

NOTICE OF CHANGEINCH-POUND

MIL-STD-1560A
 NOTICE 6
 25 June 1993

MILITARY STANDARD

INSERT ARRANGEMENTS FOR MIL-C-38999,
 MIL-C-29600 SERIES A, AND MIL-C-27599
 ELECTRICAL, CIRCULAR CONNECTORS

TO ALL HOLDERS OF MIL-STD-1560A:

1. MAKE THE FOLLOWING PEN AND INK CHANGES TO PAGES LISTED:

Title page - Following MIL-C-38999, add, "MIL-C-29600 SERIES A, ". Make this same change in Section 100.

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

NEW PAGE	DATE	SUPERSEDED PAGE	DATE
1		1	30 October 1989
2		2	30 October 1989
2a/2b		2a	30 October 1989
101.1		101.1	1 December 1975
101.2		101.2	1 December 1975
105.5/105.6		NEW	---
109.13		NEW	---
109.14		NEW	---
109.15/109.16		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

Preparing activity:

Air Force - 85

Review activities:

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

Agent:

DLA - ES

(Project 5935-3922)

MIL-STD-1560A
NOTICE 6

1. SCOPE

1.1 This standard covers insert arrangements for use with MIL-C-38999, MIL-C-29600 series A 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-29600 | - | Connectors, Electrical, circular, Miniature, Composite, High Density, Quick Coupling, Environment Resistant, Removable Crimp Contacts, Associated Hardware 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. **I** Indicates **C** 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 ±.001 diameter, socket contacts entry hole (contact sleeve) .099 minimum diameter, number of places as applicable.

MIL-C-38999 and MIL-C-29600 series A - pin contacts .094 ±.001 diameter, socket insert entry hole .103 minimum diameter, number of places as applicable.
- d. Number 16 contacts - MIL-C-27599 - pin contacts .0625 ±.0010 diameter, socket contacts entry hole (contact sleeve) .067 minimum diameter, number of places as applicable.

MIL-C-38999 and MIL-C-29600 series A - pin contacts .0625 ±.0010 diameter, socket insert entry hole .071 minimum diameter, number of places as applicable.

Supersedes page 1 of
Notice 5.

MIL-STD-1560A
NOTICE 6

- e. Number 20 contacts - MIL-C-27599 - pin contacts .040 ±.001 diameter, socket contacts entry hole (contact sleeve) .045 minimum diameter, number of places as applicable.
- MIL-C-38999 and MIL-C-29600 series A - pin contacts .040 ±.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 ±.0005 diameter socket contacts entry hole (contact sleeve) .036 minimum diameter, number of places as applicable.
- MIL-C-38999 and MIL-C-29600 series A - pin contacts .0300 ±.0005 socket insert entry hole .035 minimum diameter, number of places as applicable.
- g. Number 22D contacts - MIL-C-38999 and MIL-C-29600 series A - pin contacts .0300 ±.0005 diameter, socket insert entry hole .035 minimum diameter, number of places as applicable.
- h. Number 8 contacts - MIL-C-38999 and MIL-C-29600 series A - pin contacts .218 ±.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, MIL-C-29600 series A and MIL-C-27599 series I and II receptacle connectors shall be .002 smaller than H at MMC, and .006 smaller than GG at MMC.

⊕	H -.002	Ⓜ	GG-.006	Ⓜ	See note
---	---------	---	---------	---	----------

- j. - Gauge features for MIL-C-38999 series I, II, and III, MIL-C-29600 series A 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	Ⓜ	GG+.006	Ⓜ	See note
---	---------	---	---------	---	----------

NOTE :

- a. .004 DIA M For fixed contact designs such as MIL-C-27599 and hermetic connectors of MIL-C-38999; this requirement pertains to the pin contacts and the socket entry holes (contact sleeve).
- b. .015 DIA M For removable contacts MIL-C-38999 and MIL-C-29600 series A connectors; this requirement pertains to the closed entry hole of the socket contacts.
- c. .024 DIA M For removable contacts MIL-C-38999 and MIL-C-29600 series A connectors, this requirement pertains to the tip of the pin contact.
- d. DATUMS H, GG, and W are Located on connector intermateability dimension figures for key/keyway polarization in MIL-C-38999.

