

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRIC, RECTANGULAR, MINIATURE,
POLARIZED SHELL, RACK AND PANEL, RECEPTACLE
SOCKET CONTACTS, NONMAGNETIC, CLASSES M AND N, CRIMP TYPE

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-24308.

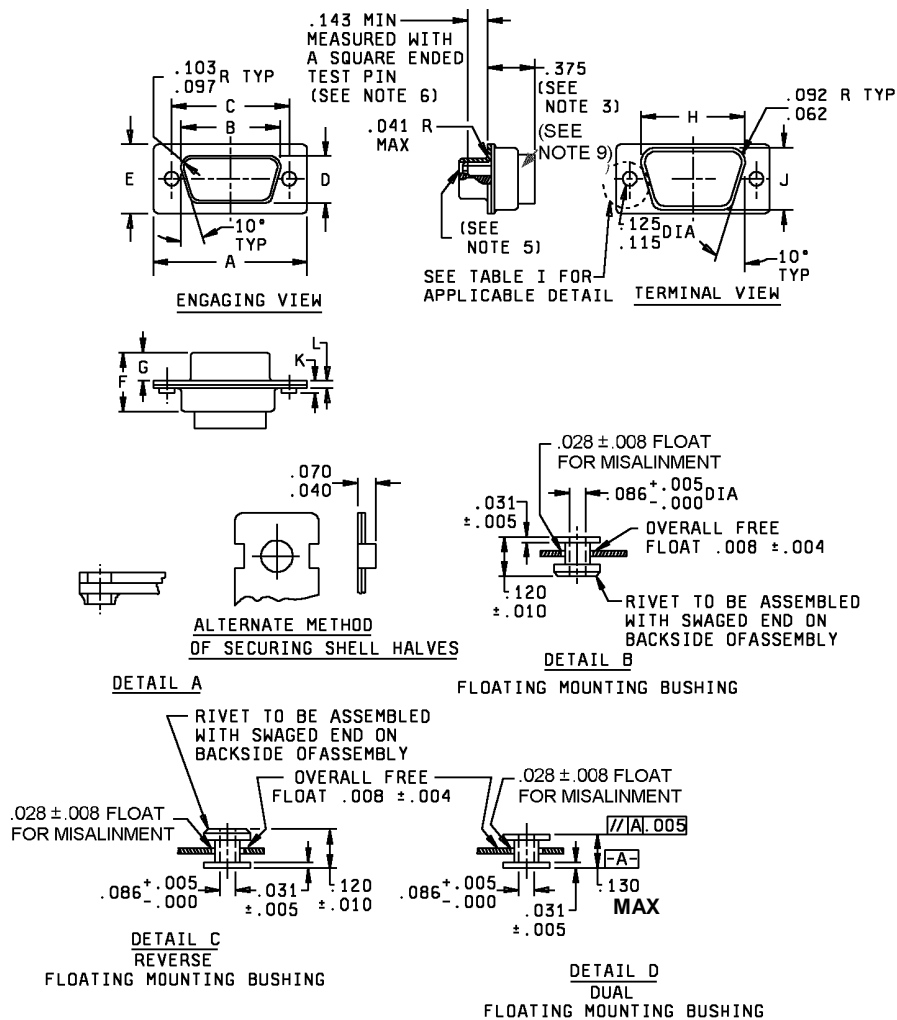


FIGURE 1. Shell, receptacle, crimp type.

