

INCH-POUND

MIL-DTL-83723/88E
1 October 2010
SUPERSEDING
MIL-DTL-83723/88D
23 May 2003

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, (CIRCULAR, ENVIRONMENT RESISTING),
RECEPTACLE, (FLANGE MOUNT, THREADED COUPLING, SOLDER PIN CONTACT),
(SERIES III, CLASSES H, J, L, N, P AND Y)

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.

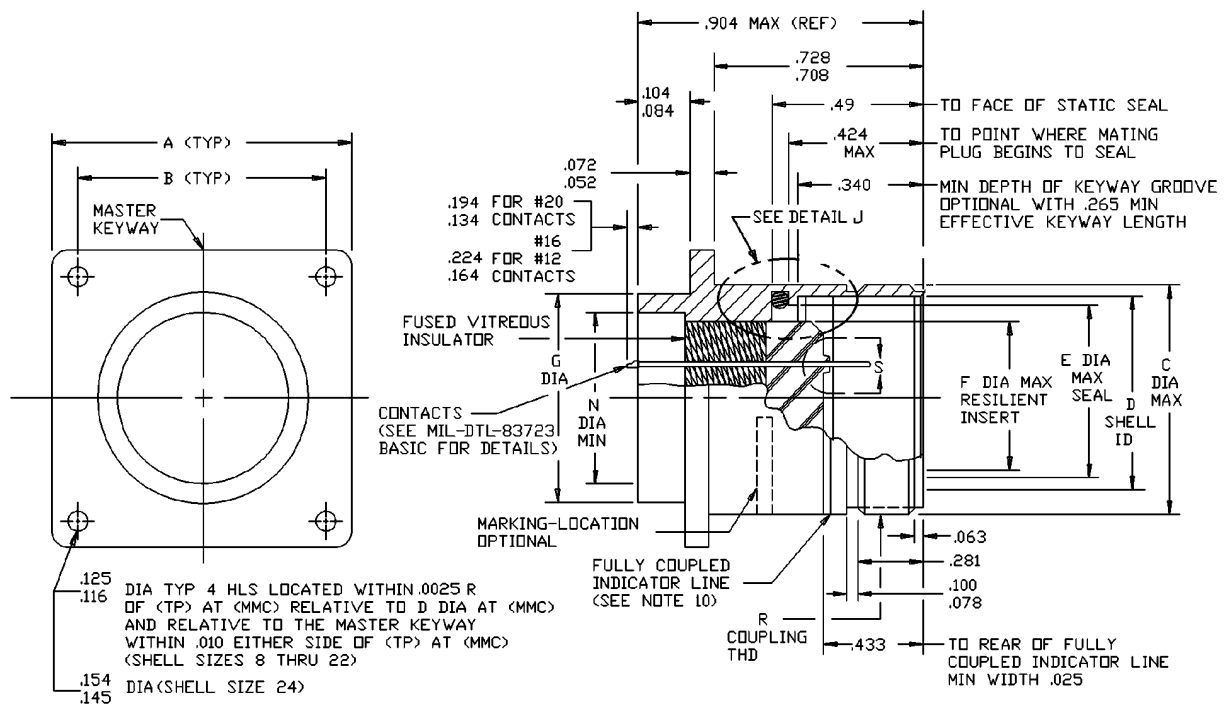


FIGURE 1. Dimensions and configurations.