Supersedes page 2 of
Notice 5.

MIL-STD-1560A
NOTICE 6

5.2 Marking. Marking shall be in accordance with MIL-C-38999, MIL-C-29600 series A, 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, HC, OS
Air Force - 15, 17, 99
DLA - ES

Preparing activity:

Air Force - 85

Agent:

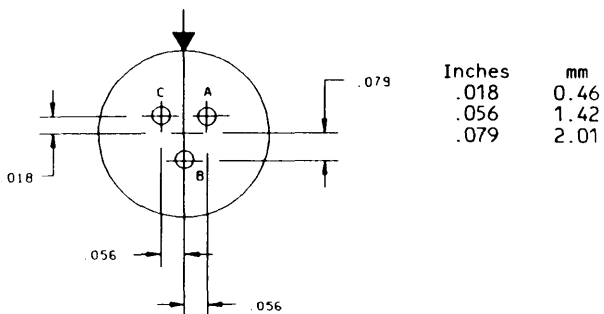
DLA - ES

(Project 5935-3464)

Supersedes page 2a of
Notice 5.

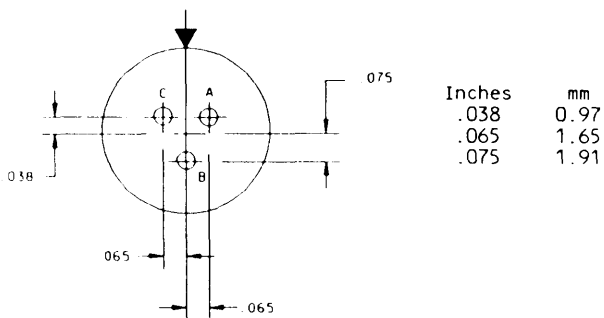
MIL-STD-1560A
NOTICE 6

SECTION 101
INSERT ARRANGEMENT, ELECTRICAL CONNECTOR
SHELL SIZE 9

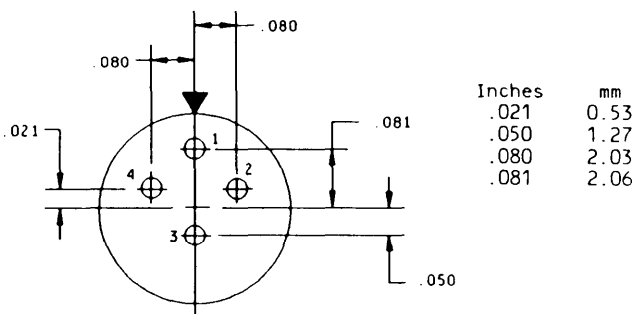


(Applicable to MIL-C-27599 only)

Shell size	Arrangement no.	Number of contacts	Size contacts	Service rating	Contact location	Supersedes document
9	-3	3	20	M	ALL	MS20049-3



Shell size	Arrangement no.	Number of contacts	Size contacts	Service rating	Contact location	Supersedes document
9	-98	3	20	I	ALL	MS20049-98



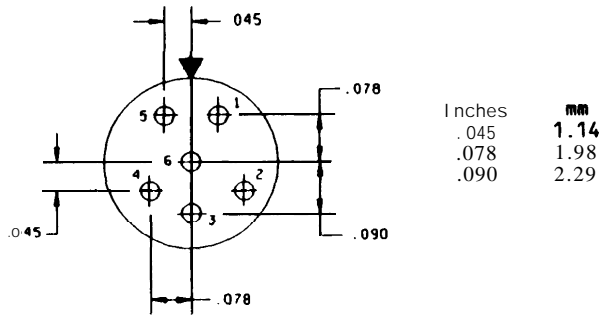
(Inactive for new design for MIL-C-38999 and MIL-C-29600, series A).

