

INCH-POUND

MIL-DTL-83723/17B
w/AMENDMENT 4
26 January 2024
SUPERSEDING
MIL-DTL-83723/17B
w/AMENDMENT 3
01 March 2021

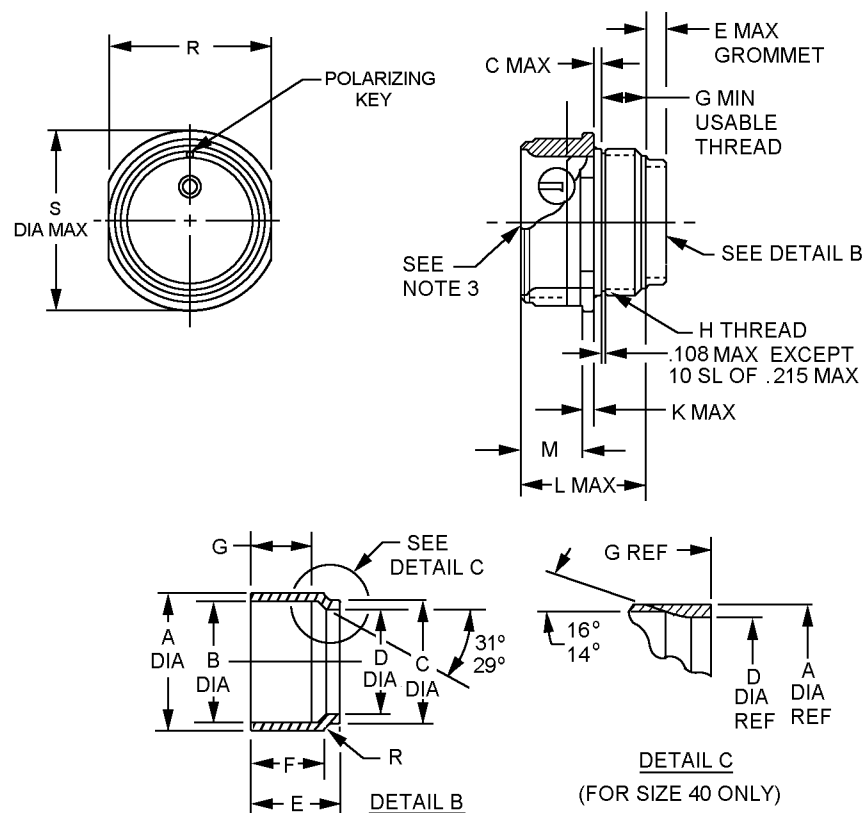
DETAIL SPECIFICATION SHEET

CONNECTORS ELECTRICAL, (CIRCULAR, ENVIRONMENT RESISTING), RECEPTACLE,
(CABLE CONNECTING, THREADED COUPLING, CRIMP SOCKET CONTACTS),
(SERIES II, CLASSES A, G, AND R)

Inactive for new design after 13 July 1976. For new design,
use SAE-AS34511 and SAE-AS50151.

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.



