

METRIC

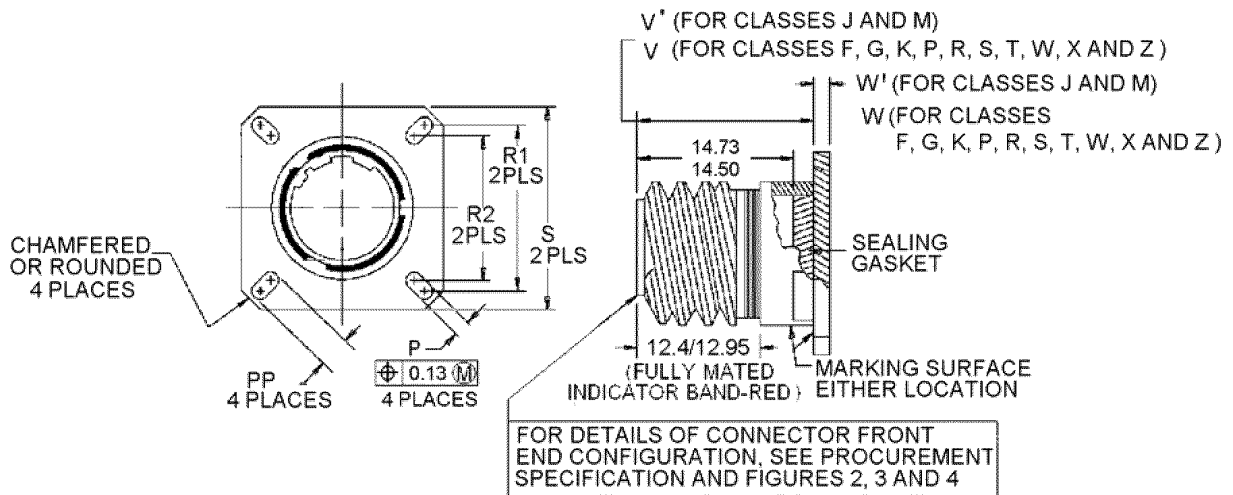
MIL-DTL-38999/22H  
14 June 2013  
SUPERSEDING  
MIL-DTL-38999/22G  
10 July 2008

### DETAIL SPECIFICATION SHEET

#### CONNECTORS, ELECTRICAL, CIRCULAR, RECEPTACLE, THREADED, DUMMY STOWAGE, SERIES III, METRIC

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-38999.



mm	Inches
0.13	.01
12.40	.49
12.95	.51
14.50	.57
14.73	.58

FIGURE 1. Receptacle, classes F, G, J, K, M, P, R, S, T, W, X and Z.

MIL-DTL-38999/22H

Dimensions					
Shell size	Shell size code	P ± .20	PP ± .20	R1 (see note 4)	R2 (see note 5)
9	A (see note 6)	3.25 (.128)	5.49 (.216)	18.26 (.719)	15.09 (.594)
9	AA (see note 7)	3.25 (.128)	5.49 (.216)	18.26 (.719)	15.09 (.594)
11	B	3.25 (.128)	4.93 (.194)	20.62 (.812)	18.26 (.719)
13	C	3.25 (.128)	4.93 (.194)	23.01 (.906)	20.62 (.812)
15	D	3.25 (.128)	4.39 (.173)	24.61 (.969)	23.01 (.906)
17	E	3.25 (.128)	4.93 (.194)	26.97 (1.062)	24.61 (.969)
19	F	3.25 (.128)	4.93 (.194)	29.36 (1.156)	26.97 (1.062)
21	G	3.25 (.128)	4.93 (.194)	31.75 (1.250)	29.36 (1.156)
23	H	3.91 (.154)	6.15 (.242)	34.93 (1.375)	31.75 (1.250)
25	J	3.91 (.154)	6.15 (.242)	38.10 (1.500)	34.93 (1.375)

FIGURE 1. Receptacle, classes F, G, J, K, M, P, R, S, T, W, X and Z – Continued.

