

INCH-POUND

MIL-STD-1560C  
w/CHANGE 1  
23 January 2017  
SUPERSEDING  
MIL-STD-1560C  
11 February 2015

# DEPARTMENT OF DEFENSE INTERFACE STANDARD

INSERT ARRANGEMENTS  
FOR MIL-DTL-38999, MIL-DTL-27599,  
AND SAE-AS29600 SERIES A  
ELECTRICAL CIRCULAR CONNECTORS



AMSC N/A

FSC 5935



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FOREWORD

1. This standard is approved for use by all Departments and Agencies of the Department of Defense.
2. Comments, suggestions, or questions on this document should be addressed to Commander, DLA Land and Maritime, ATTN: VAI, P.O. Box 3990, Columbus, Ohio, 43218-3990 or emailed to [CircularConnector@dla.mil](mailto:CircularConnector@dla.mil). Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.dla.mil>.

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SUMMARY OF CHANGE 1 MODIFICATIONS

1. Change to table II, "Cross-reference of insert arrangements by shell size" on pages 9 through 12: Add reference to footnote "1" next to each insert arrangement that requires either contact size 22 or 22M. Footnote "1" states "inactive for new design". Insert arrangements that specify contact sizes 22 and 22M, which are no longer used in new design, include series I arrangements 9-6, 9-44, 11-13, 13-22, 15-37, 17-55, 19-66, 19-67, 21-1, 23-1, 23-2, 25-1, 25-2, and series II arrangements 8-6, 8-44, 10-13, 12-22, 14-37, 16-42, 16-55, 18-53, 18-66, 18-67, 20-1, 20-2, 22-1, 22-2, 24-1, 24-2. Except for insert arrangements 8-44 and 16-42, all of the above-referenced arrangements include the phrase "(inactive for new design)" within the figures themselves. Add "(inactive for new design)" to arrangements 8-44 and 16-42 to harmonize with the other above-referenced figures.
2. Add tracer lines to insert arrangements 10-13, 10-35, 11-13 and 11-35, and require contact identification numbers for contact cavities 1, 5, 10 and 13. The tracer lines are intended as a visual aid for the user to more easily locate contact cavities for insertion and removal of crimp contacts in high density insert arrangements. In addition, update tracer line originally added to insert arrangement 11-35 during revision C. MIL-STD-1560C with change 1 replaces the tracer line with its mirror image, in order for the line to follow cavity designators in sequential order.
3. Add tracer line around contact cavity "A" in insert arrangement 21-41. The new tracer line is intended as a visual aid for the user to more easily locate contact locations in this high density insert arrangement.
4. Add requirement for tracer lines under all lower case contact cavity identification letters. The change is intended as a visual aid to better enable the user to differentiate between the upper case and lower case contact cavity identification letters in this high density insert arrangement.

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## 1. SCOPE

1.1 Scope. This standard covers insert arrangements for use with MIL-DTL-38999 series I, II, III and IV; MIL-DTL-27599 series I and II; and SAE-AS29600 series A, circular, electrical connectors.

## 2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, and 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, and 5 of this standard, whether or not they are listed.

2.2 Government documents.

2.2.1 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 cited in the solicitation or contract.

## DEPARTMENT OF DEFENSE SPECIFICATIONS

- MIL-DTL-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-DTL-27599 - Connectors, Electrical, Circular, Miniature, Quick Disconnect, Environment Resistant, Solder Contacts, General Specification for.

(Copies of these documents are available online at <http://quicksearch.dla.mil/>.)

2.2.2 Other Government documents, drawings and publications. The following other Government documents, drawings and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

## DRAWINGS

- 02003 - Contact Electrical Connector Concentric Twinax, Socket, Shielded, Size 12 (For MIL-DTL-38999 Series I, III, and IV connectors)
- 02004 - Contact Electrical Connector Concentric Twinax, Pin, Shielded, Size 12 (For MIL-DTL-38999 Series I, III, and IV connectors)

(Copies of DLA Land and Maritime drawings are available for download at internet web address <http://www.landandmaritime.dla.mil/programs/milspec/DocSearch.aspx>.)

2.2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

## SAE INTERNATIONAL

- SAE-AS29600 - Connectors, Electrical, Circular, Miniature, Composite, High Density, Quick Coupling, Environment Resistant, Removable Crimp Contacts, Associated Hardware, General Specification for.
- SAE-AS39029/59 - Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, Size 8 (for MIL-C-38999 Series I, III, and IV Connectors).

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- SAE-AS39029/60 - Contacts, Electrical Connector, Pin, Crimp Removable, Shielded, Size 8 (for MIL-C-38999 Series I, III, and IV Connectors).
- SAE-AS39029/90 - Contact, Electrical Connector, Concentric Twinax, Pin, Size 8.
- SAE-AS39029/91 - Contact, Electrical Connector, Concentric Twinax, Socket, Shielded, Size 8.
- SAE-AS39029/113 - Contact, Electrical Connector, Concentric Twinax, Pin, Size 8, MIL-DTL-38999 Series I, III and IV.
- SAE-AS39029/114 - Contact, Electrical Connector, Concentric Twinax, Socket, Size 8, MIL-DTL-38999 Series I, III and IV.
- SAE-AS39029/121 - Contacts, Electrical Connector, Socket, Crimp Removable, Expanded Performance, Sizes 10, 12, 16, 20, 22 and 23 (for MIL-DTL-38999 Series III Connectors).
- SAE-AS39029/122 - Contacts, Electrical Connector, Pin, Crimp Removable, Expanded Performance, Sizes 10, 12, 16, 20, 22 and 23 (for MIL-DTL-38999 Series III Connectors).

(Copies of these documents are available at <http://www.sae.org> or SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, and Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), or email: [CustomerService@sae.org](mailto:CustomerService@sae.org).)

2.3 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

### 3. DEFINITIONS

3.1 Definitions. The terms used in this standard are generally accepted by the electrical and electronics industries and are commonly used in electrical connector engineering practice, except for the following terms:

a) Heat shrink sleeve. Shrink sleeves (also called “heat shrink boots”) supplied with shielded contacts are used for environmental sealing of the contact to the connector grommet cavity and to the cable. It is supplied with the contact, when specified. The sleeve is placed on the cable prior to terminating the contact. Once the cable is terminated, the shrink sleeve slides over the contact, and heat is applied to shrink the sleeve and melt the adhesive. Since the maximum temperature rating of a shrink sleeve is 175°C, a connector with a higher temperature rating will be derated to 175°C when twinax contacts with shrink sleeves are used.

b) Sealing boot. A sealing boot is a device that is used to environmentally seal a cable to a shielded electrical contact and the electrical contact to the grommet cavity within a connector insert. It is supplied with the contact, when specified. The boot is placed onto the cable prior to terminating the contact. Once the contact is installed into the connector, the boot slides forward into the grommet cavity to seal the contact to the connector. For this standard, a sealing boot may be required to be supplied with the connector for specified insert arrangements with size 8 shielded contacts. A heat shrink sleeve is not used with a size 8 shielded contact when a sealing boot is specified.

c) Inactive for new design. For this standard, insert arrangements that are specified as “inactive for new design” are not be used in new designs or equipment. An inactive arrangement may be used to support existing designs or equipment.

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## 4. GENERAL REQUIREMENTS

4.1 Recycled, recovered, environmentally preferable, or biobased materials. Recycled, recovered, environmentally preferable, or biobased materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

## 5. DETAILED REQUIREMENTS

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

- a. ↓ indicates  $\text{\textcircled{C}}$  (center line) of insert arrangement.
- b. All dimensions are true position (TP). Dimensions are in inches, unless otherwise specified. Dimensions and markings: Front face of pin insert shown (socket insert opposite).
- c. Contact dimensions- socket cavity diameter and pin engaging end diameter for each contact size:

| Dimensions,<br>socket cavity diameter and pin engaging end diameter |   |  |                                       |
|---|---|--|---------------------------------------|
| Contact size  | Connector specification                     | Contacts, number of places as applicable           |                                       |
|   |   | insert, socket contact,<br>contact cavity diameter | pin contact,<br>engaging end diameter |
| 23-22   | MIL-DTL-38999                               | .032 min   | .0275 / .0260                         |
| 22  | MIL-DTL-27599 or<br>MIL-DTL-38999           | .036 min   | .0300 ± .0005                         |
| 22D   | MIL-DTL-38999 or<br>SAE-AS29600<br>series A | .035 min   | .0300 ± .0005                         |
| 22M   | MIL-DTL-27599 or<br>MIL-DTL-38999           | .036 min   | .0300 ± .0005                         |
| 20  | MIL-DTL-27599                               | .045 min   | .040 ± .001                           |
| 20  | MIL-DTL-38999 or<br>SAE-AS29600<br>series A | .049 min   | .040 ± .001                           |
| 16  | MIL-DTL-27599                               | .067 min   | .0625 ± .0010                         |
| 16  | MIL-DTL-38999 or<br>SAE-AS29600<br>series A | .071 min   | .0625 ± .0010                         |
| 12  | MIL-DTL-27599                               | .099 min   | .094 ± .001                           |
| 12  | MIL-DTL-38999 or<br>SAE-AS29600<br>series A | .103 min   | .094 ± .001                           |
| 10  | MIL-DTL-38999                               | .134 min   | .125 ± .001                           |
| 8<br>coax or<br>twinax  | MIL-DTL-38999 or<br>SAE-AS29600<br>series A | .227 min   | .218 ± .001                           |



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d. Receptacle and plug gauge features:

For MIL-DTL-38999 series I, II, and III, SAE AS29600 series A, and MIL-DTL-27599 series I and II receptacle connectors, functional gauge features for determining socket contact cavity locations or tip of pin contact locations shall be .002 smaller than H at MMC, and .006 smaller than GG at MMC.

For MIL-DTL-38999 series I, II, and III; SAE AS29600 series A and MIL-DTL-27599 series I and II plug connectors, functional gauge features for determining socket contact cavity locations or the tip of pin contact locations shall be .002 larger than W at MMC and .006 larger than GG at MMC. Crimp removable contact tolerances shall be .015 at MMC (socket contact cavities) and .024 at MMC (tip of pin contacts). Fixed contact tolerances, including hermetically sealed contacts and MIL-DTL-27599 fixed contacts, shall be .004 at MMC.

e. Contact locations, geometric dimensioning and tolerancing requirements:

Note: Some datums referenced in the below tables are found in the interchangeability dimension figures in the associated connector specifications, including MIL-DTL-38999, MIL-DTL-27599 and SAE-AS29600. For example, datums B, H, W, G, GG, F, C and L are shown in MIL-DTL-38999. Primary datum B (series I through III) is established by the plane along the surface of the front face of the receptacle shell and the plane along the surface of the front face of the plug shell. Secondary datum H is established by the inside diameter of the receptacle shell and secondary datum W is established by the outside diameter of the plug shell. Datums G and GG, which are used to establish angular orientation around the datum axis, are the centerlines of the keys or keyways. For series IV only, datum B is the front face of the receptacle shell and datum E is the front face of the plug shell. Series IV, datums L and C are established by plug and receptacle diameters. Series IV, datums H and G are used to establish angular orientation.

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MIL-DTL-38999 Series I through IV (environmentally sealed with removable crimp contacts)

|   |  |   |
|---|--|---|
| SERIES I AND II RECEPTACLE SOCKET<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.015} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{H} \left  \text{Ⓜ} \right  \text{GG} \left  \text{Ⓜ} \right $ | SERIES I AND II RECEPTACLE PIN<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.024} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{H} \left  \text{Ⓜ} \right  \text{GG} \left  \text{Ⓜ} \right $ | DATUM B IS THE FRONT FACE OF<br>PLUG OR RECEPTACLE SHELLS |
| SERIES I AND II PLUG SOCKET<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.015} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{W} \left  \text{Ⓜ} \right  \text{GG} \left  \text{Ⓜ} \right $       | SERIES I AND II PLUG PIN<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.024} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{W} \left  \text{Ⓜ} \right  \text{GG} \left  \text{Ⓜ} \right $       |   |
| SERIES III RECEPTACLE SOCKET<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.015} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{H} \left  \text{Ⓜ} \right  \text{GM} \left  \text{Ⓜ} \right $      | SERIES III RECEPTACLE PIN<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.024} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{H} \left  \text{Ⓜ} \right  \text{GM} \left  \text{Ⓜ} \right $      | DATUM B IS THE FRONT FACE OF<br>PLUG OR RECEPTACLE SHELLS |
| SERIES III PLUG SOCKET<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.015} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{W} \left  \text{Ⓜ} \right  \text{GM} \left  \text{Ⓜ} \right $            | SERIES III PLUG PIN<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.024} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{W} \left  \text{Ⓜ} \right  \text{GM} \left  \text{Ⓜ} \right $            |   |
| SERIES IV RECEPTACLE SOCKET<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.015} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{C} \left  \text{Ⓜ} \right  \text{H} \left  \text{Ⓜ} \right $        | SERIES IV RECEPTACLE PIN<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.024} \end{array} \right  \text{Ⓜ} \left  \text{B} \right  \text{C} \left  \text{Ⓜ} \right  \text{H} \left  \text{Ⓜ} \right $        | DATUM B IS THE FRONT FACE OF<br>RECEPTACLE SHELL          |
| SERIES IV PLUG SOCKET<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.015} \end{array} \right  \text{Ⓜ} \left  \text{E} \right  \text{L} \left  \text{Ⓜ} \right  \text{G} \left  \text{Ⓜ} \right $              | SERIES IV PLUG PIN<br>$\text{⊕} \left  \begin{array}{c} \text{⌀} \\ \text{.024} \end{array} \right  \text{Ⓜ} \left  \text{E} \right  \text{L} \left  \text{Ⓜ} \right  \text{G} \left  \text{Ⓜ} \right $              | DATUM E IS THE FRONT FACE OF<br>PLUG SHELL                |

Note: The pattern of the socket cavity / pin locations within the insert arrangement is constant. The pattern of the socket cavity / pin locations may shift in one direction, but the MMC modifiers on the secondary and tertiary datums do not allow socket cavity / pin position deviations within the pattern.

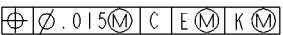
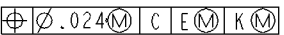
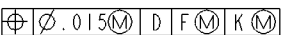
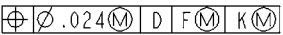
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MIL-DTL-38999 Series I through IV (hermetically sealed with fixed contacts),  
and MIL-DTL-27599 Series I and II (environmentally sealed with fixed contacts)

|   |  |   |
|---|--|---|
| SERIES I AND II RECEPTACLE SOCKET<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{H (M)} \text{GG (M)}$ | SERIES I AND II RECEPTACLE PIN<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{H (M)} \text{GG (M)}$ | DATUM B IS THE FRONT FACE OF<br>PLUG OR RECEPTACLE SHELLS |
| SERIES I AND II PLUG SOCKET<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{W (M)} \text{GG (M)}$       | SERIES I AND II PLUG PIN<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{W (M)} \text{GG (M)}$       |   |
| SERIES III RECEPTACLE SOCKET<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{H (M)} \text{G (M)}$       | SERIES III RECEPTACLE PIN<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{H (M)} \text{G (M)}$       | DATUM B IS THE FRONT FACE OF<br>PLUG OR RECEPTACLE SHELLS |
| SERIES III PLUG SOCKET<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{W (M)} \text{G (M)}$             | SERIES III PLUG PIN<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{W (M)} \text{G (M)}$             |   |
| SERIES IV RECEPTACLE SOCKET<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{C (M)} \text{H (M)}$        | SERIES IV RECEPTACLE PIN<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{B} \end{array} \right  \text{C (M)} \text{H (M)}$        | DATUM B IS THE FRONT FACE OF<br>RECEPTACLE SHELL          |
| SERIES IV PLUG SOCKET<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{E} \end{array} \right  \text{L (M)} \text{G (M)}$              | SERIES IV PLUG PIN<br>$\oplus \left  \begin{array}{c} \varnothing .004 \text{ (M)} \\ \text{E} \end{array} \right  \text{L (M)} \text{G (M)}$              | DATUM E IS THE FRONT FACE OF<br>PLUG SHELL                |

Note: The pattern of the socket cavity / pin locations within the insert arrangement is constant. The pattern of the socket cavity / pin locations may shift in one direction, but the MMC modifiers on the secondary and tertiary datums do not allow socket cavity / pin position deviations within the pattern.

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|   |  |  |
|---|--|--|
| SERIES A RECEPTACLE SOCKET<br> | SERIES A RECEPTACLE PIN<br> | DATUM C IS THE FRONT<br>FACE OF THE RECEPTACLE SHELL |
| SERIES A PLUG SOCKET<br>       | SERIES A PLUG PIN<br>       | DATUM D IS THE FRONT<br>FACE OF THE PLUG SHELL       |

Note: The pattern of the socket cavity / pin locations within the insert arrangement is constant. The pattern of the socket cavity / pin locations may shift in one direction, but the MMC modifiers on the secondary and tertiary datums do not allow socket cavity / pin position deviations within the pattern.

5.2 Marking. Marking shall be in accordance with MIL-DTL-38999, SAE-AS29600 series A, MIL-DTL-27599, and as shown in the applicable section of this standard. Sawtooth lines may be used in place of straight lines.

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

- a. Dimensions are in inches, unless otherwise specified.
- b. Metric equivalents are given for information only.
- c. Firewall applications: Insert arrangements using shielded contacts (e.g. coax, twinax, etc.), including 17-2, 17-3, 17-11, 19-18, 19-19, 21-75, 21-76, 25-7, 25-8, 25-9, 25-10, 25-20, 25-21, 25-46, 25-47, 25-90 and 25-91 shall not be used in firewall connector applications.
- d. SAE-AS39029 contacts: For application notes on SAE-AS39029 contacts, see MIL-DTL-38999, section 6.
- e. Each insert arrangement is shown using a conventional two-dimensional Cartesian system, with two perpendicular axes. The x-axis is always the horizontal axis, and the y-axis is always the vertical axis. The origin, or "0,0" point, is always where the two axes meet. The axes in each insert arrangement follow the standard two-dimensional, "positive" orientation, with the positive x-axis pointed to the right and the positive y-axis pointed up.

## 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. This standard covers insert arrangements for use with MIL-DTL-38999 series I, II, III and IV; MIL-DTL-27599 series I and II; and SAE-AS29600 series A circular connectors. Information pertaining to shell size, arrangement number, number of contacts, size of contacts, service rating, contact location, and superseding information is contained in this document.

6.2 Cross-reference. See [table I](#) for a cross-reference of previous sections and current figures. See [table II](#) for a hyperlinked cross-reference to insert arrangement numbers by shell size. See [table III](#) for a cross-reference of superseded insert arrangements.

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w/CHANGE 1

TABLE I. Cross-reference of figures to sections.

| Title   | Current figure | Previous section | Document      | Series    |
|---|----------------|------------------|---------------|-----------|
| Insert arrangement, electrical connector, shell size 9  | 1              | 101              | MIL-DTL-38999 | I,III, IV |
|   |                |                  | MIL-DTL-27599 | I         |
|   |                |                  | SAE-AS29600   | A         |
| Insert arrangement, electrical connector, shell size 11 | 2              | 102              | MIL-DTL-38999 | I,III, IV |
|   |                |                  | MIL-DTL-27599 | I         |
|   |                |                  | SAE-AS29600   | A         |
| Insert arrangement, electrical connector, shell size 13 | 3              | 103              | MIL-DTL-38999 | I,III, IV |
|   |                |                  | MIL-DTL-27599 | I         |
|   |                |                  | SAE-AS29600   | A         |
| Insert arrangement, electrical connector, shell size 15 | 4              | 104              | MIL-DTL-38999 | I,III, IV |
|   |                |                  | MIL-DTL-27599 | I         |
|   |                |                  | SAE-AS29600   | A         |
| Insert arrangement, electrical connector, shell size 17 | 5              | 105              | MIL-DTL-38999 | I,III, IV |
|   |                |                  | MIL-DTL-27599 | I         |
|   |                |                  | SAE-AS29600   | A         |
| Insert arrangement, electrical connector, shell size 19 | 6              | 106              | MIL-DTL-38999 | I,III, IV |
|   |                |                  | MIL-DTL-27599 | I         |
|   |                |                  | SAE-AS29600   | A         |
| Insert arrangement, electrical connector, shell size 21 | 7              | 107              | MIL-DTL-38999 | I,III, IV |
|   |                |                  | MIL-DTL-27599 | I         |
|   |                |                  | SAE-AS29600   | A         |
| Insert arrangement, electrical connector, shell size 23 | 8              | 108              | MIL-DTL-38999 | I,III, IV |
|   |                |                  | MIL-DTL-27599 | I         |
|   |                |                  | SAE-AS29600   | A         |
| Insert arrangement, electrical connector, shell size 25 | 9              | 109              | MIL-DTL-38999 | I,III, IV |
|   |                |                  | MIL-DTL-27599 | I         |
|   |                |                  | SAE-AS29600   | A         |
| Insert arrangement, electrical connector, shell size 8  | 10             | 201              | MIL-DTL-38999 | II        |
|   |                |                  | MIL-DTL-27599 | II        |
| Insert arrangement, electrical connector, shell size 10 | 11             | 202              | MIL-DTL-38999 | II        |
|   |                |                  | MIL-DTL-27599 | II        |
| Insert arrangement, electrical connector, shell size 12 | 12             | 203              | MIL-DTL-38999 | II        |
|   |                |                  | MIL-DTL-27599 | II        |
| Insert arrangement, electrical connector, shell size 14 | 13             | 204              | MIL-DTL-38999 | II        |
|   |                |                  | MIL-DTL-27599 | II        |
| Insert arrangement, electrical connector, shell size 16 | 14             | 205              | MIL-DTL-38999 | II        |
|   |                |                  | MIL-DTL-27599 | II        |
| Insert arrangement, electrical connector, shell size 18 | 15             | 206              | MIL-DTL-38999 | II        |
|   |                |                  | MIL-DTL-27599 | II        |
| Insert arrangement, electrical connector, shell size 20 | 16             | 207              | MIL-DTL-38999 | II        |
|   |                |                  | MIL-DTL-27599 | II        |
| Insert arrangement, electrical connector, shell size 22 | 17             | 208              | MIL-DTL-38999 | II        |
|   |                |                  | MIL-DTL-27599 | II        |
| Insert arrangement, electrical connector, shell size 24 | 18             | 209              | MIL-DTL-38999 | II        |
|   |                |                  | MIL-DTL-27599 | II        |

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TABLE II. Cross-reference to insert arrangements by shell size.

| Shell size 9, figure 1 |      |                    |      |
|------------------------|------|--------------------|------|
| Insert arrangement     | Page | Insert arrangement | Page |
| 9-3                    | 14   | 9-35               | 18   |
| 9-6 <u>1/</u>          | 15   | 9-44 <u>1/</u>     | 19   |
| 9-7                    | 16   | 9-98               | 20   |
| 9-23                   | 17   | ----               | ---  |

See footnotes at end of table.

| Shell size 11, figure 2 |      |                    |      |
|-------------------------|------|--------------------|------|
| Insert arrangement      | Page | Insert arrangement | Page |
| 11-2                    | 21   | 11-23              | 25   |
| 11-4                    | 22   | 11-35              | 26   |
| 11-5                    | 23   | 11-98              | 27   |
| 11-13 <u>1/</u>         | 24   | 11-99              | 28   |

See footnotes at end of table.

| Shell size 13, figure 3 |      |                    |      |
|-------------------------|------|--------------------|------|
| Insert arrangement      | Page | Insert arrangement | Page |
| 13-4                    | 29   | 13-23              | 32   |
| 13-8                    | 30   | 13-35              | 34   |
| 13-22 <u>1/</u>         | 31   | 13-98              | 35   |

See footnotes at end of table.

| Shell size 15, figure 4 |      |                    |      |
|-------------------------|------|--------------------|------|
| Insert arrangement      | Page | Insert arrangement | Page |
| 15-5                    | 36   | 15-23              | 42   |
| 15-15                   | 37   | 15-35              | 44   |
| 15-18                   | 38   | 15-37 <u>1/</u>    | 46   |
| 15-19                   | 39   | 15-97              | 48   |
| 15-21                   | 40   | ----               | ---  |

See footnotes at end of table.

| Shell size 17, figure 5 |      |                    |      |
|-------------------------|------|--------------------|------|
| Insert arrangement      | Page | Insert arrangement | Page |
| 17-2 <u>1/</u>          | 49   | 17-23              | 56   |
| 17-3 <u>2/</u>          | 51   | 17-26              | 58   |
| 17-6                    | 53   | 17-35              | 59   |
| 17-8                    | 54   | 17-55 <u>1/</u>    | 61   |
| 17-11                   | 55   | 17-99              | 63   |

See footnotes at end of table.

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w/CHANGE 1TABLE II. Cross-reference to insert arrangements by shell size - Continued.

| Shell size 19, figure 6 |      |                    |      |
|-------------------------|------|--------------------|------|
| Insert arrangement      | Page | Insert arrangement | Page |
| 19-11                   | 64   | 19-32              | 72   |
| 19-18 <u>1/</u>         | 65   | 19-35              | 73   |
| 19-19 <u>2/</u>         | 66   | 19-45              | 75   |
| 19-23                   | 67   | 19-66 <u>1/</u>    | 77   |
| 19-28                   | 70   | 19-67 <u>1/</u>    | 79   |
| 19-30                   | 71   | ----               | ---  |

See footnotes at end of table.

| Shell size 21, figure 7 |      |                    |      |
|-------------------------|------|--------------------|------|
| Insert arrangement      | Page | Insert arrangement | Page |
| 21-1 <u>1/</u>          | 81   | 21-29              | 91   |
| 21-11                   | 83   | 21-35              | 93   |
| 21-16                   | 84   | 21-39              | 95   |
| 21-23                   | 85   | 21-41              | 97   |
| 21-24                   | 88   | 21-75 <u>1/</u>    | 98   |
| 21-25                   | 89   | 21-76 <u>2/</u>    | 99   |
| 21-27                   | 90   | ---                | ---  |

See footnotes at end of table.

| Shell size 23, figure 8 |      |                    |      |
|-------------------------|------|--------------------|------|
| Insert arrangement      | Page | Insert arrangement | Page |
| 23-1 <u>1/</u>          | 100  | 23-35              | 112  |
| 23-2 <u>1/</u>          | 103  | 23-36              | 115  |
| 23-21                   | 105  | 23-53              | 117  |
| 23-23                   | 106  | 23-55              | 119  |
| 23-32                   | 110  | 23-97              | 121  |
| 23-34                   | 111  | 23-99              | 122  |

See footnotes at end of table.

| Shell size 25, figure 9 |      |                    |      |
|-------------------------|------|--------------------|------|
| Insert arrangement      | Page | Insert arrangement | Page |
| 25-1 <u>1/</u>          | 123  | 25-23              | 145  |
| 25-2 <u>1/</u>          | 126  | 25-24              | 150  |
| 25-4                    | 129  | 25-29              | 151  |
| 25-7 <u>1/</u>          | 131  | 25-35              | 152  |
| 25-8 <u>1/</u>          | 134  | 25-37              | 155  |
| 25-9 <u>2/</u>          | 135  | 25-43              | 157  |
| 25-10 <u>2/</u>         | 138  | 25-46 <u>1/</u>    | 159  |
| 25-11                   | 139  | 25-47 <u>2/</u>    | 161  |
| 25-19                   | 140  | 25-61              | 163  |
| 25-20 <u>1/</u>         | 141  | 25-90 <u>1/</u>    | 165  |
| 25-21 <u>2/</u>         | 143  | 25-91 <u>2/</u>    | 167  |

See footnotes at end of table.

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TABLE II. Cross-reference to insert arrangements by shell size - Continued.

| Shell size 8, figure 10 |      |                    |      |
|-------------------------|------|--------------------|------|
| Insert arrangement      | Page | Insert arrangement | Page |
| 8-3 <u>1/</u>           | 169  | 8-44 <u>1/</u>     | 172  |
| 8-6                     | 170  | 8-98               | 173  |
| 8-35                    | 171  | ----               | ---- |

See footnotes at end of table.

| Shell size 10, figure 11 |      |                    |      |
|--------------------------|------|--------------------|------|
| Insert arrangement       | Page | Insert arrangement | Page |
| 10-5                     | 174  | 10-98              | 177  |
| 10-13 <u>1/</u>          | 175  | 10-99              | 178  |
| 10-35                    | 176  | ----               | ---- |

See footnotes at end of table.

| Shell size 12, figure 12 |      |                    |      |
|--------------------------|------|--------------------|------|
| Insert arrangement       | Page | Insert arrangement | Page |
| 12-3                     | 179  | 12-22 <u>1/</u>    | 182  |
| 12-4                     | 180  | 12-35              | 183  |
| 12-8                     | 181  | 12-98              | 184  |

See footnotes at end of table.

| Shell size 14, figure 13 |      |                    |      |
|--------------------------|------|--------------------|------|
| Insert arrangement       | Page | Insert arrangement | Page |
| 14-5                     | 185  | 14-35              | 188  |
| 14-15                    | 186  | 14-37 <u>1/</u>    | 189  |
| 14-18                    | 187  | 14-97              | 190  |

See footnotes at end of table.

| Shell size 16, figure 14 |      |                    |      |
|--------------------------|------|--------------------|------|
| Insert arrangement       | Page | Insert arrangement | Page |
| 16-6/7                   | 191  | 16-42 <u>1/</u>    | 196  |
| 16-8                     | 192  | 16-55 <u>1/</u>    | 198  |
| 16-26                    | 193  | 16-99              | 200  |
| 16-35                    | 194  | ----               | ---  |

See footnotes at end of table.

| Shell size 18, figure 15 |      |                    |      |
|--------------------------|------|--------------------|------|
| Insert arrangement       | Page | Insert arrangement | Page |
| 18-11                    | 201  | 18-45              | 210  |
| 18-28                    | 202  | 18-53 <u>1/</u>    | 212  |
| 18-30                    | 204  | 18-66 <u>1/</u>    | 214  |
| 18-32                    | 206  | 18-67 <u>1/</u>    | 216  |
| 18-35                    | 208  | 18-96              | 218  |

See footnotes at end of table.



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w/CHANGE 1TABLE II. Cross-reference to insert arrangements by shell size - Continued.

| Shell size 20, figure 16           |      |                       |      |
|------------------------------------|------|-----------------------|------|
| Insert arrangement                 | Page | Insert arrangement    | Page |
| <a href="#">20-1</a> <sup>1/</sup> | 219  | <a href="#">20-27</a> | 226  |
| <a href="#">20-2</a> <sup>1/</sup> | 221  | <a href="#">20-35</a> | 227  |
| <a href="#">20-16</a>              | 223  | <a href="#">20-39</a> | 229  |
| <a href="#">20-24</a>              | 224  | <a href="#">20-41</a> | 231  |
| <a href="#">20-25</a>              | 225  | ----                  | ---  |

See footnotes at end of table.

| Shell size 22, figure 17           |      |                       |      |
|------------------------------------|------|-----------------------|------|
| Insert arrangement                 | Page | Insert arrangement    | Page |
| <a href="#">22-1</a> <sup>1/</sup> | 232  | <a href="#">22-36</a> | 244  |
| <a href="#">22-2</a> <sup>1/</sup> | 235  | <a href="#">22-53</a> | 246  |
| <a href="#">22-21</a>              | 237  | <a href="#">22-55</a> | 248  |
| <a href="#">22-32</a>              | 238  | <a href="#">22-97</a> | 250  |
| <a href="#">22-34</a>              | 239  | <a href="#">22-99</a> | 251  |
| <a href="#">22-35</a>              | 241  | ----                  | ---  |

See footnotes at end of table.

| Shell size 24, figure 18           |      |                       |      |
|------------------------------------|------|-----------------------|------|
| Insert arrangement                 | Page | Insert arrangement    | Page |
| <a href="#">24-1</a> <sup>1/</sup> | 252  | <a href="#">24-24</a> | 261  |
| <a href="#">24-2</a> <sup>1/</sup> | 255  | <a href="#">24-29</a> | 262  |
| <a href="#">24-4</a>               | 258  | <a href="#">24-35</a> | 263  |
| <a href="#">24-19</a>              | 260  | <a href="#">24-61</a> | 266  |

<sup>1/</sup> Inactive for new design.<sup>2/</sup> To ensure environmental sealing, size 8 shielded contacts for this insert arrangement require sealing boots in accordance with MIL-DTL-38999/62.

MIL-STD-1560C  
w/CHANGE 1TABLE III. Cross-reference of superseded insert arrangements. 1/

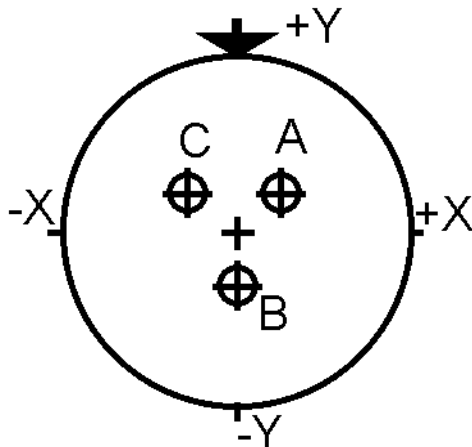
| Superseded insert arrangement number <u>2/</u> | Superseded by insert arrangement number <u>3/</u> |
|--|---|
| 17-2   | 17-3  |
| 19-18  | 19-19   |
| 21-75  | 21-76   |
| 25-7   | 25-9  |
| 25-8   | 25-10   |
| 25-46  | 25-47   |
| 25-90  | 25-91   |

- 1/ Superseded arrangements are inactive for new design, but are still available for use in existing designs.
- 2/ Inactive for new design. Note: To meet environmental sealing requirements, size 8 shielded contacts used with these insert arrangements may require separate, non-standard sealing boots that are furnished with the connector. For these insert arrangements, some connector grommet designs use a heat shrink sleeve only with specified size 8 shielded contacts to meet environmental sealing requirements. Heat shrink sleeves have a maximum temperature rating of 175°C maximum. When heat shrink sleeves are used, connectors rated to 200°C max are derated to 175°C max. When heat shrink sleeves are used, sealing boots are not used, and when sealing boots are used, heat shrink sleeves are not used.
- 3/ To ensure environmental sealing, size 8 shielded contacts for these insert arrangements require sealing boots in accordance with MIL-DTL-38999/62. Required sealing boots are furnished with the connector. When sealing boots are used, heat shrink sleeves are not used.

6.3 Subject term (key word) listing.

Coax  
Contact  
Heat shrink sleeve  
Insert  
Shell size  
Sealing boot  
Socket  
Twinax  
Pin

6.4 Changes from previous issue. The margins of this standard are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

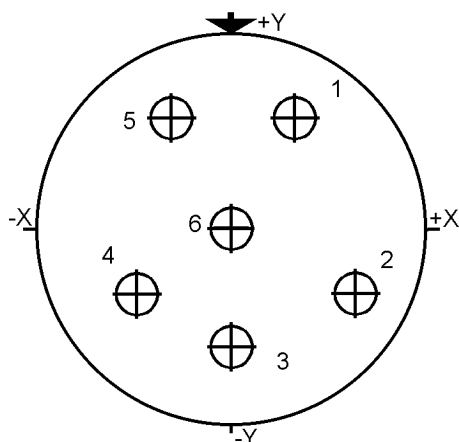
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 9-3)    |                  |                |
|---|------------------|----------------|
| Contact position<br>identification (ID) | Contact location |                |
|   | X-axis<br>(mm)   | Y-axis<br>(mm) |
| A                                       | +0.056 (1.42)    | +0.018 (0.46)  |
| B                                       | +0.000 (0.00)    | -0.079 (2.01)  |
| C                                       | -0.056 (1.42)    | +0.018 (0.46)  |

(Applicable to MIL-DTL-27599 only)

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

FIGURE 1. Insert arrangement, electrical connector, shell size 9 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600).

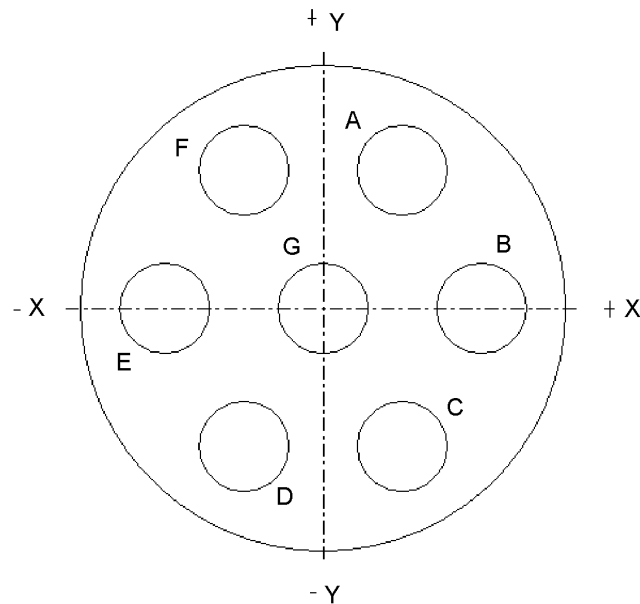
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 9-6) |                  |               |
|--------------------------------------|------------------|---------------|
| Contact position ID                  | Contact location |               |
|                                      | X-axis (mm)      | Y-axis (mm)   |
| 1                                    | +0.045 (1.14)    | +0.078 (1.98) |
| 2                                    | +0.078 (1.98)    | -0.045 (1.14) |
| 3                                    | +0.000 (0.00)    | -0.090 (2.29) |
| 4                                    | -0.078 (1.98)    | -0.045 (1.14) |
| 5                                    | -0.045 (1.14)    | +0.078 (1.98) |
| 6                                    | +0.000 (0.00)    | +0.000 (0.00) |

(Inactive for new design for MIL-DTL-38999 and SAE-AS29600)

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

FIGURE 1. Insert arrangement, electrical connector, shell size 9 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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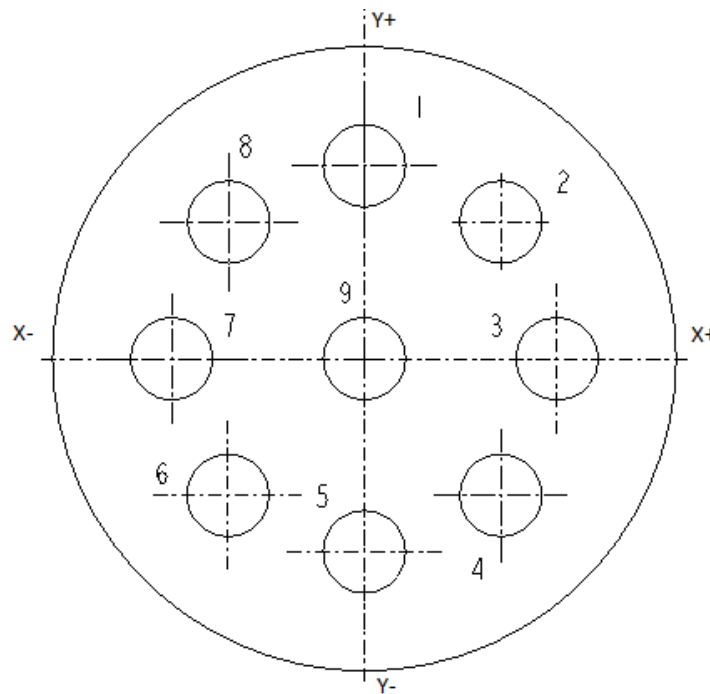
| Contacts<br>(Insert arrangement 9-7) |                          |                          |
|--------------------------------------|--------------------------|--------------------------|
| Contact<br>position<br>ID            | Contact location         |                          |
|                                      | X-axis<br>mm<br>(inches) | Y-axis<br>mm<br>(inches) |
| A                                    | +1.18 (.046)             | +2.06 (.081)             |
| B                                    | + 2.36 (.093)            | +0.00 (0.00)             |
| C                                    | +1.18 (.046 )            | - 2.06 (-.081)           |
| D                                    | - 1.18 (-.046)           | - 2.06 (-.081)           |
| E                                    | - 2.36 (-.093)           | - 0.00 (0.00)            |
| F                                    | -1.18 (- .046)           | +2.06 (.081)             |
| G                                    | +0.00 (0.00)             | +0.00 (0.00)             |

(Applicable to MIL-DTL-38999 only)

| Shell<br>size | Arrangement<br>no. | Number of<br>contacts | Size<br>contacts | Service<br>rating | Contact<br>location |
|---------------|--------------------|-----------------------|------------------|-------------------|---------------------|
| 9             | - 7                | 7                     | 22D              | M                 | All                 |

FIGURE 1. Insert arrangement, electrical connector, shell size 9 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

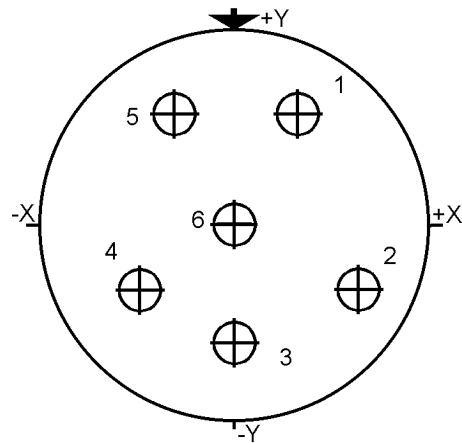
MIL-STD-1560C  
w/CHANGE 1



| Contacts<br>(Insert arrangement 9-23) |               |               |                     |               |               |
|---------------------------------------|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location      |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                     | +0.00 (0.00)  | +0.105 (2.67) | 6                   | -0.074 (1.89) | -0.074 (1.89) |
| 2                                     | +0.074 (1.89) | +0.074 (1.89) | 7                   | -0.105 (2.67) | +0.000 (0.00) |
| 3                                     | +0.105 (2.67) | +0.000 (0.00) | 8                   | -0.074 (1.89) | +0.074 (1.89) |
| 4                                     | +0.074 (1.89) | -0.074 (1.89) | 9                   | +0.000 (0.00) | +0.000 (0.00) |
| 5                                     | +0.000 (0.00) | -0.105 (2.67) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 9          | -23             | 9                  | 23-22         | N              | ALL              | M39029/122-670   | M39029/121-663 |

FIGURE 1. Insert arrangement, electrical connector, shell size 9 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

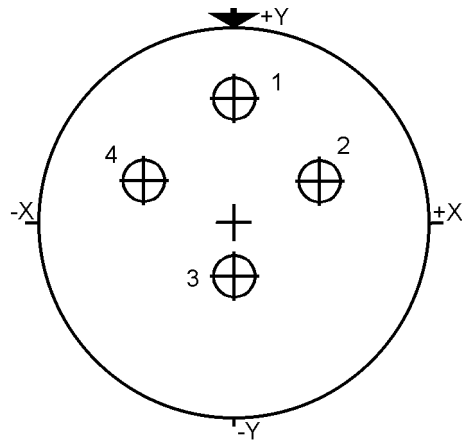
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 9-35) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| 1                                     | +0.045 (1.14)    | +0.078 (1.98) |
| 2                                     | +0.078 (1.98)    | -0.045 (1.14) |
| 3                                     | +0.000 (0.00)    | -0.090 (2.29) |
| 4                                     | -0.078 (1.98)    | -0.045 (1.14) |
| 5                                     | -0.045 (1.14)    | +0.078 (1.98) |
| 6                                     | +0.000 (0.00)    | +0.000 (0.00) |

(Applicable to MIL-DTL-38999 and SAE-AS29600)

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

FIGURE 1. Insert arrangement, electrical connector, shell size 9 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

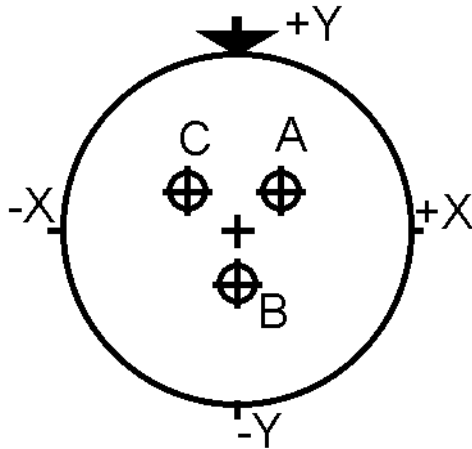
| Contacts<br>(Insert arrangement 9-44) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| 1                                     | +0.000 (0.00)    | +0.081 (2.06) |
| 2                                     | +0.080 (2.03)    | +0.021 (0.53) |
| 3                                     | +0.000 (0.00)    | -0.050 (1.27) |
| 4                                     | -0.080 (2.03)    | +0.021 (0.53) |

(Inactive for new design for MIL-DTL-38999 and SAE-AS29600)

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

FIGURE 1. Insert arrangement, electrical connector, shell size 9 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

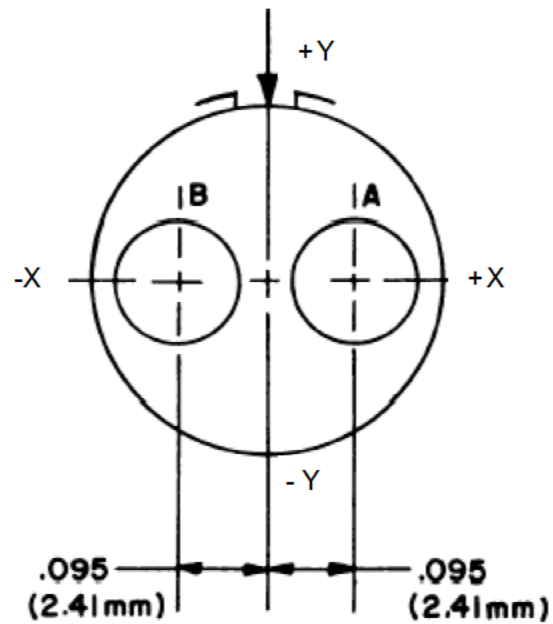


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 9-98) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.065 (1.65)    | +0.038 (0.97) |
| B                                     | +0.000 (0.00)    | -0.075 (1.91) |
| C                                     | -0.065 (1.65)    | +0.038 (0.97) |

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

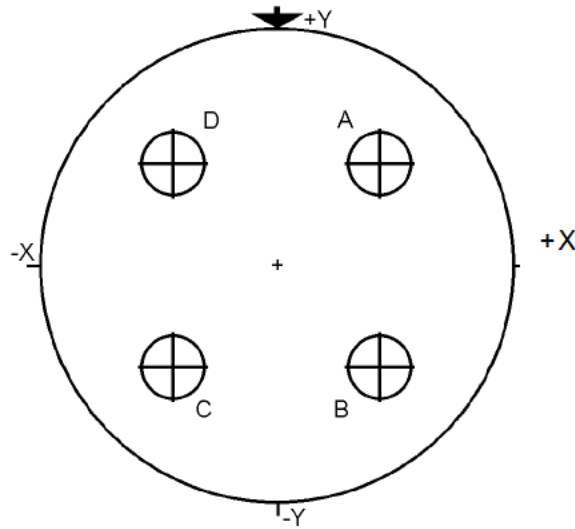
FIGURE 1. Insert arrangement, electrical connector, shell size 9 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 11-2) |                  |              |
|---------------------------------------|------------------|--------------|
| Contact position ID                   | Contact location |              |
|                                       | X-axis (mm)      | Y-axis (mm)  |
| A                                     | +0.095 (2.41)    | +0.000 (.00) |
| B                                     | -0.095 (2.41)    | +0.000 (.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location |
|------------|-----------------|--------------------|---------------|----------------|------------------|
| 11         | -2              | 2                  | 16            | I              | All              |

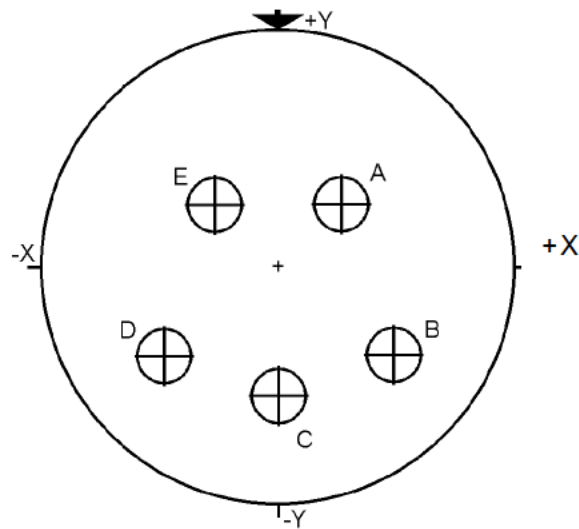
FIGURE 2. Insert arrangement, electrical connector, shell size 11 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 11-4) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.065 (1.65)    | +0.065 (1.65) |
| B                                     | +0.065 (1.65)    | -0.065 (1.65) |
| C                                     | -0.065 (1.65)    | -0.065 (1.65) |
| D                                     | -0.065 (1.65)    | +0.065 (1.65) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 11         | -4              | 4                  | 20            | I              | All              | MS20050-4  |

FIGURE 2. Insert arrangement, electrical connector, shell size 11 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600).

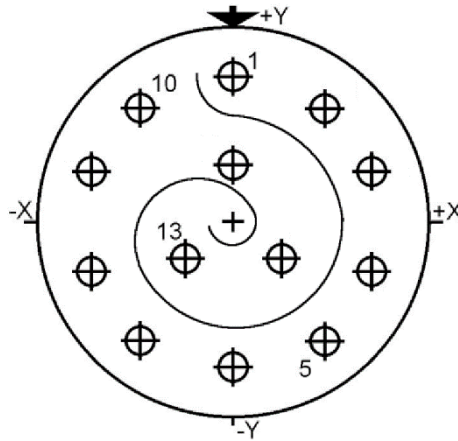
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 11-5) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.065 (1.65)    | +0.056 (1.42) |
| B                                     | +0.113 (2.87)    | -0.065 (1.65) |
| C                                     | +0.000 (0.00)    | -0.130 (3.30) |
| D                                     | -0.113 (2.87)    | -0.065 (1.65) |
| E                                     | -0.065 (1.65)    | +0.056 (1.42) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 11         | -5              | 5                  | 20            | I              | All              | MS20050-5  |

FIGURE 2. Insert arrangement, electrical connector, shell size 11 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

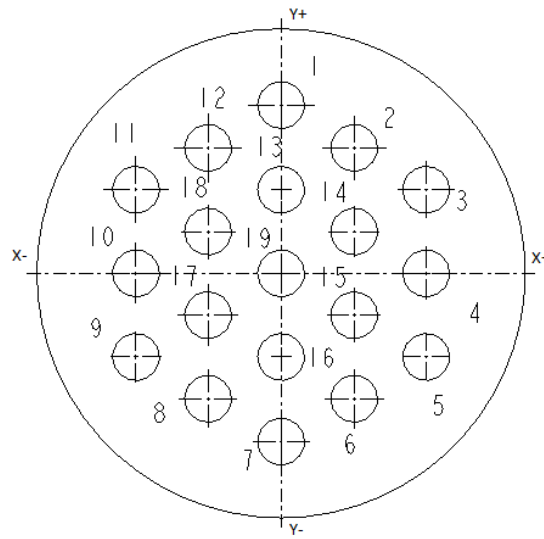


| Contacts<br>(Insert arrangement 11-13) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.000 (0.00) | +0.146 (3.71) | 8                   | -0.138 (3.51) | -0.045 (1.14) |
| 2                                      | +0.085 (2.16) | +0.118 (3.00) | 9                   | -0.138 (3.51) | +0.045 (1.14) |
| 3                                      | +0.138 (3.51) | +0.045 (1.14) | 10                  | -0.085 (2.16) | +0.118 (3.00) |
| 4                                      | +0.138 (3.51) | -0.045 (1.14) | 11                  | +0.000 (0.00) | +0.056 (1.42) |
| 5                                      | +0.085 (2.16) | -0.118 (3.00) | 12                  | +0.049 (1.24) | -0.035 (0.89) |
| 6                                      | +0.000 (0.00) | -0.146 (3.71) | 13                  | -0.049 (1.24) | -0.035 (0.89) |
| 7                                      | -0.085 (2.16) | -0.118 (3.00) | ---                 | ---           | ---           |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 11         | -13             | 13                 | 22M           | M              | ALL              | MS20050-13 |

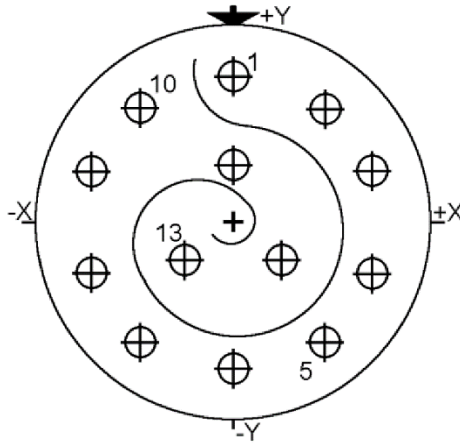
FIGURE 2. Insert arrangement, electrical connector, shell size 11 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 11-23) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.000 (0.00) | +0.161 (4.08) | 11                  | -0.139 (3.53) | +0.080 (2.04) |
| 2                                      | +0.070 (1.77) | +0.120 (3.06) | 12                  | -0.070 (1.77) | +0.120 (3.06) |
| 3                                      | +0.139 (3.53) | +0.080 (2.04) | 13                  | +0.000 (0.00) | +0.080 (2.04) |
| 4                                      | +0.139 (3.53) | +0.000 (0.00) | 14                  | +0.070 (1.77) | +0.040 (1.02) |
| 5                                      | +0.139 (3.53) | -0.080 (2.04) | 15                  | +0.070 (1.77) | -0.040 (1.02) |
| 6                                      | +0.070 (1.77) | -0.120 (3.06) | 16                  | +0.000 (0.00) | -0.080 (2.04) |
| 7                                      | +0.000 (0.00) | -0.161 (4.08) | 17                  | -0.070 (1.77) | -0.040 (1.02) |
| 8                                      | -0.070 (1.77) | -0.120 (3.06) | 18                  | -0.070 (1.77) | +0.040 (1.02) |
| 9                                      | -0.139 (3.53) | -0.080 (2.04) | 19                  | +0.000 (0.00) | +0.000 (0.00) |
| 10                                     | -0.139 (3.53) | +0.000 (0.00) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 11         | -23             | 19                 | 23-22         | N              | ALL              | M39029/122-670   | M39029/121-663 |

FIGURE 2. Insert arrangement, electrical connector, shell size 11 (Series I, III, IV of MIL-DTL38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

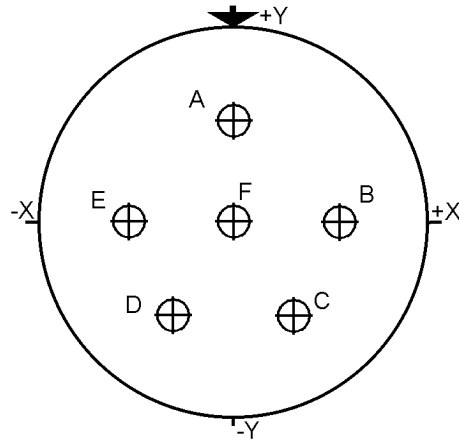
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 11-35) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.00 (0.00)  | +0.146 (3.71) | 8                   | -0.138 (3.51) | -0.045 (1.14) |
| 2                                      | +0.085 (2.16) | +0.118 (3.00) | 9                   | -0.138 (3.51) | +0.045 (1.14) |
| 3                                      | +0.138 (3.51) | +0.045 (1.14) | 10                  | -0.085 (2.16) | +0.118 (3.00) |
| 4                                      | +0.138 (3.51) | -0.045 (1.14) | 11                  | +0.000 (0.00) | +0.056 (1.42) |
| 5                                      | +0.085 (2.16) | -0.118 (3.00) | 12                  | +0.049 (1.24) | -0.035 (0.89) |
| 6                                      | +0.000 (0.00) | -0.146 (3.71) | 13                  | -0.049 (1.24) | -0.035 (0.89) |
| 7                                      | -0.085 (2.16) | -0.118 (3.00) | ---                 | ---           | ---           |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 11         | -35             | 13                 | 22D           | M              | All              | MS27526-35 |

FIGURE 2. Insert arrangement, electrical connector, shell size 11 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

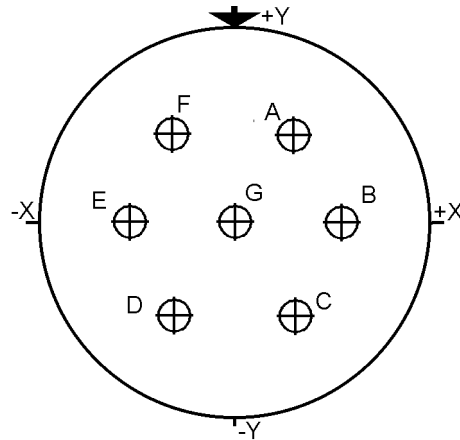
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 11-98) |                  |               |
|--|------------------|---------------|
| Contact position ID                    | Contact location |               |
|  | X-axis (mm)      | Y-axis (mm)   |
| A                                      | +0.000 (0.00)    | +1.130 (3.30) |
| B                                      | +1.130 (3.30)    | +0.000 (0.00) |
| C                                      | +0.065 (1.65)    | -1.113 (2.87) |
| D                                      | -0.065 (1.65)    | -1.113 (2.87) |
| E                                      | -1.130 (3.30)    | +0.000 (0.00) |
| F                                      | +0.000 (0.00)    | +0.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 11         | -98             | 6                  | 20            | I              | All              | MS20050-98 |

FIGURE 2. Insert arrangement, electrical connector, shell size 11 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

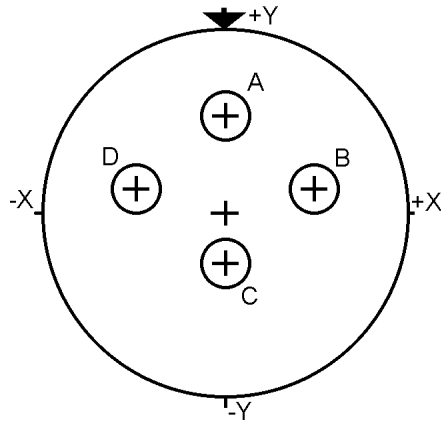


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 11-99) |               |               |
|--|---------------|---------------|
| Contact position ID                    | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +0.113 (2.87) |
| B                                      | +0.130 (3.30) | +0.000 (0.00) |
| C                                      | +0.065 (1.65) | -0.113 (2.87) |
| D                                      | -0.065 (1.65) | -0.113 (2.87) |
| E                                      | -0.130 (3.30) | +0.000 (0.00) |
| F                                      | -0.065 (1.65) | +0.113 (2.87) |
| G                                      | +0.000 (0.00) | +0.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 11         | -99             | 7                  | 20            | I              | All              | MS20050-99 |

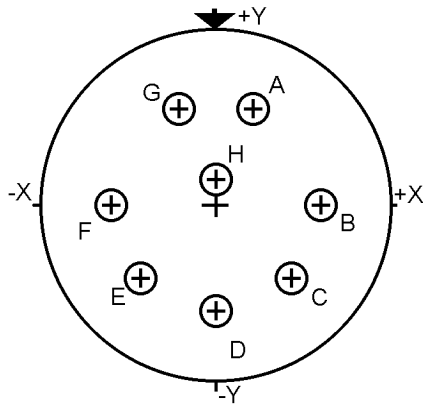
FIGURE 2. Insert arrangement, electrical connector, shell size 11 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 13-4) |                |                |
|---------------------------------------|----------------|----------------|
| Contact<br>position ID                | Location       |                |
|                                       | X-axis<br>(mm) | Y-axis<br>(mm) |
| A                                     | +0.000 (0.00)  | +0.150 (3.81)  |
| B                                     | +0.146 (3.71)  | +0.035 (0.89)  |
| C                                     | +0.000 (0.00)  | -0.083 (2.11)  |
| D                                     | -0.146 (3.71)  | +0.035 (0.89)  |

| Shell<br>size | Arrangement<br>no. | Number of<br>contacts | Size<br>contacts | Service<br>rating | Contact<br>location | Supersedes |
|---------------|--------------------|-----------------------|------------------|-------------------|---------------------|------------|
| 13            | -4                 | 4                     | 16               | I                 | All                 | MS20051-4  |

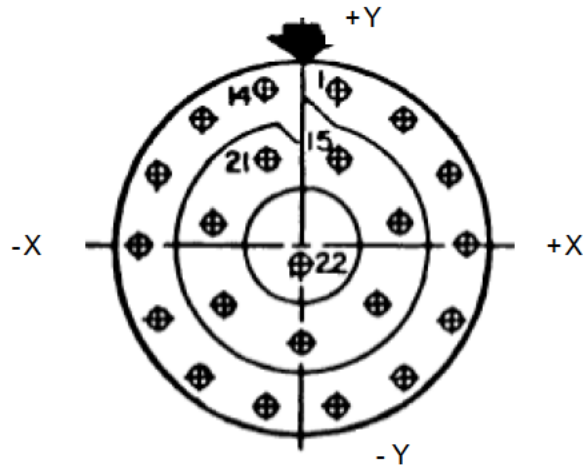
FIGURE 3. Insert arrangement, electrical connector, shell size 13 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600).

