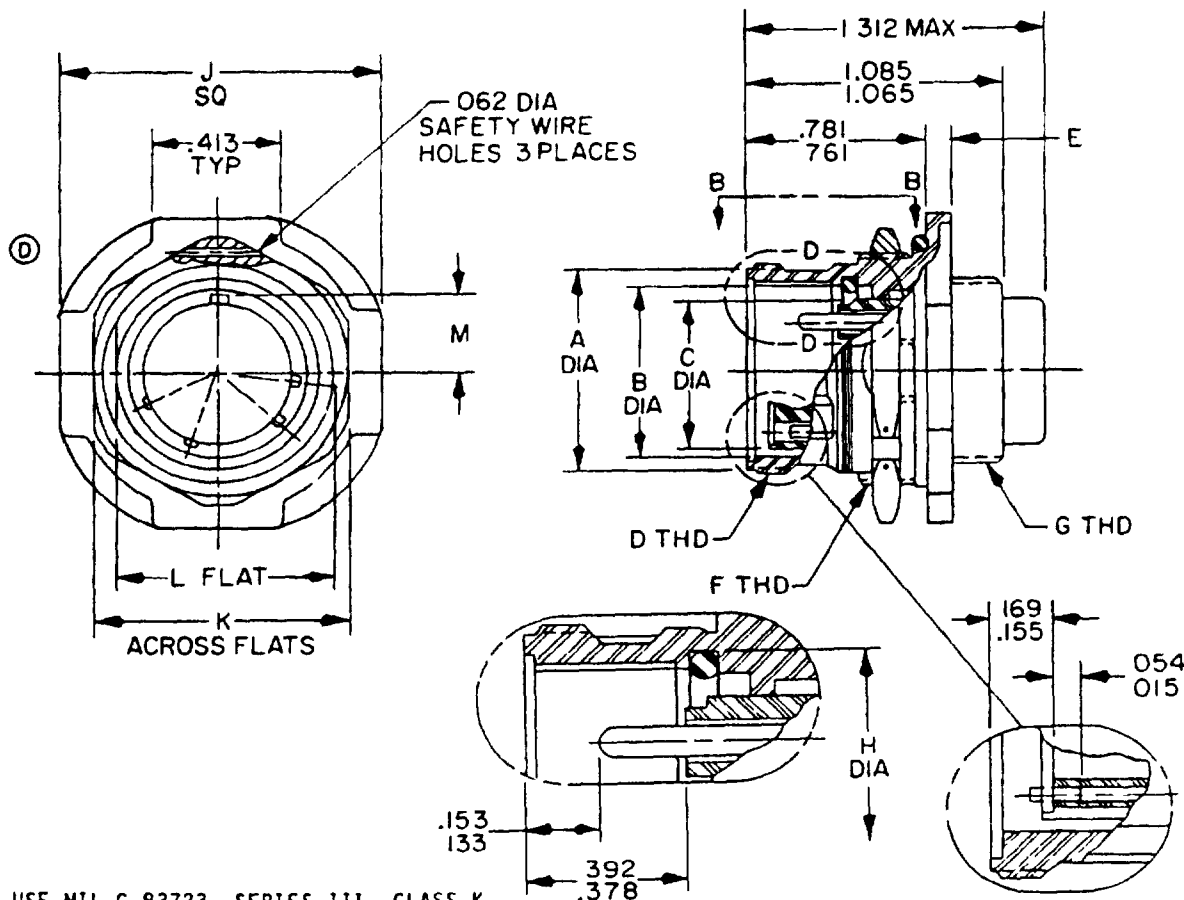


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INACTIVE FOR AIR FORCE NEW DESIGN EQUIPMENT OR MODIFICATION OF EXISTING EQUIPMENT AFTER 14 NOV 1977.

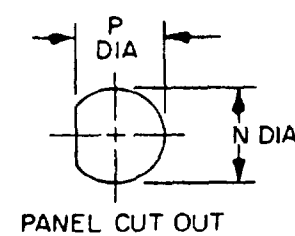
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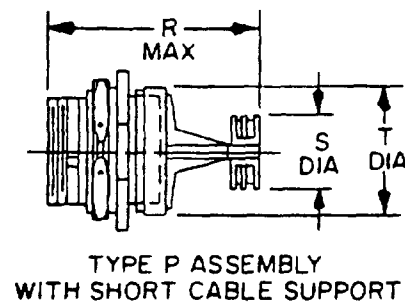
USE MIL-C-83723, SERIES III, CLASS K CONNECTOR WHICH IS INTERCHANGEABLE.