MIL-DTL-38999/22H

Dimensions						
Shell size	Shell size code	S ± .3	V + 0.00 - 0.13	V' + 1.4 - 0.0	W ± .3	W'
9	A (see note 6)	23.8 (.937)	20.83 (.820)	19.5 (.768)	2.5 (.098)	3.65 / 2.2 (.144 / .087)
9	AA (see note 7)	23.8 (.937)	20.83 (.820)	19.5 (.768)	2.5 (.098)	3.65 / 2.2 (.144 / .087)
11	B	26.2 (1.031)	20.83 (.820)	19.5 (.768)	2.5 (.098)	3.65 / 2.2 (.144 / .087)
13	C	28.6 (1.126)	20.83 (.820)	19.5 (.768)	2.5 (.098)	3.65 / 2.2 (.144 / .087)
15	D	31.0 (1.220)	20.83 (.820)	19.5 (.768)	2.5 (.098)	3.65 / 2.2 (.144 / .087)
17	E	33.3 (1.311)	20.83 (.820)	19.5 (.768)	2.5 (.098)	3.65 / 2.2 (.144 / .087)
19	F	36.5 (1.437)	20.83 (.820)	19.5 (.768)	2.5 (.098)	3.65 / 2.2 (.144 / .087)
21	G	39.7 (1.563)	20.07 (.790)	18.7 (.736)	3.2 (.126)	4.35 / 2.9 (.171 / .114)
23	H	42.9 (1.689)	20.07 (.790)	18.7 (.736)	3.2 (.126)	4.35 / 2.9 (.171 / .114)
25	J	46.0 (1.811)	20.07 (.790)	18.7 (.736)	3.2 (.126)	4.35 / 2.9 (.171 / .114)

NOTES:

1. Dimensions are in millimeters. Inch equivalents are given for information only.
2. Flange is solid.
3. Dummy receptacles are used when unmated plugs must be protected.
4. Dimensions required for intermountability with front or rear mounting series I.
5. Dimensions required for intermountability with front mounting series II.
6. Shell size code A is for use with size 9 plug mating key polarizations C, E and N, only.
7. Shell size code AA is for use with size 9 plug mating key polarizations A, B and D, only.

FIGURE 1. Receptacle, classes F, G, J, K, M, P, R, S, T, W, X and Z – Continued.

