

AS31061

## NOTICE

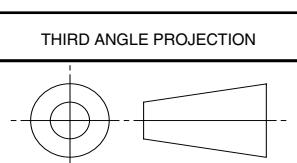
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ISSUED 2004-06



CUSTODIAN: SAE AE-8/AE-8C1

PROCUREMENT SPECIFICATION: MIL-C-5015

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**

CONNECTOR, PLUG, ELECTRIC,  
STRAIGHT, SOLDER CONTACTS,  
AN TYPE

**AS31061**  
SHEET 1 OF 11

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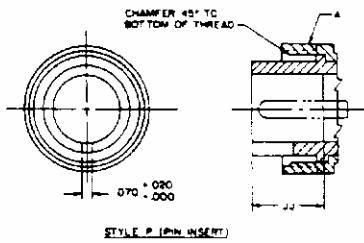
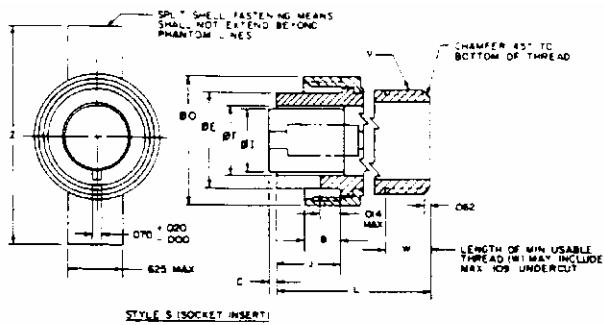
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## CLASS A-SOLID SHELL

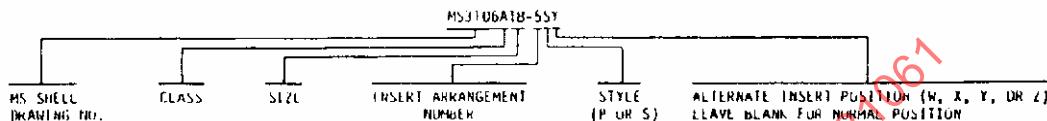
SIZE	A COUPLING THREAD	B +.000/-0.062 EXTENSION COUPLING RING	E +.000 -.015 @ OUTSIDE	F MIN @ INSIDE	G MAX INSERT	J LENGTH ENGAGE- MENT +.005	(A) JJ +.031/-0.000 INSERT LOCATION	L MAX OVERALL LENGTH	M MAX OVERALL @ OUTSIDE	N THREAD	P MIN USABLE THREAD	Q MAX CLASS 8 ONLY	FOR INSERT ARRANGEMENT SEE
85	1/2-28		.365	.252	.250			1.469	.844			.844	
105			.440	.323	.320			1.531	.969			.969	
105L		5/8-24	.446	—	.440			1.688					
125			.555	.450	.445	.719	.750	2.062	1.062			1.062	
12		3/4-20	.625										
145			.375										
14			.625	.526	.525								
165			.375										
16	1 -20		.805	.651	.650								
18	1-1/8-18		.930	.776	.770								
20	1-1/4-18		.050	.932	.925								
22	1-3/8-18		1.175	1.026	1.020								
24	1-1/2-18		1.300	1.151	1.145								
28	1-3/4-18		1.520	1.370	1.365								
32	2-3/8-18		1.770	1.620	1.615								
36	2-1/4-16		1.980	1.838	1.830								
40	2-1/2-16		2.230	2.057	2.047								

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## NOTES:

