

REV.
B

AS31001

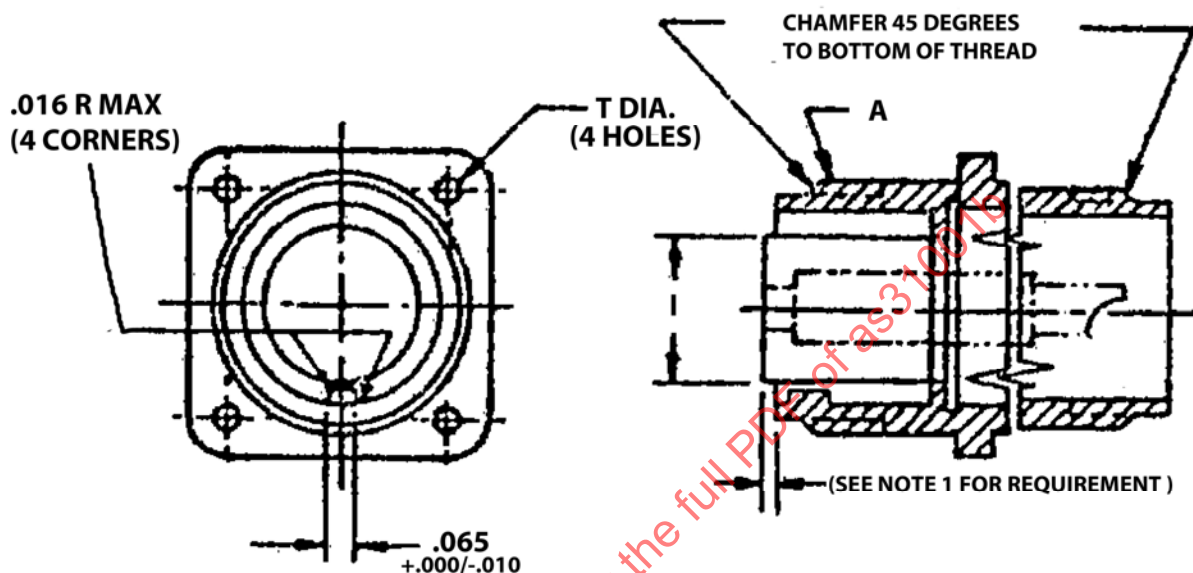
FEDERAL SUPPLY CLASS
5935

RATIONALE

- REVISION IS REQUIRED TO CORRECT THE DIMENSIONAL TOLERANCE VALUE FOR DIMENSION S.
- REVISION IS REQUIRED TO CORRECT THE APPLICATION NOTE 3 APPLICABLE SHELL SIZES.

NOTICE

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



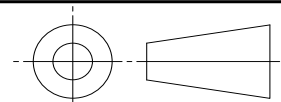
STYLES (SOCKET INSERT)

- CLASS A - SOLID SHELL
- CLASS C - PRESSURIZED

FIGURE 1 - STYLE S (SOCKET INSERT)

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS31001B>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS50151

