INCH POUND

MS3121D
w/AMENDMENT 1
29 April 2009
SUPERSEDING
MS3121D
07 November 2007

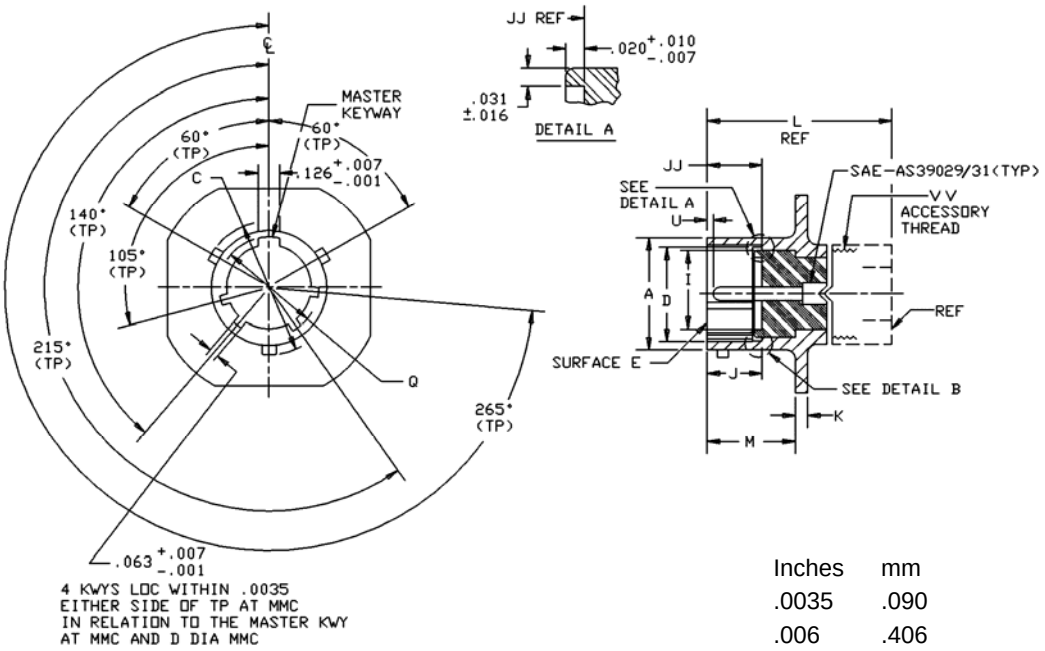
DETAIL SPECIFICATION SHEET

CONNECTORS, PLUG, ELECTRICAL, CRIMP TYPE, CABLE-CONNECTING, BAYONET COUPLING, SERIES 1, CLASSES E, F AND P

Inactive for new design after 5 September 1975.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

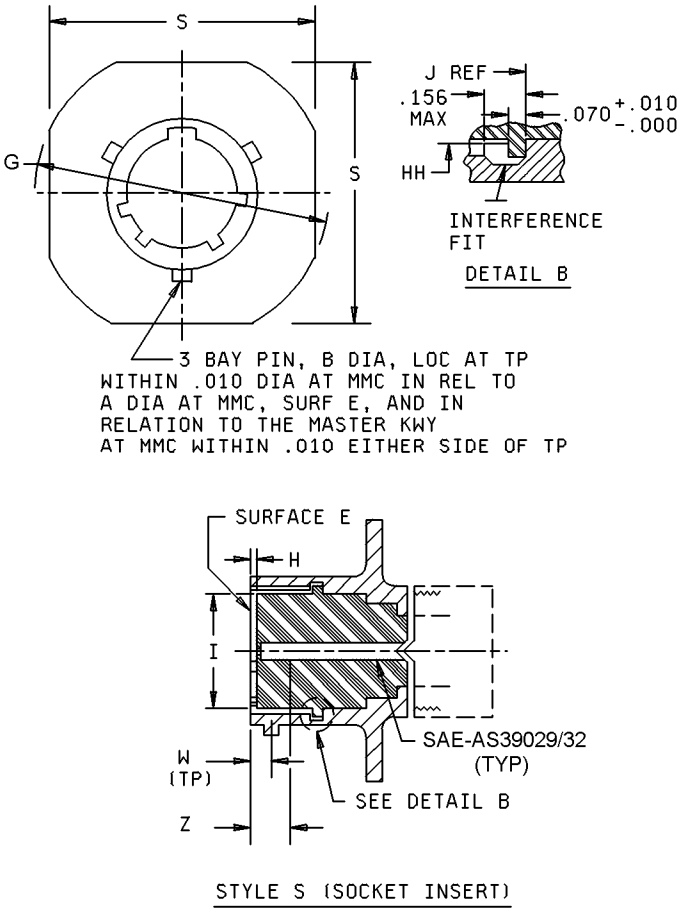
The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-26482.