MIL-DTL-83723/17B
w/AMENDMENT 4

Shell size	SAE-AS 50151 shell size	C max	E max (see note 4)	G	H Thread Class 2A	K max	L max	M	R	S
08	8S	.056 (1.422)	.400 (10.16)	.375 (9.525)	.438-28 UNEF	.11 (2.794)	1.135 (28.829)	.577 (14.655) .562 (14.274)	.304 (7.721) .496 (12.598)	.729 (18.516) .709 (18.008)
10	10S	.056 (1.422)	.400 (10.16)	.375 (9.525)	.500-28 UNEF	.11 (2.794)	1.135 (28.829)	.577 (14.655) .562 (14.274)	.629 (15.976) .621 (15.773)	.854 (21.691) .834 (21.183)
11	10SL	.056 (1.422)	.400 (10.16)	.375 (9.525)	.562-24 UNEF	.11 (2.794)	1.135 (28.829)	.577 (14.655) .562 (14.274)	.629 (15.976) .621 (15.773)	.849 (21.564) .839 (21.310)
13	12S	.041 (1.041)	.400 (10.16)	.375 (9.525)	.625-24 UNEF	.13 (3.302)	1.135 (28.829)	.577 (14.655) .562 (14.274)	.734 (18.643) .746 (18.948)	.974 (24.739) .964 (24.485)
12	12	.072 (1.828)	.317 (8.051)	.375 (9.525)	.625-24 UNEF	.13 (3.302)	1.495 (37.973)	.765 (19.431) .750 (19.05)	.734 (18.643) .746 (18.948)	.974 (24.739) .964 (24.485)
15	14S	.041 (1.041)	.400 (10.16)	.375 (9.525)	.750-20 UNEF	.13 (3.302)	1.135 (28.829)	.577 (14.655) .562 (14.274)	.879 (22.326) .871 (22.123)	1.099 (27.914) 1.089 (27.660)
14	14	.072 (1.828)	.317 (8.051)	.375 (9.525)	.750-20 UNEF	.13 (3.302)	1.495 (37.973)	.765 (19.431) .750 (19.05)	.879 (22.326) .871 (22.123)	1.099 (27.914) 1.089 (27.660)
17	16S	.041 (1.828)	.400 (10.16)	.375 (9.525)	.875-20 UNEF	.13 (3.302)	1.135 (28.829)	.577 (14.655) .562 (14.274)	1.004 (25.501) .996 (25.298)	1.224 (31.089) 1.214 (30.835)
16	16	.072 (1.828)	.317 (8.051)	.375 (9.525)	.875-20 UNEF	.13 (3.302)	1.495 (37.973)	.765 (19.431) .750 (19.05)	1.004 (25.501) .996 (25.298)	1.224 (31.089) 1.214 (30.835)
18	18	.072 (1.828)	.380 (9.652)	.500 (12.7)	1.000-20 UNEF	.16 (4.064)	1.495 (37.973)	.765 (19.431) .750 (19.05)	1.129 (28.676) 1.121 (28.473)	1.349 (34.264) 1.339 (34.010)

FIGURE 1. Dimensions and configurations – Continued.

MIL-DTL-83723/17B
w/AMENDMENT 4

Shell size	SAE-AS 50151 shell size	C max	E max (see note 4)	G	H Thread Class 2A	K max	L max	M	R	S
20	20	.056 (1.422)	.380 (9.652)	.500 (12.7)	1.125-18 UNEF	.16 (4.064)	1.495 (37.973)	.765 (19.431) .750 (19.05)	1.254 (31.851) 1.246 (31.648)	1.474 (37.439) 1.464 (37.185)
22	22	.056 (1.422)	.380 (9.652)	.500 (12.7)	1.250-18 UNEF	.16 (4.064)	1.495 (37.973)	.765 (19.431) .750 (19.05)	1.379 (35.026) 1.371 (35.026)	1.599 (40.614) 1.589 (40.360)
24	24	.041 (1.041)	.315 (8.001)	.500 (12.7)	1.375-18 UNEF	.16 (4.064)	1.556 (39.522)	.827 (21.005) .812 (20.624)	1.504 (38.201) 1.496 (37.998)	1.715 (43.561) 1.705 (43.307)
28	28	.041 (1.041)	.315 (8.001)	.500 (12.7)	1.625-18 UNEF	.16 (4.064)	1.556 (39.522)	.827 (21.005) .812 (20.624)	1.754 (44.551) 1.746 (44.348)	1.974 (50.139) 1.964 (49.885)
32	32		.260 (6.604)	.531 (13.487)	1.875-16 UN	.16 (4.064)	1.620 (41.148)	.890 (22.606) .875 (22.225)	2.004 (50.901) 1.996 (50.698)	2.224 (56.489) 2.214 (56.235)
36	36		.260 (6.604)	.531 (13.487)	2.125-16 UN	.16 (4.064)	1.620 (41.148)	.890 (22.606) .875 (22.225)	2.254 (57.251) 2.246 (57.048)	2.474 (62.839) 2.464 (62.585)
40	40		.260 (6.604)	.531 (13.487)	2.375-16 UN	.16 (4.064)	1.620 (41.148)	.890 (22.606) .875 (22.225)	2.510 (63.754) 2.500 (63.5)	2.724 (69.189) 2.714 (68.935)

