

INCH-POUND

MIL-DTL-83723/85G
w/AMENDMENT 3
8 March 2024
SUPERSEDING
MIL-DTL-83723/85G
w/AMENDMENT 2
6 February 2018

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, CIRCULAR, ENVIRONMENT RESISTING,
RECEPTACLE, JAM NUT MOUNT, THREADED COUPLING, CRIMP PIN CONTACT,
SERIES III, CLASSES A, G, K, M, N, R, S, T, W AND Z

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-83723.

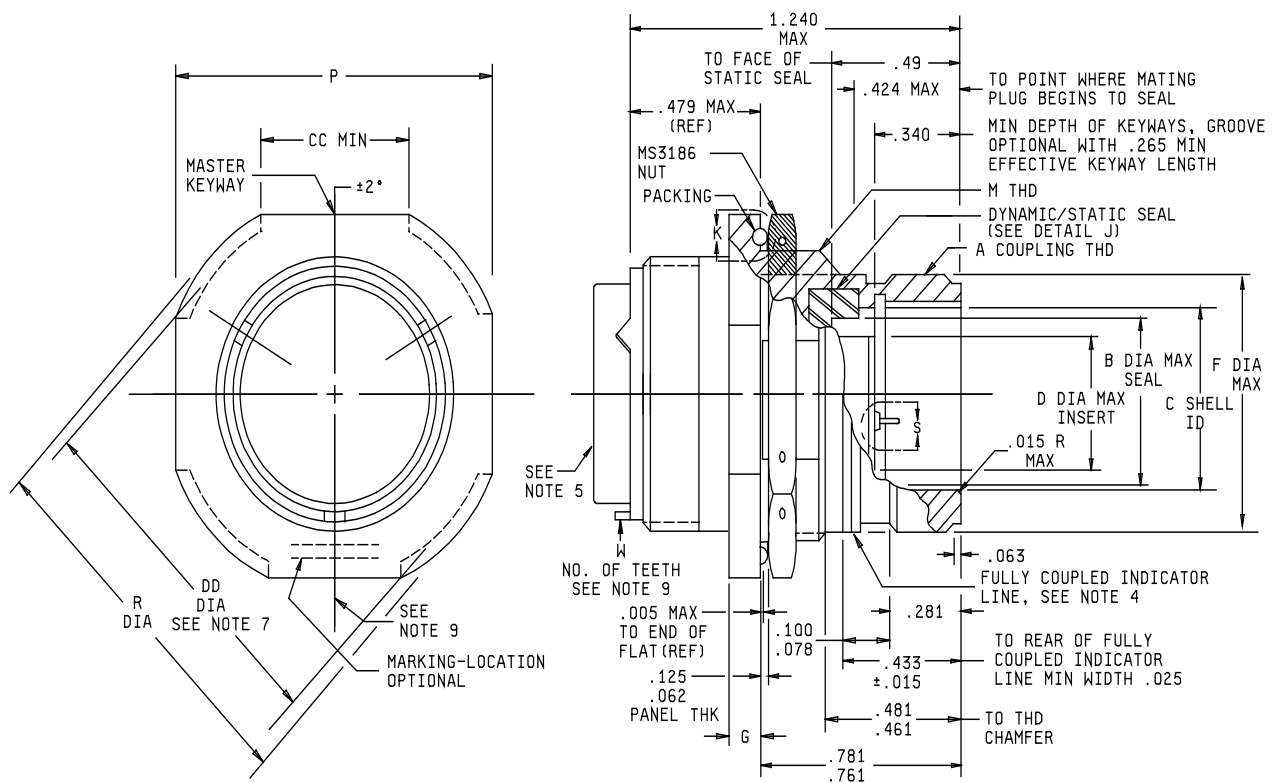


FIGURE 1. Classes A, G, K, M, R, T, W and Z.



