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REV.
B

AS31081™

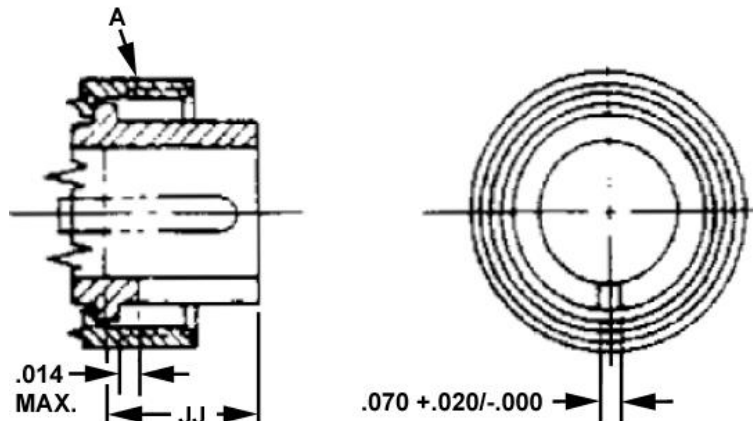
FEDERAL SUPPLY CLASS
5935

RATIONALE

REVISION IS REQUIRED TO IMPROVE DRAWINGS, TO UPDATE RESTRICTION/APPLICATION NOTES, ADD METRIC EQUIVALENTS, AND TO UPDATE DOCUMENT TO LATEST SAE FORMAT GUIDELINES.

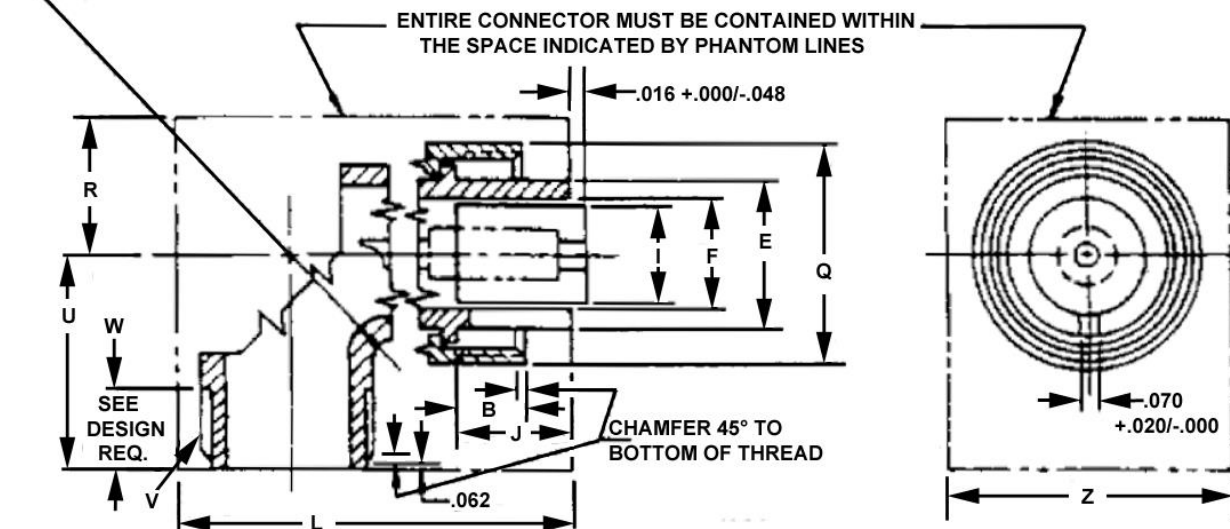
NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS50151.



STYLE P (PIN INSERT)

R = .188 MIN FOR S SHELL SIZES
R = .250 MIN FOR SHELL SIZES 12 & LARGER

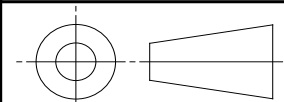


STYLE S (SOCKET INSERT)

FIGURE 1 - CONNECTOR CONFIGURATIONS AND DIMENSIONS (CLASS A SOLID SHELL/CLASS B SPLIT SHELL)

For more information on this standard, visit
<https://www.sae.org/standards/content/AS31081B/>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS50151