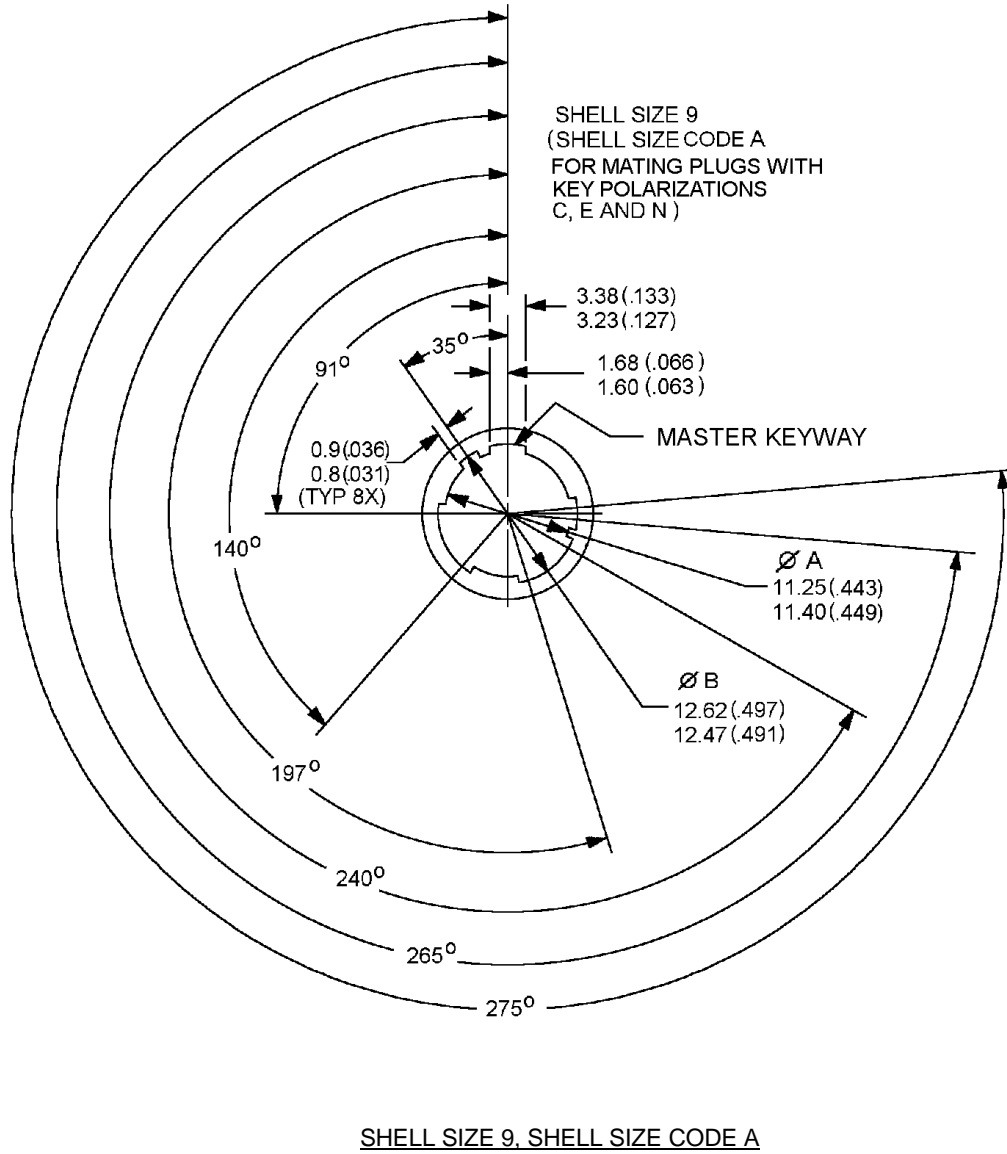