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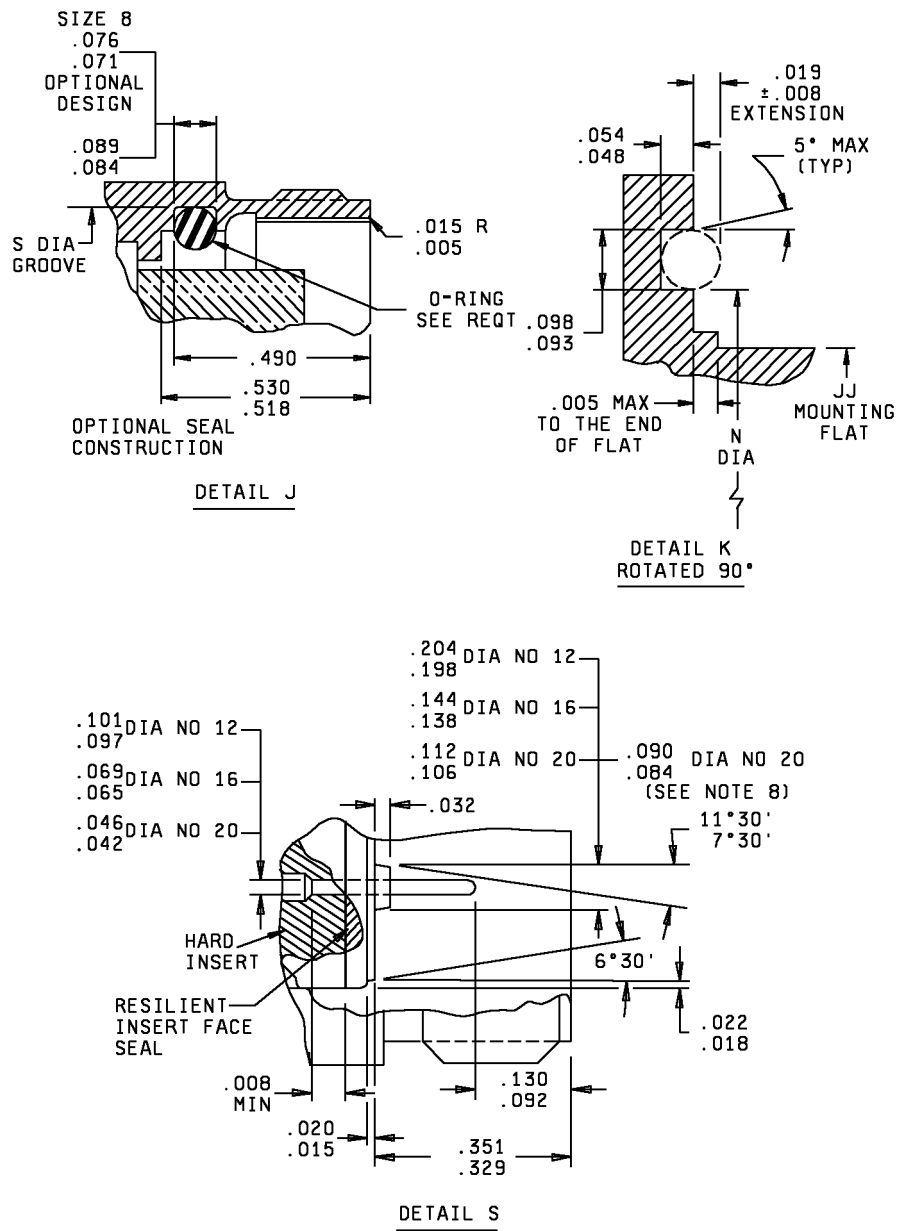


FIGURE 1. Classes A, G, K, M, R, T, W and Z - Continued.

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NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are $\pm .005$ (0.13 mm) for three place decimals and $\pm .01$ (0.25 mm) for two place decimals and $\pm 1^\circ$ for all angles.
4. Coupling indicator line shall be color coded red.
5. Rear accessory interchangeability dimensions shall be in accordance with MIL-DTL-83723.
6. Shell size 8 will not mate with MIL-DTL-26500 connectors.
7. Phantomed configuration optional.
8. See table I for contact cavities requiring this dimension.
9. The centerline of indicated projection must be located on vertical centerline $\pm 2^\circ$.

FIGURE 1. Classes A, G, K, M, R, T, W and Z - Continued.

