

REV.
A

RATIONALE

REVISE TO INCLUDE COMMENTS RECEIVED BY THE GOVERNMENT AND INDUSTRY, REMOVE GOVERNMENT JARGON, ADD QUALIFICATION REQUIREMENTS, UPDATE REFERENCES, ALIGN SPECIFICATION WITH SAE GUIDELINES, AND REVIEW SPECIFICATION FOR KNOWN TECHNICAL PROBLEMS.

SAE AS39029/83

NOTICE

THE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE LATEST ISSUE OF SAE AS39029.

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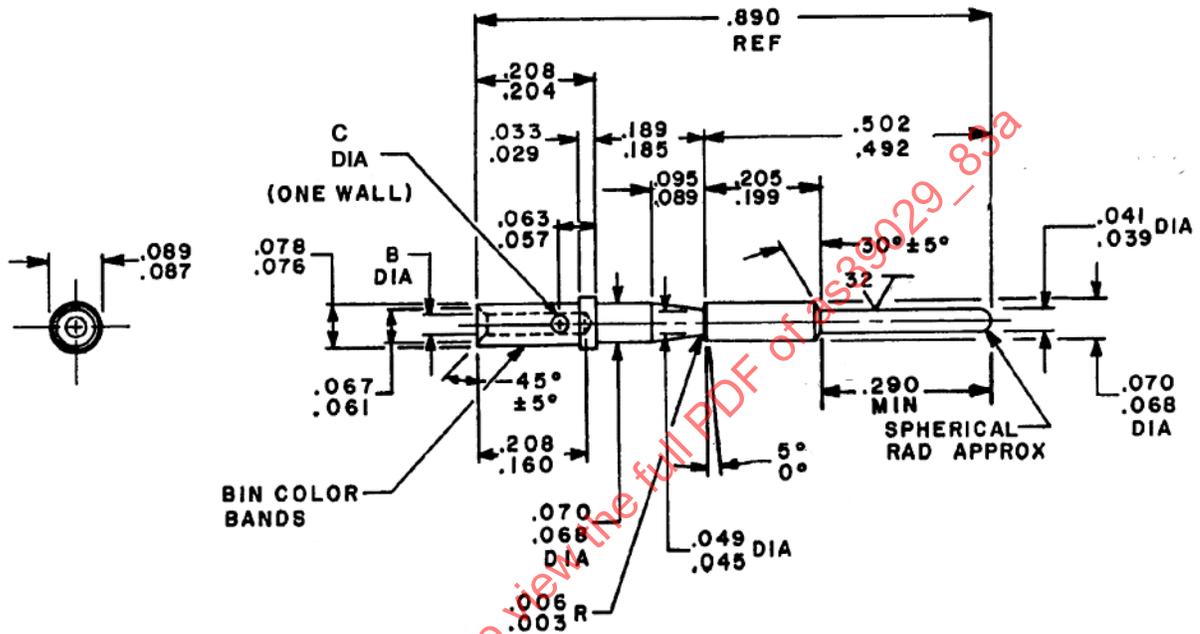
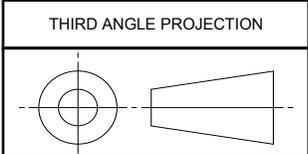


FIGURE 1 DIMENSIONS AND CONFIGURATION

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CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

CONTACTS, ELECTRICAL CONNECTOR,
PIN, CRIMP REMOVABLE
(FOR MIL-DTL-28840 CONNECTORS)

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TABLE 1 - DESIGN CHARACTERISTICS

BIN CODE	B DIA.	COLOR BANDS			MATING END SIZE	WIRE BARREL SIZE	TYPE	CLASS	C DIA. 1/
		1 ST	2 ND	3 RD					
508	.050 (1.27) .048 (1.22)	GREEN	BLACK	GRAY	20	20	A	B	.032 (.813) .026 (.660)
450	.0355 (.902) .0335 (.851)	YELLOW	GREEN	BLACK	20	22	A	B	.032 (.813) .026 (.660)
451	.0200 (.508) .0180 (.457)	YELLOW	GREEN	BROWN	20	28	A	B	.022 (.559) .018 (.457)

1/ HOLE – ONE WALL.

