

INCH-POUND

MIL-DTL-83723/66B
29 June 2009
SUPERSEDING
MIL-C-83723/66A (USAF)
17 December 1991

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, (CIRCULAR, ENVIRONMENT RESISTING),
PLUG, THREADED COUPLING, (PUSH-PULL, QUICK-DISCONNECT WITHOUT LANYARD), CRIMP
PIN CONTACT, SERIES III, CLASSES A, G, M, R, 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.

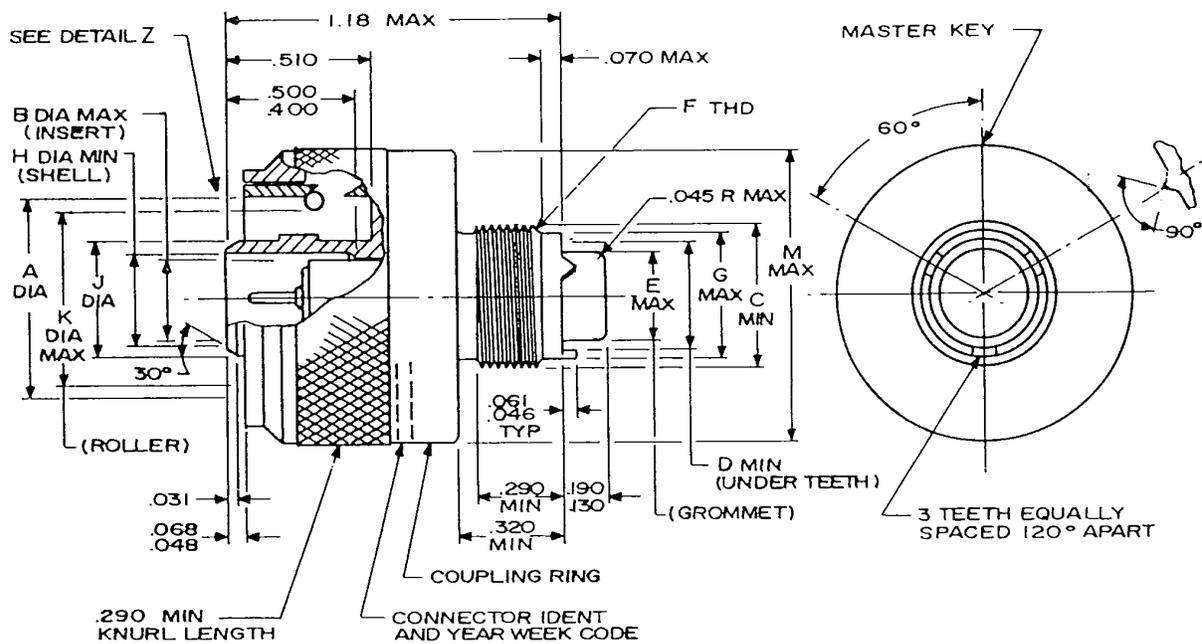
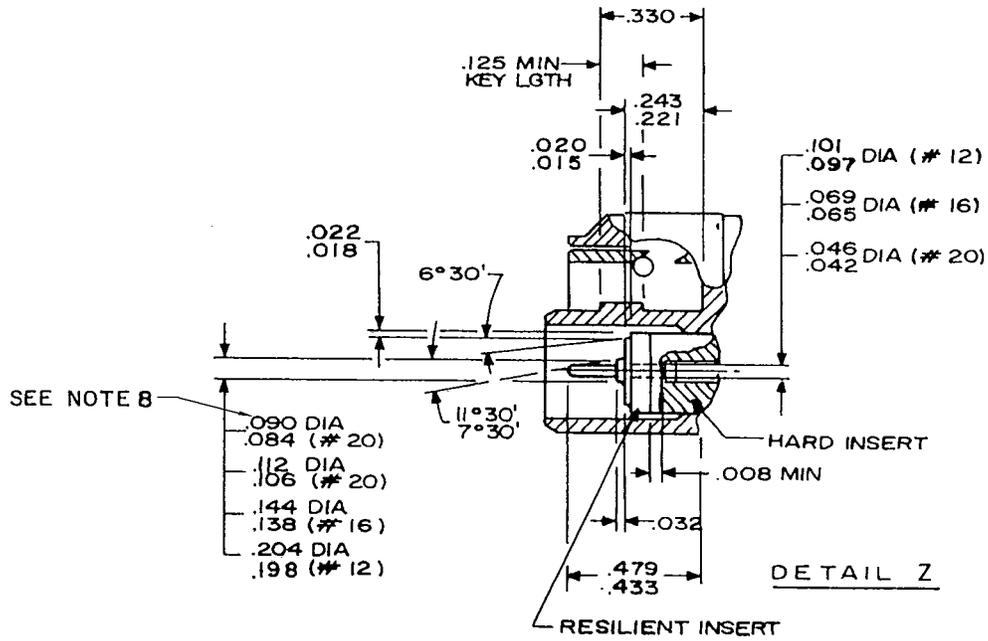


FIGURE 1. Plug, threaded coupling, dimensions and configurations.



