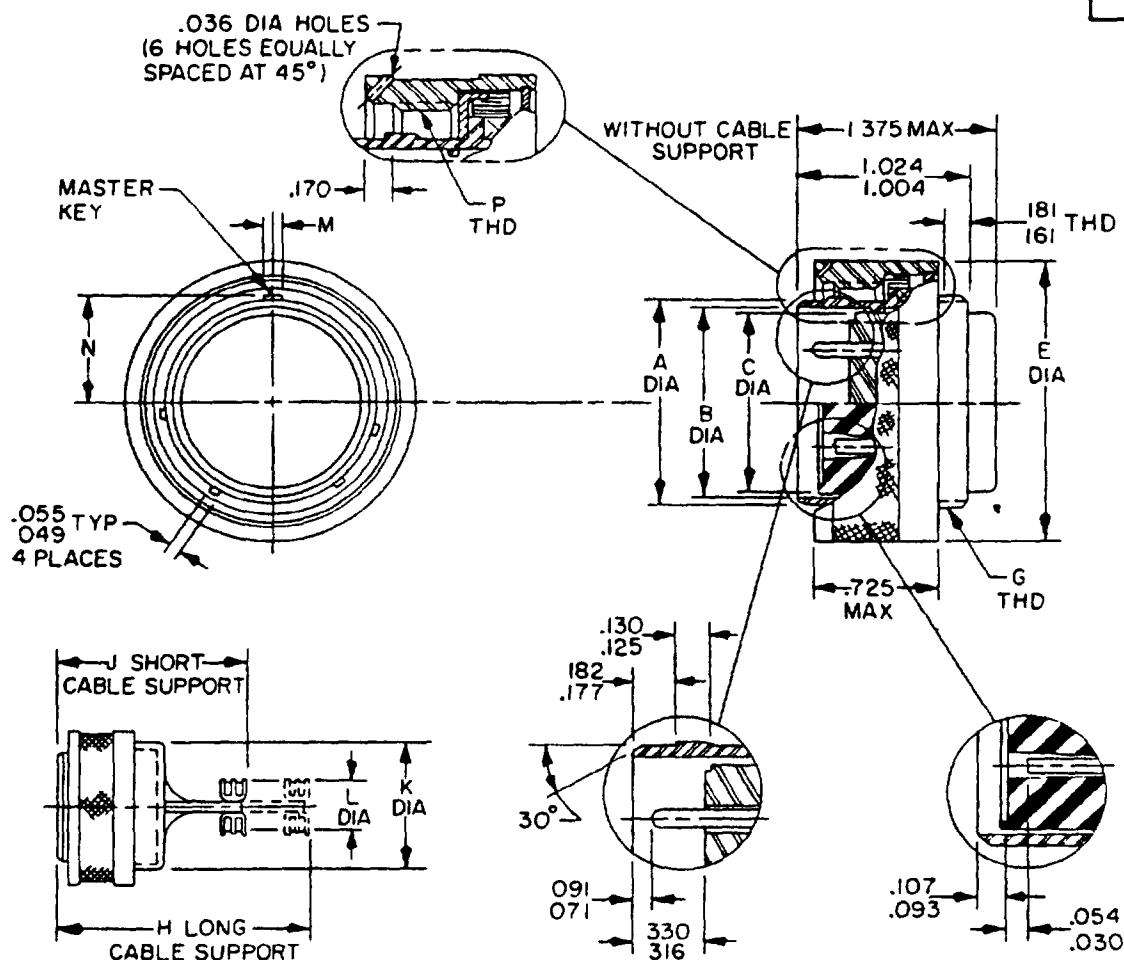


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Inches	mm	Inches	mm
.030	0.76	.161	4.09
.036	0.91	.170	4.32
.049	1.24	.177	4.50
.054	1.37	.181	4.60
.055	1.40	.182	4.62
.071	1.80	.316	8.03
.091	2.31	.330	8.38
.093	2.36	.725	18.42
.107	2.72	1.004	25.50
.125	3.18	1.024	26.01
.130	3.30	1.375	34.92

INACTIVE FOR AIR FORCE NEW DESIGN EQUIPMENT OR MODIFICATION OF EXISTING EQUIPMENT AFTER 14 NOV 1977.