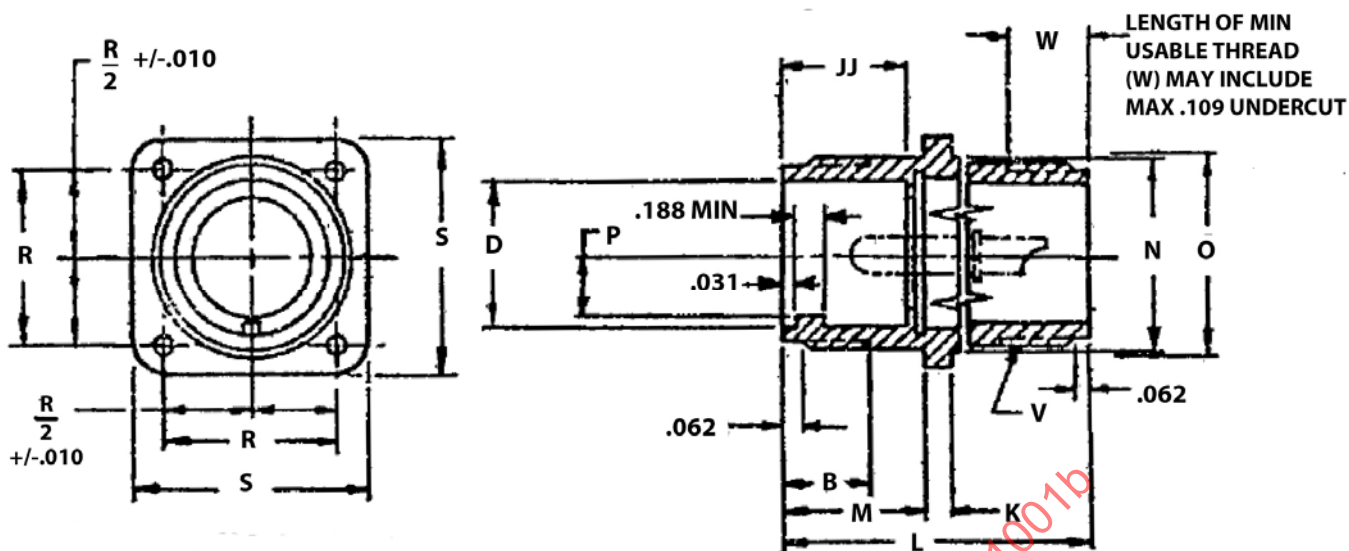


AEROSPACE STANDARD

CONNECTOR, RECEPTACLE, ELECTRIC,
WALL MOUNTING, SOLDER CONTACTS,
AN TYPE

AS31001
SHEET 1 OF 12

REV.
B



STYLE P (PIN INSERT)

CLASS A - SOLID SHELL CLASS C - PRESSURIZED

FIGURE 2 - STYLE P (PIN INSERT)

TABLE 1 - FIGURE 1 AND 2 DIMENSIONS

SIZE	A COUPLING THREAD	B MIN USABLE THREAD	D +.015 -.000 ID	I MAX INSERT DIA	JJ 1/ +.031 -.000 INSERT LOCATION	K THICKNESS MOUNTING FLANGE		L MAX OVERALL LENGTH	M +.031 -.000 MOUNTING FLANGE LOCATION
						MAX	MIN		
8S	1/2 - 28	.375	.370	.250	.562	.156	.062	1.469	.562
10S	5/8 - 24		.448	.320				1.531	
10SL			.448					1.688	
12S	3/4 - 20	.625		.557	.750			2.062	.750
14S	7/8 - 20	.375		.682	.525			.562	1.688
14		.625		.750	2.062			.750	
16S		.375	.807	.650	.562	1.688	.562		
16	1 - 20	.625			.750	.203	.094	2.062	.750
18	1-1/8 - 18		.932	.770					
20	1-1/4 - 18		1.058	.925				2.188	
22	1-3/8 - 18		1.182	1.020		2.312	.812		
24	1-1/2 - 18		1.307	1.145			.875		
28	1-3/4 - 18		1.526	1.365	.359	.125		2.438	
32	2 - 18		1.776	1.615					
36	2-1/4 - 16		1.995	1.830				2.562	
40	2-1/2 - 16		2.245	2.045					
44	2-3/4 - 16		2.495	2.300					
48	3 - 16		2.745	2.550					

$\frac{1}{2}$ WHERE RESILIENT INSERTS ARE USED, "JJ" MAY BE .109 LESS THAN THAT INDICATED.