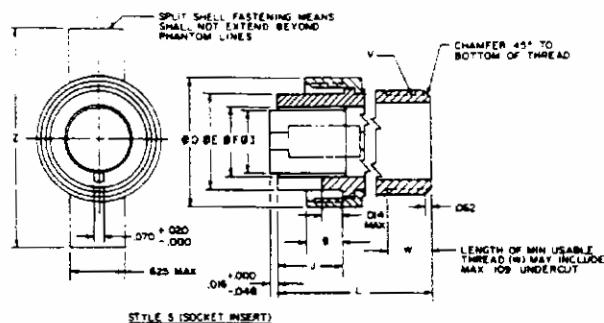
- (a) CLASS A IS CANCELLED AFTER 1 JAN 1991. FOR NEW DESIGN USE MS3456W WITH THE APPROPRIATE M85049/31 BACKSHELL. FOR SHIPBOARD JACKETED CABLES USE MS3406.
- (b) WHERE RESILIENT INSERTS ARE USED, JJ MAY BE .109 LESS THAN THAT INDICATED.
- (c) SOCKET INSERT OF HARD MATERIAL SHALL EXTEND .016 MAXIMUM BEYOND OR .032 MAXIMUM BELOW SHELL. SOCKET INSERT OF RESILIENT MATERIAL SHALL EXTEND .047 +.000 -.047 BEYOND SHELL AS SHOWN.
- (d) CONNECTORS MS3106A REPLACE AND ARE INTERCHANGEABLE WITH CORRESPONDING AN3106A (OR B) CONNECTORS.

## EXAMPLE OF PART NUMBER:

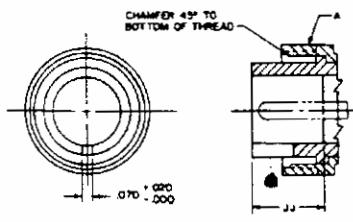


DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS  $\pm .016$ . THIS SPECIFICATION SHEET TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

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STYLE S (SOCKET INSERT)



STYLE P (PIN INSERT)

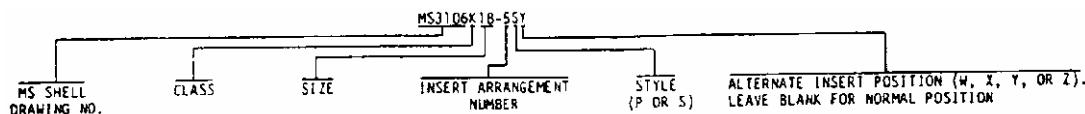
## CLASS K - FIREWALL

SIZE	A COUPLING THREAD	B +.000/-0.062 EXTENSION COUPLING RING	E -.000 +.015 # INSIDE # OUTSIDE	F MIN	G MAX	I MAX INSERT	J LENGTH ENGAGE- MENT	(K) J +.031/-0.000 INSERT LOCATION	L MAX OVERALL LENGTH	M Q MAX OVERALL # OUTSIDE	N Y THREAD	P W MIN	Q Z MAX	R FOR INSERT ARRANGEMENT SEE
85	1/2-28			.365	.252	.250				.844			.844	
105				.440	.323	.320				.969			.969	
105L	5/8-24			.446		.440							1.062	
125				.555	.450	.448				1.062				
12	3/4-20			.625										
145				.375										
14	7/8-20			.625										
165				.375										
16	1 -20			.805	.651	.650								
18	1-1/8-18			.930	.776	.770								
20	1-1/4-18			1.050	.932	.925								
22	1-3/8-18			1.175	1.026	1.020								
24	1-1/2-18			1.300	1.151	1.145								
28	1-3/4-18			1.520	1.370	1.365								
32	2 -18			1.770	1.620	1.615								
36	2-1/4-16			1.960	1.838	1.830								

## NOTES:

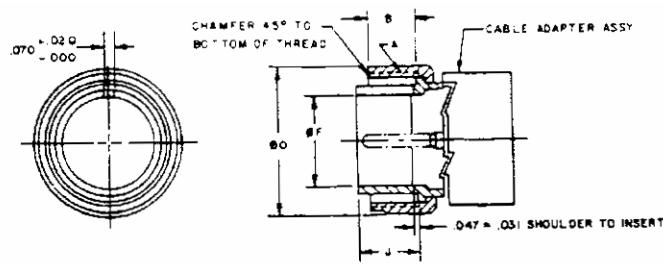
- (a) CLASS K IS INACTIVE FOR NEW DESIGN AFTER 1 JAN 1991. FOR NEW DESIGN USE MS3456K WITH APPROPRIATE M85049/31 BACKSHELL. FOR SHIPBOARD JACKETED CABLES USE MS3406.
- (b) CONNECTORS MS3106K REPLACE AND ARE INTERCHANGEABLE WITH CORRESPONDING AN3106K CONNECTORS.

