FEDERAL SUPPLY CLASS
5999

RATIONALE

REVISION REQUIRED TO DEFINE WHAT CONDUCTOR TO USE FOR QUALIFICATION, UPDATE TOOL TABLE, AND PERFORM MINOR EDITING AS NEEDED.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39029.

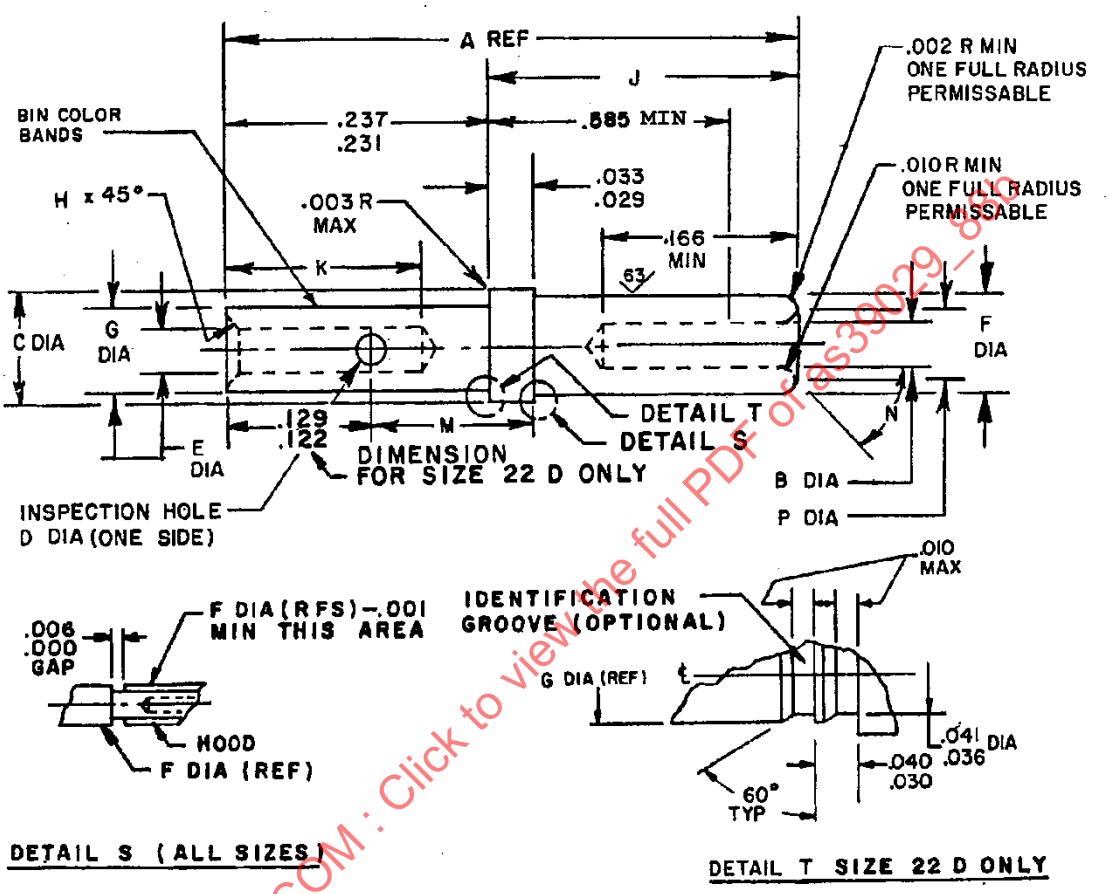
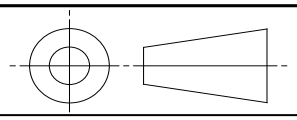


FIGURE 1 - SOCKET CONTACTS

(SEE DESIGN PARAGRAPH FOR ADDITIONAL DIMENSIONAL DETAILS.)