AEROSPACE STANDARD

CONNECTOR, RECEPTACLE, ELECTRIC,
WALL MOUNTING, SOLDER CONTACTS,
AN TYPE

AS31001
SHEET 2 OF 12

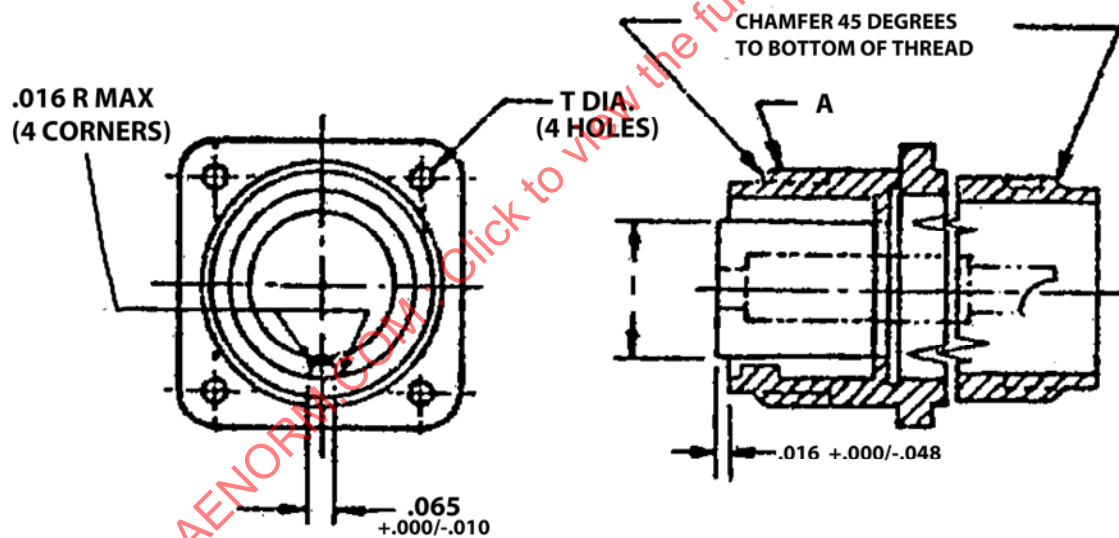
REV.
B

TABLE 1 - FIGURE 1 AND 2 DIMENSIONS (CONTINUED)

SIZE	N MAX O.D.	O (REF) MOUNTING HOLE DIA	P +.015 -.000 KEY HEIGHT	R ±.005 ¢ - ¢ MOUNTING HOLES	S ±.031 INCHES LENGTH SIDE	T +.010 -.005 MOUNTING BOLT HOLE DIA	V THREAD	W MIN USABLE THREAD	FOR INSERT ARRANGEMENT SEE DRAWING
8S	.532	.562	.130	.594	.875	.120	1/2 - 28	.375	MIL-STD 1651
10S	.656	.688	.165	.719	1.000		5/8 - 24		
10SL	.782	.812							
12S									
12									
14S	.906	.938	.263	.906	1.188		3/4 - 20		
14									
16S	1.032	1.062	.325	.969	1.281		7/8 - 20		
16									
18	1.156	1.188	.385	1.062	1.375		1 - 20		
20	1.282	1.312	.463	1.156	1.500	1-3/16 - 18			
22	1.406	1.438	.510	1.250	1.625	.147	1-7/16 - 18		
24	1.532	1.562	.573	1.375	1.750				
28	1.782	1.812	.683	1.562	2.000				
32	2.032	2.062	.808	1.750	2.250		1-3/4 - 18		
36	2.282	2.312	.915	1.938	2.500		2 - 18		
40	2.532	2.562	1.023	2.188	2.750	.173	2-1/4 - 16	.500	
44	2.782	2.812	1.150	2.375	3.000		2-1/2 - 16	.562	
48	3.032	3.062	1.275	2.625	3.250		3 - 16	.625	

NOTES FOR CLASS A AND C:

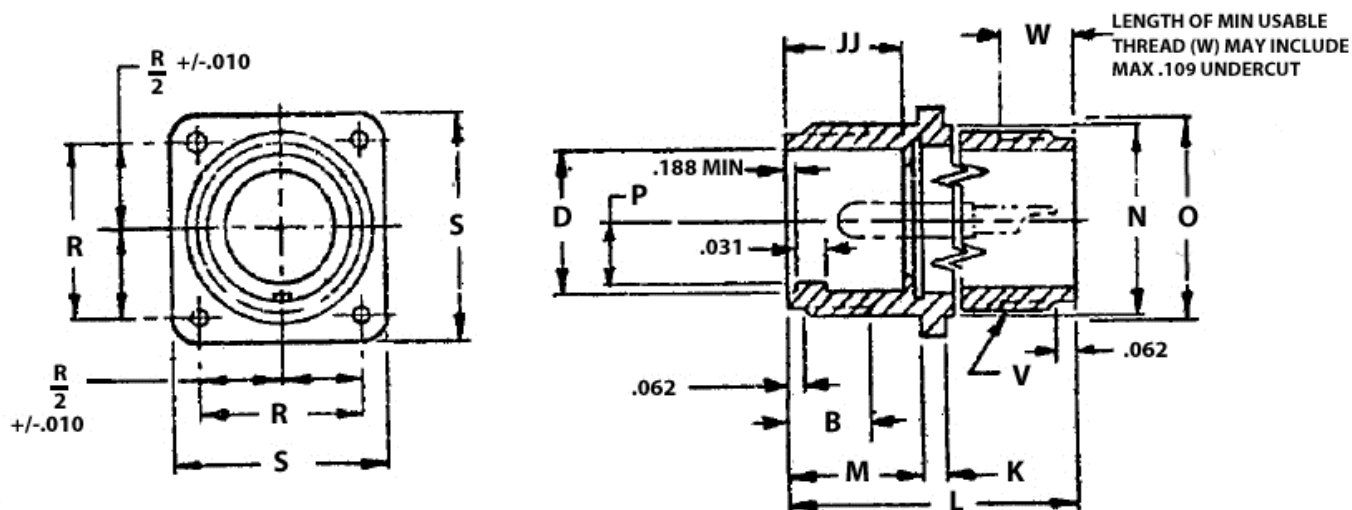
1. SOCKET INSERTS OF HARD MATERIAL SHALL EXTEND .016 MAXIMUM BEYOND OR .032 MAXIMUM BELOW SHELL. SOCKET INSERT OF RESILIENT MATERIAL SHALL EXTEND .047 +.000/-.047 BEYOND SHELL.