## EXAMPLE OF PART NUMBER:

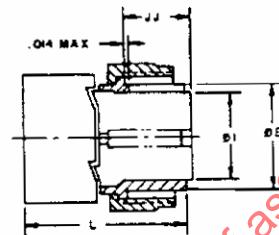
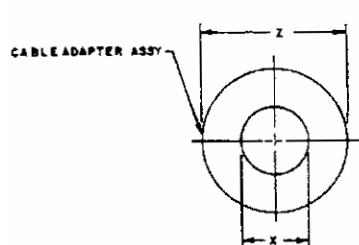


DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS  $\pm .016$ . THIS SPECIFICATION SHEET TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

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STYLE P (PIN INSERT)



STYLE S (SOCKET INSERT)

## CLASS E-ENVIRONMENT RESISTANT

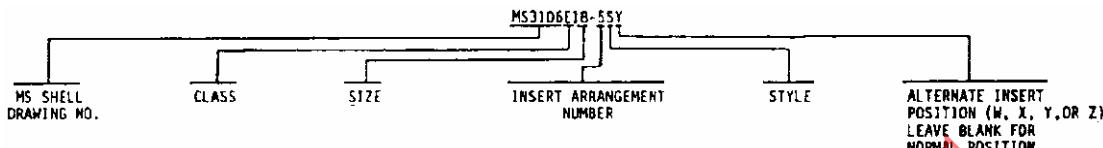
SIZE	A COUPLING THREAD	B +.000 -.062 EXTENSION COUPLING RING	E +.000 -.015 @ OUTSIDE	F MIN @ INSIDE	G MAX INSERT	J +.005 LENGTH ENGAGE- MENT	JJ +.047 -.000 INSERT LOCATION	I MAX OVER- ALL LENGTH	Q COUPLING NUT MAX @ OUTSIDE	X MIN CABLE CLEARANCE	Z MAX ACROSS ADAPTER ASSY	FOR INSERT ARRANGEMENT SEE
8S	1/2-20		.365	.252	.250				.844	.172	1.04b	MIL-ST-2651
10S			.440	.323	.320							
10SL	5/8-24	.375	.446	--	.440		.531	.531	2.250		.969	
12S			.555	.450	.448						.281	
12	3/4-20	.625					.719	.719	2.625	1.062		
14S			.375	.675	.526	.525						
14	7/8-20	.625					.719	.719	2.625	1.156	.406	
16S			.375	.805	.651	.650						
16	1 -20						.531	.531	2.250	1.250	.500	
18	1-1/8-18		.930	.776	.770						1.484	
20	1-1/4-18		1.050	.932	.925							
22	1-3/8-18		1.175	1.026	1.020							
24	1-7/2-18	.625	1.300	1.151	1.145							
26	1-3/4-18		1.520	1.370	1.365							
32	2 -18		1.770	1.620	1.615							
36	2-1/4-16		1.980	1.838	1.830							
40	2-1/2-16		2.230	2.057	2.045							