Inches	mm								
.008	0.20	.045	1.14	.084	2.13	.144	3.66	.330	8.38
.015	0.38	.046	1.17	.090	2.29	.190	4.83	.400	10.16
.018	0.46	.061	1.55	.101	2.57	.198	5.03	.433	11.00
.020	0.51	.065	1.65	.106	2.69	.204	5.18	.479	12.17
.022	0.56	.065	1.65	.112	2.84	.221	5.61	.500	12.70
.031	0.79	.068	1.73	.125	3.18	.243	6.17	.510	12.95
.032	0.81	.069	1.75	.130	3.30	.290	7.37	1.18	29.97
.042	1.07	.070	1.78	.138	3.51	.320	8.13		

FIGURE 1. Plug, threaded coupling, dimensions and configurations - Continued.

MIL-DTL-83723/66B

Shell size	A	B	C	D	E	F thread	G	H
8	.704 (17.88)	.290 (7.37)	.470 (11.94)	.370 (9.40)	.305 (7.75)	.500-20 UNF-2A	.437 (11.10)	.294 (7.47)
10	.829 (21.06)	.388 (9.86)	.600 (15.24)	.497 (12.62)	.405 (10.29)	.625-24 UNEF-2A	.572 (14.53)	.428 (10.87)
12	1.016 (25.81)	.588 (14.94)	.724 (18.39)	.613 (15.57)	.531 (13.49)	.750-20 UNEF-2A	.687 (17.45)	.598 (15.19)
14	1.079 (27.41)	.627 (15.93)	.849 (21.56)	.738 (18.75)	.665 (16.89)	.875-20 UNEF-2A	.812 (20.62)	.667 (16.94)
16	1.204 (30.58)	.772 (19.61)	.974 (24.74)	.863 (21.92)	.790 (20.07)	1.000-20 UNEF-2A	.937 (23.80)	.794 (20.17)
18	1.345 (34.16)	.860 (21.84)	1.030 (26.16)	.919 (23.34)	.869 (22.07)	1.0625-18 UNEF-2A	.992 (25.20)	.900 (22.86)
20	1.470 (37.34)	.985 (25.02)	1.154 (29.31)	1.044 (26.52)	.994 (25.25)	1.1875-18 UNEF-2A	1.117 (28.37)	1.025 (26.04)
22	1.595 (40.51)	1.110 (28.19)	1.279 (32.49)	1.169 (29.69)	1.119 (28.42)	1.3125-18 UNEF-2A	1.242 (31.55)	1.150 (29.21)
24	1.720 (43.69)	1.235 (31.37)	1.404 (35.66)	1.294 (32.87)	1.244 (31.60)	1.4375-18 UNEF-2A	1.367 (34.72)	1.275 (32.39)

Shell size	J	K	M
8	.405 (10.29) .396 (10.06)	.612 (15.54)	1.095 (27.81)
10	.526 (13.36) .517 (13.13)	.737 (18.72)	1.240 (31.50)
12	.696 (17.68) .687 (17.45)	.925 (23.50)	1.432 (36.37)
14	.765 (19.43) .756 (19.20)	.987 (25.07)	1.490 (37.85)
16	.892 (22.66) .883 (22.43)	1.112 (28.24)	1.711 (43.46)
18	.998 (25.35) .989 (25.12)	1.237 (31.42)	1.815 (46.10)
20	1.123 (28.52) 1.114 (28.30)	1.362 (34.59)	1.962 (49.83)
22	1.248 (31.70) 1.239 (31.47)	1.487 (37.77)	2.070 (52.58)
24	1.373 (34.87) 1.364 (34.65)	1.612 (40.94)	2.195 (55.75)

