from left end: .356, .344, .215, .203, .020, .013, .040, .035, .028, .022, .115, .107
- Angles: 37°, 33°, 11°, 10°, 47°, 43°
- Labels: U, C, D, MATING END, MANUFACTURER'S SYMBOL OR TRADEMARK (LOCATION OPTIONAL), DD, C, SEE DETAIL A, BIN COLOR BANDS (SEE TABLE II), SEE DETAIL B

**Detail A Dimensions:**

- Inner contact dimensions: .200, .195, .249, .239, .165, .157, .059, .039, .086, .080
- Insulator dimensions: .039, .035, .200, .194
- Labels: INNER CONTACT, FULL RADIUS, CRIMP AREA, INSULATOR, EE, BB, FF, AA

**Detail B Dimensions:**

- Shield crimp sleeve dimensions: .250, .240, HH, HHH
- Label: DETAIL B  
SHIELD CRIMP SLEEVE

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Metric equivalents are in parentheses for overall length and diameter only.
4. Dimensions shown apply after plating.

FIGURE 1. CONNECTOR CONTACT.

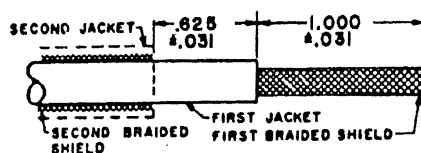
TABLE I. DIMENSIONS.

BIN code	A	B	C	D	E	AA	BB	CC	DD	EE	FF	HH	HHH	U
	DIA	DIA	DIA	DIA	DIA	DIA	MIN DIA	DIA	DIA	DIA	MIN DIA	MIN DIA	MAX DIA	
158	.103	.0910	.113	.0750	.042	.081	.022	.133 (3.38)	.099	.068	.037	.058	.087	.042
	.101	.0885	.110	.0725		.078		.130 (3.30)	.096	.062				.018
159	.162	.1430	.161	.1210	.070	.128	.022	.190 (4.83)	.145	.076	.067	.086	.130	.042
	.159	.1405	.158	.1175		.126		.187 (4.75)	.142	.070				.018
160	.162	.1430	.161	.1210	.070	.128	.022	.190 (4.83)	.145	.076	.108	.110	.130	.042
	.159	.1405	.158	.1175		.126		.187 (4.75)	.142	.070				.018
161	.162	.1430	.161	.1210	.070	.128	.022	.190 (4.83)	.145	.076	.108	.128	.142	.042
	.159	.1405	.158	.1175		.126		.187 (4.75)	.142	.070				.018
162	.162	.1430	.161	.1210	.070	.128	.034	.190 (4.83)	.145	.089	.098	.128	.142	.042
	.159	.1405	.158	.1175		.126		.187 (4.75)	.142	.085				.018
163	.162	.1430	.161	.1210	.070	.128	.034	.190 (4.83)	.145	.089	.098	.110	.130	.042
	.159	.1405	.158	.1175		.126		.187 (4.75)	.142	.085				.018

## STEP 1

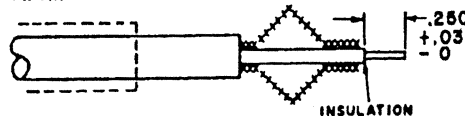
- 1A. STRIP FIRST CABLE JACKET BACK 1 INCH.  
 1B. IN THE CASES WHERE TRIAXIAL CABLES ARE USED THE SECOND JACKET AND BRAIDED SHIELD SHALL BE STRIPPED BACK AN ADDITIONAL 5/8 INCH.

CAUTION: DO NOT CUT INTO BRAIDED SHIELD

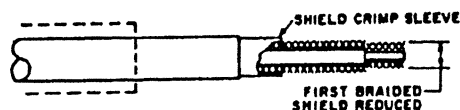


## STEP 2

- 2A. SLIDE FIRST BRAIDED SHIELD BACK AND TRIM INSULATION 1/4 INCH.



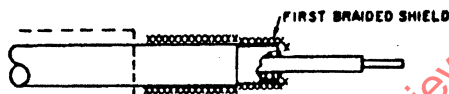
- 2B. SLIDE FIRST BRAIDED SHIELD FORWARD AND ROLL BETWEEN FINGERS TO REDUCE ITS DIAMETER.  
 2C. SLIDE SHIELD CRIMP SLEEVE OVER BRAIDED SHIELD UNTIL IT RESTS AGAINST THE FIRST JACKET.