MIL-DTL-24308/6R

Detail (See note 10)	Shell size	Dimensions										
		A	B	C	D	E	F	G	H	J	K	L
A	1	1.228	.648	.989	.316	.509	.439	.248	.769	.432	.060	.040
		(31.19)	(16.46)	(25.12)	(8.03)	(12.93)	(11.15)	(6.30)	(19.53)	(10.97)	(1.52)	(1.02)
		1.198	.638	.979	.302	.479	.419	.238	.749	.412	.035	.020
	2	(30.43)	(16.21)	(24.87)	(7.67)	(12.17)	(10.64)	(6.05)	(19.02)	(10.46)	(.89)	(.51)
		1.556	.976	1.317	.316	.509	.439	.248	1.093	.432	.060	.040
		(39.52)	(24.79)	(33.45)	(8.03)	(12.93)	(11.15)	(6.30)	(27.76)	(10.97)	(1.52)	(1.02)
	3	1.526	.966	1.307	.302	.479	.419	.238	1.073	.412	.035	.020
		(38.76)	(24.54)	(33.20)	(7.67)	(12.17)	(10.64)	(6.05)	(27.25)	(10.46)	(.89)	(.51)
		2.103	1.516	1.857	.316	.509	.439	.248	1.635	.432	.060	.049
	4	(53.42)	(38.51)	(47.17)	(8.03)	(12.93)	(11.15)	(6.30)	(41.53)	(10.97)	(1.52)	(1.24)
		2.073	1.506	1.847	.302	.479	.419	.238	1.615	.412	.035	.029
		(52.65)	(38.25)	(46.91)	(7.67)	(12.17)	(10.64)	(6.05)	(41.02)	(10.46)	(.89)	(.74)
	5	2.744	2.164	2.505	.316	.509	.439	.248	2.282	.432	.060	.049
		(69.70)	(54.97)	(63.63)	(8.03)	(12.93)	(11.15)	(6.30)	(57.96)	(10.97)	(1.52)	(1.24)
		2.714	2.154	2.495	.302	.479	.419	.238	2.262	.412	.035	.029
	6	(68.94)	(54.71)	(63.37)	(7.67)	(12.17)	(10.64)	(6.05)	(57.45)	(10.46)	(.89)	(.74)
		2.650	2.069	2.411	.428	.620	.439	.248	2.188	.544	.060	.049
		(67.31)	(52.55)	(61.24)	(10.87)	(15.75)	(11.15)	(6.30)	(55.58)	(13.82)	(1.52)	(1.24)
B	(See note 11)	2.620	2.059	2.401	.418	.590	.419	.238	2.168	.524	.035	.029
		(66.55)	(52.30)	(60.99)	(10.62)	(14.99)	(10.64)	(6.05)	(55.07)	(13.31)	(.89)	(.74)
		2.744	2.194	2.505	.490	.683	.439	.248	2.312	.606	.060	.049
C	(See note 11)	(69.70)	(55.73)	(63.63)	(12.45)	(17.35)	(11.15)	(6.30)	(58.72)	(15.39)	(1.52)	(1.24)
		2.714	2.184	2.495	.480	.653	.419	.238	2.292	.586	.035	.029
		(68.94)	(55.47)	(63.37)	(12.19)	(16.59)	(10.64)	(6.05)	(58.22)	(14.88)	(.89)	(.74)
		1 Same as detail A, shell size 1 except in accordance with detail B.										
		2 Same as detail A, shell size 2 except in accordance with detail B.										
		3 Same as detail A, shell size 3 except in accordance with detail B.										
4 Same as detail A, shell size 4 except in accordance with detail B.												
5 Same as detail A, shell size 5 except in accordance with detail B.												
6 Same as detail A, shell size 6 except in accordance with detail B.												
1 Same as detail A, shell size 1 except in accordance with detail C.												
2 Same as detail A, shell size 2 except in accordance with detail C.												
3 Same as detail A, shell size 3 except in accordance with detail C.												
4 Same as detail A, shell size 4 except in accordance with detail C.												
5 Same as detail A, shell size 5 except in accordance with detail C.												
6 Same as detail A, shell size 6 except in accordance with detail C.												
1 Same as detail A, shell size 1 except in accordance with detail D.												
2 Same as detail A, shell size 2 except in accordance with detail D.												
3 Same as detail A, shell size 3 except in accordance with detail D.												
4 Same as detail A, shell size 4 except in accordance with detail D.												
5 Same as detail A, shell size 5 except in accordance with detail D.												
6 Same as detail A, shell size 6 except in accordance with detail D.												

FIGURE 1. Shell, receptacle, crimp type - Continued.

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Insulator may project .375 (9.53mm) maximum.
4. Wire insulation .072 (1.83mm) maximum for arrangements, (see MIL-DTL-24308, Appendix A), A-1-1, A-2-1, A-3-1, A-4-1, and A-5-1. Wire insulation .054 (1.37mm) maximum for arrangements, (see MIL-DTL-24308, Appendix A), A-1-2, A-2-2, A-3-2, A-4-2, A-5-2, and A-6-1.
5. To accommodate a .040 (1.02mm) diameter pin for arrangements, (see MIL-DTL-24308, Appendix A), A-1-1, A-2-1, A-3-1, A-4-1, and A-5-1. To accommodate a .030 (0.76mm) diameter pin for arrangements, (see MIL-DTL-24308, Appendix A), A-1-2, A-2-2, A-3-2, A-4-2, A-5-2, and A-6-1.
6. Use .041/.039 (1.04/0.99mm) diameter pin for arrangements, (see MIL-DTL-24308, Appendix A), A-1.1, A-2.1, A-3.1, A-4.1, and A-5.1. Use .0305/.0295 (0.77/0.75mm) diameter pin for arrangements, (see MIL-DTL-24308, Appendix A), A-1-2, A-2-2, A-3-2, A-4-2, A-5-2, and A-6-1.
7. Patent notice. The government has a royalty free license under the U.S. Patents listed below for the benefit of manufacturers of the items disclosed and described herein, either for the government or for use in equipment delivered to the government.