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 13-8) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.065 (1.65)    | +0.157 (3.99) |
| B                                     | +0.170 (4.32)    | +0.000 (0.00) |
| C                                     | +0.120 (3.05)    | -0.120 (3.05) |
| D                                     | +0.000 (0.00)    | -0.170 (4.32) |
| E                                     | -0.120 (3.05)    | -0.120 (3.05) |
| F                                     | -0.170 (4.32)    | +0.000 (0.00) |
| G                                     | -0.065 (1.65)    | +0.157 (3.99) |
| H                                     | +0.000 (0.00)    | +0.044 (1.12) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 13         | -8              | 8                  | 20            | I              | All              | MS20051-8  |

FIGURE 3. Insert arrangement, electrical connector, shell size 13 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 13-22) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.045 (1.14) | +0.197 (5.00) | 12                  | -0.182 (4.62) | +0.088 (2.24) |
| 2                                      | +0.126 (3.20) | +0.158 (4.01) | 13                  | -0.126 (3.20) | +0.158 (4.01) |
| 3                                      | +0.182 (4.62) | +0.088 (2.24) | 14                  | -0.045 (1.14) | +0.197 (5.00) |
| 4                                      | +0.203 (5.16) | +0.000 (0.00) | 15                  | +0.045 (1.14) | +0.107 (2.72) |
| 5                                      | +0.182 (4.62) | -0.088 (2.24) | 16                  | +0.117 (2.97) | +0.026 (0.66) |
| 6                                      | +0.126 (3.20) | -0.158 (4.01) | 17                  | +0.093 (2.36) | -0.075 (1.91) |
| 7                                      | +0.045 (1.14) | -0.197 (5.00) | 18                  | +0.000 (0.00) | -0.120 (3.05) |
| 8                                      | -0.045 (1.14) | -0.197 (5.00) | 19                  | -0.093 (2.36) | -0.075 (1.91) |
| 9                                      | -0.126 (3.20) | -0.158 (4.01) | 20                  | -0.117 (2.97) | +0.026 (0.66) |
| 10                                     | -0.182 (4.62) | -0.088 (2.24) | 21                  | -0.045 (1.14) | +0.107 (2.72) |
| 11                                     | -0.203 (5.16) | +0.000 (0.00) | 22                  | +0.000 (0.00) | -0.030 (0.76) |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 13         | -22             | 22                 | 22M           | M              | All              | MS20051-22 |

FIGURE 3. Insert arrangement, electrical connector, shell size 13 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

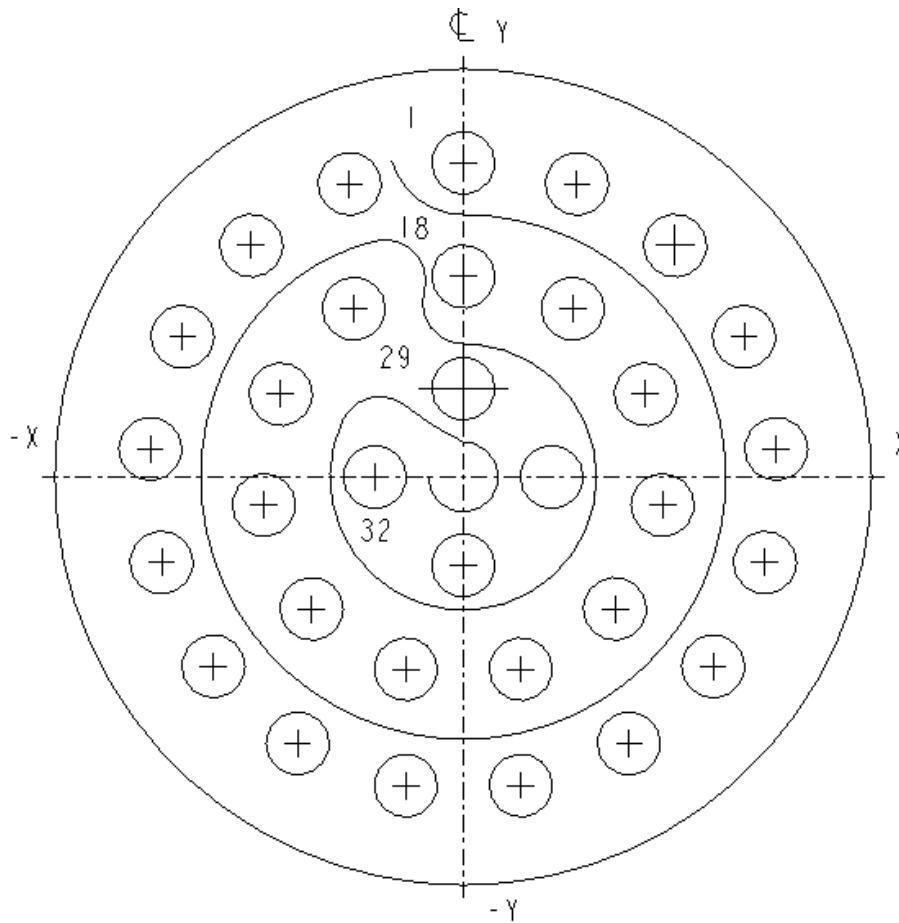
MIL-STD-1560C  
w/CHANGE 1

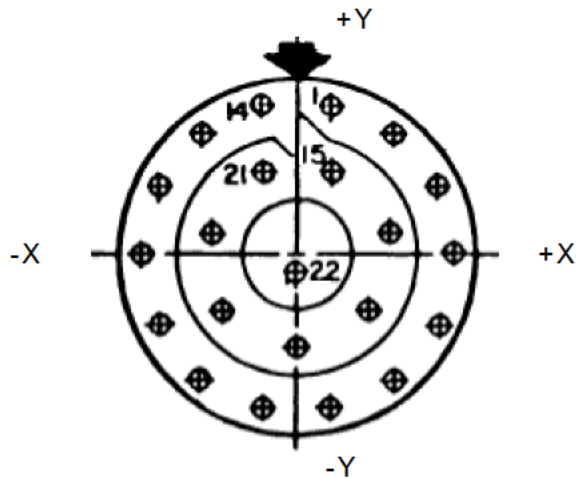
FIGURE 3. Insert arrangement, electrical connector, shell size 13 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 13-23) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.00 (0.00)  | +0.224 (5.68) | 17                  | -0.081 (2.05) | +0.209 (5.30) |
| 2                                      | +0.081 (2.05) | +0.209 (5.30) | 18                  | +0.000 (0.00) | +0.143 (3.64) |
| 3                                      | +0.151 (3.83) | +0.165 (4.20) | 19                  | +0.078 (1.97) | +0.121 (3.06) |
| 4                                      | +0.200 (5.09) | +0.100 (2.53) | 20                  | +0.130 (3.31) | +0.059 (1.51) |
| 5                                      | +0.223 (5.66) | +0.021 (0.52) | 21                  | +0.142 (3.60) | -0.021 (0.52) |
| 6                                      | +0.215 (5.46) | -0.061 (1.55) | 22                  | +0.108 (2.75) | -0.094 (2.38) |
| 7                                      | +0.178 (4.53) | -0.135 (3.42) | 23                  | +0.041 (1.03) | -0.137 (3.49) |
| 8                                      | +0.118 (2.99) | -0.190 (4.83) | 24                  | -0.041 (1.03) | -0.137 (3.49) |
| 9                                      | +0.041 (1.04) | -0.220 (5.58) | 25                  | -0.108 (2.75) | -0.094 (2.38) |
| 10                                     | -0.041 (1.04) | -0.220 (5.58) | 26                  | -0.142 (3.60) | -0.021 (0.52) |
| 11                                     | -0.118 (2.99) | -0.190 (4.83) | 27                  | -0.130 (3.31) | +0.059 (1.51) |
| 12                                     | -0.178 (4.53) | -0.135 (3.42) | 28                  | -0.078 (1.97) | +0.121 (3.06) |
| 13                                     | -0.215 (5.46) | -0.061 (1.55) | 29                  | +0.000 (0.00) | +0.063 (1.60) |
| 14                                     | -0.223 (5.66) | +0.021 (0.52) | 30                  | +0.063 (1.60) | +0.000 (0.00) |
| 15                                     | -0.200 (5.09) | +0.100 (2.53) | 31                  | +0.000 (0.00) | -0.063 (1.60) |
| 16                                     | -0.151 (3.83) | +0.165 (4.20) | 32                  | -0.063 (1.60) | +0.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 13         | -23             | 32                 | 23-22         | N              | All              | M39029/122-670   | M39029/121-663 |

FIGURE 3. Insert arrangement, electrical connector, shell size 13 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

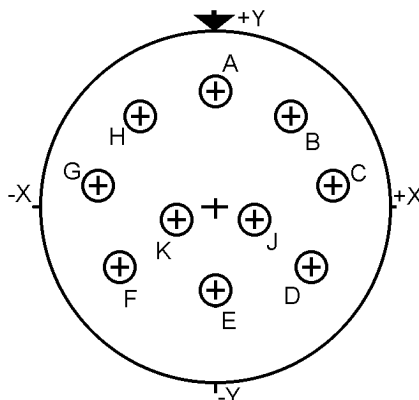
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 13-35) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.045 (1.14) | +0.197 (5.00) | 12                  | -0.182 (4.62) | +0.088 (2.24) |
| 2                                      | +0.126 (3.20) | +0.158 (4.01) | 13                  | -0.126 (3.20) | +0.158 (4.01) |
| 3                                      | +0.182 (4.62) | +0.088 (2.24) | 14                  | -0.045 (1.14) | +0.197 (5.00) |
| 4                                      | +0.203 (5.16) | +0.000 (0.00) | 15                  | +0.045 (1.14) | +0.107 (2.72) |
| 5                                      | +0.182 (4.62) | -0.088 (2.24) | 16                  | +0.117 (2.97) | +0.026 (0.66) |
| 6                                      | +0.126 (3.20) | -0.158 (4.01) | 17                  | +0.093 (2.36) | -0.075 (1.91) |
| 7                                      | +0.045 (1.14) | -0.197 (5.00) | 18                  | +0.000 (.00)  | -0.120 (3.05) |
| 8                                      | -0.045 (1.14) | -0.197 (5.00) | 19                  | -0.093 (2.36) | -0.075 (1.91) |
| 9                                      | -0.126 (3.20) | -0.158 (4.01) | 20                  | -0.117 (2.97) | +0.026 (0.66) |
| 10                                     | -0.182 (4.62) | -0.088 (2.24) | 21                  | -0.045 (1.14) | +0.107 (2.72) |
| 11                                     | -0.203 (5.16) | +0.000 (0.00) | 22                  | +0.000 (.00)  | -0.030 (0.76) |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 13         | -35             | 22                 | 22D           | M              | All              | MS27527-35 |

FIGURE 3. Insert arrangement, electrical connector, shell size 13 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

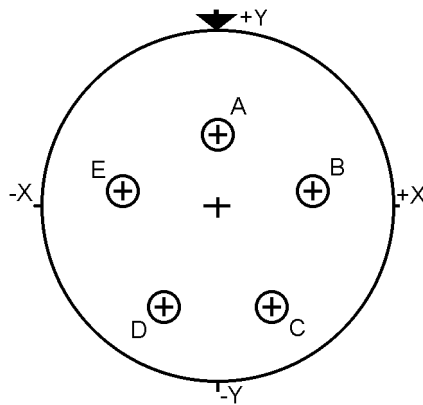
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 13-98) |                |                |
|--|----------------|----------------|
| Contact<br>position ID                 | Location       |                |
|  | X-axis<br>(mm) | Y-axis<br>(mm) |
| A                                      | +0.000 (0.00)  | +0.195 (4.95)  |
| B                                      | +0.125 (3.18)  | +0.150 (3.81)  |
| C                                      | +0.193 (4.90)  | +0.030 (0.76)  |
| D                                      | +0.164 (4.17)  | -0.105 (2.67)  |
| E                                      | +0.000 (0.00)  | -0.135 (3.43)  |
| F                                      | -0.164 (4.17)  | -0.105 (2.67)  |
| G                                      | -0.193 (4.90)  | +0.030 (0.76)  |
| H                                      | -0.125 (3.18)  | +0.150 (3.81)  |
| J                                      | +0.065 (1.65)  | -0.015 (0.38)  |
| K                                      | -0.065 (1.65)  | -0.015 (0.38)  |

| Shell<br>size | Arrangement<br>no. | Number<br>of<br>contacts | Size<br>contacts | Service<br>rating | Contact<br>location | Supersedes |
|---------------|--------------------|--------------------------|------------------|-------------------|---------------------|------------|
| 13            | -98                | 10                       | 20               | I                 | All                 | MS20051-98 |

FIGURE 3. Insert arrangement, electrical connector, shell size 13 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

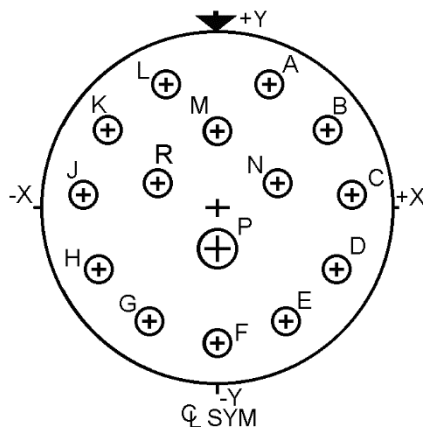


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 15-5) |               |               |
|---------------------------------------|---------------|---------------|
| Contact position ID                   | Location      |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |
| A                                     | +0.000 (0.00) | +0.100 (2.54) |
| B                                     | +0.174 (4.42) | +0.024 (0.61) |
| C                                     | +0.094 (2.39) | -0.148 (3.76) |
| D                                     | -0.094 (2.39) | -0.148 (3.76) |
| E                                     | -0.174 (4.42) | +0.024 (0.61) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 15         | -5              | 5                  | 16            | II             | All              | MS20052-5  |

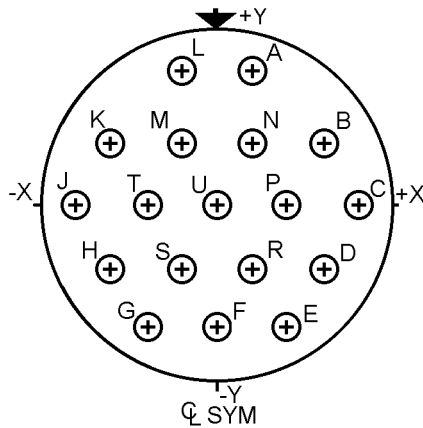
FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600).

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w/CHANGE 1

| Contacts<br>(Insert arrangement 15-15) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .100 (2.54) | + .225 (5.72) | J                   | - .244 (6.20) | + .014 (0.36) |
| B                                      | + .202 (5.13) | + .140 (3.56) | K                   | - .202 (5.13) | + .140 (3.56) |
| C                                      | + .244 (6.20) | + .014 (0.36) | L                   | - .100 (2.54) | + .225 (5.72) |
| D                                      | + .218 (5.54) | - .113 (2.87) | M                   | + .000 (.00)  | + .140 (3.56) |
| E                                      | + .126 (3.20) | - .209 (5.31) | N                   | + .110 (2.79) | + .040 (1.02) |
| F                                      | + .000 (.00)  | - .245 (6.22) | P                   | + .000 (.00)  | - .077 (1.96) |
| G                                      | - .126 (3.20) | - .209 (5.31) | R                   | - .110 (2.79) | + .040 (1.02) |
| H                                      | - .218 (5.54) | - .113 (2.87) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 15         | -15             | 1                  | 16            | I              | P                | MS20052-15 |
|            |                 | 14                 | 20            |                | All other        |            |

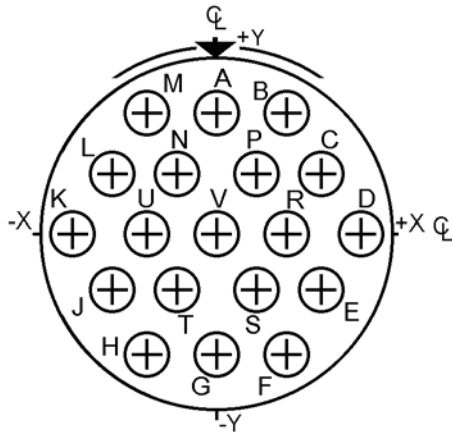
FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 15-18) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +0.252 (6.40) | K                   | -0.195 (4.95) | +0.113 (2.87) |
| B                                      | +0.195 (4.95) | +0.113 (2.87) | L                   | -0.065 (1.65) | +0.252 (6.40) |
| C                                      | +0.260 (6.60) | +0.000 (0.00) | M                   | -0.065 (1.65) | +0.113 (2.87) |
| D                                      | +0.195 (4.95) | -0.113 (2.87) | N                   | +0.065 (1.65) | +0.113 (2.87) |
| E                                      | +0.130 (3.30) | -0.225 (5.72) | P                   | +0.130 (3.30) | +0.000 (0.00) |
| F                                      | +0.000 (0.00) | -0.225 (5.72) | R                   | +0.065 (1.65) | -0.113 (2.87) |
| G                                      | -0.130 (3.30) | -0.225 (5.72) | S                   | -0.065 (1.65) | -0.113 (2.87) |
| H                                      | -0.195 (4.95) | -0.113 (2.87) | T                   | -0.130 (3.30) | +0.000 (0.00) |
| J                                      | -0.260 (6.60) | +0.000 (0.00) | U                   | +0.000 (0.00) | +0.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 15         | -18             | 18                 | 20            | I              | All              | MS20052-18 |

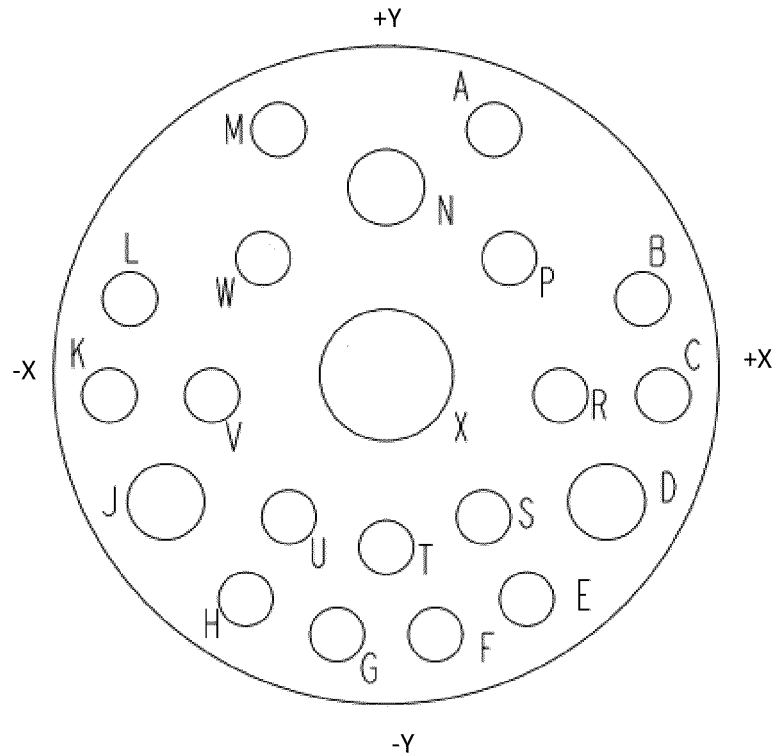
FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 15-19) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.00 (0.00)  | +0.225 (5.72) | L                   | -0.195 (4.95) | +0.113 (2.87) |
| B                                      | +0.130 (3.30) | +0.225 (5.72) | M                   | -0.130 (3.30) | +0.225 (5.72) |
| C                                      | +0.195 (4.95) | +0.113 (2.87) | N                   | -0.065 (1.65) | +0.113 (2.87) |
| D                                      | +0.260 (6.60) | +0.000 (0.00) | P                   | +0.065 (1.65) | +0.113 (2.87) |
| E                                      | +0.195 (4.95) | -0.113 (2.87) | R                   | +0.130 (3.30) | +0.000 (0.00) |
| F                                      | +0.130 (3.30) | -0.225 (5.72) | S                   | +0.065 (1.65) | -0.113 (2.87) |
| G                                      | +0.000 (0.00) | -0.225 (5.72) | T                   | -0.065 (1.65) | -0.113 (2.87) |
| H                                      | -0.130 (3.30) | -0.225 (5.72) | U                   | -0.130 (3.30) | +0.000 (0.00) |
| J                                      | -0.195 (4.95) | -0.113 (2.87) | V                   | +0.000 (0.00) | +0.000 (0.00) |
| K                                      | -0.260 (6.60) | +0.000 (0.00) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 15         | -19             | 19                 | 20            | I              | All              | MS20052-19 |

FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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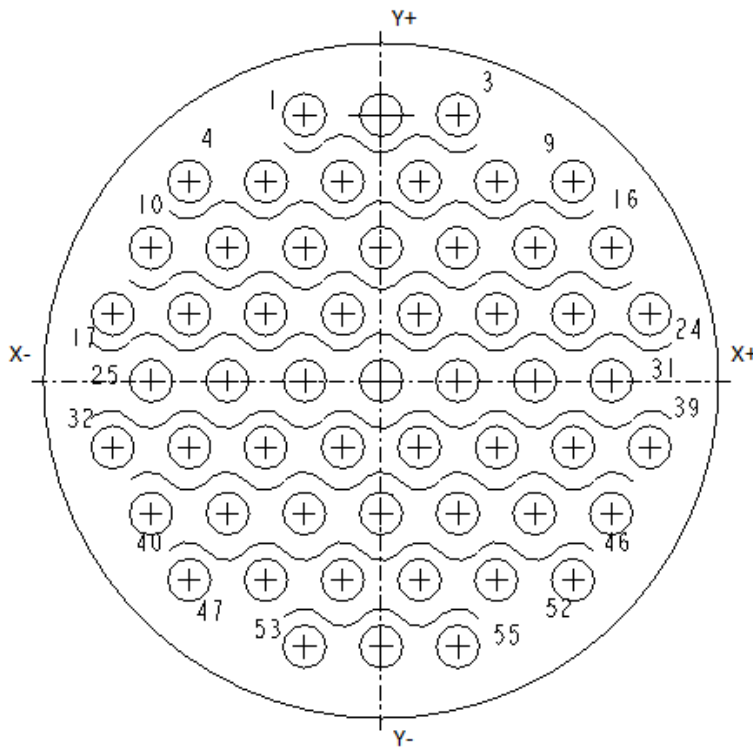
| Contacts<br>(Insert arrangement 15-21) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .105 (2.68) | + .242 (6.15) | M                   | - .105 (2.04) | + .242 (6.10) |
| B                                      | + .250 (6.35) | + .075 (1.91) | N                   | + .000 (0.00) | + .185 (4.70) |
| C                                      | + .270 (6.86) | - .020 (.051) | P                   | + .120 (3.05) | + .115 (2.92) |
| D                                      | + .215 (5.46) | - .125 (3.18) | R                   | + .170 (4.32) | - .020 (0.51) |
| E                                      | + .137 (3.48) | - .221 (5.61) | S                   | + .095 (2.41) | - .140 (3.56) |
| F                                      | + .048 (1.22) | - .256 (6.50) | T                   | + .000 (0.00) | - .170 (4.32) |
| G                                      | - .048 (1.22) | - .256 (6.50) | U                   | - .095 (2.41) | - .140 (3.56) |
| H                                      | - .137 (3.48) | - .221 (5.61) | V                   | - .170 (4.32) | - .020 (0.51) |
| J                                      | - .215 (5.46) | - .125 (3.18) | W                   | - .120 (3.05) | + .115 (2.92) |
| K                                      | - .270 (6.86) | - .020 (0.51) | X                   | + .000 (0.00) | - .000 (0.00) |
| L                                      | - .250 (6.35) | + .075 (1.91) | ---                 | ---           | ---           |

FIGURE 4. Insert arrangement, electrical connector, shell size 15 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

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| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact position ID | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|---------------------|------------------|----------------|
|            |                 |                    |               |                |                     | Pin              | Socket         |
| 15         | -21             | 1                  | 12            | Coax           | X                   | M39029/102-558   | M39029/103-559 |
|            |                 | 3                  | 20            | I              | D, J, N             | M39029/58-363    | M39029/56-351  |
|            |                 | 17                 | 22D           |                | All others          | M39029/58-360    | M39029/56-348  |

FIGURE 4. Insert arrangement, electrical connector, shell size 15 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 15-23) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.080 (2.04) | +.278 (7.07) | 29                  | +.080 (2.04) | +.000 (0.00) |
| 2                                      | +.000 (0.00) | +.278 (7.07) | 30                  | +.161 (4.08) | +.000 (0.00) |
| 3                                      | +.080 (2.04) | +.278 (7.07) | 31                  | +.241 (6.12) | +.000 (0.00) |
| 4                                      | -.201 (5.10) | +.209 (5.30) | 32                  | -.281 (7.14) | -.070 (1.77) |
| 5                                      | -.121 (3.06) | +.209 (5.30) | 33                  | -.201 (5.10) | -.070 (1.77) |
| 6                                      | -.040 (1.02) | +.209 (5.30) | 34                  | -.121 (3.06) | -.070 (1.77) |
| 7                                      | +.040 (1.02) | +.209 (5.30) | 35                  | -.040 (1.02) | -.070 (1.77) |
| 8                                      | +.121 (3.06) | +.209 (5.30) | 36                  | +.040 (1.02) | -.070 (1.77) |
| 9                                      | +.201 (5.10) | +.209 (5.30) | 37                  | +.121 (3.06) | -.070 (1.77) |
| 10                                     | -.241 (6.12) | +.139 (3.53) | 38                  | +.201 (5.10) | -.070 (1.77) |
| 11                                     | -.161 (4.08) | +.139 (3.53) | 39                  | +.281 (7.14) | -.070 (1.77) |

FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

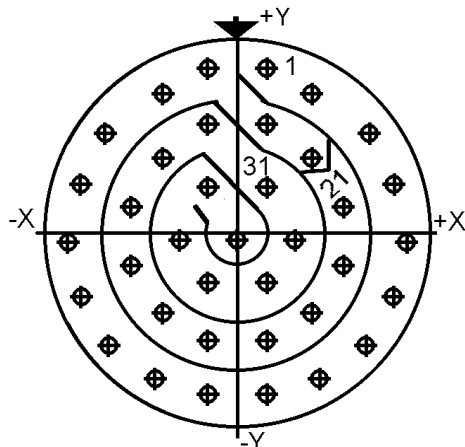
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 15-23) |              |                     |          |              |              |
|--|--------------|---------------------|----------|--------------|--------------|
| Contact position ID                    | Location     | Contact position ID | Location |              |              |
|  | X-axis (mm)  | Y-axis (mm)         |          | X-axis (mm)  | Y-axis (mm)  |
| 12                                     | -.080 (2.04) | +.139 (3.53)        | 40       | -.241 (6.12) | -.139 (3.53) |
| 13                                     | +.000 (0.00) | +.139 (3.53)        | 41       | -.161 (4.08) | -.139 (3.53) |
| 14                                     | +.080 (2.04) | +.139 (3.53)        | 42       | -.080 (2.04) | -.139 (3.53) |
| 15                                     | +.161 (4.08) | +.139 (3.53)        | 43       | +.000 (0.00) | -.139 (3.53) |
| 16                                     | +.241 (6.12) | +.139 (3.53)        | 44       | +.080 (2.04) | -.139 (3.53) |
| 17                                     | -.281 (7.14) | +.070 (1.77)        | 45       | +.161 (4.08) | -.139 (3.53) |
| 18                                     | -.201 (5.10) | +.070 (1.77)        | 46       | +.241 (6.12) | -.139 (3.53) |
| 19                                     | -.121 (3.06) | +.070 (1.77)        | 47       | -.201 (5.10) | -.209 (5.30) |
| 20                                     | -.040 (1.02) | +.070 (1.77)        | 48       | -.121 (3.06) | -.209 (5.30) |
| 21                                     | +.040 (1.02) | +.070 (1.77)        | 49       | -.040 (1.02) | -.209 (5.30) |
| 22                                     | +.121 (3.06) | +.070 (1.77)        | 50       | +.040 (1.02) | -.209 (5.30) |
| 23                                     | +.201 (5.10) | +.070 (1.77)        | 51       | +.121 (3.06) | -.209 (5.30) |
| 24                                     | +.281 (7.14) | +.070 (1.77)        | 52       | +.201 (5.10) | -.209 (5.30) |
| 25                                     | -.241 (6.12) | +.000 (0.00)        | 53       | -.080 (2.04) | -.278 (7.07) |
| 26                                     | -.161 (4.08) | +.000 (0.00)        | 54       | +.000 (0.00) | -.278 (7.07) |
| 27                                     | -.080 (2.04) | +.000 (0.00)        | 55       | +.080 (2.04) | -.278 (7.07) |
| 28                                     | +.000 (0.00) | +.000 (0.00)        | ---      | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 15         | -23             | 55                 | 23-22         | N              | All              | M39029/122-670   | M39029/121-663 |

FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.



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| Contacts<br>(Insert arrangement 15-35) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.045 (1.14) | +0.262 (6.65) | 20                  | +0.123 (3.12) | +0.119 (3.02) |
| 2                                      | +0.123 (3.12) | +0.217 (5.51) | 21                  | +0.170 (4.32) | +0.040 (1.02) |
| 3                                      | +0.211 (5.36) | +0.160 (4.06) | 22                  | +0.170 (4.32) | -0.050 (1.27) |
| 4                                      | +0.254 (6.45) | +0.080 (2.03) | 23                  | +0.123 (3.12) | -0.127 (3.23) |
| 5                                      | +0.266 (6.76) | -0.010 (.25)  | 24                  | +0.045 (1.14) | -0.172 (4.37) |
| 6                                      | +0.247 (6.27) | -0.098 (2.49) | 25                  | -0.045 (1.14) | -0.172 (4.37) |
| 7                                      | +0.200 (5.08) | -0.175 (4.45) | 26                  | -0.123 (3.12) | -0.127 (3.23) |
| 8                                      | +0.130 (3.30) | -0.232 (5.89) | 27                  | -0.170 (4.32) | -0.050 (1.27) |
| 9                                      | +0.045 (1.14) | -0.262 (6.65) | 28                  | -0.170 (4.32) | +0.040 (1.02) |
| 10                                     | -0.045 (1.14) | -0.262 (6.65) | 29                  | -0.123 (3.12) | +0.119 (3.02) |
| 11                                     | -0.130 (3.30) | -0.232 (5.89) | 30                  | -0.045 (1.14) | +0.172 (4.37) |
| 12                                     | -0.200 (5.08) | -0.175 (4.45) | 31                  | +0.045 (1.14) | +0.074 (1.88) |
| 13                                     | -0.247 (6.27) | -0.098 (2.49) | 32                  | +0.090 (2.29) | -0.004 (0.10) |
| 14                                     | -0.266 (6.76) | -0.010 (.25)  | 33                  | +0.045 (1.14) | -0.082 (2.08) |
| 15                                     | -0.254 (6.45) | +0.080 (2.03) | 34                  | -0.045 (1.14) | -0.082 (2.08) |

FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

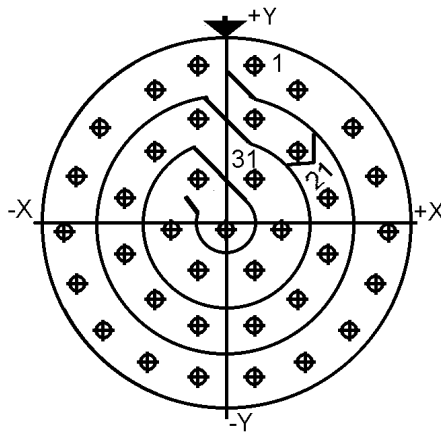
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 15-35) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 16                                     | -.211 (5.36) | +.160 (4.06) | 35                  | -.090 (2.29) | -.004 (0.10) |
| 17                                     | -.123 (3.12) | +.217 (5.51) | 36                  | -.045 (1.14) | +.074 (1.88) |
| 18                                     | -.045 (1.14) | +.262 (6.65) | 37                  | +.000 (0.00) | -.004 (0.10) |
| 19                                     | +.045 (1.14) | +.172 (4.37) | ---                 | ---          | ---          |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 15         | -35             | 37                 | 22D           | M              | All              | MS27528-35 |

FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 15-37) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.045 (1.14) | +0.262 (6.65) | 20                  | +0.123 (3.12) | +0.119 (3.02) |
| 2                                      | +0.123 (3.12) | +0.217 (5.51) | 21                  | +0.170 (4.32) | +0.040 (1.02) |
| 3                                      | +0.211 (5.36) | +0.160 (4.06) | 22                  | +0.170 (4.32) | -0.050 (1.27) |
| 4                                      | +0.254 (6.45) | +0.080 (2.03) | 23                  | +0.123 (3.12) | -0.127 (3.23) |
| 5                                      | +0.266 (6.76) | -0.010 (0.25) | 24                  | +0.045 (1.14) | -0.172 (4.37) |
| 6                                      | +0.247 (6.27) | -0.098 (2.49) | 25                  | -0.045 (1.14) | -0.172 (4.37) |
| 7                                      | +0.200 (5.08) | -0.175 (4.45) | 26                  | -0.123 (3.12) | -0.127 (3.23) |
| 8                                      | +0.130 (3.30) | -0.232 (5.89) | 27                  | -0.170 (4.32) | -0.050 (1.27) |
| 9                                      | +0.045 (1.14) | -0.262 (6.65) | 28                  | -0.170 (4.32) | +0.040 (1.02) |
| 10                                     | -0.045 (1.14) | -0.262 (6.65) | 29                  | -0.123 (3.12) | +0.119 (3.02) |
| 11                                     | -0.130 (3.30) | -0.232 (5.89) | 30                  | -0.045 (1.14) | +0.172 (4.37) |
| 12                                     | -0.200 (5.08) | -0.175 (4.45) | 31                  | +0.045 (1.14) | +0.074 (1.88) |
| 13                                     | -0.247 (6.27) | -0.098 (2.49) | 32                  | +0.090 (2.29) | -0.004 (0.10) |
| 14                                     | -0.266 (6.76) | -0.010 (0.25) | 33                  | +0.045 (1.14) | -0.082 (2.08) |
| 15                                     | -0.254 (6.45) | +0.080 (2.03) | 34                  | -0.045 (1.14) | -0.082 (2.08) |

FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

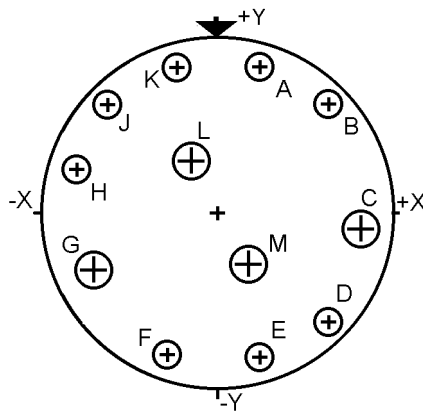
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 15-37) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 16                                     | -.211 (5.36) | +.160 (4.06) | 35                  | -.090 (2.29) | -.004 (0.10) |
| 17                                     | -.123 (3.12) | +.217 (5.51) | 36                  | -.045 (1.14) | +.074 (1.88) |
| 18                                     | -.045 (1.14) | +.262 (6.65) | 37                  | +.000 (0.00) | -.004 (0.10) |
| 19                                     | +.045 (1.14) | +.172 (4.37) | ---                 | ---          | ---          |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 15         | -37             | 37                 | 22M           | M              | All              | MS20052-37 |

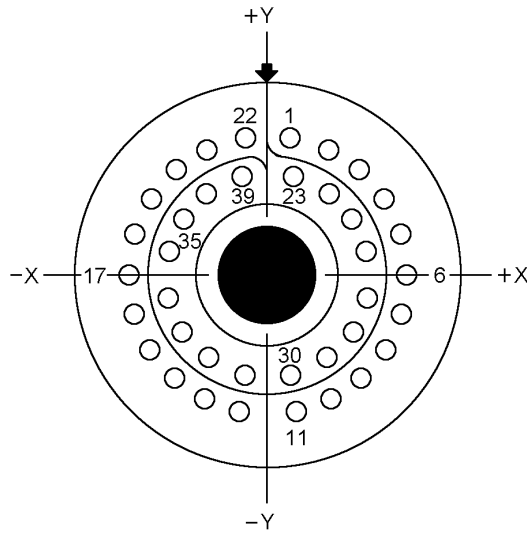
FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 15-97) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +0.234 (5.94) | G                   | -0.207 (5.26) | -0.095 (2.41) |
| B                                      | +0.178 (4.52) | +0.178 (4.52) | H                   | -0.234 (5.94) | +0.065 (1.65) |
| C                                      | +0.230 (5.84) | -0.023 (0.58) | J                   | -0.178 (4.52) | +0.178 (4.52) |
| D                                      | +0.178 (4.52) | -0.178 (4.52) | K                   | -0.065 (1.65) | +0.234 (5.94) |
| E                                      | +0.065 (1.65) | -0.234 (5.94) | L                   | -0.047 (1.19) | +0.081 (2.06) |
| F                                      | -0.089 (2.26) | -0.235 (5.97) | M                   | +0.047 (1.19) | -0.081 (2.06) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 15         | -97             | 4                  | 16            | I              | C, G, L, M       | MS20052-97 |
|            |                 | 8                  | 20            |                | All others       |            |

FIGURE 4. Insert arrangement, electrical connector, shell size 15 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 17-2) |               |               |                     |               |               |
|---------------------------------------|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location      |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                     | +0.046 (1.17) | +0.325 (8.26) | 21                  | -.133 (3.38)  | +0.299 (7.59) |
| 2                                     | +0.133 (3.38) | +0.299 (7.59) | 22                  | -.046 (1.17)  | +0.325 (8.26) |
| 3                                     | +0.211 (5.36) | +0.251 (6.38) | 23                  | +0.046 (1.17) | +0.231 (5.87) |
| 4                                     | +0.272 (6.91) | +0.183 (4.65) | 24                  | +0.129 (3.28) | +0.197 (5.00) |
| 5                                     | +0.312 (7.92) | +0.101 (2.57) | 25                  | +0.194 (4.93) | +0.133 (3.38) |
| 6                                     | +0.328 (8.33) | +0.011 (0.28) | 26                  | +0.230 (5.84) | +0.050 (1.27) |
| 7                                     | +0.318 (8.08) | -.079 (2.01)  | 27                  | +0.232 (5.89) | -.040 (1.02)  |
| 8                                     | +0.284 (7.21) | -.164 (4.17)  | 28                  | +0.200 (5.08) | -.125 (3.18)  |
| 9                                     | +0.228 (5.79) | -.236 (5.99)  | 29                  | +0.137 (3.48) | -.191 (4.85)  |
| 10                                    | +0.154 (3.91) | -.289 (7.34)  | 30                  | +0.055 (1.40) | -.229 (5.82)  |
| 11                                    | +0.068 (1.73) | -.321 (8.15)  | 31                  | -.055 (1.40)  | -.229 (5.82)  |
| 12                                    | -.068 (1.73)  | -.321 (8.15)  | 32                  | -.137 (3.48)  | -.191 (4.85)  |
| 13                                    | -.154 (3.91)  | -.289 (7.34)  | 33                  | -.200 (5.08)  | -.125 (3.18)  |
| 14                                    | -.228 (5.79)  | -.236 (5.99)  | 34                  | -.232 (5.89)  | -.040 (1.02)  |
| 15                                    | -.284 (7.21)  | -.164 (4.17)  | 35                  | -.230 (5.84)  | +0.050 (1.27) |
| 16                                    | -.318 (8.08)  | -.079 (2.01)  | 36                  | -.194 (4.93)  | +0.133 (3.38) |

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

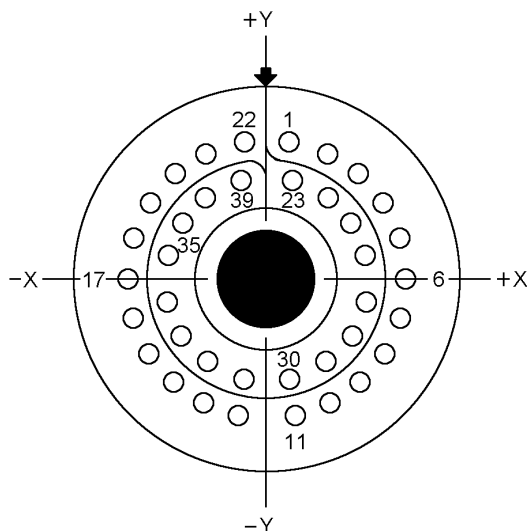
| Contacts<br>(Insert arrangement 17-2) |              |              |                     |              |              |
|---------------------------------------|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                   | Location     |              | Contact position ID | Location     |              |
|                                       | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 17                                    | -.328 (8.33) | +.011 (0.28) | 37                  | -.129 (3.28) | +.197 (5.00) |
| 18                                    | -.312 (7.92) | +.101 (2.57) | 38                  | -.046 (1.17) | +.231 (5.87) |
| 19                                    | -.272 (6.91) | +.183 (4.65) | 39                  | +.000 (0.00) | -.000 (0.00) |
| 20                                    | -.211 (5.36) | +.251 (6.38) | ---                 | ---          | ---          |

(Inactive for new design for MIL-DTL-38999. For new design, use arrangement no. 17-3.)

| Shell size | Arrangement no. | Number of contacts | Size contacts   | Service rating | Contact position ID | Standard contact |               |
|------------|-----------------|--------------------|-----------------|----------------|---------------------|------------------|---------------|
|            |                 |                    |                 |                |                     | Pin              | Socket        |
| 17         | -2              | 38                 | 22D             | M              | All other           | M39029/58-360    | M39029/56-348 |
|            |                 | 1                  | 8<br>(See note) | Twinax         | 39                  | M39029/90-529    | M39029/91-530 |

NOTE: To meet environmental sealing requirements, size 8 shielded contacts used with this insert arrangement may require separate, non-standard sealing boots that are furnished with the connector. For this insert arrangement, some connector grommet designs use a heat shrink sleeve only with the size 8 shielded contacts to meet environmental sealing requirements. Heat shrink sleeves have a maximum temperature rating of 175°C maximum. When heat shrink sleeves are used, connectors rated to 200°C max are derated to 175°C max. When heat shrink sleeves are used, sealing boots are not used, and when sealing boots are used, heat shrink sleeves are not used.

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

(INSERT ARRANGEMENT PATTERN IDENTICAL TO 17-2, EXCEPT 17-3  
USES SEALING BOOT IN ACCORDANCE WITH MIL-DTL-38999/62)

| Contacts<br>(Insert arrangement 17-3) |                |                |                        |                |                |
|---------------------------------------|----------------|----------------|------------------------|----------------|----------------|
| Contact<br>position ID                | Location       |                | Contact<br>position ID | Location       |                |
|                                       | X-axis<br>(mm) | Y-axis<br>(mm) |                        | X-axis<br>(mm) | Y-axis<br>(mm) |
| 1                                     | +0.046 (1.17)  | +0.325 (8.26)  | 21                     | -.133 (3.38)   | +0.299 (7.59)  |
| 2                                     | +0.133 (3.38)  | +0.299 (7.59)  | 22                     | -.046 (1.17)   | +0.325 (8.26)  |
| 3                                     | +0.211 (5.36)  | +0.251 (6.38)  | 23                     | +0.046 (1.17)  | +0.231 (5.87)  |
| 4                                     | +0.272 (6.91)  | +0.183 (4.65)  | 24                     | +0.129 (3.28)  | +0.197 (5.00)  |
| 5                                     | +0.312 (7.92)  | +0.101 (2.57)  | 25                     | +0.194 (4.93)  | +0.133 (3.38)  |
| 6                                     | +0.328 (8.33)  | +0.011 (0.28)  | 26                     | +0.230 (5.84)  | +0.050 (1.27)  |
| 7                                     | +0.318 (8.08)  | -.079 (2.01)   | 27                     | +0.232 (5.89)  | -.040 (1.02)   |
| 8                                     | +0.284 (7.21)  | -.164 (4.17)   | 28                     | +0.200 (5.08)  | -.125 (3.18)   |
| 9                                     | +0.228 (5.79)  | -.236 (5.99)   | 29                     | +0.137 (3.48)  | -.191 (4.85)   |
| 10                                    | +0.154 (3.91)  | -.289 (7.34)   | 30                     | +0.055 (1.40)  | -.229 (5.82)   |
| 11                                    | +0.068 (1.73)  | -.321 (8.15)   | 31                     | -.055 (1.40)   | -.229 (5.82)   |
| 12                                    | -.068 (1.73)   | -.321 (8.15)   | 32                     | -.137 (3.48)   | -.191 (4.85)   |
| 13                                    | -.154 (3.91)   | -.289 (7.34)   | 33                     | -.200 (5.08)   | -.125 (3.18)   |
| 14                                    | -.228 (5.79)   | -.236 (5.99)   | 34                     | -.232 (5.89)   | -.040 (1.02)   |
| 15                                    | -.284 (7.21)   | -.164 (4.17)   | 35                     | -.230 (5.84)   | +0.050 (1.27)  |
| 16                                    | -.318 (8.08)   | -.079 (2.01)   | 36                     | -.194 (4.93)   | +0.133 (3.38)  |

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.



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w/CHANGE 1

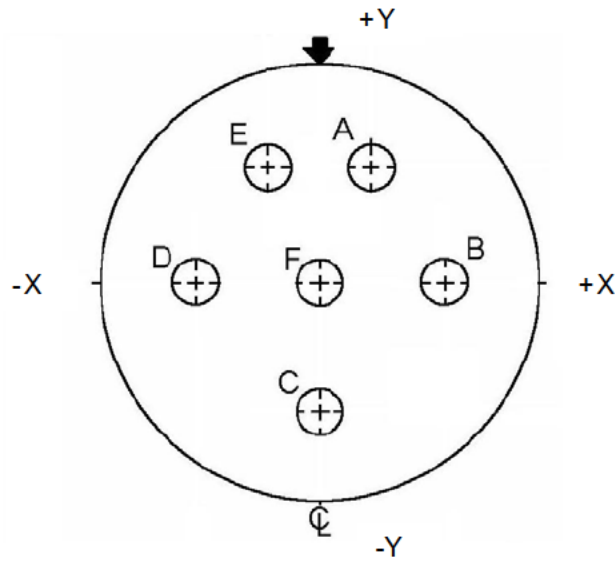
| Contacts<br>(Insert arrangement 17-3) |              |              |                     |              |              |
|---------------------------------------|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                   | Location     |              | Contact position ID | Location     |              |
|                                       | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 17                                    | -.328 (8.33) | +.011 (0.28) | 37                  | -.129 (3.28) | +.197 (5.00) |
| 18                                    | -.312 (7.92) | +.101 (2.57) | 38                  | -.046 (1.17) | +.231 (5.87) |
| 19                                    | -.272 (6.91) | +.183 (4.65) | 39                  | +.000 (0.00) | -.000 (0.00) |
| 20                                    | -.211 (5.36) | +.251 (6.38) | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts   | Service rating | Contact position ID | Standard contact |                |
|------------|-----------------|--------------------|-----------------|----------------|---------------------|------------------|----------------|
|            |                 |                    |                 |                |                     | Pin              | Socket         |
| 17         | -3              | 38                 | 22D             | M              | All other           | M39029/58-360    | M39029/56-348  |
|            |                 | 1                  | 8<br>(See note) | Twinax         | 39                  | M39029/113-625   | M39029/114-628 |

NOTE: For this insert arrangement, sealing boots in accordance with MIL-DTL-38999/62 shall be used to environmentally seal size 8 twinax contacts. Heat shrink sleeves are not used when sealing boots are used.

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

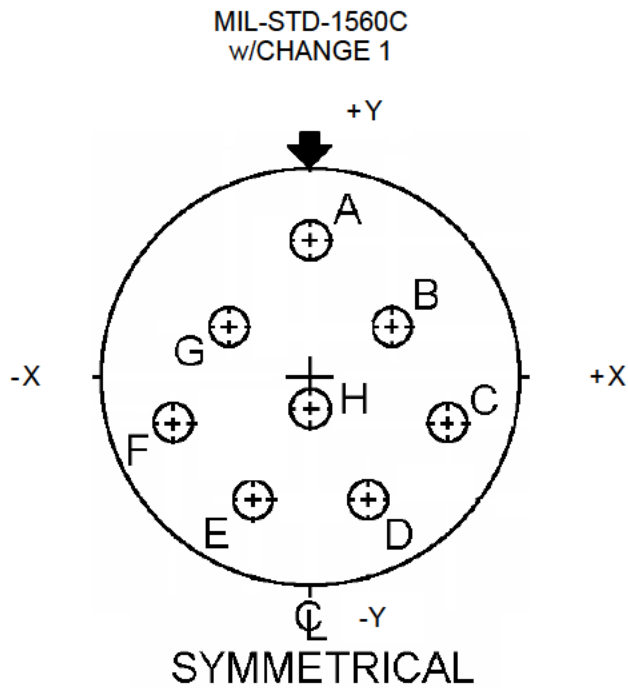
MIL-STD-1560C  
w/CHANGE 1



| Contacts<br>(Insert arrangement 17-6) |               |               |
|---------------------------------------|---------------|---------------|
| Contact position ID                   | Location      |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |
| A                                     | + .121 (3.07) | + .209 (5.31) |
| B                                     | + .241 (6.12) | + .000 (0.00) |
| C                                     | + .000 (0.00) | - .241 (6.12) |
| D                                     | - .241 (6.12) | + .000 (0.00) |
| E                                     | - .121 (3.07) | + .209 (5.31) |
| F                                     | + .000 (0.00) | + .000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 17         | -6              | 6                  | 12            | I              | All              | MS20053-6  |

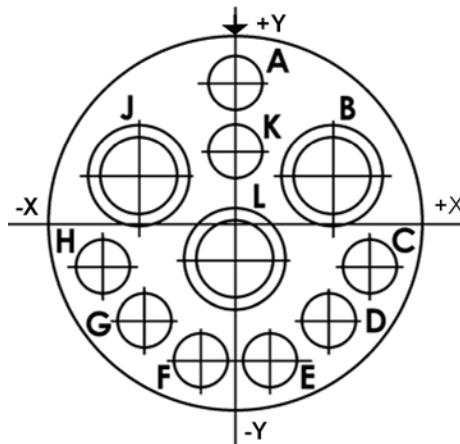
FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600).



| Contacts<br>(Insert arrangement 17-8) |               |               |
|---------------------------------------|---------------|---------------|
| Contact position ID                   | Location      |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |
| A                                     | +0.000 (0.00) | +0.236 (5.99) |
| B                                     | +0.128 (3.25) | +0.086 (2.18) |
| C                                     | +0.230 (5.84) | -0.078 (1.98) |
| D                                     | +0.094 (2.39) | -0.216 (5.49) |
| E                                     | -0.094 (2.39) | -0.216 (5.49) |
| F                                     | -0.230 (5.84) | -0.078 (1.98) |
| G                                     | -0.128 (3.25) | +0.086 (2.18) |
| H                                     | +0.000 (0.00) | -0.052 (1.32) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 17         | -8              | 8                  | 16            | II             | All              | MS20053-8  |

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

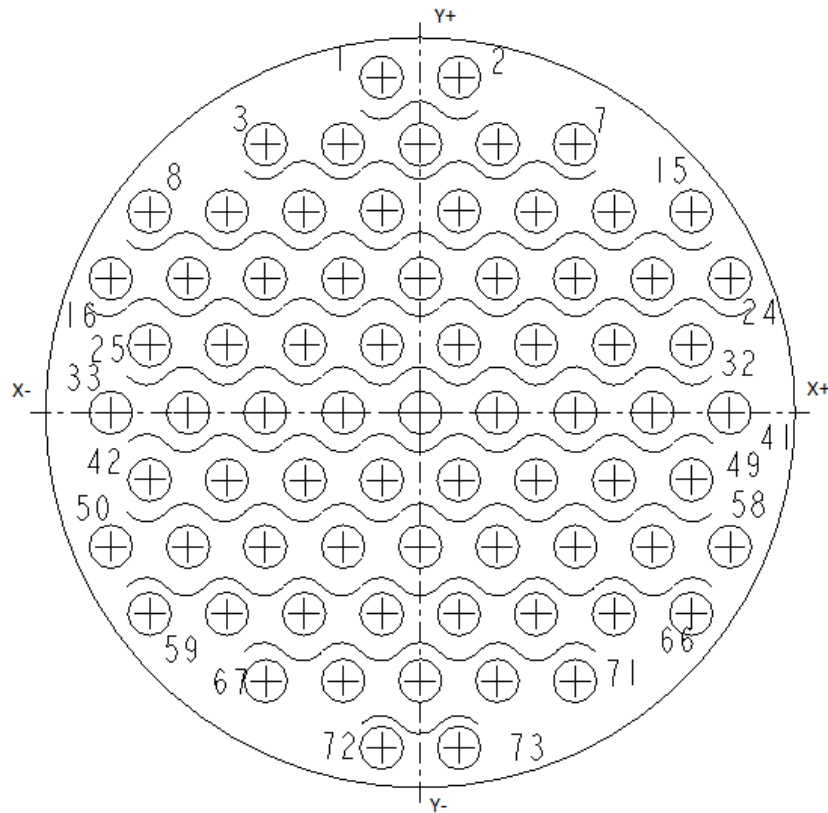
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 17-11) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.000 (0.00) | +0.290 (7.37) | G                   | -0.190 (4.83) | -0.199 (5.05) |
| B                                      | +0.200 (5.08) | +0.100 (2.54) | H                   | -0.275 (6.99) | -0.088 (2.24) |
| C                                      | +0.275 (6.99) | -0.088 (2.24) | J                   | -0.200 (5.08) | +0.100 (2.54) |
| D                                      | +0.190 (4.83) | -0.199 (5.05) | K                   | +0.000 (0.00) | +0.150 (3.81) |
| E                                      | +0.071 (1.80) | -0.282 (7.16) | L                   | +0.000 (0.00) | -0.075 (1.91) |
| F                                      | -0.071 (1.80) | -0.282 (7.16) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact position ID    | Standard contacts |               |
|------------|-----------------|--------------------|---------------|----------------|------------------------|-------------------|---------------|
|            |                 |                    |               |                |                        | Pin               | Socket        |
| 17         | -11             | 1                  | 12            | Coax           | J                      | M39029/28-211     | M39029/75-416 |
|            |                 | 2                  | 12            | Twinax         | B, L                   | 02004-936         | 02003-926     |
|            |                 | 8                  | 20            | N              | A, C, D, E, F, G, H, K | M39029/58-363     | M39029/56-351 |

(For twinax part numbers 02004-936 and 02003-926, see DLA Land and Maritime drawings 02004 and 02003.)

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 17-23) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.040 (1.02) | +.348 (8.83) | 38                  | +.080 (2.04) | +.000 (0.00) |
| 2                                      | +.040 (1.02) | +.348 (8.83) | 39                  | +.161 (4.08) | +.000 (0.00) |
| 3                                      | -.161 (4.08) | +.278 (7.07) | 40                  | +.241 (6.12) | +.000 (0.00) |
| 4                                      | -.080 (2.04) | +.278 (7.07) | 41                  | +.321 (8.16) | +.000 (0.00) |
| 5                                      | +.000 (0.00) | +.278 (7.07) | 42                  | -.281 (7.14) | -.070 (1.77) |
| 6                                      | +.080 (2.04) | +.278 (7.07) | 43                  | -.201 (5.10) | -.070 (1.77) |
| 7                                      | +.161 (4.08) | +.278 (7.07) | 44                  | -.121 (3.06) | -.070 (1.77) |
| 8                                      | -.281 (7.14) | +.209 (5.30) | 45                  | -.040 (1.02) | -.070 (1.77) |
| 9                                      | -.201 (5.10) | +.209 (5.30) | 46                  | +.040 (1.02) | -.070 (1.77) |
| 10                                     | -.121 (3.06) | +.209 (5.30) | 47                  | +.121 (3.06) | -.070 (1.77) |

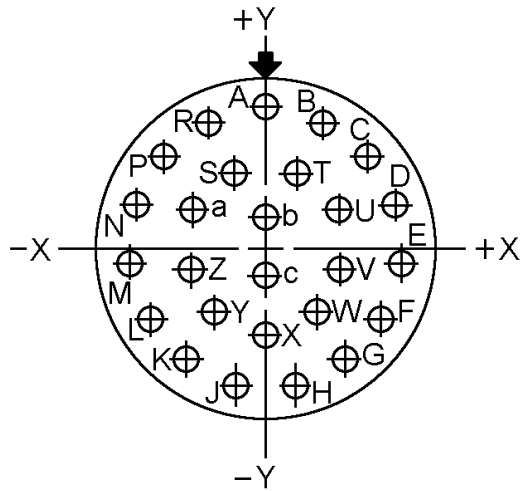
FIGURE 5. Insert arrangement, electrical connector, shell size 17 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 17-23) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 11                                     | -.040 (1.02) | +.209 (5.30) | 48                  | +.201 (5.10) | -.070 (1.77) |
| 12                                     | +.040 (1.02) | +.209 (5.30) | 49                  | +.281 (7.14) | -.070 (1.77) |
| 13                                     | +.121 (3.06) | +.209 (5.30) | 50                  | -.321 (8.16) | -.139 (3.53) |
| 14                                     | +.201 (5.10) | +.209 (5.30) | 51                  | -.241 (6.12) | -.139 (3.53) |
| 15                                     | +.281 (7.14) | +.209 (5.30) | 52                  | -.161 (4.08) | -.139 (3.53) |
| 16                                     | -.321 (8.16) | +.139 (3.53) | 53                  | -.080 (2.04) | -.139 (3.53) |
| 17                                     | -.241 (6.12) | +.139 (3.53) | 54                  | +.000 (0.00) | -.139 (3.53) |
| 18                                     | -.161 (4.08) | +.139 (3.53) | 55                  | +.080 (2.04) | -.139 (3.53) |
| 19                                     | -.080 (2.04) | +.139 (3.53) | 56                  | +.161 (4.08) | -.139 (3.53) |
| 20                                     | +.000 (0.00) | +.139 (3.53) | 57                  | +.241 (6.12) | -.139 (3.53) |
| 21                                     | +.080 (2.04) | +.139 (3.53) | 58                  | +.321 (8.16) | -.139 (3.53) |
| 22                                     | +.161 (4.08) | +.139 (3.53) | 59                  | -.281 (7.14) | -.209 (5.30) |
| 23                                     | +.241 (6.12) | +.139 (3.53) | 60                  | -.201 (5.10) | -.209 (5.30) |
| 24                                     | +.321 (8.16) | +.139 (3.53) | 61                  | -.121 (3.06) | -.209 (5.30) |
| 25                                     | -.281 (7.14) | +.070 (1.77) | 62                  | -.040 (1.02) | -.209 (5.30) |
| 26                                     | -.201 (5.10) | +.070 (1.77) | 63                  | +.040 (1.02) | -.209 (5.30) |
| 27                                     | -.121 (3.06) | +.070 (1.77) | 64                  | +.121 (3.06) | -.209 (5.30) |
| 28                                     | -.040 (1.02) | +.070 (1.77) | 65                  | +.201 (5.10) | -.209 (5.30) |
| 29                                     | +.040 (1.02) | +.070 (1.77) | 66                  | +.281 (7.14) | -.209 (5.30) |
| 30                                     | +.121 (3.06) | +.070 (1.77) | 67                  | -.161 (4.08) | -.278 (7.07) |
| 31                                     | +.201 (5.10) | +.070 (1.77) | 68                  | -.080 (2.04) | -.278 (7.07) |
| 32                                     | +.281 (7.14) | +.070 (1.77) | 69                  | +.000 (0.00) | -.278 (7.07) |
| 33                                     | -.321 (8.16) | +.000 (0.00) | 70                  | +.080 (2.04) | -.278 (7.07) |
| 34                                     | -.241 (6.12) | +.000 (0.00) | 71                  | +.161 (4.08) | -.278 (7.07) |
| 35                                     | -.161 (4.08) | +.000 (0.00) | 72                  | -.040 (1.02) | -.348 (8.83) |
| 36                                     | -.080 (2.04) | +.000 (0.00) | 73                  | +.040 (1.02) | -.348 (8.83) |
| 37                                     | +.000 (0.00) | +.000 (0.00) | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 17         | -23             | 73                 | 23-22         | N              | All              | M39029/122-670   | M39029/121-663 |

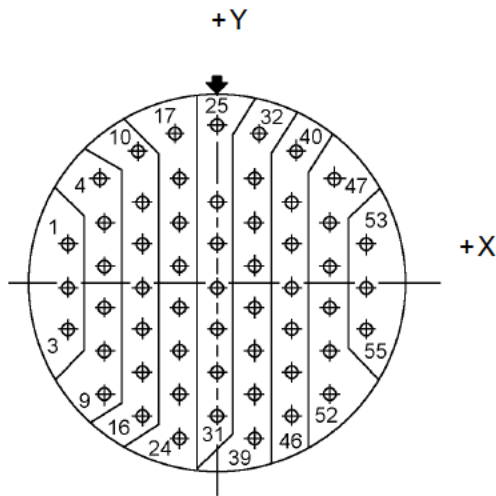
FIGURE 5. Insert arrangement, electrical connector, shell size 17 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 17-26) |                  |               |                     |                  |               |
|--|------------------|---------------|---------------------|------------------|---------------|
| Contact position ID                    | Contact location |               | Contact position ID | Contact location |               |
|  | X-axis (mm)      | Y-axis (mm)   |                     | X-axis (mm)      | Y-axis (mm)   |
| A                                      | +0.00 (0.00)     | +3.21 (8.15)  | P                   | -0.239 (6.07)    | +0.214 (5.44) |
| B                                      | +0.131 (3.33)    | +0.293 (7.44) | R                   | -0.131 (3.33)    | +0.293 (7.44) |
| C                                      | +0.239 (6.07)    | +0.214 (5.44) | S                   | -0.070 (1.78)    | +0.177 (4.50) |
| D                                      | +0.305 (7.75)    | +0.099 (2.51) | T                   | +0.070 (1.78)    | +0.177 (4.50) |
| E                                      | +0.319 (8.10)    | -0.034 (0.86) | U                   | +0.175 (4.45)    | +0.094 (2.39) |
| F                                      | +0.278 (7.06)    | -0.161 (4.09) | V                   | +0.178 (4.52)    | -0.036 (0.91) |
| G                                      | +0.189 (4.80)    | -0.260 (6.60) | W                   | +0.119 (3.02)    | -0.151 (3.84) |
| H                                      | +0.067 (1.70)    | -0.314 (7.98) | X                   | +0.000 (0.00)    | -0.203 (5.16) |
| J                                      | -0.067 (1.70)    | -0.314 (7.98) | Y                   | -0.119 (3.02)    | -0.151 (3.84) |
| K                                      | -0.189 (4.80)    | -0.260 (6.60) | Z                   | -0.178 (4.52)    | -0.036 (0.91) |
| L                                      | -0.278 (7.06)    | -0.161 (4.09) | a                   | -0.175 (4.45)    | +0.094 (2.39) |
| M                                      | -0.319 (8.10)    | -0.034 (0.86) | b                   | +0.000 (0.00)    | +0.065 (1.65) |
| N                                      | -0.305 (7.75)    | +0.099 (2.51) | c                   | +0.000 (0.00)    | -0.065 (1.65) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact position ID | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|---------------------|------------|
| 17         | -26             | 26                 | 20            | I              | All                 | MS20053-26 |

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 17-35) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.312 (7.92) | +.086 (2.18) | 29                  | .000 (0.00)  | -.094 (2.39) |
| 2                                      | -.312 (7.92) | -.004 (0.10) | 30                  | .000 (0.00)  | -.184 (4.67) |
| 3                                      | -.312 (7.92) | -.094 (2.39) | 31                  | .000 (0.00)  | -.274 (6.96) |
| 4                                      | -.242 (6.15) | +.221 (5.61) | 32                  | +.089 (2.26) | +.316 (8.03) |
| 5                                      | -.234 (5.94) | +.131 (3.33) | 33                  | +.078 (1.98) | +.221 (5.61) |
| 6                                      | -.234 (5.94) | +.041 (1.04) | 34                  | +.078 (1.98) | +.131 (3.33) |
| 7                                      | -.234 (5.94) | -.049 (1.24) | 35                  | +.078 (1.98) | +.041 (1.04) |
| 8                                      | -.234 (5.94) | -.139 (3.53) | 36                  | +.078 (1.98) | -.049 (1.24) |
| 9                                      | -.234 (5.94) | -.229 (5.82) | 37                  | +.078 (1.98) | -.139 (3.53) |
| 10                                     | -.172 (4.37) | +.279 (7.09) | 38                  | +.078 (1.98) | -.229 (5.82) |
| 11                                     | -.156 (3.96) | +.176 (4.47) | 39                  | +.078 (1.98) | -.319 (8.10) |
| 12                                     | -.156 (3.96) | +.086 (2.18) | 40                  | +.172 (4.37) | +.279 (7.09) |
| 13                                     | -.156 (3.96) | -.004 (0.10) | 41                  | +.156 (3.96) | +.176 (4.47) |
| 14                                     | -.156 (3.96) | -.094 (2.39) | 42                  | +.156 (3.96) | +.086 (2.18) |
| 15                                     | -.156 (3.96) | -.184 (4.67) | 43                  | +.156 (3.96) | -.004 (0.10) |
| 16                                     | -.156 (3.96) | -.274 (6.96) | 44                  | +.156 (3.96) | -.094 (2.39) |
| 17                                     | -.089 (2.26) | +.316 (8.03) | 45                  | +.156 (3.96) | -.184 (4.67) |
| 18                                     | -.078 (1.98) | +.221 (5.61) | 46                  | +.156 (3.96) | -.274 (6.96) |

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

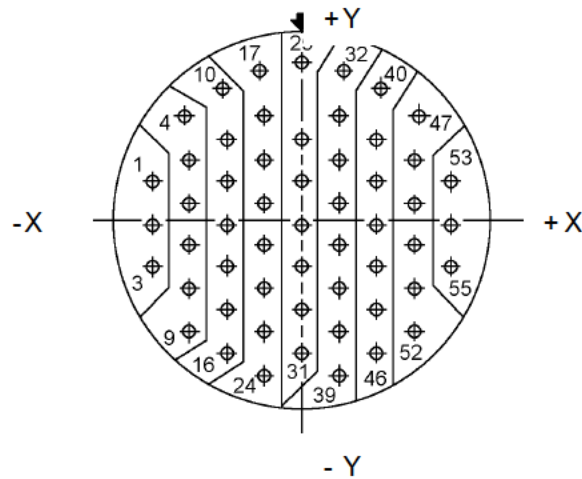


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 17-35) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 19                                     | -.078 (1.98) | +.131 (3.33) | 47                  | +.242 (6.15) | +.221 (5.61) |
| 20                                     | -.078 (1.98) | +.041 (1.04) | 48                  | +.234 (5.94) | +.131 (3.33) |
| 21                                     | -.078 (1.98) | -.049 (1.24) | 49                  | +.234 (5.94) | +.041 (1.04) |
| 22                                     | -.078 (1.98) | -.139 (3.53) | 50                  | +.234 (5.94) | -.049 (1.24) |
| 23                                     | -.078 (1.98) | -.229 (5.82) | 51                  | +.234 (5.94) | -.139 (3.53) |
| 24                                     | -.078 (1.98) | -.319 (8.10) | 52                  | +.234 (5.94) | -.229 (5.82) |
| 25                                     | .000 (0.00)  | +.329 (8.36) | 53                  | +.312 (7.92) | +.086 (2.18) |
| 26                                     | .000 (0.00)  | +.176 (4.47) | 54                  | +.312 (7.92) | -.004 (0.10) |
| 27                                     | .000 (0.00)  | +.086 (2.18) | 55                  | +.312 (7.92) | -.094 (2.39) |
| 28                                     | .000 (0.00)  | -.004 (0.10) | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 17         | -35             | 55                 | 22D           | M              | All              | MS27529-35 |

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 17-55) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.312 (7.92) | +.086 (2.18) | 29                  | +.000 (0.00) | -.094 (2.39) |
| 2                                      | -.312 (7.92) | -.004 (0.10) | 30                  | +.000 (0.00) | -.184 (4.67) |
| 3                                      | -.312 (7.92) | -.094 (2.39) | 31                  | +.000 (0.00) | -.274 (6.96) |
| 4                                      | -.242 (6.15) | +.221 (5.61) | 32                  | +.089 (2.26) | +.316 (8.03) |
| 5                                      | -.234 (5.94) | +.131 (3.33) | 33                  | +.078 (1.98) | +.221 (5.61) |
| 6                                      | -.234 (5.94) | +.041 (1.04) | 34                  | +.078 (1.98) | +.131 (3.33) |
| 7                                      | -.234 (5.94) | -.049 (1.24) | 35                  | +.078 (1.98) | +.041 (1.04) |
| 8                                      | -.234 (5.94) | -.139 (3.53) | 36                  | +.078 (1.98) | -.049 (1.24) |
| 9                                      | -.234 (5.94) | -.229 (5.82) | 37                  | +.078 (1.98) | -.139 (3.53) |
| 10                                     | -.172 (4.37) | +.279 (7.09) | 38                  | +.078 (1.98) | -.229 (5.82) |
| 11                                     | -.156 (3.96) | +.176 (4.47) | 39                  | +.078 (1.98) | -.319 (8.10) |
| 12                                     | -.156 (3.96) | +.086 (2.18) | 40                  | +.172 (4.37) | +.279 (7.09) |
| 13                                     | -.156 (3.96) | -.004 (0.10) | 41                  | +.156 (3.96) | +.176 (4.47) |
| 14                                     | -.156 (3.96) | -.094 (2.39) | 42                  | +.156 (3.96) | +.086 (2.18) |
| 15                                     | -.156 (3.96) | -.184 (4.67) | 43                  | +.156 (3.96) | -.004 (0.10) |
| 16                                     | -.156 (3.96) | -.274 (6.96) | 44                  | +.156 (3.96) | -.094 (2.39) |
| 17                                     | -.089 (2.26) | +.316 (8.03) | 45                  | +.156 (3.96) | -.184 (4.67) |
| 18                                     | -.078 (1.98) | +.221 (5.61) | 46                  | +.156 (3.96) | -.274 (6.96) |

FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

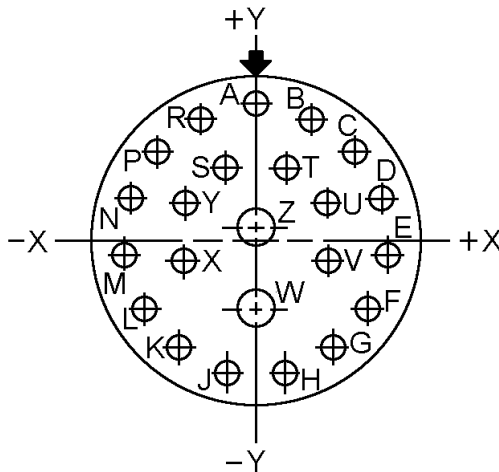
MIL-STD-1560C  
w/CHANGE 1

(Inactive for new design)

| Contacts<br>(Insert arrangement 17-55) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 19                                     | -.078 (1.98) | +.131 (3.33) | 47                  | +.242 (6.15) | +.221 (5.61) |
| 20                                     | -.078 (1.98) | +.041 (1.04) | 48                  | +.234 (5.94) | +.131 (3.33) |
| 21                                     | -.078 (1.98) | -.049 (1.24) | 49                  | +.234 (5.94) | +.041 (1.04) |
| 22                                     | -.078 (1.98) | -.139 (3.53) | 50                  | +.234 (5.94) | -.049 (1.24) |
| 23                                     | -.078 (1.98) | -.229 (5.82) | 51                  | +.234 (5.94) | -.139 (3.53) |
| 24                                     | -.078 (1.98) | -.319 (8.10) | 52                  | +.234 (5.94) | -.229 (5.82) |
| 25                                     | +.000 (0.00) | +.329 (8.36) | 53                  | +.312 (7.92) | +.086 (2.18) |
| 26                                     | +.000 (0.00) | +.176 (4.47) | 54                  | +.312 (7.92) | -.004 (0.10) |
| 27                                     | +.000 (0.00) | +.086 (2.18) | 55                  | +.312 (7.92) | -.094 (2.39) |
| 28                                     | +.000 (0.00) | -.004 (0.10) | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 17         | -55             | 55                 | 22M           | M              | All              | MS20053-55 |

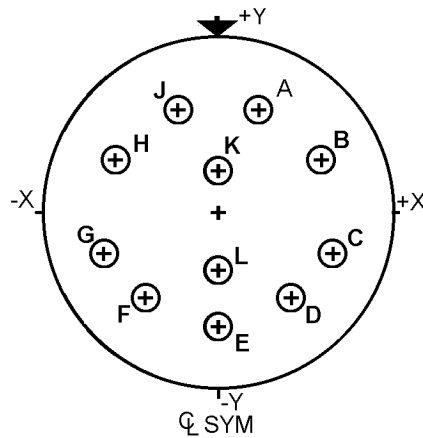
FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 17-99) |                  |               |                     |                  |               |
|--|------------------|---------------|---------------------|------------------|---------------|
| Contact position ID                    | Contact location |               | Contact position ID | Contact location |               |
|  | X-axis (mm)      | Y-axis (mm)   |                     | X-axis (mm)      | Y-axis (mm)   |
| A                                      | .000 (0.00)      | +0.321 (8.15) | N                   | -.305 (7.75)     | +0.099 (2.51) |
| B                                      | +0.131 (3.33)    | +0.293 (7.44) | P                   | -.239 (6.07)     | +0.214 (5.44) |
| C                                      | +0.239 (6.07)    | +0.214 (5.44) | R                   | -.131 (3.33)     | +0.293 (7.44) |
| D                                      | +0.305 (7.75)    | +0.099 (2.51) | S                   | -.070 (1.78)     | +0.177 (4.50) |
| E                                      | +0.319 (8.10)    | -.034 (0.86)  | T                   | +0.070 (1.78)    | +0.177 (4.50) |
| F                                      | +0.278 (7.06)    | -.161 (4.09)  | U                   | +0.175 (4.45)    | +0.094 (2.39) |
| G                                      | +0.189 (4.80)    | -.260 (6.60)  | V                   | +0.150 (3.81)    | -.075 (1.91)  |
| H                                      | +0.067 (1.70)    | -.314 (7.98)  | W                   | +0.000 (0.00)    | -.161 (4.09)  |
| J                                      | -.067 (1.70)     | -.314 (7.98)  | X                   | -.150 (3.81)     | -.075 (1.91)  |
| K                                      | -.189 (4.80)     | -.260 (6.60)  | Y                   | -.175 (4.45)     | +0.094 (2.39) |
| L                                      | -.278 (7.06)     | -.161 (4.09)  | Z                   | +0.000 (0.00)    | +0.025 (0.64) |
| M                                      | -.319 (8.10)     | -.034 (0.86)  |                     |                  |               |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact position ID | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|---------------------|------------|
| 17         | -99             | 2                  | 16            | I              | W, Z                | MS20053-99 |
|            |                 | 21                 | 20            |                | All others          |            |

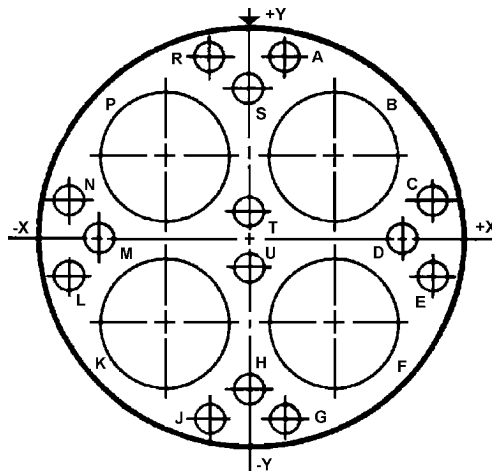
FIGURE 5. Insert arrangement, electrical connector, shell size 17 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-11) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .105 (2.67) | + .260 (6.60) | G                   | - .275 (6.99) | - .053 (1.35) |
| B                                      | + .250 (6.35) | + .132 (3.35) | H                   | - .250 (6.35) | + .132 (3.35) |
| C                                      | + .275 (6.99) | - .053 (1.35) | J                   | - .105 (2.67) | + .260 (6.60) |
| D                                      | + .179 (4.55) | - .215 (5.46) | K                   | + .000 (0.00) | + .105 (2.67) |
| E                                      | + .000 (0.00) | - .281 (7.14) | L                   | + .000 (0.00) | - .092 (2.34) |
| F                                      | - .179 (4.55) | - .215 (5.46) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 19         | -11             | 11                 | 16            | II             | All              | MS20054-11 |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600).