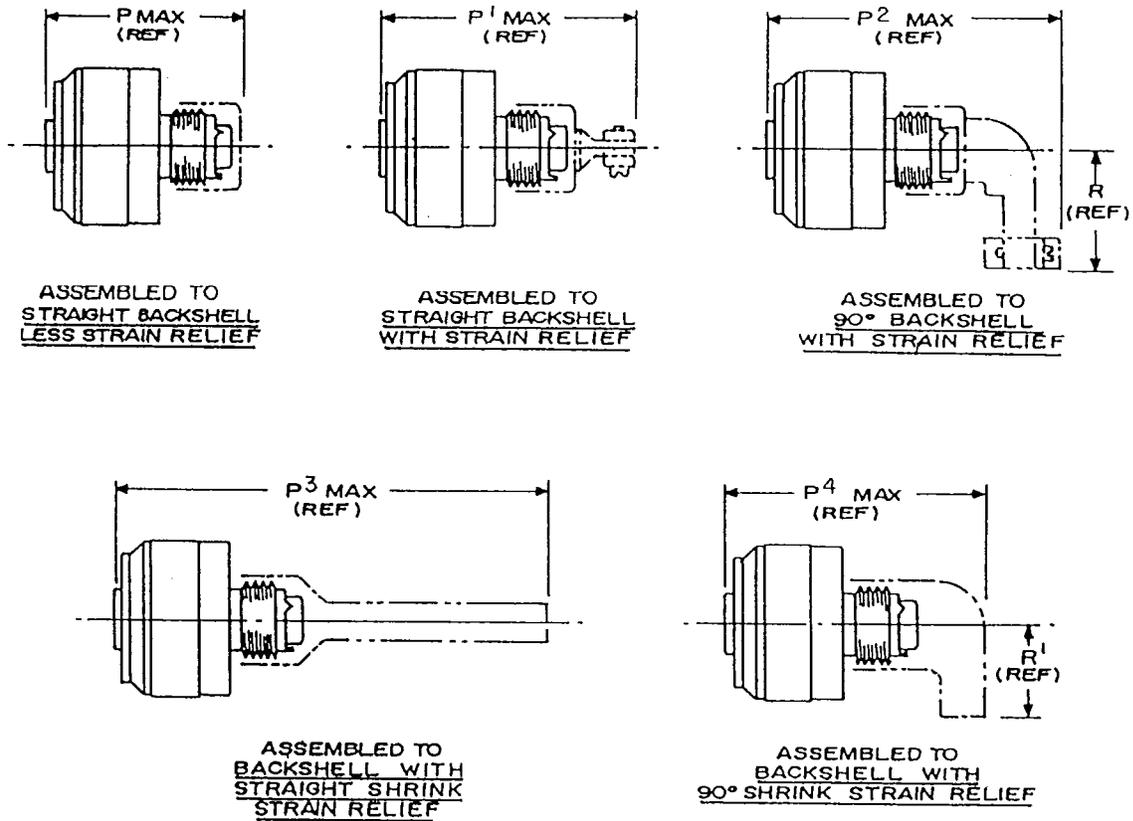
FIGURE 1. Plug, threaded coupling, dimensions and configurations - Continued.

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only. Metric equivalents are in parentheses.
3. Unless otherwise specified, tolerances are $\pm .010$ (0.25) for two place decimals, $\pm .005$ (0.13) for three place decimals, and $\pm 1^\circ$ and $\pm 30'$ for angular dimensions.
4. The dimensions showing the relationship of the coupling ring to the shell apply only when the coupling ring is in the full forward position.
5. This quick-disconnect connector plug is intended to be used with series III threaded coupling receptacles MIL-DTL-83723/82 and MIL-DTL-83723/84, with adapter MIL-DTL-83723/70 permanently attached to the receptacle.
6. Coupling of the quick-disconnect plug connector is to be accomplished by a straight axial push with no cocking of the coupling mechanism.
7. Uncoupling of the quick-disconnect plug connector is to be accomplished by a straight axial pull on the outer coupling ring.
8. See table I for contact cavities requiring this dimension.

FIGURE 1. Plug, threaded coupling, dimensions and configurations - Continued.

MIL-DTL-83723/66B



Shell size	P	P1	P2	P3	P4	R	R1
8	1.457 (37.01)	1.869 (47.47)	2.018 (51.26)	5.838 (148.29)	1.848 (46.94)	.830 (21.08)	4.585 (116.46)
10	1.457 (37.01)	1.979 (50.27)	2.100 (53.34)	6.528 (165.81)	1.888 (47.96)	.880 (22.35)	5.390 (136.91)
12	1.457 (37.01)	2.124 (53.95)	2.293 (58.24)	7.348 (186.64)	1.928 (48.97)	.950 (24.13)	6.330 (160.78)
14	1.457 (37.01)	2.124 (53.95)	2.353 (59.77)	7.348 (186.64)	1.928 (48.97)	1.010 (25.65)	6.330 (160.78)
16	1.457 (37.01)	2.229 (56.62)	2.502 (63.55)	8.068 (204.93)	2.028 (51.51)	1.070 (27.18)	6.710 (170.43)
18	1.457 (37.01)	2.474 (62.84)	2.614 (66.40)	8.068 (204.93)	2.028 (51.51)	1.130 (28.70)	6.710 (170.43)
20	1.457 (37.01)	2.604 (66.14)	2.739 (69.57)	9.068 (230.33)	2.148 (54.56)	1.190 (30.23)	7.740 (196.60)
22	1.457 (37.01)	2.729 (69.32)	2.864 (72.75)	9.068 (230.33)	2.148 (54.56)	1.260 (32.00)	7.740 (196.60)
24	1.457 (37.01)	2.854 (72.49)	2.989 (75.92)	9.068 (230.33)	2.228 (56.59)	1.320 (33.53)	8.030 (203.96)

FIGURE 2. Plug and backshell assembly, dimensions and configurations.