2790153 expires April 23, 1974

3110093 expires November 12, 1980

3158424 expires November 24, 1981

8. Copyright notice. All information disclosed in this military specification sheet which is or may be copyrighted by ITT Cannon Electric is reproduced herein with the express permission of the copyright owner.
9. Indentation on the ends of the termination side of the shell, for the purpose of securing the insulator in the shell, is permitted. This may result in the "F" dimension being undersized in these areas. However the "F" dimension shall be maintained for the remainder of the connector.
10. See table II for shell supersession data.
11. Details B and C are inactive for new design, use detail D.

Inches	mm
.004	0.10
.005	0.13
.008	0.20
.010	0.25
.031	0.79
.040	1.02
.041	1.04
.062	1.57
.070	1.78
.086	2.18
.092	2.34
.097	2.46
.103	2.62
.115	2.92
.120	3.05
.125	3.18
.129	3.28
.143	3.63
.375	9.53

FIGURE 1. Shell, receptacle, crimp type - Continued.

MIL-DTL-24308/6R

REQUIREMENTS:

The connectors shall conform to figure 1 and the specification Part or Identifying Numbers (PIN) indicated in table I.

TABLE I. Design standards. 1/

PIN class N	PIN class M	Shell size	Shell detail (see figure1)	Insert arrangement reference number 2/	Contact PIN 3/	PIN marked on connector class N	PIN marked on connector class M
M24308/6-1	M24308/6-502	1	A	A-1-1	M39029/63-656	M24308/6-1	M24308/6-502
M24308/6-2	M24308/6-503	2	A	A-2-1	M39029/63-656	M24308/6-2	M24308/6-503
M24308/6-3	M24308/6-504	3	A	A-3-1	M39029/63-656	M24308/6-3	M24308/6-504
M24308/6-4	M24308/6-505	4	A	A-4-1	M39029/63-656	M24308/6-4	M24308/6-505
M24308/6-5	M24308/6-506	5	A	A-5-1	M39029/63-656	M24308/6-5	M24308/6-506
M24308/6-6	M24308/6-507	Connector kit: M24308/6-1 connector with applicable tool 4/				M24308/6-1	M24308/6-502
M24308/6-7	M24308/6-508	Connector kit: M24308/6-2 connector with applicable tool 4/				M24308/6-2	M24308/6-503
M24308/6-8	M24308/6-509	Connector kit: M24308/6-3 connector with applicable tool 4/				M24308/6-3	M24308/6-504
M24308/6-9	M24308/6-510	Connector kit: M24308/6-4 connector with applicable tool 4/				M24308/6-4	M24308/6-505
M24308/6-10	M24308/6-511	Connector kit: M24308/6-5 connector with applicable tool 4/				M24308/6-5	M24308/6-506
M24308/6-11	M24308/6-512	1	A	A-1-2	M39029/57-662	M24308/6-11	M24308/6-512
M24308/6-12	M24308/6-513	2	A	A-2-2	M39029/57-662	M24308/6-12	M24308/6-513
M24308/6-13	M24308/6-514	3	A	A-3-2	M39029/57-662	M24308/6-13	M24308/6-514
M24308/6-14	M24308/6-515	4	A	A-4-2	M39029/57-662	M24308/6-14	M24308/6-515
M24308/6-15	M24308/6-516	5	A	A-5-2	M39029/57-662	M24308/6-15	M24308/6-516
M24308/6-16	M24308/6-517	6	A	A-6-1	M39029/57-662	M24308/6-16	M24308/6-517
M24308/6-17	M24308/6-518	Connector kit: M24308/6-11 connector with applicable tool 5/				M24308/6-11	M24308/6-512
M24308/6-18	M24308/6-519	Connector kit: M24308/6-12 connector with applicable tool 5/				M24308/6-12	M24308/6-513
M24308/6-19	M24308/6-520	Connector kit: M24308/6-13 connector with applicable tool 5/				M24308/6-13	M24308/6-514
M24308/6-20	M24308/6-521	Connector kit: M24308/6-14 connector with applicable tool 5/				M24308/6-14	M24308/6-515
M24308/6-21	M24308/6-522	Connector kit: M24308/6-15 connector with applicable tool 5/				M24308/6-15	M24308/6-516
M24308/6-22	M24308/6-523	Connector kit: M24308/6-16 connector with applicable tool 5/				M24308/6-16	M24308/6-517

See footnotes at end of table.