Inches	mm
.0035	.090
.006	.406
.007	.508
.010	.787
.016	1.60
.020	.51
.031	.79
.063	1.60
.126	3.22

STYLE P (PIN INSERT)

FIGURE 1. Plug, dimensions, classes E, F and P.



Inches	mm
.010	.254
.070	1.77
.156	3.96

FIGURE 1. Plug, dimensions, classes E, F and P - Continued.

Shell size	A dia +.001 -.005 OD	B dia +.006 -.002 bay pin	C dia +.000 -.016 over bay pins	D dia +.005 -.001 ID	G dia ±.020 across flange corners	H +.000 -.020 socket insert location
8	.473 (12.01)	.078 (1.98)	.563 (14.30)	.362 (9.19)	.938 (23.83)	.025 (.64)
10	.590 (14.99)		.680 (17.27)	.490 (12.45)	1.062 (26.97)	
12	.750 (19.05)		.859 (21.82)	.607 (15.42)	1.156 (29.36)	
14	.875 (22.23)		.984 (24.99)	.732 (18.59)	1.250 (31.75)	
16	1.000 (25.40)		1.108 (28.14)	.857 (21.77)	1.344 (34.14)	
18	1.125 (28.58)		1.233 (31.32)	.962 (24.43)	1.438 (36.53)	
20	1.250 (31.75)		1.358 (34.49)	1.087 (27.61)	1.562 (39.67)	.087 (2.21)
22	1.375 (34.93)		1.483 (37.67)	1.212 (30.78)	1.688 (42.88)	
24	1.500 (38.10)	.125 (3.18)	1.610 (40.89)	1.337 (33.96)	1.812 (46.02)	

FIGURE 1. Plug, dimensions, classes E, F and P – Continued.

Shell size	I max insert dia	J ±.010 packing location	JJ +.000 -.020 pin insert location	K ±.016 thick mounting flange	M +.031 -.000 mounting flange location
8	.285 (7.24)	.382 (9.70)	.332 (8.43)	.094 (2.39)	.400 (10.16)
10	.402 (10.21)				
12	.516 (13.11)				
14	.641 (16.28)				
16	.766 (19.46)				
18	.855 (21.72)				
20	.980 (24.89)	.444 (11.28)	.394 (10.01)	.115 (2.92)	.535 (13.59)
22	1.105 (28.07)				
24	1.229 (31.22)				.568 (14.43)

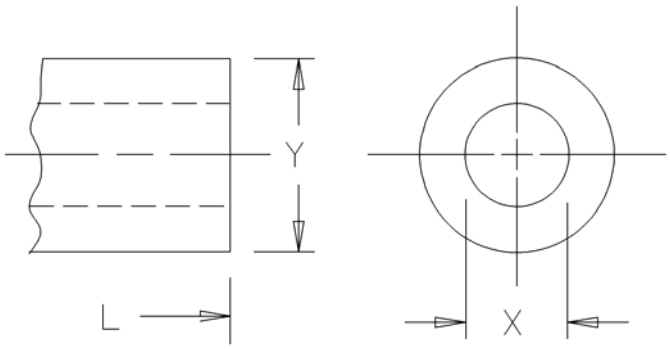
FIGURE 1. Plug, dimensions, classes E, F and P- Continued.