AEROSPACE STANDARD

(R) CONNECTORS, PLUG,
ELECTRIC, SOLDER CONTACT,
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TABLE 1 - FIGURE 1 DIMENSIONS

SIZE	A COUPLING THREAD	B +.000 -.062 (1.57) EXTENSION COUPLING RING	E +.000 -.015 (0.38) OUTSIDE DIA	F MIN INSIDE DIA	I MAX INSERT DIA	J ±.005 (0.13) LENGTH ENGAGEMENT	JJ 1/ 2/ +.031 (0.79) -.000 INSERT LOCATION
8S	1/2 – 28	.375 (9.53)	.365 (9.27)	.252 (6.40)	.250 (6.35)	.531 (13.49)	.562 (14.27)
10S	5/8 – 24		.440 (11.18)	.323 (8.20)	.320 (8.13)		
10SL			.446 (11.33)	N/A	.440 (11.18)		
12S	3/4 – 20	.625 (15.88)	.555 (14.10)	.450 (11.43)	.448 (11.38)	.719 (18.26)	.750 (19.05)
12							
14S	7/8 – 20	.375 (9.53)	.675 (17.15)	.526 (13.36)	.525 (13.34)	.531 (13.49)	.562 (14.27)
14		.625 (15.88)				.719 (18.26)	.750 (19.05)
16S	1 – 20	.375 (9.53)	.805 (20.45)	.651 (16.54)	.650 (16.51)	.531 (13.49)	.562 (14.27)
16							
18	1-1/8 – 18	.625 (15.88)	.930 (23.62)	.776 (19.71)	.770 (19.56)	.719 (18.26)	.750 (19.05)
20	1-1/4 – 18		1.050 (26.67)	.932 (23.67)	.925 (23.50)		
22	1-3/8 – 18		1.175 (29.85)	1.026 (26.06)	1.020 (25.91)		
24	1-1/2 – 18		1.300 (33.02)	1.151 (29.24)	1.145 (29.08)		
28	1-3/4 – 18		1.520 (38.61)	1.370 (34.80)	1.365 (34.67)		
32	2 – 18		1.770 (44.96)	1.620 (41.15)	1.615 (41.02)		
36	2-1/4 – 16		1.980 (50.29)	1.838 (46.69)	1.830 (46.48)		
40	2-1/2 – 16		2.230 (56.64)	2.057 (52.25)	2.045 (51.94)		

1/ WHERE RESILIENT INSERTS ARE USED, DIMENSION "JJ" MAY BE .109 (2.77) LESS THAN THAT INDICATED.

2/ SOCKET INSERT OF HARD MATERIAL SHALL EXTEND .016 (0.41) INCH MAXIMUM BEYOND OR .032 (0.81) INCH MAXIMUM BELOW THE SHELL. SOCKET INSERT OF RESILIENT MATERIAL SHALL EXTEND .047 (1.19) INCH +.000/-.047 (1.19) BEYOND THE SHELL AS SHOWN.

TABLE 1 - FIGURE 1 DIMENSIONS (CONTINUED)

SIZE	L MAX	Q MAX DIA COUPLING RING	R MAX	U MAX	V THREAD	W MIN USABLE THREAD	Z MAX CLASS B ONLY	FOR INSERT ARRANGEMENT SEE DRAWING
8S	1.750 (44.45)	.844 (21.44)	.422 (10.72)	.938 (23.83)	1/2 - 28	.375 (9.53)	.844 (21.44)	MIL-STD-1651
10S		.969 (24.61)	.485 (12.32)	1.000 (25.40)			5/8 - 24	
10SL	1.812 (46.02)		.531 (13.49)		1.062 (26.97)			
12S	2.000 (50.80)	1.156 (29.36)		.656 (16.66)			1.125 (28.58)	
12	2.250 (57.15)		1.250 (31.75)		.750 (19.05)			
14S	2.125 (53.98)	1.344 (34.14)		.828 (21.03)			1.312 (33.32)	
14	2.312 (58.72)		1.469 (37.31)		.906 (23.01)			
16S	2.375 (60.33)	1.594 (40.49)		.969 (24.61)			1.562 (39.67)	
16	2.562 (65.07)		1.719 (43.66)		1.031 (26.19)			
18	2.688 (68.28)	1.969 (50.01)		1.156 (29.36)		2.062 (52.37)	2-1/4 - 16	
20	3.031 (76.99)		2.219 (56.36)		1.312 (33.32)			
22		3.406 (86.51)		2.469 (62.71)		1.438 (36.53)	2.062 (52.37)	
24	3.750 (95.25)		2.719 (69.06)		1.562 (39.67)			
28		3.938 (100.03)		2.469 (62.71)		1.438 (36.53)	2.062 (52.37)	
32	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
36		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	
40	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)
	4.750 (120.65)		2.719 (69.06)		1.562 (39.67)			
		4.750 (120.65)		2.719 (69.06)		1.562 (39.67)	2.125 (53.98)	.438 (11.13)