SECTION D-D

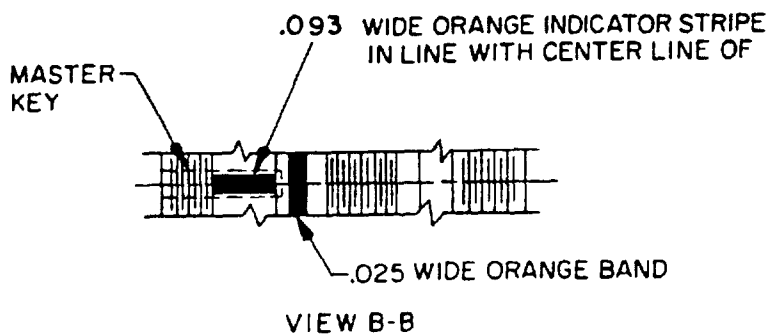
Inches	mm	Inches	mm
.015	0.38	.378	9.60
.025	0.64	.392	9.96
.054	1.37	.413	10.49
.062	1.57	.761	19.33
.093	2.36	.781	19.84
.133	3.38	1.065	27.05
.153	3.89	1.085	27.56
.155	3.94	1.312	33.32
.169	4.29		



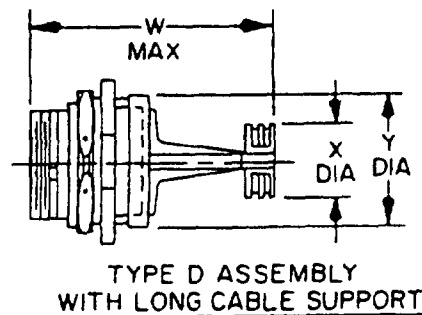
PANEL CUT OUT



TYPE P ASSEMBLY WITH SHORT CABLE SUPPORT



VIEW B-B



TYPE D ASSEMBLY WITH LONG CABLE SUPPORT

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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-F361-05

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MILITARY SPECIFICATION SHEET