FOR CABLES USING  
 M 39029/14-02,03  
 OR 06 CONTACTS

FOR CABLES USING  
 M 39029/14-01,04  
 OR 05 CONTACTS

- 2D. NO CRIMPING NECESSARY  
 2E. COMB OUT THE BRAIDED SHIELD AND FOLD IT BACK OVER THE SHIELD CRIMP SLEEVE.



- 2F. TRIM EXCESS BRAIDED SHIELD EXTENDING BEYOND THE SHIELD CRIMP SLEEVE.

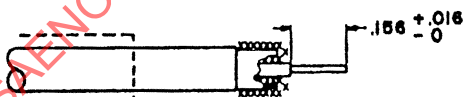


## STEP 3

- 3A. CUT INNER CONDUCTOR AND INSULATION.

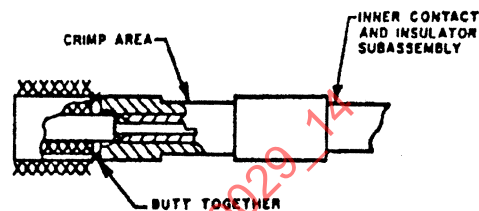


- 3B. STRIP INSULATION FROM INNER CONDUCTOR.



## STEP 4

- 4A. RESTORE INNER CONDUCTOR TO ORIGINAL LAY AND INSTALL INTO INNER CONTACT AND INSULATOR SUBASSEMBLY. BUTT CABLE AND CONTACT AS SHOWN.  
 4B. CRIMP INNER CONTACT THRU INSULATOR WITH CRIMPING TOOL AND POSITIONER LISTED IN TABLE III.



## STEP 5

- 5A. INSERT CRIMPED SUBASSEMBLY INTO OUTER CONTACT UNTIL SOLID RESISTANCE IS FELT AND OUTER CONTACT COVERS FIRST BRAIDED SHIELD.  
 5B. CRIMP OUTER CONTACT USING CAVITY A IN CRIMPING TOOL.

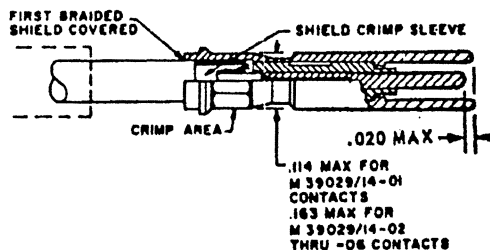


FIGURE 2. ASSEMBLY PROCEDURE.

TABLE II. DESIGN CHARACTERISTICS.

BIN code	Color bands			Contact cavity size	Cables accommodated	Type	Class
	1st	2nd	3rd				
158	Brown	Green	Gray	16	RG-178A/U RG-196A/U	D	B
159	Brown	Green	White	12	RG-179B/U RG-187A/U RG-188A/U		
160	Brown	Blue	Black	12	9530D5117 (RAYCHEM) <u>1/</u>		
161	Brown	Blue	Brown	12	RG-180B/U RG-195A/U 293-3922 (MICRODOT) <u>1/</u>		
162	Brown	Blue	Red	12	250-4070 (MICRODOT) <u>1/</u>		
163	Brown	Blue	Orange	12	5022E5111 (RAYCHEM) <u>1/</u>		

1/ or equivalent

## REQUIREMENTS:

Dimensions, design characteristics, and configuration: See figure 1 and tables I and II.

Tools: See table III.

Mating contact: MIL-C-39029/6.

Manufacturer's recommended assembly instructions to be shipped with unit package.

Assembly procedure: See figure 2.

Preparation of samples: Contacts shall be wired as required using wire in accordance with table II (cables accommodated column).

Contact resistance: Contact resistance at a load current of 1.0 ampere shall meet the requirements of table IV.

Contact engagement and separation forces: The contact separation and engagement forces shall meet the requirements of table IV.

Dielectric withstanding voltage: 1,000 volts, ac, rms from sea level to 110,000 feet altitude.

Tensile strength: The tensile strength shall meet the requirements of table IV.