

NOTICE OF CHANGE**INCH-POUND**MIL-STD-1560A
NOTICE 5
30 October 1989

MILITARY STANDARD

INSERT ARRANGEMENTS FOR MIL-C-38999
AND MIL-C-27599 ELECTRICAL
CIRCULAR CONNECTORS

TO ALL HOLDERS OF MIL-STD-1560A:

1. THE FOLLOWING PAGES OF MIL-STD-1560A HAVE BEEN REVISED AND SUPERSEDE THE PAGES LISTED:

<u>NEW PAGE</u>	<u>DATE</u>	<u>SUPERSEDED PAGE</u>	<u>DATE</u>
1		1	20 November 1981
2		2	6 February 1985
2a		NEW	---
107.7		NEW	---
109.11	24 August 1982	109.11	REPRINTED WITHOUT CHANGE
109.12		109.12	6 February 1985
109.12a		NEW	---

2. RETAIN THIS NOTICE AND INSERT BEFORE TABLE OF CONTENTS.

3. Holders of MIL-STD-1560A will verify that page changes and additions indicated above have been entered. This notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by stocking points until the military standard is completely revised or canceled.

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - AS
Air Force - 85

Review activities:

Army - AR, MI
Navy - EC, MC, OS
Air Force - 11, 15, 99
DLA - ES

Preparing activity:
Air Force - 85

Agent:
DLA - ES

(Project 5935-3737)

AMSC N/A

DISTRIBUTION STATEMENT A, Approved for public release; distribution is unlimited.

FSC 5935

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1. SCOPE

1.1 This standard covers insert arrangements for use with MIL-C-38999 and MIL-C-27599 circular connectors.

2. REFERENCED DOCUMENTS

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

MILITARY

- MIL-C-38999 - Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, General Specification for.
- MIL-C-27599 - Connector, Electrical, Miniature, Quick Disconnect (For Weapons Systems) Established Reliability.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099.)


3. DEFINITIONS

3.1 The terms used in this standard are generally accepted by the electrical and electronics industries and commonly used in electrical connector engineering practice.

4. GENERAL REQUIREMENTS. Not applicable.

5. DETAIL REQUIREMENTS

5.1 Dimensions. Dimensions shall be in accordance with the applicable section of this standard and the following dimensional data:


- a.  Indicates  of insert arrangement.
- b. All dimensions (TP) and in inches. Dimensions and markings: Front face of pin insert shown (socket insert opposite).
- c. Number 12 contacts - MIL-C-27599 pin contacts .094 \pm .001 diameter, socket contacts entry hole (contact sleeve) .099 minimum diameter, number of places as applicable.

MIL-C-38999 - pin contacts .094 \pm .001 diameter, socket insert entry hole .103 minimum diameter, number of places as applicable.


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- d. Number 16 contacts - MIL-C-27599 - pin contacts .0625 \pm .0010 diameter, socket contacts entry hole (contact sleeve) .067 minimum diameter, number of places as applicable.
- MIL-C-38999 - pin contacts .0625 \pm .0010 diameter, socket insert entry hole .071 minimum diameter, number of places as applicable.
- e. Number 20 contacts - MIL-C-27599 - pin contacts .040 \pm .001 diameter, socket contacts entry hole (contact sleeve) .045 minimum diameter, number of places as applicable.
- MIL-C-38999 - pin contacts .040 \pm .001 diameter, socket insert entry hole .049 minimum diameter, number of places as applicable.
- f. Number 22 and 22M contacts - MIL-C-27599 - pin contacts .0300 \pm .0005 diameter, socket contacts entry hole (contact sleeve) .036 minimum diameter, number of places as applicable.
- MIL-C-38999 - pin contacts .0300 \pm .0005 diameter, socket insert entry hole .035 minimum diameter, number of places as applicable.
- g. Number 22D contacts - MIL-C-38999 - pin contacts .0300 \pm .0005 diameter, socket insert entry hole .035 minimum diameter, number of places as applicable.
- h. Number 8 coaxial contacts - MIL-C-38999 - pin contacts .218 \pm .001 diameter, socket insert entry hole .227 minimum diameter, number of places as applicable.
- i. - Gauge features for MIL-C-38999 series I, II, and III and MIL-C-27599 series I and II receptacle connectors shall be .002 smaller than t at MMC, and .006 smaller than GG at MMC.