STYLE S (SOCKET INSERT)

CLASS K - FIREWALL

FIGURE 3 - STYLE S (SOCKET INSERT)



CLASS K - FIREWALL

FIGURE 4 - STYLE P (PIN INSERT)

TABLE 2 - FIGURE 3 AND 4 DIMENSIONS

SIZE	A COUPLING THREAD	B MIN USABLE THREAD	D +.015 -.000 ID	I MAX INSERT DIA	JJ +.031 -.000 INSERT LOCATION	K MIN THICKNESS MOUNTING FLANGE	L MAX OVERALL LENGTH	M +.031 -.000 MOUNTING FLANGE LOCATION
8S	1/2 - 28	.375	.370	.250	.562	.062	2.188	.562
10S	5/8 - 24		.448	.320				
10SL				.448				
12S	3/4 - 20	.625	.557	.750	2.875		.750	
14S	7/8 - 20	.375	.682	.525	.562		2.188	.562
14		.625		.750	2.875		.750	
16S	1 - 20	.375	.807	.650	.562		2.188	.562
16		.625			.750	.078	2.875	.750
18	1-1/8 - 18		.932	.770				
20	1-1/4 - 18		1.058	.925				
22	1-3/8 - 18		1.182	1.020				
24	1-1/2 - 18		1.307	1.145		.125	3.125	.812
28	1-3/4 - 18		1.526	1.365				
32	2 - 18		1.776	1.615				
36	2-1/4 - 16		1.995	1.830				
40	2-1/2 - 16		2.245	2.045			.875	



AEROSPACE STANDARD

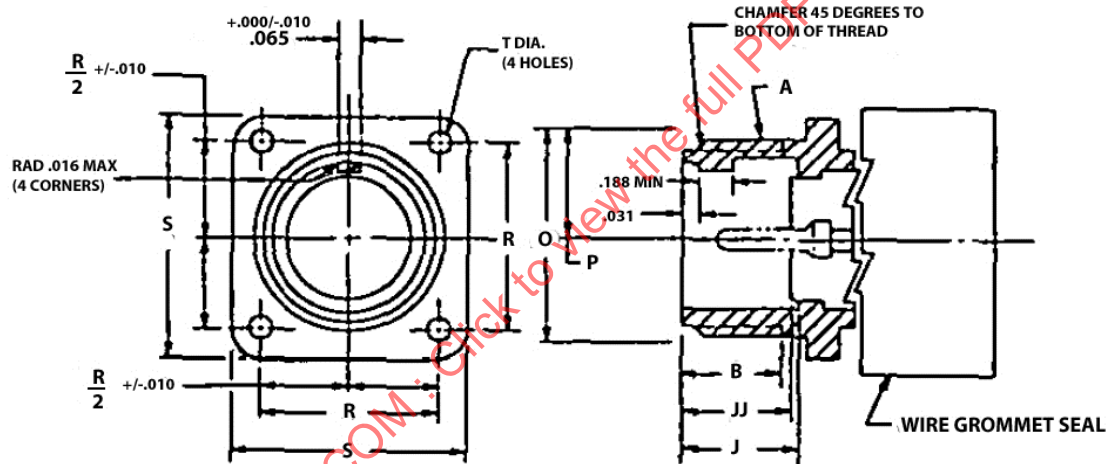
CONNECTOR, RECEPTACLE, ELECTRIC,
WALL MOUNTING, SOLDER CONTACTS,
AN TYPE

AS31001
SHEET 4 OF 12

REV.
B

TABLE 2 - FIGURE 3 AND 4 DIMENSIONS (CONTINUED)