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w/CHANGE 1

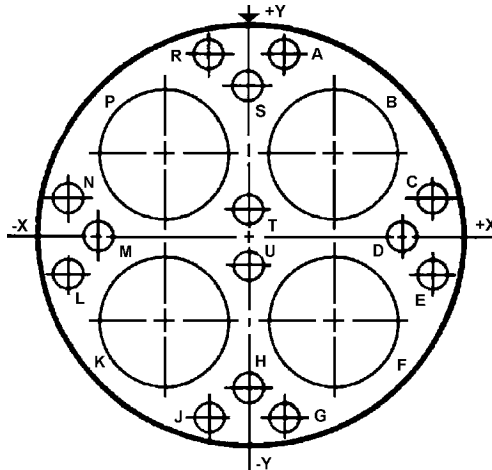
(Inactive for new design for MIL-DTL-38999. For new design, use arrangement no. 19-19.)

| Contacts<br>(Insert arrangement 19-18) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.068 (1.73) | +0.380 (9.65) | K                   | -0.180 (4.57) | -0.180 (4.57) |
| B                                      | +0.180 (4.57) | +0.180 (4.57) | L                   | -0.377 (9.58) | -0.065 (1.65) |
| C                                      | +0.377 (9.58) | +0.065 (1.65) | M                   | -0.317 (8.05) | +0.000 (0.00) |
| D                                      | +0.317 (8.05) | +0.000 (0.00) | N                   | -0.377 (9.58) | +0.065 (1.65) |
| E                                      | +0.377 (9.58) | -0.065 (1.65) | P                   | -0.180 (4.57) | +0.180 (4.57) |
| F                                      | +0.180 (4.57) | -0.180 (4.57) | R                   | -0.068 (1.73) | +0.380 (9.65) |
| G                                      | +0.068 (1.73) | -0.380 (9.65) | S                   | +0.000 (0.00) | +0.319 (8.10) |
| H                                      | +0.000 (0.00) | -0.319 (8.10) | T                   | +0.000 (0.00) | +0.044 (1.12) |
| J                                      | -0.068 (1.73) | -0.380 (9.65) | U                   | +0.000 (0.00) | -0.044 (1.12) |

| Shell size | Arrangement No. | Number of contacts | Size contacts   | Service rating | Contact location | Standard contact |               |
|------------|-----------------|--------------------|-----------------|----------------|------------------|------------------|---------------|
|            |                 |                    |                 |                |                  | Pin              | Socket        |
| 19         | 18              | 4                  | 8<br>(see note) | Twinax         | B, F, K, P       | M39029/90-529    | M39029/91-530 |
|            |                 | 14                 | 22D             | M              | All others       | M39029/58        | M39029/56     |

NOTE: To meet environmental sealing requirements, size 8 shielded contacts used with this insert arrangement may require separate, non-standard sealing boots that are furnished with the connector. For this insert arrangement, some connector grommet designs use a heat shrink sleeve only with the size 8 shielded contacts to meet environmental sealing requirements. Heat shrink sleeves have a maximum temperature rating of 175°C maximum. When heat shrink sleeves are used, connectors rated to 200°C max are derated to 175°C max. When heat shrink sleeves are used, sealing boots are not used, and when sealing boots are used, heat shrink sleeves are not used.

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

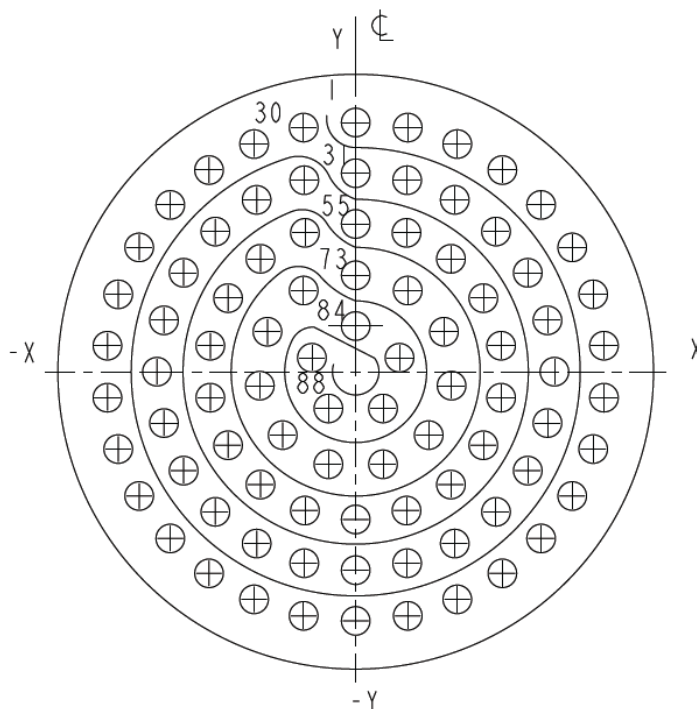
(INSERT ARRANGEMENT PATTERN IDENTICAL TO 19-18, EXCEPT 19-19  
USES SEALING BOOT IN ACCORDANCE WITH MIL-DTL-38999/62)

| Contacts<br>(Insert arrangement 19-19) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| A                                      | +.068 (1.73) | +.380 (9.65) | K                   | -.180 (4.57) | -.180 (4.57) |
| B                                      | +.180 (4.57) | +.180 (4.57) | L                   | -.377 (9.58) | -.065 (1.65) |
| C                                      | +.377 (9.58) | +.065 (1.65) | M                   | -.317 (8.05) | +.000 (0.00) |
| D                                      | +.317 (8.05) | +.000 (0.00) | N                   | -.377 (9.58) | +.065 (1.65) |
| E                                      | +.377 (9.58) | -.065 (1.65) | P                   | -.180 (4.57) | +.180 (4.57) |
| F                                      | +.180 (4.57) | -.180 (4.57) | R                   | -.068 (1.73) | +.380 (9.65) |
| G                                      | +.068 (1.73) | -.380 (9.65) | S                   | +.000 (0.00) | +.319 (8.10) |
| H                                      | +.000 (0.00) | -.319 (8.10) | T                   | +.000 (0.00) | +.044 (1.12) |
| J                                      | -.068 (1.73) | -.380 (9.65) | U                   | +.000 (0.00) | -.044 (1.12) |

| Shell size | Arrangement no. | Number of contacts | Size contacts   | Service rating | Contact location | Standard contact        |                         |
|------------|-----------------|--------------------|-----------------|----------------|------------------|-------------------------|-------------------------|
|            |                 |                    |                 |                |                  | Pin                     | Socket                  |
| 19         | -19             | 4                  | 8<br>(see note) | Twinax         | B,F,K,P          | SAE-AS39029<br>/113-625 | SAE-AS39029<br>/114-628 |
|            |                 | 14                 | 22D             | M              | All others       | SAE-AS39029<br>/58      | SAE-AS39029<br>/56      |

NOTE: For this insert arrangement, sealing boots in accordance with MIL-DTL-38999/62 shall be used to environmentally seal size 8 twinax contacts. Heat shrink sleeves are not used when sealing boots are used.

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-23) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.000 (0.00) | +0.393 (9.99) | 45                  | -0.156 (3.97) | -0.271 (6.88) |
| 2                                      | +0.082 (2.08) | +0.385 (9.77) | 46                  | -0.221 (5.62) | -0.221 (5.62) |
| 3                                      | +0.160 (4.06) | +0.359 (9.12) | 47                  | -0.271 (6.88) | -0.156 (3.97) |
| 4                                      | +0.231 (5.87) | +0.318 (8.08) | 48                  | -0.302 (7.67) | -0.081 (2.06) |
| 5                                      | +0.292 (7.42) | +0.263 (6.68) | 49                  | -0.313 (7.95) | +0.000 (0.00) |
| 6                                      | +0.341 (8.65) | +0.197 (4.99) | 50                  | -0.302 (7.67) | +0.081 (2.06) |
| 7                                      | +0.374 (9.50) | +0.122 (3.09) | 51                  | -0.271 (6.88) | +0.156 (3.97) |
| 8                                      | +0.391 (9.93) | +0.041 (1.04) | 52                  | -0.221 (5.62) | +0.221 (5.62) |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.



MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-23) |                     |               |                     |                     |               |
|--|---------------------|---------------|---------------------|---------------------|---------------|
| Contact position ID                    | Contact position ID |               | Contact position ID | Contact position ID |               |
|  | X-axis (mm)         | Y-axis (mm)   |                     | X-axis (mm)         | Y-axis (mm)   |
| 9                                      | + .391 (9.93)       | - .041 (1.04) | 53                  | - .156 (3.97)       | + .271 (6.88) |
| 10                                     | + .374 (9.50)       | - .122 (3.09) | 54                  | - .081 (2.06)       | + .302 (7.67) |
| 11                                     | + .341 (8.65)       | - .197 (4.99) | 55                  | + .000 (0.00)       | + .233 (5.91) |
| 12                                     | + .292 (7.42)       | - .263 (6.68) | 56                  | + .080 (2.02)       | + .219 (5.55) |
| 13                                     | + .231 (5.87)       | - .318 (8.08) | 57                  | + .150 (3.80)       | + .178 (4.52) |
| 14                                     | + .160 (4.06)       | - .359 (9.12) | 58                  | + .201 (5.11)       | + .116 (2.95) |
| 15                                     | + .082 (2.08)       | - .385 (9.77) | 59                  | + .229 (5.82)       | + .041 (1.03) |
| 16                                     | + .000 (0.00)       | - .393 (9.99) | 60                  | + .229 (5.82)       | - .041 (1.03) |
| 17                                     | - .082 (2.08)       | - .385 (9.77) | 61                  | + .201 (5.11)       | - .116 (2.95) |
| 18                                     | - .160 (4.06)       | - .359 (9.12) | 62                  | + .150 (3.80)       | - .178 (4.52) |
| 19                                     | - .231 (5.87)       | - .318 (8.08) | 63                  | + .080 (2.02)       | - .219 (5.55) |
| 20                                     | - .292 (7.42)       | - .263 (6.68) | 64                  | + .000 (0.00)       | - .233 (5.91) |
| 21                                     | - .341 (8.65)       | - .197 (4.99) | 65                  | - .080 (2.02)       | - .219 (5.55) |
| 22                                     | - .374 (9.50)       | - .122 (3.09) | 66                  | - .150 (3.80)       | - .178 (4.52) |
| 23                                     | - .391 (9.93)       | - .041 (1.04) | 67                  | - .201 (5.11)       | - .116 (2.95) |
| 24                                     | - .391 (9.93)       | + .041 (1.04) | 68                  | - .229 (5.82)       | - .041 (1.03) |
| 25                                     | - .374 (9.50)       | + .122 (3.09) | 69                  | - .229 (5.82)       | + .041 (1.03) |
| 26                                     | - .341 (8.65)       | + .197 (4.99) | 70                  | - .201 (5.11)       | + .116 (2.95) |
| 27                                     | - .292 (7.42)       | + .263 (6.68) | 71                  | - .150 (3.80)       | + .178 (4.52) |
| 28                                     | - .231 (5.87)       | + .318 (8.08) | 72                  | - .080 (2.02)       | + .219 (5.55) |
| 29                                     | - .160 (4.06)       | + .359 (9.12) | 73                  | + .000 (0.00)       | + .152 (3.87) |
| 30                                     | - .082 (2.08)       | + .385 (9.77) | 74                  | + .082 (2.09)       | + .128 (3.25) |
| 31                                     | + .000 (0.00)       | + .313 (7.95) | 75                  | + .139 (3.52)       | + .063 (1.61) |
| 32                                     | + .081 (2.06)       | + .302 (7.67) | 76                  | + .151 (3.83)       | - .022 (0.55) |
| 33                                     | + .156 (3.97)       | + .271 (6.88) | 77                  | + .115 (2.92)       | - .100 (2.53) |
| 34                                     | + .221 (5.62)       | + .221 (5.62) | 78                  | + .043 (1.09)       | - .146 (3.71) |
| 35                                     | + .271 (6.88)       | + .156 (3.97) | 79                  | - .043 (1.09)       | - .146 (3.71) |

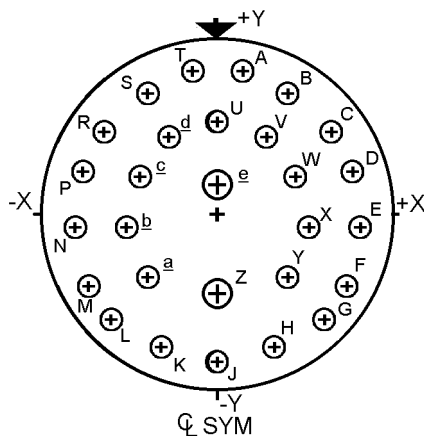
FIGURE 6. Insert arrangement, electrical connector, shell size 19 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-23) |                     |               |                     |                     |               |
|--|---------------------|---------------|---------------------|---------------------|---------------|
| Contact position ID                    | Contact position ID |               | Contact position ID | Contact position ID |               |
|  | X-axis (mm)         | Y-axis (mm)   |                     | X-axis (mm)         | Y-axis (mm)   |
| 36                                     | +0.302 (7.67)       | +0.081 (2.06) | 80                  | -0.115 (2.92)       | -0.100 (2.53) |
| 37                                     | +0.313 (7.95)       | +0.000 (0.00) | 81                  | -0.151 (3.83)       | -0.022 (0.55) |
| 38                                     | +0.302 (7.67)       | -0.081 (2.06) | 82                  | -0.139 (3.52)       | +0.063 (1.61) |
| 39                                     | +0.271 (6.88)       | -0.156 (3.97) | 83                  | -0.082 (2.09)       | +0.128 (3.25) |
| 40                                     | +0.221 (5.62)       | -0.221 (5.62) | 84                  | +0.000 (0.00)       | +0.072 (1.83) |
| 41                                     | +0.156 (3.97)       | -0.271 (6.88) | 85                  | +0.069 (1.74)       | +0.022 (0.56) |
| 42                                     | +0.081 (2.06)       | -0.302 (7.67) | 86                  | +0.043 (1.09)       | -0.058 (1.48) |
| 43                                     | +0.000 (0.00)       | -0.313 (7.95) | 87                  | -0.043 (1.09)       | -0.058 (1.48) |
| 44                                     | -0.081 (2.06)       | -0.302 (7.67) | 88                  | -0.069 (1.74)       | +0.022 (0.56) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 19         | -23             | 88                 | 23-22         | N              | All              | M39029/122-670   | M39029/121-663 |

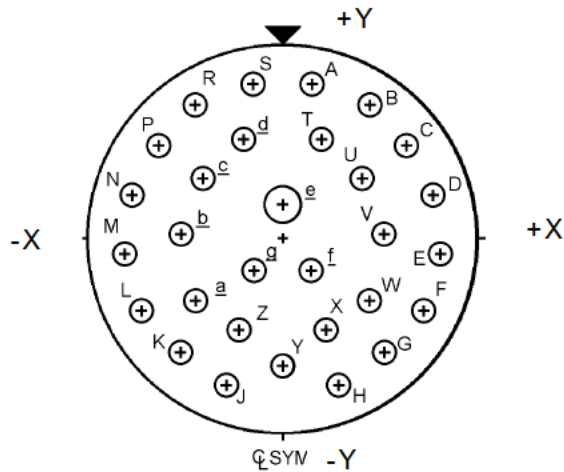
FIGURE 6. Insert arrangement, electrical connector, shell size 19 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-28) |                  |               |                     |                  |               |
|--|------------------|---------------|---------------------|------------------|---------------|
| Contact position ID                    | Contact location |               | Contact position ID | Contact location |               |
|  | X-axis (mm)      | Y-axis (mm)   |                     | X-axis (mm)      | Y-axis (mm)   |
| A                                      | +0.066 (1.68)    | +0.353 (8.97) | R                   | -0.286 (7.26)    | +0.217 (5.51) |
| B                                      | +0.189 (4.80)    | +0.305 (7.75) | S                   | -0.189 (4.80)    | +0.305 (7.75) |
| C                                      | +0.286 (7.26)    | +0.217 (5.51) | T                   | -0.066 (1.68)    | +0.353 (8.97) |
| D                                      | +0.345 (8.76)    | +0.098 (2.49) | U                   | +0.000 (0.00)    | +0.230 (5.84) |
| E                                      | +0.357 (9.07)    | -0.033 (0.84) | V                   | +0.124 (3.15)    | +0.193 (4.90) |
| F                                      | +0.321 (8.15)    | -0.160 (4.06) | W                   | +0.209 (5.31)    | +0.095 (2.41) |
| G                                      | +0.242 (6.15)    | -0.265 (6.73) | X                   | +0.228 (5.79)    | -0.033 (0.84) |
| H                                      | +0.130 (3.30)    | -0.335 (8.51) | Y                   | +0.174 (4.42)    | -0.151 (3.84) |
| J                                      | +0.000 (0.00)    | -0.359 (9.12) | Z                   | +0.000 (0.00)    | -0.191 (4.85) |
| K                                      | -0.130 (3.30)    | -0.335 (8.51) | a                   | -0.174 (4.42)    | -0.151 (3.84) |
| L                                      | -0.242 (6.15)    | -0.265 (6.73) | b                   | -0.228 (5.79)    | -0.033 (0.84) |
| M                                      | -0.321 (8.15)    | -0.160 (4.06) | c                   | -0.209 (5.31)    | +0.095 (2.41) |
| N                                      | -0.357 (9.07)    | -0.033 (0.84) | d                   | -0.124 (3.15)    | +0.193 (4.90) |
| P                                      | -0.345 (8.76)    | +0.098 (2.49) | e                   | +0.000 (0.00)    | +0.062 (1.57) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 19         | -28             | 2                  | 16            | I              | e, Z             | MS20054-28 |
|            |                 | 26                 | 20            |                | All others       |            |

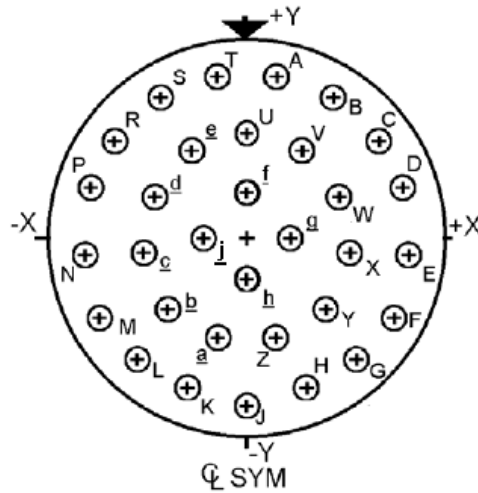
FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-30) |                  |              |                     |                  |              |
|--|------------------|--------------|---------------------|------------------|--------------|
| Contact position ID                    | Contact location |              | Contact position ID | Contact location |              |
|  | X-axis (mm)      | Y-axis (mm)  |                     | X-axis (mm)      | Y-axis (mm)  |
| A                                      | +065 (1.65)      | +346 (8.79)  | S                   | -065 (1.65)      | +346 (8.79)  |
| B                                      | +186 (4.72)      | +299 (7.59)  | T                   | +084 (2.13)      | +217 (5.51)  |
| C                                      | +282 (7.16)      | +210 (5.33)  | U                   | +181 (4.60)      | +129 (3.28)  |
| D                                      | +340 (8.64)      | +093 (2.36)  | V                   | +228 (5.79)      | +008 (0.20)  |
| E                                      | +351 (8.92)      | -.033 (0.84) | W                   | +193 (4.90)      | -.117 (2.97) |
| F                                      | +315 (8.00)      | -.158 (4.01) | X                   | +096 (2.44)      | -.203 (5.16) |
| G                                      | +236 (5.99)      | -.261 (6.63) | Y                   | +000 (0.00)      | -.290 (7.37) |
| H                                      | +124 (3.15)      | -.330 (8.38) | Z                   | -.096 (2.44)     | -.203 (5.16) |
| J                                      | -.124 (3.15)     | -.330 (8.38) | a                   | -.193 (4.90)     | -.117 (2.97) |
| K                                      | -.236 (5.99)     | -.261 (6.63) | b                   | -.228 (5.79)     | +008 (0.20)  |
| L                                      | -.315 (8.00)     | -.158 (4.01) | c                   | -.181 (4.60)     | +129 (3.28)  |
| M                                      | -.351 (8.92)     | -.033 (0.84) | d                   | -.084 (2.13)     | +217 (5.51)  |
| N                                      | -.340 (8.64)     | +093 (2.36)  | e                   | +000 (0.00)      | +072 (1.83)  |
| P                                      | -.282 (7.16)     | +210 (5.33)  | f                   | +069 (1.75)      | -.076 (1.93) |
| R                                      | -.186 (4.72)     | +299 (7.59)  | g                   | -.069 (1.75)     | -.076 (1.93) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 19         | -30             | 1                  | 16            | I              | e                | MS20054-30 |
|            |                 | 29                 | 20            |                | All others       |            |

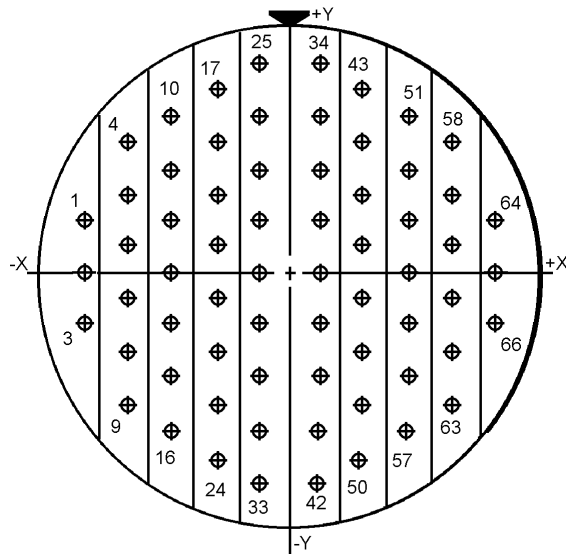
FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-32) |                  |               |                     |                  |               |
|--|------------------|---------------|---------------------|------------------|---------------|
| Contact position ID                    | Contact location |               | Contact position ID | Contact location |               |
|  | X-axis (mm)      | Y-axis (mm)   |                     | X-axis (mm)      | Y-axis (mm)   |
| A                                      | +0.066 (1.68)    | +0.353 (8.97) | T                   | -0.066 (1.68)    | +0.353 (8.97) |
| B                                      | +0.189 (4.80)    | +0.305 (7.75) | U                   | +0.000 (0.00)    | +0.230 (5.84) |
| C                                      | +0.286 (7.26)    | +0.217 (5.51) | V                   | +0.124 (3.15)    | +0.193 (4.90) |
| D                                      | +0.345 (8.76)    | +0.098 (2.49) | W                   | +0.209 (5.31)    | +0.095 (2.41) |
| E                                      | +0.357 (9.07)    | -0.033 (0.84) | X                   | +0.228 (5.79)    | -0.033 (0.84) |
| F                                      | +0.321 (8.15)    | -0.160 (4.06) | Y                   | +0.174 (4.42)    | -0.151 (3.84) |
| G                                      | +0.242 (6.15)    | -0.265 (6.73) | Z                   | +0.065 (1.65)    | -0.221 (5.61) |
| H                                      | +0.130 (3.30)    | -0.335 (8.51) | a                   | -0.065 (1.65)    | -0.221 (5.61) |
| J                                      | -0.000 (0.00)    | -0.359 (9.12) | b                   | -0.174 (4.42)    | -0.151 (3.84) |
| K                                      | -0.130 (3.30)    | -0.335 (8.51) | c                   | -0.228 (5.79)    | -0.033 (0.84) |
| L                                      | -0.242 (6.15)    | -0.265 (6.73) | d                   | -0.209 (5.31)    | +0.095 (2.41) |
| M                                      | -0.321 (8.15)    | -0.160 (4.06) | e                   | -0.124 (3.15)    | +0.193 (4.90) |
| N                                      | -0.357 (9.07)    | -0.033 (0.84) | f                   | +0.000 (0.00)    | +0.096 (2.44) |
| P                                      | -0.345 (8.76)    | +0.098 (2.49) | g                   | +0.096 (2.44)    | +0.000 (0.00) |
| R                                      | -0.286 (7.26)    | +0.217 (5.51) | h                   | +0.000 (0.00)    | -0.096 (2.44) |
| S                                      | -0.189 (4.80)    | +0.305 (7.75) | j                   | -0.096 (2.44)    | +0.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 19         | -32             | 32                 | 20            | I              | All              | MS20054-   |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-35) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.357 (9.07) | +.090 (2.29) | 34                  | +.045 (1.14) | +.360 (9.14) |
| 2                                      | -.357 (9.07) | +.000 (0.00) | 35                  | +.045 (1.14) | +.270 (6.86) |
| 3                                      | -.357 (9.07) | -.090 (2.29) | 36                  | +.045 (1.14) | +.180 (4.57) |
| 4                                      | -.279 (7.09) | +.225 (5.72) | 37                  | +.045 (1.14) | +.090 (2.29) |
| 5                                      | -.279 (7.09) | +.135 (3.43) | 38                  | +.045 (1.14) | +.000 (0.00) |
| 6                                      | -.279 (7.09) | +.045 (1.14) | 39                  | +.045 (1.14) | -.090 (2.29) |
| 7                                      | -.279 (7.09) | -.045 (1.14) | 40                  | +.045 (1.14) | -.180 (4.57) |
| 8                                      | -.279 (7.09) | -.135 (3.43) | 41                  | +.045 (1.14) | -.270 (6.86) |
| 9                                      | -.279 (7.09) | -.225 (5.72) | 42                  | +.045 (1.14) | -.360 (9.14) |
| 10                                     | -.201 (5.11) | +.270 (6.86) | 43                  | +.123 (3.12) | +.315 (8.00) |
| 11                                     | -.201 (5.11) | +.180 (4.57) | 44                  | +.123 (3.12) | +.225 (5.72) |
| 12                                     | -.201 (5.11) | +.090 (2.29) | 45                  | +.123 (3.12) | +.135 (3.43) |
| 13                                     | -.201 (5.11) | +.000 (0.00) | 46                  | +.123 (3.12) | +.045 (1.14) |
| 14                                     | -.201 (5.11) | -.090 (2.29) | 47                  | +.123 (3.12) | -.045 (1.14) |
| 15                                     | -.201 (5.11) | -.180 (4.57) | 48                  | +.123 (3.12) | -.135 (3.43) |
| 16                                     | -.201 (5.11) | -.270 (6.86) | 49                  | +.123 (3.12) | -.225 (5.72) |
| 17                                     | -.123 (3.12) | +.315 (8.00) | 50                  | +.123 (3.12) | -.315 (8.00) |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

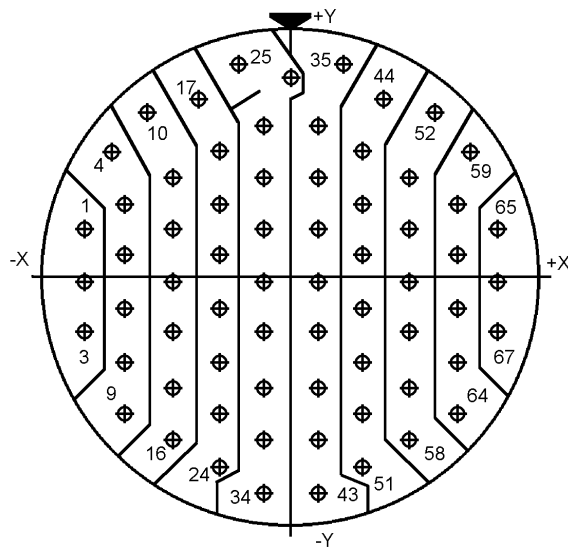
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-35) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 18                                     | -.123 (3.12) | +.225 (5.72) | 51                  | +.201 (5.11) | +.270 (6.86) |
| 19                                     | -.123 (3.12) | +.135 (3.43) | 52                  | +.201 (5.11) | +.180 (4.57) |
| 20                                     | -.123 (3.12) | +.045 (1.14) | 53                  | +.201 (5.11) | +.090 (2.29) |
| 21                                     | -.123 (3.12) | -.045 (1.14) | 54                  | +.201 (5.11) | +.000 (0.00) |
| 22                                     | -.123 (3.12) | -.135 (3.43) | 55                  | +.201 (5.11) | -.090 (2.29) |
| 23                                     | -.123 (3.12) | -.225 (5.72) | 56                  | +.201 (5.11) | -.180 (4.57) |
| 24                                     | -.123 (3.12) | -.315 (8.00) | 57                  | +.201 (5.11) | -.270 (6.86) |
| 25                                     | -.045 (1.14) | +.360 (9.14) | 58                  | +.279 (7.09) | +.225 (5.72) |
| 26                                     | -.045 (1.14) | +.270 (6.86) | 59                  | +.279 (7.09) | +.135 (3.43) |
| 27                                     | -.045 (1.14) | +.180 (4.57) | 60                  | +.279 (7.09) | +.045 (1.14) |
| 28                                     | -.045 (1.14) | +.090 (2.29) | 61                  | +.279 (7.09) | -.045 (1.14) |
| 29                                     | -.045 (1.14) | +.000 (0.00) | 62                  | +.279 (7.09) | -.135 (3.43) |
| 30                                     | -.045 (1.14) | -.090 (2.29) | 63                  | +.279 (7.09) | -.225 (5.72) |
| 31                                     | -.045 (1.14) | -.180 (4.57) | 64                  | +.357 (9.07) | +.090 (2.29) |
| 32                                     | -.045 (1.14) | -.270 (6.86) | 65                  | +.357 (9.07) | +.000 (0.00) |
| 33                                     | -.045 (1.14) | -.360 (9.14) | 66                  | +.357 (9.07) | -.090 (2.29) |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 19         | -35             | 66                 | 22D           | M              | All              | MS27530-35 |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-45) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.357 (9.07) | +.081 (2.06) | 35                  | +.088 (2.24) | +.360 (9.14) |
| 2                                      | -.357 (9.07) | -.009 (0.23) | 36                  | +.045 (1.14) | +.261 (6.63) |
| 3                                      | -.357 (9.07) | -.099 (2.51) | 37                  | +.045 (1.14) | +.171 (4.34) |
| 4                                      | -.304 (7.72) | +.213 (5.41) | 38                  | +.045 (1.14) | +.081 (2.06) |
| 5                                      | -.279 (7.09) | +.126 (3.20) | 39                  | +.045 (1.14) | -.009 (.23)  |
| 6                                      | -.279 (7.09) | +.036 (0.91) | 40                  | +.045 (1.14) | -.099 (2.51) |
| 7                                      | -.279 (7.09) | -.054 (1.37) | 41                  | +.045 (1.14) | -.189 (4.80) |
| 8                                      | -.279 (7.09) | -.144 (3.66) | 42                  | +.045 (1.14) | -.279 (7.09) |
| 9                                      | -.279 (7.09) | -.234 (5.94) | 43                  | +.045 (1.14) | -.369 (9.37) |
| 10                                     | -.244 (6.20) | +.280 (7.11) | 44                  | +.156 (3.96) | +.301 (7.65) |
| 11                                     | -.201 (5.11) | +.171 (4.34) | 45                  | +.123 (3.12) | +.216 (5.49) |
| 12                                     | -.201 (5.11) | +.081 (2.06) | 46                  | +.123 (3.12) | +.126 (3.20) |
| 13                                     | -.201 (5.11) | -.009 (0.23) | 47                  | +.123 (3.12) | +.036 (0.91) |
| 14                                     | -.201 (5.11) | -.099 (2.51) | 48                  | +.123 (3.12) | -.054 (1.37) |
| 15                                     | -.201 (5.11) | -.189 (4.80) | 49                  | +.123 (3.12) | -.144 (3.66) |
| 16                                     | -.201 (5.11) | -.279 (7.09) | 50                  | +.123 (3.12) | -.234 (5.94) |
| 17                                     | -.156 (3.96) | +.301 (7.65) | 51                  | +.123 (3.12) | -.324 (8.23) |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.



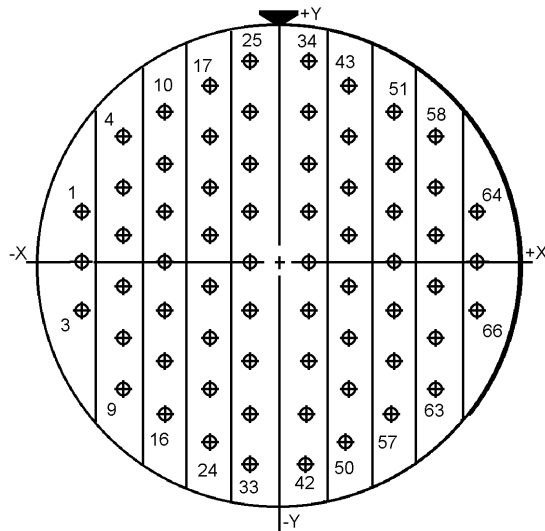
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-45) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 18                                     | -.123 (3.12) | +.216 (5.49) | 52                  | +.244 (6.20) | +.280 (7.11) |
| 19                                     | -.123 (3.12) | +.126 (3.20) | 53                  | +.201 (5.11) | +.171 (4.34) |
| 20                                     | -.123 (3.12) | +.036 (0.91) | 54                  | +.201 (5.11) | +.081 (2.06) |
| 21                                     | -.123 (3.12) | -.054 (1.37) | 55                  | +.201 (5.11) | -.009 (0.23) |
| 22                                     | -.123 (3.12) | -.144 (3.66) | 56                  | +.201 (5.11) | -.099 (2.51) |
| 23                                     | -.123 (3.12) | -.234 (5.94) | 57                  | +.201 (5.11) | -.189 (4.80) |
| 24                                     | -.123 (3.12) | -.324 (8.23) | 58                  | +.201 (5.11) | -.279 (7.09) |
| 25                                     | -.088 (2.24) | +.360 (9.14) | 59                  | +.304 (7.72) | +.213 (5.41) |
| 26                                     | +.000 (0.00) | +.339 (8.61) | 60                  | +.279 (7.09) | +.126 (3.20) |
| 27                                     | -.045 (1.14) | +.261 (6.63) | 61                  | +.279 (7.09) | +.036 (0.91) |
| 28                                     | -.045 (1.14) | +.171 (4.34) | 62                  | +.279 (7.09) | -.054 (1.37) |
| 29                                     | -.045 (1.14) | +.081 (2.06) | 63                  | +.279 (7.09) | -.144 (3.66) |
| 30                                     | -.045 (1.14) | -.009 (0.23) | 64                  | +.279 (7.09) | -.234 (5.94) |
| 31                                     | -.045 (1.14) | -.099 (2.51) | 65                  | +.357 (9.07) | +.081 (2.06) |
| 32                                     | -.045 (1.14) | -.189 (4.80) | 66                  | +.357 (9.07) | -.009 (0.23) |
| 33                                     | -.045 (1.14) | -.279 (7.09) | 67                  | +.357 (9.07) | -.099 (2.51) |
| 34                                     | -.045 (1.14) | -.369 (9.37) | ---                 | ---          | ---          |

(Applicable to MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 19         | -45             | 67                 | 22D           | M              | All              | MS27530-45 |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-66) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.357 (9.07) | +.090 (2.29) | 34                  | +.045 (1.14) | +.360 (9.14) |
| 2                                      | -.357 (9.07) | +.000 (0.00) | 35                  | +.045 (1.14) | +.270 (6.86) |
| 3                                      | -.357 (9.07) | -.090 (2.29) | 36                  | +.045 (1.14) | +.180 (4.57) |
| 4                                      | -.279 (7.09) | +.225 (5.72) | 37                  | +.045 (1.14) | +.090 (2.29) |
| 5                                      | -.279 (7.09) | +.135 (3.43) | 38                  | +.045 (1.14) | +.000 (0.00) |
| 6                                      | -.279 (7.09) | +.045 (1.14) | 39                  | +.045 (1.14) | -.090 (2.29) |
| 7                                      | -.279 (7.09) | -.045 (1.14) | 40                  | +.045 (1.14) | -.180 (4.57) |
| 8                                      | -.279 (7.09) | -.135 (3.43) | 41                  | +.045 (1.14) | -.270 (6.86) |
| 9                                      | -.279 (7.09) | -.225 (5.72) | 42                  | +.045 (1.14) | -.360 (9.14) |
| 10                                     | -.201 (5.11) | +.270 (6.86) | 43                  | +.123 (3.12) | +.315 (8.00) |
| 11                                     | -.201 (5.11) | +.180 (4.57) | 44                  | +.123 (3.12) | +.225 (5.72) |
| 12                                     | -.201 (5.11) | +.090 (2.29) | 45                  | +.123 (3.12) | +.135 (3.43) |
| 13                                     | -.201 (5.11) | +.000 (0.00) | 46                  | +.123 (3.12) | +.045 (1.14) |
| 14                                     | -.201 (5.11) | -.090 (2.29) | 47                  | +.123 (3.12) | -.045 (1.14) |
| 15                                     | -.201 (5.11) | -.180 (4.57) | 48                  | +.123 (3.12) | -.135 (3.43) |
| 16                                     | -.201 (5.11) | -.270 (6.86) | 49                  | +.123 (3.12) | -.225 (5.72) |
| 17                                     | -.123 (3.12) | +.315 (8.00) | 50                  | +.123 (3.12) | -.315 (8.00) |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

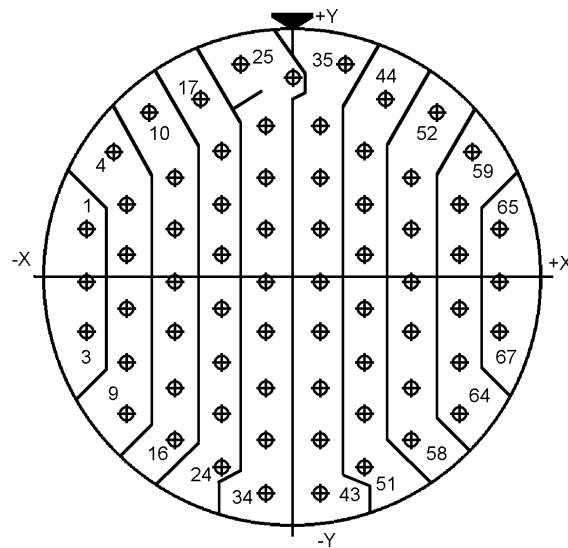
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-66) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 18                                     | -.123 (3.12) | +.225 (5.72) | 51                  | +.201 (5.11) | +.270 (6.86) |
| 19                                     | -.123 (3.12) | +.135 (3.43) | 52                  | +.201 (5.11) | +.180 (4.57) |
| 20                                     | -.123 (3.12) | +.045 (1.14) | 53                  | +.201 (5.11) | +.090 (2.29) |
| 21                                     | -.123 (3.12) | -.045 (1.14) | 54                  | +.201 (5.11) | +.000 (0.00) |
| 22                                     | -.123 (3.12) | -.135 (3.43) | 55                  | +.201 (5.11) | -.090 (2.29) |
| 23                                     | -.123 (3.12) | -.225 (5.72) | 56                  | +.201 (5.11) | -.180 (4.57) |
| 24                                     | -.123 (3.12) | -.315 (8.00) | 57                  | +.201 (5.11) | -.270 (6.86) |
| 25                                     | -.045 (1.14) | +.360 (9.14) | 58                  | +.279 (7.09) | +.225 (5.72) |
| 26                                     | -.045 (1.14) | +.270 (6.86) | 59                  | +.279 (7.09) | +.135 (3.43) |
| 27                                     | -.045 (1.14) | +.180 (4.57) | 60                  | +.279 (7.09) | +.045 (1.14) |
| 28                                     | -.045 (1.14) | +.090 (2.29) | 61                  | +.279 (7.09) | -.045 (1.14) |
| 29                                     | -.045 (1.14) | +.000 (0.00) | 62                  | +.279 (7.09) | -.135 (3.43) |
| 30                                     | -.045 (1.14) | -.090 (2.29) | 63                  | +.279 (7.09) | -.225 (5.72) |
| 31                                     | -.045 (1.14) | -.180 (4.57) | 64                  | +.357 (9.07) | +.090 (2.29) |
| 32                                     | -.045 (1.14) | -.270 (6.86) | 65                  | +.357 (9.07) | +.000 (0.00) |
| 33                                     | -.045 (1.14) | -.360 (9.14) | 66                  | +.357 (9.07) | -.090 (2.29) |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 19         | -66             | 66                 | 22M           | M              | All              | MS20054-66 |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-67) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.357 (9.07) | +.081 (2.06) | 35                  | +.088 (2.24) | +.360 (9.14) |
| 2                                      | -.357 (9.07) | -.009 (0.23) | 36                  | +.045 (1.14) | +.261 (6.63) |
| 3                                      | -.357 (9.07) | -.099 (2.51) | 37                  | +.045 (1.14) | +.171 (4.34) |
| 4                                      | -.304 (7.72) | +.213 (5.41) | 38                  | +.045 (1.14) | +.081 (2.06) |
| 5                                      | -.279 (7.09) | +.126 (3.20) | 39                  | +.045 (1.14) | -.009 (0.23) |
| 6                                      | -.279 (7.09) | +.036 (0.91) | 40                  | +.045 (1.14) | -.099 (2.51) |
| 7                                      | -.279 (7.09) | -.054 (1.37) | 41                  | +.045 (1.14) | -.189 (4.80) |
| 8                                      | -.279 (7.09) | -.144 (3.66) | 42                  | +.045 (1.14) | -.279 (7.09) |
| 9                                      | -.279 (7.09) | -.234 (5.94) | 43                  | +.045 (1.14) | -.369 (9.37) |
| 10                                     | -.244 (6.20) | +.280 (7.11) | 44                  | +.156 (3.96) | +.301 (7.65) |
| 11                                     | -.201 (5.11) | +.171 (4.34) | 45                  | +.123 (3.12) | +.216 (5.49) |
| 12                                     | -.201 (5.11) | +.081 (2.06) | 46                  | +.123 (3.12) | +.126 (3.20) |
| 13                                     | -.201 (5.11) | -.009 (0.23) | 47                  | +.123 (3.12) | +.036 (0.91) |
| 14                                     | -.201 (5.11) | -.099 (2.51) | 48                  | +.123 (3.12) | -.054 (1.37) |
| 15                                     | -.201 (5.11) | -.189 (4.80) | 49                  | +.123 (3.12) | -.144 (3.66) |
| 16                                     | -.201 (5.11) | -.279 (7.09) | 50                  | +.123 (3.12) | -.234 (5.94) |
| 17                                     | -.156 (3.96) | +.301 (7.65) | 51                  | +.123 (3.12) | -.324 (8.23) |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

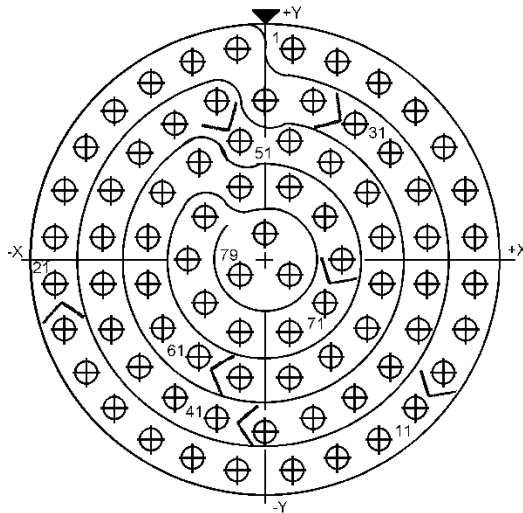
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 19-67) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 18                                     | -.123 (3.12) | +.216 (5.49) | 52                  | +.244 (6.20) | +.280 (7.11) |
| 19                                     | -.123 (3.12) | +.126 (3.20) | 53                  | +.201 (5.11) | +.171 (4.34) |
| 20                                     | -.123 (3.12) | +.036 (0.91) | 54                  | +.201 (5.11) | +.081 (2.06) |
| 21                                     | -.123 (3.12) | -.054 (1.37) | 55                  | +.201 (5.11) | -.009 (.23)  |
| 22                                     | -.123 (3.12) | -.144 (3.66) | 56                  | +.201 (5.11) | -.099 (2.51) |
| 23                                     | -.123 (3.12) | -.234 (5.94) | 57                  | +.201 (5.11) | -.189 (4.80) |
| 24                                     | -.123 (3.12) | -.324 (8.23) | 58                  | +.201 (5.11) | -.279 (7.09) |
| 25                                     | -.088 (2.24) | +.360 (9.14) | 59                  | +.304 (7.72) | +.213 (5.41) |
| 26                                     | -.000 (0.00) | +.339 (8.61) | 60                  | +.279 (7.09) | +.126 (3.20) |
| 27                                     | -.045 (1.14) | +.261 (6.63) | 61                  | +.279 (7.09) | +.036 (0.91) |
| 28                                     | -.045 (1.14) | +.171 (4.34) | 62                  | +.279 (7.09) | -.054 (1.37) |
| 29                                     | -.045 (1.14) | +.081 (2.06) | 63                  | +.279 (7.09) | -.144 (3.66) |
| 30                                     | -.045 (1.14) | -.009 (0.23) | 64                  | +.279 (7.09) | -.234 (5.94) |
| 31                                     | -.045 (1.14) | -.099 (2.51) | 65                  | +.357 (9.07) | +.081 (2.06) |
| 32                                     | -.045 (1.14) | -.189 (4.80) | 66                  | +.357 (9.07) | -.009 (0.23) |
| 33                                     | -.045 (1.14) | -.279 (7.09) | 67                  | +.357 (9.07) | -.099 (2.51) |
| 34                                     | -.045 (1.14) | -.369 (9.37) | ---                 | ---          | ---          |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 19         | -67             | 67                 | 22M           | M              | All              | MS20054-67 |

FIGURE 6. Insert arrangement, electrical connector, shell size 19 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 21-1) |               |               |                     |              |              |
|---------------------------------------|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |              |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                     | +0.053 (1.35) | +4.26 (10.82) | 41                  | -.098 (2.49) | -.322 (8.18) |
| 2                                     | +.146 (3.71)  | +4.04 (10.26) | 42                  | -.184 (4.67) | -.280 (7.11) |
| 3                                     | +.232 (5.89)  | +3.62 (9.19)  | 43                  | -.258 (6.55) | -.220 (5.59) |
| 4                                     | +.306 (7.77)  | +3.02 (7.67)  | 44                  | -.311 (7.90) | -.141 (3.58) |
| 5                                     | +.365 (9.27)  | +.227 (5.77)  | 45                  | -.332 (8.43) | -.048 (1.22) |
| 6                                     | +.406 (10.31) | +.141 (3.58)  | 46                  | -.332 (8.43) | +.048 (1.22) |
| 7                                     | +.427 (10.85) | +.048 (1.22)  | 47                  | -.311 (7.90) | +.141 (3.58) |
| 8                                     | +.427 (10.85) | -.048 (1.22)  | 48                  | -.258 (6.55) | +.220 (5.59) |
| 9                                     | +.406 (10.31) | -.141 (3.58)  | 49                  | -.184 (4.67) | +.280 (7.11) |
| 10                                    | +.365 (9.27)  | -.227 (5.77)  | 50                  | -.098 (2.49) | +.322 (8.18) |
| 11                                    | +.306 (7.77)  | -.302 (7.67)  | 51                  | -.048 (1.22) | +.241 (6.12) |
| 12                                    | +.232 (5.89)  | -.362 (9.19)  | 52                  | +.048 (1.22) | +.241 (6.12) |
| 13                                    | +.146 (3.71)  | -.404 (10.26) | 53                  | +.134 (3.40) | +.199 (5.05) |
| 14                                    | +.053 (1.35)  | -.426 (10.82) | 54                  | +.208 (5.28) | +.139 (3.53) |
| 15                                    | -.053 (1.35)  | -.426 (10.82) | 55                  | +.237 (6.02) | +.048 (1.22) |
| 16                                    | -.146 (3.71)  | -.404 (10.26) | 56                  | +.237 (6.02) | -.048 (1.22) |
| 17                                    | -.232 (5.89)  | -.362 (9.19)  | 57                  | +.208 (5.28) | -.139 (3.53) |
| 18                                    | -.306 (7.77)  | -.302 (7.67)  | 58                  | +.134 (3.40) | -.199 (5.05) |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

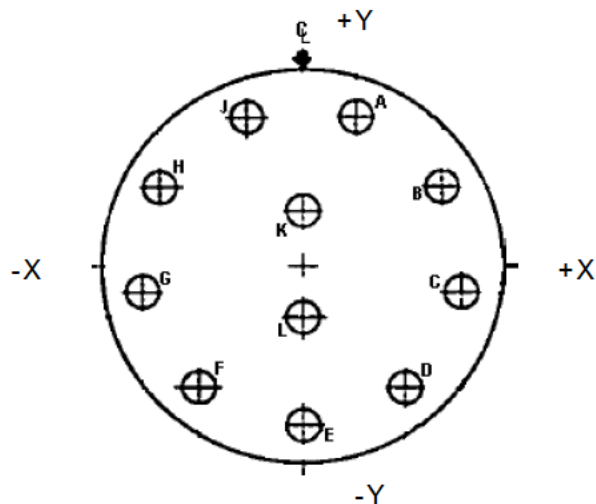
| Contacts<br>(Insert arrangement 21-1) |               |               |                     |              |              |
|---------------------------------------|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |              |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| 19                                    | -.365 (9.27)  | -.227 (5.77)  | 59                  | +.048 (1.22) | -.241 (6.12) |
| 20                                    | -.406 (10.31) | -.141 (3.58)  | 60                  | -.048 (1.22) | -.241 (6.12) |
| 21                                    | -.427 (10.85) | -.048 (1.22)  | 61                  | -.134 (3.40) | -.199 (5.05) |
| 22                                    | -.427 (10.85) | +.048 (1.22)  | 62                  | -.208 (5.28) | -.139 (3.53) |
| 23                                    | -.406 (10.31) | +.141 (3.58)  | 63                  | -.237 (6.02) | -.048 (1.22) |
| 24                                    | -.365 (9.27)  | +.227 (5.77)  | 64                  | -.237 (6.02) | +.048 (1.22) |
| 25                                    | -.306 (7.77)  | +.302 (7.67)  | 65                  | -.208 (5.28) | +.139 (3.53) |
| 26                                    | -.232 (5.89)  | +.362 (9.19)  | 66                  | -.134 (3.40) | +.199 (5.05) |
| 27                                    | -.146 (3.71)  | +.404 (10.26) | 67                  | -.048 (1.22) | +.146 (3.71) |
| 28                                    | -.053 (1.35)  | +.426 (10.82) | 68                  | +.048 (1.22) | +.146 (3.71) |
| 29                                    | +.000 (0.00)  | +.323 (8.20)  | 69                  | +.125 (3.18) | +.090 (2.29) |
| 30                                    | +.098 (2.49)  | +.322 (8.18)  | 70                  | +.155 (3.94) | +.000 (0.00) |
| 31                                    | +.184 (4.67)  | +.280 (7.11)  | 71                  | +.125 (3.18) | -.090 (2.29) |
| 32                                    | +.258 (6.55)  | +.220 (5.59)  | 72                  | +.048 (1.22) | -.146 (3.71) |
| 33                                    | +.311 (7.90)  | +.141 (3.58)  | 73                  | -.048 (1.22) | -.146 (3.71) |
| 34                                    | +.332 (8.43)  | +.048 (1.22)  | 74                  | -.125 (3.18) | -.090 (2.29) |
| 35                                    | +.332 (8.43)  | -.048 (1.22)  | 75                  | -.155 (3.94) | +.000 (0.00) |
| 36                                    | +.311 (7.90)  | -.141 (3.58)  | 76                  | -.125 (3.18) | +.090 (2.29) |
| 37                                    | +.258 (6.55)  | -.220 (5.59)  | 77                  | +.000 (0.00) | +.053 (1.35) |
| 38                                    | +.184 (4.67)  | -.280 (7.11)  | 78                  | +.048 (1.22) | -.029 (0.74) |
| 39                                    | +.098 (2.49)  | -.322 (8.18)  | 79                  | -.048 (1.22) | -.029 (0.74) |
| 40                                    | +.000 (0.00)  | -.347 (8.81)  | ---                 | ---          | ---          |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 21         | -1              | 79                 | 22M           | M              | 79               | MS20055-1  |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

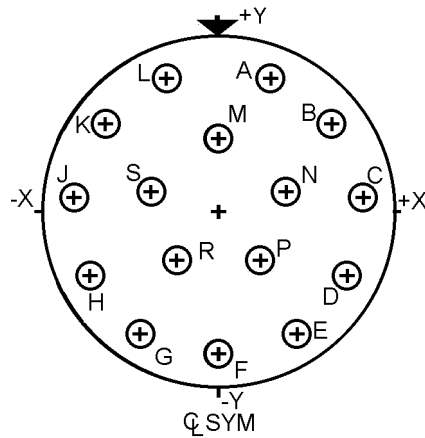


| Contacts<br>(Insert arrangement 21-11) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .121 (3.07) | + .332 (8.43) | G                   | - .348 (8.84) | - .061 (1.55) |
| B                                      | + .306 (7.77) | + .177 (4.50) | H                   | - .306 (7.77) | + .177 (4.50) |
| C                                      | + .348 (8.84) | - .061 (1.55) | J                   | - .121 (3.07) | + .332 (8.43) |
| D                                      | + .227 (5.77) | - .270 (6.86) | K                   | + .000 (0.00) | + .123 (3.12) |
| E                                      | + .000 (0.00) | - .353 (8.97) | L                   | + .000 (0.00) | - .115 (2.92) |
| F                                      | - .227 (5.77) | - .270 (6.86) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 21         | -11             | 11                 | 12            | I              | All              | MS20055-11 |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