	H	-.002	M	GG-.006	M	See note
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- j. - Gauge features for MIL-C-38999 series I, II, and III and MIL-C-27599 series I and II plug connectors shall be .002 larger than W at MMC and .006 larger than GG at MMC.

	W	+.002	M	GG+.006	M	See note
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NOTE:

- a. T.004 DIA M For MIL-C-27599 connectors; this requirement pertains to the pin contacts and the socket entry holes (contact sleeve).

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- b. .015 DIA M For MIL-C-38999 connectors; this requirement pertains to the closed entry hole of the socket contacts.
- c. .024 DIA M For MIL-C-38999 connectors; this requirement pertains to the tip of the pin contact.
- d. DATUMS H, GG, and H are located on connector intermateability dimension figures for key/keyway polarization in MIL-C-38999.

5.2 Marking Marking shall be in accordance with MIL-C-38999, MIL-C-27599, and as shown in the applicable section of this military standard. Sawtooth lines may be use in place of straight lines.

5.3 Drawing notes. The following information is applicable to all figures of this military standard.

- a. Dimensions are in inches.
- b. Metric equivalents are given for general information only.

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - AS
Air Force - 85

Review activities:

Army - AR, MI
Navy - EC, MC, OS
Air Force - 11, 15, 17, 99
DLA - ES

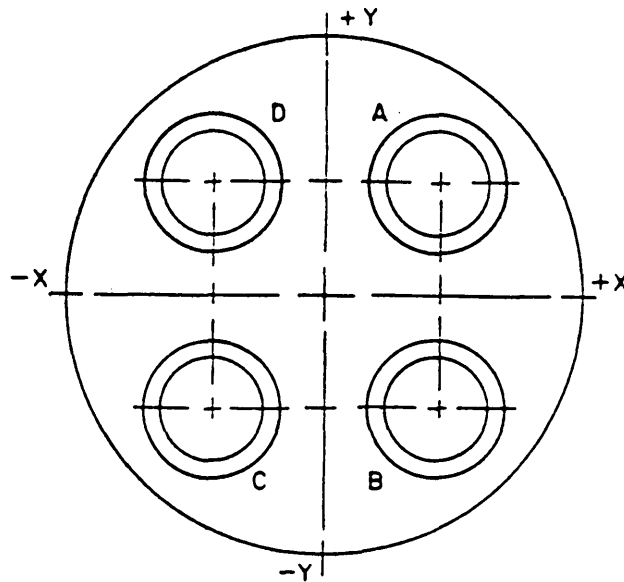
Preparing activity:
Air Force - 85

Agent:
DLA - ES

(Project 5935-3464)

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INSERT ARRANGEMENT, ELECTRICAL CONNECTOR
SHELL SIZE 21



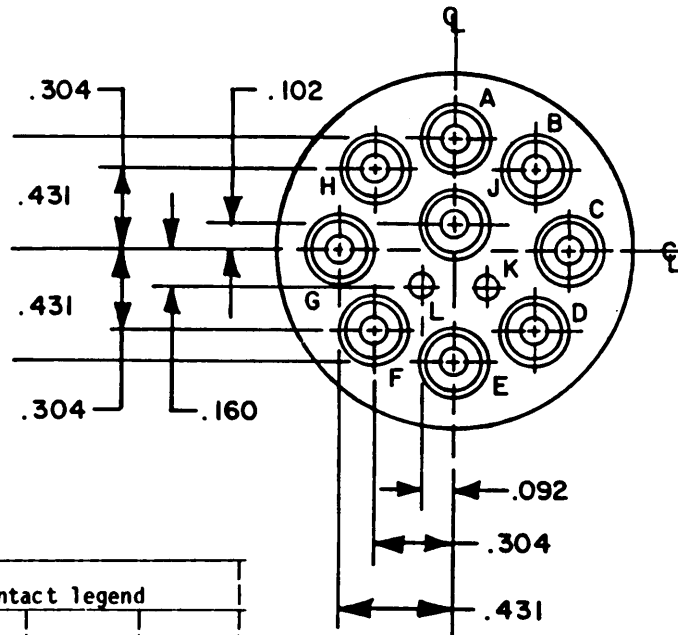
Contact location	X	Y
A	.180	.160
B	.180	-.180
C	-.180	-.160
D	-.180	.180

Inches mm
.180 4.57

Shell size	Arrangement number	Number of contacts	Size contacts	Service rating	Contact location	Standard contact	
						Pin	Socket
21	75	4	8	TWINAX	All	M39029/90-529	M39029/91-530