Shell size	Q dia +.005 -.006 over keyways	S max length side	HH max ID gasket	U +.010 -.020 pin contact location
8	.412 (10.46)	.828 (21.03)	.329 (8.36)	.085 (2.16)
10	.540 (13.72)	.954 (24.23)	.457 (11.61)	
12	.689 (17.50)	1.047 (26.59)	.564 (14.33)	
14	.814 (20.68)	1.141 (28.98)	.689 (17.50)	
16	.939 (23.85)	1.234 (31.34)	.814 (20.68)	
18	1.039 (26.39)	1.326 (33.68)	.907 (23.04)	
20	1.164 (29.57)	1.453 (36.91)	1.039 (26.39)	.147 (3.73)
22	1.289 (32.74)	1.578 (40.08)	1.164 (29.57)	
24	1.414 (35.92)	1.703 (43.26)	1.289 (32.74)	

FIGURE 1. Plug, dimensions, classes E, F and P - Continued.

Shell size	W (TP) bay pin location	Z (b) +.000 -.078 socket contact spring location	V V class 2A accessory thread
8	.100 (2.54)	.153 (3.89)	7/16-28
10			9/16-24
12			11/16-24
14			13/16-20
16			15/16-20
18			1-1/16-18
20		.215 (5.46)	1-3/16-18
22			1-5/16-18
24	.109 (2.77)		1-7/16-18

FIGURE 1. Plug, dimensions, classes E, F and P - Continued.

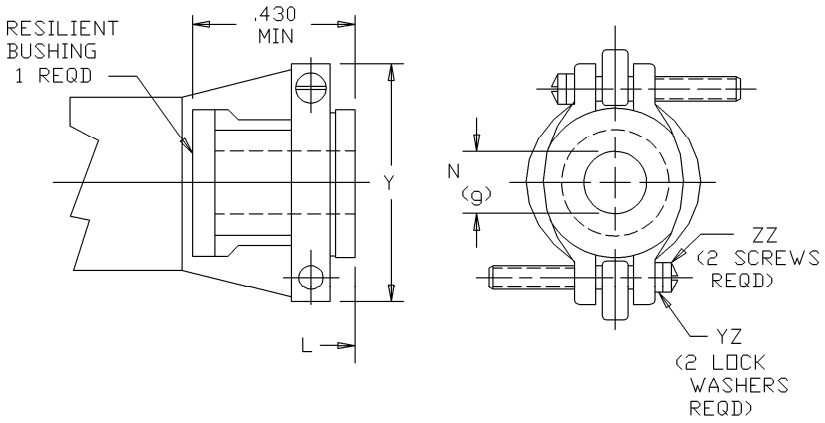


Dimensions for class E

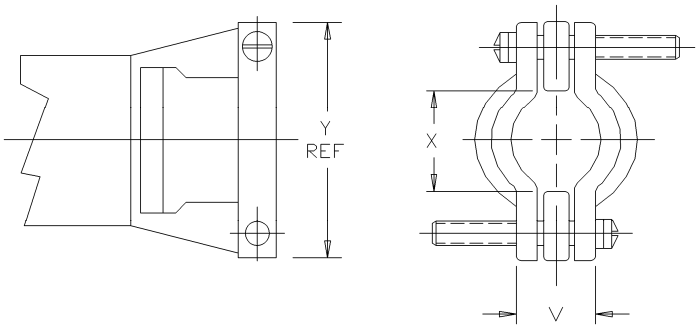
Shell size	L max over-all length	X dia min ID	Y dia max OD
8	1.552 (39.42)	.259 (6.58)	.608 (15.44)
10		.359 (9.12)	.734 (18.64)
12		.469 (11.91)	.858 (21.79)
14		.589 (14.96)	.984 (24.99)
16		.717 (18.21)	1.110 (28.19)
18		.779 (19.79)	1.234 (31.34)
20	1.709 (43.41)	.901 (22.89)	1.360 (34.54)
22		1.009 (25.63)	1.484 (37.69)
24		1.123 (28.52)	1.610 (40.89)

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.