MIL-DTL-24308/6R

TABLE I. Design standards - Continued. 1/

PIN class N	PIN class M	Shell size	Shell detail (see figure1)	Insert arrangement reference number <u>2/</u>	Contact PIN <u>3/</u>	PIN marked on connector class N	PIN marked on connector class M
M24308/6-281	M24308/6-540	1	A	A-1-1	Contacts not included	M24308/6-1	M24308/6-502
M24308/6-282	M24308/6-541	2	A	A-2-1	"	M24308/6-2	M24308/6-503
M24308/6-283	M24308/6-542	3	A	A-3-1	"	M24308/6-3	M24308/6-504
M24308/6-284	M24308/6-543	4	A	A-4-1	"	M24308/6-4	M24308/6-505
M24308/6-285	M24308/6-544	5	A	A-5-1	"	M24308/6-5	M24308/6-506
M24308/6-286	M24308/6-545	1	A	A-1-2	"	M24308/6-11	M24308/6-512
M24308/6-287	M24308/6-546	2	A	A-2-2	"	M24308/6-12	M24308/6-513
M24308/6-288	M24308/6-547	3	A	A-3-2	"	M24308/6-13	M24308/6-514
M24308/6-289	M24308/6-548	4	A	A-4-2	"	M24308/6-14	M24308/6-515
M24308/6-290	M24308/6-549	5	A	A-5-2	"	M24308/6-15	M24308/6-516
M24308/6-291	M24308/6-550	6	A	A-6-1	"	M24308/6-16	M24308/6-517
<u>6/</u>	<u>6/</u>						
M24308/6-259	M24308/6-518	1	B	A-1-1	M39029/63-656	M24308/6-259	M24308/6-518
M24308/6-260	M24308/6-519	2	B	A-2-1	M39029/63-656	M24308/6-260	M24308/6-519
M24308/6-261	M24308/6-520	3	B	A-3-1	M39029/63-656	M24308/6-261	M24308/6-520
M24308/6-262	M24308/6-521	4	B	A-4-1	M39029/63-656	M24308/6-262	M24308/6-521
M24308/6-263	M24308/6-522	5	B	A-5-1	M39029/63-656	M24308/6-263	M24308/6-522
M24308/6-264	M24308/6-523	1	B	A-1-2	M39029/57-662	M24308/6-264	M24308/6-523
M24308/6-265	M24308/6-524	2	B	A-2-2	M39029/57-662	M24308/6-265	M24308/6-524
M24308/6-266	M24308/6-525	3	B	A-3-2	M39029/57-662	M24308/6-266	M24308/6-525
M24308/6-267	M24308/6-526	4	B	A-4-2	M39029/57-662	M24308/6-267	M24308/6-526
M24308/6-268	M24308/6-527	5	B	A-5-2	M39029/57-662	M24308/6-268	M24308/6-527
M24308/6-269	M24308/6-528	6	B	A-6-1	M39029/57-662	M24308/6-269	M24308/6-528

See footnotes at end of table.