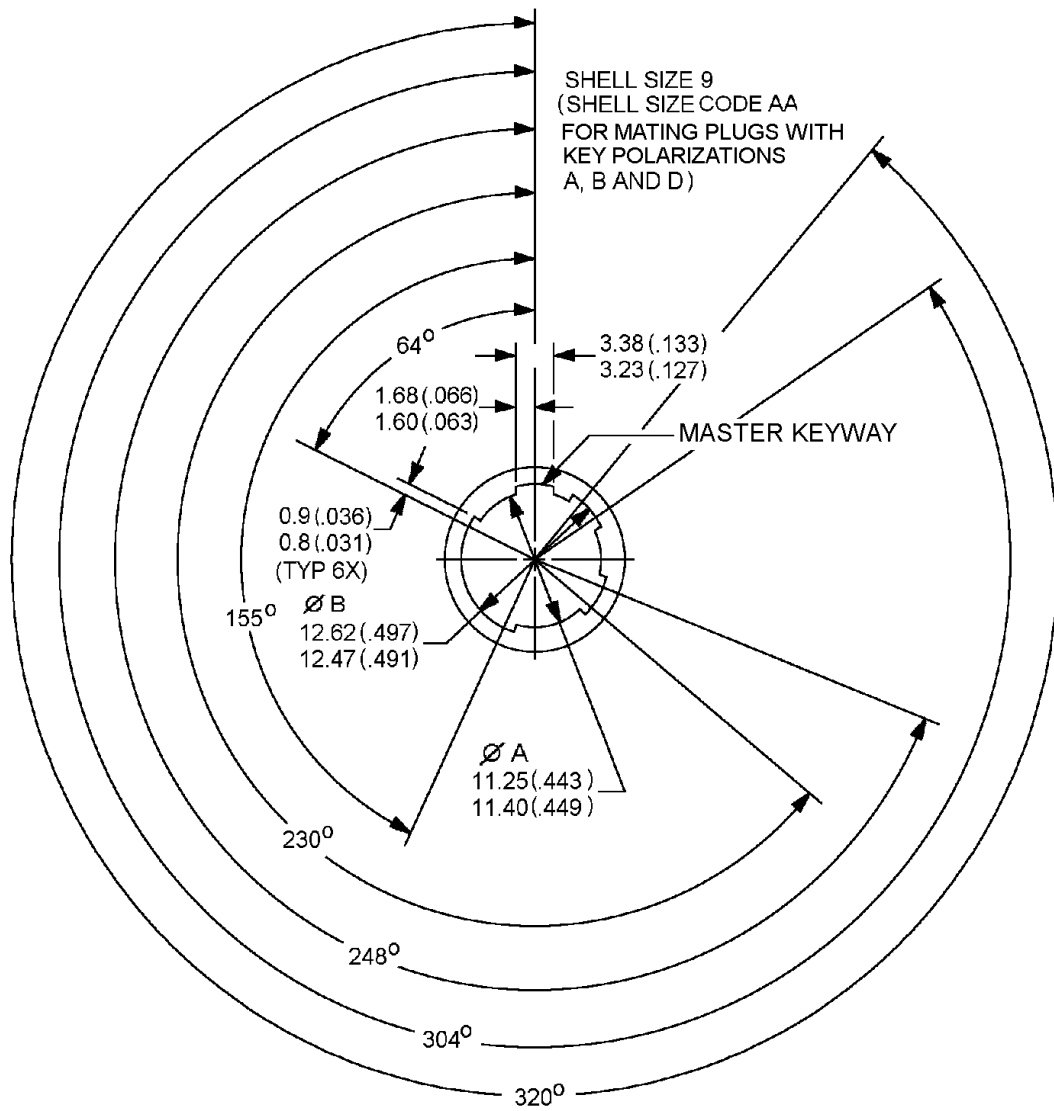