FIGURE 1. Plug, dimensions, classes E, F and P - Continued.



Dimensions for class F



Inches	mm
.430	10.92

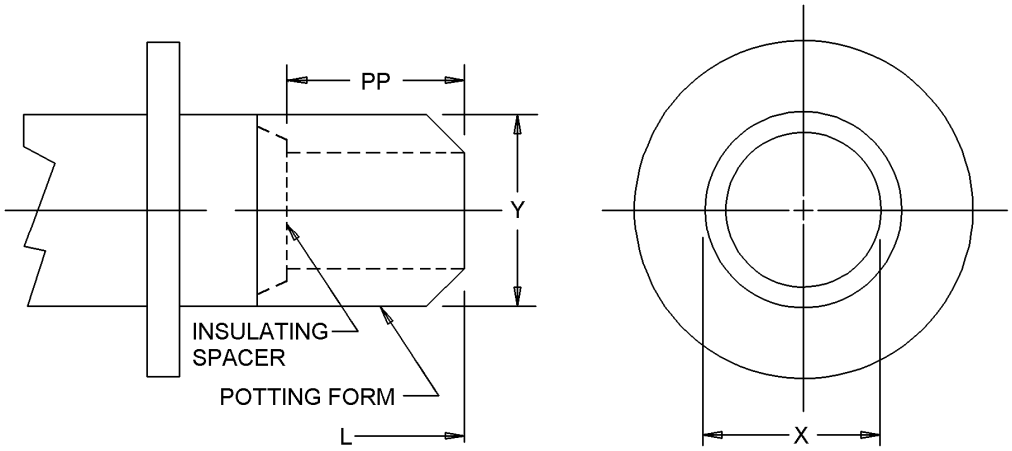
Dimensions for class F, bushing removed

FIGURE 1. Plug, dimensions, classes E, F and P - Continued.

Shell size	L max over-all length	X dla min open	Y max	V max closed
8	2.422 (61.52)	.234 (5.94)	.828 (21.03)	.187 (4.75)
10		.297 (7.54)	.891 (22.63)	.187 (4.75)
12		.422 (10.72)	1.016 (25.81)	.281 (7.14)
14		.547 (13.89)	1.141 (28.98)	.325 (8.26)
16	2.537 (64.44)	.609 (15.47)	1.203 (30.56)	.356 (9.04)
18		.734 (18.64)	1.469 (37.31)	.456 (11.58)
20	2.824 (71.73)			.519 (13.18)
22		.922 (23.42)	1.656 (42.06)	
24	2.900 (73.66)	.984 (24.99)	1.750 (44.45)	.657 (16.69)

Shell size	N free dia	ZZ screw threads	YZ lockwashers NASM35338 or NASM35333
8	.125 (3.18)	6-32 UNC	NASM35338-98 or -41 NASM35333-105 or -37
10	.188 (4.78)		
12	.312 (7.92)		
14	.375 (9.53)		
16	.500 (12.70)		
18	.625 (15.88)	8-32 UNC	NASM35338-99 or -42 NASM35333-106 or -38
20	.625 (15.88)		
22	.750 (19.05)		
24	.800 (20.32)		

FIGURE 1. Plug, dimensions, classes E, F and P - Continued.