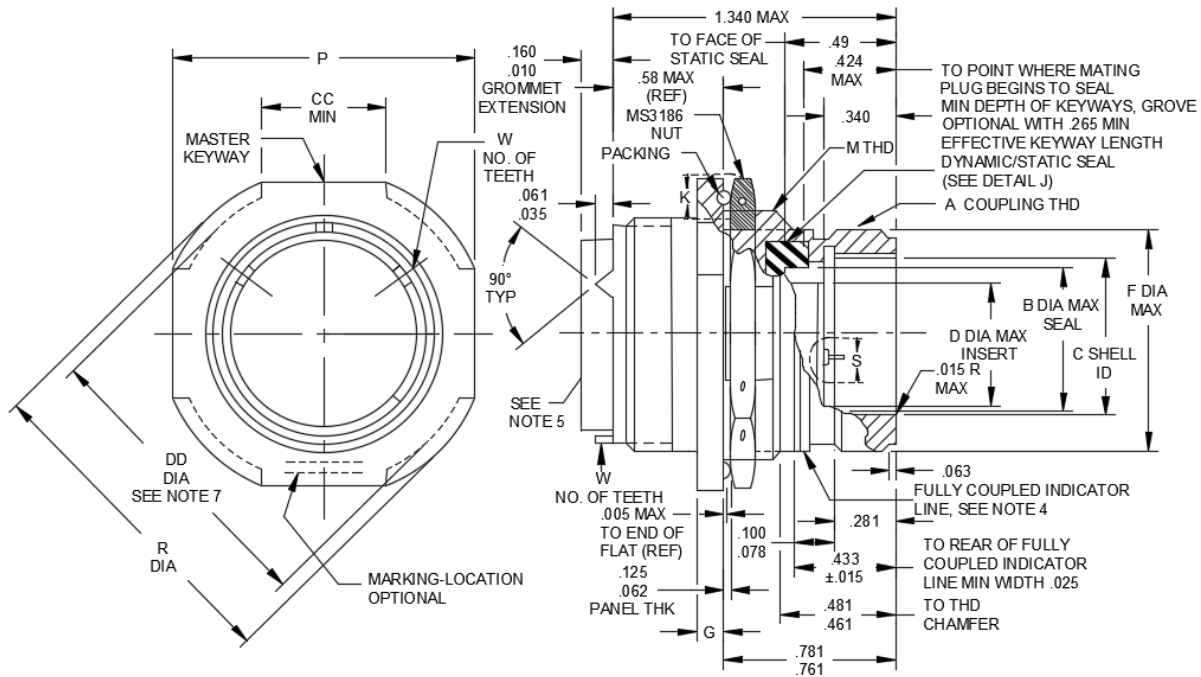


FIGURE 2. Classes N and S.

SIZE 8
 .076
 .071
 OPTIONAL DESIGN
 .089
 .084
 S DIA GROOVE
 .015 R
 .005
 O-RING SEE REPT
 .490
 .530
 .518
 OPTIONAL SEAL CONSTRUCTION

Technical drawing of Detail K, showing a cross-section of a part with a hole. Dimensions include .054, .048, .019 ±.008 EXTENSION, 5° MAX (TYP), .098, .093, and N DIA. The drawing is labeled DETAIL K.

Technical drawing of a mechanical part, likely a valve or plug, showing a cross-section with various dimensions and labels. The part features a central bore with a tapered section. Labels include "HARD INSERT" pointing to a hatched area, "RESILIENT INSERT FACE SEAL" pointing to a seal area, and "RESILIENT INSERT" pointing to the outer ring. Dimensions are given in inches, including diameters (DIA NO 12, DIA NO 16, DIA NO 20), radii (.032, .130, .092), and angles (11°30', 7°30', 6°30'). A minimum dimension of .008 is specified for a gap.

DETAIL S

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NOTES:

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4. Coupling indicator line shall be color coded red.
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8. See table I for contact cavities requiring this dimension.
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FIGURE 2. Classes N and S - Continued.