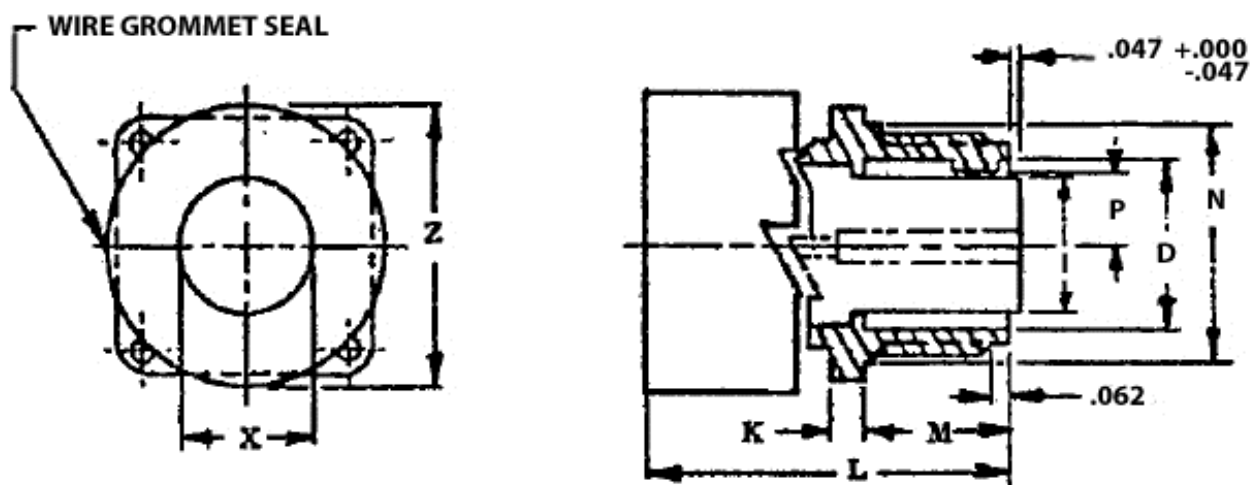
	N MAX O.D.	O (REF) MOUNTING HOLE DIA	P +.015 -.000 KEY HEIGHT	R ±.005 ℄ - ℄ MOUNTING HOLES	S ±.031 INCHES LENGTH SIDE	T +.010 -.005 MOUNTING BOLT HOLE DIA	V THREAD	W MIN USABLE THREAD	FOR INSERT ARRANGEMENT SEE DRAWING
SIZE									
8S	.532	.562	.130	.594	.875	.150	1/2 - 28	.375	MIL-STD 1651
10S	.656	.688	.165	.719	1.000		5/8 - 24		
10SL	.782	.812	.224	.812	1.094				
12S							3/4 - 20		
12									
14S	.906	.938	.263	.906	1.188		7/8 - 20		
14									
16S	1.032	1.062	.325	.969	1.281		1 - 20		
16									
18	1.156	1.188	.385	1.062	1.375		1-3/16 - 18		
20	1.344	1.375	.463	1.156	1.500	.177	1-7/16 - 18		
22	1.406	1.438	.510	1.250	1.625		.209	1-3/4 - 18	
24	1.625	1.688	.573	1.375	1.750	.438			
28	1.782	1.812	.683	1.562	2.000			2 - 18	
32	2.032	2.062	.808	1.750	2.250				
36	2.282	2.312	.915	1.938	2.500	2-1/4 - 16			
40	2.532	2.562	1.023	2.188	2.750				



STYLE P (PIN INSERT)

CLASS E - ENVIRONMENT RESISTANT

FIGURE 5 - STYLE P (PIN INSERT)



STYLE S (SOCKET INSERT)

CLASS E - ENVIRONMENT RESISTANT

FIGURE 6 - STYLE S (SOCKET INSERT)