Use MIL-C-83723, Series III, connector which is interchangeable.

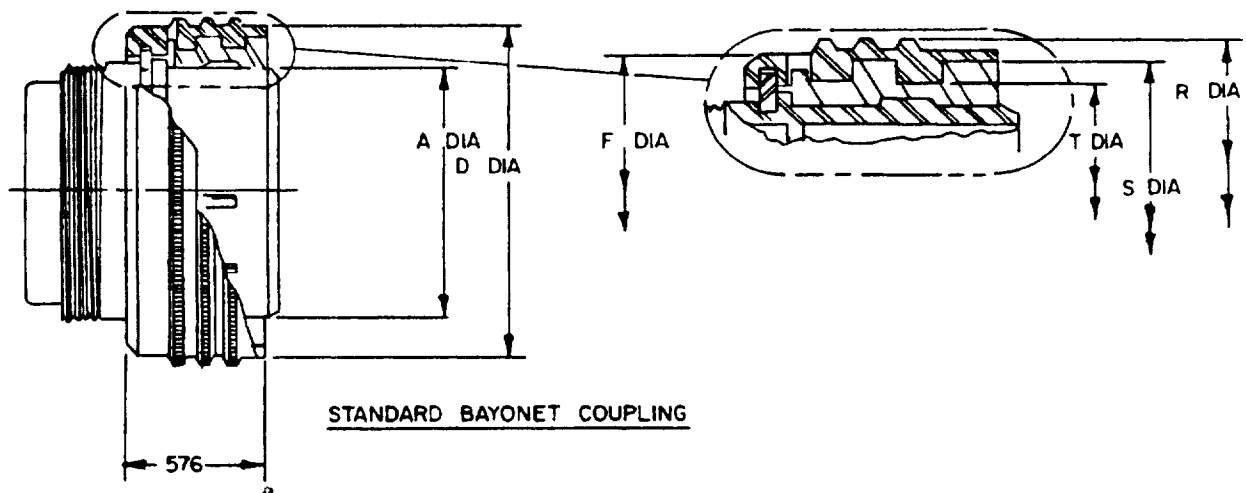
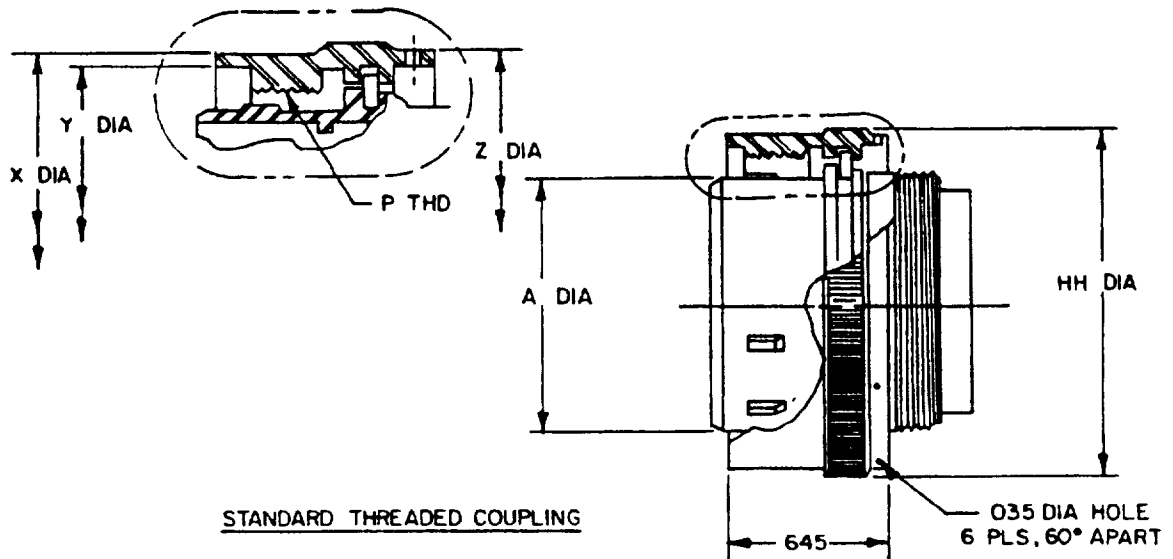
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PREPARING ACTIVITY Air Force - 85 CUSTODIANS ARMY NAVY AIR FORCE 85 DIA ES REVIEW Air Force - 11, 17, 99 USER PROJECT NUMBER 5935-F361-06	MILITARY SPECIFICATION SHEET TITLE CONNECTOR, ELECTRICAL, PLUG, RATCHET LOCK COUPLING, FIREWALL SERIES	SPECIFICATION SHEET NUMBER MS27615D(USAF) 7 Sept 90 SUPERSEDING MS27615C 14 Nov 77 AMSC N/A FSC 5935
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Inches	mm
.035	0.89
.576	14.63
.645	16.38