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Shell size	A thread	B max	D max	F max
08	.562-24 UNEF-2A	.394 (10.01)	.290 (7.37)	.562 (14.27)
10	.688-24 UNEF-2A	.515 (13.08)	.388 (9.86)	.696 (17.68)
12	.875-20 UNEF-2A	.685 (17.40)	.558 (14.17)	.875 (22.23)
14	.938-20 UNEF-2A	.754 (19.15)	.627 (15.93)	.936 (23.77)
16	1.062-18 UNEF-2A	.881 (22.38)	.772 (19.61)	1.062 (26.97)
18	1.188-18 UNEF-2A	.987 (25.07)	.860 (21.84)	1.187 (30.15)
20	1.312-18 UNEF-2A	1.112 (28.24)	.985 (25.02)	1.312 (33.32)
22	1.438-18 UNEF-2A	1.237 (31.42)	1.110 (28.19)	1.437 (36.50)
24	1.562-18 UNEF-2A	1.362 (34.59)	1.235 (31.37)	1.562 (39.67)

Shell size	C	G	M thread
08	.418 (10.62) .413 (10.49)	.137 (3.48) .097 (2.46)	.625-25 UN-2A
10	.535 (13.59) .530 (13.46)		.750-20 UNEF-2A
12	.705 (17.91) .700 (17.78)		.938-20 UNEF-2A
14	.774 (19.66) .769 (19.53)		1.000-20 UNEF-2A
16	.901 (22.89) .896 (22.76)		1.125-18 UNEF-2A
18	1.007 (25.58) 1.002 (25.45)		1.250-18 UNEF-2A
20	1.132 (28.75) 1.127 (28.63)		1.375-18 UNEF-2A
22	1.257 (31.93) 1.252 (31.80)	.148 (3.76) .128 (3.25)	1.500-18 UNEF-2A
24	1.382 (35.10) 1.377 (34.98)	.168 (4.27) .128 (3.25)	1.625-18 UNEF-2A

FIGURE 3. Dimensions and configurations.

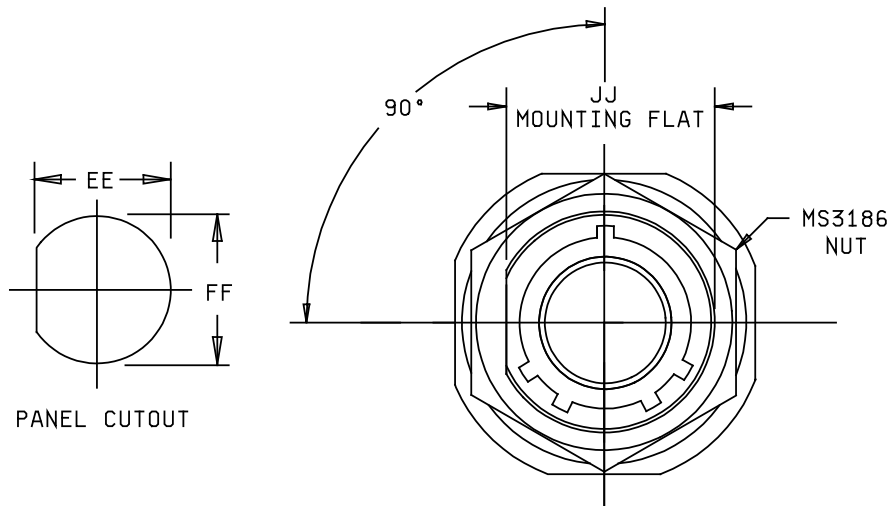
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Shell size	N	P	R
08	.670 (17.02)	.980 (24.89) .949 (24.10)	1.078 (27.38) 1.047 (26.59)
10	.796 (20.22)	1.104 (28.04) 1.073 (27.25)	1.192 (30.28) 1.161 (29.49)
12	.984 (24.99)	1.291 (32.79) 1.260 (32.00)	1.380 (35.05) 1.349 (34.26)
14	1.046 (26.57)	1.391 (35.33) 1.360 (34.54)	1.561 (39.65) 1.485 (37.72)
16	1.171 (29.74)	1.516 (38.51) 1.485 (37.72)	1.641 (41.68) 1.610 (40.89)
18	1.296 (32.92)	1.641 (41.68) 1.610 (40.89)	1.766 (44.86) 1.735 (44.07)
20	1.482 (37.64)	1.766 (44.86) 1.735 (44.07)	1.954 (49.63) 1.923 (48.84)
22	1.609 (40.87)	1.954 (49.63) 1.923 (48.84)	2.078 (52.78) 2.047 (51.99)
24	1.732 (43.99)	2.079 (52.81) 2.084 (52.93)	2.182 (55.42) 2.152 (54.66)