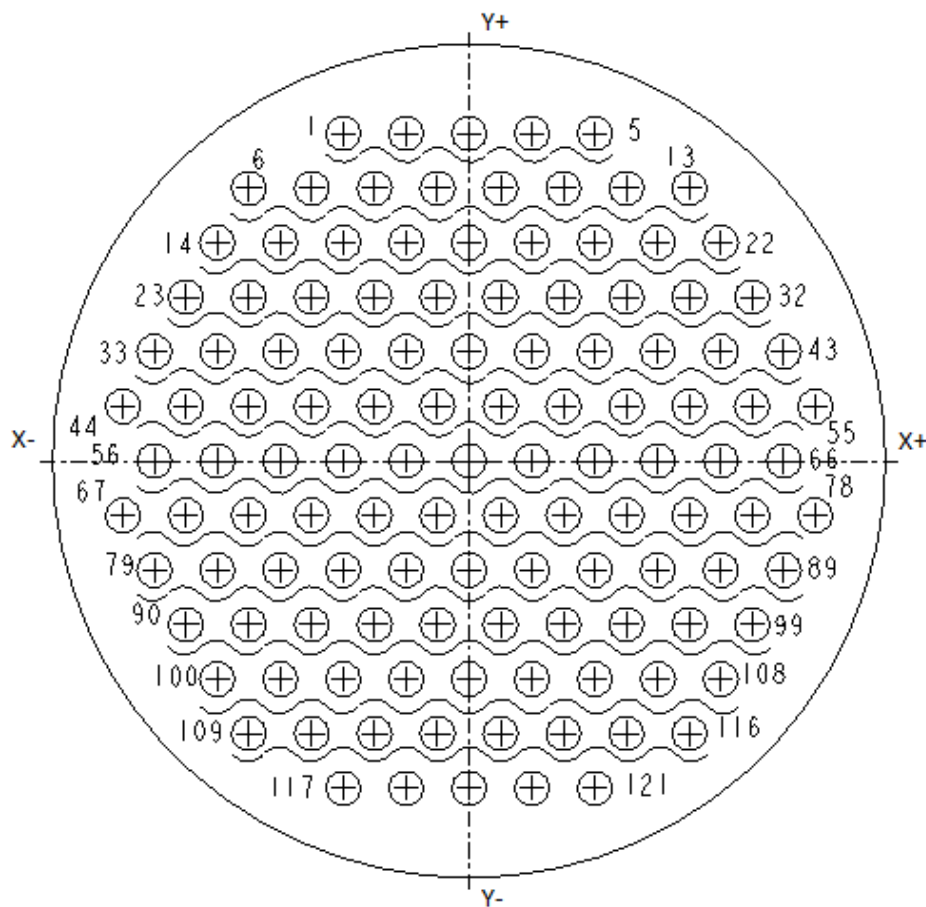


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 21-16) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis        | Y-axis        |                     | X-axis        | Y-axis        |
| A                                      | + .118 (3.00) | + .322 (8.18) | J                   | - .341 (8.66) | + .036 (0.91) |
| B                                      | + .271 (6.88) | + .211 (5.36) | K                   | - .271 (6.88) | + .211 (5.36) |
| C                                      | + .341 (8.66) | + .036 (0.91) | L                   | - .118 (3.00) | + .322 (8.18) |
| D                                      | + .308 (7.82) | - .150 (3.81) | M                   | + .000 (0.00) | + .175 (4.45) |
| E                                      | + .182 (4.62) | - .290 (7.37) | N                   | + .154 (3.91) | + .062 (1.57) |
| F                                      | + .000 (0.00) | - .343 (8.71) | P                   | + .094 (2.39) | - .122 (3.10) |
| G                                      | - .182 (4.62) | - .290 (7.37) | R                   | - .094 (2.39) | - .122 (3.10) |
| H                                      | - .308 (7.82) | - .150 (3.81) | S                   | - .154 (3.91) | + .062 (1.57) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 21         | -16             | 16                 | 16            | II             | All              | MS20055-16 |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 21-23) |              |               |                     |               |              |
|--|--------------|---------------|---------------------|---------------|--------------|
| Contact position ID                    | Location     |               | Contact position ID | Location      |              |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)  |
| 1                                      | -.161 (4.08) | +.417 (10.60) | 62                  | +.080 (2.04)  | +.000 (0.00) |
| 2                                      | -.080 (2.04) | +.417 (10.60) | 63                  | +.161 (4.08)  | +.000 (0.00) |
| 3                                      | +.000 (0.00) | +.417 (10.60) | 64                  | +.241 (6.12)  | +.000 (0.00) |
| 4                                      | +.080 (2.04) | +.417 (10.60) | 65                  | +.321 (8.16)  | +.000 (0.00) |
| 5                                      | +.161 (4.08) | +.417 (10.60) | 66                  | +.402 (10.20) | +.000 (0.00) |
| 6                                      | -.281 (7.14) | +.348 (8.83)  | 67                  | -.442 (11.22) | -.070 (1.77) |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 21-23) |               |              |                     |               |              |
|--|---------------|--------------|---------------------|---------------|--------------|
| Contact position ID                    | Location      |              | Contact position ID | Location      |              |
|  | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)   | Y-axis (mm)  |
| 7                                      | -.201 (5.10)  | +.348 (8.83) | 68                  | -.361 (9.18)  | -.070 (1.77) |
| 8                                      | -.121 (3.06)  | +.348 (8.83) | 69                  | -.281 (7.14)  | -.070 (1.77) |
| 9                                      | -.040 (1.02)  | +.348 (8.83) | 70                  | -.201 (5.10)  | -.070 (1.77) |
| 10                                     | +.040 (1.02)  | +.348 (8.83) | 71                  | -.121 (3.06)  | -.070 (1.77) |
| 11                                     | +.121 (3.06)  | +.348 (8.83) | 72                  | -.040 (1.02)  | -.070 (1.77) |
| 12                                     | +.201 (5.10)  | +.348 (8.83) | 73                  | +.040 (1.02)  | -.070 (1.77) |
| 13                                     | +.281 (7.14)  | +.348 (8.83) | 74                  | +.121 (3.06)  | -.070 (1.77) |
| 14                                     | -.321 (8.16)  | +.278 (7.07) | 75                  | +.201 (5.10)  | -.070 (1.77) |
| 15                                     | -.241 (6.12)  | +.278 (7.07) | 76                  | +.281 (7.14)  | -.070 (1.77) |
| 16                                     | -.161 (4.08)  | +.278 (7.07) | 77                  | +.361 (9.18)  | -.070 (1.77) |
| 17                                     | -.080 (2.04)  | +.278 (7.07) | 78                  | +.442 (11.22) | -.070 (1.77) |
| 18                                     | +.000 (0.00)  | +.278 (7.07) | 79                  | -.402 (10.20) | -.139 (3.53) |
| 19                                     | +.080 (2.04)  | +.278 (7.07) | 80                  | -.321 (8.16)  | -.139 (3.53) |
| 20                                     | +.161 (4.08)  | +.278 (7.07) | 81                  | -.241 (6.12)  | -.139 (3.53) |
| 21                                     | +.241 (6.12)  | +.278 (7.07) | 82                  | -.161 (4.08)  | -.139 (3.53) |
| 22                                     | +.321 (8.16)  | +.278 (7.07) | 83                  | -.080 (2.04)  | -.139 (3.53) |
| 23                                     | -.361 (9.18)  | +.209 (5.30) | 84                  | +.000 (0.00)  | -.139 (3.53) |
| 24                                     | -.281 (7.14)  | +.209 (5.30) | 85                  | +.080 (2.04)  | -.139 (3.53) |
| 25                                     | -.201 (5.10)  | +.209 (5.30) | 86                  | +.161 (4.08)  | -.139 (3.53) |
| 26                                     | -.121 (3.06)  | +.209 (5.30) | 87                  | +.241 (6.12)  | -.139 (3.53) |
| 27                                     | -.040 (1.02)  | +.209 (5.30) | 88                  | +.321 (8.16)  | -.139 (3.53) |
| 28                                     | +.040 (1.02)  | +.209 (5.30) | 89                  | +.402 (10.20) | -.139 (3.53) |
| 29                                     | +.121 (3.06)  | +.209 (5.30) | 90                  | -.361 (9.18)  | -.209 (5.30) |
| 30                                     | +.201 (5.10)  | +.209 (5.30) | 91                  | -.281 (7.14)  | -.209 (5.30) |
| 31                                     | +.281 (7.14)  | +.209 (5.30) | 92                  | -.201 (5.10)  | -.209 (5.30) |
| 32                                     | +.361 (9.18)  | +.209 (5.30) | 93                  | -.121 (3.06)  | -.209 (5.30) |
| 33                                     | -.402 (10.20) | +.139 (3.53) | 94                  | -.040 (1.02)  | -.209 (5.30) |
| 34                                     | -.321 (8.16)  | +.139 (3.53) | 95                  | +.040 (1.02)  | -.209 (5.30) |
| 35                                     | -.241 (6.12)  | +.139 (3.53) | 96                  | +.121 (3.06)  | -.209 (5.30) |
| 36                                     | -.161 (4.08)  | +.139 (3.53) | 97                  | +.201 (5.10)  | -.209 (5.30) |

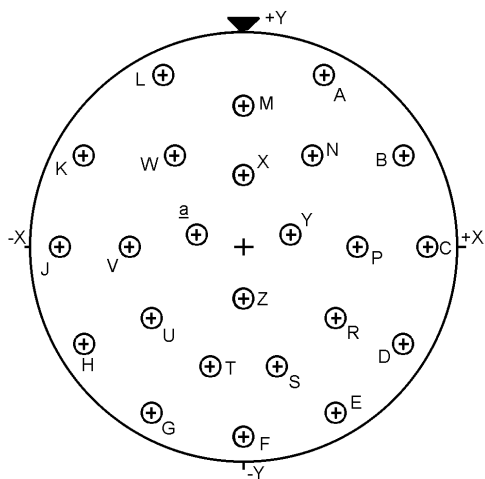
FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 21-23) |               |              |                     |              |               |
|--|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                    | Location      |              | Contact position ID | Location     |               |
|  | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 37                                     | -.080 (2.04)  | +.139 (3.53) | 98                  | +.281 (7.14) | -.209 (5.30)  |
| 38                                     | +.000 (0.00)  | +.139 (3.53) | 99                  | +.361 (9.18) | -.209 (5.30)  |
| 39                                     | +.080 (2.04)  | +.139 (3.53) | 100                 | -.321 (8.16) | -.278 (7.07)  |
| 40                                     | +.161 (4.08)  | +.139 (3.53) | 101                 | -.241 (6.12) | -.278 (7.07)  |
| 41                                     | +.241 (6.12)  | +.139 (3.53) | 102                 | -.161 (4.08) | -.278 (7.07)  |
| 42                                     | +.321 (8.16)  | +.139 (3.53) | 103                 | -.080 (2.04) | -.278 (7.07)  |
| 43                                     | +.402 (10.20) | +.139 (3.53) | 104                 | +.000 (0.00) | -.278 (7.07)  |
| 44                                     | -.442 (11.22) | +.070 (1.77) | 105                 | +.080 (2.04) | -.278 (7.07)  |
| 45                                     | -.361 (9.18)  | +.070 (1.77) | 106                 | +.161 (4.08) | -.278 (7.07)  |
| 46                                     | -.281 (7.14)  | +.070 (1.77) | 107                 | +.241 (6.12) | -.278 (7.07)  |
| 47                                     | -.201 (5.10)  | +.070 (1.77) | 108                 | +.321 (8.16) | -.278 (7.07)  |
| 48                                     | -.121 (3.06)  | +.070 (1.77) | 109                 | -.281 (7.14) | -.348 (8.83)  |
| 49                                     | -.040 (1.02)  | +.070 (1.77) | 110                 | -.201 (5.10) | -.348 (8.83)  |
| 50                                     | +.040 (1.02)  | +.070 (1.77) | 111                 | -.121 (3.06) | -.348 (8.83)  |
| 51                                     | +.121 (3.06)  | +.070 (1.77) | 112                 | -.040 (1.02) | -.348 (8.83)  |
| 52                                     | +.201 (5.10)  | +.070 (1.77) | 113                 | +.040 (1.02) | -.348 (8.83)  |
| 53                                     | +.281 (7.14)  | +.070 (1.77) | 114                 | +.121 (3.06) | -.348 (8.83)  |
| 54                                     | +.361 (9.18)  | +.070 (1.77) | 115                 | +.201 (5.10) | -.348 (8.83)  |
| 55                                     | +.442 (11.22) | +.070 (1.77) | 116                 | +.281 (7.14) | -.348 (8.83)  |
| 56                                     | -.402 (10.20) | +.000 (0.00) | 117                 | -.161 (4.08) | -.417 (10.60) |
| 57                                     | -.321 (8.16)  | +.000 (0.00) | 118                 | -.080 (2.04) | -.417 (10.60) |
| 58                                     | -.241 (6.12)  | +.000 (0.00) | 119                 | +.000 (0.00) | -.417 (10.60) |
| 59                                     | -.161 (4.08)  | +.000 (0.00) | 120                 | +.080 (2.04) | -.417 (10.60) |
| 60                                     | -.080 (2.04)  | +.000 (0.00) | 121                 | +.161 (4.08) | -.417 (10.60) |
| 61                                     | +.000 (0.00)  | +.000 (0.00) | ---                 | ---          | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 21         | -23             | 121                | 23-22         | N              | All              | M39029/122-670   | M39029/121-663 |

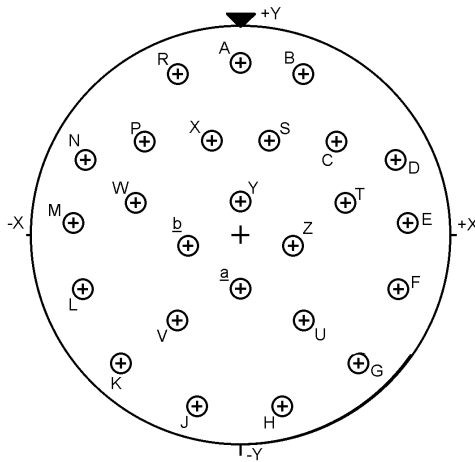
FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 21-24) |                  |               |                     |                  |              |
|--|------------------|---------------|---------------------|------------------|--------------|
| Contact position ID                    | Contact location |               | Contact position ID | Contact location |              |
|  | X-axis (mm)      | Y-axis (mm)   |                     | X-axis (mm)      | Y-axis (mm)  |
| A                                      | +.175 (4.45)     | +.375 (9.53)  | N                   | +.150 (3.81)     | +.200 (5.08) |
| B                                      | +.350 (8.89)     | +.200 (5.08)  | P                   | +.250 (6.35)     | +.000 (0.00) |
| C                                      | +.400 (10.16)    | +.000 (0.00)  | R                   | +.200 (5.08)     | -.150 (3.81) |
| D                                      | +.350 (8.89)     | -.200 (5.08)  | S                   | +.075 (1.91)     | -.250 (6.35) |
| E                                      | +.200 (5.08)     | -.350 (8.89)  | T                   | -.075 (1.91)     | -.250 (6.35) |
| F                                      | +.000 (0.00)     | -.400 (10.16) | U                   | -.200 (5.08)     | -.150 (3.81) |
| G                                      | -.200 (5.08)     | -.350 (8.89)  | V                   | -.250 (6.35)     | +.000 (0.00) |
| H                                      | -.350 (8.89)     | -.200 (5.08)  | W                   | -.150 (3.81)     | +.200 (5.08) |
| J                                      | -.400 (10.16)    | +.000 (0.00)  | X                   | +.000 (0.00)     | +.150 (3.81) |
| K                                      | -.350 (8.89)     | +.200 (5.08)  | Y                   | +.100 (2.54)     | +.025 (0.64) |
| L                                      | -.175 (4.45)     | +.375 (9.53)  | Z                   | +.000 (0.00)     | -.100 (2.54) |
| M                                      | +.000 (0.00)     | +.300 (7.62)  | a                   | -.100 (2.54)     | +.025 (0.64) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 21         | -24             | 24                 | 20            | I              | All              | MS20055-24 |

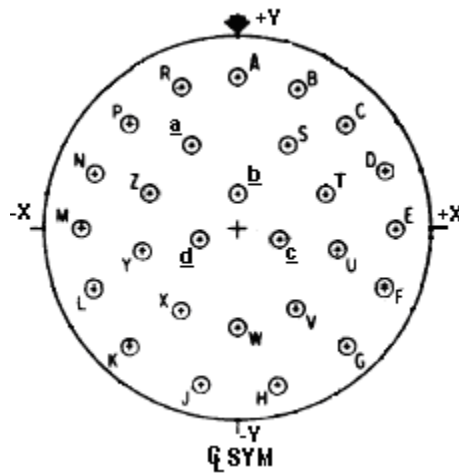
FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 21-25) |                  |                |                     |                  |               |
|--|------------------|----------------|---------------------|------------------|---------------|
| Contact position ID                    | Contact location |                | Contact position ID | Contact location |               |
|  | X-axis (mm)      | Y-axis (mm)    |                     | X-axis (mm)      | Y-axis (mm)   |
| A                                      | +0.000 (0.00)    | +0.400 (10.16) | P                   | -.225 (5.72)     | +0.225 (5.72) |
| B                                      | +0.150 (3.81)    | +0.375 (9.53)  | R                   | -.150 (3.81)     | +0.375 (9.53) |
| C                                      | +0.225 (5.72)    | +0.225 (5.72)  | S                   | +0.075 (1.91)    | +0.225 (5.72) |
| D                                      | +0.375 (9.53)    | +0.175 (4.45)  | T                   | +0.250 (6.35)    | +0.075 (1.91) |
| E                                      | +0.400 (10.16)   | +0.025 (0.64)  | U                   | +0.150 (3.81)    | -.200 (5.08)  |
| F                                      | +0.375 (9.53)    | -.125 (3.18)   | V                   | -.150 (3.81)     | -.200 (5.08)  |
| G                                      | +0.275 (6.99)    | -.300 (7.62)   | W                   | -.250 (6.35)     | +0.075 (1.91) |
| H                                      | +0.100 (2.54)    | -.400 (10.16)  | X                   | -.075 (1.91)     | +0.225 (5.72) |
| J                                      | -.100 (2.54)     | -.400 (10.16)  | Y                   | +0.000 (0.00)    | +0.075 (1.91) |
| K                                      | -.275 (6.99)     | -.300 (7.62)   | Z                   | +0.125 (3.18)    | -.025 (0.64)  |
| L                                      | -.375 (9.53)     | -.125 (3.18)   | a                   | +0.000 (0.00)    | -.125 (3.18)  |
| M                                      | -.400 (10.16)    | +0.025 (0.64)  | b                   | -.125 (3.18)     | -.025 (0.64)  |
| N                                      | -.375 (9.53)     | +0.175 (4.45)  | ---                 | ---              | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 21         | -25             | 25                 | 20            | I              | All              | MS20055-25 |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

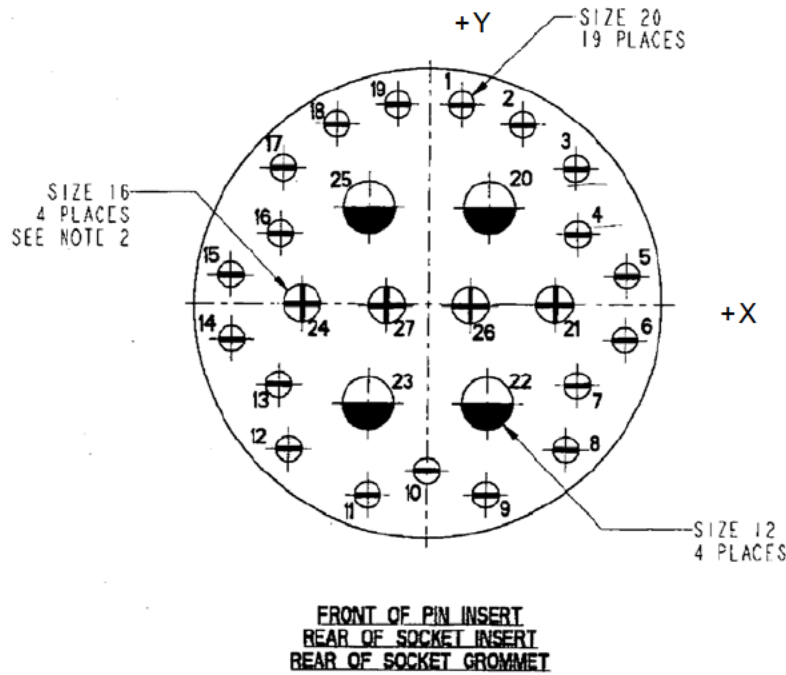
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w/CHANGE 1

| Contacts<br>(Insert arrangement 21-27) |                  |               |                     |                  |              |
|--|------------------|---------------|---------------------|------------------|--------------|
| Contact position ID                    | Contact location |               | Contact position ID | Contact location |              |
|  | X-axis           | Y-axis        |                     | X-axis           | Y-axis       |
| A                                      | +0.00 (0.00)     | +4.00 (10.16) | R                   | -1.50 (3.81)     | +3.75 (9.53) |
| B                                      | +1.50 (3.81)     | +3.75 (9.53)  | S                   | +1.25 (3.18)     | +2.25 (5.72) |
| C                                      | +2.75 (6.99)     | +2.75 (6.99)  | T                   | +2.25 (5.72)     | +1.00 (2.54) |
| D                                      | +3.75 (9.53)     | +1.50 (3.81)  | U                   | +2.50 (6.35)     | -.050 (1.27) |
| E                                      | +4.00 (10.16)    | +0.00 (0.00)  | V                   | +1.50 (3.81)     | -.200 (5.08) |
| F                                      | +3.75 (9.53)     | -.150 (3.81)  | W                   | +0.00 (0.00)     | -.250 (6.35) |
| G                                      | +2.75 (6.99)     | -.300 (7.62)  | X                   | -.150 (3.81)     | -.200 (5.08) |
| H                                      | +1.00 (2.54)     | -.400 (10.16) | Y                   | -.250 (6.35)     | -.050 (1.27) |
| J                                      | -.100 (2.54)     | -.400 (10.16) | Z                   | -.225 (5.72)     | +1.00 (2.54) |
| K                                      | -.275 (6.99)     | -.300 (7.62)  | a                   | -.125 (3.18)     | +2.25 (5.72) |
| L                                      | -.375 (9.53)     | -.150 (3.81)  | b                   | +0.00 (0.00)     | +1.00 (2.54) |
| M                                      | -.400 (10.16)    | +0.00 (0.00)  | c                   | +1.00 (2.54)     | -.025 (0.64) |
| N                                      | -.375 (9.53)     | +1.50 (3.81)  | d                   | -.100 (2.54)     | -.025 (0.64) |
| P                                      | -.275 (6.99)     | +2.75 (6.99)  | ---                 | ---              | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 21         | -27             | 27                 | 20            | I              | All              | MS20055-27 |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1



| Contacts<br>(Insert arrangement 21-29) |                  |               |                     |                  |               |
|--|------------------|---------------|---------------------|------------------|---------------|
| Contact position ID                    | Contact location |               | Contact position ID | Contact location |               |
|  | X-axis           | Y-axis        |                     | X-axis           | Y-axis        |
| 1                                      | +067 (1.70)      | +412 (10.46)  | 15                  | -.412(10.46)     | +060 (1.52)   |
| 2                                      | +.194 (4.93)     | +.372 (9.45)  | 16                  | -.310 (7.87)     | +.146 (3.71)  |
| 3                                      | +.305 (7.45)     | +.281 (7.14)  | 17                  | -.305 (7.45)     | +.281 (7.14)  |
| 4                                      | +.310 (7.87)     | +.146 (3.71)  | 18                  | -.194 (4.93)     | +.372 (9.45)  |
| 5                                      | +.412(10.46)     | +.060 (1.52)  | 19                  | -.067 (1.70)     | +.412 (10.46) |
| 6                                      | +.409 (10.39)    | -.074 (1.88)  | 20                  | +.126 (3.20)     | +.200 (5.08)  |
| 7                                      | +.311 (7.90)     | -.169 (4.29)  | 21                  | +.264 (6.71)     | -.003 (0.08)  |
| 8                                      | +.289 (7.34)     | -.302 (7.67)  | 22                  | +.125 (3.18)     | -.207 (5.26)  |
| 9                                      | +.124 (3.15)     | -.397 (10.08) | 23                  | -.125 (3.18)     | -.207 (5.26)  |
| 10                                     | -.000 (0.00)     | -.347 (8.81)  | 24                  | -.264 (6.71)     | -.003 (0.08)  |
| 11                                     | -.124 (3.15)     | -.397 (10.08) | 25                  | -.126 (3.20)     | +.200 (5.08)  |
| 12                                     | -.289 (7.34)     | -.302 (7.67)  | 26                  | .088 (2.24)      | -.003 0.08)   |
| 13                                     | -.311 (7.90)     | -.169 (4.29)  | 27                  | -.088 (2.24)     | -.003 (0.08)  |
| 14                                     | -.409 (10.39)    | -.074 (1.88)  | ---                 | ---              | ---           |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

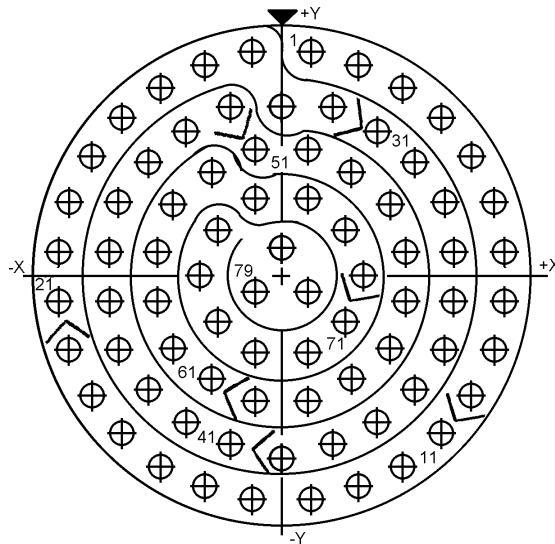


MIL-STD-1560C  
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| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location |
|------------|-----------------|--------------------|---------------|----------------|------------------|
| 21         | -29             | 4                  | 12            | I              | 20, 22, 23, 25   |
|            |                 | 4                  | 16            |                | 21, 24, 26, 27   |
|            |                 | 19                 | 20            |                | All others       |

- NOTES: 1. Trademark and 21-29 shall appear in available space. Contact identifying letter shall be located so as to identify relative contact.
2. The size 16 contact cavities are not located on the centerline of the arrangement. The size 16 contact cavities are positioned .003 below the centerline.

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 21-35) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.053 (1.35)  | +0.426 (10.82) | 41                  | -0.098 (2.49) | -0.322 (8.18) |
| 2                                      | +0.146 (3.71)  | +0.404 (10.26) | 42                  | -0.184 (4.67) | -0.280 (7.11) |
| 3                                      | +0.232 (5.89)  | +0.362 (9.19)  | 43                  | -0.258 (6.55) | -0.220 (5.59) |
| 4                                      | +0.306 (7.77)  | +0.302 (7.67)  | 44                  | -0.311 (7.90) | -0.141 (3.58) |
| 5                                      | +0.365 (9.27)  | +0.227 (5.77)  | 45                  | -0.332 (8.43) | -0.048 (1.22) |
| 6                                      | +0.406 (10.31) | +0.141 (3.58)  | 46                  | -0.332 (8.43) | +0.048 (1.22) |
| 7                                      | +0.427 (10.85) | +0.048 (1.22)  | 47                  | -0.311 (7.90) | +0.141 (3.58) |
| 8                                      | +0.427 (10.85) | -0.048 (1.22)  | 48                  | -0.258 (6.55) | +0.220 (5.59) |
| 9                                      | +0.406 (10.31) | -0.141 (3.58)  | 49                  | -0.184 (4.67) | +0.280 (7.11) |
| 10                                     | +0.365 (9.27)  | -0.227 (5.77)  | 50                  | -0.098 (2.49) | +0.322 (8.18) |
| 11                                     | +0.306 (7.77)  | -0.302 (7.67)  | 51                  | -0.048 (1.22) | +0.241 (6.12) |
| 12                                     | +0.232 (5.89)  | -0.362 (9.19)  | 52                  | +0.048 (1.22) | +0.241 (6.12) |
| 13                                     | +0.146 (3.71)  | -0.404 (10.26) | 53                  | +0.134 (3.40) | +0.199 (5.05) |
| 14                                     | +0.053 (1.35)  | -0.426 (10.82) | 54                  | +0.208 (5.28) | +0.139 (3.53) |
| 15                                     | -0.053 (1.35)  | -0.426 (10.82) | 55                  | +0.237 (6.02) | +0.048 (1.22) |
| 16                                     | -0.146 (3.71)  | -0.404 (10.26) | 56                  | +0.237 (6.02) | -0.048 (1.22) |
| 17                                     | -0.232 (5.89)  | -0.362 (9.19)  | 57                  | +0.208 (5.28) | -0.139 (3.53) |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

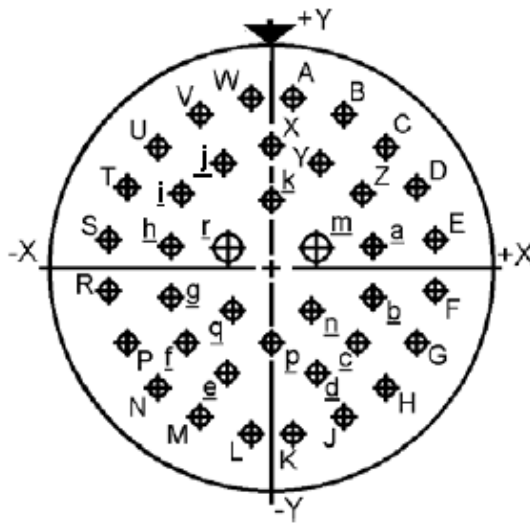
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 21-35) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| 18                                     | -.306 (7.77)  | -.302 (7.67)  | 58                  | +.134 (3.40) | -.199 (5.05) |
| 19                                     | -.365 (9.27)  | -.227 (5.77)  | 59                  | +.048 (1.22) | -.241 (6.12) |
| 20                                     | -.406 (10.31) | -.141 (3.58)  | 60                  | -.048 (1.22) | -.241 (6.12) |
| 21                                     | -.427 (10.85) | -.048 (1.22)  | 61                  | -.134 (3.40) | -.199 (5.05) |
| 22                                     | -.427 (10.85) | +.048 (1.22)  | 62                  | -.208 (5.28) | -.139 (3.53) |
| 23                                     | -.406 (10.31) | +.141 (3.58)  | 63                  | -.237 (6.02) | -.048 (1.22) |
| 24                                     | -.365 (9.27)  | +.227 (5.77)  | 64                  | -.237 (6.02) | +.048 (1.22) |
| 25                                     | -.306 (7.77)  | +.302 (7.67)  | 65                  | -.208 (5.28) | +.139 (3.53) |
| 26                                     | -.232 (5.89)  | +.362 (9.19)  | 66                  | -.134 (3.40) | +.199 (5.05) |
| 27                                     | -.146 (3.71)  | +.404 (10.26) | 67                  | -.048 (1.22) | +.146 (3.71) |
| 28                                     | -.053 (1.35)  | +.426 (10.82) | 68                  | +.048 (1.22) | +.146 (3.71) |
| 29                                     | +.000 (.00)   | +.323 (8.20)  | 69                  | +.125 (3.18) | +.090 (2.29) |
| 30                                     | +.098 (2.49)  | +.322 (8.18)  | 70                  | +.155 (3.94) | +.000 (0.00) |
| 31                                     | +.184 (4.67)  | +.280 (7.11)  | 71                  | +.125 (3.18) | -.090 (2.29) |
| 32                                     | +.258 (6.55)  | +.220 (5.59)  | 72                  | +.048 (1.22) | -.146 (3.71) |
| 33                                     | +.311 (7.90)  | +.141 (3.58)  | 73                  | -.048 (1.22) | -.146 (3.71) |
| 34                                     | +.332 (8.43)  | +.048 (1.22)  | 74                  | -.125 (3.18) | -.090 (2.29) |
| 35                                     | +.332 (8.43)  | -.048 (1.22)  | 75                  | -.155 (3.94) | +.000 (0.00) |
| 36                                     | +.311 (7.90)  | -.141 (3.58)  | 76                  | -.125 (3.18) | +.090 (2.29) |
| 37                                     | +.258 (6.55)  | -.220 (5.59)  | 77                  | +.000 (0.00) | +.053 (1.35) |
| 38                                     | +.184 (4.67)  | -.280 (7.11)  | 78                  | +.048 (1.22) | -.029 (0.74) |
| 39                                     | +.098 (2.49)  | -.322 (8.18)  | 79                  | -.048 (1.22) | -.029 (0.74) |
| 40                                     | +.000 (0.00)  | -.347 (8.81)  | ---                 | ---          | ---          |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 21         | -35             | 79                 | 22D           | M              | ALL              | MS27531-35 |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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| Contacts<br>(Insert arrangement 21-39) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +4.11 (10.44) | X                   | +0.000 (0.00) | +2.95 (7.49)  |
| B                                      | +1.89 (4.80)  | +3.71 (9.42)  | Y                   | +1.26 (3.20)  | +2.56 (6.50)  |
| C                                      | +2.94 (7.47)  | +2.94 (7.47)  | Z                   | +2.32 (5.89)  | +1.79 (4.55)  |
| D                                      | +3.71 (9.42)  | +1.89 (4.80)  | a                   | +2.80 (7.11)  | +0.057 (1.45) |
| E                                      | +4.11 (10.44) | +0.065 (1.65) | b                   | +2.80 (7.11)  | -0.74 (1.88)  |
| F                                      | +4.11 (10.44) | -0.65 (1.65)  | c                   | +2.17 (5.51)  | -1.89 (4.80)  |
| G                                      | +3.71 (9.42)  | -1.89 (4.80)  | d                   | +1.12 (2.84)  | -2.65 (6.73)  |
| H                                      | +2.94 (7.47)  | -2.94 (7.47)  | e                   | -1.12 (2.84)  | -2.65 (6.73)  |
| J                                      | +1.89 (4.80)  | -3.71 (9.42)  | f                   | -2.17 (5.51)  | -1.89 (4.80)  |
| K                                      | +0.065 (1.65) | -4.11 (10.44) | g                   | -2.80 (7.11)  | -0.74 (1.88)  |
| L                                      | -0.65 (1.65)  | -4.11 (10.44) | h                   | -2.80 (7.11)  | +0.057 (1.45) |
| M                                      | -1.89 (4.80)  | -3.71 (9.42)  | i                   | -2.32 (5.89)  | +1.79 (4.55)  |
| N                                      | -2.94 (7.47)  | -2.94 (7.47)  | j                   | -1.26 (3.20)  | +2.56 (6.50)  |
| P                                      | -3.71 (9.42)  | -1.89 (4.80)  | k                   | +0.000 (0.00) | +1.64 (4.17)  |
| R                                      | -4.11 (10.44) | -0.65 (1.65)  | m                   | +1.14 (2.90)  | +0.048 (1.22) |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

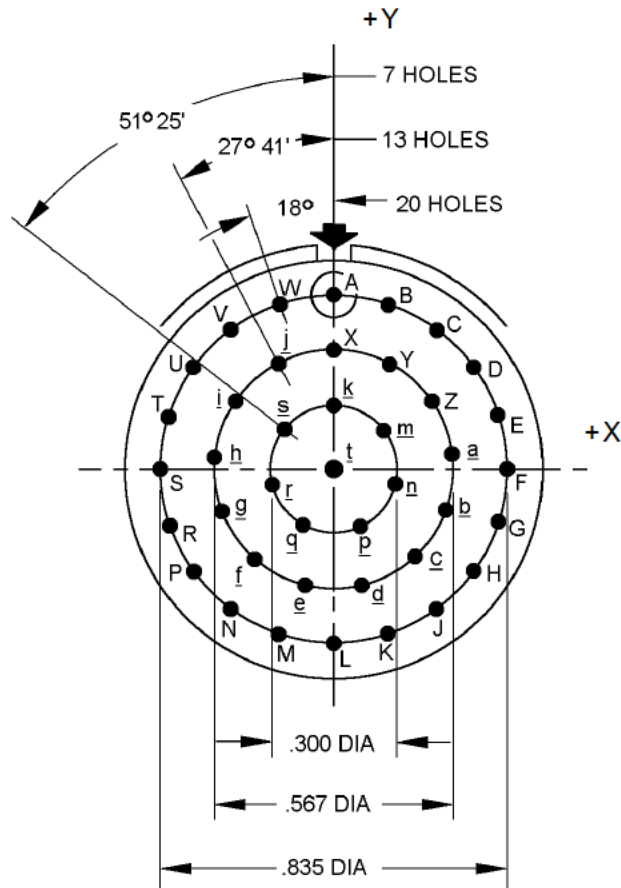
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| Contacts<br>(Insert arrangement 21-39) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| S                                      | -.411 (10.44) | +.065 (1.65)  | <u>n</u>            | +.106 (2.69) | -.107 (2.72) |
| T                                      | -.371 (9.42)  | +.189 (4.80)  | <u>p</u>            | +.000 (0.00) | -.189 (4.80) |
| U                                      | -.294 (7.47)  | +.294 (7.47)  | <u>q</u>            | -.106 (2.69) | -.107 (2.72) |
| V                                      | -.189 (4.80)  | +.371 (9.42)  | <u>r</u>            | -.114 (2.90) | +.048 (1.09) |
| W                                      | -.065 (1.65)  | +.411 (10.44) | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 21         | -39             | 2                  | 16            | I              | <u>r, m</u>      | MS20055-39 |
|            |                 | 37                 | 20            |                | All others       |            |

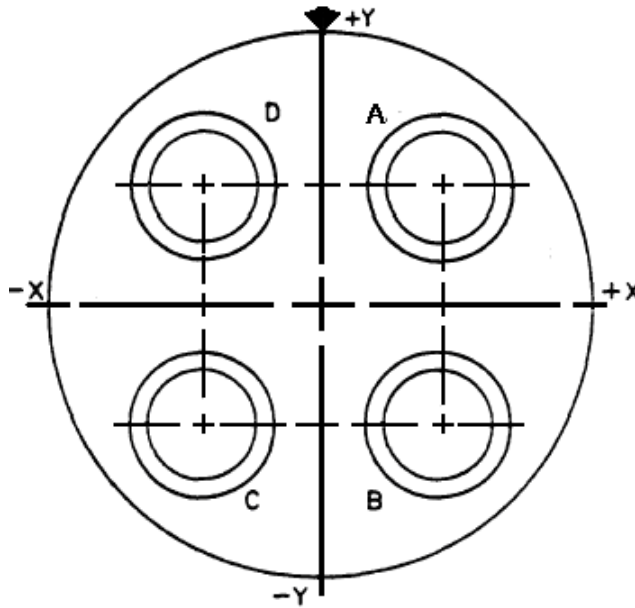
FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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| Insert arrangement 21-41 |                 |                    |               |                |                  |            |
|--------------------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| Shell size               | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
| 21                       | -41             | 41                 | 20            | I              | All              | MS20055-41 |

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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(Inactive for new design for MIL-DTL-38999. For new design, use arrangement no. 21-76.)

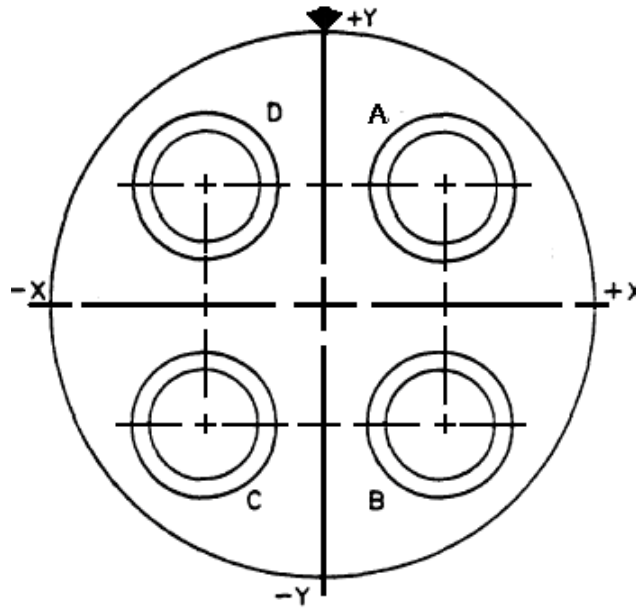
| Contacts<br>(Insert arrangement 21-75) |               |               |
|--|---------------|---------------|
| Contact position ID                    | Location      |               |
|  | X axis        | Y axis        |
| A                                      | + .180 (4.57) | + .180 (4.57) |
| B                                      | + .180 (4.57) | - .180 (4.57) |
| C                                      | - .180 (4.57) | - .180 (4.57) |
| D                                      | - .180 (4.57) | + .180 (4.57) |

| Shell size | Arrangement no. | Number of contacts | Size contacts   | Service rating | Contact location | Standard contact |               |
|------------|-----------------|--------------------|-----------------|----------------|------------------|------------------|---------------|
|            |                 |                    |                 |                |                  | Pin              | Socket        |
| 21         | -75             | 4                  | 8<br>(see note) | Twinax         | All              | M39029/90-529    | M39029/91-530 |

NOTE: To meet environmental sealing requirements, size 8 shielded contacts used with this insert arrangement may require separate, non-standard sealing boots that are furnished with the connector. For this insert arrangement, some connector grommet designs use a heat shrink sleeve only with the size 8 shielded contacts to meet environmental sealing requirements. When heat shrink sleeves are used, sealing boots are not used, and when sealing boots are used, heat shrink sleeves are not used. Heat shrink sleeves have a maximum temperature rating of 175°C maximum. When heat shrink sleeves are used, connectors rated to 200°C max are derated to 175°C max.

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1



(INSERT ARRANGEMENT PATTERN IDENTICAL TO 21-75, EXCEPT 21-76 USES SEALING BOOTS IN ACCORDANCE WITH MIL-DTL-38999/62)

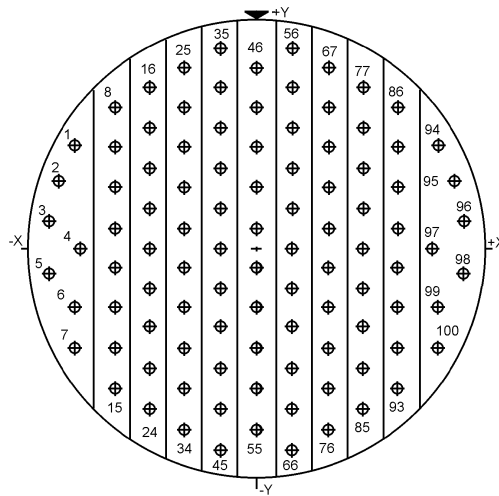
| Contacts<br>(Insert arrangement 21-76) |               |               |
|--|---------------|---------------|
| Contact position ID                    | Location      |               |
|  | X axis        | Y axis        |
| A                                      | + .180 (4.57) | + .180 (4.57) |
| B                                      | + .180 (4.57) | - .180 (4.57) |
| C                                      | - .180 (4.57) | - .180 (4.57) |
| D                                      | - .180 (4.57) | + .180 (4.57) |

| Shell size | Arrangement No. | Number of contacts | Size contacts   | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|-----------------|----------------|------------------|------------------|----------------|
|            |                 |                    |                 |                |                  | Pin              | Socket         |
| 21         | -76             | 4                  | 8<br>(see note) | Twinax         | All              | M39029/113-625   | M39029/114-628 |

NOTE: For this insert arrangement, sealing boots in accordance with MIL-DTL-38999/62 shall be used to environmentally seal size 8 twinax contacts. Heat shrink sleeves are not used with size 8 twinax contacts when sealing boots are used.

FIGURE 7. Insert arrangement, electrical connector, shell size 21 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.



MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-1) |               |              |                     |              |               |
|---------------------------------------|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |              | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.428 (10.87) | +.241 (6.12) | 51                  | +.000 (0.00) | -.047 (1.19)  |
| 2                                     | -.467 (11.86) | +.154 (3.91) | 52                  | +.000 (0.00) | -.142 (3.61)  |
| 3                                     | -.488 (12.40) | +.061 (1.55) | 53                  | +.000 (0.00) | -.237 (6.02)  |
| 4                                     | -.415 (10.54) | +.000 (0.00) | 54                  | +.000 (0.00) | -.332 (8.43)  |
| 5                                     | -.488 (12.40) | -.061 (1.55) | 55                  | +.000 (0.00) | -.427 (10.85) |
| 6                                     | -.428 (10.87) | -.142 (3.61) | 56                  | +.083 (2.11) | +.475 (12.07) |
| 7                                     | -.428 (10.87) | -.237 (6.02) | 57                  | +.083 (2.11) | +.380 (9.65)  |
| 8                                     | -.332 (8.43)  | +.333 (8.46) | 58                  | +.083 (2.11) | +.285 (7.24)  |
| 9                                     | -.332 (8.43)  | +.238 (6.05) | 59                  | +.083 (2.11) | +.190 (4.83)  |
| 10                                    | -.332 (8.43)  | +.143 (3.63) | 60                  | +.083 (2.11) | +.095 (2.41)  |
| 11                                    | -.332 (8.43)  | +.048 (1.22) | 61                  | +.083 (2.11) | +.000 (0.00)  |
| 12                                    | -.332 (8.43)  | -.047 (1.19) | 62                  | +.083 (2.11) | -.095 (2.41)  |
| 13                                    | -.332 (8.43)  | -.142 (3.61) | 63                  | +.083 (2.11) | -.190 (4.83)  |
| 14                                    | -.332 (8.43)  | -.237 (6.02) | 64                  | +.083 (2.11) | -.285 (7.24)  |
| 15                                    | -.332 (8.43)  | -.332 (8.43) | 65                  | +.083 (2.11) | -.380 (9.65)  |
| 16                                    | -.249 (6.32)  | +.380 (9.65) | 66                  | +.083 (2.11) | -.475 (12.07) |
| 17                                    | -.249 (6.32)  | +.285 (7.24) | 67                  | +.166 (4.22) | +.428 (10.87) |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600).

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-1) |               |                |                     |                |               |
|---------------------------------------|---------------|----------------|---------------------|----------------|---------------|
| Contact position ID                   | Location      |                | Contact position ID | Location       |               |
|                                       | X-axis (mm)   | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)   |
| 18                                    | -.249 (6.32)  | + .190 (4.83)  | 68                  | + .166 (4.22)  | + .333 (8.46) |
| 19                                    | -.249 (6.32)  | + .095 (2.41)  | 69                  | + .166 (4.22)  | + .238 (6.05) |
| 20                                    | -.249 (6.32)  | + .000 (0.00)  | 70                  | + .166 (4.22)  | + .143 (3.63) |
| 21                                    | -.249 (6.32)  | -.095 (2.41)   | 71                  | + .166 (4.22)  | + .048 (1.22) |
| 22                                    | -.249 (6.32)  | -.190 (4.83)   | 72                  | + .166 (4.22)  | -.047 (1.19)  |
| 23                                    | -.249 (6.32)  | -.285 (7.24)   | 73                  | + .166 (4.22)  | -.142 (3.61)  |
| 24                                    | -.249 (6.32)  | -.380 (9.65)   | 74                  | + .166 (4.22)  | -.237 (6.02)  |
| 25                                    | -.166 (4.22)  | + .428 (10.87) | 75                  | + .166 (4.22)  | -.332 (8.43)  |
| 26                                    | -.166 (4.22)  | + .333 (8.46)  | 76                  | + .166 (4.22)  | -.427 (10.85) |
| 27                                    | -.166 (4.22)  | + .238 (6.05)  | 77                  | + .249 (6.32)  | + .380 (9.65) |
| 28                                    | -.166 (4.22)  | + .143 (3.63)  | 78                  | + .249 (6.32)  | + .285 (7.24) |
| 29                                    | -.166 (4.22)  | + .048 (1.22)  | 79                  | + .249 (6.32)  | + .190 (4.83) |
| 30                                    | -.166 (4.22)  | -.047 (1.19)   | 80                  | + .249 (6.32)  | + .095 (2.41) |
| 31                                    | -.166 (4.22)  | -.142 (3.61)   | 81                  | + .249 (6.32)  | + .000 (0.00) |
| 32                                    | -.166 (4.22)  | -.237 (6.02)   | 82                  | + .249 (6.32)  | -.095 (2.41)  |
| 33                                    | -.166 (4.22)  | -.332 (8.43)   | 83                  | + .249 (6.32)  | -.190 (4.83)  |
| 34                                    | -.166 (4.22)  | -.427 (10.85)  | 84                  | + .249 (6.32)  | -.285 (7.24)  |
| 35                                    | -.083 (2.11)  | + .475 (12.07) | 85                  | + .249 (6.32)  | -.380 (9.65)  |
| 36                                    | -.083 (2.11)  | + .380 (9.65)  | 86                  | + .332 (8.43)  | + .333 (8.46) |
| 37                                    | -.083 (2.11)  | + .285 (7.24)  | 87                  | + .332 (8.43)  | + .238 (6.05) |
| 38                                    | -.083 (2.11)  | + .190 (4.83)  | 88                  | + .332 (8.43)  | + .143 (3.63) |
| 39                                    | -.083 (2.11)  | + .095 (2.41)  | 89                  | + .332 (8.43)  | + .048 (1.22) |
| 40                                    | -.083 (2.11)  | + .000 (0.00)  | 90                  | + .332 (8.43)  | -.047 (1.19)  |
| 41                                    | -.083 (2.11)  | -.095 (2.41)   | 91                  | + .332 (8.43)  | -.142 (3.61)  |
| 42                                    | -.083 (2.11)  | -.190 (4.83)   | 92                  | + .332 (8.43)  | -.237 (6.02)  |
| 43                                    | -.083 (2.11)  | -.285 (7.24)   | 93                  | + .332 (8.43)  | -.332 (8.43)  |
| 44                                    | -.083 (2.11)  | -.380 (9.65)   | 94                  | + .428 (10.87) | + .241 (6.12) |
| 45                                    | -.083 (2.11)  | -.475 (12.07)  | 95                  | + .467 (11.86) | + .154 (3.91) |
| 46                                    | + .000 (0.00) | + .428 (10.87) | 96                  | + .488 (12.40) | + .061 (1.55) |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

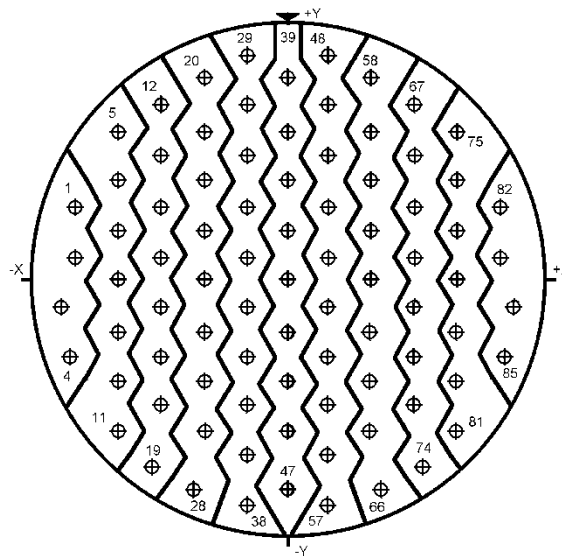
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-1) |               |               |                     |                |               |
|---------------------------------------|---------------|---------------|---------------------|----------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location       |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)    | Y-axis (mm)   |
| 47                                    | +0.000 (0.00) | +0.333 (8.46) | 97                  | +0.415 (10.54) | +0.000 (0.00) |
| 48                                    | +0.000 (0.00) | +0.238 (6.05) | 98                  | +0.488 (12.40) | -0.061 (1.55) |
| 49                                    | +0.000 (0.00) | +0.143 (3.63) | 99                  | +0.428 (10.87) | -0.142 (3.61) |
| 50                                    | +0.000 (0.00) | +0.048 (1.22) | 100                 | +0.428 (10.87) | -0.237 (6.02) |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -1              | 100                | 22M           | M              | All              | MS20056-1  |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-2) |               |              |                     |              |               |
|---------------------------------------|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |              | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.455 (11.56) | +.159 (4.04) | 44                  | +.000 (0.00) | -.106 (2.69)  |
| 2                                     | -.455 (11.56) | +.053 (1.35) | 45                  | +.000 (0.00) | -.212 (5.38)  |
| 3                                     | -.482 (12.24) | -.053 (1.35) | 46                  | +.000 (0.00) | -.318 (8.08)  |
| 4                                     | -.455 (11.56) | -.159 (4.04) | 47                  | +.000 (0.00) | -.424 (10.77) |
| 5                                     | -.364 (9.25)  | +.318 (8.08) | 48                  | +.091 (2.31) | +.477 (12.12) |
| 6                                     | -.364 (9.25)  | +.212 (5.38) | 49                  | +.091 (2.31) | +.371 (9.42)  |
| 7                                     | -.364 (9.25)  | +.106 (2.69) | 50                  | +.091 (2.31) | +.265 (6.73)  |
| 8                                     | -.364 (9.25)  | +.000 (0.00) | 51                  | +.091 (2.31) | +.159 (4.04)  |
| 9                                     | -.364 (9.25)  | -.106 (2.69) | 52                  | +.091 (2.31) | +.053 (1.35)  |
| 10                                    | -.364 (9.25)  | -.212 (5.38) | 53                  | +.091 (2.31) | -.053 (1.35)  |
| 11                                    | -.364 (9.25)  | -.318 (8.08) | 54                  | +.091 (2.31) | -.159 (4.04)  |
| 12                                    | -.273 (6.93)  | +.371 (9.42) | 55                  | +.091 (2.31) | -.265 (6.73)  |
| 13                                    | -.273 (6.93)  | +.265 (6.73) | 56                  | +.091 (2.31) | -.371 (9.42)  |
| 14                                    | -.273 (6.93)  | +.159 (4.04) | 57                  | +.091 (2.31) | -.477 (12.12) |
| 15                                    | -.273 (6.93)  | +.053 (1.35) | 58                  | +.182 (4.62) | +.424 (10.77) |
| 16                                    | -.273 (6.93)  | -.053 (1.35) | 59                  | +.182 (4.62) | +.318 (8.08)  |
| 17                                    | -.273 (6.93)  | -.159 (4.04) | 60                  | +.182 (4.62) | +.212 (5.38)  |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

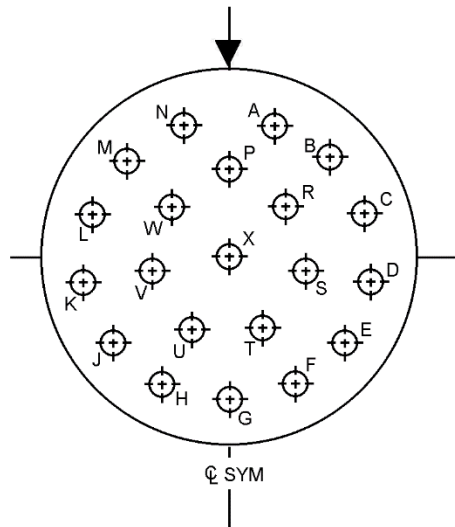
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-2) |              |               |                     |              |               |
|---------------------------------------|--------------|---------------|---------------------|--------------|---------------|
| Contact position ID                   | Location     |               | Contact position ID | Location     |               |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)   |
| 18                                    | -.273 (6.93) | -.265 (6.73)  | 61                  | +182 (4.62)  | +106 (2.69)   |
| 19                                    | -.287 (7.29) | -.390 (9.91)  | 62                  | +182 (4.62)  | +000 (0.00)   |
| 20                                    | -.182 (4.62) | +424 (10.77)  | 63                  | +182 (4.62)  | -.106 (2.69)  |
| 21                                    | -.182 (4.62) | +318 (8.08)   | 64                  | +182 (4.62)  | -.212 (5.38)  |
| 22                                    | -.182 (4.62) | +212 (5.38)   | 65                  | +182 (4.62)  | -.318 (8.08)  |
| 23                                    | -.182 (4.62) | +106 (2.69)   | 66                  | +192 (4.88)  | -.446 (11.33) |
| 24                                    | -.182 (4.62) | +000 (0.00)   | 67                  | +273 (6.93)  | +371 (9.42)   |
| 25                                    | -.182 (4.62) | -.106 (2.69)  | 68                  | +273 (6.93)  | +265 (6.73)   |
| 26                                    | -.182 (4.62) | -.212 (5.38)  | 69                  | +273 (6.93)  | +159 (4.04)   |
| 27                                    | -.182 (4.62) | -.318 (8.08)  | 70                  | +273 (6.93)  | +053 (1.35)   |
| 28                                    | -.192 (4.88) | -.446 (11.33) | 71                  | +273 (6.93)  | -.053 (1.35)  |
| 29                                    | -.091 (2.31) | +477 (12.12)  | 72                  | +273 (6.93)  | -.159 (4.04)  |
| 30                                    | -.091 (2.31) | +371 (9.42)   | 73                  | +273 (6.93)  | -.265 (6.73)  |
| 31                                    | -.091 (2.31) | +265 (6.73)   | 74                  | +287 (7.29)  | -.390 (9.91)  |
| 32                                    | -.091 (2.31) | +159 (4.04)   | 75                  | +364 (9.25)  | +318 (8.08)   |
| 33                                    | -.091 (2.31) | +053 (1.35)   | 76                  | +364 (9.25)  | +212 (5.38)   |
| 34                                    | -.091 (2.31) | -.053 (1.35)  | 77                  | +364 (9.25)  | +106 (2.69)   |
| 35                                    | -.091 (2.31) | -.159 (4.04)  | 78                  | +364 (9.25)  | +000 (0.00)   |
| 36                                    | -.091 (2.31) | -.265 (6.73)  | 79                  | +364 (9.25)  | -.106 (2.69)  |
| 37                                    | -.091 (2.31) | -.371 (9.42)  | 80                  | +364 (9.25)  | -.212 (5.38)  |
| 38                                    | -.091 (2.31) | -.477 (12.12) | 81                  | +364 (9.25)  | -.318 (8.08)  |
| 39                                    | +000 (0.00)  | +424 (10.77)  | 82                  | +455 (11.56) | +159 (4.04)   |
| 40                                    | +000 (0.00)  | +318 (8.08)   | 83                  | +455 (11.56) | +053 (1.35)   |
| 41                                    | +000 (0.00)  | +212 (5.38)   | 84                  | +482 (12.24) | -.053 (1.35)  |
| 42                                    | +000 (0.00)  | +106 (2.69)   | 85                  | +455 (11.56) | -.159 (4.04)  |
| 43                                    | +000 (0.00)  | +000 (0.00)   | ---                 | ---          | ---           |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -2              | 85                 | 22            | M              | All              | MS20056-2  |

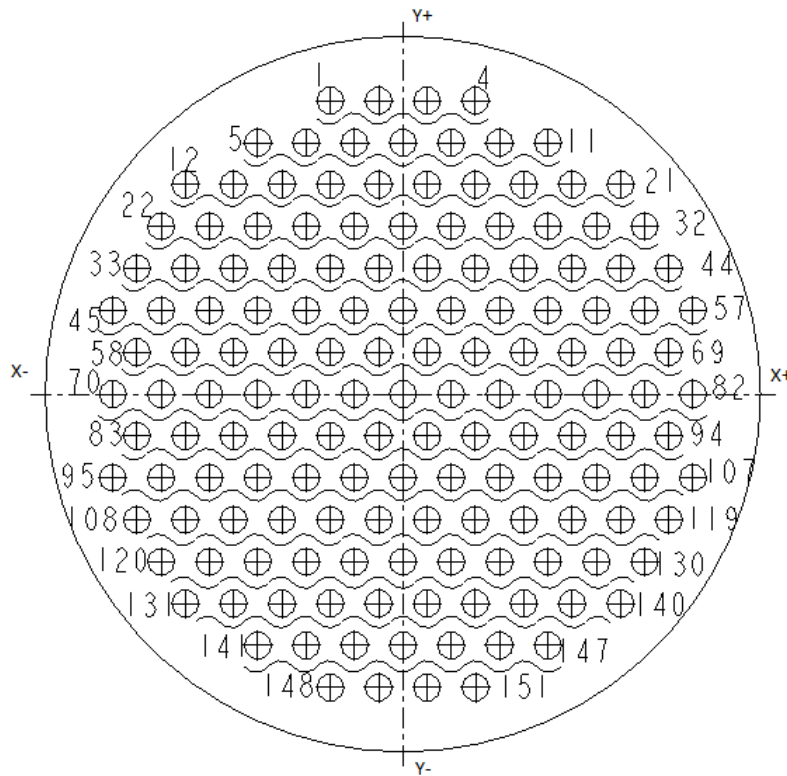
FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-21) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .128 (3.25)  | + .385 (9.78)  | M                   | - .289 (7.34) | + .285 (7.24) |
| B                                      | + .289 (7.34)  | + .285 (7.24)  | N                   | - .128 (3.25) | + .385 (9.78) |
| C                                      | + .386 (9.80)  | + .123 (3.12)  | P                   | + .000 (0.00) | + .245 (6.22) |
| D                                      | + .400 (10.16) | - .065 (1.65)  | R                   | + .160 (4.06) | + .146 (3.71) |
| E                                      | + .328 (8.33)  | - .239 (6.07)  | S                   | + .214 (5.44) | - .035 (0.89) |
| F                                      | + .183 (4.65)  | - .362 (9.19)  | T                   | + .094 (2.39) | - .194 (4.93) |
| G                                      | + .000 (0.00)  | - .406 (10.31) | U                   | - .094 (2.39) | - .194 (4.93) |
| H                                      | - .183 (4.65)  | - .362 (9.19)  | V                   | - .214 (5.44) | - .035 (0.89) |
| J                                      | - .328 (8.33)  | - .239 (6.07)  | W                   | - .160 (4.06) | + .146 (3.71) |
| K                                      | - .400 (10.16) | - .065 (1.65)  | X                   | + .000 (0.00) | + .000 (0.00) |
| L                                      | - .386 (9.80)  | + .123 (3.12)  | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -21             | 21                 | 16            | II             | All              | MS20056-21 |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-23) |              |               |                     |               |              |
|--|--------------|---------------|---------------------|---------------|--------------|
| Contact position ID                    | Location     |               | Contact position ID | Location      |              |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)  |
| 1                                      | -.121 (3.06) | +.487 (12.37) | 77                  | +.080 (2.04)  | +.000 (0.00) |
| 2                                      | -.040 (1.02) | +.487 (12.37) | 78                  | +.161 (4.08)  | +.000 (0.00) |
| 3                                      | +.040 (1.02) | +.487 (12.37) | 79                  | +.241 (6.12)  | +.000 (0.00) |
| 4                                      | +.121 (3.06) | +.487 (12.37) | 80                  | +.321 (8.16)  | +.000 (0.00) |
| 5                                      | -.241 (6.12) | +.417 (10.60) | 81                  | +.402 (10.20) | +.000 (0.00) |
| 6                                      | -.161 (4.08) | +.417 (10.60) | 82                  | +.482 (12.24) | +.000 (0.00) |
| 7                                      | -.080 (2.04) | +.417 (10.60) | 83                  | -.442 (11.22) | -.070 (1.77) |
| 8                                      | +.000 (0.00) | +.417 (10.60) | 84                  | -.361 (9.18)  | -.070 (1.77) |
| 9                                      | +.080 (2.04) | +.417 (10.60) | 85                  | -.281 (7.14)  | -.070 (1.77) |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-23) |                |                |                     |                |               |
|--|----------------|----------------|---------------------|----------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)   |
| 10                                     | +0.161 (4.08)  | +0.417 (10.60) | 86                  | -0.201 (5.10)  | -0.070 (1.77) |
| 11                                     | +0.241 (6.12)  | +0.417 (10.60) | 87                  | -0.121 (3.06)  | -0.070 (1.77) |
| 12                                     | -0.361 (9.18)  | +0.348 (8.83)  | 88                  | -0.040 (1.02)  | -0.070 (1.77) |
| 13                                     | -0.281 (7.14)  | +0.348 (8.83)  | 89                  | +0.040 (1.02)  | -0.070 (1.77) |
| 14                                     | -0.201 (5.10)  | +0.348 (8.83)  | 90                  | +0.121 (3.06)  | -0.070 (1.77) |
| 15                                     | -0.121 (3.06)  | +0.348 (8.83)  | 91                  | +0.201 (5.10)  | -0.070 (1.77) |
| 16                                     | -0.040 (1.02)  | +0.348 (8.83)  | 92                  | +0.281 (7.14)  | -0.070 (1.77) |
| 17                                     | +0.040 (1.02)  | +0.348 (8.83)  | 93                  | +0.361 (9.18)  | -0.070 (1.77) |
| 18                                     | +0.121 (3.06)  | +0.348 (8.83)  | 94                  | +0.442 (11.22) | -0.070 (1.77) |
| 19                                     | +0.201 (5.10)  | +0.348 (8.83)  | 95                  | -0.482 (12.24) | -0.139 (3.53) |
| 20                                     | +0.281 (7.14)  | +0.348 (8.83)  | 96                  | -0.402 (10.20) | -0.139 (3.53) |
| 21                                     | +0.361 (9.18)  | +0.348 (8.83)  | 97                  | -0.321 (8.16)  | -0.139 (3.53) |
| 22                                     | -0.402 (10.20) | +0.278 (7.07)  | 98                  | -0.241 (6.12)  | -0.139 (3.53) |
| 23                                     | -0.321 (8.16)  | +0.278 (7.07)  | 99                  | -0.161 (4.08)  | -0.139 (3.53) |
| 24                                     | -0.241 (6.12)  | +0.278 (7.07)  | 100                 | -0.080 (2.04)  | -0.139 (3.53) |
| 25                                     | -0.161 (4.08)  | +0.278 (7.07)  | 101                 | +0.000 (0.00)  | -0.139 (3.53) |
| 26                                     | -0.080 (2.04)  | +0.278 (7.07)  | 102                 | +0.080 (2.04)  | -0.139 (3.53) |
| 27                                     | +0.000 (0.00)  | +0.278 (7.07)  | 103                 | +0.161 (4.08)  | -0.139 (3.53) |
| 28                                     | +0.080 (2.04)  | +0.278 (7.07)  | 104                 | +0.241 (6.12)  | -0.139 (3.53) |
| 29                                     | +0.161 (4.08)  | +0.278 (7.07)  | 105                 | +0.321 (8.16)  | -0.139 (3.53) |
| 30                                     | +0.241 (6.12)  | +0.278 (7.07)  | 106                 | +0.402 (10.20) | -0.139 (3.53) |
| 31                                     | +0.321 (8.16)  | +0.278 (7.07)  | 107                 | +0.482 (12.24) | -0.139 (3.53) |
| 32                                     | +0.402 (10.20) | +0.278 (7.07)  | 108                 | -0.442 (11.22) | -0.209 (5.30) |
| 33                                     | -0.442 (11.22) | +0.209 (5.30)  | 109                 | -0.361 (9.18)  | -0.209 (5.30) |
| 34                                     | -0.361 (9.18)  | +0.209 (5.30)  | 110                 | -0.281 (7.14)  | -0.209 (5.30) |
| 35                                     | -0.281 (7.14)  | +0.209 (5.30)  | 111                 | -0.201 (5.10)  | -0.209 (5.30) |
| 36                                     | -0.201 (5.10)  | +0.209 (5.30)  | 112                 | -0.121 (3.06)  | -0.209 (5.30) |
| 37                                     | -0.121 (3.06)  | +0.209 (5.30)  | 113                 | -0.040 (1.02)  | -0.209 (5.30) |
| 38                                     | -0.040 (1.02)  | +0.209 (5.30)  | 114                 | +0.040 (1.02)  | -0.209 (5.30) |
| 39                                     | +0.040 (1.02)  | +0.209 (5.30)  | 115                 | +0.121 (3.06)  | -0.209 (5.30) |
| 40                                     | +0.121 (3.06)  | +0.209 (5.30)  | 116                 | +0.201 (5.10)  | -0.209 (5.30) |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.



MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-23) |                |                |                           |                |                |
|--|----------------|----------------|---------------------------|----------------|----------------|
| Contact<br>position ID                 | Location       |                | Contact<br>position<br>ID | Location       |                |
|  | X-axis<br>(mm) | Y-axis<br>(mm) |                           | X-axis<br>(mm) | Y-axis<br>(mm) |
| 41                                     | + .201 (5.10)  | + .209 (5.30)  | 117                       | + .281 (7.14)  | - .209 (5.30)  |
| 42                                     | + .281 (7.14)  | + .209 (5.30)  | 118                       | + .361 (9.18)  | - .209 (5.30)  |
| 43                                     | + .361 (9.18)  | + .209 (5.30)  | 119                       | + .442 (11.22) | - .209 (5.30)  |
| 44                                     | + .442 (11.22) | + .209 (5.30)  | 120                       | - .402 (10.20) | - .278 (7.07)  |
| 45                                     | - .482 (12.24) | + .139 (3.53)  | 121                       | - .321 (8.16)  | - .278 (7.07)  |
| 46                                     | - .402 (10.20) | + .139 (3.53)  | 122                       | - .241 (6.12)  | - .278 (7.07)  |
| 47                                     | - .321 (8.16)  | + .139 (3.53)  | 123                       | - .161 (4.08)  | - .278 (7.07)  |
| 48                                     | - .241 (6.12)  | + .139 (3.53)  | 124                       | - .080 (2.04)  | - .278 (7.07)  |
| 49                                     | - .161 (4.08)  | + .139 (3.53)  | 125                       | + .000 (0.00)  | - .278 (7.07)  |
| 50                                     | - .080 (2.04)  | + .139 (3.53)  | 126                       | + .080 (2.04)  | - .278 (7.07)  |
| 51                                     | + .000 (0.00)  | + .139 (3.53)  | 127                       | + .161 (4.08)  | - .278 (7.07)  |
| 52                                     | + .080 (2.04)  | + .139 (3.53)  | 128                       | + .241 (6.12)  | - .278 (7.07)  |
| 53                                     | + .161 (4.08)  | + .139 (3.53)  | 129                       | + .321 (8.16)  | - .278 (7.07)  |
| 54                                     | + .241 (6.12)  | + .139 (3.53)  | 130                       | + .402 (10.20) | - .278 (7.07)  |
| 55                                     | + .321 (8.16)  | + .139 (3.53)  | 131                       | - .361 (9.18)  | - .348 (8.83)  |
| 56                                     | + .402 (10.20) | + .139 (3.53)  | 132                       | - .281 (7.14)  | - .348 (8.83)  |
| 57                                     | + .482 (12.24) | + .139 (3.53)  | 133                       | - .201 (5.10)  | - .348 (8.83)  |
| 58                                     | - .442 (11.22) | + .070 (1.77)  | 134                       | - .121 (3.06)  | - .348 (8.83)  |
| 59                                     | - .361 (9.18)  | + .070 (1.77)  | 135                       | - .040 (1.02)  | - .348 (8.83)  |
| 60                                     | - .281 (7.14)  | + .070 (1.77)  | 136                       | + .040 (1.02)  | - .348 (8.83)  |
| 61                                     | - .201 (5.10)  | + .070 (1.77)  | 137                       | + .121 (3.06)  | - .348 (8.83)  |
| 62                                     | - .121 (3.06)  | + .070 (1.77)  | 138                       | + .201 (5.10)  | - .348 (8.83)  |
| 63                                     | - .040 (1.02)  | + .070 (1.77)  | 139                       | + .281 (7.14)  | - .348 (8.83)  |
| 64                                     | + .040 (1.02)  | + .070 (1.77)  | 140                       | + .361 (9.18)  | - .348 (8.83)  |
| 65                                     | + .121 (3.06)  | + .070 (1.77)  | 141                       | - .241 (6.12)  | - .417 (10.60) |
| 66                                     | + .201 (5.10)  | + .070 (1.77)  | 142                       | - .161 (4.08)  | - .417 (10.60) |
| 67                                     | + .281 (7.14)  | + .070 (1.77)  | 143                       | - .080 (2.04)  | - .417 (10.60) |
| 68                                     | + .361 (9.18)  | + .070 (1.77)  | 144                       | + .000 (0.00)  | - .417 (10.60) |
| 69                                     | + .442 (11.22) | + .070 (1.77)  | 145                       | + .080 (2.04)  | - .417 (10.60) |
| 70                                     | - .482 (12.24) | + .000 (0.00)  | 146                       | + .161 (4.08)  | - .417 (10.60) |

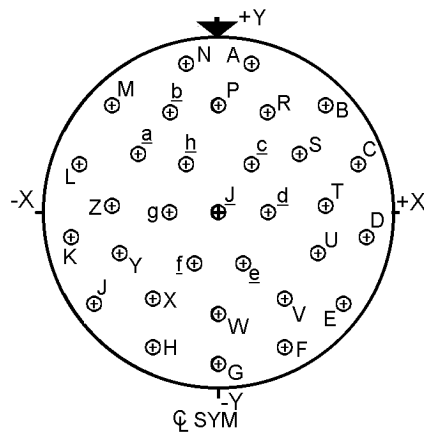
FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-23) |               |              |                     |              |               |
|--|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                    | Location      |              | Contact position ID | Location     |               |
|  | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 71                                     | -.402 (10.20) | +.000 (0.00) | 147                 | +.241 (6.12) | -.417 (10.60) |
| 72                                     | -.321 (8.16)  | +.000 (0.00) | 148                 | -.121 (3.06) | -.487 (12.37) |
| 73                                     | -.241 (6.12)  | +.000 (0.00) | 149                 | -.040 (1.02) | -.487 (12.37) |
| 74                                     | -.161 (4.08)  | +.000 (0.00) | 150                 | +.040 (1.02) | -.487 (12.37) |
| 75                                     | -.080 (2.04)  | +.000 (0.00) | 151                 | +.121 (3.06) | -.487 (12.37) |
| 76                                     | +.000 (0.00)  | +.000 (0.00) | ---                 | ---          | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 23         | -23             | 151                | 23-22         | N              | All              | M39029/122-670   | M39029/121-663 |
|            |                 |                    |               |                |                  |                  |                |

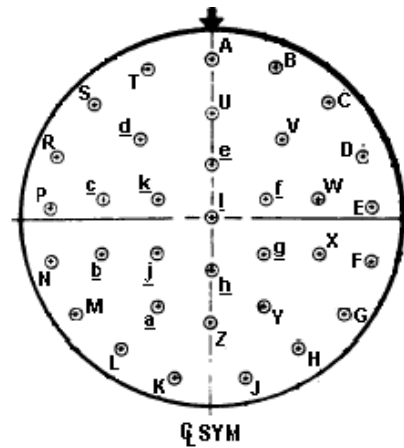
FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-32) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .100 (2.54)  | + .450 (11.43) | T                   | + .325 (8.26) | + .025 (0.64) |
| B                                      | + .325 (8.26)  | + .325 (8.26)  | U                   | + .300 (7.62) | - .125 (3.18) |
| C                                      | + .425 (10.80) | + .150 (3.81)  | V                   | + .200 (5.08) | - .250 (6.35) |
| D                                      | + .450 (11.43) | - .075 (1.91)  | W                   | + .000 (0.00) | - .300 (7.62) |
| E                                      | + .375 (9.53)  | - .275 (6.99)  | X                   | - .200 (5.08) | - .250 (6.35) |
| F                                      | + .200 (5.08)  | - .400 (10.16) | Y                   | - .300 (7.62) | - .125 (3.18) |
| G                                      | + .000 (0.00)  | - .450 (11.43) | Z                   | - .325 (8.26) | + .025 (0.64) |
| H                                      | - .200 (5.08)  | - .400 (10.16) | a                   | - .250 (6.35) | + .175 (4.45) |
| J                                      | - .375 (9.53)  | - .275 (6.99)  | b                   | - .150 (3.81) | + .300 (7.62) |
| K                                      | - .450 (11.43) | - .075 (1.91)  | c                   | + .100 (2.54) | + .150 (3.81) |
| L                                      | - .425 (10.80) | + .150 (3.81)  | d                   | + .150 (3.81) | + .000 (0.00) |
| M                                      | - .325 (8.26)  | + .325 (8.26)  | e                   | + .075 (1.91) | - .150 (3.81) |
| N                                      | - .100 (2.54)  | + .450 (11.43) | f                   | - .075 (1.91) | - .150 (3.81) |
| P                                      | + .000 (0.00)  | + .325 (8.26)  | g                   | - .150 (3.81) | + .000 (0.00) |
| R                                      | + .150 (3.81)  | + .300 (7.62)  | h                   | - .100 (2.54) | + .150 (3.81) |
| S                                      | + .250 (6.35)  | + .175 (4.45)  | j                   | + .000 (0.00) | + .000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -32             | 32                 | 20            | I              | All              | MS20056-32 |

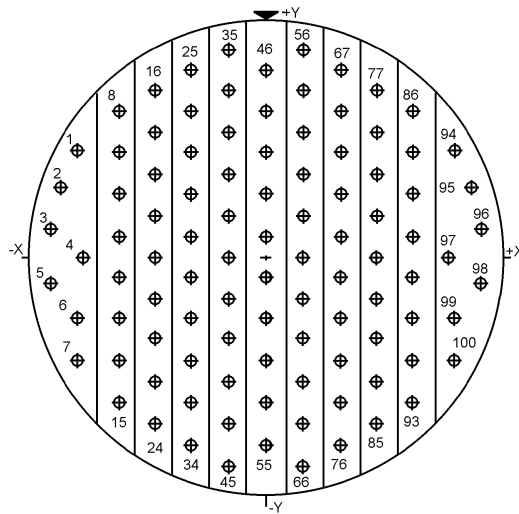
FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-34) |              |              |                     |             |             |
|--|--------------|--------------|---------------------|-------------|-------------|
| Contact position ID                    | Location     |              | Contact position ID | Location    |             |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm) | Y-axis (mm) |
| A                                      | +0.00 (0.00) | +450 (11.43) | U                   | +0.00 (.00) | +300 (7.62) |
| B                                      | +175 (4.45)  | +425 (10.80) | V                   | +200 (5.08) | +225 (5.72) |
| C                                      | +325 (8.26)  | +325 (8.26)  | W                   | +300 (7.62) | +050 (1.27) |
| D                                      | +425 (10.80) | +175 (4.45)  | X                   | +300 (7.62) | -100 (2.54) |
| E                                      | +450 (11.43) | +025 (0.64)  | Y                   | +150 (3.81) | -250 (6.35) |
| F                                      | +450 (11.43) | -125 (3.18)  | Z                   | +000 (0.00) | -300 (7.62) |
| G                                      | +375 (9.53)  | -275 (6.99)  | a                   | -150 (3.81) | -250 (6.35) |
| H                                      | +250 (6.35)  | -375 (9.53)  | b                   | -300 (7.62) | -100 (2.54) |
| J                                      | +100 (2.54)  | -450 (11.43) | c                   | -300 (7.62) | +050 (1.27) |
| K                                      | -100 (2.54)  | -450 (11.43) | d                   | -200 (5.08) | +225 (5.72) |
| L                                      | -250 (6.35)  | -375 (9.53)  | e                   | +000 (0.00) | +150 (3.81) |
| M                                      | -375 (9.53)  | -275 (6.99)  | f                   | +150 (3.81) | +050 (1.27) |
| N                                      | -450 (11.43) | -125 (3.18)  | g                   | +150 (3.81) | -100 (2.54) |
| P                                      | -450 (11.43) | +025 (0.64)  | h                   | +000 (0.00) | -150 (3.81) |
| R                                      | -425 (10.80) | +175 (4.45)  | i                   | -150 (3.81) | -100 (2.54) |
| S                                      | -325 (8.26)  | +325 (8.26)  | k                   | -150 (3.81) | +050 (1.27) |
| T                                      | -175 (4.45)  | +425 (10.80) | l                   | +000 (0.00) | +000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -34             | 34                 | 20            | I              | All              | MS20056-34 |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-35) |               |              |                     |              |               |
|--|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                    | Location      |              | Contact position ID | Location     |               |
|  | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                      | -.428 (10.87) | +.241 (6.12) | 51                  | +.000 (0.00) | -.047 (1.19)  |
| 2                                      | -.467 (11.86) | +.154 (3.91) | 52                  | +.000 (0.00) | -.142 (3.61)  |
| 3                                      | -.488 (12.40) | +.061 (1.55) | 53                  | +.000 (0.00) | -.237 (6.02)  |
| 4                                      | -.415 (10.54) | +.000 (0.00) | 54                  | +.000 (0.00) | -.332 (8.43)  |
| 5                                      | -.488 (12.40) | -.061 (1.55) | 55                  | +.000 (0.00) | -.427 (10.85) |
| 6                                      | -.428 (10.87) | -.142 (3.61) | 56                  | +.083 (2.11) | +.475 (12.07) |
| 7                                      | -.428 (10.87) | -.237 (6.02) | 57                  | +.083 (2.11) | +.380 (9.65)  |
| 8                                      | -.332 (8.43)  | +.333 (8.46) | 58                  | +.083 (2.11) | +.285 (7.24)  |
| 9                                      | -.332 (8.43)  | +.238 (6.05) | 59                  | +.083 (2.11) | +.190 (4.83)  |
| 10                                     | -.332 (8.43)  | +.143 (3.63) | 60                  | +.083 (2.11) | +.095 (2.41)  |
| 11                                     | -.332 (8.43)  | +.048 (1.22) | 61                  | +.083 (2.11) | +.000 (0.00)  |
| 12                                     | -.332 (8.43)  | -.047 (1.19) | 62                  | +.083 (2.11) | -.095 (2.41)  |
| 13                                     | -.332 (8.43)  | -.142 (3.61) | 63                  | +.083 (2.11) | -.190 (4.83)  |
| 14                                     | -.332 (8.43)  | -.237 (6.02) | 64                  | +.083 (2.11) | -.285 (7.24)  |
| 15                                     | -.332 (8.43)  | -.332 (8.43) | 65                  | +.083 (2.11) | -.380 (9.65)  |
| 16                                     | -.249 (6.32)  | +.380 (9.65) | 66                  | +.083 (2.11) | -.475 (12.07) |
| 17                                     | -.249 (6.32)  | +.285 (7.24) | 67                  | +.166 (4.22) | +.428 (10.87) |
| 18                                     | -.249 (6.32)  | +.190 (4.83) | 68                  | +.166 (4.22) | +.333 (8.46)  |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-35) |              |               |                     |               |               |
|--|--------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location     |               | Contact position ID | Location      |               |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 19                                     | -.249 (6.32) | +.095 (2.41)  | 69                  | +.166 (4.22)  | +.238 (6.05)  |
| 20                                     | -.249 (6.32) | +.000 (0.00)  | 70                  | +.166 (4.22)  | +.143 (3.63)  |
| 21                                     | -.249 (6.32) | -.095 (2.41)  | 71                  | +.166 (4.22)  | +.048 (1.22)  |
| 22                                     | -.249 (6.32) | -.190 (4.83)  | 72                  | +.166 (4.22)  | -.047 (1.19)  |
| 23                                     | -.249 (6.32) | -.285 (7.24)  | 73                  | +.166 (4.22)  | -.142 (3.61)  |
| 24                                     | -.249 (6.32) | -.380 (9.65)  | 74                  | +.166 (4.22)  | -.237 (6.02)  |
| 25                                     | -.166 (4.22) | +.428 (10.87) | 75                  | +.166 (4.22)  | -.332 (8.43)  |
| 26                                     | -.166 (4.22) | +.333 (8.46)  | 76                  | +.166 (4.22)  | -.427 (10.85) |
| 27                                     | -.166 (4.22) | +.238 (6.05)  | 77                  | +.249 (6.32)  | +.380 (9.65)  |
| 28                                     | -.166 (4.22) | +.143 (3.63)  | 78                  | +.249 (6.32)  | +.285 (7.24)  |
| 29                                     | -.166 (4.22) | +.048 (1.22)  | 79                  | +.249 (6.32)  | +.190 (4.83)  |
| 30                                     | -.166 (4.22) | -.047 (1.19)  | 80                  | +.249 (6.32)  | +.095 (2.41)  |
| 31                                     | -.166 (4.22) | -.142 (3.61)  | 81                  | +.249 (6.32)  | +.000 (0.00)  |
| 32                                     | -.166 (4.22) | -.237 (6.02)  | 82                  | +.249 (6.32)  | -.095 (2.41)  |
| 33                                     | -.166 (4.22) | -.332 (8.43)  | 83                  | +.249 (6.32)  | -.190 (4.83)  |
| 34                                     | -.166 (4.22) | -.427 (10.85) | 84                  | +.249 (6.32)  | -.285 (7.24)  |
| 35                                     | -.083 (2.11) | +.475 (12.07) | 85                  | +.249 (6.32)  | -.380 (9.65)  |
| 36                                     | -.083 (2.11) | +.380 (9.65)  | 86                  | +.332 (8.43)  | +.333 (8.46)  |
| 37                                     | -.083 (2.11) | +.285 (7.24)  | 87                  | +.332 (8.43)  | +.238 (6.05)  |
| 38                                     | -.083 (2.11) | +.190 (4.83)  | 88                  | +.332 (8.43)  | +.143 (3.63)  |
| 39                                     | -.083 (2.11) | +.095 (2.41)  | 89                  | +.332 (8.43)  | +.048 (1.22)  |
| 40                                     | -.083 (2.11) | +.000 (0.00)  | 90                  | +.332 (8.43)  | -.047 (1.19)  |
| 41                                     | -.083 (2.11) | -.095 (2.41)  | 91                  | +.332 (8.43)  | -.142 (3.61)  |
| 42                                     | -.083 (2.11) | -.190 (4.83)  | 92                  | +.332 (8.43)  | -.237 (6.02)  |
| 43                                     | -.083 (2.11) | -.285 (7.24)  | 93                  | +.332 (8.43)  | -.332 (8.43)  |
| 44                                     | -.083 (2.11) | -.380 (9.65)  | 94                  | +.428 (10.87) | +.241 (6.12)  |
| 45                                     | -.083 (2.11) | -.475 (12.07) | 95                  | +.467 (11.86) | +.154 (3.91)  |
| 46                                     | +.000 (0.00) | +.428 (10.87) | 96                  | +.488 (12.40) | +.061 (1.55)  |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

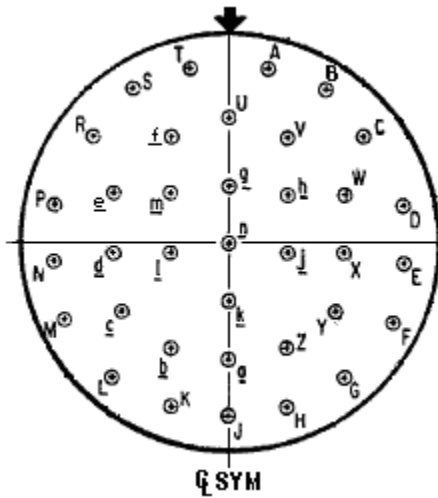
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-35) |               |               |                     |                |               |
|--|---------------|---------------|---------------------|----------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location       |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)    | Y-axis (mm)   |
| 47                                     | +0.00 (0.00)  | +0.333 (8.46) | 97                  | +0.415 (10.54) | +0.000 (0.00) |
| 48                                     | +0.000 (0.00) | +0.238 (6.05) | 98                  | +0.488 (12.40) | -0.061 (1.55) |
| 49                                     | +0.000 (0.00) | +0.143 (3.63) | 99                  | +0.428 (10.87) | -0.142 (3.61) |
| 50                                     | +0.000 (0.00) | +0.048 (1.22) | 100                 | +0.428 (10.87) | -0.237 (6.02) |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -35             | 100                | 22D           | M              | All              | MS27532-35 |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-36) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| A                                      | +1.00 (2.54)  | +4.50 (11.43) | V                   | +1.50 (3.81) | +2.75 (6.99) |
| B                                      | +2.50 (6.35)  | +4.00 (10.16) | W                   | +3.00 (7.62) | +1.25 (3.18) |
| C                                      | +3.50 (8.89)  | +2.75 (6.99)  | X                   | +3.00 (7.62) | -.025 (0.64) |
| D                                      | +4.50 (11.43) | +1.00 (2.54)  | Y                   | +2.75 (6.99) | -.175 (4.45) |
| E                                      | +4.50 (11.43) | -.050 (1.27)  | Z                   | +1.50 (3.81) | -.275 (6.99) |
| F                                      | +4.25 (10.80) | -.200 (5.08)  | a                   | +0.00 (0.00) | -.300 (7.62) |
| G                                      | +3.00 (7.62)  | -.350 (8.89)  | b                   | -.150 (3.81) | -.275 (6.99) |
| H                                      | +1.50 (3.81)  | -.425 (10.80) | c                   | -.275 (6.99) | -.175 (4.45) |
| J                                      | +0.00 (0.00)  | -.450 (11.43) | d                   | -.300 (7.62) | -.025 (0.64) |
| K                                      | -.150 (3.81)  | -.425 (10.80) | e                   | -.300 (7.62) | +1.25 (3.18) |
| L                                      | -.300 (7.62)  | -.350 (8.89)  | f                   | -.150 (3.81) | +2.75 (6.99) |
| M                                      | -.425 (10.80) | -.200 (5.08)  | g                   | +0.00 (.00)  | +1.50 (3.81) |
| N                                      | -.450 (11.43) | -.050 (1.27)  | h                   | +1.50 (3.81) | +1.25 (3.18) |
| P                                      | -.450 (11.43) | +1.00 (2.54)  | i                   | +1.50 (3.81) | -.025 (0.64) |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

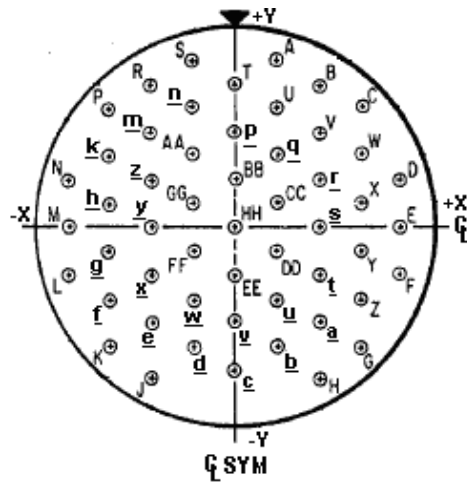


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-36) |              |               |                     |              |              |
|--|--------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |               | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| R                                      | -.350 (8.89) | +.275 (6.99)  | <u>k</u>            | +.000 (0.00) | -.150 (3.81) |
| S                                      | -.250 (6.35) | +.400 (10.16) | <u>l</u>            | -.150 (3.81) | -.025 (0.64) |
| T                                      | -.100 (2.54) | +.450 (11.43) | <u>m</u>            | -.150 (3.81) | +.125 (3.18) |
| U                                      | +.000 (0.00) | +.325 (8.26)  | <u>n</u>            | +.000 (0.00) | +.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -36             | 36                 | 20            | I              | All              | MS20056-36 |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-53) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .112 (2.84)  | + .455 (11.56) | e                   | - .225 (5.72) | - .260 (6.60) |
| B                                      | + .225 (5.72)  | + .390 (9.91)  | f                   | - .336 (8.53) | - .195 (4.95) |
| C                                      | + .336 (8.53)  | + .325 (8.26)  | g                   | - .336 (8.53) | - .065 (1.65) |
| D                                      | + .450 (11.43) | + .130 (3.30)  | h                   | - .336 (8.53) | + .065 (1.65) |
| E                                      | + .450 (11.43) | + .000 (0.00)  | k                   | - .336 (8.53) | + .195 (4.95) |
| F                                      | + .450 (11.43) | - .130 (3.30)  | m                   | - .225 (5.72) | + .260 (6.60) |
| G                                      | + .336 (8.53)  | - .325 (8.26)  | n                   | - .112 (2.84) | + .325 (8.26) |
| H                                      | + .225 (5.72)  | - .410 (10.41) | p                   | + .000 (0.00) | + .260 (6.60) |
| J                                      | - .225 (5.72)  | - .410 (10.41) | q                   | + .112 (2.84) | + .195 (4.95) |
| K                                      | - .336 (8.53)  | - .325 (8.26)  | r                   | + .225 (5.72) | + .130 (3.30) |
| L                                      | - .450 (11.43) | - .130 (3.30)  | s                   | + .225 (5.72) | + .000 (0.00) |
| M                                      | - .450 (11.43) | + .000 (0.00)  | t                   | + .225 (5.72) | - .130 (3.30) |
| N                                      | - .450 (11.43) | + .130 (3.30)  | u                   | + .112 (2.84) | - .195 (4.95) |
| P                                      | - .336 (8.53)  | + .325 (8.26)  | v                   | + .000 (0.00) | - .260 (6.60) |
| R                                      | - .225 (5.72)  | + .390 (9.91)  | w                   | - .112 (2.84) | - .195 (4.95) |
| S                                      | - .112 (2.84)  | + .455 (11.56) | x                   | - .225 (5.72) | - .130 (3.30) |
| T                                      | + .000 (0.00)  | + .390 (9.91)  | y                   | - .225 (5.72) | + .000 (0.00) |
| U                                      | + .112 (2.84)  | + .325 (8.26)  | z                   | - .225 (5.72) | + .130 (3.30) |
| V                                      | + .225 (5.72)  | + .260 (6.60)  | AA                  | - .112 (2.84) | + .195 (4.95) |

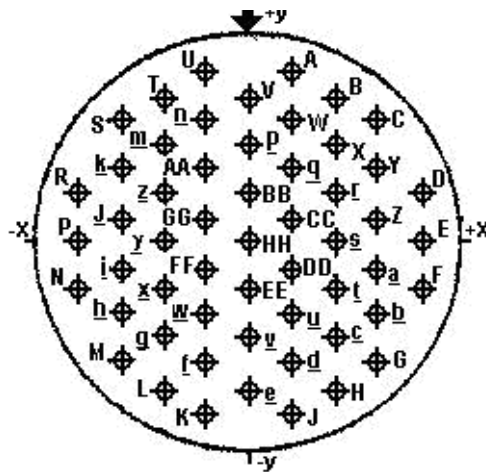
FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-53) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| W                                      | +0.336 (8.53) | +0.195 (4.95) | BB                  | +0.000 (0.00) | +0.130 (3.30) |
| X                                      | +0.336 (8.53) | +0.065 (1.65) | CC                  | +0.112 (2.84) | +0.065 (1.65) |
| Y                                      | +0.336 (8.53) | -0.065 (1.65) | DD                  | +0.112 (2.84) | -0.065 (1.65) |
| Z                                      | +0.336 (8.53) | -0.195 (4.95) | EE                  | +0.000 (0.00) | -0.130 (3.30) |
| a                                      | +0.225 (5.72) | -0.260 (6.60) | FF                  | -0.112 (2.84) | -0.065 (1.65) |
| b                                      | +0.112 (2.84) | -0.325 (8.26) | GG                  | -0.112 (2.84) | +0.065 (1.65) |
| c                                      | +0.000 (0.00) | -0.390 (9.91) | HH                  | +0.000 (0.00) | +0.000 (0.00) |
| d                                      | -0.112 (2.84) | -0.325 (8.26) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -53             | 53                 | 20            | I              | All              | MS20056-53 |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-55) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .112 (2.84)  | + .455 (11.56) | f                   | - .112 (2.84) | - .325 (8.26) |
| B                                      | + .225 (5.72)  | + .390 (9.91)  | g                   | - .225 (5.72) | - .260 (6.60) |
| C                                      | + .336 (8.53)  | + .325 (8.26)  | h                   | - .336 (8.53) | - .195 (4.95) |
| D                                      | + .450 (11.43) | + .130 (3.30)  | i                   | - .336 (8.53) | - .065 (1.65) |
| E                                      | + .450 (11.43) | + .000 (0.00)  | j                   | - .336 (8.53) | + .065 (1.65) |
| F                                      | + .450 (11.43) | - .130 (3.30)  | k                   | - .336 (8.53) | + .195 (4.95) |
| G                                      | + .336 (8.53)  | - .325 (8.26)  | m                   | - .225 (5.72) | + .260 (6.60) |
| H                                      | + .225 (5.72)  | - .390 (9.91)  | n                   | - .112 (2.84) | + .325 (8.26) |
| J                                      | + .112 (2.84)  | - .455 (11.56) | p                   | + .000 (0.00) | + .260 (6.60) |
| K                                      | - .112 (2.84)  | - .455 (11.56) | q                   | + .112 (2.84) | + .195 (4.95) |
| L                                      | - .225 (5.72)  | - .390 (9.91)  | r                   | + .225 (5.72) | + .130 (3.30) |
| M                                      | - .336 (8.53)  | - .325 (8.26)  | s                   | + .225 (5.72) | + .000 (0.00) |
| N                                      | - .450 (11.43) | - .130 (3.30)  | t                   | + .225 (5.72) | - .130 (3.30) |
| P                                      | - .450 (11.43) | + .000 (0.00)  | u                   | + .112 (2.84) | - .195 (4.95) |
| R                                      | - .450 (11.43) | + .130 (3.30)  | v                   | + .000 (0.00) | - .260 (6.60) |
| S                                      | - .336 (8.53)  | + .325 (8.26)  | w                   | - .112 (2.84) | - .195 (4.95) |
| T                                      | - .225 (5.72)  | + .390 (9.91)  | x                   | - .225 (5.72) | - .130 (3.30) |
| U                                      | - .112 (2.84)  | + .455 (11.56) | y                   | - .225 (5.72) | + .000 (0.00) |
| V                                      | + .000 (0.00)  | + .390 (9.91)  | z                   | - .225 (5.72) | + .130 (3.30) |

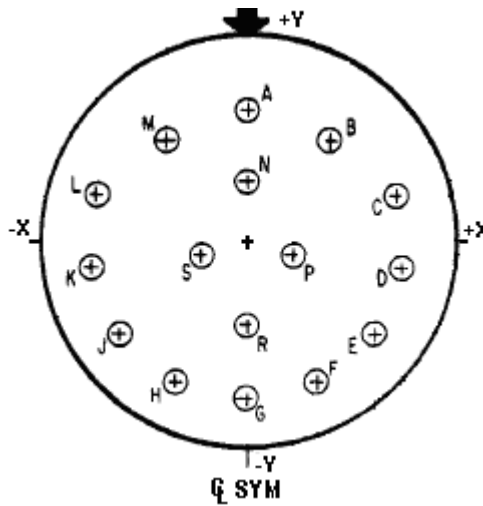
FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-55) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| W                                      | + .112 (2.84) | + .325 (8.26) | AA                  | - .112 (2.84) | + .195 (4.95) |
| X                                      | + .225 (5.72) | + .260 (6.60) | BB                  | + .000 (0.00) | + .130 (3.30) |
| Y                                      | + .336 (8.53) | + .195 (4.95) | CC                  | + .112 (2.84) | + .065 (1.65) |
| Z                                      | + .336 (8.53) | + .065 (1.65) | DD                  | + .112 (2.84) | - .065 (1.65) |
| <u>a</u>                               | + .336 (8.53) | - .065 (1.65) | EE                  | + .000 (0.00) | - .130 (3.30) |
| <u>b</u>                               | + .336 (8.53) | - .195 (4.95) | FF                  | - .112 (2.84) | - .065 (1.65) |
| <u>c</u>                               | + .225 (5.72) | - .260 (6.60) | GG                  | - .112 (2.84) | + .065 (1.65) |
| <u>d</u>                               | + .112 (2.84) | - .325 (8.26) | HH                  | + .000 (0.00) | + .000 (0.00) |
| <u>e</u>                               | + .000 (0.00) | - .390 (9.91) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -55             | 55                 | 20            | I              | All              | ----       |

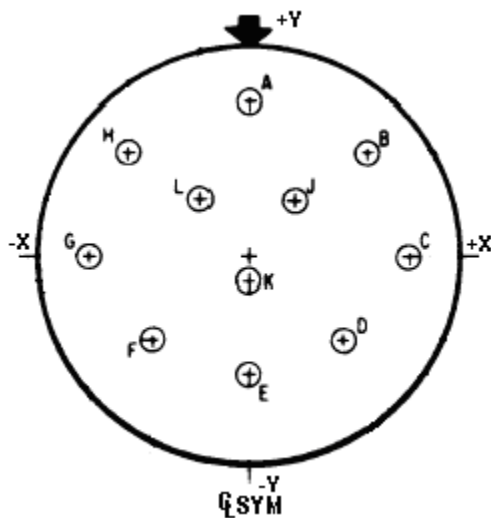
FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-97) |                |                |                     |                |               |
|--|----------------|----------------|---------------------|----------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)   |
| A                                      | +0.00 (0.00)   | +0.344 (8.74)  | J                   | -0.328 (8.33)  | -0.239 (6.07) |
| B                                      | +0.210 (5.33)  | +0.270 (6.86)  | K                   | -0.400 (10.16) | -0.065 (1.65) |
| C                                      | +0.386 (9.80)  | +0.123 (3.12)  | L                   | -0.386 (9.80)  | +0.123 (3.12) |
| D                                      | +0.400 (10.16) | -0.065 (1.65)  | M                   | -0.210 (5.33)  | +0.270 (6.86) |
| E                                      | +0.328 (8.33)  | -0.239 (6.07)  | N                   | +0.000 (0.00)  | +0.156 (3.96) |
| F                                      | +0.183 (4.65)  | -0.362 (9.19)  | P                   | +0.120 (3.05)  | -0.030 (0.76) |
| G                                      | +0.000 (0.00)  | -0.406 (10.31) | R                   | +0.000 (0.00)  | -0.218 (5.54) |
| H                                      | -0.183 (4.65)  | -0.362 (9.19)  | S                   | -0.120 (3.05)  | -0.030 (0.76) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -97             | 16                 | 16            | I              | All              | MS20056-97 |

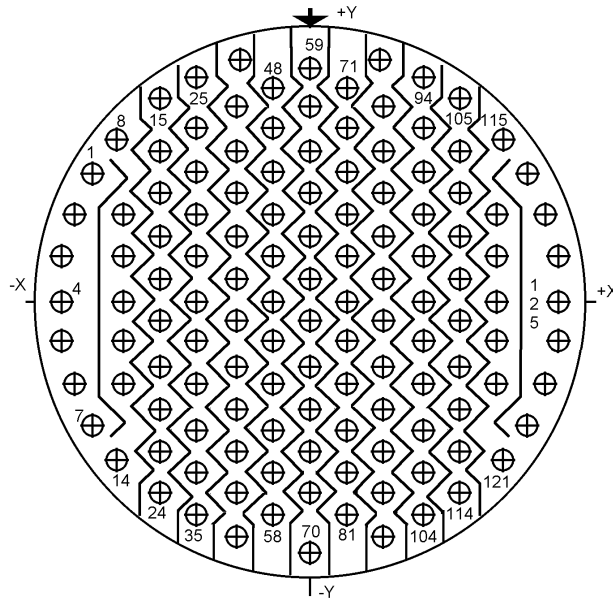
FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 23-99) |                |                |                     |                |               |
|--|----------------|----------------|---------------------|----------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)   |
| A                                      | +0.000 (0.00)  | +0.404 (10.26) | G                   | -0.404 (10.26) | +0.000 (0.00) |
| B                                      | +0.300 (7.62)  | +0.270 (6.86)  | H                   | -0.300 (7.62)  | +0.270 (6.86) |
| C                                      | +0.404 (10.26) | +0.000 (0.00)  | J                   | +0.120 (3.05)  | +0.150 (3.81) |
| D                                      | +0.240 (6.10)  | -0.210 (5.33)  | K                   | +0.000 (0.00)  | -0.060 (1.52) |
| E                                      | +0.000 (0.00)  | -0.300 (7.62)  | L                   | -0.120 (3.05)  | +0.150 (3.81) |
| F                                      | -0.240 (6.10)  | -0.210 (5.33)  | ---                 | ---            | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 23         | -99             | 11                 | 16            | II             | All              | MS20056-99 |

FIGURE 8. Insert arrangement, electrical connector, shell size 23 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-1) |               |               |                     |              |               |
|---------------------------------------|---------------|---------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.479 (12.17) | +.279 (7.09)  | 65                  | +.000 (0.00) | -.047 (1.19)  |
| 2                                     | -.520 (13.21) | +.190 (4.83)  | 66                  | +.000 (0.00) | -.142 (3.61)  |
| 3                                     | -.546 (13.87) | +.095 (2.41)  | 67                  | +.000 (0.00) | -.237 (6.02)  |
| 4                                     | -.555 (14.10) | +.000 (0.00)  | 68                  | +.000 (0.00) | -.332 (8.43)  |
| 5                                     | -.546 (13.87) | -.095 (2.41)  | 69                  | +.000 (0.00) | -.427 (10.85) |
| 6                                     | -.520 (13.21) | -.190 (4.83)  | 70                  | +.000 (0.00) | -.555 (14.10) |
| 7                                     | -.479 (12.17) | -.279 (7.09)  | 71                  | +.083 (2.11) | +.475 (12.07) |
| 8                                     | -.424 (10.77) | +.357 (9.07)  | 72                  | +.083 (2.11) | +.380 (9.65)  |
| 9                                     | -.415 (10.54) | +.190 (4.83)  | 73                  | +.083 (2.11) | +.285 (7.24)  |
| 10                                    | -.415 (10.54) | +.095 (2.41)  | 74                  | +.083 (2.11) | +.190 (4.83)  |
| 11                                    | -.415 (10.54) | +.000 (0.00)  | 75                  | +.083 (2.11) | +.095 (2.41)  |
| 12                                    | -.415 (10.54) | -.095 (2.41)  | 76                  | +.083 (2.11) | +.000 (0.00)  |
| 13                                    | -.415 (10.54) | -.190 (4.83)  | 77                  | +.083 (2.11) | -.095 (2.41)  |
| 14                                    | -.424 (10.77) | -.357 (9.07)  | 78                  | +.083 (2.11) | -.190 (4.83)  |
| 15                                    | -.332 (8.43)  | +.444 (11.28) | 79                  | +.083 (2.11) | -.285 (7.24)  |
| 16                                    | -.332 (8.43)  | +.332 (8.43)  | 80                  | +.083 (2.11) | -.380 (9.65)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600).



MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-1) |              |               |                     |              |               |
|---------------------------------------|--------------|---------------|---------------------|--------------|---------------|
| Contact position ID                   | Location     |               | Contact position ID | Location     |               |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)   |
| 17                                    | -.332 (8.43) | +.237 (6.02)  | 81                  | +.083 (2.11) | -.475 (12.07) |
| 18                                    | -.332 (8.43) | +.142 (3.61)  | 82                  | +.160 (4.06) | +.531 (13.49) |
| 19                                    | -.332 (8.43) | +.047 (1.19)  | 83                  | +.166 (4.22) | +.427 (10.85) |
| 20                                    | -.332 (8.43) | -.047 (1.19)  | 84                  | +.166 (4.22) | +.332 (8.43)  |
| 21                                    | -.332 (8.43) | -.142 (3.61)  | 85                  | +.166 (4.22) | +.237 (6.02)  |
| 22                                    | -.332 (8.43) | -.237 (6.02)  | 86                  | +.166 (4.22) | +.142 (3.61)  |
| 23                                    | -.332 (8.43) | -.332 (8.43)  | 87                  | +.166 (4.22) | +.047 (1.19)  |
| 24                                    | -.332 (8.43) | -.427 (10.85) | 88                  | +.166 (4.22) | -.047 (1.19)  |
| 25                                    | -.249 (6.32) | +.496 (12.60) | 89                  | +.166 (4.22) | -.142 (3.61)  |
| 26                                    | -.249 (6.32) | +.380 (9.65)  | 90                  | +.166 (4.22) | -.237 (6.02)  |
| 27                                    | -.249 (6.32) | +.285 (7.24)  | 91                  | +.166 (4.22) | -.332 (8.43)  |
| 28                                    | -.249 (6.32) | +.190 (4.83)  | 92                  | +.166 (4.22) | -.427 (10.85) |
| 29                                    | -.249 (6.32) | +.095 (2.41)  | 93                  | +.166 (4.22) | -.522 (13.26) |
| 30                                    | -.249 (6.32) | +.000 (0.00)  | 94                  | +.249 (6.32) | +.496 (12.60) |
| 31                                    | -.249 (6.32) | -.095 (2.41)  | 95                  | +.249 (6.32) | +.380 (9.65)  |
| 32                                    | -.249 (6.32) | -.190 (4.83)  | 96                  | +.249 (6.32) | +.285 (7.24)  |
| 33                                    | -.249 (6.32) | -.285 (7.24)  | 97                  | +.249 (6.32) | +.190 (4.83)  |
| 34                                    | -.249 (6.32) | -.380 (9.65)  | 98                  | +.249 (6.32) | +.095 (2.41)  |
| 35                                    | -.249 (6.32) | -.475 (12.07) | 99                  | +.249 (6.32) | +.000 (0.00)  |
| 36                                    | -.160 (4.06) | +.531 (13.49) | 100                 | +.249 (6.32) | -.095 (2.41)  |
| 37                                    | -.166 (4.22) | +.427 (10.85) | 101                 | +.249 (6.32) | -.190 (4.83)  |
| 38                                    | -.166 (4.22) | +.332 (8.43)  | 102                 | +.249 (6.32) | -.285 (7.24)  |
| 39                                    | -.166 (4.22) | +.237 (6.02)  | 103                 | +.249 (6.32) | -.380 (9.65)  |
| 40                                    | -.166 (4.22) | +.142 (3.61)  | 104                 | +.249 (6.32) | -.475 (12.07) |
| 41                                    | -.166 (4.22) | +.047 (1.19)  | 105                 | +.332 (8.43) | +.444 (11.28) |
| 42                                    | -.166 (4.22) | -.047 (1.19)  | 106                 | +.332 (8.43) | +.332 (8.43)  |
| 43                                    | -.166 (4.22) | -.142 (3.61)  | 107                 | +.332 (8.43) | +.237 (6.02)  |
| 44                                    | -.166 (4.22) | -.237 (6.02)  | 108                 | +.332 (8.43) | +.142 (3.61)  |
| 45                                    | -.166 (4.22) | -.332 (8.43)  | 109                 | +.332 (8.43) | +.047 (1.19)  |
| 46                                    | -.166 (4.22) | -.427 (10.85) | 110                 | +.332 (8.43) | -.047 (1.19)  |
| 47                                    | -.166 (4.22) | -.522 (13.26) | 111                 | +.332 (8.43) | -.142 (3.61)  |
| 48                                    | -.083 (2.11) | +.475 (12.07) | 112                 | +.332 (8.43) | -.237 (6.02)  |
| 49                                    | -.083 (2.11) | +.380 (9.65)  | 113                 | +.332 (8.43) | -.332 (8.43)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

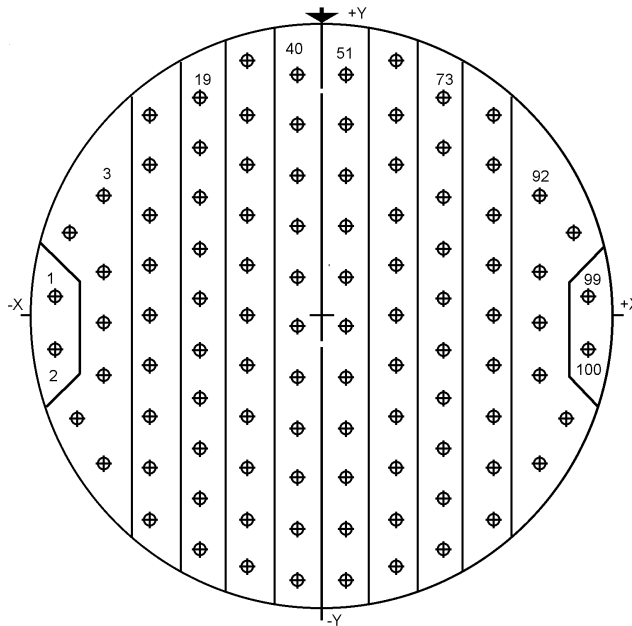
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-1) |              |               |                     |               |               |
|---------------------------------------|--------------|---------------|---------------------|---------------|---------------|
| Contact position ID                   | Location     |               | Contact position ID | Location      |               |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 50                                    | -.083 (2.11) | +.285 (7.24)  | 114                 | +.332 (8.43)  | -.427 (10.85) |
| 51                                    | -.083 (2.11) | +.190 (4.83)  | 115                 | +.424 (10.77) | +.357 (9.07)  |
| 52                                    | -.083 (2.11) | +.095 (2.41)  | 116                 | +.415 (10.54) | +.190 (4.83)  |
| 53                                    | -.083 (2.11) | +.000 (0.00)  | 117                 | +.415 (10.54) | +.095 (2.41)  |
| 54                                    | -.083 (2.11) | -.095 (2.41)  | 118                 | +.415 (10.54) | +.000 (0.00)  |
| 55                                    | -.083 (2.11) | -.190 (4.83)  | 119                 | +.415 (10.54) | -.095 (2.41)  |
| 56                                    | -.083 (2.11) | -.285 (7.24)  | 120                 | +.415 (10.54) | -.190 (4.83)  |
| 57                                    | -.083 (2.11) | -.380 (9.65)  | 121                 | +.424 (10.77) | -.357 (9.07)  |
| 58                                    | -.083 (2.11) | -.475 (12.07) | 122                 | +.479 (12.17) | +.279 (7.09)  |
| 59                                    | +.000 (0.00) | +.522 (13.26) | 123                 | +.520 (13.21) | +.190 (4.83)  |
| 60                                    | +.000 (0.00) | +.427 (10.85) | 124                 | +.546 (13.87) | +.095 (2.41)  |
| 61                                    | +.000 (0.00) | +.332 (8.43)  | 125                 | +.555 (14.10) | +.000 (0.00)  |
| 62                                    | +.000 (0.00) | +.237 (6.02)  | 126                 | +.546 (13.87) | -.095 (2.41)  |
| 63                                    | +.000 (0.00) | +.142 (3.61)  | 127                 | +.520 (13.21) | -.190 (4.83)  |
| 64                                    | +.000 (0.00) | +.047 (1.19)  | 128                 | +.479 (12.17) | -.279 (7.09)  |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 25         | -1              | 128                | 22M           | M              | All              | MS20057-1  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-2) |               |               |                     |              |               |
|---------------------------------------|---------------|---------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.550 (13.97) | +.039 (.99)   | 51                  | +.053 (1.35) | +.502 (12.75) |
| 2                                     | -.550 (13.97) | -.068 (1.73)  | 52                  | +.053 (1.35) | +.397 (10.08) |
| 3                                     | -.459 (11.66) | +.253 (6.43)  | 53                  | +.053 (1.35) | +.292 (7.42)  |
| 4                                     | -.523 (13.28) | +.175 (4.45)  | 54                  | +.053 (1.35) | +.187 (4.75)  |
| 5                                     | -.459 (11.66) | +.092 (2.34)  | 55                  | +.053 (1.35) | +.082 (2.08)  |
| 6                                     | -.459 (11.66) | -.014 (0.36)  | 56                  | +.053 (1.35) | -.023 (0.58)  |
| 7                                     | -.459 (11.66) | -.122 (3.10)  | 57                  | +.053 (1.35) | -.128 (3.25)  |
| 8                                     | -.509 (12.93) | -.215 (5.46)  | 58                  | +.053 (1.35) | -.233 (5.92)  |
| 9                                     | -.459 (11.66) | -.307 (7.80)  | 59                  | +.053 (1.35) | -.338 (8.59)  |
| 10                                    | -.354 (8.99)  | +.420 (10.67) | 60                  | +.053 (1.35) | -.443 (11.25) |
| 11                                    | -.354 (8.99)  | +.315 (8.00)  | 61                  | +.053 (1.35) | -.548 (13.92) |
| 12                                    | -.354 (8.99)  | +.210 (5.33)  | 62                  | +.154 (3.91) | +.525 (13.34) |
| 13                                    | -.354 (8.99)  | +.105 (2.67)  | 63                  | +.154 (3.91) | +.420 (10.67) |
| 14                                    | -.354 (8.99)  | +.000 (0.00)  | 64                  | +.154 (3.91) | +.315 (8.00)  |
| 15                                    | -.354 (8.99)  | -.105 (2.67)  | 65                  | +.154 (3.91) | +.210 (5.33)  |
| 16                                    | -.354 (8.99)  | -.210 (5.33)  | 66                  | +.154 (3.91) | +.105 (2.67)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-2) |              |               |                     |               |               |
|---------------------------------------|--------------|---------------|---------------------|---------------|---------------|
| Contact position ID                   | Location     |               | Contact position ID | Location      |               |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 17                                    | -.354 (8.99) | -.315 (8.00)  | 67                  | +.154 (3.91)  | +0.000 (0.00) |
| 18                                    | -.354 (8.99) | -.420 (10.67) | 68                  | +.154 (3.91)  | -.105 (2.67)  |
| 19                                    | -.255 (6.48) | +.457 (11.61) | 69                  | +.154 (3.91)  | -.210 (5.33)  |
| 20                                    | -.255 (6.48) | +.352 (8.94)  | 70                  | +.154 (3.91)  | -.315 (8.00)  |
| 21                                    | -.255 (6.48) | +.247 (6.27)  | 71                  | +.154 (3.91)  | -.420 (10.67) |
| 22                                    | -.255 (6.48) | +.142 (3.61)  | 72                  | +.154 (3.91)  | -.525 (13.34) |
| 23                                    | -.255 (6.48) | +.037 (0.94)  | 73                  | +.255 (6.48)  | +.457 (11.61) |
| 24                                    | -.255 (6.48) | -.068 (1.73)  | 74                  | +.255 (6.48)  | +.352 (8.94)  |
| 25                                    | -.255 (6.48) | -.173 (4.39)  | 75                  | +.255 (6.48)  | +.247 (6.27)  |
| 26                                    | -.255 (6.48) | -.278 (7.06)  | 76                  | +.255 (6.48)  | +.142 (3.61)  |
| 27                                    | -.255 (6.48) | -.383 (9.73)  | 77                  | +.255 (6.48)  | +.037 (0.94)  |
| 28                                    | -.255 (6.48) | -.488 (12.40) | 78                  | +.255 (6.48)  | -.068 (1.73)  |
| 29                                    | -.154 (3.91) | +.525 (13.34) | 79                  | +.255 (6.48)  | -.173 (4.39)  |
| 30                                    | -.154 (3.91) | +.420 (10.67) | 80                  | +.255 (6.48)  | -.278 (7.06)  |
| 31                                    | -.154 (3.91) | +.315 (8.00)  | 81                  | +.255 (6.48)  | -.383 (9.73)  |
| 32                                    | -.154 (3.91) | +.210 (5.33)  | 82                  | +.255 (6.48)  | -.488 (12.40) |
| 33                                    | -.154 (3.91) | +.105 (2.67)  | 83                  | +.354 (8.99)  | +.420 (10.67) |
| 34                                    | -.154 (3.91) | +0.000 (0.00) | 84                  | +.354 (8.99)  | +.315 (8.00)  |
| 35                                    | -.154 (3.91) | -.105 (2.67)  | 85                  | +.354 (8.99)  | +.210 (5.33)  |
| 36                                    | -.154 (3.91) | -.210 (5.33)  | 86                  | +.354 (8.99)  | +.105 (2.67)  |
| 37                                    | -.154 (3.91) | -.315 (8.00)  | 87                  | +.354 (8.99)  | +0.000 (0.00) |
| 38                                    | -.154 (3.91) | -.420 (10.67) | 88                  | +.354 (8.99)  | -.105 (2.67)  |
| 39                                    | -.154 (3.91) | -.525 (13.34) | 89                  | +.354 (8.99)  | -.210 (5.33)  |
| 40                                    | -.053 (1.35) | +.502 (12.75) | 90                  | +.354 (8.99)  | -.315 (8.00)  |
| 41                                    | -.053 (1.35) | +.397 (10.08) | 91                  | +.354 (8.99)  | -.420 (10.67) |
| 42                                    | -.053 (1.35) | +.292 (7.42)  | 92                  | +.459 (11.66) | +.253 (6.43)  |
| 43                                    | -.053 (1.35) | +.187 (4.75)  | 93                  | +.523 (13.28) | +.175 (4.45)  |
| 44                                    | -.053 (1.35) | +.082 (2.08)  | 94                  | +.459 (11.66) | +.092 (2.34)  |
| 45                                    | -.053 (1.35) | -.023 (0.58)  | 95                  | +.459 (11.66) | -.014 (0.36)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

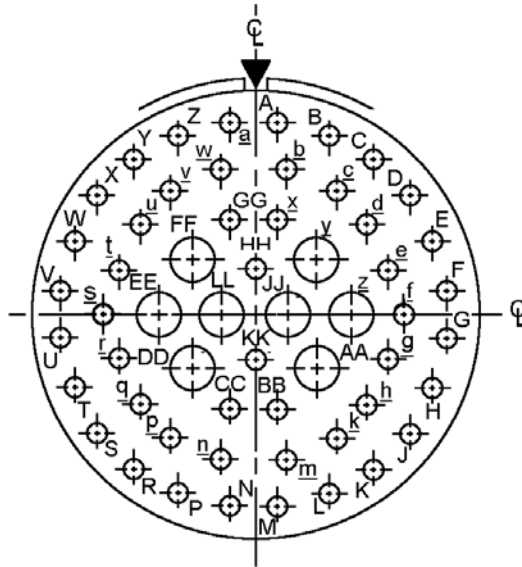
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-2) |              |               |                     |               |              |
|---------------------------------------|--------------|---------------|---------------------|---------------|--------------|
| Contact position ID                   | Location     |               | Contact position ID | Location      |              |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)  |
| 46                                    | -.053 (1.35) | -.128 (3.25)  | 96                  | +.459 (11.66) | -.122 (3.10) |
| 47                                    | -.053 (1.35) | -.233 (5.92)  | 97                  | +.509 (12.93) | -.215 (5.46) |
| 48                                    | -.053 (1.35) | -.338 (8.59)  | 98                  | +.459 (11.66) | -.307 (7.80) |
| 49                                    | -.053 (1.35) | -.443 (11.25) | 99                  | +.550 (13.97) | +.039 (0.99) |
| 50                                    | -.053 (1.35) | -.548 (13.92) | 100                 | +.550 (13.97) | -.068 (1.73) |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 25         | -2              | 100                | 22            | M              | All              | MS20057-2  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-4) |                |                |                     |                |                |
|---------------------------------------|----------------|----------------|---------------------|----------------|----------------|
| Contact position ID                   | Location       |                | Contact position ID | Location       |                |
|                                       | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)    |
| A                                     | +0.069 (1.75)  | +0.531 (13.49) | f                   | +0.412 (10.46) | +0.000 (0.00)  |
| B                                     | +0.203 (5.16)  | +0.495 (12.57) | g                   | +0.377 (9.58)  | -0.132 (3.35)  |
| C                                     | +0.324 (8.23)  | +0.425 (10.80) | h                   | +0.311 (7.90)  | -0.251 (6.38)  |
| D                                     | +0.424 (10.77) | +0.326 (8.28)  | k                   | +0.212 (5.38)  | -0.344 (8.74)  |
| E                                     | +0.493 (12.52) | +0.205 (5.21)  | m                   | +0.086 (2.18)  | -0.397 (10.08) |
| F                                     | +0.531 (13.49) | +0.069 (1.75)  | n                   | -0.086 (2.18)  | -0.397 (10.08) |
| G                                     | +0.531 (13.49) | -0.069 (1.75)  | p                   | -0.212 (5.38)  | -0.344 (8.74)  |
| H                                     | +0.493 (12.52) | -0.205 (5.21)  | q                   | -0.311 (7.90)  | -0.251 (6.38)  |
| J                                     | +0.424 (10.77) | -0.326 (8.28)  | r                   | -0.377 (9.58)  | -0.132 (3.35)  |
| K                                     | +0.324 (8.23)  | -0.425 (10.80) | s                   | -0.412 (10.46) | +0.000 (0.00)  |
| L                                     | +0.203 (5.16)  | -0.495 (12.57) | t                   | -0.377 (9.58)  | +0.132 (3.35)  |
| M                                     | +0.069 (1.75)  | -0.531 (13.49) | u                   | -0.311 (7.90)  | +0.251 (6.38)  |
| N                                     | -0.069 (1.75)  | -0.531 (13.49) | v                   | -0.212 (5.38)  | +0.344 (8.74)  |
| P                                     | -0.203 (5.16)  | -0.495 (12.57) | w                   | -0.086 (2.18)  | +0.397 (10.08) |
| R                                     | -0.324 (8.23)  | -0.425 (10.80) | x                   | +0.069 (1.75)  | +0.263 (6.68)  |
| S                                     | -0.424 (10.77) | -0.326 (8.28)  | y                   | +0.172 (4.37)  | +0.149 (3.78)  |
| T                                     | -0.493 (12.52) | -0.205 (5.21)  | z                   | +0.258 (6.55)  | +0.000 (0.00)  |
| U                                     | -0.531 (13.49) | -0.069 (1.75)  | AA                  | +0.172 (4.37)  | -0.149 (3.78)  |
| V                                     | -0.531 (13.49) | +0.069 (1.75)  | BB                  | +0.069 (1.75)  | -0.263 (6.68)  |
| W                                     | -0.493 (12.52) | +0.205 (5.21)  | CC                  | -0.069 (1.75)  | -0.263 (6.68)  |

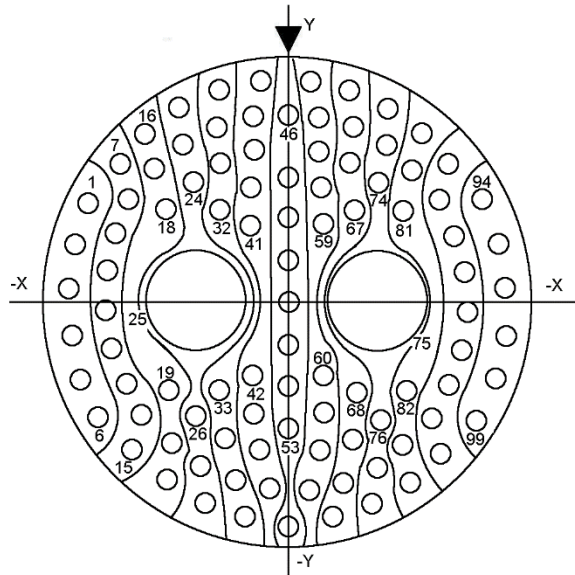
FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-4) |               |               |                     |              |              |
|---------------------------------------|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |              |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| X                                     | -.424 (10.77) | +.326 (8.28)  | DD                  | -.172 (4.37) | -.149 (3.78) |
| Y                                     | -.324 (8.23)  | +.425 (10.80) | EE                  | -.258 (6.55) | +.000 (0.00) |
| Z                                     | -.203 (5.16)  | +.495 (12.57) | FF                  | -.172 (4.37) | +.149 (3.78) |
| a                                     | -.069 (1.75)  | +.531 (13.49) | GG                  | -.069 (1.75) | +.263 (6.68) |
| b                                     | +.086 (2.18)  | +.397 (10.08) | HH                  | +.000 (0.00) | +.132 (3.35) |
| c                                     | +.212 (5.38)  | +.344 (8.74)  | JJ                  | +.086 (2.18) | +.000 (0.00) |
| d                                     | +.311 (7.90)  | +.251 (6.38)  | KK                  | +.000 (0.00) | -.132 (3.35) |
| e                                     | +.377 (9.58)  | +.132 (3.35)  | LL                  | -.086 (2.18) | +.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location             | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------------------|------------|
| 25         | -4              | 8                  | 16            | I              | y, z, AA, DD, EE, FF, LL, JJ | MS20057-4  |
|            |                 | 48                 | 20            |                | All others                   |            |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

(Inactive for new design for MIL-DTL-38999. For new design, use arrangement no. 25-9.)

| Contacts<br>(Insert arrangement 25-7) |               |              |                     |              |               |
|---------------------------------------|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |              | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.494 (12.55) | +.242 (6.15) | 51                  | +.000 (0.00) | -.106 (2.69)  |
| 2                                     | -.533 (13.54) | +.138 (3.51) | 52                  | +.000 (0.00) | -.212 (5.38)  |
| 3                                     | -.550 (13.97) | +.028 (0.71) | 53                  | +.000 (0.00) | -.310 (7.87)  |
| 4                                     | -.544 (13.82) | -.083 (2.11) | 54                  | +.000 (0.00) | -.551 (14.00) |
| 5                                     | -.516 (13.11) | -.191 (4.85) | 55                  | +.056 (1.42) | +.548 (13.92) |
| 6                                     | -.467 (11.86) | -.292 (7.42) | 56                  | +.095 (2.41) | +.461 (11.71) |
| 7                                     | -.435 (11.05) | +.337 (8.56) | 57                  | +.068 (1.73) | +.370 (9.40)  |
| 8                                     | -.399 (10.13) | +.249 (6.32) | 58                  | +.092 (2.34) | +.278 (7.06)  |
| 9                                     | -.441 (11.20) | +.163 (4.14) | 59                  | +.095 (2.41) | +.183 (4.65)  |
| 10                                    | -.465 (11.81) | +.071 (1.80) | 60                  | +.089 (2.26) | -.178 (4.52)  |
| 11                                    | -.470 (11.94) | -.024 (0.61) | 61                  | +.094 (2.39) | -.277 (7.04)  |
| 12                                    | -.456 (11.58) | -.118 (3.00) | 62                  | +.069 (1.75) | -.376 (9.55)  |
| 13                                    | -.423 (10.74) | -.207 (5.26) | 63                  | +.048 (1.22) | -.468 (11.89) |
| 14                                    | -.372 (9.45)  | -.288 (7.32) | 64                  | +.165 (4.19) | +.525 (13.34) |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.