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PREPARING ACTIVITY Air Force - 85
CUSTODIANS ARMY NAVY
AIR FORCE 85 DLA ES

REVIEW Air Force - 11, 17, 99

USER

PROJECT NUMBER 5935-F361-06

DISTRIBUTION STATEMENT

MILITARY SPECIFICATION SHEET

TITLE
CONNECTOR, ELECTRICAL, PLUG
RATCHET LOCK COUPLING, FIREWALL
SERIES

SPECIFICATION SHEET NUMBER

MS27615D(USAF)

SUPERSEDING
MS27615C

14 Nov 77

AMSC N/A

FSC 5935

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Shell size (see note)	A dia +.000 (0.00) -.005 (0.13)	B dia +.003 (0.08) -.006 (0.15)	C dia max	D dia ±.005 (0.13)	E dia ±.005 (0.13)	F dia ±.005 (0.13)	G 36NS-2A	H dim max	MH dia max	J dim max
12	.696 (17.68)	.634 (16.10)	.508 (14.73)	N/A	1.11 (28.2)	N/A	.7334 (18.628)	2.045 (51.94)	1.086 (27.58)	N/A
14	.765 (19.43)	.703 (17.86)	.627 (15.92)	1.059 (26.40)	1.175 (29.84)	1.016 (25.81)	.8032 (20.401)	2.145 (54.48)	1.149 (29.18)	1.875 (47.62)
16	.892 (22.66)	.830 (21.08)	.754 (19.15)	1.186 (30.12)	1.302 (33.07)	1.143 (29.03)	.9302 (23.627)	2.245 (57.02)	1.275 (32.38)	1.875 (47.62)
18	.998 (25.35)	.936 (23.77)	.860 (21.84)	1.292 (32.82)	1.408 (35.76)	1.249 (31.72)	1.0362 (26.319)	2.345 (59.56)	1.383 (35.13)	1.875 (47.62)
22	1.248 (31.70)	1.186 (30.12)	1.110 (28.19)	1.542 (39.17)	1.658 (42.11)	1.499 (38.07)	1.2862 (32.669)	2.575 (65.40)	1.633 (41.49)	1.875 (47.62)
24	1.373 (34.87)	1.311 (33.30)	1.235 (31.37)	1.667 (42.34)	1.78 (45.2)	1.624 (41.25)	1.4111 (35.842)	2.675 (67.94)	1.758 (44.65)	N/A
28	1.623 (41.22)	1.561 (39.65)	1.488 (37.80)	N/A	2.038 (51.76)	N/A	1.6611 (42.192)	2.645 (67.18)	2.008 (51.00)	N/A

NOTE. Form size 12, 24, and 28 in bayonet series not released.

