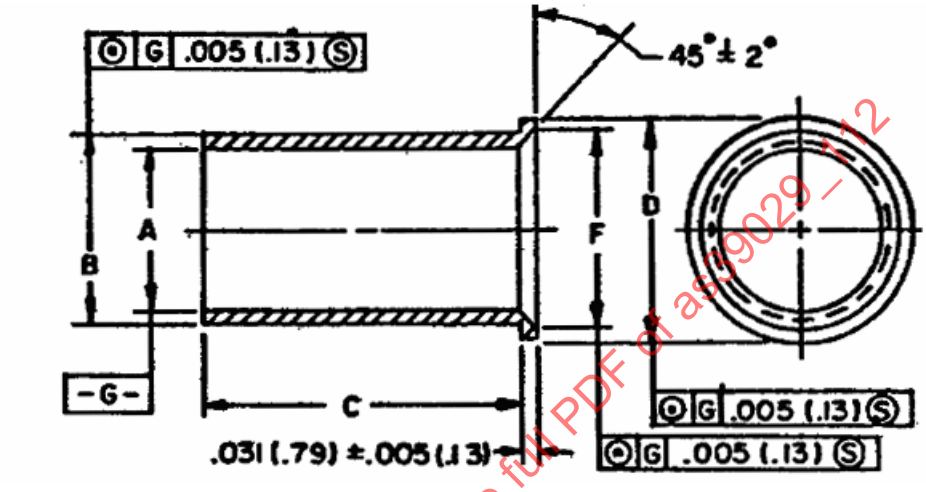
FEDERAL SUPPLY CLASS
5999

RATIONALE

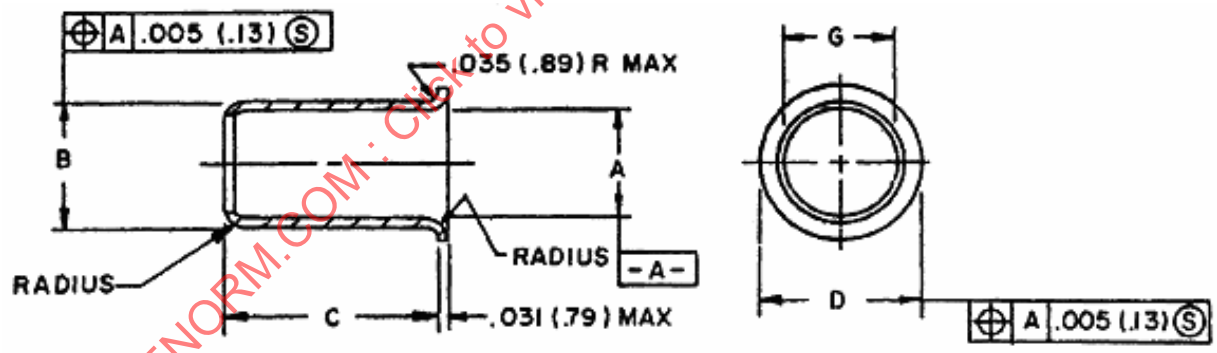
INCORPORATE AS33481 “CONTACT BUSHING, ELECTRIC, WIRE BARREL” INTO AS39029 TO PROVIDE QUALIFICATION, AND BETTER QUALITY CONTROL. REVIEW AND REVISE, AS REQUIRED, REMOVE GOVERNMENT JARGON, UPDATE SPECIFICATION REFERENCES, AND ALIGN SPECIFICATION WITH SAE GUIDELINES.

THE REQUIREMENTS FOR ACQUIRING THE CONTACTS DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF AS39029.

CONTACT BUSHING, ELECTRIC, WIRE BARREL



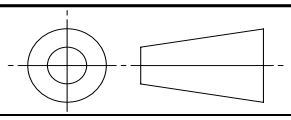
CONTACT BUSHING DESIGN



ALTERNATE CONTACT BUSHING DESIGN

FIGURE 1 - AS39029/112 CONTACT BUSHING

THIRD ANGLE PROJECTION



ISSUED 2007-03

CUSTODIAN: SAE AE-8/AE-8C1

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

ELECTRICAL CONNECTOR,
CONTACT BUSHING,
WIRE BARREL

AS39029/112
SHEET 1 OF 5

TABLE 1 - CONTACT BUSHING DIMENSIONS

Dash number	Contact wire barrel size (ref)	Wire size (ref)	A +.002 (.05) -.003 (.08) Dia	B +.002 (.05) -.003 (.08) Dia	C +.017 (.43) -.016 (.41)	D ±.016 (.41)	F +.006 (.15) -.005 (.13) Dia
-8 -10	8	10	.136 (3.45)	.173 (4.39)	.380 (9.65)	.250 (6.35)	.188 (4.78)
-4 -6	4	6	.225 (5.72)	.272 (6.91)	.380 (9.65)	.344 (8.74)	.292 (7.42)
-0 -2	1/0	2	.359 (9.12)	.444 (11.28)	.536 (13.61)	.516 (13.11)	.462 (11.73)
-4 -6L	4	6	.225 (5.72)	.272 (6.91)	.700 (17.78)	.344 (8.74)	.292 (7.42)
-1 -2L	1	2	.359 (9.12)	.396 (10.06)		.516 (13.11)	.422 (10.72)
-4 -5L	4	5	.250 (6.35)	.272 (6.91)		.344 (8.74)	.292 (7.42)
-6 -8L	6	8	.185 (4.70)	.225 (5.72)		.297 (7.54)	.250 (6.35)
-6 -9L	6	9	.155 (3.94)	.225 (5.72)		.297 (7.54)	.219 (5.56)
-1 -6L	1	6	.225 (5.72)	.396 (10.06)		.516 (13.11)	.422 (10.72)
-4/0 -2/0L	4/0	2/0	.500 (12.70)	.629 (15.98)		.719 (18.26)	.562 (14.27)
-4 -8L	4	8	.185 (4.70)	.272 (6.91)		.344 (8.74)	.250 (6.35)
-6-10L	6	10	.136 (3.45)	.225 (5.72)		.297 (7.54)	.188 (4.78)