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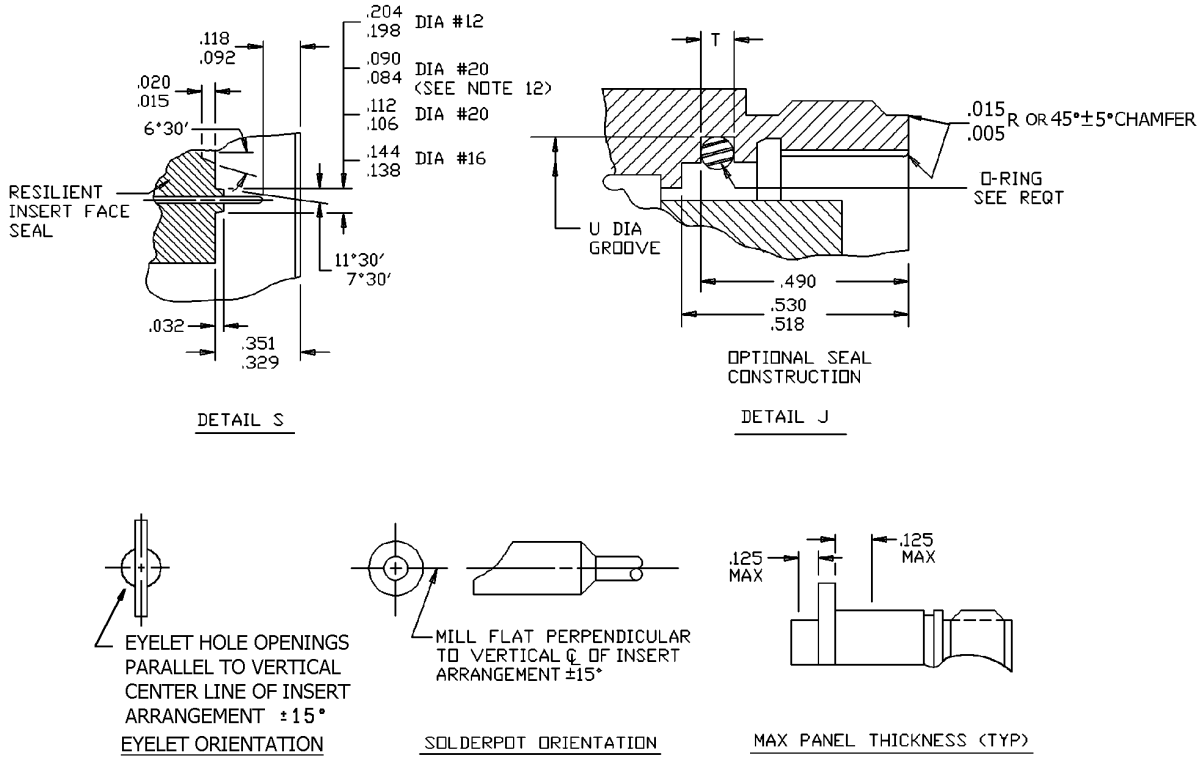


FIGURE 1. Dimensions and configurations – Continued.

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Shell size	A	B	C	D	E	F	G
8	.812	.594	.562	.418 .413	.394	.290	.500 .494
10	.937	.719	.696	.535 .530	.515	.388	.562 .556
12	1.031	.812	.875	.705 .700	.685	.558	.750 .744
14	1.125	.906	.936	.774 .769	.754	.627	.812 .806
16	1.250	.969	1.062	.901 .896	.881	.772	.937 .931
18	1.343	1.062	1.187	1.007 1.002	.987	.860	1.062 1.056
20	1.437	1.156	1.312	1.132 1.127	1.112	.985	1.187 1.181
22	1.562	1.250	1.437	1.257 1.252	1.237	1.110	1.312 1.306
24	1.703	1.375	1.562	1.382 1.377	1.362	1.235	1.437 1.431

FIGURE 1. Dimensions and configurations – Continued.

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Shell size	N	Panel cutout dia	R thread UNEF-2A	T	U +.005 -.000
8	.400	.572	.562-24	.076 .071	.490
10	.411	.706	.688-24	.089 .084	.636
12	.581	.885	.875-20	.089 .084	.806
14	.650	.946	.938-20	.089 .084	.875
16	.777	1.072	1.062-18	.089 .084	1.002
18	.864	1.197	1.188-18	.089 .084	1.108
20	1.034	1.322	1.312-18	.089 .084	1.233
22	1.133	1.447	1.438-18	.089 .084	1.358
24	1.284	1.572	1.562-18	.089 .084	1.483

FIGURE 1. Dimensions and configurations – Continued.