TABLE 3 - FIGURE 5 AND 6 DIMENSIONS

SIZE	A COUPLING THREAD	B MIN USABLE THREAD	D +.015 -.000 ID	I MAX INSERT DIA	J +.031 -.000 INT SHELL SHLDR	JJ ±.031 INSERT LOCATION	K THICKNESS MOUNTING FLANGE		L MAX 1/ OVERALL LENGTH	M +.031 -.000 MOUNTING FLANGE LOCATION
							MAX	MIN		
8S	1/2 - 28	.375	.370	.250	.562	.484	.156	.078	2.250	.562
10S	5/8 - 24		.448	.320						
10SL										
12S	3/4 - 20	.625	.557	.448	.750	.672			2.625	.750
14S	7/8 - 20	.375	.682	.525	.562	.484			2.250	.562
14		.625			.750	.672			2.625	.750
16S	1 - 20	.375	.807	.650	.562	.484			2.250	.562
16		.625			.750	.672	.203	.094	2.625	.750
18	1-1/8 - 18		.932	.770					2.688	
20	1-1/4 - 18		1.058	.925					2.750	
22	1-3/8 - 18		1.182	1.020					2.969	.812
24	1-1/2 - 18		1.307	1.145					3.031	
28	1-3/4 - 18		1.526	1.365			.359	.125	3.281	.875
32	2 - 18		1.776	1.615					3.500	
36	2-1/4 - 16		1.995	1.830						
40	2-1/2 - 16		2.245	2.045						

1/ ADD .375 FOR SIZE "0" CONTACTS.



AEROSPACE STANDARD

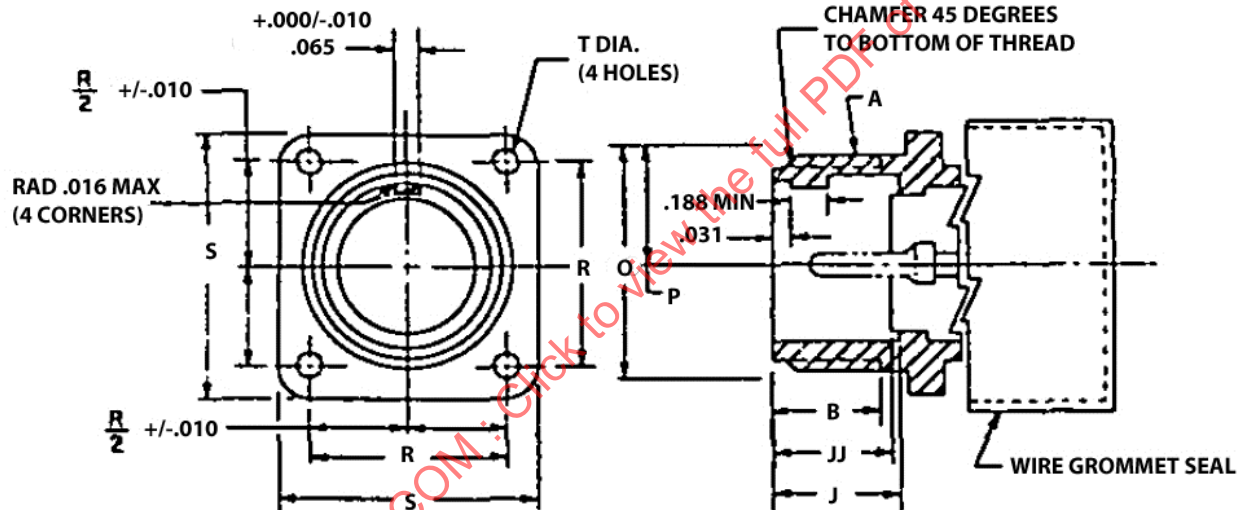
CONNECTOR, RECEPTACLE, ELECTRIC,
WALL MOUNTING, SOLDER CONTACTS,
AN TYPE

AS31001
SHEET 6 OF 12

REV.
B

TABLE 3 - FIGURE 5 AND 6 DIMENSIONS (CONTINUED)