Ⓓ denotes change

PREPARING ACTIVITY Air Force - 85 CUSTODIANS ARMY NAVY AIR FORCE 85 DLA ES	MILITARY SPECIFICATION SHEET TITLE CONNECTOR, ELECTRICAL, PLUG RATCHET LOCK COUPLING, FIREWALL SERIES	SPECIFICATION SHEET NUMBER MS27615D(USAF)
REVIEW Air Force - 11, 17, 99 USER	SUPERSEDING MS27615C 14 Nov 77	AMSC N/A FSC 5935
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Shell size (See note)	K dia	L dia	M dim	N dim	P UNEF-28	R dia max	S dia	T dim	W	X	Y	Z
12	.788 (20.02)	.435 (11.05)	.084 (2.13)	.370 (9.40)	.875-20 (22.22)	N/A	N/A	N/A	N/A	.984 (25.0)	.928 (23.12)	.902 (22.94)
14	.862 (21.89)	.504 (12.80)	.084 (2.13)	.405 (10.29)	.937-20 (23.80)	1.087 (27.61)	1.0055 (25.565)	.900 (22.86)	.282 (7.16)	1.054 (26.77)	.998 (25.34)	.962 (24.43)
16	.989 (25.12)	.686 (17.42)	.115 (2.92)	.468 (11.87)	1.062-18 (26.97)	1.214 (30.84)	1.1335 (28.790)	1.028 (26.11)	.402 (10.21)	1.181 (30.00)	1.125 (28.57)	1.089 (27.66)
18	1.095 (27.81)	.794 (20.17)	.115 (2.92)	.521 (13.23)	1.187-18 (30.15)	1.320 (33.53)	1.2395 (31.483)	1.134 (28.08)	.556 (14.12)	1.287 (32.68)	1.231 (31.55)	1.195 (30.35)
22	1.345 (34.16)	1.038 (26.36)	.115 (2.92)	.646 (16.41)	1.437-18 (36.50)	1.570 (39.88)	1.4895 (37.833)	1.384 (35.15)	.608 (15.44)	1.537 (39.03)	1.481 (37.61)	1.445 (36.70)
24	1.595 (40.51)	1.162 (29.51)	.115 (2.92)	.708 (17.98)	1.562-18 (39.67)	1.695 (43.05)	1.6148 (41.016)	1.511 (38.38)	N/A	1.662 (42.21)	1.606 (40.79)	1.570 (39.87)
28	1.845 (46.86)	1.412 (35.86)	.115 (2.92)	.833 (21.16)	1.812-16 (46.02)	N/A	N/A	N/A	N/A	1.912 (48.56)	1.856 (47.14)	1.820 (46.22)

NOTE: Form size 12, 24, and 28 in bayonet series not released.

① denotes change

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REVIEW Air Force - 11, 17, 99 USER	SUPERSEDING MS27615C 14 Nov 77	AMSC N/A FSC 5935
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Weights of assembly less contacts and cable support (weights in pounds)

Size	12	12	14	14	14	14	16	16	18	18	18	22
Configuration	03	12	04	07	12	15	10	24	08	14	31	19
Pin	.068	.066	.069	.067	.068	.069	.094	.086	.097	.095	.092	.132
mm	1.73	1.68	1.75	1.70	1.73	1.75	2.39	4.72	2.46	2.41	2.34	3.35
Socket	.072	.071	.072	.071	.072	.073	.097	.093	.102	.101	.098	.136
mm	1.83	1.80	1.83	1.80	1.83	1.85	2.46	2.36	2.59	2.56	2.49	3.45

Size	22	22	24	24	28	28
Configuration	① 12	55	30	43	40	42
Pin	.135	.138	.160	.162	.209	.208
mm	3.43	3.51	4.06	4.11	5.31	5.28
Socket	.140	.144	.165	.188	.211	.214
mm	3.56	3.66	4.19	4.78	5.36	5.44

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Nomenclature breakdown
(see sheet 3)

MS27615	-	K	12	T	08	P	06	-	P	
Basic MS no.										Cable support
Class										H = long support J = short support (omit for no support)
Form size										Alternate key position (omit for normal)
T = threaded B = bayonet										Contact gender P = Pin S = Socket
Insert arrangement										
S = ratchet lock										

NOTES:

1. Dimensions are in inches.
2. Millimeters are in parentheses.
3. Metric equivalents are given for general information only.
4. The connector described in this MS drawing is classified as class K firewall connector. The shell sizes range from 12 to 28 and shall conform to the applicable portions of MIL-C-26500.
- ⑤ 5. The contacts shall be crimp type contacts and shall conform to MIL-C-39029
- ⑤ 6. For insert arrangements and alternate insert (keying) positions. See MIL-STD-1554.
7. Material and finishes:
 - a. The shells shall be of stainless steel material, type 300 series in accordance with MIL-C-862 and shall be passivated in accordance with MIL-STD-171.
 - ⑤ b. The contacts shall be of tinic bronze and shall be rhodium plated in accordance with MIL-C-39029.
 - c. The rigid insulations shall be of fired aluminum oxide (ceramic) material.
 - d. Cable supports shall be of 310 stainless steel, casting alloy and shall be passivated in accordance with MIL-STD-171.
 - ⑤ e. Contact retainers - material optional.
 - f. Seals and grommets shall be of silicone rubber.
- ⑤ 8. The contacts shall be crimped with a tool conforming to MIL-C-22520/1 crimping tool
9. All dimensions shown are in inches and are after plating dimensions. The four keys and/or keyways shall be within .004 of true position relative to the master key
10. Requirements for class K connectors
 - a. The connectors described herein shall meet all the environmental and electrical requirements of MIL-C-26500.
 - b. In addition to the requirements of MIL-C-26500, the connectors shall meet the following requirements:
 - ⑤ (1) Fireproof. A connector plug mated to its applicable receptacle assembly shall be mounted as used in service on a fixture fabricated in accordance with figure 9 of MIL-C-5015 and subjected to a 1,093°C flame for a period of 60 minutes. The flame shall be directed at the connector, and shall completely encompass the connector. The temperature of the flame shall be measured at .250 inch, vertical distance from the rear of the connector. The flame shall be produced by using propane fuel with a high air-to-fuel mixture at a flow rate equivalent to an input of 33,000 to 37,000 BTU/HR. The assembly shall be vibrated continuously at 33 CPS with total excursion of .250 inch for 60 minutes. The contacts shall carry the following dc current for the first 5 minutes of the test.

⑤ denotes change

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Contact size	Amperes
12	41.
16	22.
20	7.5

During the next minute of test, 110/125 volts at 60 CPS shall be applied between adjacent contacts and between contacts and the shell without exceeding 2 amperes of line current. Throughout the test, there shall be no passing of flames through the connector, nor shall there be any secondary combustion at the rear of the panel mounted connector. There shall be no adapters or extensions other than the standard cable clamp assembled to the connectors during the fireproof test.

- (2) Insulation resistance, fireproof: After the flame test, the connectors shall be allowed to cool to room temperature, the mated connectors shall then be subjected to a test potential of 500 V dc. The insulation resistance of the connectors shall be greater than 2,000 megohms.
- (3) Dielectric withstanding voltage, fireproof. After exposure to the flame and insulation resistance tests, the mated connectors shall be subjected to 1500 V ac rms. Applied between adjacent contacts and the contacts closet to the shell, there shall be no evidence of breakdown or flashover.
- (4) Contact retention, fireproof: After exposure to the flame, insulation resistance and dielectric withstanding tests, the individual contact locking mechanism shall withstand the axial loads specified in the table

Contact size	Axial load (lbs.) (fireproof)
12	23
16	18
20	12

The load shall be applied to the contact as specified in MIL-C-26500 and shall be applied at a rate of one pound per second.

11. The class K connector plug described herein shall include a ratchet locking mechanism within the plug assembly. The ratchet locking mechanism engages only when the mating shells bottoms out (metal to metal) indicating completion of mating of the shells. The ratchet locking mechanism will not require safety wiring.
12. The dimension and weight requirements shall be as specified in the tables shown on the MS drawings.
13. Contacts are not assembled into the connectors, but are furnished separately in containers.
14. Dust caps are supplied for front and back end of the connectors.
- ① 15. When part number designates a cable support, the connector and cable support will be furnished unassembled.

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