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w/CHANGE 1

| Contacts<br>(Insert arrangement 25-7) |               |               |                     |               |               |
|---------------------------------------|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location      |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 15                                    | -.399 (10.13) | -.379 (9.63)  | 65                  | +.186 (4.72)  | +.433 (11.00) |
| 16                                    | -.359 (9.12)  | +.418 (10.62) | 66                  | +.164 (4.17)  | +.340 (8.64)  |
| 17                                    | -.341 (8.66)  | +.324 (8.23)  | 67                  | +.181 (4.60)  | +.225 (5.72)  |
| 18                                    | -.308 (7.82)  | +.222 (5.64)  | 68                  | +.172 (4.37)  | -.223 (5.66)  |
| 19                                    | -.303 (7.70)  | -.223 (5.66)  | 69                  | +.159 (4.04)  | -.347 (8.81)  |
| 20                                    | -.307 (7.80)  | -.357 (9.07)  | 70                  | +.141 (3.58)  | -.449 (11.40) |
| 21                                    | -.314 (7.98)  | -.452 (11.48) | 71                  | +.111 (2.82)  | -.539 (13.69) |
| 22                                    | -.267 (6.78)  | +.481 (12.22) | 72                  | +.267 (6.78)  | +.481 (12.22) |
| 23                                    | -.269 (6.83)  | +.386 (9.80)  | 73                  | +.269 (6.83)  | +.386 (9.80)  |
| 24                                    | -.247 (6.27)  | +.294 (7.47)  | 74                  | +.247 (6.27)  | +.294 (7.47)  |
| 25                                    | -.238 (6.05)  | +.000 (0.00)  | 75                  | +.238 (6.05)  | +.000 (0.00)  |
| 26                                    | -.237 (6.02)  | -.292 (7.42)  | 76                  | +.237 (6.02)  | -.292 (7.42)  |
| 27                                    | -.228 (5.79)  | -.412 (10.46) | 77                  | +.228 (5.79)  | -.412 (10.46) |
| 28                                    | -.217 (5.51)  | -.506 (12.85) | 78                  | +.217 (5.51)  | -.506 (12.85) |
| 29                                    | -.165 (4.19)  | +.525 (13.34) | 79                  | +.359 (9.12)  | +.418 (10.62) |
| 30                                    | -.186 (4.72)  | +.433 (11.00) | 80                  | +.341 (8.66)  | +.324 (8.23)  |
| 31                                    | -.164 (4.17)  | +.340 (8.64)  | 81                  | +.308 (7.82)  | +.222 (5.64)  |
| 32                                    | -.181 (4.60)  | +.225 (5.72)  | 82                  | +.303 (7.70)  | -.223 (5.66)  |
| 33                                    | -.172 (4.37)  | -.223 (5.66)  | 83                  | +.307 (7.80)  | -.357 (9.07)  |
| 34                                    | -.159 (4.04)  | -.347 (8.81)  | 84                  | +.314 (7.98)  | -.452 (11.48) |
| 35                                    | -.141 (3.58)  | -.449 (11.40) | 85                  | +.435 (11.05) | +.337 (8.56)  |
| 36                                    | -.111 (2.82)  | -.539 (13.69) | 86                  | +.399 (10.13) | +.249 (6.32)  |
| 37                                    | -.056 (1.42)  | +.548 (13.92) | 87                  | +.441 (11.20) | +.163 (4.14)  |
| 38                                    | -.095 (2.41)  | +.461 (11.71) | 88                  | +.465 (11.81) | +.071 (1.80)  |
| 39                                    | -.068 (1.73)  | +.370 (9.40)  | 89                  | +.470 (11.94) | -.024 (.61)   |
| 40                                    | -.092 (2.34)  | +.278 (7.06)  | 90                  | +.456 (11.58) | -.118 (3.00)  |
| 41                                    | -.095 (2.41)  | +.183 (4.65)  | 91                  | +.423 (10.74) | -.207 (5.26)  |
| 42                                    | -.089 (2.26)  | -.178 (4.52)  | 92                  | +.372 (9.45)  | -.288 (7.32)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

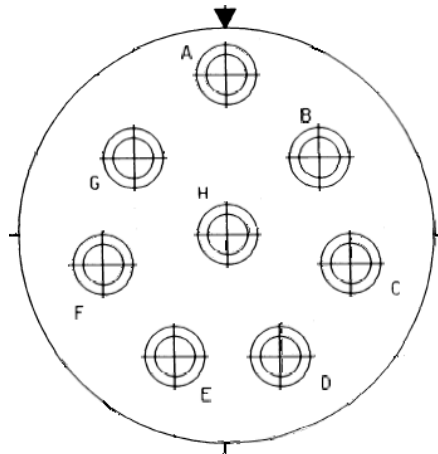
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-7) |              |               |                     |               |              |
|---------------------------------------|--------------|---------------|---------------------|---------------|--------------|
| Contact position ID                   | Location     |               | Contact position ID | Location      |              |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)  |
| 43                                    | -.094 (2.39) | -.277 (7.04)  | 93                  | +.399 (10.13) | -.379 (9.63) |
| 44                                    | -.069 (1.75) | -.376 (9.55)  | 94                  | +.494 (12.55) | +.242 (6.15) |
| 45                                    | -.048 (1.22) | -.468 (11.89) | 95                  | +.533 (13.54) | +.138 (3.51) |
| 46                                    | +.000 (0.00) | +.471 (11.96) | 96                  | +.550 (13.97) | +.028 (0.71) |
| 47                                    | +.000 (0.00) | +.303 (7.70)  | 97                  | +.544 (13.82) | -.083 (2.11) |
| 48                                    | +.000 (0.00) | +.208 (5.28)  | 98                  | +.516 (13.11) | -.191 (4.85) |
| 49                                    | +.000 (0.00) | +.104 (2.64)  | 99                  | +.467 (11.86) | -.292 (7.42) |
| 50                                    | +.000 (0.00) | +.000 (0.00)  | ---                 | ---           | ---          |

| Shell size | Arrange-ment no. | Number of contacts | Size contacts   | Service rating | Contact location | Standard contact |               |
|------------|------------------|--------------------|-----------------|----------------|------------------|------------------|---------------|
|            |                  |                    |                 |                |                  | Pin              | Socket        |
| 25         | -7               | 2                  | 8<br>(See note) | Twinax         | 25, 75           | M39029/90-529    | M39029/91-530 |
|            |                  | 97                 | 22D             | M              | All others       | M39029/58-360    | M39029/56-348 |

NOTE: To meet environmental sealing requirements, size 8 shielded contacts used with this insert arrangement may require separate, non-standard sealing boots that are furnished with the connector. For this insert arrangement, some connector grommet designs use a heat shrink sleeve only with the size 8 shielded contacts to meet environmental sealing requirements. When heat shrink sleeves are used, sealing boots are not used, and when sealing boots are used, heat shrink sleeves are not used. Heat shrink sleeves have a maximum temperature rating of 175°C maximum. When heat shrink sleeves are used, connectors rated to 200°C max are derated to 175°C max.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

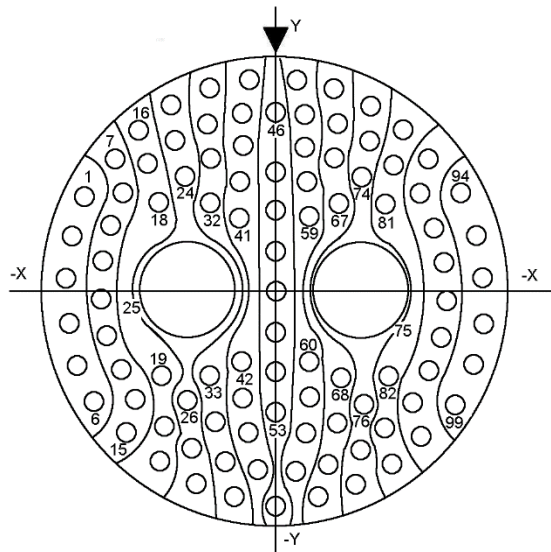
(Inactive for new design for MIL-DTL-38999. For new design, use arrangement no. 25-10.)

| Contacts<br>(Insert arrangement 25-8) |                  |                |
|---------------------------------------|------------------|----------------|
| Contact position ID                   | Contact location |                |
|                                       | X-axis (mm)      | Y-axis (mm)    |
| A                                     | +0.000 (0.00)    | +0.426 (10.82) |
| B                                     | +0.333 (8.46)    | +0.266 (6.76)  |
| C                                     | +0.415 (10.54)   | -0.095 (2.41)  |
| D                                     | +0.185 (4.70)    | -0.384 (9.75)  |
| E                                     | -0.185 (4.70)    | -0.384 (9.75)  |
| F                                     | -0.415 (10.54)   | -0.095 (2.41)  |
| G                                     | -0.333 (8.46)    | +0.266 (6.76)  |
| H                                     | +0.000 (0.00)    | +0.000 (0.00)  |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |               |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|---------------|
|            |                 |                    |               |                |                  | Pin              | Socket        |
| 25         | -8              | 8                  | 8             | Twinax         | All              | M39029/90-529    | M39029/91-530 |

NOTE: To meet environmental sealing requirements, size 8 shielded contacts used with this insert arrangement may require separate, non-standard sealing boots that are furnished with the connector. For this insert arrangement, some connector grommet designs use a heat shrink sleeve only with the size 8 shielded contacts to meet environmental sealing requirements. When heat shrink sleeves are used, sealing boots are not used, and when sealing boots are used, heat shrink sleeves are not used. When heat shrink sleeves are used, connectors rated to 200°C max are derated to 175°C max.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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(INSERT ARRANGEMENT PATTERN IDENTICAL TO 25-7, EXCEPT 25-9)

USES SEALING

BOOT IN ACCORDANCE WITH MIL-DTL-38999/62)

| Contacts<br>(Insert arrangement 25-9) |               |              |                     |              |               |
|---------------------------------------|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |              | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.494 (12.55) | +.242 (6.15) | 51                  | +.000 (0.00) | -.106 (2.69)  |
| 2                                     | -.533 (13.54) | +.138 (3.51) | 52                  | +.000 (0.00) | -.212 (5.38)  |
| 3                                     | -.550 (13.97) | +.028 (0.71) | 53                  | +.000 (0.00) | -.310 (7.87)  |
| 4                                     | -.544 (13.82) | -.083 (2.11) | 54                  | +.000 (0.00) | -.551 (14.00) |
| 5                                     | -.516 (13.11) | -.191 (4.85) | 55                  | +.056 (1.42) | +.548 (13.92) |
| 6                                     | -.467 (11.86) | -.292 (7.42) | 56                  | +.095 (2.41) | +.461 (11.71) |
| 7                                     | -.435 (11.05) | +.337 (8.56) | 57                  | +.068 (1.73) | +.370 (9.40)  |
| 8                                     | -.399 (10.13) | +.249 (6.32) | 58                  | +.092 (2.34) | +.278 (7.06)  |
| 9                                     | -.441 (11.20) | +.163 (4.14) | 59                  | +.095 (2.41) | +.183 (4.65)  |
| 10                                    | -.465 (11.81) | +.071 (1.80) | 60                  | +.089 (2.26) | -.178 (4.52)  |
| 11                                    | -.470 (11.94) | -.024 (0.61) | 61                  | +.094 (2.39) | -.277 (7.04)  |
| 12                                    | -.456 (11.58) | -.118 (3.00) | 62                  | +.069 (1.75) | -.376 (9.55)  |
| 13                                    | -.423 (10.74) | -.207 (5.26) | 63                  | +.048 (1.22) | -.468 (11.89) |
| 14                                    | -.372 (9.45)  | -.288 (7.32) | 64                  | +.165 (4.19) | +.525 (13.34) |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 25-9) |               |               |                     |               |               |
|---------------------------------------|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location      |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 15                                    | -.399 (10.13) | -.379 (9.63)  | 65                  | +.186 (4.72)  | +.433 (11.00) |
| 16                                    | -.359 (9.12)  | +.418 (10.62) | 66                  | +.164 (4.17)  | +.340 (8.64)  |
| 17                                    | -.341 (8.66)  | +.324 (8.23)  | 67                  | +.181 (4.60)  | +.225 (5.72)  |
| 18                                    | -.308 (7.82)  | +.222 (5.64)  | 68                  | +.172 (4.37)  | -.223 (5.66)  |
| 19                                    | -.303 (7.70)  | -.223 (5.66)  | 69                  | +.159 (4.04)  | -.347 (8.81)  |
| 20                                    | -.307 (7.80)  | -.357 (9.07)  | 70                  | +.141 (3.58)  | -.449 (11.40) |
| 21                                    | -.314 (7.98)  | -.452 (11.48) | 71                  | +.111 (2.82)  | -.539 (13.69) |
| 22                                    | -.267 (6.78)  | +.481 (12.22) | 72                  | +.267 (6.78)  | +.481 (12.22) |
| 23                                    | -.269 (6.83)  | +.386 (9.80)  | 73                  | +.269 (6.83)  | +.386 (9.80)  |
| 24                                    | -.247 (6.27)  | +.294 (7.47)  | 74                  | +.247 (6.27)  | +.294 (7.47)  |
| 25                                    | -.238 (6.05)  | +.000 (0.00)  | 75                  | +.238 (6.05)  | +.000 (0.00)  |
| 26                                    | -.237 (6.02)  | -.292 (7.42)  | 76                  | +.237 (6.02)  | -.292 (7.42)  |
| 27                                    | -.228 (5.79)  | -.412 (10.46) | 77                  | +.228 (5.79)  | -.412 (10.46) |
| 28                                    | -.217 (5.51)  | -.506 (12.85) | 78                  | +.217 (5.51)  | -.506 (12.85) |
| 29                                    | -.165 (4.19)  | +.525 (13.34) | 79                  | +.359 (9.12)  | +.418 (10.62) |
| 30                                    | -.186 (4.72)  | +.433 (11.00) | 80                  | +.341 (8.66)  | +.324 (8.23)  |
| 31                                    | -.164 (4.17)  | +.340 (8.64)  | 81                  | +.308 (7.82)  | +.222 (5.64)  |
| 32                                    | -.181 (4.60)  | +.225 (5.72)  | 82                  | +.303 (7.70)  | -.223 (5.66)  |
| 33                                    | -.172 (4.37)  | -.223 (5.66)  | 83                  | +.307 (7.80)  | -.357 (9.07)  |
| 34                                    | -.159 (4.04)  | -.347 (8.81)  | 84                  | +.314 (7.98)  | -.452 (11.48) |
| 35                                    | -.141 (3.58)  | -.449 (11.40) | 85                  | +.435 (11.05) | +.337 (8.56)  |
| 36                                    | -.111 (2.82)  | -.539 (13.69) | 86                  | +.399 (10.13) | +.249 (6.32)  |
| 37                                    | -.056 (1.42)  | +.548 (13.92) | 87                  | +.441 (11.20) | +.163 (4.14)  |
| 38                                    | -.095 (2.41)  | +.461 (11.71) | 88                  | +.465 (11.81) | +.071 (1.80)  |
| 39                                    | -.068 (1.73)  | +.370 (9.40)  | 89                  | +.470 (11.94) | -.024 (.61)   |
| 40                                    | -.092 (2.34)  | +.278 (7.06)  | 90                  | +.456 (11.58) | -.118 (3.00)  |
| 41                                    | -.095 (2.41)  | +.183 (4.65)  | 91                  | +.423 (10.74) | -.207 (5.26)  |
| 42                                    | -.089 (2.26)  | -.178 (4.52)  | 92                  | +.372 (9.45)  | -.288 (7.32)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

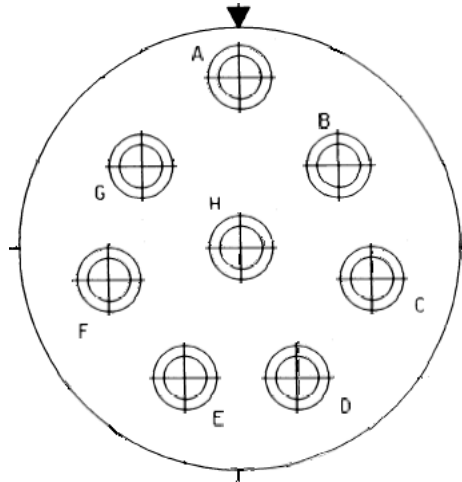
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-9) |              |               |                     |               |              |
|---------------------------------------|--------------|---------------|---------------------|---------------|--------------|
| Contact position ID                   | Location     |               | Contact position ID | Location      |              |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)  |
| 43                                    | -.094 (2.39) | -.277 (7.04)  | 93                  | +.399 (10.13) | -.379 (9.63) |
| 44                                    | -.069 (1.75) | -.376 (9.55)  | 94                  | +.494 (12.55) | +.242 (6.15) |
| 45                                    | -.048 (1.22) | -.468 (11.89) | 95                  | +.533 (13.54) | +.138 (3.51) |
| 46                                    | +.000 (0.00) | +.471 (11.96) | 96                  | +.550 (13.97) | +.028 (0.71) |
| 47                                    | +.000 (0.00) | +.303 (7.70)  | 97                  | +.544 (13.82) | -.083 (2.11) |
| 48                                    | +.000 (0.00) | +.208 (5.28)  | 98                  | +.516 (13.11) | -.191 (4.85) |
| 49                                    | +.000 (0.00) | +.104 (2.64)  | 99                  | +.467 (11.86) | -.292 (7.42) |
| 50                                    | +.000 (0.00) | +.000 (0.00)  | ---                 | ---           | ---          |

| Shell size | Arrange-ment no. | Number of contacts | Size contacts   | Service rating | Contact location | Standard contact |                |
|------------|------------------|--------------------|-----------------|----------------|------------------|------------------|----------------|
|            |                  |                    |                 |                |                  | Pin              | Socket         |
| 25         | -9               | 2                  | 8<br>(See note) | Twinax         | 25, 75           | M39029/113-625   | M39029/114-628 |
|            |                  | 97                 | 22D             | M              | All others       | M39029/58-360    | M39029/56-348  |

NOTE: For this insert arrangement, sealing boots in accordance with MIL-DTL-38999/62 shall be used to environmentally seal size 8 twinax contacts. Heat shrink sleeves are not used when MIL-DTL-38999/62 sealing boots are used.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

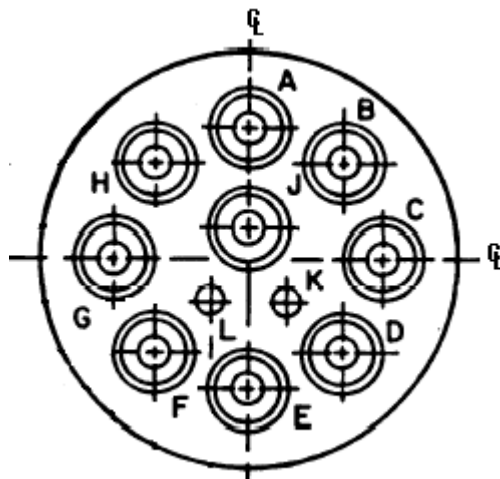
(INSERT ARRANGEMENT PATTERN IDENTICAL TO 25-8, EXCEPT 25-10  
USES SEALING BOOT IN ACCORDANCE WITH MIL-DTL-38999/62)

| Contacts<br>(Insert arrangement 25-10) |                  |                |
|--|------------------|----------------|
| Contact position ID                    | Contact location |                |
|  | X-axis (mm)      | Y-axis (mm)    |
| A                                      | +0.000 (0.00)    | +0.426 (10.82) |
| B                                      | +0.333 (8.46)    | +0.266 (6.76)  |
| C                                      | +0.415 (10.54)   | -0.095 (2.41)  |
| D                                      | +0.185 (4.70)    | -0.384 (9.75)  |
| E                                      | -0.185 (4.70)    | -0.384 (9.75)  |
| F                                      | -0.415 (10.54)   | -0.095 (2.41)  |
| G                                      | -0.333 (8.46)    | +0.266 (6.76)  |
| H                                      | +0.000 (0.00)    | +0.000 (0.00)  |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 25         | -10             | 8                  | 8             | Twinax         | All              | M39029/113-625   | M39029/114-628 |

NOTE: For this insert arrangement, sealing boots in accordance with MIL-DTL-38999/62 shall be used to environmentally seal size 8 twinax contacts. Heat shrink sleeves are not used when MIL-DTL-38999/62 sealing boots are used.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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| Contacts<br>(Insert arrangement 25-11) |                |                |                     |                |               |
|--|----------------|----------------|---------------------|----------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)   |
| A                                      | +0.00 (0.00)   | +0.431 (10.95) | G                   | -0.431 (10.95) | +0.00 (0.00)  |
| B                                      | +0.304 (7.72)  | +0.304 (7.72)  | H                   | -0.304 (7.72)  | +0.304 (7.72) |
| C                                      | +0.431 (10.95) | +0.00 (0.00)   | J                   | +0.00 (0.00)   | +0.102 (2.59) |
| D                                      | +0.304 (7.72)  | -0.304 (7.72)  | K                   | +0.092 (2.34)  | -0.160 (4.06) |
| E                                      | +0.00 (0.00)   | -0.431 (10.95) | L                   | -0.092 (2.34)  | -0.160 (4.06) |
| F                                      | -0.304 (7.72)  | -0.304 (7.72)  | ---                 | ---            | ---           |

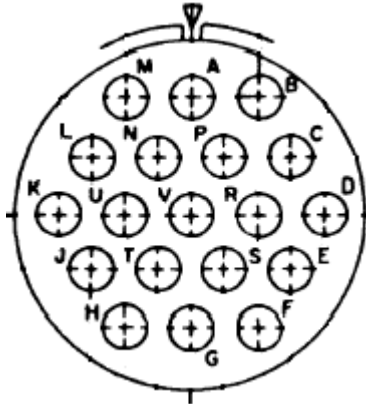
## NOTES:

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

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location      |
|------------|-----------------|--------------------|---------------|----------------|-----------------------|
| 25         | -11             | 9                  | 10            | N              | A,B,C,D,E,F,<br>G,H,J |
|            |                 | 2                  | 20            |                | L,K                   |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

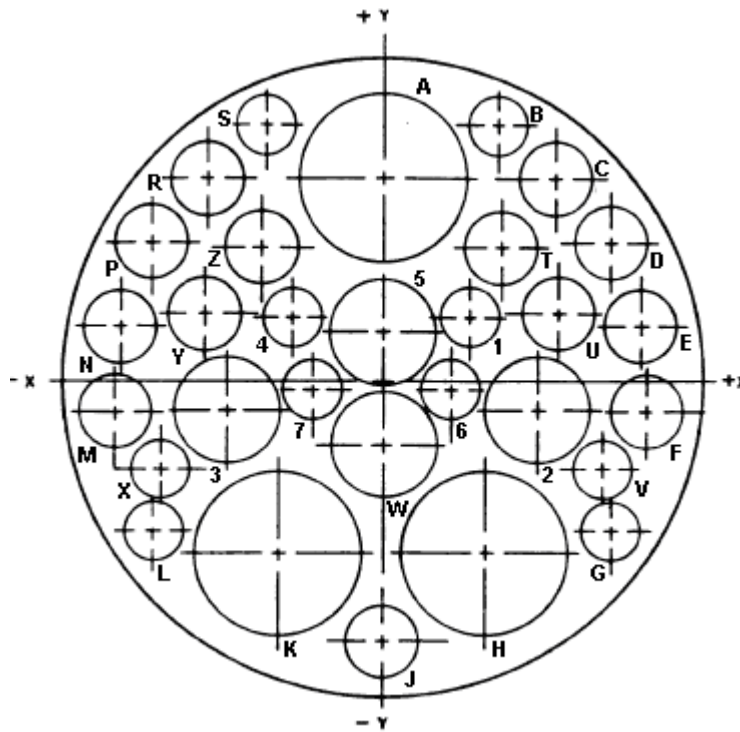


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w/CHANGE 1

| Contacts<br>(Insert arrangement 25-19) |                |                |                     |               |                |
|--|----------------|----------------|---------------------|---------------|----------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |                |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)    |
| A                                      | +0.00 (0.00)   | +0.409 (10.39) | L                   | -0.354 (8.99) | +0.205 (5.21)  |
| B                                      | +0.236 (5.99)  | +0.409 (10.39) | M                   | -0.236 (5.99) | +0.409 (10.39) |
| C                                      | +0.354 (8.99)  | +0.205 (5.21)  | N                   | -0.118 (3.00) | +0.205 (5.21)  |
| D                                      | +0.472 (11.99) | +0.000 (0.00)  | P                   | +0.118 (3.00) | +0.205 (5.21)  |
| E                                      | +0.354 (8.99)  | -0.205 (5.21)  | R                   | +0.236 (5.99) | +0.000 (0.00)  |
| F                                      | +0.236 (5.99)  | -0.409 (10.39) | S                   | +0.118 (3.00) | -0.205 (5.21)  |
| G                                      | +0.000 (.00)   | -0.409 (10.39) | T                   | -0.118 (3.00) | -0.205 (5.21)  |
| H                                      | -0.236 (5.99)  | -0.409 (10.39) | U                   | -0.236 (5.99) | +0.000 (0.00)  |
| J                                      | -0.354 (8.99)  | -0.205 (5.21)  | V                   | +0.000 (0.00) | +0.000 (0.00)  |
| K                                      | -0.472 (11.99) | +0.000 (0.00)  | ---                 | ---           | ---            |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 25         | -19             | 19                 | 12            | I              | All              | MS20057-19 |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 25-20) |                |                |                     |                |                |
|--|----------------|----------------|---------------------|----------------|----------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |                |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)    |
| A                                      | +0.00 (0.00)   | +0.407 (10.34) | S                   | -0.234 (5.94)  | +0.511 (12.98) |
| B                                      | +0.234 (5.94)  | +0.511 (12.98) | T                   | +0.243 (6.17)  | +0.270 (6.86)  |
| C                                      | +0.352 (8.94)  | +0.411 (10.44) | U                   | +0.357 (9.07)  | +0.136 (3.45)  |
| D                                      | +0.466 (11.84) | +0.275 (6.99)  | V                   | +0.450 (11.43) | -0.183 (4.65)  |
| E                                      | +0.530 (13.46) | +0.111 (2.82)  | w                   | +0.000 (0.00)  | -0.131 (3.33)  |
| F                                      | +0.537 (13.64) | -0.060 (1.52)  | X                   | -0.450 (11.43) | -0.183 (4.65)  |
| G                                      | +0.467 (11.86) | -0.312 (7.92)  | Y                   | -0.357 (9.07)  | +0.136 (3.45)  |
| H                                      | +0.208 (5.28)  | -0.353 (8.97)  | Z                   | -0.243 (6.17)  | +0.270 (6.86)  |
| J                                      | +0.000 (0.00)  | -0.541 (13.74) | 1                   | +0.195 (4.95)  | +0.115 (2.92)  |
| K                                      | -0.208 (5.28)  | -0.353 (8.97)  | 2                   | +0.317 (8.05)  | -0.061 (1.55)  |
| L                                      | -0.467 (11.86) | -0.312 (7.92)  | 3                   | -0.317 (8.05)  | -0.061 (1.55)  |
| M                                      | -0.537 (13.64) | -0.060 (1.52)  | 4                   | -0.195 (4.95)  | +0.115 (2.92)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

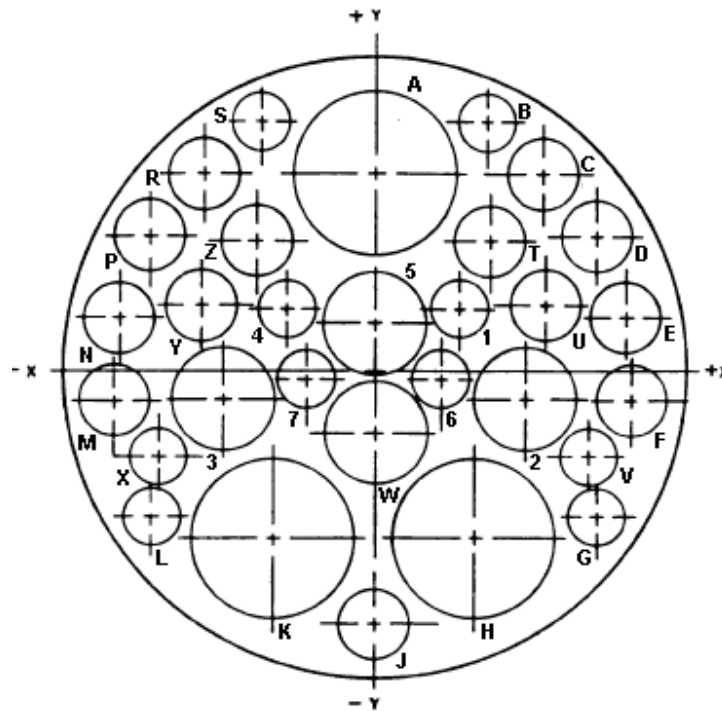
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-20) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| N                                      | -.530 (13.46) | +.111 (2.82)  | 5                   | +.000 (0.00) | +.099 (2.51) |
| P                                      | -.466 (11.84) | +.275 (6.99)  | 6                   | +.141 (3.58) | -.018 (0.46) |
| R                                      | -.352 (8.94)  | +.411 (10.44) | 7                   | -.141 (3.58) | -.018 (0.46) |

| Shell size | Arrange-ment no. | Number of contacts           | Size 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,<br>J,M,N,P,<br>R,T,U,Y,<br>Z | M39029/58-364    | M39029/56-352  |
| 10         | 20               | B,G,L,S,<br>V,X,1,4,<br>6, 7 | M39029/58-363 |                | M39029/56-351                         |                  |                |

NOTE: For this insert arrangement, size 8 twinax contacts are intended to be used with a heat shrink sleeve to effect environmental sealing to the connector and cable. Heat shrink sleeves used with size 8 twinax contacts are rated to 175° C maximum. Connectors rated to 200°C max are derated to 175°C max when heat shrink sleeves are used. For environmental sealing and prevention of splaying, some 25-20 insert arrangement grommet designs may use a separate, non-standard boot that is supplied with the connector for use with size 8 twinax contacts. If a heat shrink sleeve is used, then a sealing boot is not used. If a sealing boot is used, then a heat shrink sleeve is not used.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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(This insert arrangement pattern is identical to arrangement 25-20, except this arrangement is designed to use MIL-DTL-38999/62 sealing boots with size 8 twinax contacts.)

| Contacts<br>(Insert arrangement 25-21) |                |                |                     |                |                |
|--|----------------|----------------|---------------------|----------------|----------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |                |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)    |
| A                                      | +0.00 (0.00)   | +0.407 (10.34) | S                   | -0.234 (5.94)  | +0.511 (12.98) |
| B                                      | +0.234 (5.94)  | +0.511 (12.98) | T                   | +0.243 (6.17)  | +0.270 (6.86)  |
| C                                      | +0.352 (8.94)  | +0.411 (10.44) | U                   | +0.357 (9.07)  | +0.136 (3.45)  |
| D                                      | +0.466 (11.84) | +0.275 (6.99)  | V                   | +0.450 (11.43) | -0.183 (4.65)  |
| E                                      | +0.530 (13.46) | +0.111 (2.82)  | w                   | +0.000 (0.00)  | -0.131 (3.33)  |
| F                                      | +0.537 (13.64) | -0.060 (1.52)  | X                   | -0.450 (11.43) | -0.183 (4.65)  |
| G                                      | +0.467 (11.86) | -0.312 (7.92)  | Y                   | -0.357 (9.07)  | +0.136 (3.45)  |
| H                                      | +0.208 (5.28)  | -0.353 (8.97)  | Z                   | -0.243 (6.17)  | +0.270 (6.86)  |
| J                                      | +0.000 (0.00)  | -0.541 (13.74) | 1                   | +0.195 (4.95)  | +0.115 (2.92)  |
| K                                      | -0.208 (5.28)  | -0.353 (8.97)  | 2                   | +0.317 (8.05)  | -0.061 (1.55)  |
| L                                      | -0.467 (11.86) | -0.312 (7.92)  | 3                   | -0.317 (8.05)  | -0.061 (1.55)  |
| M                                      | -0.537 (13.64) | -0.060 (1.52)  | 4                   | -0.195 (4.95)  | +0.115 (2.92)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

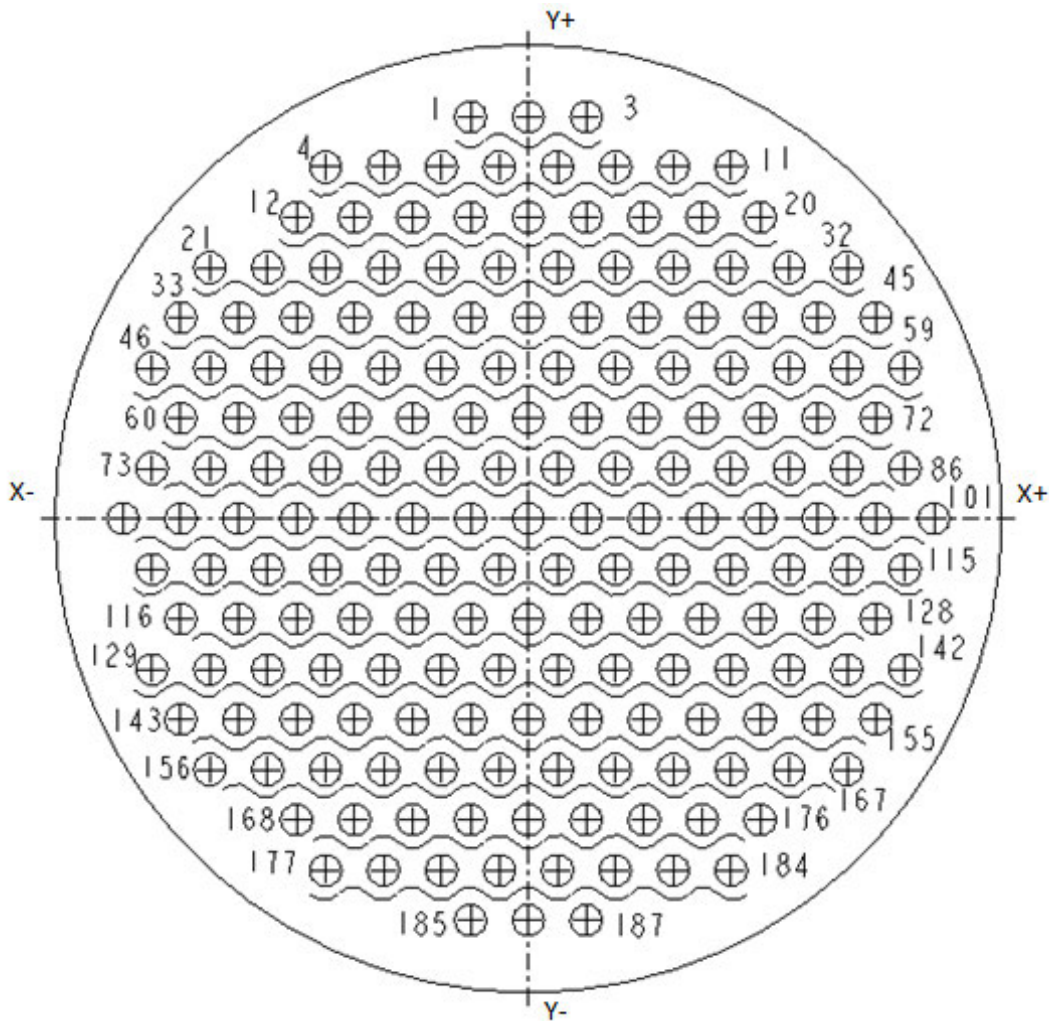
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| Contacts<br>(Insert arrangement 25-21) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| N                                      | -.530 (13.46) | +.111 (2.82)  | 5                   | +0.000 (0.00) | +0.099 (2.51) |
| P                                      | -.466 (11.84) | +.275 (6.99)  | 6                   | +0.141 (3.58) | -.018 (0.46)  |
| R                                      | -.352 (8.94)  | +.411 (10.44) | 7                   | -.141 (3.58)  | -.018 (0.46)  |

| Shell size | Arrange-ment no. | Number of contacts           | Size contacts | Service rating | Contact location                      | Standard contact |                |
|------------|------------------|------------------------------|---------------|----------------|---------------------------------------|------------------|----------------|
|            |                  |                              |               |                |                                       | Pin              | Socket         |
| 25         | -21              | 3                            | 8             | Twinax         | A,H,K                                 | M39029/113-625   | M39029/114-628 |
|            |                  | 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,<br>J,M,N,P,<br>R,T,U,Y,<br>Z | M39029/58-364    | M39029/56-352  |
| 10         | 20               | B,G,L,S,<br>V,X,1,4,<br>6, 7 | M39029/58-363 |                | M39029/56-351                         |                  |                |

NOTE: For this insert arrangement, sealing boots in accordance with MIL-DTL-38999/62 shall be used to environmentally seal size 8 twinax contacts. Heat shrink sleeves are not used when MIL-DTL-38999/62 sealing boots are used.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 25-23) |                |                |                        |                |                |
|--|----------------|----------------|------------------------|----------------|----------------|
| Contact<br>position ID                 | Location       |                | Contact<br>position ID | Location       |                |
|  | X-axis<br>(mm) | Y-axis<br>(mm) |                        | X-axis<br>(mm) | Y-axis<br>(mm) |
| 1                                      | -.080 (2.04)   | +.556 (14.13)  | 95                     | +.080 (2.04)   | +.000 (0.00)   |
| 2                                      | +.000 (0.00)   | +.556 (14.13)  | 96                     | +.161 (4.08)   | +.000 (0.00)   |
| 3                                      | +.080 (2.04)   | +.556 (14.13)  | 97                     | +.241 (6.12)   | +.000 (0.00)   |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-23) |               |               |                     |               |              |
|--|---------------|---------------|---------------------|---------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)  |
| 4                                      | -.281 (7.14)  | +.487 (12.37) | 98                  | +.321 (8.16)  | +.000 (0.00) |
| 5                                      | -.201 (5.10)  | +.487 (12.37) | 99                  | +.402 (10.20) | +.000 (0.00) |
| 6                                      | -.121 (3.06)  | +.487 (12.37) | 100                 | +.482 (12.24) | +.000 (0.00) |
| 7                                      | -.040 (1.02)  | +.487 (12.37) | 101                 | +.562 (14.28) | +.000 (0.00) |
| 8                                      | +.040 (1.02)  | +.487 (12.37) | 102                 | -.522 (13.26) | -.070 (1.77) |
| 9                                      | +.121 (3.06)  | +.487 (12.37) | 103                 | -.442 (11.22) | -.070 (1.77) |
| 10                                     | +.201 (5.10)  | +.487 (12.37) | 104                 | -.361 (9.18)  | -.070 (1.77) |
| 11                                     | +.281 (7.14)  | +.487 (12.37) | 105                 | -.281 (7.14)  | -.070 (1.77) |
| 12                                     | -.321 (8.16)  | +.417 (10.60) | 106                 | -.201 (5.10)  | -.070 (1.77) |
| 13                                     | -.241 (6.12)  | +.417 (10.60) | 107                 | -.121 (3.06)  | -.070 (1.77) |
| 14                                     | -.161 (4.08)  | +.417 (10.60) | 108                 | -.040 (1.02)  | -.070 (1.77) |
| 15                                     | -.080 (2.04)  | +.417 (10.60) | 109                 | +.040 (1.02)  | -.070 (1.77) |
| 16                                     | +.000 (0.00)  | +.417 (10.60) | 110                 | +.121 (3.06)  | -.070 (1.77) |
| 17                                     | +.080 (2.04)  | +.417 (10.60) | 111                 | +.201 (5.10)  | -.070 (1.77) |
| 18                                     | +.161 (4.08)  | +.417 (10.60) | 112                 | +.281 (7.14)  | -.070 (1.77) |
| 19                                     | +.241 (6.12)  | +.417 (10.60) | 113                 | +.361 (9.18)  | -.070 (1.77) |
| 20                                     | +.321 (8.16)  | +.417 (10.60) | 114                 | +.442 (11.22) | -.070 (1.77) |
| 21                                     | -.442 (11.22) | +.348 (8.83)  | 115                 | +.522 (13.26) | -.070 (1.77) |
| 22                                     | -.361 (9.18)  | +.348 (8.83)  | 116                 | -.482 (12.24) | -.139 (3.53) |
| 23                                     | -.281 (7.14)  | +.348 (8.83)  | 117                 | -.402 (10.20) | -.139 (3.53) |
| 24                                     | -.201 (5.10)  | +.348 (8.83)  | 118                 | -.321 (8.16)  | -.139 (3.53) |
| 25                                     | -.121 (3.06)  | +.348 (8.83)  | 119                 | -.241 (6.12)  | -.139 (3.53) |
| 26                                     | -.040 (1.02)  | +.348 (8.83)  | 120                 | -.161 (4.08)  | -.139 (3.53) |
| 27                                     | +.040 (1.02)  | +.348 (8.83)  | 121                 | -.080 (2.04)  | -.139 (3.53) |
| 28                                     | +.121 (3.06)  | +.348 (8.83)  | 122                 | +.000 (0.00)  | -.139 (3.53) |
| 29                                     | +.201 (5.10)  | +.348 (8.83)  | 123                 | +.080 (2.04)  | -.139 (3.53) |
| 30                                     | +.281 (7.14)  | +.348 (8.83)  | 124                 | +.161 (4.08)  | -.139 (3.53) |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 25-23) |                |               |                     |                |               |
|--|----------------|---------------|---------------------|----------------|---------------|
| Contact position ID                    | Location       |               | Contact position ID | Location       |               |
|  | X-axis (mm)    | Y-axis (mm)   |                     | X-axis (mm)    | Y-axis (mm)   |
| 31                                     | + .361 (9.18)  | + .348 (8.83) | 125                 | + .241 (6.12)  | - .139 (3.53) |
| 32                                     | + .442 (11.22) | + .348 (8.83) | 126                 | + .321 (8.16)  | - .139 (3.53) |
| 33                                     | - .482 (12.24) | + .278 (7.07) | 127                 | + .402 (10.20) | - .139 (3.53) |
| 34                                     | - .402 (10.20) | + .278 (7.07) | 128                 | + .482 (12.24) | - .139 (3.53) |
| 35                                     | - .321 (8.16)  | + .278 (7.07) | 129                 | - .522 (13.26) | - .209 (5.30) |
| 36                                     | - .241 (6.12)  | + .278 (7.07) | 130                 | - .442 (11.22) | - .209 (5.30) |
| 37                                     | - .161 (4.08)  | + .278 (7.07) | 131                 | - .361 (9.18)  | - .209 (5.30) |
| 38                                     | - .080 (2.04)  | + .278 (7.07) | 132                 | - .281 (7.14)  | - .209 (5.30) |
| 39                                     | + .000 (0.00)  | + .278 (7.07) | 133                 | - .201 (5.10)  | - .209 (5.30) |
| 40                                     | + .080 (2.04)  | + .278 (7.07) | 134                 | - .121 (3.06)  | - .209 (5.30) |
| 41                                     | + .161 (4.08)  | + .278 (7.07) | 135                 | - .040 (1.02)  | - .209 (5.30) |
| 42                                     | + .241 (6.12)  | + .278 (7.07) | 136                 | + .040 (1.02)  | - .209 (5.30) |
| 43                                     | + .321 (8.16)  | + .278 (7.07) | 137                 | + .121 (3.06)  | - .209 (5.30) |
| 44                                     | + .402 (10.20) | + .278 (7.07) | 138                 | + .201 (5.10)  | - .209 (5.30) |
| 45                                     | + .482 (12.24) | + .278 (7.07) | 139                 | + .281 (7.14)  | - .209 (5.30) |
| 46                                     | - .522 (13.26) | + .209 (5.30) | 140                 | + .361 (9.18)  | - .209 (5.30) |
| 47                                     | - .442 (11.22) | + .209 (5.30) | 141                 | + .442 (11.22) | - .209 (5.30) |
| 48                                     | - .361 (9.18)  | + .209 (5.30) | 142                 | + .522 (13.26) | - .209 (5.30) |
| 49                                     | - .281 (7.14)  | + .209 (5.30) | 143                 | - .482 (12.24) | - .278 (7.07) |
| 50                                     | - .201 (5.10)  | + .209 (5.30) | 144                 | - .402 (10.20) | - .278 (7.07) |
| 51                                     | - .121 (3.06)  | + .209 (5.30) | 145                 | - .321 (8.16)  | - .278 (7.07) |
| 52                                     | - .040 (1.02)  | + .209 (5.30) | 146                 | - .241 (6.12)  | - .278 (7.07) |
| 53                                     | + .040 (1.02)  | + .209 (5.30) | 147                 | - .161 (4.08)  | - .278 (7.07) |
| 54                                     | + .121 (3.06)  | + .209 (5.30) | 148                 | - .080 (2.04)  | - .278 (7.07) |
| 55                                     | + .201 (5.10)  | + .209 (5.30) | 149                 | + .000 (0.00)  | - .278 (7.07) |
| 56                                     | + .281 (7.14)  | + .209 (5.30) | 150                 | + .080 (2.04)  | - .278 (7.07) |
| 57                                     | + .361 (9.18)  | + .209 (5.30) | 151                 | + .161 (4.08)  | - .278 (7.07) |
| 58                                     | + .442 (11.22) | + .209 (5.30) | 152                 | + .241 (6.12)  | - .278 (7.07) |
| 59                                     | + .522 (13.26) | + .209 (5.30) | 153                 | + .321 (8.16)  | - .278 (7.07) |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.



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w/CHANGE 1

| Contacts<br>(Insert arrangement 25-23) |               |              |                     |               |               |
|--|---------------|--------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |              | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)   | Y-axis (mm)   |
| 60                                     | -.482 (12.24) | +.139 (3.53) | 154                 | +.402 (10.20) | -.278 (7.07)  |
| 61                                     | -.402 (10.20) | +.139 (3.53) | 155                 | +.482 (12.24) | -.278 (7.07)  |
| 62                                     | -.321 (8.16)  | +.139 (3.53) | 156                 | -.442 (11.22) | -.348 (8.83)  |
| 63                                     | -.241 (6.12)  | +.139 (3.53) | 157                 | -.361 (9.18)  | -.348 (8.83)  |
| 64                                     | -.161 (4.08)  | +.139 (3.53) | 158                 | -.281 (7.14)  | -.348 (8.83)  |
| 65                                     | -.080 (2.04)  | +.139 (3.53) | 159                 | -.201 (5.10)  | -.348 (8.83)  |
| 66                                     | +.000 (0.00)  | +.139 (3.53) | 160                 | -.121 (3.06)  | -.348 (8.83)  |
| 67                                     | +.080 (2.04)  | +.139 (3.53) | 161                 | -.040 (1.02)  | -.348 (8.83)  |
| 68                                     | +.161 (4.08)  | +.139 (3.53) | 162                 | +.040 (1.02)  | -.348 (8.83)  |
| 69                                     | +.241 (6.12)  | +.139 (3.53) | 163                 | +.121 (3.06)  | -.348 (8.83)  |
| 70                                     | +.321 (8.16)  | +.139 (3.53) | 164                 | +.201 (5.10)  | -.348 (8.83)  |
| 71                                     | +.402 (10.20) | +.139 (3.53) | 165                 | +.281 (7.14)  | -.348 (8.83)  |
| 72                                     | +.482 (12.24) | +.139 (3.53) | 166                 | +.361 (9.18)  | -.348 (8.83)  |
| 73                                     | -.522 (13.26) | +.070 (1.77) | 167                 | +.442 (11.22) | -.348 (8.83)  |
| 74                                     | -.442 (11.22) | +.070 (1.77) | 168                 | -.321 (8.16)  | -.417 (10.60) |
| 75                                     | -.361 (9.18)  | +.070 (1.77) | 169                 | -.241 (6.12)  | -.417 (10.60) |
| 76                                     | -.281 (7.14)  | +.070 (1.77) | 170                 | -.161 (4.08)  | -.417 (10.60) |
| 77                                     | -.201 (5.10)  | +.070 (1.77) | 171                 | -.080 (2.04)  | -.417 (10.60) |
| 78                                     | -.121 (3.06)  | +.070 (1.77) | 172                 | +.000 (0.00)  | -.417 (10.60) |
| 79                                     | -.040 (1.02)  | +.070 (1.77) | 173                 | +.080 (2.04)  | -.417 (10.60) |
| 80                                     | +.040 (1.02)  | +.070 (1.77) | 174                 | +.161 (4.08)  | -.417 (10.60) |
| 81                                     | +.121 (3.06)  | +.070 (1.77) | 175                 | +.241 (6.12)  | -.417 (10.60) |
| 82                                     | +.201 (5.10)  | +.070 (1.77) | 176                 | +.321 (8.16)  | -.417 (10.60) |
| 83                                     | +.281 (7.14)  | +.070 (1.77) | 177                 | -.281 (7.14)  | -.487 (12.37) |
| 84                                     | +.361 (9.18)  | +.070 (1.77) | 178                 | -.201 (5.10)  | -.487 (12.37) |
| 85                                     | +.442 (11.22) | +.070 (1.77) | 179                 | -.121 (3.06)  | -.487 (12.37) |
| 86                                     | +.522 (13.26) | +.070 (1.77) | 180                 | -.040 (1.02)  | -.487 (12.37) |
| 87                                     | -.562 (14.28) | +.000 (0.00) | 181                 | +.040 (1.02)  | -.487 (12.37) |
| 88                                     | -.482 (12.24) | +.000 (0.00) | 182                 | +.121 (3.06)  | -.487 (12.37) |
| 89                                     | -.402 (10.20) | +.000 (0.00) | 183                 | +.201 (5.10)  | -.487 (12.37) |

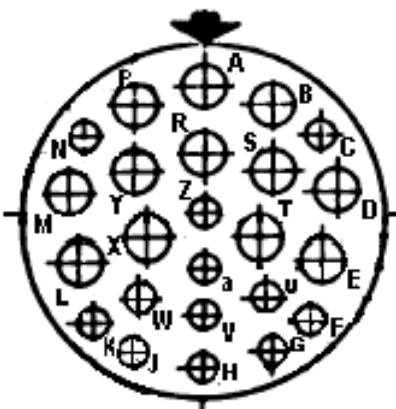
FIGURE 9. Insert arrangement, electrical connector, shell size 25 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-23) |              |              |                     |              |               |
|--|--------------|--------------|---------------------|--------------|---------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |               |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 90                                     | -.321 (8.16) | +.000 (0.00) | 184                 | +.281 (7.14) | -.487 (12.37) |
| 91                                     | -.241 (6.12) | +.000 (0.00) | 185                 | -.080 (2.04) | -.556 (14.13) |
| 92                                     | -.161 (4.08) | +.000 (0.00) | 186                 | +.000 (0.00) | -.556 (14.13) |
| 93                                     | -.080 (2.04) | +.000 (0.00) | 187                 | +.080 (2.04) | -.556 (14.13) |
| 94                                     | +.000 (0.00) | +.000 (0.00) | ---                 | ---          | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |                |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------------|----------------|
|            |                 |                    |               |                |                  | Pin              | Socket         |
| 25         | -23             | 187                | 23-22         | N              | All              | M39029/122-670   | M39029/121-663 |

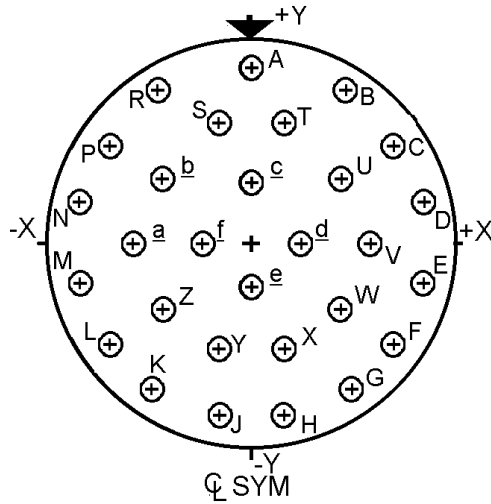
FIGURE 9. Insert arrangement, electrical connector, shell size 25 (Series I, III, IV of MIL-DTL-38999, Series I of MIL-DTL-27599, and Series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-24) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis        | Y-axis        |                     | X-axis       | Y-axis       |
| A                                      | +0.00 (0.00)  | +472 (11.99)  | N                   | -403 (10.24) | +298 (7.57)  |
| B                                      | +230 (5.84)   | +410 (10.41)  | P                   | -230 (5.84)  | +410 (10.41) |
| C                                      | +403 (10.24)  | +298 (7.57)   | R                   | +0.00 (0.00) | +234 (5.94)  |
| D                                      | +461 (11.71)  | +100 (2.54)   | S                   | +230 (5.84)  | +172 (4.37)  |
| E                                      | +413 (10.49)  | -.134 (3.40)  | T                   | +186 (4.72)  | -.062 (1.57) |
| F                                      | +370 (9.40)   | -.336 (8.53)  | U                   | +211 (5.36)  | -.267 (6.78) |
| G                                      | +230 (5.84)   | -.441 (11.20) | V                   | +0.00 (0.00) | -.323 (8.20) |
| H                                      | +0.00 (0.00)  | -.495 (12.57) | W                   | -.211 (5.36) | -.267 (6.78) |
| J                                      | -.230 (5.84)  | -.441 (11.20) | X                   | -.186 (4.72) | -.062 (1.57) |
| K                                      | -.370 (9.40)  | -.336 (8.53)  | Y                   | -.230 (5.84) | +172 (4.37)  |
| L                                      | -.413 (10.49) | -.134 (3.40)  | Z                   | +0.00 (0.00) | +028 (0.71)  |
| M                                      | -.461 (11.71) | +100 (2.54)   | a                   | +0.00 (0.00) | -.151 (3.84) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location          |
|------------|-----------------|--------------------|---------------|----------------|---------------------------|
| 25         | -24             | 12                 | 12            | I              | A,B,D,E,LM<br>P,R,S,T,X,Y |
|            |                 | 12                 | 16            |                | All others                |

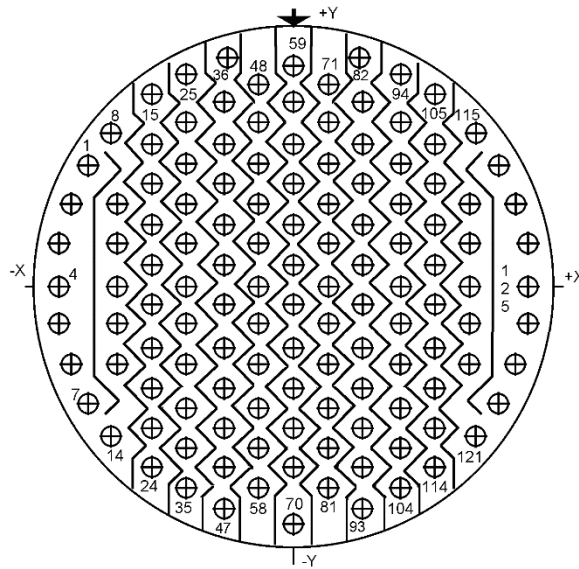
FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-29) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.00 (0.00)   | +0.481 (12.22) | S                   | -0.091 (2.31) | +0.321 (8.15) |
| B                                      | +0.258 (6.55)  | +0.406 (10.31) | T                   | +0.091 (2.31) | +0.321 (8.15) |
| C                                      | +0.395 (10.03) | +0.277 (7.04)  | U                   | +0.228 (5.79) | +0.194 (4.93) |
| D                                      | +0.469 (11.91) | +0.109 (2.77)  | V                   | +0.319 (8.10) | +0.000 (0.00) |
| E                                      | +0.469 (11.91) | -0.109 (2.77)  | W                   | +0.240 (6.10) | -0.181 (4.60) |
| F                                      | +0.395 (10.03) | -0.277 (7.04)  | X                   | +0.091 (2.31) | -0.290 (7.37) |
| G                                      | +0.263 (6.68)  | -0.406 (10.31) | Y                   | -0.091 (2.31) | -0.290 (7.37) |
| H                                      | +0.091 (2.31)  | -0.472 (11.99) | Z                   | -0.240 (6.10) | -0.181 (4.60) |
| J                                      | -0.091 (2.31)  | -0.472 (11.99) | a                   | -0.319 (8.10) | +0.000 (0.00) |
| K                                      | -0.263 (6.68)  | -0.406 (10.31) | b                   | -0.228 (5.79) | +0.194 (4.93) |
| L                                      | -0.395 (10.03) | -0.277 (7.04)  | c                   | +0.000 (0.00) | +0.161 (4.09) |
| M                                      | -0.469 (11.91) | -0.109 (2.77)  | d                   | +0.134 (3.40) | +0.000 (0.00) |
| N                                      | -0.469 (11.91) | +0.109 (2.77)  | e                   | +0.000 (0.00) | -0.130 (3.30) |
| P                                      | -0.395 (10.03) | +0.277 (7.04)  | f                   | -0.134 (3.40) | +0.000 (0.00) |
| R                                      | -0.258 (6.55)  | +0.406 (10.31) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 25         | -29             | 29                 | 16            | I              | All              | MS20057-29 |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-35) |                |                |                     |               |                |
|--|----------------|----------------|---------------------|---------------|----------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |                |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)    |
| 1                                      | -0.479 (12.17) | +0.279 (7.09)  | 65                  | +0.000 (0.00) | -0.047 (1.19)  |
| 2                                      | -0.520 (13.21) | +0.190 (4.83)  | 66                  | +0.000 (0.00) | -0.142 (3.61)  |
| 3                                      | -0.546 (13.87) | +0.095 (2.41)  | 67                  | +0.000 (0.00) | -0.237 (6.02)  |
| 4                                      | -0.555 (14.10) | +0.000 (0.00)  | 68                  | +0.000 (0.00) | -0.332 (8.43)  |
| 5                                      | -0.546 (13.87) | -0.095 (2.41)  | 69                  | +0.000 (0.00) | -0.427 (10.85) |
| 6                                      | -0.520 (13.21) | -0.190 (4.83)  | 70                  | +0.000 (0.00) | -0.555 (14.10) |
| 7                                      | -0.479 (12.17) | -0.279 (7.09)  | 71                  | +0.083 (2.11) | +0.475 (12.07) |
| 8                                      | -0.424 (10.77) | +0.357 (9.07)  | 72                  | +0.083 (2.11) | +0.380 (9.65)  |
| 9                                      | -0.415 (10.54) | +0.190 (4.83)  | 73                  | +0.083 (2.11) | +0.285 (7.24)  |
| 10                                     | -0.415 (10.54) | +0.095 (2.41)  | 74                  | +0.083 (2.11) | +0.190 (4.83)  |
| 11                                     | -0.415 (10.54) | .000 (0.00)    | 75                  | +0.083 (2.11) | +0.095 (2.41)  |
| 12                                     | -0.415 (10.54) | -0.095 (2.41)  | 76                  | +0.083 (2.11) | +0.000 (0.00)  |
| 13                                     | -0.415 (10.54) | -0.190 (4.83)  | 77                  | +0.083 (2.11) | -0.095 (2.41)  |
| 14                                     | -0.424 (10.77) | -0.357 (9.07)  | 78                  | +0.083 (2.11) | -0.190 (4.83)  |
| 15                                     | -0.332 (8.43)  | +0.444 (11.28) | 79                  | +0.083 (2.11) | -0.285 (7.24)  |
| 16                                     | -0.332 (8.43)  | +0.332 (8.43)  | 80                  | +0.083 (2.11) | -0.380 (9.65)  |
| 17                                     | -0.332 (8.43)  | +0.237 (6.02)  | 81                  | +0.083 (2.11) | -0.475 (12.07) |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-35) |              |               |                     |              |               |
|--|--------------|---------------|---------------------|--------------|---------------|
| Contact position ID                    | Location     |               | Contact position ID | Location     |               |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)   |
| 18                                     | -.332 (8.43) | +.142 (3.61)  | 82                  | +.160 (4.06) | +.531 (13.49) |
| 19                                     | -.332 (8.43) | +.047 (1.19)  | 83                  | +.166 (4.22) | +.427 (10.85) |
| 20                                     | -.332 (8.43) | -.047 (1.19)  | 84                  | +.166 (4.22) | +.332 (8.43)  |
| 21                                     | -.332 (8.43) | -.142 (3.61)  | 85                  | +.166 (4.22) | +.237 (6.02)  |
| 22                                     | -.332 (8.43) | -.237 (6.02)  | 86                  | +.166 (4.22) | +.142 (3.61)  |
| 23                                     | -.332 (8.43) | -.332 (8.43)  | 87                  | +.166 (4.22) | +.047 (1.19)  |
| 24                                     | -.332 (8.43) | -.427 (10.85) | 88                  | +.166 (4.22) | -.047 (1.19)  |
| 25                                     | -.249 (6.32) | +.496 (12.60) | 89                  | +.166 (4.22) | -.142 (3.61)  |
| 26                                     | -.249 (6.32) | +.380 (9.65)  | 90                  | +.166 (4.22) | -.237 (6.02)  |
| 27                                     | -.249 (6.32) | +.285 (7.24)  | 91                  | +.166 (4.22) | -.332 (8.43)  |
| 28                                     | -.249 (6.32) | +.190 (4.83)  | 92                  | +.166 (4.22) | -.427 (10.85) |
| 29                                     | -.249 (6.32) | +.095 (2.41)  | 93                  | +.166 (4.22) | -.522 (13.26) |
| 30                                     | -.249 (6.32) | +.000 (0.00)  | 94                  | +.249 (6.32) | +.496 (12.60) |
| 31                                     | -.249 (6.32) | -.095 (2.41)  | 95                  | +.249 (6.32) | +.380 (9.65)  |
| 32                                     | -.249 (6.32) | -.190 (4.83)  | 96                  | +.249 (6.32) | +.285 (7.24)  |
| 33                                     | -.249 (6.32) | -.285 (7.24)  | 97                  | +.249 (6.32) | +.190 (4.83)  |
| 34                                     | -.249 (6.32) | -.380 (9.65)  | 98                  | +.249 (6.32) | +.095 (2.41)  |
| 35                                     | -.249 (6.32) | -.475 (12.07) | 99                  | +.249 (6.32) | +.000 (0.00)  |
| 36                                     | -.160 (4.06) | +.531 (13.49) | 100                 | +.249 (6.32) | -.095 (2.41)  |
| 37                                     | -.166 (4.22) | +.427 (10.85) | 101                 | +.249 (6.32) | -.190 (4.83)  |
| 38                                     | -.166 (4.22) | +.332 (8.43)  | 102                 | +.249 (6.32) | -.285 (7.24)  |
| 39                                     | -.166 (4.22) | +.237 (6.02)  | 103                 | +.249 (6.32) | -.380 (9.65)  |
| 40                                     | -.166 (4.22) | +.142 (3.61)  | 104                 | +.249 (6.32) | -.475 (12.07) |
| 41                                     | -.166 (4.22) | +.047 (1.19)  | 105                 | +.332 (8.43) | +.444 (11.28) |
| 42                                     | -.166 (4.22) | -.047 (1.19)  | 106                 | +.332 (8.43) | +.332 (8.43)  |
| 43                                     | -.166 (4.22) | -.142 (3.61)  | 107                 | +.332 (8.43) | +.237 (6.02)  |
| 44                                     | -.166 (4.22) | -.237 (6.02)  | 108                 | +.332 (8.43) | +.142 (3.61)  |
| 45                                     | -.166 (4.22) | -.332 (8.43)  | 109                 | +.332 (8.43) | +.047 (1.19)  |
| 46                                     | -.166 (4.22) | -.427 (10.85) | 110                 | +.332 (8.43) | -.047 (1.19)  |
| 47                                     | -.166 (4.22) | -.522 (13.26) | 111                 | +.332 (8.43) | -.142 (3.61)  |
| 48                                     | -.083 (2.11) | +.475 (12.07) | 112                 | +.332 (8.43) | -.237 (6.02)  |
| 49                                     | -.083 (2.11) | +.380 (9.65)  | 113                 | +.332 (8.43) | -.332 (8.43)  |
| 50                                     | -.083 (2.11) | +.285 (7.24)  | 114                 | +.332 (8.43) | -.427 (10.85) |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