	N MAX	O (REF) MOUNTING HOLE	P +.015 -.000 KEY HEIGHT	R ±.005 ℄ - ℄ MOUNTING HOLES	S ±.031 INCHES LENGTH SIDE	T +.010 -.005 MOUNTING BOLT HOLE DIA	X MIN CABLE CLEARANCE	Z MAX ACROSS SEAL ASSEMBLY	FOR INSERT ARRANGEMENT SEE DRAWING	
SIZE	O.D.	DIA								
8S	.532	.562	.130	.594	.875	.120	.172	1.046	MIL-STD 1651	
10S	.656	.688	.165	.719	1.000		.281	1.125		
10SL										
12S	.782	.812	.224	.812	1.094		.406	1.343		
12										
14S	.906	.938	.263	.906	1.188		.500	1.484		
14										
16S	1.032	1.062	.325	.969	1.281		.531	1.609		
16										
18	1.156	1.188	.385	1.062	1.375		.656	1.890		
20	1.282	1.312	.463	1.156	1.500		.750			
22	1.406	1.438	.510	1.250	1.625	.147	.781	2.170		
24	1.532	1.562	.573	1.375	1.750		.922			
28	1.782	1.812	.683	1.562	2.000	.173	1.156	2.656		
32	2.032	2.062	.808	1.750	2.250		1.250	2.922		
36	2.282	2.312	.915	1.838	2.500		1.562	3.531		
40	2.532	2.562	1.023	2.188	2.750					



STYLE P (PIN INSERT)

CLASS R - ENVIRONMENT RESISTANT

FIGURE 7 - STYLE P (PIN INSERT)

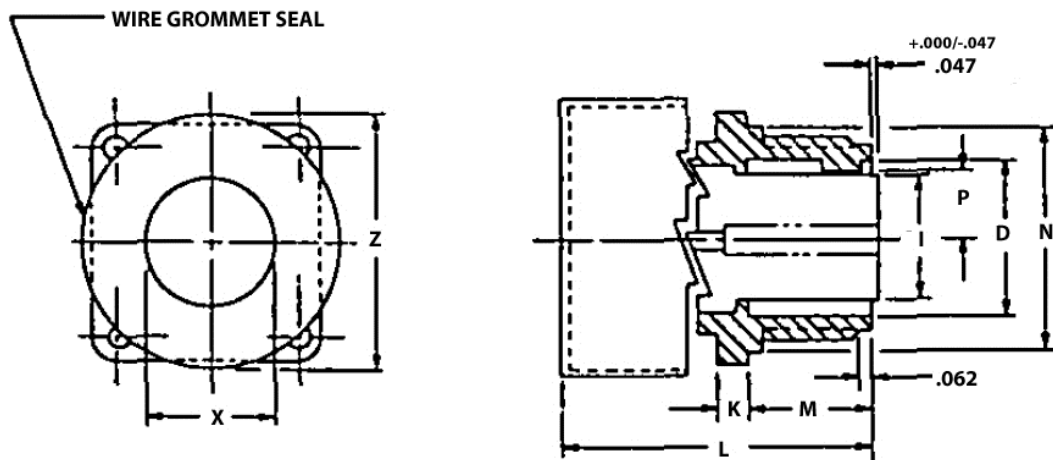


AEROSPACE STANDARD

CONNECTOR, RECEPTACLE, ELECTRIC,
WALL MOUNTING, SOLDER CONTACTS,
AN TYPE

AS31001
SHEET 7 OF 12

REV.
B



STYLE S (SOCKET INSERT)

CLASS R - ENVIRONMENT RESISTANT

FIGURE 8 - STYLE S (SOCKET INSERT)

TABLE 4 - FIGURE 7 AND 8 DIMENSIONS

SIZE	A COUPLING THREAD	B MIN USABLE THREAD	D +.015 -.000 ID	I MAX INSERT DIA	J +.031 -.000 INT SHELL SHLDR	JJ ±.031 INSERT LOCATION	K THICKNESS MOUNTING FLANGE		L MAX 1/ OVERALL LENGTH	M +.031 -.000 MOUNTING FLANGE LOCATION
							MAX	MIN		
8S	1/2 - 28	.375	.370	.250	.562	.484	.156	.076	1.838	.562
10S	5/8 - 24		.448	.320						
10SL			.448							
12S	3/4 - 20			.625						
12		7/8 - 20	.375	.682	.525	.562			.484	1.838
14S	.625		.750	.672	2.181	.750				
14	.375		.562	.484	1.838	.562				
16S	1 - 20	.625	.807	.650	.750	.672	.203	.094	2.181	.750
16			.932	.770					2.281	
18	1-1/8 - 18		1.058	.925						
20	1-1/4 - 18		1.182	1.020						
22	1-3/8 - 18		1.307	1.145						
24	1-1/2 - 18		1.526	1.365						
28	1-3/4 - 18		1.776	1.615			.359	.125	2.322	.875
32	2 - 18		1.995	1.930						
36	2-1/4 - 16		2.245	2.045						
40	2-1/2 - 16									

$\frac{1}{2}$ ADD .375 FOR SIZE "0" CONTACTS.