Dimensions for class P

Shell size	L max over-all length	X dia min ID	Y dia max OD	PP min
8	1.656 (42.06)	.317 (8.05)	.608 (15.44)	.250 (6.35)
10		.434 (11.02)	.734 (18.64)	
12		.548 (13.92)	.858 (21.79)	
14		.673 (17.09)	.984 (24.99)	
16		.798 (20.27)	1.110 (28.19)	
18		.899 (22.83)	1.234 (31.34)	
20	1.750 (44.45)	1.024 (26.01)	1.360 (34.54)	
22	1.750 (44.45)	1.149 (29.18)	1.484 (37.69)	
24	1.782 (45.26)	1.274 (32.36)	1.610 (40.89)	

FIGURE 1. Plug, dimensions, classes E, F and P - Continued.

NOTES:
1. Dimensions are in inches. Metric equivalents are given for information only.
2. Distance between end of shell and the point at which a gage pin having the same basic diameter as the mating contact and a square face first engages socket contact spring.
3. Packing material shall be In accordance with ASTM-D2000.
4. True position (TP) tolerances in accordance with ASME Y14.5M.
5. For class F: Lockwashers may be captivated. Use MS3420 bushing with dimension N if reduced opening is required.

FIGURE 1. Plug, dimensions, classes E, F and P - Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

This connector mates with MS3120, MS3122, MS3124, MS3127 and MS3128.

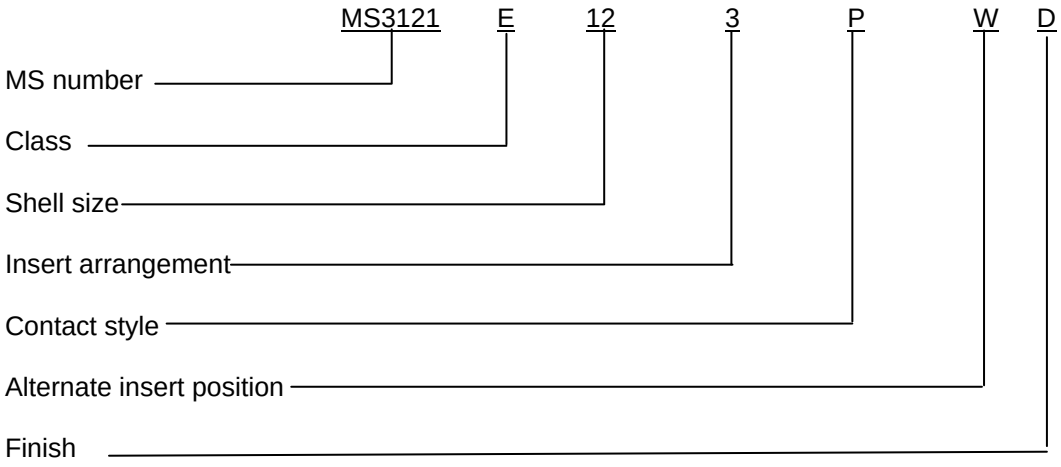
Insert arrangement shall be in accordance with MIL-STD-1669.

Packing material shall meet the requirements of ASTM-D2000.

Finishes: A finish designator shall not be included in the PIN when finish W is required. See MIL-DTL-26482 for alternative finishes D, T and Z for classes E, F and P.

Material:
- a. Shell - aluminum alloy.
- b. Bayonet pins (B dia) - stainless steel, passivated.

Part or Identifying Number (PIN) example:



Note: No finish designator is used when finish W is required (finish W is the default finish).

Amendment Notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. In addition to MIL-DTL-26482, this document references the following:

MS3120
MS3122
MS3124
MS3127
MS3128
MS3420
MIL-STD-1669
SAE-AS39029/31
SAE-AS39029/32
NASM35333
NASM35338
ASME Y14.5M
ASTM-D2000

CONCLUDING MATERIAL

Custodians:
Army - CR
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-2008-129)

Review activities:
Army - CR4, MI
Air Force - 99

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