TABLE 2 – TOOLS

BIN CODE	BASIC CRIMPING TOOL	POSITIONER	INSTALLING TOOL	REMOVAL TOOL
508	M22520/34-01	M22520/34-02	M81969/33-01	M81969/34-01
450	M22520/34-01	M22520/34-02	M81969/33-01	M81969/34-01
451	M22520/34-01	M22520/34-02	M81969/33-01	M81969/34-01

TABLE 3 – PART NUMBER AND BIN CODE

PART NUMBER	BIN CODE	SUPERSEDED PART NUMBER
M39029/83-508	508	-----
M39029/83-450	450	M39029/83-20-22
M39029/83-451	451	M39029/83-20-28

TABLE 4 – LOW SIGNAL LEVEL CONTACT RESISTANCE (TYPE A)

MATING END SIZE	WIRE BARREL SIZE	WIRE SIZE	MAXIMUM CONTACT RESISTANCE (MILLIOHMS)	
			INITIAL	AFTER CONDITIONING
20	20	20	9	11
		24	20	23
20	22	22	15	17
		26	31	38
20	28	28	50	60
		30	75	88

TABLE 5 – CONTACT RESISTANCE (TYPE A) WITH SILVER PLATED WIRE

MATING END SIZE	WIRE BARREL SIZE	WIRE SIZE RANGE	TEST CURRENT (AMPERES)	MAXIMUM VOLTAGE DROP (MILIVOLTS)					
				25 °C ±3 °C		25 °C ±3 °C AFTER CONDITIONING		200 °C +3 °C -0 °C	
				MAX	MAX AVG	MAX	MAX AVG.	MAX	MAX AVG.
20	20	20	7.5	55	50	66	56	94	71
		24	3	45	41	54	46	77	63
20	22	22	5.0	73	66	88	75	125	94
		26	2.0	53	48	64	55	91	69
20	28	28	1.5	54	49	65	56	92	69
		30	1.0	60	55	73	62	103	78

TABLE 6 – TENSILE STRENGTH (TYPE A)

MATING END SIZE	WIRE BARREL SIZE	WIRE SIZE	AXIAL LOAD (POUNDS)				
			SILVER TIN-PLATED COPPER WIRES		NICKEL-PLATED COPPER WIRE		HIGH STRENGTH COPPER ALLOY WIRE
			INITIAL CONDITION VALUES	THERMAL CONDITION VALUES	INITIAL CONDITION VALUES	THERMAL CONDITION VALUES	INITIAL CONDITION VALUES
20	20	20	20	14	19	14.3	-----
		24	8	6	6	4.5	
20	22	22	12	7.5	8	6.0	22
		26	5	4.0	3	2.5	10
20	28	28	3	2.25	2	1.50	5.5
		30	1.5	1.13	1.5	1.13	3.4

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

1. DESIGN:

CONTACTS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1 AND TABLE 1. DIMENSIONS ARE IN INCHES. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY. DIMENSIONS SHOWN APPLY AFTER PLATING. SPHERICAL END DIMENSIONS TO COMPLY WITH AS39029. SURFACE FINISH (ELECTRICAL ENGAGEMENT AREA) 32 MICROINCH FINISH. PIN TIP FLAT AS DEFINED IN AS39029 DOES NOT REQUIRE 32 MICROINCH FINISH. THE .290 MIN DIMENSION IS THE CONTACT ENGAGEMENT AREA FOR THE LOCALIZED FINISH OPTION (SEE REQUIREMENTS).

2. TOOLS:

TOOLS REQUIRED FOR CRIMPING CONTACTS TO WIRE/CABLE AND THE INSTALLING/REMOVAL FROM THE CONNECTOR SHALL BE IN ACCORDANCE WITH TABLE 2.

3. PART NUMBERS:

CONTACT PART NUMBERS SHALL BE IN ACCORDANCE WITH TABLE 3. SUPERSEDED PART NUMBERS ARE AS SPECIFIED.

 An SAE International Group	AEROSPACE STANDARD CONTACTS, ELECTRICAL CONNECTOR, PIN, CRIMP REMOVABLE (FOR MIL-DTL-28840 CONNECTORS)	SAE AS39029/83 SHEET 3 OF 4	REV. A