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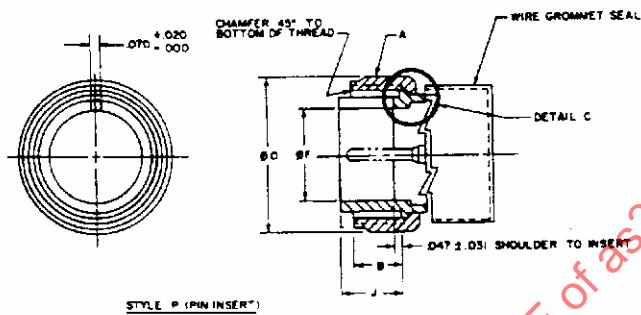
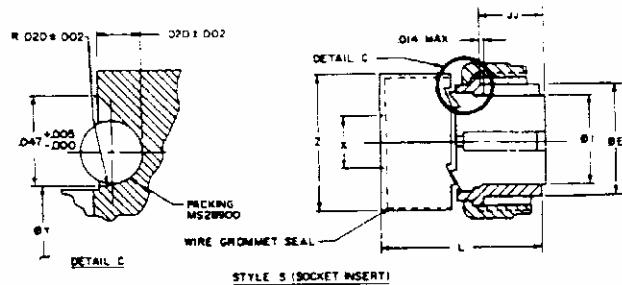
## NOTES:

- (a) CLASS E IS CANCELLED AFTER 1 JAN 1991. FOR REPLACEMENT PURPOSES USE MS3106F FOR CONNECTOR WITH CLAMP AND 3106R FOR CONNECTOR WITH GROMMET SEAL. MANUFACTURERS MAY CONTINUE TO SUPPLY MS3106E CONNECTORS UNTIL 1 JAN 1992 OR EXHAUST THEIR INVENTORIES, WHICHEVER COMES FIRST. FOR NEW DESIGN USE MS3456W WITH APPROPRIATE M85049/31 BACKSHELL. FOR SHIPBOARD JACKETED CABLES USE MS3406.
- (b) CONNECTORS MS3106E REPLACE AND ARE INTERCHANGEABLE WITH CORRESPONDING AN3106E CONNECTORS.

## EXAMPLE OF PART NUMBER:



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## CLASS R-ENVIRONMENT RESISTANT

SIZE	A COUPLING THREAD	B +.000 -.062 EXTENSION COUPLING RING	C +.000 -.015 # OUTSIDE	D +.000 -.015 # INSIDE	E +.000 -.015 # INSIDE	F MIN # INSIDE	G MAX # INSIDE	H +.005 LENGTH ENGAGE- MENT	I +.007 -.000 INSERT LOCATION	J L (a) MAX OVERALL LENGTH	K COUPLING NUT MAX # OUTSIDE	L MIN # OUTSIDE	M CABLE CLEARANCE	N +.005 -.010 BY	O Z MAX ACROSS WIRE GROMMET SEAL	P FOR INSERT ARRANGEMENT SEE DRAWING	Q PACKING MS28900 DASH NO.	
8S	1/2-28		.365	.252	.250					.844	.172	.355	1.046				-8	
10S	5/8-24	.375	.440	.323	.320			.531	.531	1.838	.969		.440				-10	
10SL			.446	—	.440								.446				-12	
12S	3/4-20		.555	.450	.448			.719	.719	2.181	1.062		.555				-14	
12		.625															-16	
14S	7/8-20	.375	.675	.526	.525			.531	.531	1.838	1.156	.406	.675	1.345	MIL-STD-1651		-18	
14		.625															-20	
16S	1 -20	.375	.805	.651	.650			.531	.531	1.838	1.250	.500	.805	1.484			-22	
16										2.181							-24	
18	1-1/8-18		.930	.776	.770						1.344	.531	.930	1.609			-26	
20	1-1/4-18		1.050	.932	.925						2.281	1.469	.656	1.050	1.890			-28
22	1-3/8-18	.625	1.175	1.026	1.020							1.594	.750	1.175			-30	
24	1-1/2-18		1.300	1.151	1.145							1.719	.781	1.300			-32	
28	1-3/4-18		1.520	1.370	1.365							1.969	.922	1.520			-34	
32	2 -18		1.770	1.620	1.615						2.322	2.219	1.156	1.770	2.656			-36
36	2-1/4-16		1.960	1.838	1.830							2.469	1.250	1.980	2.922			-38
40	2-1/2-16		2.230	2.057	2.045						2.430	2.719	1.562	2.230	3.328			-40

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