Shell size	S +.005 (.13) / -.000 (.00)	W number of teeth	CC min	DD
08	.490 (12.45)	12	.443 (11.25)	.991 (25.17)
10	.636 (16.15)	15	.443 (11.25)	1.107 (28.12)
12	.806 (20.47)	21	.482 (12.24)	1.295 (32.89)
14	.875 (22.23)	24	.596 (15.14)	1.357 (34.47)
16	1.002 (25.45)	30	.622 (15.80)	1.482 (37.64)
18	1.108 (28.14)	33	.646 (16.41)	1.607 (40.82)
20	1.233 (31.32)	36	.648 (16.46)	1.795 (45.59)
22	1.358 (34.49)	39	.701 (17.81)	1.920 (48.77)
24	1.483 (37.67)	42	.726 (18.44)	2.045 (51.94)

FIGURE 3. Dimensions and configurations - Continued.

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Shell size	EE	FF	JJ
08	.605 (15.37)	.635 (16.13)	.596 (15.14) .590 (14.99)
10	.730 (18.54)	.760 (19.30)	.721 (18.31) .715 (18.16)
12	.917 (23.29)	.947 (24.05)	.908 (23.06) .902 (22.91)
14	.980 (24.89)	1.010 (25.65)	.971 (24.66) .965 (24.51)
16	1.105 (28.07)	1.135 (28.83)	1.096 (27.84) 1.090 (27.69)
18	1.229 (31.22)	1.260 (32.00)	1.220 (30.99) 1.214 (30.84)
20	1.354 (34.39)	1.385 (35.18)	1.345 (34.16) 1.339 (34.01)
22	1.479 (37.57)	1.510 (38.35)	1.470 (37.34) 1.464 (37.19)
24	1.604 (40.74)	1.635 (41.53)	1.595 (40.51) 1.589 (40.36)

FIGURE 3. Dimensions and configurations - Continued.

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4. Coupling indicator line shall be color coded red.
5. Rear accessory interchangeability dimensions shall be in accordance with MIL-DTL-83723.
6. Shell size 8 will not mate with MIL-DTL-26500 connectors.
7. Phantom configuration optional.
8. See table I for contact cavities requiring this dimension.
9. The centerline of indicated projection must be located on vertical centerline $\pm 2^\circ$.

FIGURE 3. Dimensions and configurations - Continued.

REQUIREMENTS:

Dimensions and configurations: See figures 1 and 3 for classes A, G, K, M, R, T, W and Z. See figures 2 and 3 for classes N and S. (Dimension W on figure 3 does not apply for classes A, G, K, M, R, T, W and Z).

This connector mates with MIL-DTL-83723/86, MIL-DTL-83723/91, MIL-DTL-83723/95 and MIL-DTL-83723/97.

Insert arrangements and polarizing positions: See MIL-STD-1554 and table I.

TABLE I. Insert arrangements requiring reduced diameter for raised seal barriers on outer row of contact cavities as indicated.

Shell size	Insert arrangements	Contact cavities
08	03, 98	1, 2, 3
10	06	1, 2, 3, 4, 5, 6

O-ring: See MIL-DTL-83723.

Part or Identifying Number (PIN) example:

M83723/ 85 W 08 55 N

<u>M83723/</u>	Military designation
<u>85</u>	Specification sheet number
<u>W</u>	Class
<u>08</u>	Shell size
<u>55</u>	Insert arrangement
<u>N</u>	Polarizing position

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

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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-83723, this document references the following:

MIL-STD-1554
MIL-DTL-26500
MIL-DTL-83723/86
MIL-DTL-83723/91
MIL-DTL-83723/95
MIL-DTL-83723/97
MS3186

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project 5935-2024-064)

Review activities:

Army - AR, MI
Navy - EC
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>.