MIL-DTL-24308/6R

TABLE I. Design standards - Continued. 1/

PIN class N	PIN class M	Shell size	Shell detail (see figure1)	Insert arrangement reference number <u>2/</u>	Contact PIN <u>3/</u>	PIN marked on connector class N	PIN marked on connector class M
M24308/6-270	M24308/6-529	Connector kit: M24308/6-259 connector with applicable tool <u>4/</u>				M24308/6-259	M24308/6-518
M24308/6-271	M24308/6-530	Connector kit: M24308/6-260 connector with applicable tool <u>4/</u>				M24308/6-260	M24308/6-519
M24308/6-272	M24308/6-531	Connector kit: M24308/6-261 connector with applicable tool <u>4/</u>				M24308/6-261	M24308/6-520
M24308/6-273	M24308/6-532	Connector kit: M24308/6-262 connector with applicable tool <u>4/</u>				M24308/6-262	M24308/6-521
M24308/6-274	M24308/6-533	Connector kit: M24308/6-263 connector with applicable tool <u>4/</u>				M24308/6-263	M24308/6-522
M24308/6-275	M24308/6-534	Connector kit: M24308/6-264 connector with applicable tool <u>5/</u>				M24308/6-264	M24308/6-523
M24308/6-276	M24308/6-535	Connector kit: M24308/6-265 connector with applicable tool <u>5/</u>				M24308/6-265	M24308/6-524
M24308/6-277	M24308/6-536	Connector kit: M24308/6-266 connector with applicable tool <u>5/</u>				M24308/6-266	M24308/6-525
M24308/6-278	M24308/6-537	Connector kit: M24308/6-267 connector with applicable tool <u>5/</u>				M24308/6-267	M24308/6-526
M24308/6-279	M24308/6-538	Connector kit: M24308/6-268 connector with applicable tool <u>5/</u>				M24308/6-268	M24308/6-527
M24308/6-280	M24308/6-539	Connector kit: M24308/6-269 connector with applicable tool <u>5/</u>				M24308/6-269	M24308/6-528
M24308/6-453	M24308/6-551	1	D	A-1-1	M39029/63-656	M24308/6-453	M24308/6-551
M24308/6-454	M24308/6-552	2	D	A-2-1	M39029/63-656	M24308/6-454	M24308/6-552
M24308/6-455	M24308/6-553	3	D	A-3-1	M39029/63-656	M24308/6-455	M24308/6-553
M24308/6-456	M24308/6-554	4	D	A-4-1	M39029/63-656	M24308/6-456	M24308/6-554
M24308/6-457	M24308/6-555	5	D	A-5-1	M39029/63-656	M24308/6-457	M24308/6-555
M24308/6-458	M24308/6-556	1	D	A-1-2	M39029/57-662	M24308/6-458	M24308/6-556
M24308/6-459	M24308/6-557	2	D	A-2-2	M39029/57-662	M24308/6-459	M24308/6-557
M24308/6-460	M24308/6-558	3	D	A-3-2	M39029/57-662	M24308/6-460	M24308/6-558
M24308/6-461	M24308/6-559	4	D	A-4-2	M39029/57-662	M24308/6-461	M24308/6-559
M24308/6-462	M24308/6-560	5	D	A-5-2	M39029/57-662	M24308/6-462	M24308/6-560
M24308/6-463	M24308/6-561	6	D	A-6-1	M39029/57-662	M24308/6-463	M24308/6-561

See footnotes at end of table.

MIL-DTL-24308/6R

TABLE I. Design standards - Continued. 1/

PIN class N	PIN class M	Shell size	Shell detail (see figure1)	Insert arrangement reference number <u>2/</u>	Contact PIN <u>3/</u>	PIN marked on connector class N	PIN marked on connector class M
M24308/6-464	M24308/6-562	Connector kit: M24308/6-453 connector with applicable tool <u>4/</u>				M24308/6-453	M24308/6-551
M24308/6-465	M24308/6-563	Connector kit: M24308/6-454 connector with applicable tool <u>4/</u>				M24308/6-454	M24308/6-552
M24308/6-466	M24308/6-564	Connector kit: M24308/6-455 connector with applicable tool <u>4/</u>				M24308/6-455	M24308/6-553
M24308/6-467	M24308/6-565	Connector kit: M24308/6-456 connector with applicable tool <u>4/</u>				M24308/6-456	M24308/6-554
M24308/6-468	M24308/6-566	Connector kit: M24308/6-457 connector with applicable tool <u>4/</u>				M24308/6-457	M24308/6-555
M24308/6-469	M24308/6-567	Connector kit: M24308/6-458 connector with applicable tool <u>5/</u>				M24308/6-458	M24308/6-556
M24308/6-470	M24308/6-568	Connector kit: M24308/6-459 connector with applicable tool <u>5/</u>				M24308/6-459	M24308/6-557
M24308/6-471	M24308/6-569	Connector kit: M24308/6-460 connector with applicable tool <u>5/</u>				M24308/6-460	M24308/6-558
M24308/6-472	M24308/6-570	Connector kit: M24308/6-461 connector with applicable tool <u>5/</u>				M24308/6-461	M24308/6-559
M24308/6-473	M24308/6-571	Connector kit: M24308/6-462 connector with applicable tool <u>5/</u>				M24308/6-462	M24308/6-560
M24308/6-474	M24308/6-572	Connector kit: M24308/6-463 connector with applicable tool <u>5/</u>				M24308/6-463	M24308/6-561
M24308/6-491	M24308/6-573	1	D	A-1-1	Contacts not included	M24308/6-453	M24308/6-551
M24308/6-492	M24308/6-574	2	D	A-2-1	"	M24308/6-454	M24308/6-552
M24308/6-493	M24308/6-575	3	D	A-3-1	"	M24308/6-455	M24308/6-553
M24308/6-494	M24308/6-576	4	D	A-4-1	"	M24308/6-456	M24308/6-554
M24308/6-495	M24308/6-577	5	D	A-5-1	"	M24308/6-457	M24308/6-555
M24308/6-496	M24308/6-578	1	D	A-1-2	"	M24308/6-458	M24308/6-556
M24308/6-497	M24308/6-579	2	D	A-2-2	"	M24308/6-459	M24308/6-557
M24308/6-498	M24308/6-580	3	D	A-3-2	"	M24308/6-460	M24308/6-558
M24308/6-499	M24308/6-581	4	D	A-4-2	"	M24308/6-461	M24308/6-559
M24308/6-500	M24308/6-582	5	D	A-5-2	"	M24308/6-462	M24308/6-560
M24308/6-501	M24308/6-583	6	D	A-6-1	"	M24308/6-463	M24308/6-561