Shell size	Arrangement no.	Number of contacts	Size contacts	Service rating	Contact location	Supersedes document
9	-44	4	22	M	ALL	MS20049-44

Supersedes page 101.1 of
MIL-STD-1560A.

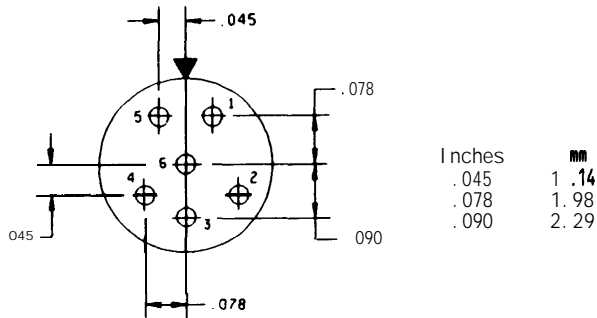
SECTION 101A

MIL-STD-1560A
NOTICE 6



(Inactive for new design for **MIL-C-38999** and **MIL-C-29600**, series A.)

Shell size	Arrangement no.	Number of contacts	Size contacts	Service rating	Contact location	Supersedes document
9	-6	6	22M	M	All	MS20049-6

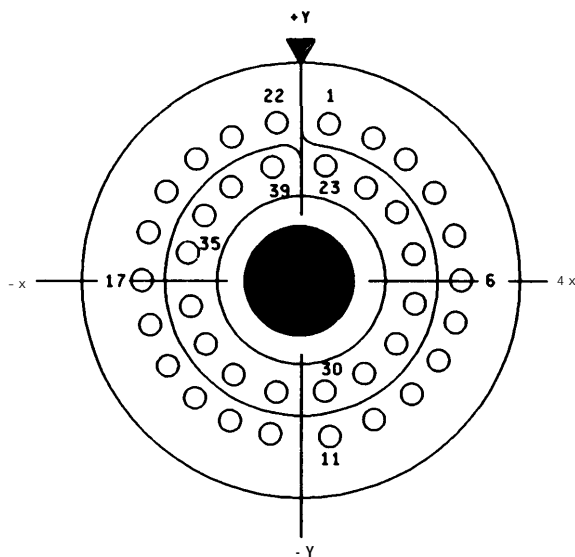


(Applicable to **MIL-C-38999** and **MIL-C-29600**, series A).

Shell size	Arrangement no.	Number of contacts	Size contacts	Service rating	Contact location	Supersedes document
9	-35	6	22D	M	All	MS27525-35

MIL-STD-1560A
NOTICE 6

INSERT ARRANGEMENT, ELECTRICAL CONNECTOR
SHELL SIZE 17



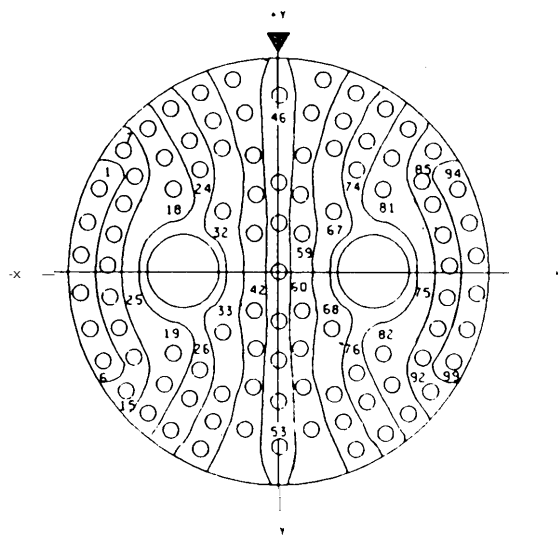
Contact number	Location		Contact number	Location		Contact number	Location	
	X-axis	Y-axis		X-axis	Y-axis		X-axis	Y-axis
1	+.046	+ .325	14	-.228	-.236	27	+ .232	-.040
2	+.133	+.299	15	-.284	-.164	28	+.200	-.125
3	+.211	+ .251	16	-.318	-.079	29	+.137	-.191
4	+ .272	+ .183	17	-.328	+.011	30	+.055	-.229
5	+.312	+.101	18	-.312	+.101	31	-.055	-.229
6	+ .328	+.011	19	-.272	+.183	32	-.137	-.191
7	+.318	-.079	20	-.211	+.251	33	-.200	-.125
8	+.284	-.164	21	-.133	+.299	34	-.232	-.040
9	+ .228	-.236	22	-.046	+ .325	35	-.230	+ .050
10	+.154	-.289	23	+.046	+ .231	36	-.194	+.133
11	+ .068	-.321	24	+ .129	+.197	37	-.129	+ .197
12	-.068	-.321	25	+.194	+ .133	38	-.046	+.231
13	-.154	-.289	26	+.230	+.050	39	+.000	-.000