For more information on this standard, visit
https://www.sae.org/standards/content/AS39029/88B/

THIRD ANGLE PROJECTION



ISSUED 2000-07 REAFFIRMED 2020-01 REVISED 2024-01

CUSTODIAN: A-8C1

PROCUREMENT SPECIFICATION: AS39029

AEROSPACE STANDARD

CONTACTS, ELECTRICAL CONNECTOR
SOCKET, CRIMP REMOVABLE, THERMOCOUPLE
(FOR MIL-DTL-38999 SERIES I, III, IV CONNECTORS)

TABLE 1 - CONTACT DIMENSIONS

BIN CODE	A DIA	B DIA	C DIA	D DIA	E DIA	F DIA MAX	G	H	J	K	M	N°	P DIA MIN
482 THRU 485	.855 (21.72)	.031 (0.79) MIN	.062 (1.57) .060 (1.52)	.022 (0.56) .018 (0.46)	.0355 (0.90) .0335 (0.85)	.062 (1.57)	.048 (1.22) .046 (1.17)	.005 (0.13) .003 (0.08)	.62 (15.75) .616 (15.65)	.141 (3.58) MIN	N/A	50° 44°	.047 (1.19)
486 THRU 489		.044 (1.12) .042 (1.07)	.094 (2.39) .091 (2.31)	.032 (0.81) .026 (0.66)	.048 (1.22) .046 (1.17)	.078 (1.98)	.070 (1.78) .068 (1.73)	.010 (0.25) .005 (0.13)		.229 (5.82) .209 (5.31)	.078 (1.98) .072 (1.83)	47° 40°	.053 (1.35)
490 THRU 493		.064 (1.63) MIN	.130 (3.30) .127 (3.23)	.042 (1.07) .036 (0.914)	.068 (1.73) .066 (1.68)	.113 (2.87)	.103 (2.62) .101 (2.57)				.088 (2.24) .082 (2.08)		.084 (2.13)

TABLE 2 - MARKING AND DESIGN CHARACTERISTICS

BIN CODE	COLOR BANDS 1ST	COLOR BANDS 2ND	COLOR BANDS 3RD	MATING END SIZE	WIRE BARRELL SIZE	TYPE	CLASS
482	YELLOW	GRAY	RED	22	22D	C (SEE TABLE 4)	B
483	YELLOW	GRAY	ORANGE	22	22D		
484	YELLOW	GRAY	YELLOW	22	22D		
485	YELLOW	GRAY	GREEN	22	22D		
486	YELLOW	GRAY	BLUE	20	20		
487	YELLOW	GRAY	VIOLET	20	20		
488	YELLOW	GRAY	GRAY	20	20		
489	YELLOW	GRAY	WHITE	20	20		
490	YELLOW	WHITE	BLACK	16	16		
491	YELLOW	WHITE	BROWN	16	16		
492	YELLOW	WHITE	RED	16	16		
493	YELLOW	WHITE	ORANGE	16	16		

TABLE 3 - TOOLS

BIN CODE	BASIC CRIMPING TOOL	POSITIONER	INSTALLING TOOL	REMOVAL TOOL	UNWIRED CONTACT TOOL
482, 483, 484, 485	M22520/2-01 OR M22520/7-01	M22520/2-07 OR M22520/7-05	M81969/8-01 OR M81969/8-301 OR M81969/14-01	M81969/8-02 OR M81969/14-01	M81969/30-08 (BROWN PROBE -28)
486, 487, 488, 489	M22520/1-01 OR M22520/2-01 OR M22520/7-01	M22520/1-04 OR M22520/2-10 OR M22520/7-08	M81969/8-05 OR M81969/8-305 OR M81969/14-02	M81969/8-06 OR M81969/14-02	M81969/30-11 (RED PROBE -31)
490, 491, 492, 493	M22520/1-01 OR M22520/7-01	M22520/1-04 OR M22520/7-04	M81969/8-07 OR M81969/8-307 OR M81969/14-03	M81969/8-08 OR M81969/14-03	M81969/30-12 (BLUE PROBE -32)