FIGURE 2. Receptacle, keyway arrangements, classes F, G, J, K, M, P, R, T, S, W, X and Z (shell size 9).

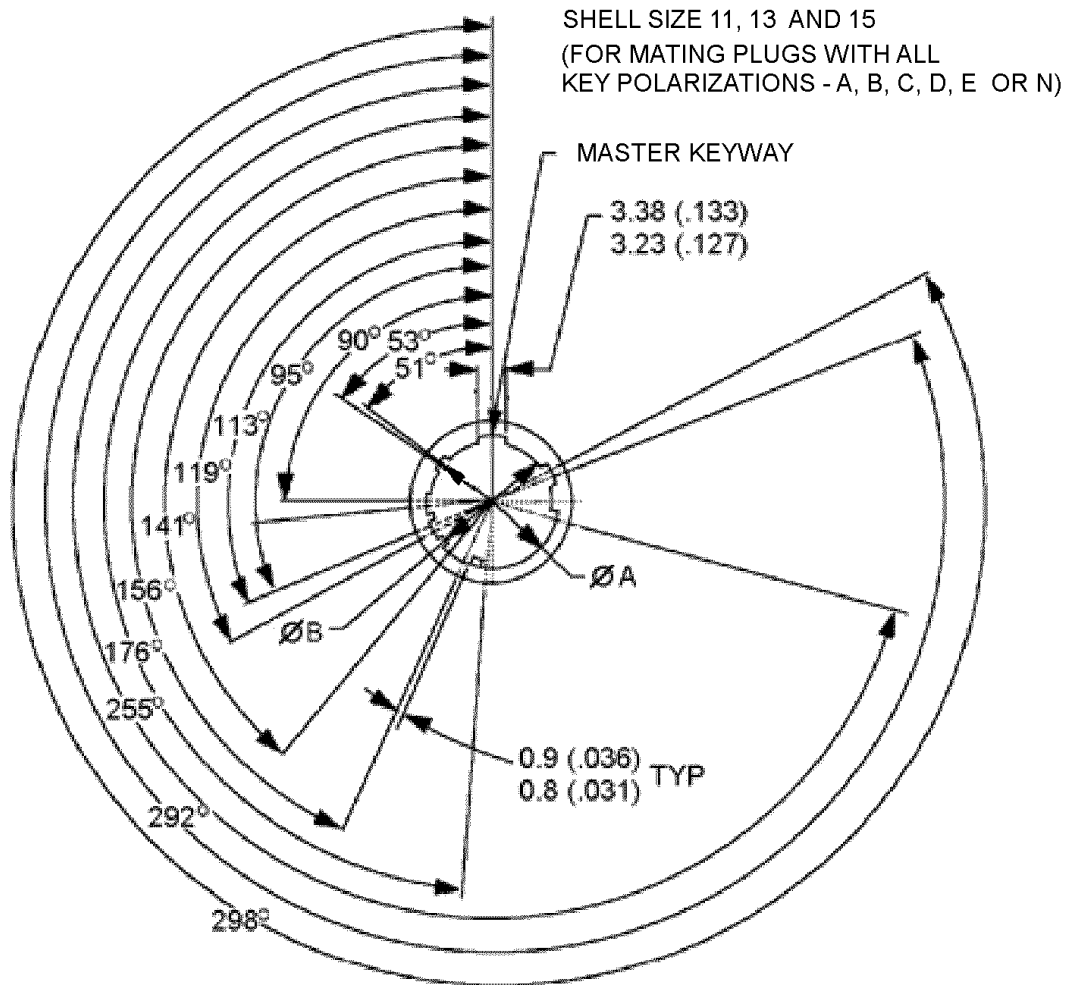


SHELL SIZE 9, SHELL SIZE CODE AA

NOTES:

1. Dimensions are in millimeters.
2. Inch equivalents are given for information only.

FIGURE 2. Receptacle, keyway arrangements, classes F, G, J, K, M, P, R, T, S, W, X and Z (shell size 9) - Continued.