Shell size	Arrangement number	Number of contacts	Size contacts	Service rating	Contact location	Standard contact	
						Pin	Socket
17	-2	38	22D	M	All other	M39029/58-360	M39029/56-348
		1	8	Twinax	39	M39029/90-529	M39029/91-530

MIL-STD-1560A
NOTICE 6

INSERT ARRANGEMENT, ELECTRICAL CONNECTOR
SHELL SIZE 25

Contact number	Location		Contact number	Location	
	X-axis	Y-axis		X-axis	Y-axis
1	-.494	+.242	51	.000	-.106
2	-.533	+.138	52	.000	-.212
3	-.550	+.028	53	.000	-.310
4	-.544	-.083	54	.000	-.551
5	-.516	-.191	55	+.056	+.548
6	-.467	-.292	56	+.095	+.461
7	-.435	+.337	57	+.068	+.370
8	-.399	+.249	58	+.092	+.278
9	-.441	+.163	59	+.095	+.183
10	-.465	+.071	60	+.089	-.178
11	-.470	-.024	61	+.094	-.277
12	-.456	-.118	62	+.069	-.376
13	-.423	-.207	63	+.048	-.468
14	-.372	-.288	64	+.165	+.525
15	-.399	-.379	65	+.186	+.433
16	-.359	+.418	66	+.164	+.340
17	-.341	+.324	67	+.181	+.225
18	-.308	+.222	68	+.172	-.223
19	-.303	-.223	69	+.159	-.347
20	-.307	-.357	70	+.141	-.449
21	-.314	-.452	71	+.111	-.539
22	-.267	+.481	72	+.267	+.481
23	-.269	+.386	73	+.269	-.386
24	-.247	+.294	74	+.247	+.294
25	-.238	.000	75	+.238	.000
26	-.237	-.292	76	+.237	-.292
27	-.228	-.412	77	+.228	-.412
28	-.217	-.506	78	+.217	-.506
29	-.165	+.525	79	+.359	+.418
30	-.186	+.433	80	+.341	+.324
31	-.164	+.340	81	+.308	+.222
32	-.181	+.225	82	+.303	-.223
33	-.172	-.223	83	+.307	-.357
34	-.159	-.347	84	+.314	-.452
35	-.141	-.449	85	+.435	+.337
36	-.111	-.539	86	+.399	+.249
37	-.056	+.548	87	+.441	+.163
38	-.095	+.461	88	+.465	+.071
39	-.068	+.370	89	+.470	-.024
40	-.092	+.278	90	+.456	-.118
41	-.095	+.183	91	+.423	-.207
42	-.089	-.178	92	+.372	-.288
43	-.094	-.277	93	+.399	-.379
44	-.069	-.376	94	+.494	+.242
45	-.048	-.468	95	+.533	+.138
46	.000	+.471	96	+.550	+.028
47	.000	+.303	97	+.544	-.083
48	.000	+.208	98	+.516	-.191
49	.000	+.104	99	+.467	-.292
50	.000	.000			