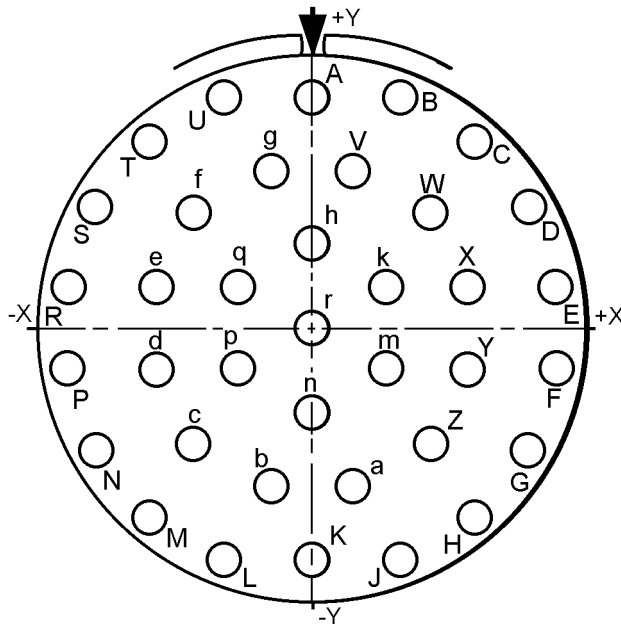
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-35) |               |                |                     |                |               |
|--|---------------|----------------|---------------------|----------------|---------------|
| Contact position ID                    | Location      |                | Contact position ID | Location       |               |
|  | X-axis (mm)   | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)   |
| 51                                     | -.083 (2.11)  | + .190 (4.83)  | 115                 | + .424 (10.77) | + .357 (9.07) |
| 52                                     | -.083 (2.11)  | + .095 (2.41)  | 116                 | + .415 (10.54) | + .190 (4.83) |
| 53                                     | -.083 (2.11)  | + .000 (0.00)  | 117                 | + .415 (10.54) | + .095 (2.41) |
| 54                                     | -.083 (2.11)  | -.095 (2.41)   | 118                 | + .415 (10.54) | + .000 (0.00) |
| 55                                     | -.083 (2.11)  | -.190 (4.83)   | 119                 | + .415 (10.54) | -.095 (2.41)  |
| 56                                     | -.083 (2.11)  | -.285 (7.24)   | 120                 | + .415 (10.54) | -.190 (4.83)  |
| 57                                     | -.083 (2.11)  | -.380 (9.65)   | 121                 | + .424 (10.77) | -.357 (9.07)  |
| 58                                     | -.083 (2.11)  | -.475 (12.07)  | 122                 | + .479 (12.17) | + .279 (7.09) |
| 59                                     | + .000 (0.00) | + .522 (13.26) | 123                 | + .520 (13.21) | + .190 (4.83) |
| 60                                     | + .000 (0.00) | + .427 (10.85) | 124                 | + .546 (13.87) | + .095 (2.41) |
| 61                                     | + .000 (0.00) | + .332 (8.43)  | 125                 | + .555 (14.10) | + .000 (0.00) |
| 62                                     | + .000 (0.00) | + .237 (6.02)  | 126                 | + .546 (13.87) | -.095 (2.41)  |
| 63                                     | + .000 (0.00) | + .142 (3.61)  | 127                 | + .520 (13.21) | -.190 (4.83)  |
| 64                                     | + .000 (0.00) | + .047 (1.19)  | 128                 | + .479 (12.17) | -.279 (7.09)  |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 25         | -35             | 128                | 22D           | M              | All              | MS27533-35 |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-37) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.000 (.00)   | +0.472 (11.99) | W                   | +0.242 (6.15) | +0.236 (5.99) |
| B                                      | +0.185 (4.70)  | +0.472 (11.99) | X                   | +0.326 (8.28) | +0.086 (2.18) |
| C                                      | +0.333 (8.46)  | +0.382 (9.70)  | Y                   | +0.326 (8.28) | -0.086 (2.18) |
| D                                      | +0.441 (11.20) | +0.249 (6.32)  | Z                   | +0.242 (6.15) | -0.236 (5.99) |
| E                                      | +0.500 (12.70) | +0.086 (2.18)  | a                   | +0.086 (2.18) | -0.320 (8.13) |
| F                                      | +0.500 (12.70) | -0.086 (2.18)  | b                   | -0.086 (2.18) | -0.320 (8.13) |
| G                                      | +0.441 (11.20) | -0.249 (6.32)  | c                   | -0.242 (6.15) | -0.236 (5.99) |
| H                                      | +0.333 (8.46)  | +0.382 (9.70)  | d                   | -0.326 (8.28) | -0.086 (2.18) |
| J                                      | +0.186 (4.72)  | -0.472 (11.99) | e                   | -0.326 (8.28) | +0.086 (2.18) |
| K                                      | +0.000 (.00)   | -0.472 (11.99) | f                   | -0.242 (6.15) | +0.236 (5.99) |
| L                                      | -0.186 (4.72)  | -0.472 (11.99) | g                   | -0.086 (2.18) | +0.320 (8.13) |
| M                                      | -0.333 (8.46)  | -0.382 (9.70)  | h                   | +0.000 (.00)  | +0.172 (4.37) |
| N                                      | -0.441 (11.20) | -0.249 (6.32)  | k                   | +0.154 (3.91) | +0.086 (2.18) |
| P                                      | -0.500 (12.70) | -0.086 (2.18)  | m                   | +0.154 (3.91) | -0.086 (2.18) |
| R                                      | -0.500 (12.70) | +0.086 (2.18)  | n                   | +0.000 (.00)  | -0.172 (4.37) |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

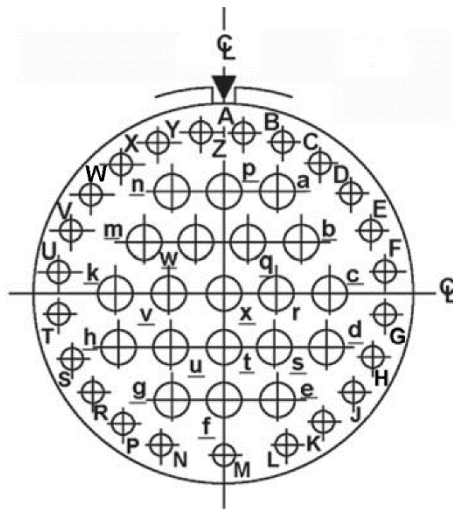


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-37) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| S                                      | -.441 (11.20) | +.249 (6.32)  | p                   | -.154 (3.91) | -.086 (2.18) |
| T                                      | -.333 (8.46)  | +.382 (9.70)  | q                   | -.154 (3.91) | +.086 (2.18) |
| U                                      | -.186 (4.72)  | +.472 (11.99) | r                   | +.000 (.00)  | +.000 (.00)  |
| V                                      | +.086 (2.18)  | +.320 (8.13)  | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 25         | -37             | 37                 | 16            | II             | All              | -----      |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 25-43) |                |                |                     |               |                |
|--|----------------|----------------|---------------------|---------------|----------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |                |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)    |
| A                                      | +0.069 (1.75)  | +0.531 (13.49) | Z                   | -0.069 (1.75) | +0.531 (13.49) |
| B                                      | +0.203 (5.16)  | +0.495 (12.57) | a                   | +0.172 (4.37) | +0.344 (8.74)  |
| C                                      | +0.324 (8.23)  | +0.425 (10.80) | b                   | +0.258 (6.55) | +0.172 (4.37)  |
| D                                      | +0.424 (10.77) | +0.326 (8.28)  | c                   | +0.344 (8.74) | +0.000 (0.00)  |
| E                                      | +0.493 (12.52) | +0.205 (5.21)  | d                   | +0.344 (8.74) | -0.172 (4.37)  |
| F                                      | +0.531 (13.49) | +0.069 (1.75)  | e                   | +0.172 (4.37) | -0.344 (8.74)  |
| G                                      | +0.531 (13.49) | -0.069 (1.75)  | f                   | +0.000 (0.00) | -0.344 (8.74)  |
| H                                      | +0.493 (12.52) | -0.205 (5.21)  | g                   | -0.172 (4.37) | -0.344 (8.74)  |
| J                                      | +0.424 (10.77) | -0.326 (8.28)  | h                   | -0.344 (8.74) | -0.172 (4.37)  |
| K                                      | +0.324 (8.23)  | -0.425 (10.80) | k                   | -0.344 (8.74) | +0.000 (0.00)  |
| L                                      | +0.203 (5.16)  | -0.495 (12.57) | m                   | -0.258 (6.55) | +0.172 (4.37)  |
| M                                      | +0.000 (0.00)  | -0.531 (13.49) | n                   | -0.172 (4.37) | +0.344 (8.74)  |
| N                                      | -0.203 (5.16)  | -0.495 (12.57) | p                   | +0.000 (0.00) | +0.344 (8.74)  |
| P                                      | -0.324 (8.23)  | -0.425 (10.80) | q                   | +0.086 (2.18) | +0.172 (4.37)  |
| R                                      | -0.424 (10.77) | -0.326 (8.28)  | r                   | +0.172 (4.37) | +0.000 (0.00)  |
| S                                      | -0.493 (12.52) | -0.205 (5.21)  | s                   | +0.172 (4.37) | -0.172 (4.37)  |
| T                                      | -0.531 (13.49) | -0.069 (1.75)  | t                   | +0.000 (0.00) | -0.172 (4.37)  |
| U                                      | -0.531 (13.49) | +0.069 (1.75)  | u                   | -0.172 (4.37) | -0.172 (4.37)  |

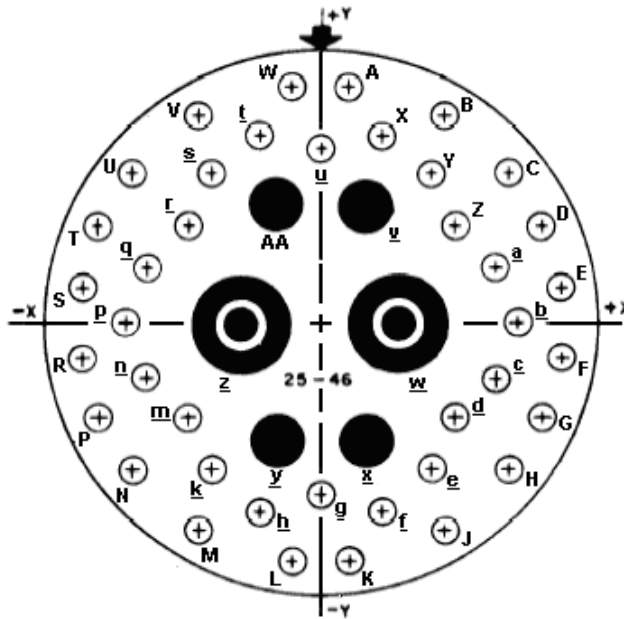
FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

MIL-STD-1560C  
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| Contacts<br>(Insert arrangement 25-43) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| V                                      | -.493 (12.52) | +.205 (5.21)  | <u>v</u>            | -.172 (4.37) | +.000 (0.00) |
| W                                      | -.424 (10.77) | +.326 (8.28)  | <u>w</u>            | -.086 (2.18) | +.172 (4.37) |
| X                                      | -.324 (8.23)  | +.425 (10.80) | <u>x</u>            | +.000 (0.00) | +.000 (0.00) |
| Y                                      | -.203 (5.16)  | +.495 (12.57) |                     |              |              |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location  | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|---|------------|
| 25         | -43             | 20                 | 16            | I              | <u>a,b,c,d,e,f,g,h,k,m,</u><br><u>n,p,q,r,s,t,u,v,w,x</u> | MS20057-43 |
|            |                 | 23                 | 20            |                | All others  |            |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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(Inactive for new design for MIL-DTL-38999. For new design, use arrangement no. 25-47.)

| Contacts<br>(Insert arrangement 25-46) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +5.33 (13.54) | <u>a</u>            | +4.04 (10.26) | +1.25 (3.18)  |
| B                                      | +2.75 (6.99)  | +4.66 (11.84) | <u>b</u>            | +4.37 (11.10) | +0.00 (0.00)  |
| C                                      | +4.20 (10.67) | +3.37 (8.56)  | <u>c</u>            | +4.04 (10.26) | -1.25 (3.18)  |
| D                                      | +4.90 (12.45) | +2.27 (5.77)  | <u>d</u>            | +3.14 (7.98)  | -2.21 (5.61)  |
| E                                      | +5.31 (13.49) | +0.93 (2.36)  | <u>e</u>            | +2.45 (6.22)  | -3.37 (8.56)  |
| F                                      | +5.31 (13.49) | -0.93 (2.36)  | <u>f</u>            | +1.36 (3.45)  | -4.24 (10.77) |
| G                                      | +4.90 (12.45) | -2.27 (5.77)  | <u>g</u>            | +0.00 (0.00)  | -3.95 (10.03) |
| H                                      | +4.20 (10.67) | -3.37 (8.56)  | <u>h</u>            | -1.36 (3.45)  | -4.24 (10.77) |
| J                                      | +2.75 (6.99)  | -4.66 (11.84) | <u>k</u>            | -2.45 (6.22)  | -3.37 (8.56)  |
| K                                      | +0.065 (1.65) | -5.33 (13.54) | <u>m</u>            | -3.14 (7.98)  | -2.21 (5.61)  |
| L                                      | -0.065 (1.65) | -5.33 (13.54) | <u>n</u>            | -4.04 (10.26) | -1.25 (3.18)  |
| M                                      | -2.75 (6.99)  | -4.66 (11.84) | <u>p</u>            | -4.37 (11.10) | +0.00 (0.00)  |
| N                                      | -4.20 (10.67) | -3.37 (8.56)  | <u>q</u>            | -4.04 (10.26) | +1.25 (3.18)  |
| P                                      | -4.90 (12.45) | -2.27 (5.77)  | <u>r</u>            | -3.14 (7.98)  | +2.21 (5.61)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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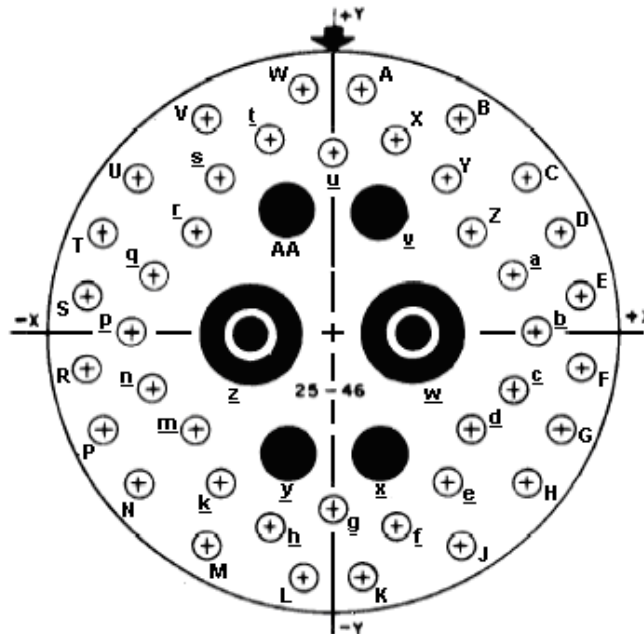
| Contacts<br>(Insert arrangement 25-46) |               |                |                     |               |                |
|--|---------------|----------------|---------------------|---------------|----------------|
| Contact position ID                    | Location      |                | Contact position ID | Location      |                |
|  | X-axis (mm)   | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)    |
| R                                      | -.531 (13.49) | -.093 (2.36)   | <u>s</u>            | -.245 (6.22)  | + .337 (8.56)  |
| S                                      | -.531 (13.49) | + .093 (2.36)  | <u>t</u>            | -.136 (3.45)  | + .424 (10.77) |
| T                                      | -.490 (12.45) | + .227 (5.77)  | <u>u</u>            | + .000 (0.00) | + .395 (10.03) |
| U                                      | -.420 (10.67) | + .337 (8.56)  | <u>v</u>            | + .097 (2.46) | + .265 (6.73)  |
| V                                      | -.275 (6.99)  | + .466 (11.84) | <u>w</u>            | + .180 (4.57) | + .000 (0.00)  |
| W                                      | -.065 (1.65)  | + .533 (13.54) | <u>x</u>            | + .097 (2.46) | -.265 (6.73)   |
| X                                      | + .136 (3.45) | + .424 (10.77) | <u>y</u>            | -.097 (2.46)  | -.265 (6.73)   |
| Y                                      | + .245 (6.22) | + .337 (8.56)  | <u>z</u>            | -.180 (4.57)  | + .000 (0.00)  |
| Z                                      | + .314 (7.98) | + .221 (5.61)  | AA                  | -.097 (2.46)  | + .265 (6.73)  |

| Shell size | Arrange-ment no. | Number of contacts | Size contacts | Service rating | Contact location | Standard contact |               |
|------------|------------------|--------------------|---------------|----------------|------------------|------------------|---------------|
|            |                  |                    |               |                |                  | Pin              | Socket        |
| 25         | -46              | 2                  | 8 (see note)  | Coax           | z, w             | M39029/60-367    | M39029/59-366 |
|            |                  | 4                  | 16            |                |                  | I                | AA, v, x, y   |
|            |                  | 40                 | 20            | All others     | M39029/58-363    |                  |               |

## NOTES:

- To meet environmental sealing requirements, size 8 shielded contacts used with this insert arrangement may require separate, non-standard sealing boots that are furnished with the connector. For this insert arrangement, some connector grommet designs use a heat shrink sleeve only with the size 8 shielded contacts to meet environmental sealing requirements. When heat shrink sleeves are used, sealing boots are not used, and when sealing boots are used, heat shrink sleeves are not used. Heat shrink sleeves have a maximum temperature rating of 175°C maximum. When heat shrink sleeves are used, connectors rated to 200°C max are derated to 175°C max.
- If an identical insert arrangement / contact pattern is required which uses SAE-AS39029/90 and /91 size 8 twinax contacts, use insert arrangement 25-90. If an identical insert arrangement / contact pattern is required with uses SAE-AS39029/113 and /114 size 8 twinax contacts, use insert arrangement 25-91.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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(INSERT ARRANGEMENT PATTERN IDENTICAL TO 25-46, EXCEPT 25-47

USES

SEALING BOOT IN ACCORDANCE WITH MIL-DTL-38999/62)

| Contacts<br>(Insert arrangement 25-47) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +5.33 (13.54) | <u>a</u>            | +4.04 (10.26) | +1.25 (3.18)  |
| B                                      | +2.75 (6.99)  | +4.66 (11.84) | <u>b</u>            | +4.37 (11.10) | +0.00 (0.00)  |
| C                                      | +4.20 (10.67) | +3.37 (8.56)  | <u>c</u>            | +4.04 (10.26) | -1.25 (3.18)  |
| D                                      | +4.90 (12.45) | +2.27 (5.77)  | <u>d</u>            | +3.14 (7.98)  | -2.21 (5.61)  |
| E                                      | +5.31 (13.49) | +0.93 (2.36)  | <u>e</u>            | +2.45 (6.22)  | -3.37 (8.56)  |
| F                                      | +5.31 (13.49) | -0.93 (2.36)  | <u>f</u>            | +1.36 (3.45)  | -4.24 (10.77) |
| G                                      | +4.90 (12.45) | -2.27 (5.77)  | <u>g</u>            | +0.00 (0.00)  | -3.95 (10.03) |
| H                                      | +4.20 (10.67) | -3.37 (8.56)  | <u>h</u>            | -1.36 (3.45)  | -4.24 (10.77) |
| J                                      | +2.75 (6.99)  | -4.66 (11.84) | <u>k</u>            | -2.45 (6.22)  | -3.37 (8.56)  |
| K                                      | +0.065 (1.65) | -5.33 (13.54) | <u>m</u>            | -3.14 (7.98)  | -2.21 (5.61)  |
| L                                      | -0.065 (1.65) | -5.33 (13.54) | <u>n</u>            | -4.04 (10.26) | -1.25 (3.18)  |
| M                                      | -2.75 (6.99)  | -4.66 (11.84) | <u>p</u>            | -4.37 (11.10) | +0.00 (0.00)  |
| N                                      | -4.20 (10.67) | -3.37 (8.56)  | <u>q</u>            | -4.04 (10.26) | +1.25 (3.18)  |
| P                                      | -4.90 (12.45) | -2.27 (5.77)  | <u>r</u>            | -3.14 (7.98)  | +2.21 (5.61)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

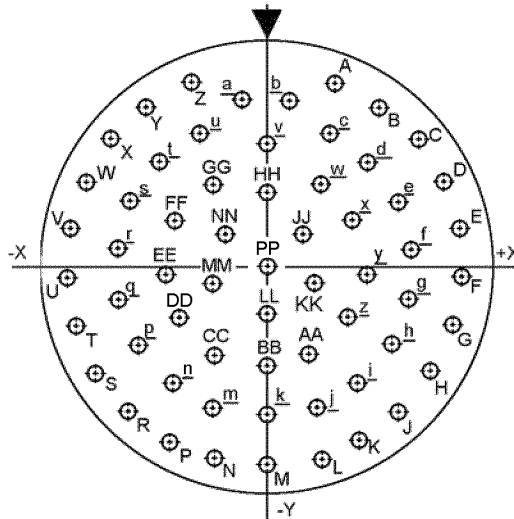
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-47) |               |                |                     |               |                |
|--|---------------|----------------|---------------------|---------------|----------------|
| Contact position ID                    | Location      |                | Contact position ID | Location      |                |
|  | X-axis (mm)   | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)    |
| R                                      | -.531 (13.49) | -.093 (2.36)   | <u>s</u>            | -.245 (6.22)  | + .337 (8.56)  |
| S                                      | -.531 (13.49) | + .093 (2.36)  | <u>t</u>            | -.136 (3.45)  | + .424 (10.77) |
| T                                      | -.490 (12.45) | + .227 (5.77)  | <u>u</u>            | + .000 (0.00) | + .395 (10.03) |
| U                                      | -.420 (10.67) | + .337 (8.56)  | <u>v</u>            | + .097 (2.46) | + .265 (6.73)  |
| V                                      | -.275 (6.99)  | + .466 (11.84) | <u>w</u>            | + .180 (4.57) | + .000 (0.00)  |
| W                                      | -.065 (1.65)  | + .533 (13.54) | <u>x</u>            | + .097 (2.46) | -.265 (6.73)   |
| X                                      | + .136 (3.45) | + .424 (10.77) | <u>y</u>            | -.097 (2.46)  | -.265 (6.73)   |
| Y                                      | + .245 (6.22) | + .337 (8.56)  | <u>z</u>            | -.180 (4.57)  | + .000 (0.00)  |
| Z                                      | + .314 (7.98) | + .221 (5.61)  | AA                  | -.097 (2.46)  | + .265 (6.73)  |

| Shell size | Arrangement no. | Number of contacts | Size contacts   | Service rating | Contact location | Standard contact |               |
|------------|-----------------|--------------------|-----------------|----------------|------------------|------------------|---------------|
|            |                 |                    |                 |                |                  | Pin              | Socket        |
| 25         | -47             | 2                  | 8<br>(see note) | Coax           | z, w             | M39029/60-367    | M39029/59-366 |
|            |                 | 4                  | 16              | I              | AA,<br>v, x, y   | M39029/58-364    | M39029/56-352 |
|            |                 | 40                 | 20              |                | All others       | M39029/58-363    | M39029/56-351 |

NOTE: For this insert arrangement, sealing boots in accordance with MIL-DTL-38999/62 shall be used to environmentally seal the size 8 coax contacts required by this arrangement. Heat shrink sleeves are not used when sealing boots in accordance with MIL-DTL-38999/62 are used. For an identical insert arrangement pattern for connectors supplied with size 8 twinax contacts, see insert arrangement 25-91. 25-91 uses size 8 twinax contacts in accordance with SAE-AS39029/113 or /114, and it uses sealing boots in accordance with MIL-DTL-38999/62.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 25-61) |                |                |                     |                |                |
|--|----------------|----------------|---------------------|----------------|----------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |                |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)    |
| A                                      | + .196 (4.98)  | + .500 (12.70) | i                   | + .251 (6.38)  | - .314 (7.98)  |
| B                                      | + .314 (7.98)  | + .435 (11.05) | j                   | + .133 (3.38)  | - .379 (9.63)  |
| C                                      | + .413 (10.49) | + .343 (8.71)  | k                   | + .000 (0.00)  | - .402 (10.21) |
| D                                      | + .485 (12.32) | + .230 (5.84)  | m                   | - .133 (3.38)  | - .379 (9.63)  |
| E                                      | + .527 (13.39) | + .101 (2.57)  | n                   | - .251 (6.38)  | - .314 (7.98)  |
| F                                      | + .536 (13.61) | - .030 (0.76)  | p                   | - .341 (8.66)  | - .213 (5.41)  |
| G                                      | + .511 (12.98) | - .164 (4.17)  | q                   | - .392 (9.96)  | - .088 (2.24)  |
| H                                      | + .454 (11.53) | - .287 (7.29)  | r                   | - .399 (10.13) | + .046 (1.17)  |
| J                                      | + .368 (9.35)  | - .391 (9.93)  | s                   | - .362 (9.19)  | + .175 (4.45)  |
| K                                      | + .259 (6.58)  | - .470 (11.94) | t                   | - .285 (7.24)  | + .283 (7.19)  |
| L                                      | + .134 (3.40)  | - .519 (13.18) | u                   | - .173 (4.39)  | + .363 (9.22)  |
| M                                      | + .000 (0.00)  | - .537 (13.64) | v                   | + .000 (0.00)  | + .338 (8.59)  |
| N                                      | - .134 (3.40)  | - .519 (13.18) | w                   | + .147 (3.73)  | + .223 (5.66)  |
| P                                      | - .259 (6.58)  | - .470 (11.94) | x                   | + .237 (6.02)  | + .122 (3.10)  |
| R                                      | - .368 (9.35)  | - .391 (9.93)  | y                   | + .267 (6.78)  | - .010 (0.25)  |
| S                                      | - .454 (11.53) | - .287 (7.29)  | z                   | + .228 (5.79)  | - .139 (3.53)  |
| T                                      | - .511 (12.98) | - .164 (4.17)  | AA                  | + .131 (3.33)  | - .233 (5.92)  |
| U                                      | - .536 (13.61) | - .030 (0.76)  | BB                  | + .000 (0.00)  | - .267 (6.78)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

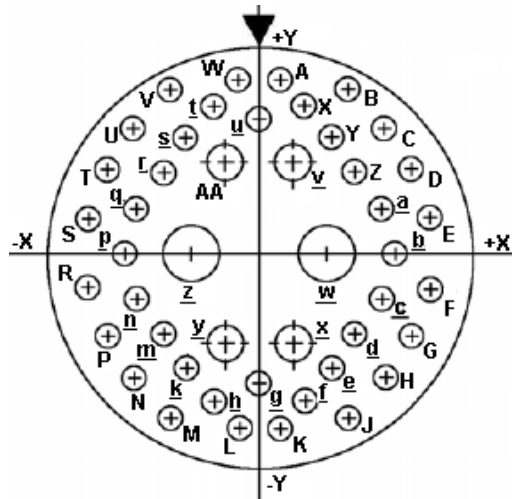


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 25-61) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| V                                      | -.527 (13.39) | +.101 (2.57)  | CC                  | -.131 (3.33) | -.233 (5.92) |
| W                                      | -.485 (12.32) | +.230 (5.84)  | DD                  | -.228 (5.79) | -.139 (3.53) |
| X                                      | -.413 (10.49) | +.343 (8.71)  | EE                  | -.267 (6.78) | -.010 (0.25) |
| Y                                      | -.314 (7.98)  | +.435 (11.05) | FF                  | -.237 (6.02) | +.122 (3.10) |
| Z                                      | -.196 (4.98)  | +.500 (12.70) | GG                  | -.147 (3.73) | +.223 (5.66) |
| a                                      | -.068 (1.73)  | +.454 (11.53) | HH                  | +.000 (0.00) | +.200 (5.08) |
| b                                      | +.068 (1.73)  | +.454 (11.53) | JJ                  | +.105 (2.67) | +.094 (2.39) |
| c                                      | +.173 (4.39)  | +.363 (9.22)  | KK                  | +.135 (3.43) | -.041 (1.04) |
| d                                      | +.285 (7.24)  | +.283 (7.19)  | LL                  | +.000 (0.00) | -.132 (3.35) |
| e                                      | +.362 (9.19)  | +.175 (4.45)  | MM                  | -.135 (3.43) | -.041 (1.04) |
| f                                      | +.399 (10.13) | +.046 (1.17)  | NN                  | -.105 (2.67) | +.094 (2.39) |
| g                                      | +.392 (9.96)  | -.088 (2.24)  | PP                  | +.000 (0.00) | +.000 (0.00) |
| h                                      | +.341 (8.66)  | -.213 (5.41)  | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 25         | -61             | 61                 | 20            | I              | All              | MS20057-61 |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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(Inactive for new design for MIL-DTL-38999. For new design, use arrangement no. 25-91.)

| Contacts<br>(Insert arrangement 25-90) |                |                |                     |                |                |
|--|----------------|----------------|---------------------|----------------|----------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |                |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)    |
| A                                      | +0.065 (1.65)  | +0.533 (13.54) | <u>a</u>            | +0.404 (10.26) | +0.125 (3.18)  |
| B                                      | +0.275 (6.99)  | +0.466 (11.84) | <u>b</u>            | +0.437 (11.10) | +0.000 (0.00)  |
| C                                      | +0.420 (10.67) | +0.337 (8.56)  | <u>c</u>            | +0.404 (10.26) | -0.125 (3.18)  |
| D                                      | +0.490 (12.45) | +0.227 (5.77)  | <u>d</u>            | +0.314 (7.98)  | -0.221 (5.61)  |
| E                                      | +0.531 (13.49) | +0.093 (2.36)  | <u>e</u>            | +0.245 (6.22)  | -0.337 (8.56)  |
| F                                      | +0.531 (13.49) | -0.093 (2.36)  | <u>f</u>            | +0.136 (3.45)  | -0.424 (10.77) |
| G                                      | +0.490 (12.45) | -0.227 (5.77)  | <u>g</u>            | +0.000 (0.00)  | -0.395 (10.03) |
| H                                      | +0.420 (10.67) | -0.337 (8.56)  | <u>h</u>            | -0.136 (3.45)  | -0.424 (10.77) |
| J                                      | +0.275 (6.99)  | -0.466 (11.84) | <u>k</u>            | -0.245 (6.22)  | -0.337 (8.56)  |
| K                                      | +0.065 (1.65)  | -0.533 (13.54) | <u>m</u>            | -0.314 (7.98)  | -0.221 (5.61)  |
| L                                      | -0.065 (1.65)  | -0.533 (13.54) | <u>n</u>            | -0.404 (10.26) | -0.125 (3.18)  |
| M                                      | -0.275 (6.99)  | -0.466 (11.84) | <u>p</u>            | -0.437 (11.10) | +0.000 (0.00)  |
| N                                      | -0.420 (10.67) | -0.337 (8.56)  | <u>q</u>            | -0.404 (10.26) | +0.125 (3.18)  |
| P                                      | -0.490 (12.45) | -0.227 (5.77)  | <u>r</u>            | -0.314 (7.98)  | +0.221 (5.61)  |
| R                                      | -0.531 (13.49) | -0.093 (2.36)  | <u>s</u>            | -0.245 (6.22)  | +0.337 (8.56)  |
| S                                      | -0.531 (13.49) | +0.093 (2.36)  | <u>t</u>            | -0.136 (3.45)  | +0.424 (10.77) |
| T                                      | -0.490 (12.45) | +0.227 (5.77)  | <u>u</u>            | +0.000 (0.00)  | +0.395 (10.03) |
| U                                      | -0.420 (10.67) | +0.337 (8.56)  | <u>v</u>            | +0.097 (2.46)  | +0.265 (6.73)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

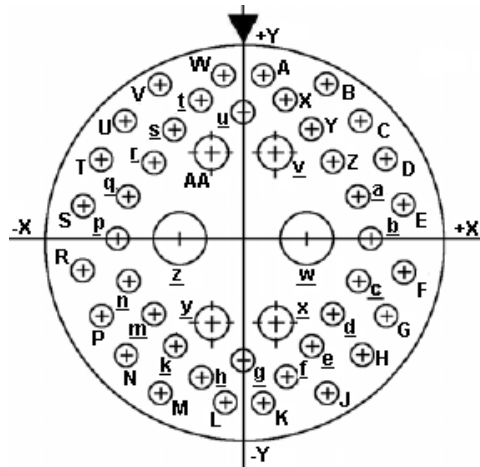
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| Contacts<br>(Insert arrangement 25-90) |              |               |                     |              |              |
|--|--------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |               | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| V                                      | -.275 (6.99) | +.466 (11.84) | <u>w</u>            | +.180 (4.57) | +.000 (.00)  |
| W                                      | -.065 (1.65) | +.533 (13.54) | <u>x</u>            | +.097 (2.46) | -.265 (6.73) |
| X                                      | +.136 (3.45) | +.424 (10.77) | <u>y</u>            | -.097 (2.46) | -.265 (6.73) |
| Y                                      | +.245 (6.22) | +.337 (8.56)  | <u>z</u>            | -.180 (4.57) | +.000 (0.00) |
| Z                                      | +.314 (7.98) | +.221 (5.61)  | <u>AA</u>           | -.097 (2.46) | +.265 (6.73) |

| Shell size | Arrange-ment no. | Number of contacts | Size contacts   | Service rating | Contact location                              | Standard contact |               |
|------------|------------------|--------------------|-----------------|----------------|---|------------------|---------------|
|            |                  |                    |                 |                |   | Pin              | Socket        |
| 25         | -90              | 2                  | 8<br>(see note) | Twinax         | <u>w</u> , <u>z</u>                           | M39029/90-529    | M39029/91-530 |
|            |                  | 4                  | 16              | I              | <u>v</u> , <u>x</u> , <u>y</u> ,<br><u>AA</u> | M39029/58-364    | M39029/56-352 |
|            |                  | 40                 | 20              |                | All others                                    | M39029/58-363    | M39029/56-351 |

NOTE: To meet environmental sealing requirements, size 8 shielded contacts used with this insert arrangement may require separate, non-standard sealing boots that are furnished with the connector. For this insert arrangement, some connector grommet designs use a heat shrink sleeve only with the size 8 shielded contacts to meet environmental sealing requirements. When heat shrink sleeves are used, sealing boots are not used, and when sealing boots are used, heat shrink sleeves are not used. Heat shrink sleeves have a maximum temperature rating of 175°C maximum. When heat shrink sleeves are used, connectors rated to 200°C max are derated to 175°C max.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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(INSERT ARRANGEMENT PATTERN IDENTICAL TO 25-90, EXCEPT 25-91  
USES SEALING BOOTS IN ACCORDANCE WITH MIL-DTL-38999/62)

| Contacts<br>(Insert arrangement 25-91) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +5.33 (13.54) | <u>a</u>            | +4.04 (10.26) | +1.25 (3.18)  |
| B                                      | +2.75 (6.99)  | +4.66 (11.84) | <u>b</u>            | +4.37 (11.10) | +0.00 (0.00)  |
| C                                      | +4.20 (10.67) | +3.37 (8.56)  | <u>c</u>            | +4.04 (10.26) | -1.25 (3.18)  |
| D                                      | +4.90 (12.45) | +2.27 (5.77)  | <u>d</u>            | +3.14 (7.98)  | -2.21 (5.61)  |
| E                                      | +5.31 (13.49) | +0.93 (2.36)  | <u>e</u>            | +2.45 (6.22)  | -3.37 (8.56)  |
| F                                      | +5.31 (13.49) | -0.93 (2.36)  | <u>f</u>            | +1.36 (3.45)  | -4.24 (10.77) |
| G                                      | +4.90 (12.45) | -2.27 (5.77)  | <u>g</u>            | +0.00 (0.00)  | -3.95 (10.03) |
| H                                      | +4.20 (10.67) | -3.37 (8.56)  | <u>h</u>            | -1.36 (3.45)  | -4.24 (10.77) |
| J                                      | +2.75 (6.99)  | -4.66 (11.84) | <u>k</u>            | -2.45 (6.22)  | -3.37 (8.56)  |
| K                                      | +0.065 (1.65) | -5.33 (13.54) | <u>m</u>            | -3.14 (7.98)  | -2.21 (5.61)  |
| L                                      | -0.065 (1.65) | -5.33 (13.54) | <u>n</u>            | -4.04 (10.26) | -1.25 (3.18)  |
| M                                      | -2.75 (6.99)  | -4.66 (11.84) | <u>p</u>            | -4.37 (11.10) | +0.00 (0.00)  |
| N                                      | -4.20 (10.67) | -3.37 (8.56)  | <u>q</u>            | -4.04 (10.26) | +1.25 (3.18)  |
| P                                      | -4.90 (12.45) | -2.27 (5.77)  | <u>r</u>            | -3.14 (7.98)  | +2.21 (5.61)  |
| R                                      | -5.31 (13.49) | -0.93 (2.36)  | <u>s</u>            | -2.45 (6.22)  | +3.37 (8.56)  |
| S                                      | -5.31 (13.49) | +0.93 (2.36)  | <u>t</u>            | -1.36 (3.45)  | +4.24 (10.77) |
| T                                      | -4.90 (12.45) | +2.27 (5.77)  | <u>u</u>            | +0.00 (0.00)  | +3.95 (10.03) |
| U                                      | -4.20 (10.67) | +3.37 (8.56)  | <u>v</u>            | +0.097 (2.46) | +2.65 (6.73)  |

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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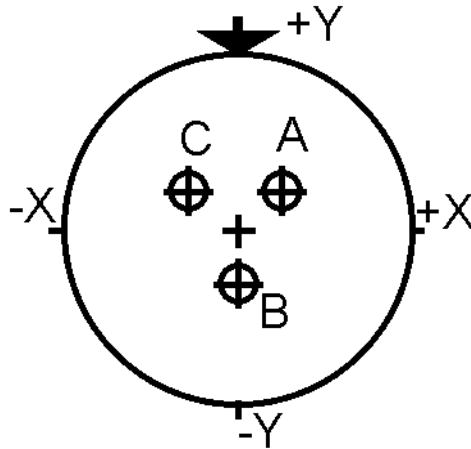
| Contacts<br>(Insert arrangement 25-91) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| V                                      | -.275 (6.99) | +466 (11.84) | <u>w</u>            | +180 (4.57)  | +000 (.00)   |
| W                                      | -.065 (1.65) | +533 (13.54) | <u>x</u>            | +097 (2.46)  | -.265 (6.73) |
| X                                      | +136 (3.45)  | +424 (10.77) | <u>y</u>            | -.097 (2.46) | -.265 (6.73) |
| Y                                      | +245 (6.22)  | +337 (8.56)  | <u>z</u>            | -.180 (4.57) | +000 (0.00)  |
| Z                                      | +314 (7.98)  | +221 (5.61)  | <u>AA</u>           | -.097 (2.46) | +265 (6.73)  |

| Shell size | Arrange ment no. | Number of contacts | Size contacts   | Service rating | Contact location                              | Standard contact |               |
|------------|------------------|--------------------|-----------------|----------------|---|------------------|---------------|
|            |                  |                    |                 |                |   | Pin              | Socket        |
| 25         | -91              | 2                  | 8<br>(see note) | Twinax         | <u>w</u> , <u>z</u>                           | M39029/113       | M39029/114    |
|            |                  | 4                  | 16              | I              | <u>v</u> , <u>x</u> , <u>y</u> ,<br><u>AA</u> | M39029/58-364    | M39029/56-352 |
|            |                  | 40                 | 20              |                | All others                                    | M39029/58-363    | M39029/56-351 |

NOTE: For this arrangement, sealing boots in accordance with MIL-DTL-38999/62 shall be used to environmentally seal size 8 twinax contacts. Heat shrink sleeves are not used when sealing boots in accordance with MIL-DTL-38999/62 are used.

FIGURE 9. Insert arrangement, electrical connector, shell size 25 (series I, III, IV of MIL-DTL-38999, series I of MIL-DTL-27599, and series A of SAE-AS29600) – Continued.

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w/CHANGE 1

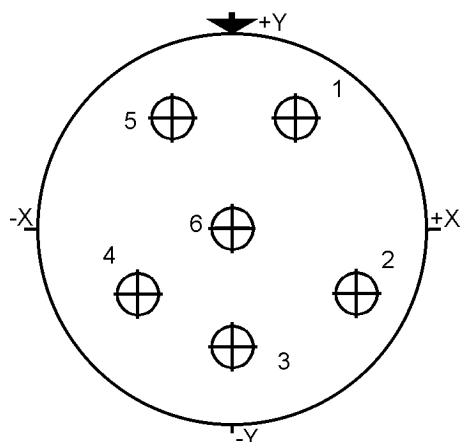


| Contacts<br>(Insert arrangement 8-3) |                  |               |
|--------------------------------------|------------------|---------------|
| Contact position ID                  | Contact location |               |
|                                      | X-axis (mm)      | Y-axis (mm)   |
| A                                    | +0.056 (1.42)    | +0.018 (0.46) |
| B                                    | +0.000 (0.00)    | -0.079 (2.01) |
| C                                    | -0.056 (1.42)    | +0.018 (0.46) |

(Applicable to MIL-DTL-27599 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 8          | -3              | 3                  | 20            | M              | All              | MS27343-3  |

FIGURE 10. Insert arrangement, electrical connector, shell size 8 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599).

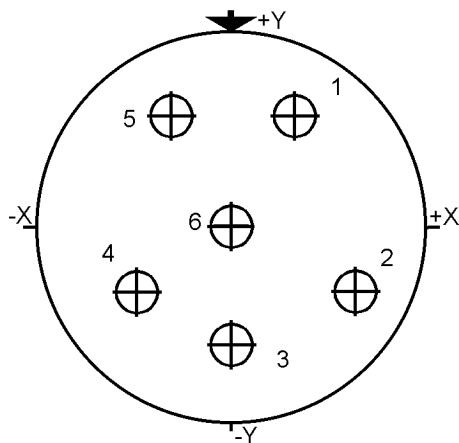
MIL-STD-1560C  
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| Contacts<br>(Insert arrangement 8-6) |                  |               |
|--------------------------------------|------------------|---------------|
| Contact position ID                  | Contact location |               |
|                                      | X-axis (mm)      | Y-axis (mm)   |
| 1                                    | +0.045 (1.14)    | +0.078 (1.98) |
| 2                                    | +0.078 (1.98)    | -0.045 (1.14) |
| 3                                    | +0.000 (0.00)    | -0.090 (2.29) |
| 4                                    | -0.078 (1.98)    | -0.045 (1.14) |
| 5                                    | -0.045 (1.14)    | +0.078 (1.98) |
| 6                                    | +0.000 (0.00)    | +0.000 (0.00) |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 8          | -6              | 6                  | 22M           | M              | All              | MS27343-6  |

FIGURE 10. Insert arrangement, electrical connector, shell size 8 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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w/CHANGE 1

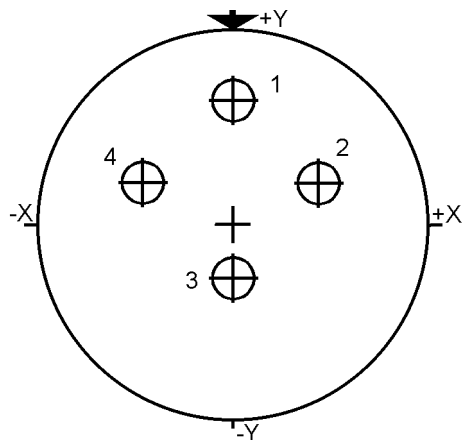
| Contacts<br>(Insert arrangement 8-35) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| 1                                     | +0.045 (1.14)    | +0.078 (1.98) |
| 2                                     | +0.078 (1.98)    | -0.045 (1.14) |
| 3                                     | +0.000 (0.00)    | -0.090 (2.29) |
| 4                                     | -0.078 (1.98)    | -0.045 (1.14) |
| 5                                     | -0.045 (1.14)    | +0.078 (1.98) |
| 6                                     | +0.000 (0.00)    | +0.000 (0.00) |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 8          | -35             | 6                  | 22D           | M              | All              | MS27516-35 |

FIGURE 10. Insert arrangement, electrical connector, shell size 8 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



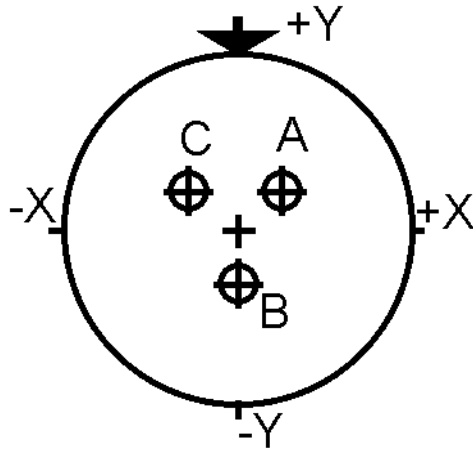
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| Contacts<br>(Insert arrangement 8-44) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| 1                                     | +0.00 (0.00)     | +0.081 (2.06) |
| 2                                     | +0.080 (2.03)    | +0.021 (0.53) |
| 3                                     | +0.000 (0.00)    | -0.050 (1.27) |
| 4                                     | -0.080 (2.03)    | +0.021 (0.53) |

(Applicable to MIL-DTL-27599 only. Inactive for new design.)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 8          | -44             | 4                  | 22            | M              | All              | MS27343-44 |

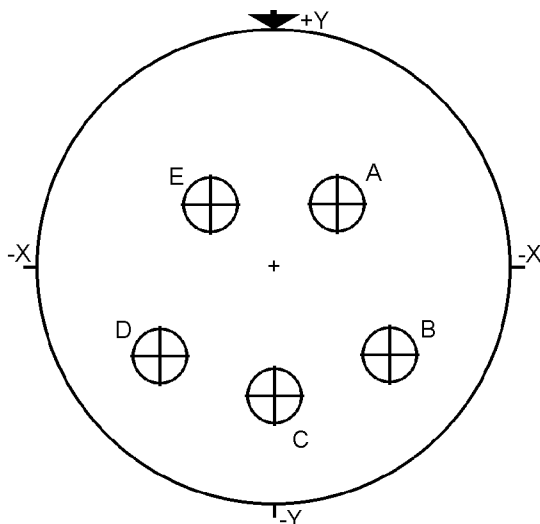
FIGURE 10. Insert arrangement, electrical connector, shell size 8 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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| Contacts<br>(Insert arrangement 8-98) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.065 (1.65)    | +0.038 (0.97) |
| B                                     | +0.000 (0.00)    | -0.075 (1.91) |
| C                                     | -0.065 (1.65)    | +0.038 (0.97) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 8          | -98             | 3                  | 20            | I              | All              | MS27343-98 |

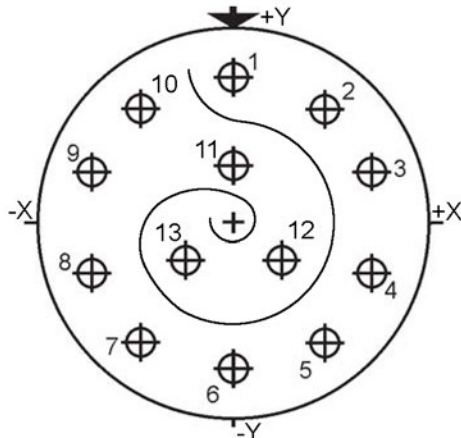
FIGURE 10. Insert arrangement, electrical connector, shell size 8 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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| Contacts<br>(Insert arrangement 10-5) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.065 (1.65)    | +0.056 (1.42) |
| B                                     | +0.113 (2.87)    | -0.065 (1.65) |
| C                                     | +0.000 (0.00)    | -0.130 (3.30) |
| D                                     | -0.113 (2.87)    | -0.065 (1.65) |
| E                                     | -0.065 (1.65)    | +0.056 (1.42) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 10         | -5              | 5                  | 20            | I              | All              | MS27344-5  |

FIGURE 11. Insert arrangement, electrical connector, shell size 10 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599).

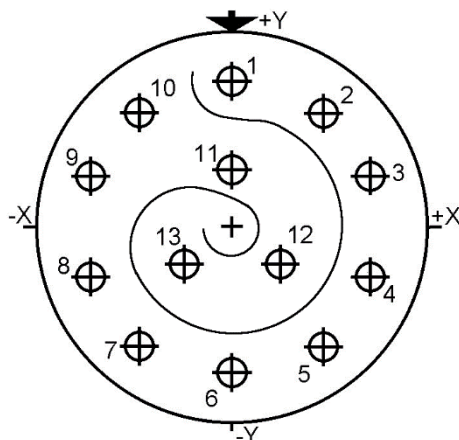
MIL-STD-1560C  
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| Contacts<br>(Insert arrangement 10-13) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.000 (0.00) | +0.146 (3.71) | 8                   | -0.138 (3.51) | -0.045 (1.14) |
| 2                                      | +0.085 (2.16) | +0.118 (3.00) | 9                   | -0.138 (3.51) | +0.045 (1.14) |
| 3                                      | +0.138 (3.51) | +0.045 (1.14) | 10                  | -0.085 (2.16) | +0.118 (3.00) |
| 4                                      | +0.138 (3.51) | -0.045 (1.14) | 11                  | +0.000 (0.00) | +0.056 (1.42) |
| 5                                      | +0.085 (2.16) | -0.118 (3.00) | 12                  | +0.049 (1.24) | -0.035 (0.89) |
| 6                                      | +0.000 (0.00) | -0.146 (3.71) | 13                  | -0.049 (1.24) | -0.035 (0.89) |
| 7                                      | -0.085 (2.16) | -0.118 (3.00) | ---                 | ---           | ---           |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 10         | -13             | 13                 | 22M           | M              | All              | MS27344-13 |

FIGURE 11. Insert arrangement, electrical connector, shell size 10 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

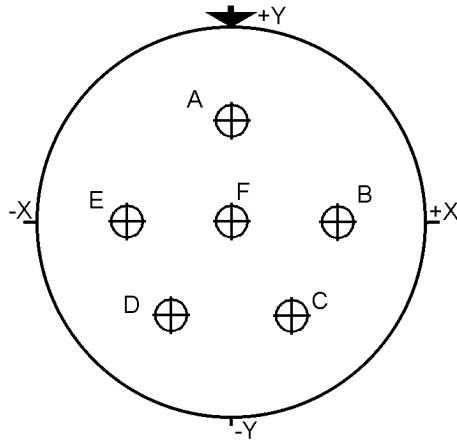
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 10-35) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.00 (0.00)  | +0.146 (3.71) | 8                   | -.138 (3.51)  | -.045 (1.14)  |
| 2                                      | +0.085 (2.16) | +0.118 (3.00) | 9                   | -.138 (3.51)  | +0.045 (1.14) |
| 3                                      | +0.138 (3.51) | +0.045 (1.14) | 10                  | -.085 (2.16)  | +0.118 (3.00) |
| 4                                      | +0.138 (3.51) | -.045 (1.14)  | 11                  | +0.000 (0.00) | +0.056 (1.42) |
| 5                                      | +0.085 (2.16) | -.118 (3.00)  | 12                  | +0.049 (1.24) | -.035 (0.89)  |
| 6                                      | +0.000 (0.00) | -.146 (3.71)  | 13                  | -.049 (1.24)  | -.035 (0.89)  |
| 7                                      | -.085 (2.16)  | -.118 (3.00)  | ---                 | ---           | ---           |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 10         | -35             | 13                 | 22D           | M              | All              | MS27517-35 |

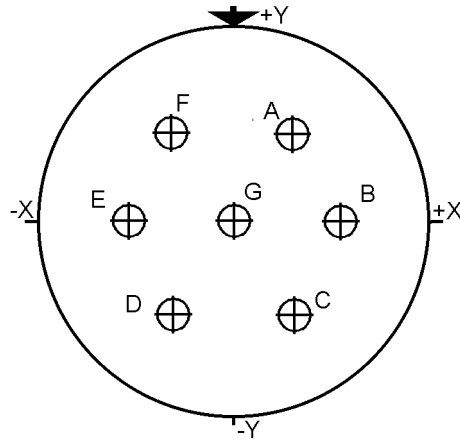
FIGURE 11. Insert arrangement, electrical connector, shell size 10 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 10-98) |                  |               |
|--|------------------|---------------|
| Contact position ID                    | Contact location |               |
|  | X-axis (mm)      | Y-axis (mm)   |
| A                                      | +0.00 (0.00)     | +0.130 (3.30) |
| B                                      | +0.130 (3.30)    | +0.000 (0.00) |
| C                                      | +0.065 (1.65)    | -0.113 (2.87) |
| D                                      | -0.065 (1.65)    | -0.113 (2.87) |
| E                                      | -0.130 (3.30)    | +0.000 (0.00) |
| F                                      | +0.000 (0.00)    | +0.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 10         | -98             | 6                  | 20            | I              | All              | MS27344-98 |

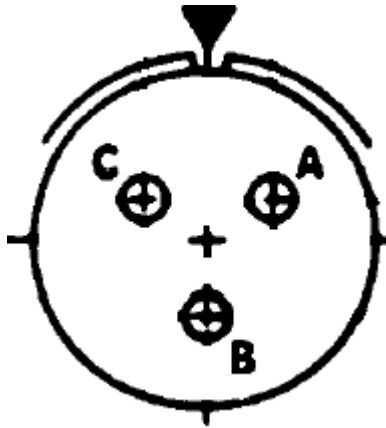
FIGURE 11. Insert arrangement, electrical connector, shell size 10 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 10-99) |                  |               |
|--|------------------|---------------|
| Contact position ID                    | Contact location |               |
|  | X-axis (mm)      | Y-axis (mm)   |
| A                                      | +0.065 (1.65)    | +0.113 (2.87) |
| B                                      | +0.130 (3.30)    | +0.000 (0.00) |
| C                                      | +0.065 (1.65)    | -0.113 (2.87) |
| D                                      | -0.065 (1.65)    | -0.113 (2.87) |
| E                                      | -0.130 (3.30)    | +0.000 (0.00) |
| F                                      | -0.065 (1.65)    | +0.113 (2.87) |
| G                                      | +0.000 (0.00)    | +0.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 10         | -99             | 7                  | 20            | I              | All              | MS27344-99 |

FIGURE 11. Insert arrangement, electrical connector, shell size 10 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

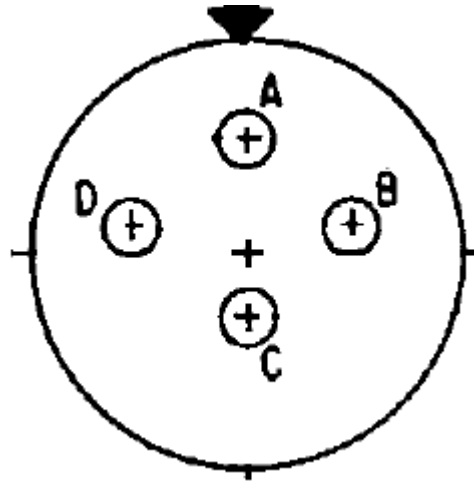
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 12-3) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.094 (2.39)    | +0.058 (1.47) |
| B                                     | +0.000 (0.00)    | -0.111 (2.82) |
| C                                     | -0.094 (2.39)    | +0.058 (1.47) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 12         | -3              | 3                  | 16            | II             | All              | MS27345-3  |

FIGURE 12. Insert arrangement, electrical connector, shell size 12 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

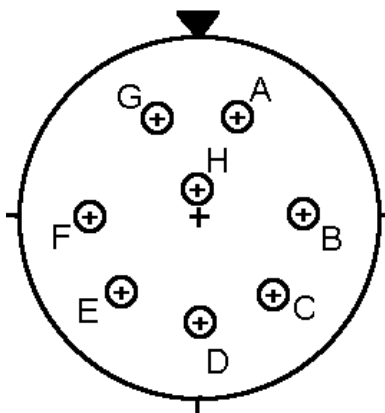


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 12-4) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.000 (0.00)    | +0.150 (3.81) |
| B                                     | +0.146 (3.71)    | +0.035 (0.89) |
| C                                     | +0.000 (0.00)    | -0.083 (2.11) |
| D                                     | -0.146 (3.71)    | +0.035 (0.89) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 12         | -4              | 4                  | 16            | I              | All              | MS27345-4  |

FIGURE 12. Insert arrangement, electrical connector, shell size 12 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 12-8) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.065 (1.65)    | +0.157 (3.99) |
| B                                     | +0.170 (4.32)    | +0.000 (0.00) |
| C                                     | +0.120 (3.05)    | -0.120 (3.05) |
| D                                     | +0.000 (0.00)    | -0.170 (4.32) |
| E                                     | -0.120 (3.05)    | -0.120 (3.05) |
| F                                     | -0.170 (4.32)    | +0.000 (0.00) |
| G                                     | -0.065 (1.65)    | +0.157 (3.99) |
| H                                     | +0.000 (0.00)    | +0.044 (1.12) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 12         | -8              | 8                  | 20            | I              | All              | MS27345-8  |

FIGURE 12. Insert arrangement, electrical connector, shell size 12 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

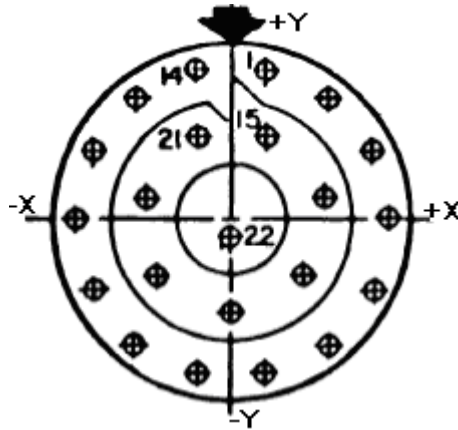
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 12-22) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.045 (1.14) | +0.197 (5.00) | 12                  | -0.182 (4.62) | +0.088 (2.24) |
| 2                                      | +0.126 (3.20) | +0.158 (4.01) | 13                  | -0.126 (3.20) | +0.158 (4.01) |
| 3                                      | +0.182 (4.62) | +0.088 (2.24) | 14                  | -0.045 (1.14) | +0.197 (5.00) |
| 4                                      | +0.203 (5.16) | +0.000 (0.00) | 15                  | +0.045 (1.14) | +0.107 (2.72) |
| 5                                      | +0.182 (4.62) | -0.088 (2.24) | 16                  | +0.117 (2.97) | +0.026 (0.66) |
| 6                                      | +0.126 (3.20) | -0.158 (4.01) | 17                  | +0.093 (2.36) | -0.075 (1.91) |
| 7                                      | +0.045 (1.14) | -0.197 (5.00) | 18                  | +0.000 (0.00) | -0.120 (3.05) |
| 8                                      | -0.045 (1.14) | -0.197 (5.00) | 19                  | -0.093 (2.36) | -0.075 (1.91) |
| 9                                      | -0.126 (3.20) | -0.158 (4.01) | 20                  | -0.117 (2.97) | +0.026 (0.66) |
| 10                                     | -0.182 (4.62) | -0.088 (2.24) | 21                  | -0.045 (1.14) | +0.107 (2.72) |
| 11                                     | -0.203 (5.16) | +0.000 (0.00) | 22                  | +0.000 (0.00) | -0.030 (0.76) |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 12         | -22             | 22                 | 22M           | M              | All              | MS27345-22 |

FIGURE 12. Insert arrangement, electrical connector, shell size 12 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599).

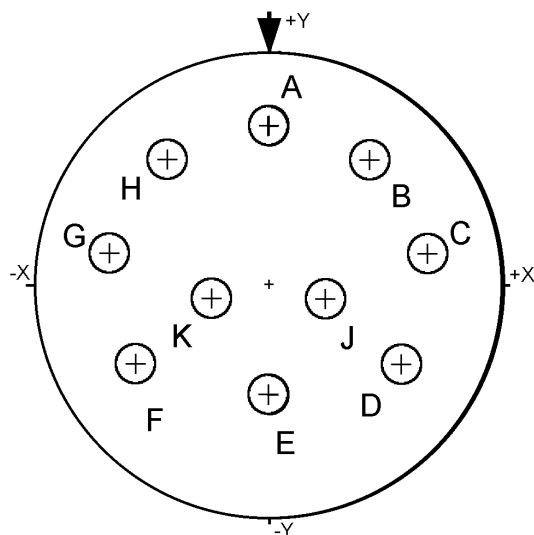
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 12-35) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.045 (1.14) | +0.197 (5.00) | 12                  | -.182 (4.62)  | +0.088 (2.24) |
| 2                                      | +0.126 (3.20) | +0.158 (4.01) | 13                  | -.126 (3.20)  | +0.158 (4.01) |
| 3                                      | +0.182 (4.62) | +0.088 (2.24) | 14                  | -.045 (1.14)  | +0.197 (5.00) |
| 4                                      | +0.203 (5.16) | +0.000 (0.00) | 15                  | +0.045 (1.14) | +0.107 (2.72) |
| 5                                      | +0.182 (4.62) | -.088 (2.24)  | 16                  | +0.117 (2.97) | +0.026 (0.66) |
| 6                                      | +0.126 (3.20) | -.158 (4.01)  | 17                  | +0.093 (2.36) | -.075 (1.91)  |
| 7                                      | +0.045 (1.14) | -.197 (5.00)  | 18                  | +0.000 (0.00) | -.120 (3.05)  |
| 8                                      | -.045 (1.14)  | -.197 (5.00)  | 19                  | -.093 (2.36)  | -.075 (1.91)  |
| 9                                      | -.126 (3.20)  | -.158 (4.01)  | 20                  | -.117 (2.97)  | +0.026 (0.66) |
| 10                                     | -.182 (4.62)  | -.088 (2.24)  | 21                  | -.045 (1.24)  | +0.107 (2.72) |
| 11                                     | -.203 (5.16)  | +0.000 (0.00) | 22                  | +0.000 (0.00) | -.030 (0.76)  |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 12         | -35             | 22                 | 22D           | M              | All              | MS27518-35 |

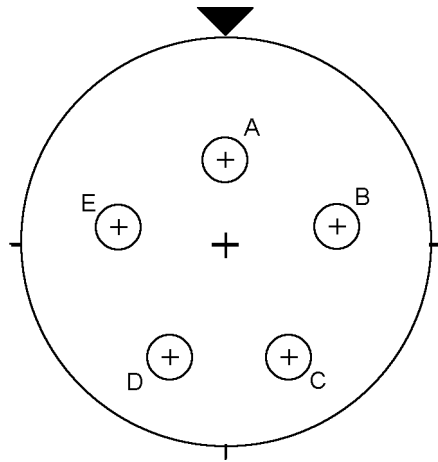
FIGURE 12. Insert arrangement, electrical connector, shell size 12 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 12-98) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.00 (0.00)  | +0.195 (4.95) | F                   | -0.164 (4.17) | -0.105 (2.67) |
| B                                      | +0.125 (3.18) | +0.150 (3.81) | G                   | -0.193 (4.90) | +0.030 (0.76) |
| C                                      | +0.193 (4.90) | +0.030 (0.76) | H                   | -0.125 (3.18) | +0.150 (3.81) |
| D                                      | +0.164 (4.17) | -0.105 (2.67) | J                   | +0.065 (1.65) | -0.015 (0.38) |
| E                                      | +0.000 (0.00) | -0.135 (3.43) | K                   | -0.065 (1.65) | -0.015 (0.38) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 12         | -98             | 10                 | 20            | I              | All              | MS27345-98 |

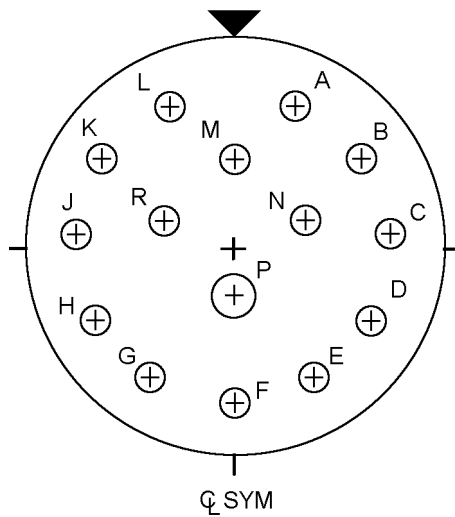
FIGURE 12. Insert arrangement, electrical connector, shell size 12 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 14-5) |                  |               |
|---------------------------------------|------------------|---------------|
| Contact position ID                   | Contact location |               |
|                                       | X-axis (mm)      | Y-axis (mm)   |
| A                                     | +0.000 (0.00)    | +0.100 (2.54) |
| B                                     | +0.174 (4.42)    | +0.024 (0.61) |
| C                                     | +0.094 (2.39)    | -0.148 (3.76) |
| D                                     | -0.094 (2.39)    | -0.148 (3.76) |
| E                                     | -0.174 (4.42)    | +0.024 (0.61) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 14         | -5              | 5                  | 16            | II             | All              | MS27346-5  |

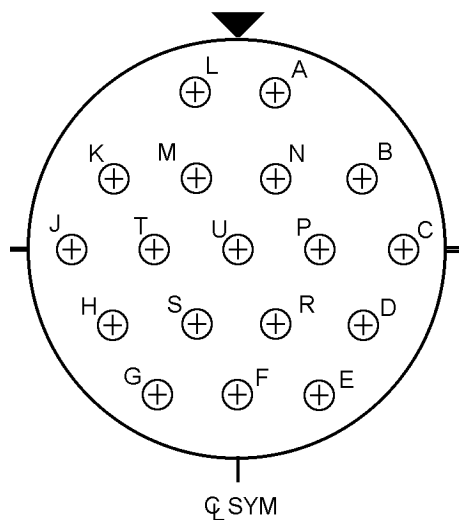
FIGURE 13. Insert arrangement, electrical connector, shell size 14 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599).