FIGURE 1. Dimensions and configurations – Continued.

MIL-DTL-83723/17B
w/AMENDMENT 4

Detail B dimensions									
Shell size	SAE-AS 50151 shell size	A	B	C	D	E	F	G	R
08	8S	.280	.250	.245	.180	.427	.342	.286	
		(7.112)	(6.35)	(6.223)	(4.572)	(10.845)	(8.686)	(7.264)	
		.271	.237	.232	.167	.401	.326	.276	
		(6.883)	(6.019)	(5.892)	(4.241)	(10.185)	(8.280)	(7.010)	
10	10S	.340	.312	.298	.242	.420	.335	.272	
		(8.636)	(7.924)	(7.569)	(6.146)	(10.668)	(8.509)	(6.908)	
		.332	.299	.285	.229	.397	.322	.262	
		(8.432)	(7.594)	(7.239)	(5.816)	(10.083)	(8.178)	(6.654)	
11	10SL	.409	.380	.378	.310	.430	.335	.237	
		(10.388)	(9.65)	(9.601)	(7.874)	(10.922)	(8.509)	(6.019)	
		.401	.367	.365	.297	.407	.322	.227	
		(10.185)	(9.321)	(9.271)	(7.543)	(10.337)	(8.178)	(5.765)	
12 13	12 & 12S	.460	.432	.403	.355	.419	.340	.270	
		(11.684)	(10.972)	(10.236)	(9.017)	(10.642)	(8.636)	(6.858)	
		.452	.419	.390	.342	.396	.326	.260	
		(11.480)	(10.642)	(9.906)	(8.686)	(10.058)	(8.280)	(6.604)	
14 15	14 & 14S	.563	.518	.485	.448	.414	.339	.261	.040
		(14.300)	(13.157)	(12.319)	(11.379)	(10.515)	(8.610)	(6.629)	(1.016)
		.550	.505	.472	.435	.391	.326	.251	.020
		(13.97)	(12.827)	(11.988)	(11.049)	(9.931)	(8.280)	(6.375)	(.508)
16 17	16 & 16S	.689	.644	.605	.574	.424	.339	.266	.040
		(17.500)	(16.357)	(15.367)	(14.579)	(10.769)	(8.610)	(6.756)	(1.016)
		.676	.631	.592	.561	.401	.326	.256	.020
		(17.170)	(16.027)	(15.036)	(14.249)	(10.185)	(8.280)	(6.502)	(.508)
18	18	.806	.760	.725	.690	.574	.449	.371	.060
		(20.472)	(19.304)	(18.415)	(17.526)	(14.579)	(11.404)	(9.423)	(1.524)
		.793	.747	.712	.677	.551	.436	.361	.040
		(20.142)	(18.973)	(18.054)	(9.575)	(13.995)	(11.074)	(9.169)	(1.016)
20	20	.941	.894	.863	.814	.573	.458	.385	.060
		(23.901)	(22.707)	(21.920)	(20.675)	(14.554)	(11.633)	(9.779)	(1.524)
		.928	.881	.850	.801	.550	.445	.375	.040
		(23.571)	(22.377)	(21.59)	(20.345)	(13.97)	(11.303)	(9.525)	(1.016)
22	22	1.059	.982	.973	.902	.551	.456	.389	.060
		(26.898)	(24.942)	(24.714)	(22.910)	(13.995)	(11.582)	(9.880)	(1.524)
		1.046	.969	.960	.889	.528	.443	.379	.040
		(26.568)	(24.612)	(24.384)	(22.580)	(13.411)	(11.252)	(9.626)	(1.016)
24	24	1.170	1.106	1.085	1.026	.547	.457	.385	.060
		(29.718)	(28.092)	(27.559)	(26.060)	(13.893)	(11.607)	(9.779)	(1.524)
		1.157	1.093	1.072	1.013	.524	.444	.375	.040
		(29.387)	(27.762)	(27.228)	(25.730)	(13.309)	(11.277)	(9.525)	(1.016)