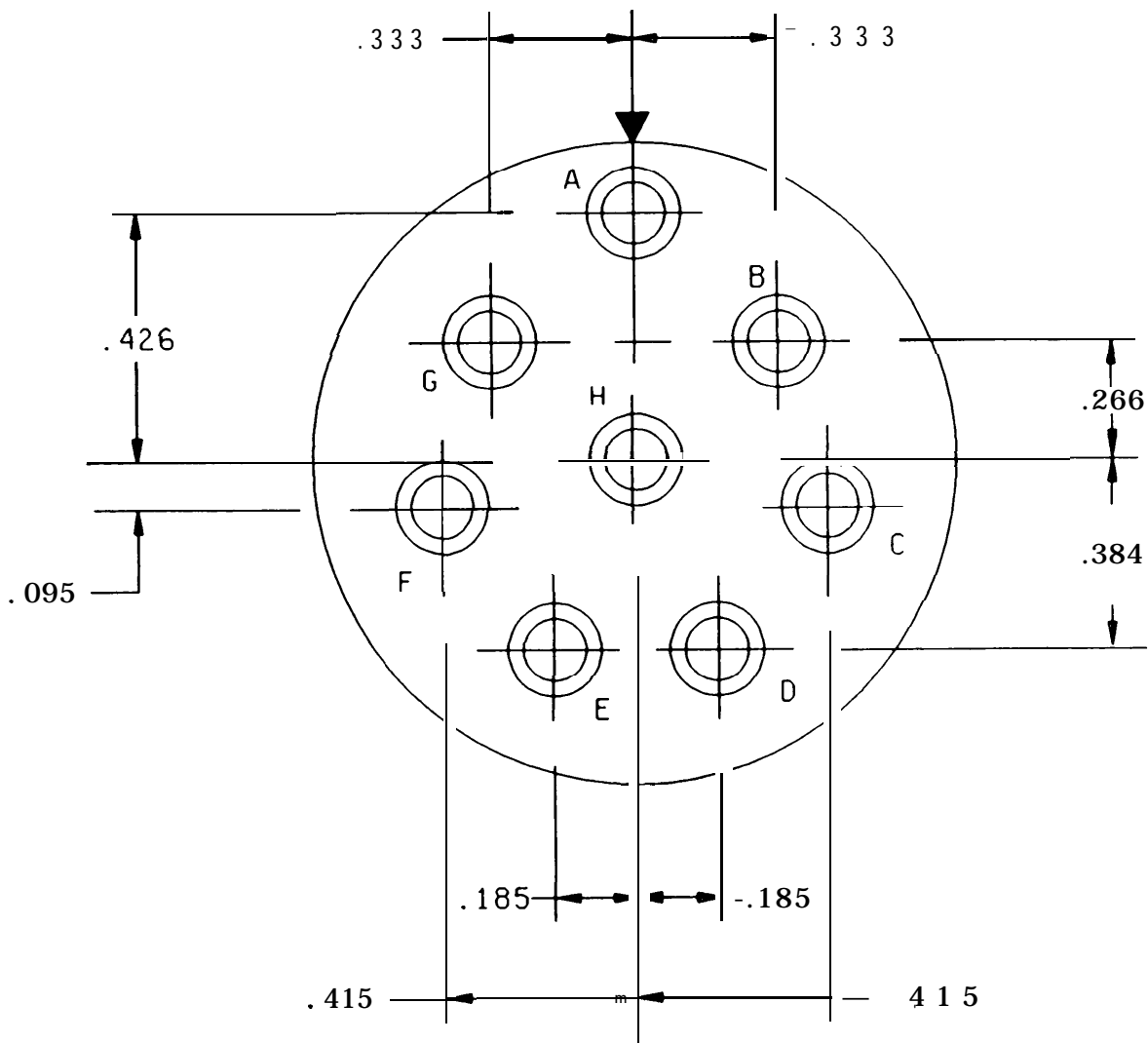


2-#8 triaxial contacts, 97-#22D contacts

See table I for contact hole locations.
Front of pin insert and rear of socket insert shown.