TITLE
CONNECTOR, ELECTRICAL, RECEPTACLE
"D" HOLE MOUNT, FIREWALL SERIES

SPECIFICATION SHEET NUMBER

MS27614D(USAF) 7 Sept 90

SUPERSEDING

MS27614C 14 Nov 77

AMSC N/A

FSC 5935

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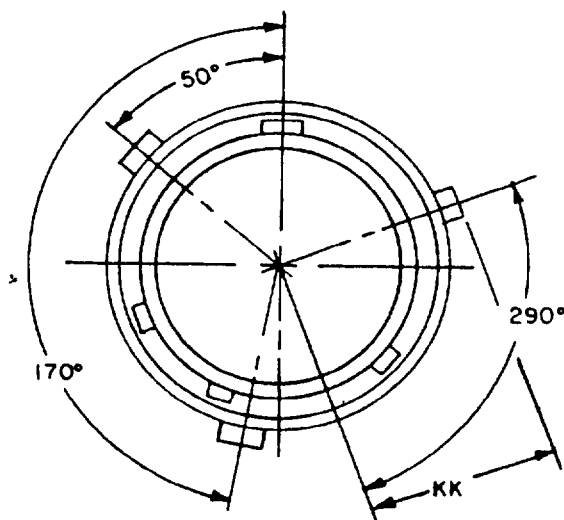
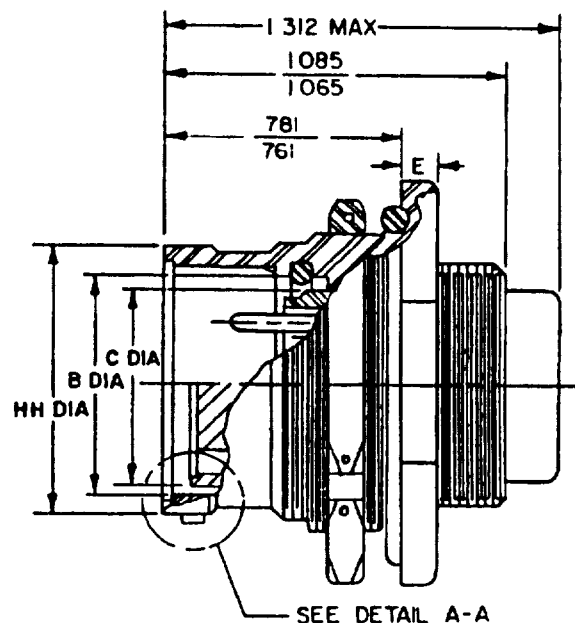
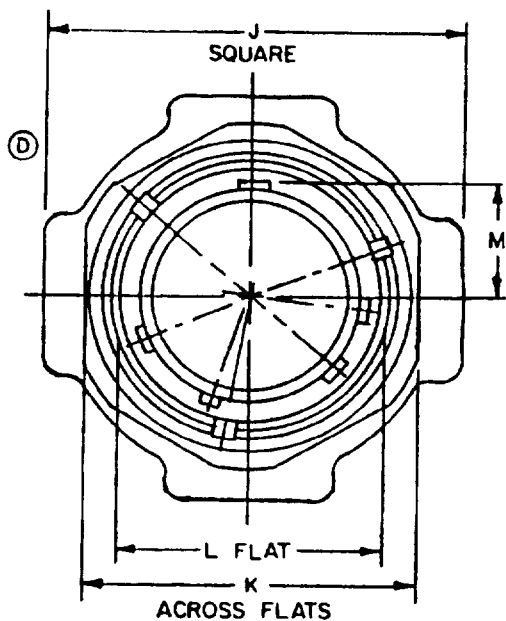
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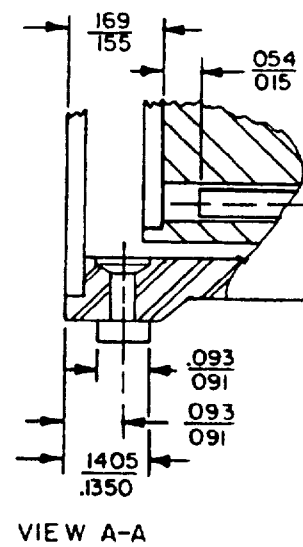
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Inches	mm
.015	0.38
.054	1.37
.091	2.31
.093	2.36
.1350	3.429
.1405	3.568
.155	3.93
.169	4.29
.761	19.33
.781	19.84
1.065	27.05
1.085	27.56
1.312	33.32



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AIR FORCE 85 DLA ES
REVIEW Air Force - 11, 17, 99
USER
PROJECT NUMBER 5935-F361-05
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SPECIFICATION SHEET NUMBER
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Shell size (see note)	A dia $\pm .005$ (0.13)	B dia $\pm .005$ (0.13) $-.000$ (0.00)	C dia	D UNEF-2A	E dia $\pm .005$ (0.13)	F UNS-2A	G -36NS-2A	H dia	HH $\pm .005$ (0.13)	J dim $\pm .005$ (0.13)
12	.809 (20.55)	.700 (17.78)	.558 (14.17)	.875-20 (22.22)	.102 (2.59)	.937-20 (23.80)	.7334 (18.628)	.801 (20.34)	.829 (21.06)	1.291 (32.79)
14	.871 (22.12)	.769 (19.53)	.627 (15.92)	.937-18 (23.80)	.102 (2.59)	1.000-20 (25.40)	.8032 (20.401)	.875 (22.22)	.898 (22.81)	1.391 (35.33)
16	.989 (25.12)	.896 (22.76)	.754 (19.15)	1.062-18 (26.97)	.102 (2.59)	1.125-20 (28.58)	.9302 (23.627)	1.002 (25.45)	1.025 (26.04)	1.516 (38.51)
18	1.114 (28.30)	1.002 (25.45)	.860 (21.84)	1.187-18 (30.15)	.102 (2.59)	1.250-20 (31.75)	1.0362 (26.319)	1.108 (28.14)	1.131 (28.73)	1.641 (41.68)
22	1.364 (34.64)	1.252 (31.80)	1.110 (28.19)	1.437-18 (36.50)	.133 (3.38)	1.500-20 (38.10)	1.2862 (32.669)	1.358 (34.49)	1.381 (35.08)	1.954 (49.63)
24	1.488 (37.80)	1.377 (34.98)	1.235 (31.37)	1.562-18 (31.37)	.133 (3.38)	1.625-18 (41.28)	1.4111 (35.842)	1.483 (37.67)	N/A	2.068 (52.53)
28	1.729 (43.92)	1.627 (41.32)	1.488 (37.80)	1.812-18 (46.02)	.133 (3.38)	1.875-20 (47.62)	1.6611 (42.192)	1.733 (44.02)	N/A	2.318 (58.88)