AEROSPACE STANDARD

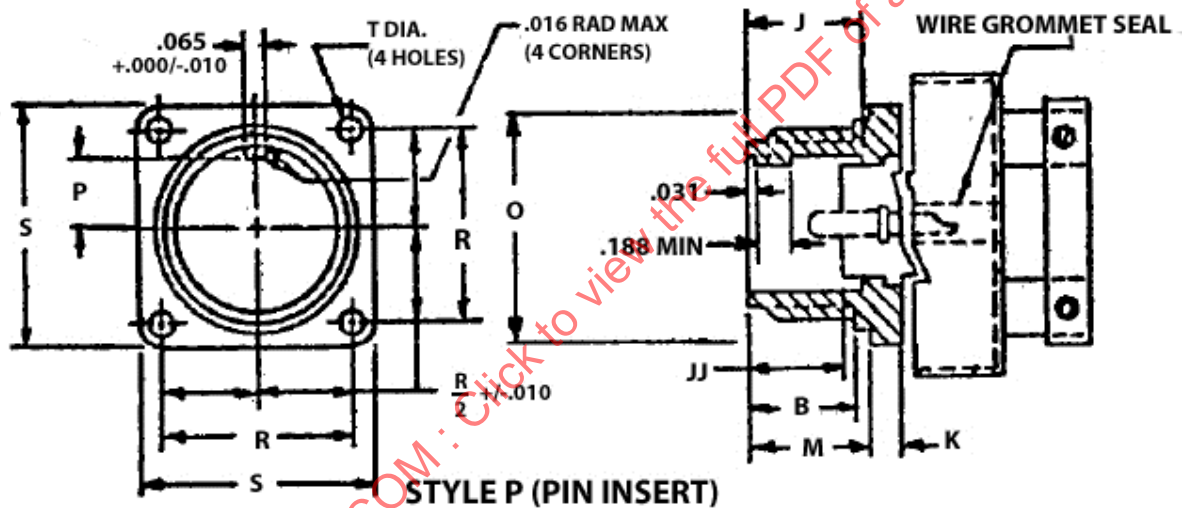
CONNECTOR, RECEPTACLE, ELECTRIC,
WALL MOUNTING, SOLDER CONTACTS,
AN TYPE

AS31001
SHEET 8 OF 12

**REV.
B**

TABLE 4 - FIGURE 7 AND 8 DIMENSIONS (CONTINUED)

SIZE	N MAX O.D.	O (REF) MOUNTING HOLE DIA	P +.015 -.000 KEY HEIGHT	R ±.005 ¢ - ¢ MOUNTING HOLES	S ±.031 INCHES LENGTH SIDE	T +.010 -.005 MOUNTING BOLT HOLE DIA	X MIN CABLE CLEARANCE	Z MAX ACROSS SEAL ASSEMBLY	FOR INSERT ARRANGEMENT SEE DRAWING
8S	.532	.562	.130	.594	.875	.120	.172	1.046	MIL-STD 1651
10S	.656	.688	.165	.719	1.000		.281	1.125	
10SL									
12S	.782	.812	.224	.812	1.094		.406	1.343	
12							.500	1.484	
14S	.906	.938	.263	.906	1.188		.531	1.609	
14							.656	1.890	
16S	1.032	1.062	.325	.969	1.281		.750	2.170	
16							.781		
18	1.156	1.188	.385	1.062	1.375		.922		
20	1.282	1.312	.463	1.156	1.500	.147	1.156	2.656	
22	1.406	1.438	.510	1.250	1.625		1.250	2.922	
24	1.532	1.562	.573	1.375	1.750	.173	1.562	3.328	
28	1.782	1.812	.683	1.562	2.000				
32	2.032	2.062	.808	1.750	2.250				
36	2.282	2.312	.915	1.938	2.500				
40	2.532	2.562	1.023	2.188	2.750				



CLASS F - ENVIRONMENT RESISTANT

FIGURE 9 - STYLE P (PIN INSERT)



AEROSPACE STANDARD

CONNECTOR, RECEPTACLE, ELECTRIC,
WALL MOUNTING, SOLDER CONTACTS,
AN TYPEAS31001
SHEET 9 OF 12REV.
B