Shell size	Arrangement number	Number of contacts	Size contacts	Service rating	contact location	Standard contact	
						Pin	Socket
25	-7	2	8	Triax	25, 75	M39029/90-529	M39029/91-530
		97	22D	M	All others	M39029/58-360	M39029/56-348

MI L- STD-1560A
NOTICE 6

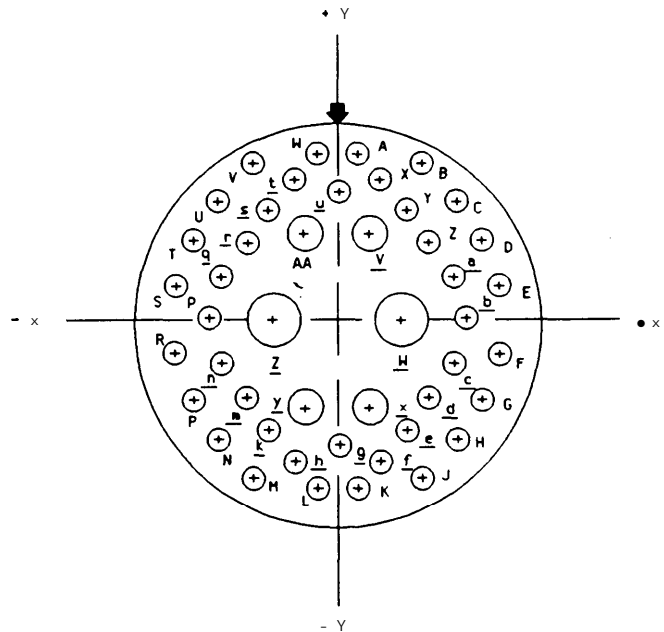


Inches	mm	Inches	mm	Inches	mm
.095	2.41	.333	8.46	.428	10.87
.185	4.70	.384	9.75		
.266	6.76	.415	10.54		

Shell size	Arrangement number	Number of contacts	Size contacts	Service rating	Contact location	Standard contact	
						Pin	Socket
25	-8	8	8	Twix	ALL	M39029/90-529	M39029/91-530

MIL-STD-1560A
NOTICE 6

Contact Letter	Location		Contact Letter	Location	
	X-axis	Y-axis		X-axis	Y-axis
A	+ .065	+ .533	a	+ .404	+.125
B	+ .275	+ .466	b	+ .437	.000
C	+ .420	+ .337	c	+ .404	-.125
D	+ .490	+ .227	d	+.314	-.221
E	+ .531	+ .093	e	+ .245	-.337
F	+.531	-.093	f	+.136	-.424
G	+ .490	-.227	g	.000	-.395
H	+ .420	-.337	h	-.136	-.424
J	+ .275	-.466	i	-.245	-.337
K	+ .065	-.533	k	-.314	-.221
L	-.065	-.533	l	-.404	-.125
M	-.275	-.466	m	-.437	.000
N	-.420	-.337	n	-.404	+.125
P	-.490	-.227	p	-.314	+.221
R	-.531	-.093	q	-.245	+ .337
s	-.531	+ .093	r	-.136	+ .424
T	-.490	+ .227	s	.000	+ .395
u	-.420	+ .337	t	+ .097	+ .265
v	-.275	+ .466	u	+.180	0 0 0
w	-.065	+ .533	v	+ .097	-.265
x	+ .136	+ .424	w	-.097	-.265
Y	+ .245	+ .337	x	-.180	.000
z	+.314	+.221	y	-.097	+ .265
			z	-.180	.000
			AA	-.097	+ .265



Inches	mm	Inches	mm	Inches	
.065	1.65	.245	6.22	.424	10.17
.093	2.36	.265	6.73	.437	11.10
.097	2.46	.275	6.99	.466	11.84
.125	3.18	.314	7.98	.490	12.45
.136	3.45	.337	8.56	.531	13.49
.180	4.57	.395	10.03	.533	13.54
.221	5.61	.404	10.26		
.227	5.77	.420	10.67		

Shell size	Arrangement number	Number of contacts	Size contacts	Service rating	Contact location	Standard contact	
						Pin	Socket
25	-90	2	8 Twinax	Twinax	w, z	M39029/90-529	1139029/91-530
		4	16	I	v, x, y, AA	M39029/58-364	1139029/56-352
		40	20		All other	M39029/58-363	M39029/56-351