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only. Metric equivalents are in parentheses.
3. Unless otherwise specified, tolerances are $\pm .010$ (0.25) for two place decimals, $\pm .005$ (0.13) for three place decimals, and $\pm 1^\circ 30'$ for angular dimensions.

FIGURE 2. Plug and backshell assembly, dimensions and configurations – Continued.

REQUIREMENTS:

Dimensions and configurations: See figures 1 and 2.

For insert arrangements, see MIL-STD-1554 and table I.

TABLE I. Inserts requiring reduced diameters for raised seal barriers on the outer row of the contact cavities.

Shell size	Insert arrangements	Contact cavities
8	03	1, 2, 3
10	06	1, 2, 3, 4, 5, 6

For connector accessories: See SAE-AS85049 and MIL-C-83723/16.

Unless otherwise specified in the purchase order, the following components shall be furnished with the connector:

- a. Contacts in accordance with SAE-AS39029 shall be furnished with the connector. Spare contacts for each size contact are required. The total quantity of spare contacts shall be 10 percent or 1, whichever is greater, of the total number of each size contact required.
- b. Grommet seal plugs in accordance with MS27488 shall be furnished with the connector. Total quantity shall be 15 percent of each contact size or 3, whichever is greater.
- c. Contact extraction tools in accordance with MIL-I-81969 shall be included in the connector package.

Connector assembly shall include a backshell (see SAE-AS85049 and MIL-C-83723/16) to ensure compliance with moisture sealing requirements.

The coupling mechanism of the connector plug shall withstand a minimum tensile load of 100 lb (45.36 kg) minimum. Load shall be applied to rear accessory hardware in a straight axial direction.

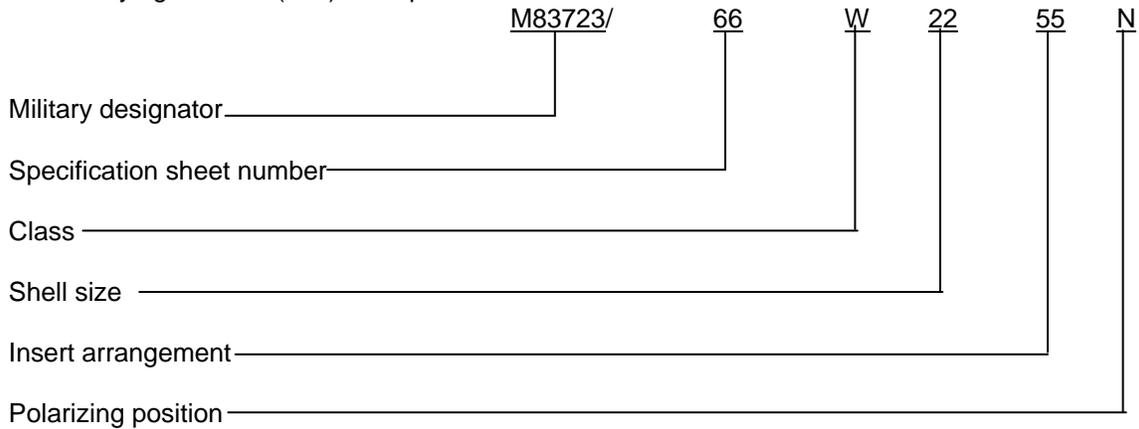
The quick-disconnect connector plug shall meet the vibration and shock requirements in accordance with MIL-DTL-83723 and the coupling mechanism shall maintain the plug and receptacle in a locked condition.

The tensile force required to unlock the coupling mechanism shall be 5 lb (2.27 kg) minimum and 20 lb (9.07 kg) maximum.

The locking mechanism shall meet the performance requirements of MIL-DTL-83723.

MIL-DTL-83723/66B

Part or Identifying Number (PIN) example:



Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Referenced documents. In addition to MIL-DTL-83723, this document references the following:

- MIL-STD-1554
- MS27488
- MIL-I-81969
- MIL-C-83723/16
- MIL-DTL-83723/70
- MIL-DTL-83723/82
- MIL-DTL-83723/84
- SAE-AS39029
- SAE-AS85049

CONCLUDING MATERIAL

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

Preparing activity:
DLA - CC
(Project 5935-2008-102)

Review activities:
Air Force – 70, 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 <http://assist.daps.dla.mil>.