

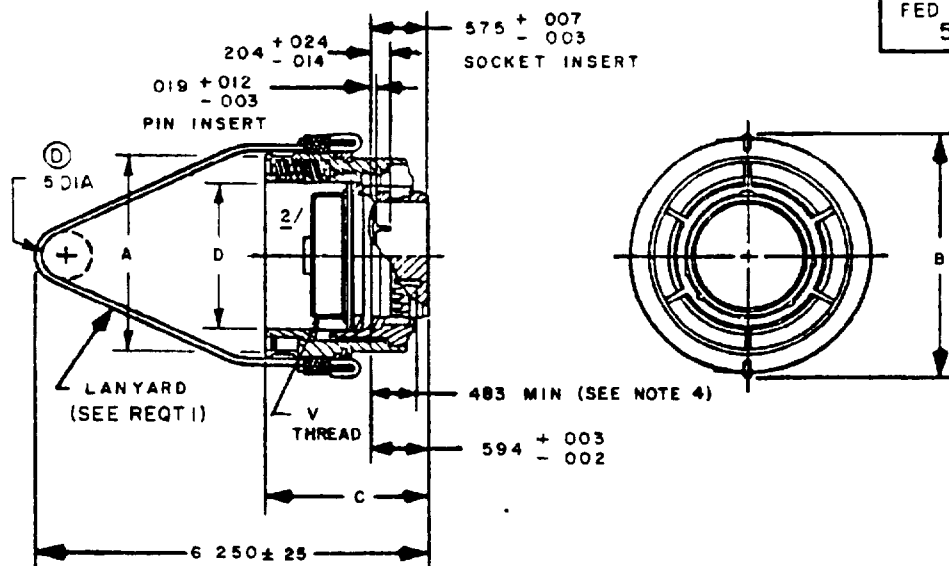
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DD FORM 1 MAY 672 (Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

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CLASSES E AND T FINISH: SEE PROCUREMENT SPECIFICATION

- 1/ Class E inactive for new design
2/ For details of connector rear end, see procurement specification.

EXAMPLE OF PART NUMBER

MS27661
MS NO CLASS SHELL SIZE FINISH INSERT ARR. STYLE (P or S) POLARIZATION (NO LETTER REQUIRED FOR NORMAL)

TABLE I. Dimensions.

Shell size	A Max	B Max	C Max	D Min	V Thread UNEF-2A
11	1.437	1.843	1.703	.745	.5625-24
13	1.562	1.969	1.703	.931	.6875-24
15	1.672	2.078	1.703	1.056	.8125-20
17	1.812	2.207	1.703	1.181	.9375-20
19	1.938	2.328	1.703	1.306	1.0625-18
21	2.062	2.450	1.703	1.431	1.1875-18
23	2.188	2.574	1.703	1.556	1.3125-18
25	2.297	2.703	1.765	1.681	1.4375-18

ⓓ DENOTES CHANGES

AF 85	International Interchange	TITLE	MILITARY STANDARD
Other Cust Army - CR Navy - AS		CONNECTOR, PLUG, ELECTRICAL, CRIMP TYPE, LANYARD RELEASE, FAIL SAFE, SERIES I	MS27661
SUPERCEDES		PAGE 1 OF 3	

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5935-3328

APPROVED 14 Nov 72 REVISED (A) 2 JAN 76 (B) 28 OCT 76 (C) 1 NOV 78 (D) 24 JUN 83

FED SUP CLASS 5935

FED SUP CLASS
5935

TABLE III Separation forces

TABLE II Operating voltage.

Service rating	Operating voltage (sea level)
	AC (rms) DC
M	400 550
	500 550
	500 1250

Shell size	Straight pull (lbs) max (see note 5)	15 degree pull (lbs) max (see note 6)	Separation forces (lbs) max after cold soak	Separation forces (lbs) min
11	15	20	150	5.5
13	20	25	150	5.5
15	25	30	150	12.0
17	30	35	150	12.0
19	35	45	150	2.0
21	45	55	150	12.0
23	65	65	250	12.0
25	65	75	250	12.0

INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
.002	.05	.483	12.27	.969	24.613	1.562	39.67	2.078	52.78
.003	.08	5	13	1.0625	26.988	1.594	40.49	2.188	55.58
.007	.18	.5625	14.288	1.094	27.79	1.672	42.47	2.203	55.96
.012	.30	.575	14.60	1.1875	30.162	1.703	43.26	2.297	58.34
.014	.36	.594	15.09	1.219	30.96	1.766	44.86	2.328	59.13
.019	.48	.6875	17.462	1.3125	33.338	1.812	46.02	2.469	62.71
.024	.61	.719	18.26	1.344	34.138	1.843	46.81	2.594	65.89
.204	5.18	.8125	20.638	1.437	36.50	1.938	49.23	2.703	68.66
.25	6.4	.844	21.44	1.4375	36.512	1.969	50.01	6.250	158.75
		.9375	23.812	1.469	37.31	2.062	52.37		

NOTES

- Dimensions are in inches.
- For design feature purposes, this standard takes precedence over procurement documents referenced herein.
- Referenced documents shall be of the issue in effect on date of invitation for bids, or request for proposal, except that referenced adopted industry documents shall give the date of the issue adopted.
- A point at which a gage pin, having the same basic diameter as the mating contact and a square face, touches the contact spring.
- Operating voltages are listed in table II for guidance.
- ⑥ Increase values by 50 percent for arrangements having contacts size 22, 22M, and 220

REQUIREMENTS

- Lanyard Coupling design optional.

(a) .062 diameter, 7 strands of stainless steel capable of withstanding 200 pounds pull test after assembly with connector.

(b) Cable shall be covered with a suitable protective sleeving to preclude possible chaffing of wires.

- ⑦ Durability and separation The number of cycles of normal mating and unmating shall be 200. This shall be followed by 50 cycles of normal mating and straight pull. Following this, the connector shall be subjected to the below separation test. The pull rate shall be 5 inches/second max and each pull test shall be performed within 3 minutes of removal from the temperature chamber. Connector to be in chamber for 1 hour min. Separation values shall be within those listed in table III.

PART AF-85	Internal release	TITLE	MILITARY STANDARD
Other Cost		CONNECTOR, PLUG, ELECTRICAL, CRIMP	
Army - CR		TYPE, LANYARD RELEASE, FAIL-SAFE,	
Navy - AS		SERIES I	MS2766I
Supersedes	SUPERSEDES		PAGE 2 OF 3
MIL-C-38999			

FED SLP CLASS
5935SEPARATION TEST

	<u>Step 1</u>	<u>Step 2</u>	<u>Step 3</u>
Straight pull	Room ambient	-65°C	Max temp. of connector
15° pull	Room ambient	-65°C	Max temp. of connector

3. Vibration (qualification only) Wired mated connectors shall meet the vibration requirements of MIL-C-38999 when subjected to the random vibration test specified in method 214 of MIL-STD-202. The following details and exceptions apply
- (a) Receptacles shall be mounted on the vibration fixture by normal means. The wire bundle shall be clamped to nonvibrating points at least 8 inches from the rear of the connector.
- (b) Test condition II, letter E shall be used.
- (c) All contacts shall be wired in a series circuit and 100 to 150 milliamperes of current allowed to flow through the circuit during the test.
- (d) Duration of the test shall be 8 hours in the longitudinal axis and 8 hours in the perpendicular axis.
- ④ (e) An extender adapter, Bendix part no. 10-494596-xx (xx-applicable shell size) or equivalent, shall be used with M85049/49-2 strain relief. Only the M85049/49-2 strain relief needs to be used on the mating receptacle
4. Shock (qualification only): Wired, mated connectors shall meet the shock requirements of MIL-C-38999 with the following exception.
- The pulse shall be approximately half sine wave of 150 G $\pm 15^\circ$ magnitude with a duration of 3 ± 1 milliseconds.
5. Connector shall disengage from any coupling condition including partially mated.
6. Connector design shall incorporate a swivel action for the lanyard to prevent twisting of the cable.
- ⑦ 7. Maximum separation force lanyard not operational The maximum straight pull force required to separate mated plug and receptacle connectors when lanyard is broken or not hooked up is 950 pounds.

APPROVED 14 Nov 72 REVISED ③ FOR CHANGES SEE PAGES 1, 2 & 3

AF - 85 Other Cost Army - CR Navy - AS	International Interest	TITLE CONNECTOR, PLUG, ELECTRICAL, CRIMP TYPE, LANYARD RELEASE, FAIL-SAFE, SERIES I	MILITARY STANDARD MS27661
PREVIOUS SPECIFICATION MIL-C-38999		SUPERSEDES	PAGE 3 OF 3

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Review activities: Army - AR, MI; Navy - EC, MC, DS; Air Force - 11, 15, 99, 17; DLA - ES

User activities: Army - 100; Navy - 100; Air Force - 100