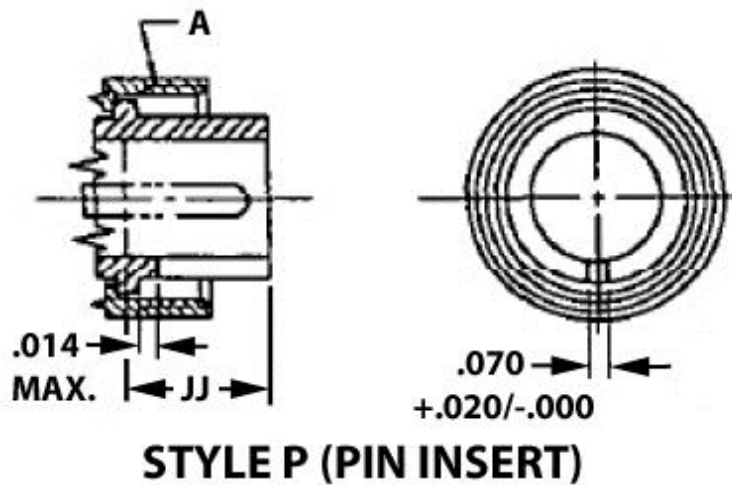


FIGURE 2 - CONNECTOR CONFIGURATIONS AND DIMENSIONS (CLASS K - FIREWALL)

TABLE 2 - FIGURE 2 DIMENSIONS

	A	B			I	J	JJ
	COUPLING	+0.000/-0.062	E DIA	F	MAX	±0.005 (0.13)	+0.031 (0.79)
SIZE	THREAD	EXTENSION	+0.000	MIN	INSERT	LENGTH	-0.000
		COUPLING	-0.015 (0.38)	DIA	DIA	ENGAGEMENT	INSERT
		RING					LOCATION
8S	1/2 - 28	.375 (9.53)	.365 (9.27)	.252 (6.40)	.250 (6.35)	.531 (13.49)	.562 (14.27)
10S	5/8 - 24		.440 (11.18)	.323 (8.20)	.320 (8.13)		
10SL			.446 (11.33)	N/A	.440 (11.18)		
12S	3/4 - 20	.625 (15.88)	.555 (14.10)	.450 (11.43)	.448 (11.38)	.719 (18.26)	.750 (19.05)
12							
14S	7/8 - 20	.375 (9.53)	.675 (17.15)	.526 (13.36)	.525 (13.34)	.531 (13.49)	.562 (14.27)
14		.625 (15.88)				.719 (18.26)	.750 (19.05)
16S	1 - 20	.375 (9.53)	.805 (20.45)	.651 (16.54)	.650 (16.51)	.531 (13.49)	.562 (14.27)
16							
18	1-1/8 - 18	.625 (15.88)	.930 (23.62)	.776 (19.71)	.770 (19.56)	.719 (18.26)	.750 (19.05)
20	1-1/4 - 18		1.050 (26.67)	.932 (23.67)	.925 (23.50)		
22	1-3/8 - 18		1.175 (29.85)	1.026 (26.06)	1.020 (25.91)		
24	1-1/2 - 18		1.300 (33.02)	1.151 (29.24)	1.145 (29.08)		
28	1-3/4 - 18		1.520 (38.61)	1.370 (34.80)	1.365 (34.67)		
32	2 - 18		1.770 (44.96)	1.620 (41.15)	1.615 (41.02)		
36	2-1/4 - 16		1.980 (50.29)	1.838 (46.69)	1.830 (46.48)		
40	2-1/2 - 16		2.230 (56.64)	2.057 (52.25)	2.045 (51.94)		



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