1/ These connectors mate with connectors specified in MIL-DTL-24308/7 and MIL-DTL-24308/8.

2/ For insert arrangements see MIL-DTL-24308 Appendix A.

3/ See table III for contact supersession information.

4/ Installation and removal tool: M81969/39-01 with plastic tips or M81969/1-02 with metal tips. For size 20 contacts, either tool shall be supplied with each individual connector.

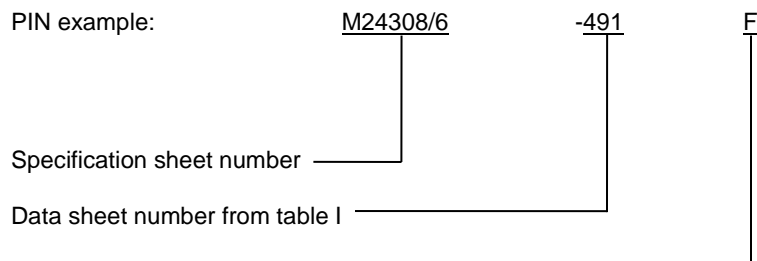
5/ Installation and removal tool: M81969/14-01 with plastic tips or M81969/1-04 with metal tips. For size 22 contacts, either tool shall be supplied with each individual connector.

6/ PINs M24308/6-259 through M24308/6-280, and M24308/6-518 through M24308/6-539 are inactive for new design. Use M24308/6-453 through M24308/6-501 and M24308/6-551 through M24308/6-561.

MIL-DTL-24308/6R

PIN: Consists of the letter M, the basic number of the specification sheet, and a dash number compiled from the code.

PIN example:



Finish: For class N:

- A = Pure electrodeposited aluminum
- F = Cadmium (Navy-SH prohibits the use of cadmium finished connectors for shipboard application)
- K = Zinc nickel
- P = Passivated stainless steel
- T = Nickel Fluorocarbon Polymer
- Z = Zinc

For class M: Class M connectors have a gold finish, no suffix is required.

TABLE II. Shell supersession data.

Shell detail (see figure 1)	Superseded MS sheet
Detail A	MS18270-1 through -6
Detail B	MS18270-7 through -12
Detail C	MS18270-13 through -18
Detail D	MS18270-19 through -24

TABLE III. Contact supersession data.

Contact (see table I)	Superseded contact
M39029/57-662	M39029/57-354
M39029/63-656	M39029/63-368

CHANGES FROM PREVIOUS ISSUE: The margins of this specification are marked with asterisks 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-24308, this document references the following:

- MIL-DTL-24308/7
- MIL-DTL-24308/8

MIL-DTL-24308/6R

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force - 85
NASA - NA
DLA - CC

Preparing activity:
DLA - CC

(Project: 5935-2014-026)

Review activities:
Army - AT, AV, CR4, MI
Navy - AS, CG, MC, SH
Air Force - 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>.