FIGURE 1. Dimensions and configurations – Continued.

MIL-DTL-83723/17B
w/AMENDMENT 4

Detail B dimensions									
Shell size	SAE-AS 50151 shell size	A	B	C	D	E	F	G	R
28	28	1.401 (35.585) 1.388 (1.330)	1.330 (33.782) 1.317 (33.451)	1.245 (31.623) 1.232 (31.292)	1.185 (30.099) 1.172 (29.768)	.573 (14.554) .550 (13.97)	.458 (11.633) .445 (11.303)	.329 (8.356) .319 (8.102)	
32	32	1.652 (41.960) 1.639 41.630)	1.608 (40.843) 1.595 (40.513)	1.515 (38.488) 1.502 (38.150)	1.440 (36.576) 1.427 (36.245)	.544 (13.817) .521 (13.233)	.459 (11.658) .446 (11.328)	.316 (8.026) .306 (7.772)	.060 (1.524) .040 (1.016)
36	36	1.860 (47.244) 1.847 (46.913)	1.796 (45.618) 1.783 (45.288)	1.751 (44.475) 1.738 (44.145)	1.653 (41.986) 1.640 (41.656)	.573 (14.554) .550 (13.97)	.463 (11.760) .450 (11.43)	.355 (9.017) .345 (8.763)	.060 (1.524) .040 (1.016)
40	40	2.105 (53.467) 2.092 (53.136)	2.000 (50.8) 1.989 (50.520)		1.905 (48.387) 1.892 (48.056)	.823 (20.904) .800 (20.32)		.379 (9.626) .279 (7.086)	

NOTES:

1. All dimensions are in inches. Metric equivalents are given for information only.
2. All dimensions are after plating.
3. For details of connector front end configuration, see procurement specification.
4. When insulator arrangement sizes 18 thru 40 contain one or more size No. 0 contacts, E dimension will increase .150 max.

FIGURE 1. Dimensions and configurations – Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

This receptacle mates with MIL-DTL-83723/24.

For insert arrangements see MIL-STD-1651.

Rear hardware as specified in MIL-DTL-83723/27, /35, or /50 must be used for correct wire sealing.

Insert positions and alternate rotations: The letter N indicates normal (or standard) insert position. Alternate positions are identified in MIL-STD-1651.

Qualification is not required. When specified in the contract, a sample shall be subjected to first article inspection. The first article testing shall consist of the qualification inspections specified in MIL-DTL-83723.

MIL-DTL-83723/17B
w/AMENDMENT 4

Part or Identifying Number (PIN) example:

M83723/ 17 R 08 01 N

<u>M83723/</u>	MIL number prefix
<u>17</u>	Specification sheet number
<u>R</u>	Class
<u>08</u>	Shell size
<u>01</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 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 notation.

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

MIL-DTL-83723/24
MIL-DTL-83723/27
MIL-DTL-83723/35
MIL-DTL-83723/50
MIL-STD-1651
SAE-AS34511
SAE-AS50151

CONCLUDING MATERIAL

Custodians:
Air Force – 85
DLA - CC

Preparing activity:
DLA - CC

Review activities:
Air Force – 19

(Project 5935-2024-026)

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