TABLE 4 - MATERIALS, PLATING, AND TENSILE STRENGTH

BIN CODE	MATERIALS	PLATING	TENSILE STRENGTH 1/			
			WIRE SIZE	AXIAL LOAD (LBF)	WIRE SIZE	AXIAL LOAD (LBF)
482	JN	NONE	28 MIN	2.25	22 MAX	7.5
483	KN	NONE				
484	KP	NONE				
485	JP	CADMIUM PLATE 2/				
486	JN	NONE	24 MIN	6.00	20 MAX	12
487	KN	NONE				
488	KP	NONE				
489	JP	CADMIUM PLATE 2/				
490	JN	NONE	20 MIN	14.00	16 MAX	45
491	KN	NONE				
492	KP	NONE				
493	JP	CADMIUM PLATE 2/				

1/ APPLIES TO TYPE 1 WIRE PER MIL-DTL-5846.
2/ CHROMATE CLEAR COAT.

TABLE 5 - PART NUMBER AND BIN CODE

PART NUMBER	BIN CODE	SUPERSEDED
M39029/88-482	482	M39029/882222C1
M39029/88-483	483	M39029/882222C2
M39029/88-484	484	M39029/882222C3
M39029/88-485	485	M39029/882222C4
M39029/88-486	486 1/	M39029/882020C1
M39029/88-487	487 1/	M39029/882020C2
M39029/88-488	488 1/	M39029/882020C3
M39029/88-489	489 1/	M39029/882020C4
M39029/88-490	490 1/	M39029/881616C1
M39029/88-491	491 1/	M39029/881616C2
M39029/88-492	492 1/	M39029/881616C3
M39029/88-493	493 1/	M39029/881616C4

1/ NOT FOR USE WITH MIL-DTL-83733 OR MIL-DTL-24308 CONNECTORS (FOR MIL-DTL-83733 CONTACT SIZES 20 AND 16, REFER TO AS39029/9).

REQUIREMENTS: ALL REQUIREMENTS SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39029.

1. DESIGN:

   a. CONTACTS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1 AND TABLES 1 AND 2.

   b. DIMENSIONS ARE IN INCHES. METRIC EQUIVALENTS IN PARENTHESES ARE FOR GENERAL INFORMATION ONLY. DIMENSIONS APPLY AFTER PLATING.

   c. FOR SIZE 22D ONLY, DIAMETERS E AND G ARE TO BE CONCENTRIC WITHIN .003 (TIR) REGARDLESS OF FEATURE SIZE (RFS). FOR ALL OTHER CONTACT SIZES, DIAMETERS E AND G ARE TO BE CONCENTRIC WITHIN .001 (TIR) AT MAXIMUM MATERIAL CONDITION (MMC).

   d. THE .585 MIN DIMENSION IS THE POINT AT WHICH A SQUARE ENDED PIN OF THE SAME BASIC DIAMETER AS THE MATING CONTACT FIRST ENGAGES THE SOCKET CONTACT SPRING.

   e. THE .029-.033 DIMENSION IS NOT APPLICABLE FOR SIZE 22D. HOODS SHALL NOT EXCEED CONTACT BODY DIAMETER REGARDLESS OF FEATURE SIZE (RFS) IN ATTACHMENT AREA.

2. TOOLS:

   TOOLS REQUIRED FOR CRIMPING CONTACTS TO THE WIRE/CABLE AND THE INSTALLING/REMOVAL FROM THE CONNECTOR SHALL BE IN ACCORDANCE WITH TABLE 3.

3. PART NUMBERS:

   CONTACT PART NUMBERS SHALL BE IN ACCORDANCE WITH TABLE 5. SUPERSEDING PART NUMBERS ARE AS SPECIFIED.

4. MATERIALS AND PLATING:

   SEE TABLE 4.

5. TENSILE STRENGTH:

   SEE TABLE 4.