.00050	Inches	0.00127	mm	.118	Inches	3.00	mm	.500	Inches	12.70	mm	.812	Inches	20.62	mm	1.156	mm	29.36
.0025	Inches	0.063	mm	.125	Inches	3.18	mm	.515	Inches	13.08	mm	.860	Inches	21.84	mm	1.181	mm	30.00
.003	Inches	0.08	mm	.134	Inches	3.40	mm	.518	Inches	13.25	mm	.875	Inches	22.22	mm	1.187	mm	30.15
.004	Inches	0.10	mm	.138	Inches	3.51	mm	.530	Inches	13.16	mm	.881	Inches	22.38	mm	1.197	mm	30.40
.005	Inches	0.13	mm	.144	Inches	3.66	mm	.535	Inches	13.59	mm	.885	Inches	22.48	mm	1.233	mm	31.32
.015	Inches	0.38	mm	.145	Inches	3.68	mm	.556	Inches	14.12	mm	.896	Inches	22.76	mm	1.235	mm	31.37
.018	Inches	0.46	mm	.154	Inches	3.91	mm	.558	Inches	14.17	mm	.901	Inches	22.89	mm	1.237	mm	31.42
.020	Inches	0.51	mm	.164	Inches	4.17	mm	.562	Inches	14.27	mm	.904	Inches	22.96	mm	1.250	mm	31.75
.022	Inches	0.56	mm	.194	Inches	4.93	mm	.572	Inches	14.53	mm	.906	Inches	23.01	mm	1.252	mm	31.80
.025	Inches	0.64	mm	.198	Inches	5.03	mm	.594	Inches	15.09	mm	.931	Inches	23.65	mm	1.257	mm	31.93
.032	Inches	0.81	mm	.204	Inches	5.18	mm	.627	Inches	15.93	mm	.937	Inches	23.80	mm	1.306	mm	33.17
.052	Inches	1.32	mm	.224	Inches	5.69	mm	.636	Inches	16.15	mm	.946	Inches	24.03	mm	1.312	mm	33.32
.063	Inches	1.60	mm	.265	Inches	6.73	mm	.685	Inches	17.40	mm	.969	Inches	24.61	mm	1.322	mm	33.58
.071	Inches	1.80	mm	.281	Inches	7.14	mm	.700	Inches	17.78	mm	.9842	Inches	24.999	mm	1.343	mm	34.11
.072	Inches	1.83	mm	.290	Inches	7.37	mm	.705	Inches	17.91	mm	.985	Inches	25.02	mm	1.362	mm	34.59
.076	Inches	1.93	mm	.329	Inches	8.36	mm	.706	Inches	17.93	mm	.987	Inches	25.07	mm	1.375	mm	34.93
.078	Inches	1.98	mm	.340	Inches	8.64	mm	.708	Inches	17.98	mm	1.002	Inches	25.45	mm	1.432	mm	36.37
.084	Inches	2.13	mm	.351	Inches	8.92	mm	.719	Inches	18.26	mm	1.007	Inches	25.58	mm	1.437	mm	36.50
.089	Inches	2.26	mm	.388	Inches	9.86	mm	.728	Inches	18.49	mm	1.031	Inches	26.19	mm	1.447	mm	36.75
.090	Inches	2.29	mm	.394	Inches	10.01	mm	.744	Inches	18.90	mm	1.056	Inches	26.82	mm	1.483	mm	37.67
.092	Inches	2.34	mm	.413	Inches	10.49	mm	.750	Inches	19.05	mm	1.062	Inches	26.97	mm	1.562	mm	39.67
.100	Inches	2.54	mm	.418	Inches	10.62	mm	.754	Inches	19.15	mm	1.072	Inches	27.23	mm	1.572	mm	39.93
.104	Inches	2.64	mm	.424	Inches	10.77	mm	.769	Inches	19.43	mm	1.108	Inches	28.14	mm	1.703	mm	43.26
.106	Inches	2.69	mm	.433	Inches	11.00	mm	.772	Inches	19.61	mm	1.110	Inches	28.19	mm			
.112	Inches	2.84	mm	.490	Inches	12.45	mm	.774	Inches	19.66	mm	1.112	Inches	28.24	mm			
.116	Inches	2.95	mm	.494	Inches	12.55	mm	.806	Inches	20.47	mm	1.125	Inches	28.58	mm			

NOTES: (Notes 4 through 9 applicable to contacts only).