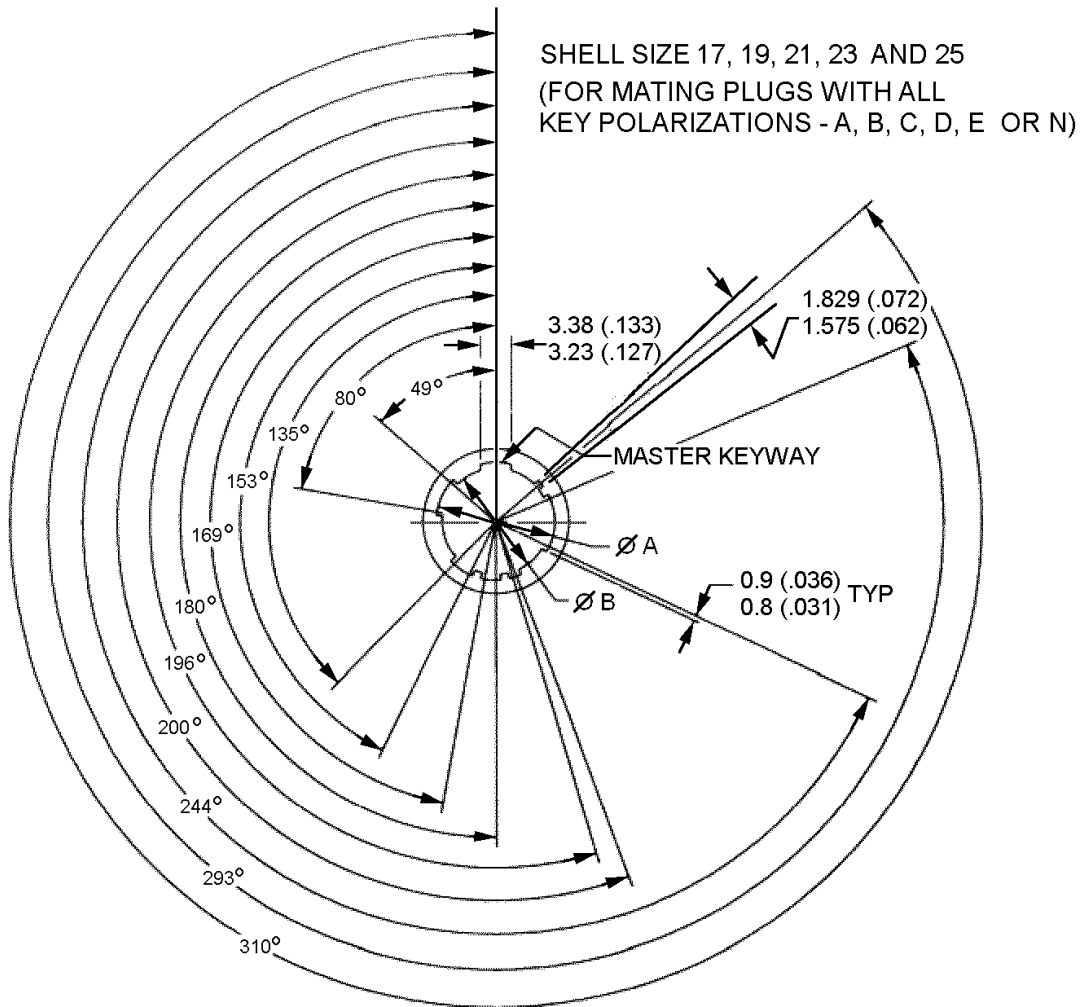
SHELL SIZES 11, 13 AND 15

Shell size	A dia	B dia
11	15.88/15.60 (.625/.614)	14.66/14.45 (.577/.569)
13	19.66/19.38 (.774/.763)	17.50/17.30 (.689/.681)
15	22.84/22.56 (.899/.888)	20.65/20.44 (.813/.805)

NOTES:

1. Dimensions are in millimeters.
2. Inch equivalents are given for information only.

FIGURE 3. Receptacle, keyway arrangement, classes F, G, J, K, M, P, R, S, T, W, X and Z (shell sizes 11, 13 and 15).



SHELL SIZES 17, 19, 21, 23 AND 25

Shell size	A dia	B dia
17	26.01/25.73 (1.024/1.013)	23.85/23.64 (.939/.930)
19	28.63/28.40 (1.127/1.118)	26.55/26.31 (1.045/1.036)
21	31.85/31.57 (1.254/1.243)	29.70/29.49 (1.169/1.161)
23	35.03/34.75 (1.379/1.368)	32.85/32.66 (1.293/1.286)
25	38.20/37.92 (1.504/1.493)	36.00/35.84 (1.417/1.411)

FIGURE 4. Receptacle, keyway arrangement, classes F, G, J, K, M, P, R, S, T, W, X and Z (shell sizes 17, 19, 21, 23 and 25).

MIL-DTL-38999/22H

REQUIREMENTS:

Dimensions and configurations: See figures 1 thru 4. Interface dimensions shall conform to MIL-DTL-38999, except as noted.

This connector mates with MIL-DTL-38999/26, MIL-DTL-38999/29, MIL-DTL-38999/30, and MIL-DTL-38999/31.