TABLE 2 - ALTERNATE CONTACT BUSHING DESIGN DIMENSIONS

Dash number	Contact Wire Barrel Size (Ref)	Wire Size (Ref)	A Dia Max	B +.002 (.05) -.003 (.08) Dia	C ±.010 (.25) Dia	D ±.016 (.41) Dia	G Dia Min
-8 -10	8	10	.146 (3.71)	.173 (4.39)	.380 (9.65)	.250 (6.35)	.136 (3.45)
-4 -6	4	6	.235 (5.79)	.272 (6.91)	.380 (9.65)	.344 (8.74)	.225 (5.71)
-0 -2	1/0	2	.369 (9.37)	.444 (11.28)	.536 (13.61)	.516 (13.11)	.359 (9.12)
-1 -2L	1	2	.369 (9.37)	.396 (10.06)	.700 (17.78)	.516 (13.11)	.359 (9.12)
-4 -5L	4	5	.260 (6.60)	.272 (6.91)		.344 (8.74)	.250 (6.30)
-4 -6L	4	6	.235 (5.97)	.272 (6.91)		.344 (8.74)	.225 (6.35)
-6 -8L	6	8	.195 (4.95)	.225 (5.71)		.297 (7.54)	.185 (4.70)
-6 -9L	6	9	.165 (4.19)	.225 (5.71)		.297 (7.54)	.155 (3.94
-1 -6L	1	6	.235 (5.97)	.396 (10.06)		.516 (13.11)	.225 (6.35)
-4/0 -2/0L	4/0	2/0	.510 (12.95)	.629 (15.98)		.719 (18.26)	.500 (12.70)
-4 -8L	4	8	.195 (4.95)	.272 (6.91)		.344 (8.74)	.185 (4.70)
-6-10L	6	10	.146 (3.71)	.225 (5.72)		.297 (7.54)	.136 (3.45)

NOTES:

1. DIMENSIONS ARE IN INCHES.

2. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1.00 INCH = 25.4 MM.

3. DIMENSIONING AND TOLERANCING ARE IN ACCORDANCE WITH ANSI Y14.5-1973.

4. METRIC EQUIVALENTS ARE IN PARENTHESES.

5. REQUIREMENTS:

5.1 CLASSIFICATION: TYPE A / CLASS B

5.2 MATERIAL: COPPER ALLOY: ANNEAL TO ROCKWELL HARDNESS 15T 70 MAXIMUM IN ACCORDANCE WITH ASTM E 18, EXCEPT THAT -1-6L SHALL BE ANNEALED TO ROCKWELL HARDNESS 15T 55 MAXIMUM IN ACCORDANCE WITH ASTM E 18.

5.3 FINISH: BUSHINGS SHALL BE SILVER PLATED TO A MINIMUM THICKNESS OF .0002 INCH (.005) IN ACCORDANCE WITH AMS-QQ-S-365 OVER ELECTROLYTIC NICKEL UNDERPLATE OF 30-150 (.00076-.0038) MICRO-INCHES THICK PER AMS-QQ-N-290 OR OVER COPPER PLATE IN ACCORDANCE WITH AMS 2418, 0.000050 (.00127) INCH THICK MINIMUM.

5.4 SURFACE TEXTURE: ALL EXTERNAL SURFACES TO BE 63 OR BETTER IN ACCORDANCE WITH USAS B46.1-1962.

5.5 CONTACT BUSHINGS TO BE FREE OF ALL BURRS. BREAK ALL SHARP EDGES .005R MAXIMUM.

6. QUALIFICATION REQUIREMENTS: QUALIFICATION SHALL BE IN ACCORDANCE WITH AS39029. THE SAMPLE SIZE SHALL BE THE SAME AS SPECIFIED FOR CONTACTS WITH WIRE BARRELS 10 AND LARGER. THE FOLLOWING TESTS APPLY:

6.1 MATERIAL AND FIINISH CERTIFICATIONS

6.2 EXAMINATION OF PRODUCT: SAMPLE TYPES-ALL WIRE BARREL SIZES

6.3 AXIAL CONCENTRICITY-WIRED: SAMPLE TYPES-WIRE BARREL SIZE 8 - 10, 1/ 0 - 2 AND 4/0 - 2/0, CONTACT TYPE-OPTIONAL

6.4 CRIMP TENSILE STRENGTH: SAMPLE TYPE-WIRE BARREL SIZE 8 - 10, 4 - 8, 1/ 0 - 2, AND 4/0 - 2/0, CONTACT TYPE-OPTIONAL

6.5 CONTACT RESISTANCE: SAMPLE TYPE-WIRE BARREL SIZES 8 - 10, 4 - 8, AND 4/0 - 2/0, CONTACT TYPE-OPTIONAL, WIRE TYPE-TIN OR SILVER AND NICKEL.

7. CRIMP TOOL: IN ACCORDANCE WITH THE CONTACT DETAIL SPECIFICATION FOR SIZES 8 - 4/0 (SEE 8.1).