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ± 0.05 inches (0.13 mm) for three place decimals, ± 0.01 inches (0.25mm) for two place decimals and $\pm 1^\circ$ for all angles.
4. Contact finish: Gold plate .00050 inch (0.00127 mm) minimum in accordance with ASTM B488. A suitable underplating shall be used. Silver shall not be used. Finish is applied after sealing.
5. Dimensions apply after plating.
6. Surface finish: 63 () all over in accordance with ASME-B46.1, unless otherwise specified.
7. Remove all burrs and sharp edges .003 to .005 inches (0.076 to 0.127 mm) R.
8. Diameters to be concentric within .004 inches (0.102 mm) TIR.
9. Diameters in the same cross-sectional plane to be concentric with each other .003 inches (0.076 mm) TIR.
10. Coupling indicator line shall be color coded red.
11. Shell size 8 will not mate with MIL-DTL-26500 connectors.
12. See table I for contact cavities requiring this dimension.

FIGURE 1. Dimensions and configurations – Continued.

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REQUIREMENTS:

Dimensions and configurations: See figure 1.

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

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

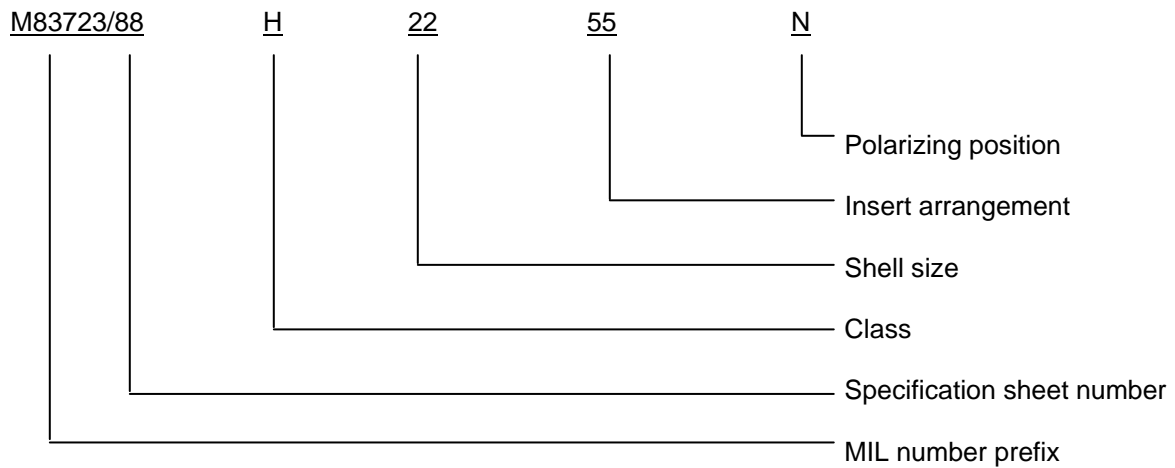
TABLE I. Insert arrangements requiring reduced diameters for raised seal barriers on contact cavities as indicated.

Shell size	Insert arrangement	Contact cavities
8	03, 98	1, 2, 3
10	06	1, 2, 3, 4, 5, 6

Connector accessories: See SAE-AS85049.

O-ring: See MIL-DTL-83723.

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.

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

MIL-DTL-26500
MIL-DTL-83723/86
MIL-DTL-83723/91
MIL-DTL-83723/95
MIL-DTL-83723/97
MIL-STD-1554
ASME-B46.1
ASTM B488
SAE-AS85049

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project 5935-2010-051)

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.daps.dla.mil>.