Air leakage: Testing shall be in accordance with EIA-364-02, except the minimum period of measurement shall be 10 seconds. The air leakage rate shall be no greater than 1 atmospheric cubic inch per hour ( $4.55 \times 10^{-3} \text{ cm}^3/\text{s}$ ). Stowage receptacles shall be mated to connectors having either contacts or inserts removed so that a pressure of 10 lbft/in<sup>2</sup> (.703 Kg/cm<sup>2</sup>) can be applied against the insides of the stowage receptacles.

Qualification (all classes). Qualification shall be in accordance with MIL-DTL-38999, conducted on two samples of each shell size, except only the following sequence of tests shall be required:

- Examination of product
- Coupling torque
- Dynamic salt spray (corrosion)
- Air leakage (see requirement)
- Visual and mechanical

Qualification (classes J and M only): Qualification shall be in accordance with MIL-DTL-38999, except that in addition to the test sequence specified for all classes above, the following tests shall be required:

- Temperature cycling
- Hydrolytic stability

Group A sampling inspection. Sampling for group A inspection shall be as specified in table I.

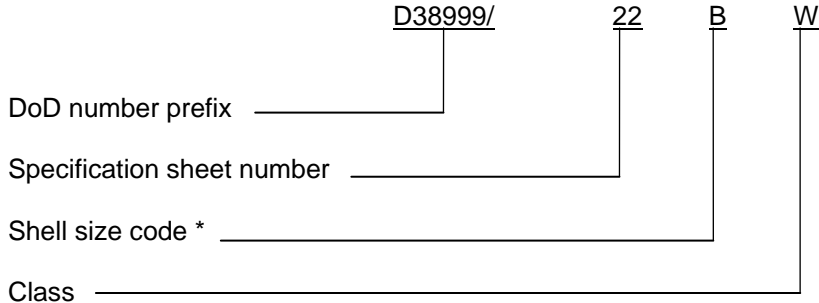
TABLE I. Group A sampling plan.

Lot size	Sampling size
1 to 13	100 percent
14 to 150	13 units
151 to 280	20 units
281 to 500	29 units
501 to 1,200	34 units
1,201 to 3,200	42 units
3,201 and up	54 units



MIL-DTL-38999/22H

Part or Identifying Number (PIN) example:



\* NOTE: For shell size 9 only:

- Shell size code A is for use with plugs with mating key polarizations "C", "E" or "N".
- Shell size code AA is for use with plugs with mating key polarizations "A", "B" or "D".

Class F is not for Navy use. Class F is inactive for use in Air Force new design.

NOTE: The term PIN is equivalent to the term (part number, identification number, and type designator) which was previously used in this specification.

Change effectivity. Unless otherwise specified by the preparing activity and/or the qualifying activity, all changes from the previous revision of this specification sheet shall become effective within 90 days of the date of publication of the latest revision. If unable to implement changes within the 90 day time period, the manufacturer or value added distributor shall notify the qualifying activity. The qualifying activity shall determine if an extension may be granted.

Disposition of stock. Unless otherwise specified by the qualifying activity and coordinated with the preparing activity, qualified manufacturers and their selling agents or distributors may continue to ship stowage receptacles which were manufactured in accordance with the previous revision of this specification sheet for a period of 18 months from the date of the latest revision, provided that form, fit and function are not affected.

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. 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 and relationship to the last previous issue.

Referenced documents. In addition to MIL-DTL-38999, this document references the following:

- MIL-DTL-38999/26
- MIL-DTL-38999/29
- MIL-DTL-38999/30
- MIL-DTL-38999/31
- EIA-364-02

MIL-DTL-38999/22H

CONCLUDING MATERIAL

Custodians:

Army - CR  
Navy - AS  
Air Force – 85  
DLA - CC

Preparing activity:

DLA - CC

(Project 5935-2012-217)

Review activities:

Army - AR, MI  
Navy - EC, MC, OS  
Air Force - 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.