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

① denotes change

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Shell size (See note)	K dim max hex	KK dim - .002 (0.05) + .005 (0.13)	L dim max	M dim + .005 (0.13) - .000 (0.00)	N dia + .005 (0.13)	P dim + .005 (0.13)	R max	S dia + .005 (0.15)	T dia + .010 (0.25)	U + .003 (0.08)	W dia max	X dia + .006 0.15	Y dia + .010 (0.25)
12	1.125 (28.58)	.4555 (11.570)	.905 (22.99)	.373 (9.47)	.927 (23.54)	.917 (23.29)	N/A	N/A	N/A	.094 (2.39)	2.045 (51.94)	.435 (11.05)	.788 (20.02)
14	1.062 (26.97)	.4900 (12.446)	.971 (24.66)	.408 (10.36)	1.010 (25.65)	.980 (24.89)	1.875 (47.17)	.382 (9.70)	.862 (21.89)	.094 (2.39)	2.145 (54.48)	.554 (14.07)	.862 (21.89)
16	1.187 (30.15)	.5535 (14.059)	1.098 (27.89)	.471 (11.96)	1.135 (28.83)	1.105 (28.07)	1.875 (47.17)	.462 (11.73)	.989 (25.12)	.094 (2.39)	2.245 (57.02)	.686 (17.42)	.989 (25.12)
18	1.312 (33.32)	.6065 (15.405)	1.220 (30.99)	.524 (13.31)	1.260 (32.00)	1.225 (31.12)	1.875 (47.17)	.556 (14.12)	1.095 (27.81)	.125 (3.18)	2.345 (59.56)	.794 (20.17)	1.095 (27.81)
22	1.562 (39.67)	.7315 (18.580)	1.470 (37.34)	.648 (16.46)	1.510 (38.35)	1.475 (37.46)	1.875 (47.17)	.608 (15.44)	1.345 (34.16)	.125 (3.18)	2.575 (65.40)	1.038 (26.36)	1.345 (34.16)
24	1.892 (48.06)	N/A	1.592 (40.44)	.713 (18.11)	1.645 (41.78)	1.600 (40.64)	N/A	N/A	N/A	.125 (3.18)	2.675 (67.94)	1.162 (29.51)	1.595 (40.51)
28	2.142 (54.41)	N/A	1.842 (46.79)	.838 (21.28)	1.865 (47.37)	1.847 (46.91)	N/A	N/A	N/A	.125 (3.18)	2.875 (73.02)	1.412 (35.86)	1.845 (46.86)

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

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DD Form 672, MAY 88		Page 4 of 7

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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
Config- uration	① 03	12	04	07	12	15	10	24	08	14	31	19
Pin	.064	.062	.068	.068	.067	.069	.073	.079	.094	.095	.097	.129
mm	1.62	1.57	1.73	1.73	1.70	1.75	1.85	2.01	2.39	2.41	2.46	3.28
Socket	.067	.064	.071	.070	.070	.071	.079	.081	.099	.100	.101	.139
mm	1.70	1.62	1.80	1.78	1.78	1.80	2.01	2.06	2.51	2.54	2.56	3.53

Size	22	22	24	24	28	28
Config- uration	① 12	55	30	43	40	42
Pin	.130	.130	.140	.142	.203	.206
mm	3.30	3.30	3.56	3.61	5.16	5.23
Socket	.135	.131	.142	.146	.207	.208
mm	3.43	3.33	3.61	3.71	5.26	5.28

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Nomenclature breakdown

MS27614 - K 12 T 08 P 06 - P

Basic MS no. _____
 Class _____
 Form size _____
 T = threaded
 B = bayonet - Coupling
 Insert arrangement _____

Cable support
 D = long support
 P = short support
 Alternate key position
 (omit for normal)
 Contact gender
 P = Pin
 S = Socket

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.
 - 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.
 - 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.
- ⑤ 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.
- ⑤ 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:
 - (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

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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 closest 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 dimension and weight requirements shall be as specified in the tables shown on the MS drawings.
12. Contacts are not assembled into the connectors, but are furnished separately in containers.
13. Dust caps are supplied for front and back end of the connectors.
- ① 14. When part number designates a cable support, the connector and cable support will be furnished unassembled.

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