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INSERT ARRANGEMENT, ELECTRICAL CONNECTOR
SHELL SIZE 25



Contact legend		
Contact ident	Size	Qty
	10	9
	20	2

Inches	mm
.092	2.34
.102	2.59
.160	4.06
.304	7.72
.431	10.95

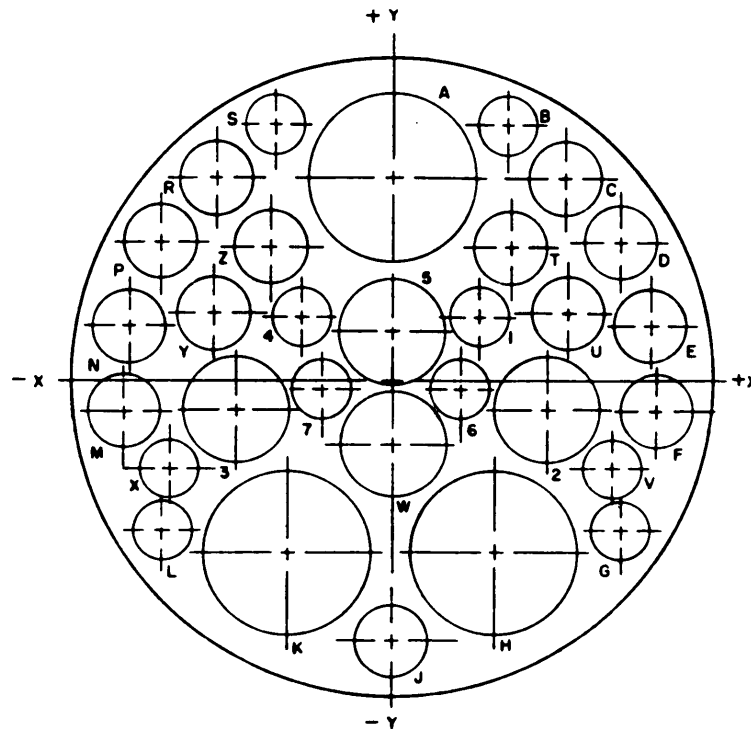
Shell size	Arrangement number	Number of contacts	Size contacts	Service rating	Contact location
25	-11	9	10	N	A, B, C, D, E, F, G, H, J
		2	20		L, K

NOTES:

1. All dimensions are true positions.
2. Front face of pin insert shown.

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INSERT ARRANGEMENT, ELECTRICAL CONNECTOR
SHELL SIZE 25



Contact location	X	Y
A	.000	+.407
B	+.234	+.511
C	+.352	+.411
D	+.466	+.275
E	+.530	+.111
F	+.537	-.060
G	+.467	-.312
H	+.208	-.353
J	.000	-.541
K	-.208	-.353
L	-.467	-.312
M	-.537	-.060
N	-.530	+.111
P	-.466	+.275
R	-.352	+.411

Contact location	X	Y
S	-.234	+.511
T	+.243	+.270
U	+.357	+.136
V	+.450	-.183
W	.000	-.131
X	-.450	-.183
Y	-.357	+.136
Z	-.243	+.270
1	+.195	+.115
2	+.317	-.061
3	-.317	-.061
4	-.195	+.115
5	.000	+.099
6	+.141	-.018
7	-.141	-.018

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Inches	mm	Inches	mm
.018	0.46	.275	6.98
.060	1.52	.312	7.92
.061	1.55	.317	8.05
.099	2.51	.352	8.94
.111	2.82	.353	8.97
.115	2.92	.357	9.07
.131	3.33	.407	10.34
.136	3.45	.411	10.44
.141	3.58	.450	11.43
.183	4.65	.466	11.84
.195	4.95	.467	11.86
.208	5.28	.511	12.98
.234	5.94	.530	13.46
.243	6.17	.537	13.64
.270	6.84	.541	13.74

Shell size	Arrangement number	Number of contacts	Size of contacts	Service rating	Contact location	Standard contact	
						Pin	Socket
25	-20	3	8	TWINAX	A, H, K	M39029/90-529	M39029/91-530
		4	12	COAX	2, 3	M39029/28-211	M39029/75-416
					W, 5	M39029/102-558	M39029/103-559
		13	16	N	C, D, E, F, J, M, N, P, R, T, U, Y, Z	M39029/58-364	M39029/56-352
		10	20		B, G, L, S, V, X, 1, 4, 6, 7	M39029/58-363	M39029/56-351