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 14-15) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .100 (2.54) | + .225 (5.72) | J                   | - .244 (6.20) | + .014 (0.36) |
| B                                      | + .202 (5.13) | + .140 (3.56) | K                   | - .202 (5.13) | + .140 (3.56) |
| C                                      | + .244 (6.20) | + .014 (0.36) | L                   | - .100 (2.54) | + .225 (5.72) |
| D                                      | + .218 (5.54) | - .113 (2.87) | M                   | + .000 (0.00) | + .140 (3.56) |
| E                                      | + .126 (3.20) | - .209 (5.31) | N                   | + .110 (2.79) | + .040 (1.02) |
| F                                      | + .000 (0.00) | - .245 (6.22) | P                   | + .000 (0.00) | - .077 (1.96) |
| G                                      | - .126 (3.20) | - .209 (5.18) | R                   | - .110 (2.79) | + .040 (1.02) |
| H                                      | - .218 (5.54) | - .113 (2.87) |                     |               |               |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 14         | -15             | 1                  | 16            | I              | P                | MS27346-15 |
|            |                 | 14                 | 20            |                | All others       |            |

FIGURE 13. Insert arrangement, electrical connector, shell size 14 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

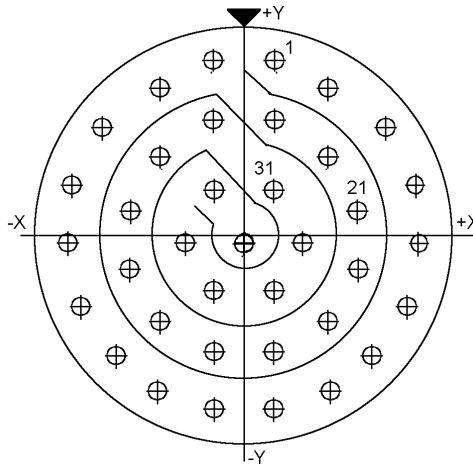
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 14-18) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +0.252 (6.40) | K                   | -0.195 (4.95) | +0.113 (2.87) |
| B                                      | +0.195 (4.95) | +0.113 (2.87) | L                   | -0.065 (1.65) | +0.252 (6.40) |
| C                                      | +0.260 (6.60) | +0.000 (0.00) | M                   | -0.065 (1.65) | +0.113 (2.87) |
| D                                      | +0.195 (4.95) | -0.113 (2.87) | N                   | +0.065 (1.65) | +0.113 (2.87) |
| E                                      | +0.130 (3.30) | -0.225 (5.72) | P                   | +0.130 (3.30) | +0.000 (0.00) |
| F                                      | +0.000 (0.00) | -0.225 (5.72) | R                   | +0.065 (1.65) | -0.113 (2.87) |
| G                                      | -0.130 (3.30) | -0.225 (5.72) | S                   | -0.065 (1.65) | -0.113 (2.87) |
| H                                      | -0.195 (4.95) | -0.113 (2.87) | T                   | -0.130 (3.30) | +0.000 (0.00) |
| J                                      | -0.260 (6.60) | +0.000 (0.00) | U                   | +0.000 (0.00) | +0.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 14         | -18             | 18                 | 20            | I              | All              | MS27346-18 |

FIGURE 13. Insert arrangement, electrical connector, shell size 14 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



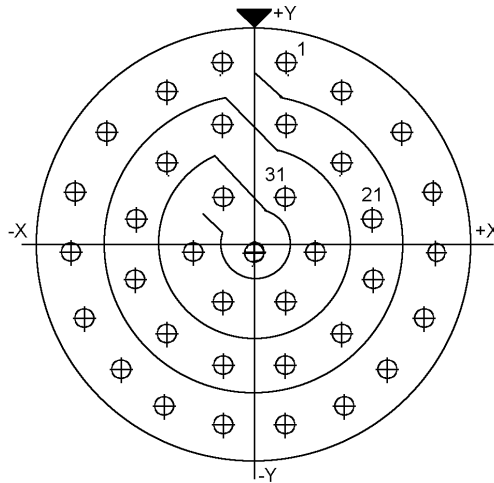
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 14-35) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.045 (1.14) | +0.262 (6.65) | 20                  | +0.123 (3.12) | +0.119 (3.02) |
| 2                                      | +0.123 (3.12) | +0.217 (5.51) | 21                  | +0.170 (4.32) | +0.040 (1.02) |
| 3                                      | +0.211 (5.36) | +0.160 (4.06) | 22                  | +0.170 (4.32) | -0.050 (1.27) |
| 4                                      | +0.254 (6.45) | +0.080 (2.03) | 23                  | +0.123 (3.12) | -0.127 (3.23) |
| 5                                      | +0.266 (6.76) | -0.010 (0.25) | 24                  | +0.045 (1.14) | -0.172 (4.37) |
| 6                                      | +0.247 (6.27) | -0.098 (2.49) | 25                  | -0.045 (1.14) | -0.172 (4.37) |
| 7                                      | +0.200 (5.08) | -0.175 (4.45) | 26                  | -0.123 (3.12) | -0.127 (3.23) |
| 8                                      | +0.130 (3.30) | -0.232 (5.89) | 27                  | -0.170 (4.32) | -0.050 (1.27) |
| 9                                      | +0.045 (1.14) | -0.262 (6.65) | 28                  | -0.170 (4.32) | +0.040 (1.02) |
| 10                                     | -0.045 (1.14) | -0.262 (6.65) | 29                  | -0.123 (3.12) | +0.119 (3.02) |
| 11                                     | -0.130 (3.30) | -0.232 (5.89) | 30                  | -0.045 (1.14) | +0.172 (4.37) |
| 12                                     | -0.200 (5.08) | -0.175 (4.45) | 31                  | +0.045 (1.14) | +0.074 (1.88) |
| 13                                     | -0.247 (6.27) | -0.098 (2.49) | 32                  | +0.090 (2.29) | -0.004 (0.10) |
| 14                                     | -0.266 (6.76) | -0.010 (0.25) | 33                  | +0.045 (1.14) | -0.082 (2.08) |
| 15                                     | -0.254 (6.45) | +0.080 (2.03) | 34                  | -0.045 (1.14) | -0.082 (2.08) |
| 16                                     | -0.211 (5.36) | +0.160 (4.06) | 35                  | -0.090 (2.29) | -0.004 (0.10) |
| 17                                     | -0.123 (3.12) | +0.217 (5.51) | 36                  | -0.045 (1.14) | +0.074 (1.88) |
| 18                                     | -0.045 (1.14) | +0.262 (6.65) | 37                  | +0.000 (0.00) | -0.004 (0.10) |
| 19                                     | +0.045 (1.14) | +0.172 (4.37) |                     |               |               |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 14         | -35             | 37                 | 22D           | M              | All              | MS27519-35 |

FIGURE 13. Insert arrangement, electrical connector, shell size 14 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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w/CHANGE 1

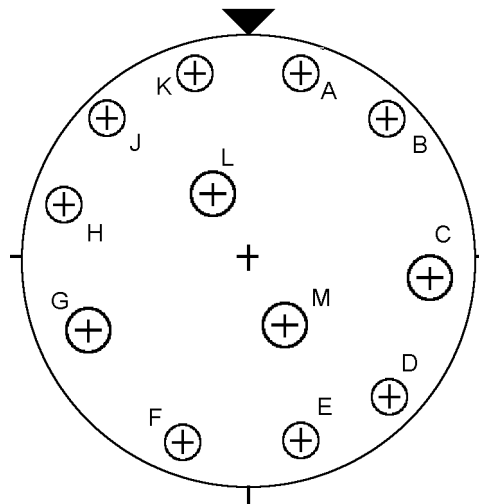
| Contacts<br>(Insert arrangement 14-37) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.045 (1.14) | +0.262 (6.65) | 20                  | +0.123 (3.12) | +0.119 (3.02) |
| 2                                      | +0.123 (3.12) | +0.217 (5.51) | 21                  | +0.170 (4.32) | +0.040 (1.02) |
| 3                                      | +0.211 (5.36) | +0.160 (4.06) | 22                  | +0.170 (4.32) | -0.050 (1.27) |
| 4                                      | +0.254 (6.45) | +0.080 (2.03) | 23                  | +0.123 (3.12) | -0.127 (3.23) |
| 5                                      | +0.266 (6.76) | -0.010 (0.25) | 24                  | +0.045 (1.14) | -0.172 (4.37) |
| 6                                      | +0.247 (6.27) | -0.098 (2.49) | 25                  | -0.045 (1.14) | -0.172 (4.37) |
| 7                                      | +0.200 (5.08) | -0.175 (4.45) | 26                  | -0.123 (3.12) | -0.127 (3.23) |
| 8                                      | +0.130 (3.30) | -0.232 (5.89) | 27                  | -0.170 (4.32) | -0.050 (1.27) |
| 9                                      | +0.045 (1.14) | -0.262 (6.65) | 28                  | -0.170 (4.32) | +0.040 (1.02) |
| 10                                     | -0.045 (1.14) | -0.262 (6.65) | 29                  | -0.123 (3.12) | +0.119 (3.02) |
| 11                                     | -0.130 (3.30) | -0.232 (5.89) | 30                  | -0.045 (1.14) | +0.172 (4.37) |
| 12                                     | -0.200 (5.08) | -0.175 (4.45) | 31                  | +0.045 (1.14) | +0.074 (1.88) |
| 13                                     | -0.247 (6.27) | -0.098 (2.49) | 32                  | +0.090 (2.29) | -0.004 (0.10) |
| 14                                     | -0.266 (6.76) | -0.010 (0.25) | 33                  | +0.045 (1.14) | -0.082 (2.08) |
| 15                                     | -0.254 (6.45) | +0.080 (2.03) | 34                  | -0.045 (1.14) | -0.082 (2.08) |
| 16                                     | -0.211 (5.36) | +0.160 (4.06) | 35                  | -0.090 (2.29) | -0.004 (0.10) |
| 17                                     | -0.123 (3.12) | +0.217 (5.51) | 36                  | -0.045 (1.14) | +0.074 (1.88) |
| 18                                     | -0.045 (1.14) | +0.262 (6.65) | 37                  | +0.000 (0.00) | -0.004 (0.10) |
| 19                                     | +0.045 (1.14) | +0.172 (4.37) | ---                 | ---           | ---           |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 14         | -37             | 37                 | 22M           | M              | All              | MS27346-37 |

FIGURE 13. Insert arrangement, electrical connector, shell size 14 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

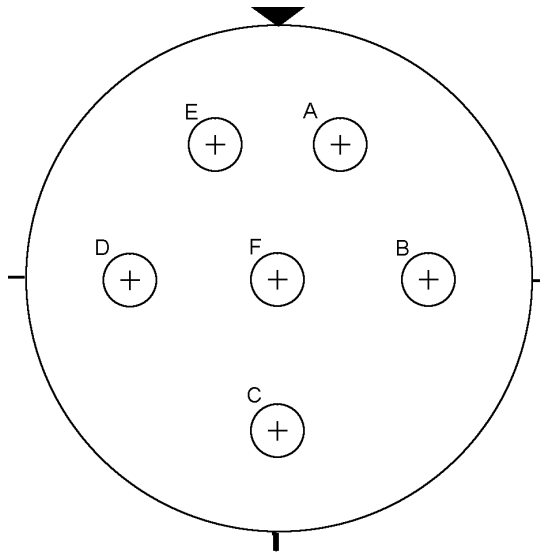
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| Contacts<br>(Insert arrangement 14-97) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +0.234 (5.94) | G                   | -0.207 (5.26) | -.095 (2.41)  |
| B                                      | +0.178 (4.52) | +0.178 (4.52) | H                   | -0.234 (5.94) | +0.065 (1.65) |
| C                                      | +0.230 (5.84) | -.023 (0.58)  | J                   | -0.178 (4.52) | +0.178 (4.52) |
| D                                      | +0.178 (4.52) | -0.178 (4.52) | K                   | -0.065 (1.65) | +0.234 (5.94) |
| E                                      | +0.065 (1.65) | -0.234 (5.94) | L                   | -0.047 (1.19) | +0.081 (2.06) |
| F                                      | -.089 (2.26)  | -.235 (5.97)  | M                   | +0.047 (1.19) | -.081 (2.06)  |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 14         | -97             | 4                  | 16            | I              | C,M,G,L          | MS27346-97 |
|            |                 | 8                  | 20            |                | All others       |            |

FIGURE 13. Insert arrangement, electrical connector, shell size 14 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

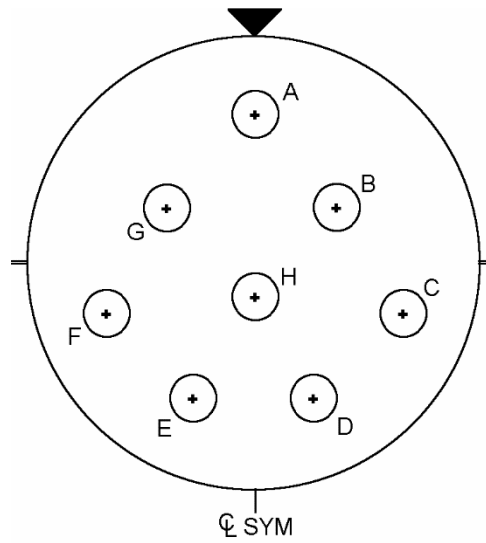
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| Contacts<br>(Insert arrangement 16-6 or 16-7) |                  |               |
|---|------------------|---------------|
| Contact position ID                           | Contact location |               |
|   | X-axis (mm)      | Y-axis (mm)   |
| A   | + .121 (3.07)    | + .209 (5.31) |
| B   | + .241 (6.12)    | + .000 (0.00) |
| C   | + .000 (0.00)    | - .241 (6.12) |
| D   | - .241 (6.12)    | + .000 (0.00) |
| E   | - .121 (3.07)    | + .209 (5.31) |
| F   | + .000 (0.00)    | + .000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts      | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|--------------------|----------------|------------------|------------|
| 16         | -6              | 6                  | 12                 | I              | All              | MS27347-6  |
|            | -7              | 6                  | Shielded, size 12A | II             | All              | -----      |

FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

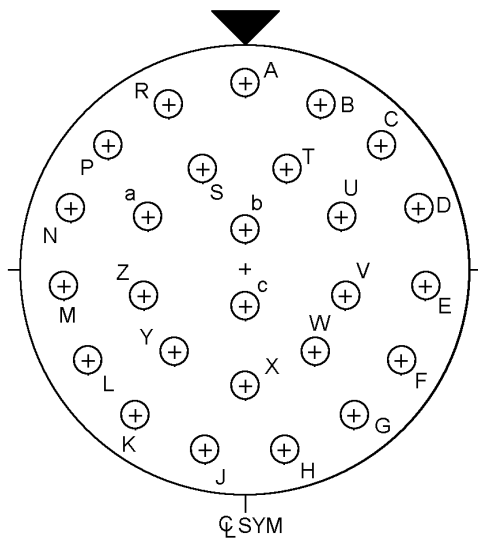
MIL-STD-1560C  
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| Contacts<br>(Insert arrangement 16-8) |               |               |                     |               |               |
|---------------------------------------|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location      |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                     | +0.000 (0.00) | +0.236 (5.99) | E                   | -0.094 (2.39) | -.216 (5.49)  |
| B                                     | +0.128 (3.25) | +0.086 (2.18) | F                   | -0.230 (5.84) | -.078 (1.98)  |
| C                                     | +0.230 (5.84) | -.078 (1.98)  | G                   | -0.128 (3.25) | +0.086 (2.18) |
| D                                     | +0.094 (2.39) | -.216 (5.49)  | H                   | +0.000 (0.00) | -.052 (1.32)  |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 16         | -8              | 8                  | 16            | II             | All              | MS27347-8  |

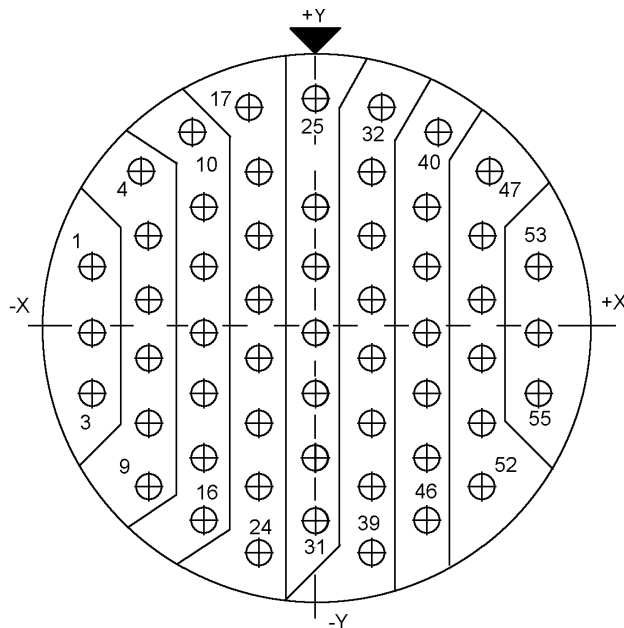
FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599).

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| Contacts<br>(Insert arrangement 16-26) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.000 (0.00) | +0.321 (8.15) | P                   | -0.239 (6.07) | +0.214 (5.44) |
| B                                      | +0.131 (3.33) | +0.293 (7.44) | R                   | -0.131 (3.33) | +0.293 (7.44) |
| C                                      | +0.239 (6.07) | +0.214 (5.44) | S                   | -0.070 (1.78) | +0.177 (4.50) |
| D                                      | +0.305 (7.75) | +0.099 (2.51) | T                   | +0.070 (1.78) | +0.177 (4.50) |
| E                                      | +0.319 (8.10) | -0.034 (0.86) | U                   | +0.175 (4.45) | +0.094 (2.39) |
| F                                      | +0.278 (7.06) | -0.161 (4.09) | V                   | +0.178 (4.52) | -0.036 (0.91) |
| G                                      | +0.189 (4.80) | -0.260 (6.60) | W                   | +0.119 (3.02) | -0.151 (3.84) |
| H                                      | +0.067 (1.70) | -0.314 (7.98) | X                   | +0.000 (.00)  | -0.203 (5.16) |
| J                                      | -0.067 (1.70) | -0.314 (7.98) | Y                   | -0.119 (.005) | -0.151 (3.84) |
| K                                      | -0.189 (4.80) | -0.260 (6.60) | Z                   | -0.178 (4.52) | -0.036 (0.91) |
| L                                      | -0.278 (7.06) | -0.161 (4.09) | a                   | -0.175 (4.45) | +0.094 (2.39) |
| M                                      | -0.319 (8.10) | -0.034 (0.86) | b                   | +0.000 (0.00) | +0.065 (1.65) |
| N                                      | -0.305 (7.75) | +0.099 (2.51) | c                   | +0.000 (0.00) | -0.065 (1.65) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 16         | -26             | 26                 | 20            | I              | All              | MS27347-26 |

FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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| Contacts<br>(Insert arrangement 16-35) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.312 (7.92) | +.086 (2.18) | 29                  | +.000 (0.00) | -.094 (2.39) |
| 2                                      | -.312 (7.92) | -.004 (0.10) | 30                  | +.000 (0.00) | -.184 (4.67) |
| 3                                      | -.312 (7.92) | -.094 (2.39) | 31                  | +.000 (0.00) | -.274 (6.96) |
| 4                                      | -.242 (6.15) | +.221 (5.61) | 32                  | +.089 (2.26) | +.316 (8.03) |
| 5                                      | -.234 (5.94) | +.131 (3.33) | 33                  | +.078 (1.98) | +.221 (5.61) |
| 6                                      | -.234 (5.94) | +.041 (1.04) | 34                  | +.078 (1.98) | +.131 (3.33) |
| 7                                      | -.234 (5.94) | -.049 (1.24) | 35                  | +.078 (1.98) | +.041 (1.04) |
| 8                                      | -.234 (5.94) | -.139 (3.53) | 36                  | +.078 (1.98) | -.049 (1.24) |
| 9                                      | -.234 (5.94) | -.229 (5.82) | 37                  | +.078 (1.98) | -.139 (3.53) |
| 10                                     | -.172 (4.37) | +.279 (7.09) | 38                  | +.078 (1.98) | -.229 (5.82) |
| 11                                     | -.156 (3.96) | +.176 (4.47) | 39                  | +.078 (1.98) | -.319 (8.10) |
| 12                                     | -.156 (3.96) | +.086 (2.18) | 40                  | +.172 (4.37) | +.279 (7.09) |
| 13                                     | -.156 (3.96) | -.004 (0.10) | 41                  | +.156 (3.96) | +.176 (4.47) |
| 14                                     | -.156 (3.96) | -.094 (2.39) | 42                  | +.156 (3.96) | +.086 (2.18) |
| 15                                     | -.156 (3.96) | -.184 (4.67) | 43                  | +.156 (3.96) | -.004 (0.10) |

FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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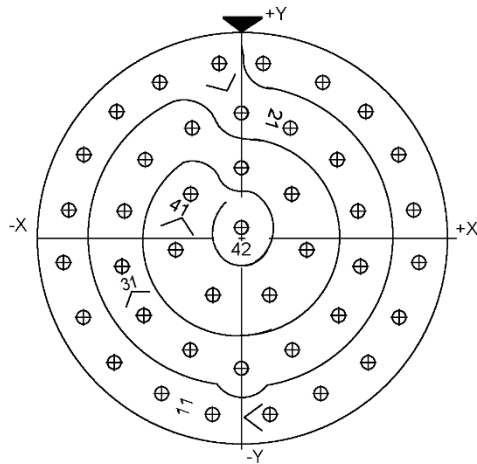
| Contacts<br>(Insert arrangement 16-35) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 16                                     | -.156 (3.96) | -.274 (6.96) | 44                  | +.156 (3.96) | -.094 (2.39) |
| 17                                     | -.089 (2.26) | +.316 (8.03) | 45                  | +.156 (3.96) | -.184 (4.67) |
| 18                                     | -.078 (1.98) | +.221 (5.61) | 46                  | +.156 (3.96) | -.274 (6.96) |
| 19                                     | -.078 (1.98) | +.131 (3.33) | 47                  | +.242 (6.15) | +.221 (5.61) |
| 20                                     | -.078 (1.98) | +.041 (1.04) | 48                  | +.234 (5.94) | +.131 (3.33) |
| 21                                     | -.078 (1.98) | -.049 (1.24) | 49                  | +.234 (5.94) | +.041 (1.04) |
| 22                                     | -.078 (1.98) | -.139 (3.53) | 50                  | +.234 (5.94) | -.049 (1.24) |
| 23                                     | -.078 (1.98) | -.229 (5.82) | 51                  | +.234 (5.94) | -.139 (3.53) |
| 24                                     | -.078 (1.98) | -.319 (8.10) | 52                  | +.234 (5.94) | -.229 (5.82) |
| 25                                     | +.000 (0.00) | +.329 (8.36) | 53                  | -.312 (7.92) | +.086 (2.18) |
| 26                                     | +.000 (0.00) | +.176 (4.47) | 54                  | +.312 (7.92) | -.004 (0.10) |
| 27                                     | +.000 (0.00) | +.086 (2.18) | 55                  | +.312 (7.92) | -.094 (2.39) |
| 28                                     | +.000 (0.00) | -.004 (0.10) | ---                 | ---          | ---          |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 16         | -35             | 55                 | 22D           | M              | All              | MS27520-35 |

FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



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| Contacts<br>(Insert arrangement 16-42) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.050 (1.27) | +0.318 (8.08) | 22                  | +0.095 (2.41) | +0.198 (5.03) |
| 2                                      | +0.145 (3.68) | +0.286 (7.26) | 23                  | +0.178 (4.52) | +0.142 (3.61) |
| 3                                      | +0.228 (5.79) | +0.230 (5.84) | 24                  | +0.218 (5.54) | +0.050 (1.27) |
| 4                                      | +0.287 (7.29) | +0.149 (3.78) | 25                  | +0.218 (5.54) | -0.050 (1.27) |
| 5                                      | +0.318 (8.08) | +0.053 (1.35) | 26                  | +0.177 (4.50) | -0.142 (3.61) |
| 6                                      | +0.319 (8.10) | -0.047 (1.19) | 27                  | +0.095 (2.41) | -0.202 (5.13) |
| 7                                      | +0.289 (7.34) | -0.143 (3.63) | 28                  | +0.000 (0.00) | -0.235 (5.97) |
| 8                                      | +0.232 (5.89) | -0.226 (5.74) | 29                  | -0.095 (2.41) | -0.202 (5.13) |
| 9                                      | +0.151 (3.84) | -0.285 (7.24) | 30                  | -0.177 (4.50) | -0.142 (3.61) |
| 10                                     | +0.056 (1.42) | -0.318 (8.08) | 31                  | -0.218 (5.54) | -0.050 (1.27) |
| 11                                     | -0.056 (1.42) | -0.318 (8.08) | 32                  | -0.218 (5.54) | +0.050 (1.27) |
| 12                                     | -0.151 (3.84) | -0.285 (7.24) | 33                  | -0.178 (4.52) | +0.142 (3.61) |
| 13                                     | -0.232 (5.89) | -0.226 (5.74) | 34                  | -0.095 (2.41) | +0.198 (5.03) |
| 14                                     | -0.289 (7.34) | -0.143 (3.63) | 35                  | +0.000 (0.00) | +0.131 (3.33) |
| 15                                     | -0.319 (8.10) | -0.047 (1.19) | 36                  | +0.091 (2.31) | +0.080 (2.03) |
| 16                                     | -0.318 (8.08) | +0.053 (1.35) | 37                  | +0.121 (3.07) | -0.017 (0.43) |
| 17                                     | -0.287 (7.29) | +0.149 (3.78) | 38                  | +0.056 (1.42) | -0.101 (2.57) |
| 18                                     | -0.228 (5.79) | +0.230 (5.84) | 39                  | -0.056 (1.42) | -0.101 (2.57) |

FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

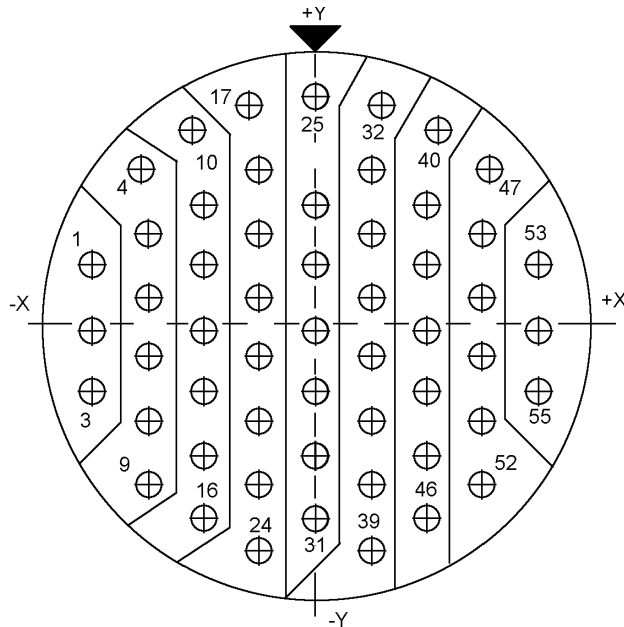
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| Contacts<br>(Insert arrangement 16-42) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 19                                     | -.145 (3.68) | +.286 (7.26) | 40                  | -.121 (3.07) | -.017 (0.43) |
| 20                                     | -.050 (1.27) | +.318 (8.08) | 41                  | -.091 (2.31) | +.080 (2.03) |
| 21                                     | +.000 (0.00) | +.231 (5.87) | 42                  | +.000 (0.00) | +.031 (0.79) |

(Applicable to MIL-DTL-27599 only. Inactive for new design)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 16         | -42             | 42                 | 22            | M              | All              | MS27347-42 |

FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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| Contacts<br>(Insert arrangement 16-55) |                |                |                        |                |                |
|--|----------------|----------------|------------------------|----------------|----------------|
| Contact<br>position ID                 | Location       |                | Contact<br>position ID | Location       |                |
|  | X-axis<br>(mm) | Y-axis<br>(mm) |                        | X-axis<br>(mm) | Y-axis<br>(mm) |
| 1                                      | -.312 (7.92)   | +.086 (2.18)   | 29                     | +.000 (0.00)   | -.094 (2.39)   |
| 2                                      | -.312 (7.92)   | -.004 (0.10)   | 30                     | +.000 (0.00)   | -.184 (4.67)   |
| 3                                      | -.312 (7.92)   | -.094 (2.39)   | 31                     | +.000 (0.00)   | -.274 (6.96)   |
| 4                                      | -.242 (6.15)   | +.221 (5.61)   | 32                     | +.089 (2.26)   | +.316 (8.03)   |
| 5                                      | -.234 (5.94)   | +.131 (3.33)   | 33                     | +.078 (1.98)   | +.221 (5.61)   |
| 6                                      | -.234 (5.94)   | +.041 (1.04)   | 34                     | +.078 (1.98)   | +.131 (3.33)   |
| 7                                      | -.234 (5.94)   | -.049 (1.24)   | 35                     | +.078 (1.98)   | +.041 (1.04)   |
| 8                                      | -.234 (5.94)   | -.139 (3.53)   | 36                     | +.078 (1.98)   | -.049 (1.24)   |
| 9                                      | -.234 (5.94)   | -.229 (5.82)   | 37                     | +.078 (1.98)   | -.139 (3.53)   |
| 10                                     | -.172 (4.37)   | +.279 (7.09)   | 38                     | +.078 (1.98)   | -.229 (5.82)   |
| 11                                     | -.156 (3.96)   | +.176 (4.47)   | 39                     | +.078 (1.98)   | -.319 (8.10)   |

FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

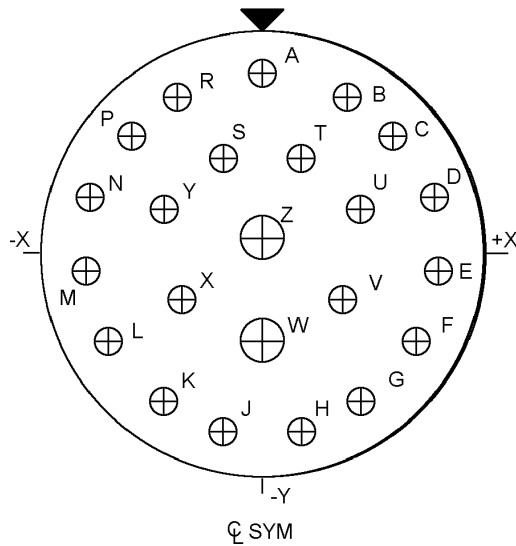
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 16-55) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 12                                     | -.156 (3.96) | +.086 (2.18) | 40                  | +.172 (4.37) | +.279 (7.09) |
| 13                                     | -.156 (3.96) | -.004 (0.10) | 41                  | +.156 (3.96) | +.176 (4.47) |
| 14                                     | -.156 (3.96) | -.094 (2.39) | 42                  | +.156 (3.96) | +.086 (2.18) |
| 15                                     | -.156 (3.96) | -.184 (4.67) | 43                  | +.156 (3.96) | -.004 (0.10) |
| 16                                     | -.156 (3.96) | -.274 (6.96) | 44                  | +.156 (3.96) | -.094 (2.39) |
| 17                                     | -.089 (2.26) | +.316 (8.03) | 45                  | +.156 (3.96) | -.184 (4.67) |
| 18                                     | -.078 (1.98) | +.221 (5.61) | 46                  | +.156 (3.96) | -.274 (6.96) |
| 19                                     | -.078 (1.98) | +.131 (3.33) | 47                  | +.242 (6.15) | +.221 (5.61) |
| 20                                     | -.078 (1.98) | +.041 (1.04) | 48                  | +.234 (5.94) | +.131 (3.33) |
| 21                                     | -.078 (1.98) | -.049 (1.24) | 49                  | +.234 (5.94) | +.041 (1.04) |
| 22                                     | -.078 (1.98) | -.139 (3.53) | 50                  | +.234 (5.94) | -.049 (1.24) |
| 23                                     | -.078 (1.98) | -.229 (5.82) | 51                  | +.234 (5.94) | -.139 (3.53) |
| 24                                     | -.078 (1.98) | -.319 (8.10) | 52                  | +.234 (5.94) | -.229 (5.82) |
| 25                                     | +.000 (0.00) | +.329 (8.36) | 53                  | +.312 (7.92) | +.086 (2.18) |
| 26                                     | +.000 (0.00) | +.176 (4.47) | 54                  | +.312 (7.92) | -.004 (0.10) |
| 27                                     | +.000 (0.00) | +.086 (2.18) | 55                  | +.312 (7.92) | -.094 (2.39) |
| 28                                     | +.000 (0.00) | -.004 (0.10) | ---                 | ---          | ---          |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 16         | -55             | 55                 | 22M           | M              | All              | MS27347-55 |

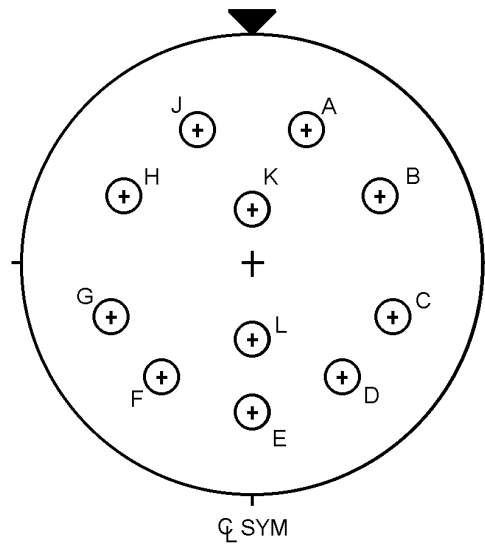
FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 16-99) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.00 (0.00)  | +0.321 (8.15) | N                   | -0.305 (7.75) | +0.099 (2.51) |
| B                                      | +0.131 (3.33) | +0.293 (7.44) | P                   | -0.239 (6.07) | +0.214 (5.44) |
| C                                      | +0.239 (6.07) | +0.214 (5.44) | R                   | -0.131 (3.33) | +0.293 (7.44) |
| D                                      | +0.305 (7.75) | +0.099 (2.51) | S                   | -0.070 (1.78) | +0.177 (4.50) |
| E                                      | +0.319 (8.10) | -0.034 (0.86) | T                   | +0.070 (1.78) | +0.177 (4.50) |
| F                                      | +0.278 (7.06) | -0.161 (4.09) | U                   | +0.175 (4.45) | +0.094 (2.39) |
| G                                      | +0.189 (4.80) | -0.260 (6.60) | V                   | +0.150 (3.81) | -0.075 (1.91) |
| H                                      | +0.067 (1.70) | -0.314 (7.98) | W                   | +0.000 (0.00) | -0.161 (4.09) |
| J                                      | -0.067 (1.70) | -0.314 (7.98) | X                   | -0.150 (3.81) | -0.075 (1.91) |
| K                                      | -0.189 (4.80) | -0.260 (6.60) | Y                   | -0.175 (4.45) | +0.094 (2.39) |
| L                                      | -0.278 (7.06) | -0.161 (4.09) | Z                   | +0.000 (0.00) | +0.025 (0.64) |
| M                                      | -0.319 (8.10) | -0.034 (0.86) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 16         | -99             | 2                  | 16            | I              | W, Z             | MS27347-99 |
|            |                 | 21                 | 20            |                | All others       |            |

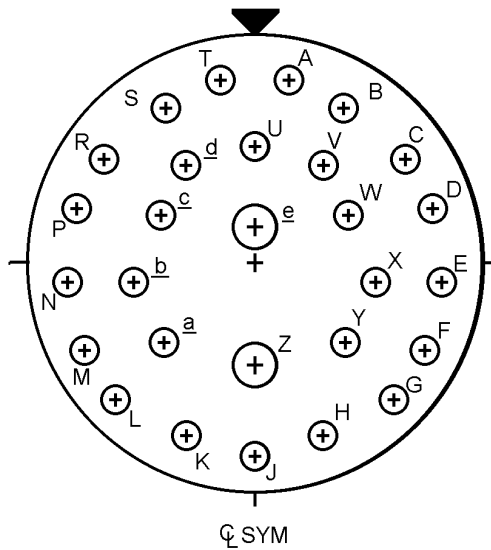
FIGURE 14. Insert arrangement, electrical connector, shell size 16 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-11) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .105 (2.67) | + .260 (6.60) | G                   | - .275 (6.99) | - .053 (1.35) |
| B                                      | + .250 (6.35) | + .132 (3.35) | H                   | - .250 (6.35) | + .132 (3.35) |
| C                                      | + .275 (6.99) | - .053 (1.35) | J                   | - .105 (2.67) | + .260 (6.60) |
| D                                      | + .179 (4.55) | - .215 (5.46) | K                   | + .000 (0.00) | + .105 (2.67) |
| E                                      | + .000 (0.00) | - .281 (7.14) | L                   | + .000 (0.00) | - .092 (2.34) |
| F                                      | - .179 (4.55) | - .215 (5.46) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 18         | -11             | 11                 | 16            | II             | All              | MS27348-11 |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599).

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-28) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.066 (1.68) | +0.353 (8.97) | R                   | -0.286 (7.26) | +0.217 (5.51) |
| B                                      | +0.189 (4.80) | +0.305 (7.75) | S                   | -0.189 (4.80) | +0.305 (7.75) |
| C                                      | +0.286 (7.26) | +0.217 (5.51) | T                   | -0.066 (1.68) | +0.353 (8.97) |
| D                                      | +0.345 (8.76) | +0.098 (2.49) | U                   | +0.000 (0.00) | +0.230 (5.84) |
| E                                      | +0.357 (9.07) | -0.033 (0.84) | V                   | +0.124 (3.15) | +0.193 (4.90) |
| F                                      | +0.321 (8.15) | -0.160 (4.06) | W                   | +0.209 (5.31) | +0.095 (2.41) |
| G                                      | +0.242 (6.15) | -0.265 (6.73) | X                   | +0.228 (5.79) | -0.033 (0.84) |
| H                                      | +0.130 (3.30) | -0.335 (8.51) | Y                   | +0.174 (4.42) | -0.151 (3.84) |
| J                                      | +0.000 (0.00) | -0.359 (9.12) | Z                   | +0.000 (0.00) | -0.191 (4.85) |
| K                                      | -0.130 (3.30) | -0.335 (8.51) | <u>a</u>            | -0.174 (4.42) | -0.151 (3.84) |
| L                                      | -0.242 (6.15) | -0.265 (6.73) | <u>b</u>            | -0.228 (5.79) | -0.033 (0.84) |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

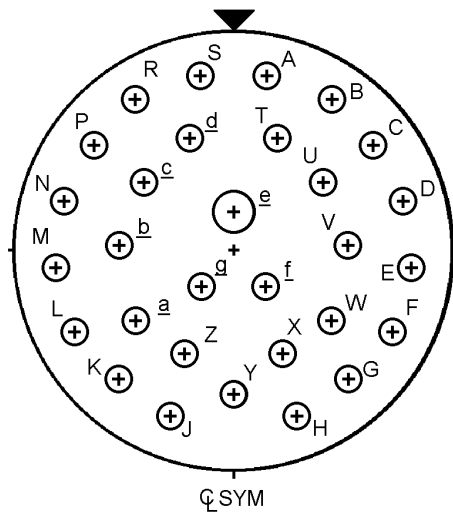
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-28) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| M                                      | -.321 (8.15) | -.160 (4.06) | <u>c</u>            | -.209 (5.31) | +.095 (2.41) |
| N                                      | -.357 (9.07) | -.033 (0.84) | <u>d</u>            | -.124 (3.15) | +.193 (4.90) |
| P                                      | -.345 (8.76) | +.098 (2.49) | <u>e</u>            | +.000 (0.00) | +.062 (1.57) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 18         | -28             | 2                  | 16            | I              | <u>e, Z</u>      | MS27348-28 |
|            |                 | 26                 | 20            |                | All others       |            |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-30) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65) | +0.346 (8.79) | S                   | -0.065 (1.65) | +0.346 (8.79) |
| B                                      | +0.186 (4.72) | +0.299 (7.59) | T                   | +0.084 (2.13) | +0.217 (5.51) |
| C                                      | +0.282 (7.16) | +0.210 (5.33) | U                   | +0.181 (4.60) | +0.129 (3.28) |
| D                                      | +0.340 (8.64) | +0.093 (2.36) | V                   | +0.228 (5.79) | +0.008 (0.20) |
| E                                      | +0.351 (8.92) | -0.033 (0.84) | W                   | +0.193 (4.90) | -0.117 (2.97) |
| F                                      | +0.315 (8.00) | -0.158 (4.01) | X                   | +0.096 (2.44) | -0.203 (5.16) |
| G                                      | +0.236 (5.99) | -0.261 (6.63) | Y                   | +0.000 (0.00) | -0.290 (7.37) |
| H                                      | +0.124 (3.15) | -0.330 (8.38) | Z                   | -0.096 (2.44) | -0.203 (5.16) |
| J                                      | -0.124 (3.15) | -0.330 (8.38) | <u>a</u>            | -0.193 (4.90) | -0.117 (2.97) |
| K                                      | -0.236 (5.99) | -0.261 (6.63) | <u>b</u>            | -0.228 (5.79) | +0.008 (0.20) |
| L                                      | -0.315 (8.00) | -0.158 (4.01) | <u>c</u>            | -0.181 (4.60) | +0.129 (3.28) |
| M                                      | -0.351 (8.92) | -0.033 (0.84) | <u>d</u>            | -0.084 (2.13) | +0.217 (5.51) |

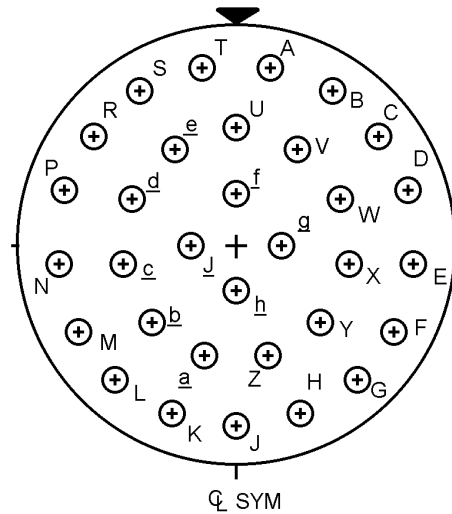
FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-30) |              |              |                     |               |               |
|--|--------------|--------------|---------------------|---------------|---------------|
| Contact position ID                    | Location     |              | Contact position ID | Location      |               |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)   | Y-axis (mm)   |
| N                                      | -.340 (8.64) | +.093 (2.36) | <u>e</u>            | +0.000 (0.00) | +0.072 (1.83) |
| P                                      | -.282 (7.16) | +.210 (5.33) | <u>f</u>            | +0.069 (1.75) | -.076 (1.93)  |
| R                                      | -.186 (4.72) | +.299 (7.59) | <u>g</u>            | -.069 (1.75)  | -.076 (1.93)  |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 18         | -30             | 1                  | 16            | I              | <u>e</u>         | MS27348-30 |
|            |                 | 29                 | 20            |                | All others       |            |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-32) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.066 (1.68) | +0.353 (8.97) | T                   | -0.066 (1.68) | +0.353 (8.97) |
| B                                      | +0.189 (4.80) | +0.305 (7.75) | U                   | +0.000 (0.00) | +0.230 (5.84) |
| C                                      | +0.286 (7.26) | +0.217 (5.51) | V                   | +0.124 (3.15) | +0.193 (4.90) |
| D                                      | +0.345 (8.76) | +0.098 (2.49) | W                   | +0.209 (5.31) | +0.095 (2.41) |
| E                                      | +0.357 (9.07) | -0.033 (0.84) | X                   | +0.228 (5.79) | -0.033 (0.84) |
| F                                      | +0.321 (8.15) | -0.160 (4.06) | Y                   | +0.174 (4.42) | -0.151 (3.84) |
| G                                      | +0.242 (6.15) | -0.265 (6.73) | Z                   | +0.065 (1.65) | -0.221 (5.61) |
| H                                      | +0.130 (3.30) | -0.335 (8.51) | a                   | -0.065 (1.65) | -0.221 (5.61) |
| J                                      | +0.000 (0.00) | -0.359 (9.12) | b                   | -0.174 (4.42) | -0.151 (3.84) |
| K                                      | -0.130 (3.30) | -0.335 (8.51) | c                   | -0.228 (5.79) | -0.033 (0.84) |
| L                                      | -0.242 (6.15) | -0.265 (6.73) | d                   | -0.209 (5.31) | +0.095 (2.41) |
| M                                      | -0.321 (8.15) | -0.160 (4.06) | e                   | -0.124 (3.15) | +0.193 (4.90) |
| N                                      | -0.357 (9.07) | -0.033 (0.84) | f                   | +0.000 (0.00) | +0.096 (2.44) |

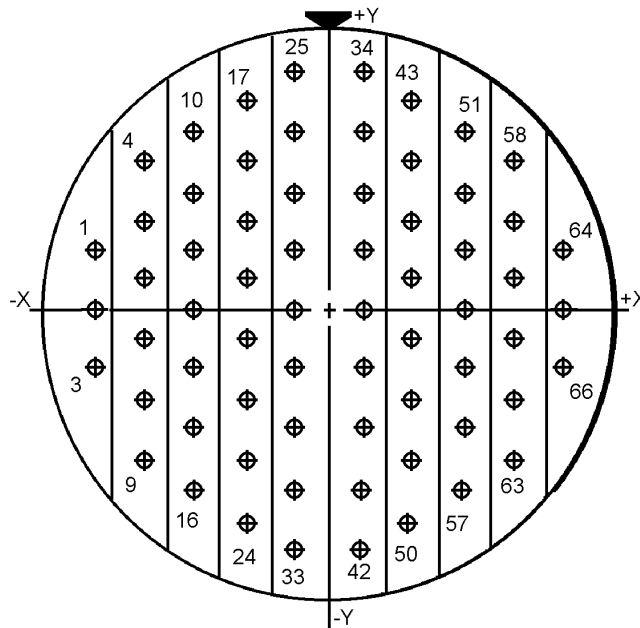
FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-32) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| P                                      | -.345 (8.76) | +.098 (2.49) | <u>g</u>            | +.096 (2.44) | +.000 (0.00) |
| R                                      | -.286 (7.26) | +.217 (5.51) | <u>h</u>            | +.000 (0.00) | -.096 (2.44) |
| S                                      | -.189 (4.80) | +.305 (7.75) | <u>i</u>            | -.096 (2.44) | +.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 18         | -32             | 32                 | 20            | I              | All              | MS27348-32 |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-35) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.357 (9.07) | +.090 (2.29) | 34                  | +.045 (1.14) | +.360 (9.14) |
| 2                                      | -.357 (9.07) | +.000 (0.00) | 35                  | +.045 (1.14) | +.270 (6.86) |
| 3                                      | -.357 (9.07) | -.090 (2.29) | 36                  | +.045 (1.14) | +.180 (4.57) |
| 4                                      | -.279 (7.09) | +.225 (5.72) | 37                  | +.045 (1.14) | +.090 (2.29) |
| 5                                      | -.279 (7.09) | +.135 (3.43) | 38                  | +.045 (1.14) | +.000 (0.00) |
| 6                                      | -.279 (7.09) | +.045 (1.14) | 39                  | +.045 (1.14) | -.090 (2.29) |
| 7                                      | -.279 (7.09) | -.045 (1.14) | 40                  | +.045 (1.14) | -.180 (4.57) |
| 8                                      | -.279 (7.09) | -.135 (3.43) | 41                  | +.045 (1.14) | -.270 (6.86) |
| 9                                      | -.279 (7.09) | -.225 (5.72) | 42                  | +.045 (1.14) | -.360 (9.14) |
| 10                                     | -.201 (5.11) | +.270 (6.86) | 43                  | +.123 (3.12) | +.315 (8.00) |
| 11                                     | -.201 (5.11) | +.180 (4.57) | 44                  | +.123 (3.12) | +.225 (5.72) |
| 12                                     | -.201 (5.11) | +.090 (2.29) | 45                  | +.123 (3.12) | +.135 (3.43) |
| 13                                     | -.201 (5.11) | +.000 (0.00) | 46                  | +.123 (3.12) | +.045 (1.14) |
| 14                                     | -.201 (5.11) | -.090 (2.29) | 47                  | +.123 (3.12) | -.045 (1.14) |
| 15                                     | -.201 (5.11) | -.180 (4.57) | 48                  | +.123 (3.12) | -.135 (3.43) |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

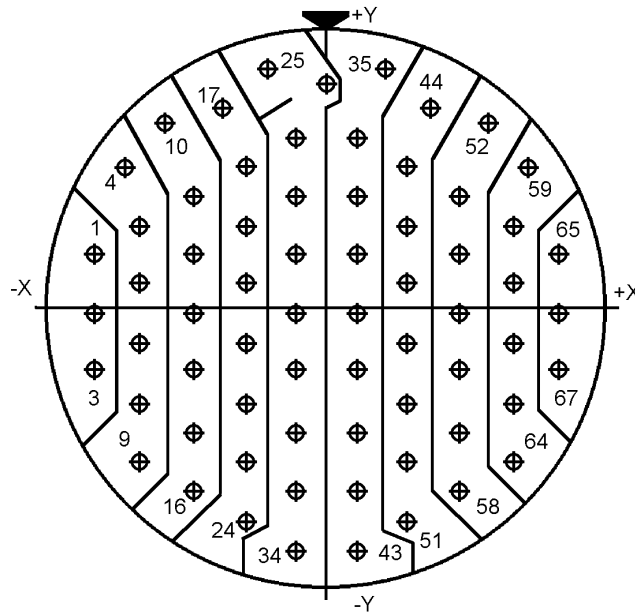
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-35) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 16                                     | -.201 (5.11) | -.270 (6.86) | 49                  | +.123 (3.12) | -.225 (5.72) |
| 17                                     | -.123 (3.12) | +.315 (8.00) | 50                  | +.123 (3.12) | -.315 (8.00) |
| 18                                     | -.123 (3.12) | +.225 (5.72) | 51                  | +.201 (5.11) | +.270 (6.86) |
| 19                                     | -.123 (3.12) | +.135 (3.43) | 52                  | +.201 (5.11) | +.180 (4.57) |
| 20                                     | -.123 (3.12) | +.045 (1.14) | 53                  | +.201 (5.11) | +.090 (2.29) |
| 21                                     | -.123 (3.12) | -.045 (1.14) | 54                  | +.201 (5.11) | +.000 (0.00) |
| 22                                     | -.123 (3.12) | -.135 (3.43) | 55                  | +.201 (5.11) | -.090 (2.29) |
| 23                                     | -.123 (3.12) | -.225 (5.72) | 56                  | +.201 (5.11) | -.180 (4.57) |
| 24                                     | -.123 (3.12) | -.315 (8.00) | 57                  | +.201 (5.11) | -.270 (6.86) |
| 25                                     | -.045 (1.14) | +.360 (9.14) | 58                  | +.279 (7.09) | +.225 (5.72) |
| 26                                     | -.045 (1.14) | +.270 (6.86) | 59                  | +.279 (7.09) | +.135 (3.43) |
| 27                                     | -.045 (1.14) | +.180 (4.57) | 60                  | +.279 (7.09) | +.045 (1.14) |
| 28                                     | -.045 (1.14) | +.090 (2.29) | 61                  | +.279 (7.09) | -.045 (1.14) |
| 29                                     | -.045 (1.14) | +.000 (0.00) | 62                  | +.279 (7.09) | -.135 (3.43) |
| 30                                     | -.045 (1.14) | -.090 (2.29) | 63                  | +.279 (7.09) | -.225 (5.72) |
| 31                                     | -.045 (1.14) | -.180 (4.57) | 64                  | +.357 (9.07) | +.090 (2.29) |
| 32                                     | -.045 (1.14) | -.270 (6.86) | 65                  | +.357 (9.07) | +.000 (0.00) |
| 33                                     | -.045 (1.14) | -.360 (9.14) | 66                  | +.357 (9.07) | -.090 (2.29) |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 18         | -35             | 66                 | 22D           | M              | All              | MS27521-35 |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-45) |                |                |                        |                |                |
|--|----------------|----------------|------------------------|----------------|----------------|
| Contact<br>position ID                 | Location       |                | Contact<br>position ID | Location       |                |
|  | X-axis<br>(mm) | Y-axis<br>(mm) |                        | X-axis<br>(mm) | Y-axis<br>(mm) |
| 1                                      | -.357 (9.07)   | +.081 (2.06)   | 35                     | +.088 (2.24)   | +.360 (9.14)   |
| 2                                      | -.357 (9.07)   | -.009 (0.23)   | 36                     | +.045 (1.14)   | +.261 (6.63)   |
| 3                                      | -.357 (9.07)   | -.099 (2.51)   | 37                     | +.045 (1.14)   | +.171 (4.34)   |
| 4                                      | -.304 (7.72)   | +.213 (5.41)   | 38                     | +.045 (1.14)   | +.081 (2.06)   |
| 5                                      | -.279 (7.09)   | +.126 (3.20)   | 39                     | +.045 (1.14)   | -.009 (0.23)   |
| 6                                      | -.279 (7.09)   | +.036 (0.91)   | 40                     | +.045 (1.14)   | -.099 (2.51)   |
| 7                                      | -.279 (7.09)   | -.054 (1.37)   | 41                     | +.045 (1.14)   | -.189 (4.80)   |
| 8                                      | -.279 (7.09)   | -.144 (3.66)   | 42                     | +.045 (1.14)   | -.279 (7.09)   |
| 9                                      | -.279 (7.09)   | -.234 (5.94)   | 43                     | +.045 (1.14)   | -.369 (9.37)   |
| 10                                     | -.244 (6.20)   | +.280 (7.11)   | 44                     | +.156 (3.96)   | +.301 (7.65)   |
| 11                                     | -.201 (5.11)   | +.171 (4.34)   | 45                     | +.123 (3.12)   | +.216 (5.49)   |
| 12                                     | -.201 (5.11)   | +.081 (2.06)   | 46                     | +.123 (3.12)   | +.126 (3.20)   |
| 13                                     | -.201 (5.11)   | -.009 (0.23)   | 47                     | +.123 (3.12)   | +.036 (0.91)   |
| 14                                     | -.201 (5.11)   | -.099 (2.51)   | 48                     | +.123 (3.12)   | -.054 (1.37)   |
| 15                                     | -.201 (5.11)   | -.189 (4.80)   | 49                     | +.123 (3.12)   | -.144 (3.66)   |
| 16                                     | -.201 (5.11)   | -.279 (7.09)   | 50                     | +.123 (3.12)   | -.234 (5.94)   |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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w/CHANGE 1

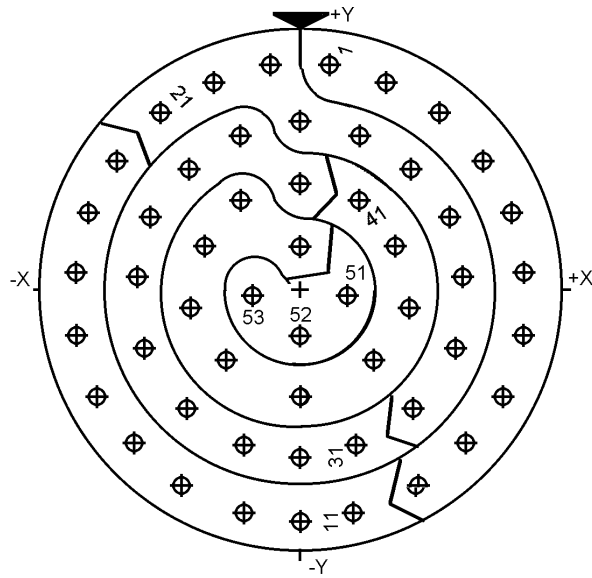
| Contacts<br>(Insert arrangement 18-45) |                |                |                        |                |                |
|--|----------------|----------------|------------------------|----------------|----------------|
| Contact<br>position ID                 | Location       |                | Contact<br>position ID | Location       |                |
|  | X-axis<br>(mm) | Y-axis<br>(mm) |                        | X-axis<br>(mm) | Y-axis<br>(mm) |
| 17                                     | -.156 (3.96)   | +.301 (7.65)   | 51                     | +.123 (3.12)   | -.324 (8.23)   |
| 18                                     | -.123 (3.12)   | +.216 (5.49)   | 52                     | +.244 (6.20)   | +.280 (7.11)   |
| 19                                     | -.123 (3.12)   | +.126 (3.20)   | 53                     | +.201 (5.11)   | +.171 (4.34)   |
| 20                                     | -.123 (3.12)   | +.036 (0.91)   | 54                     | +.201 (5.11)   | +.081 (2.06)   |
| 21                                     | -.123 (3.12)   | -.054 (1.37)   | 55                     | +.201 (5.11)   | -.009 (0.23)   |
| 22                                     | -.123 (3.12)   | -.144 (3.66)   | 56                     | +.201 (5.11)   | -.099 (2.51)   |
| 23                                     | -.123 (3.12)   | -.234 (5.94)   | 57                     | +.201 (5.11)   | -.189 (4.80)   |
| 24                                     | -.123 (3.12)   | -.324 (8.23)   | 58                     | +.201 (5.11)   | -.279 (7.09)   |
| 25                                     | -.088 (2.24)   | +.360 (9.14)   | 59                     | +.304 (7.72)   | +.213 (5.41)   |
| 26                                     | -.000 (0.00)   | +.339 (8.61)   | 60                     | +.279 (7.09)   | +.126 (3.20)   |
| 27                                     | -.045 (1.14)   | +.261 (6.63)   | 61                     | +.279 (7.09)   | +.036 (0.91)   |
| 28                                     | -.045 (1.14)   | +.171 (4.34)   | 62                     | +.279 (7.09)   | -.054 (1.37)   |
| 29                                     | -.045 (1.14)   | +.081 (2.06)   | 63                     | +.279 (7.09)   | -.144 (3.66)   |
| 30                                     | -.045 (1.14)   | -.009 (0.23)   | 64                     | +.279 (7.09)   | -.234 (5.94)   |
| 31                                     | -.045 (1.14)   | -.099 (2.51)   | 65                     | +.357 (9.07)   | +.081 (2.06)   |
| 32                                     | -.045 (1.14)   | -.189 (4.80)   | 66                     | +.357 (9.07)   | -.009 (0.23)   |
| 33                                     | -.045 (1.14)   | -.279 (7.09)   | 67                     | +.357 (9.07)   | -.099 (2.51)   |
| 34                                     | -.045 (1.14)   | -.369 (9.37)   | ---                    | ---            | ---            |

(Applicable to MIL-DTL-38999 only)

| Shell<br>size | Arrangement<br>no. | Number of<br>contacts | Size<br>contacts | Service<br>rating | Contact<br>location | Supersedes |
|---------------|--------------------|-----------------------|------------------|-------------------|---------------------|------------|
| 18            | -45                | 67                    | 22D              | M                 | All                 | MS27521-45 |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-53) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.050 (1.27) | +0.364 (9.25) | 28                  | +0.266 (6.76) | +0.018 (0.46) |
| 2                                      | +0.146 (3.71) | +0.336 (8.53) | 29                  | +0.260 (6.60) | -0.094 (2.39) |
| 3                                      | +0.232 (5.89) | +0.284 (7.21) | 30                  | +0.184 (4.67) | -0.195 (4.95) |
| 4                                      | +0.301 (7.65) | +0.212 (5.38) | 31                  | +0.099 (2.51) | -0.252 (6.40) |
| 5                                      | +0.347 (8.81) | +0.123 (3.12) | 32                  | +0.000 (0.00) | -0.268 (6.81) |
| 6                                      | +0.367 (9.32) | +0.025 (0.64) | 33                  | -0.099 (2.51) | -0.252 (6.40) |
| 7                                      | +0.360 (9.14) | -0.075 (1.91) | 34                  | -0.184 (4.67) | -0.195 (4.95) |
| 8                                      | +0.328 (8.33) | -0.170 (4.32) | 35                  | -0.260 (6.60) | -0.094 (2.39) |
| 9                                      | +0.269 (6.83) | -0.251 (6.38) | 36                  | -0.266 (6.76) | +0.018 (0.46) |
| 10                                     | +0.191 (4.85) | -0.314 (7.98) | 37                  | -0.245 (6.22) | +0.116 (2.95) |
| 11                                     | +0.099 (2.51) | -0.354 (8.99) | 38                  | -0.183 (4.65) | +0.195 (4.95) |
| 12                                     | +0.000 (0.00) | -0.368 (9.35) | 39                  | -0.096 (2.44) | +0.248 (6.30) |
| 13                                     | -0.099 (2.51) | -0.354 (8.99) | 40                  | +0.000 (0.00) | +0.176 (4.47) |
| 14                                     | -0.191 (4.85) | -0.314 (7.98) | 41                  | +0.096 (2.44) | +0.145 (3.68) |
| 15                                     | -0.269 (6.83) | -0.251 (6.38) | 42                  | +0.158 (4.01) | +0.068 (1.73) |
| 16                                     | -0.328 (8.33) | -0.170 (4.32) | 43                  | +0.178 (4.52) | -0.032 (0.81) |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

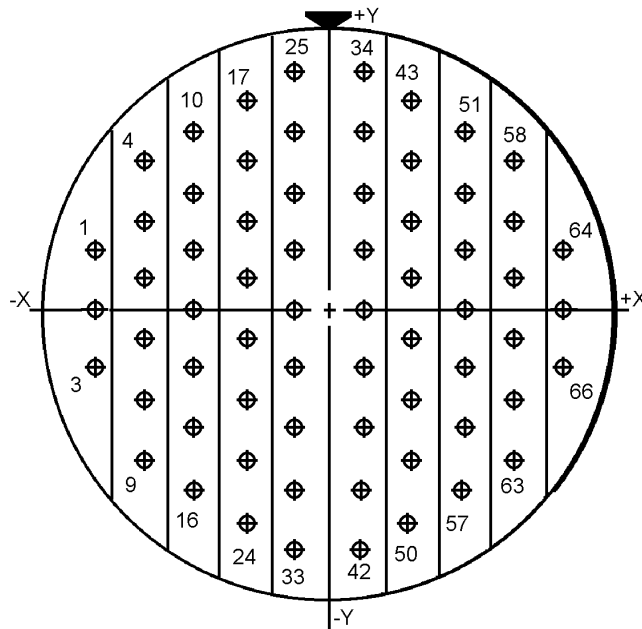
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-53) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 17                                     | -.360 (9.14) | -.075 (1.91) | 44                  | +.120 (3.05) | -.114 (2.90) |
| 18                                     | -.367 (9.32) | +.025 (0.64) | 45                  | +.000 (0.00) | -.168 (4.27) |
| 19                                     | -.347 (8.81) | +.123 (3.12) | 46                  | -.120 (3.05) | -.114 (2.90) |
| 20                                     | -.301 (7.65) | +.212 (5.38) | 47                  | -.178 (4.52) | -.032 (0.81) |
| 21                                     | -.232 (5.89) | +.284 (7.21) | 48                  | -.158 (4.01) | +.068 (1.73) |
| 22                                     | -.146 (3.71) | +.336 (8.53) | 49                  | -.096 (2.44) | +.145 (3.68) |
| 23                                     | -.050 (1.27) | +.364 (9.25) | 50                  | +.000 (0.00) | +.076 (1.93) |
| 24                                     | +.000 (0.00) | +.276 (7.01) | 51                  | +.080 (2.03) | -.002 (0.05) |
| 25                                     | +.096 (2.44) | +.248 (6.30) | 52                  | +.000 (0.00) | -.068 (1.73) |
| 26                                     | +.183 (4.65) | +.195 (4.95) | 53                  | -.080 (2.03) | -.002 (0.05) |
| 27                                     | +.245 (6.22) | +.116 (2.95) | ---                 | ---          | ---          |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 18         | -53             | 53                 | 22            | M              | All              | MS27348-53 |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-66) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.357 (9.07) | +.090 (2.29) | 34                  | +.045 (1.14) | +.360 (9.14) |
| 2                                      | -.357 (9.07) | +.000 (0.00) | 35                  | +.045 (1.14) | +.270 (6.86) |
| 3                                      | -.357 (9.07) | -.090 (2.29) | 36                  | +.045 (1.14) | +.180 (4.57) |
| 4                                      | -.279 (7.09) | +.225 (5.72) | 37                  | +.045 (1.14) | +.090 (2.29) |
| 5                                      | -.279 (7.09) | +.135 (3.43) | 38                  | +.045 (1.14) | +.000 (0.00) |
| 6                                      | -.279 (7.09) | +.045 (1.14) | 39                  | +.045 (1.14) | -.090 (2.29) |
| 7                                      | -.279 (7.09) | -.045 (1.14) | 40                  | +.045 (1.14) | -.180 (4.57) |
| 8                                      | -.279 (7.09) | -.135 (3.43) | 41                  | +.045 (1.14) | -.270 (6.86) |
| 9                                      | -.279 (7.09) | -.225 (5.72) | 42                  | +.045 (1.14) | -.360 (9.14) |
| 10                                     | -.201 (5.11) | +.270 (6.86) | 43                  | +.123 (3.12) | +.315 (8.00) |
| 11                                     | -.201 (5.11) | +.180 (4.57) | 44                  | +.123 (3.12) | +.225 (5.72) |
| 12                                     | -.201 (5.11) | +.090 (2.29) | 45                  | +.123 (3.12) | +.135 (3.43) |
| 13                                     | -.201 (5.11) | +.000 (0.00) | 46                  | +.123 (3.12) | +.045 (1.14) |
| 14                                     | -.201 (5.11) | -.090 (2.29) | 47                  | +.123 (3.12) | -.045 (1.14) |
| 15                                     | -.201 (5.11) | -.180 (4.57) | 48                  | +.123 (3.12) | -.135 (3.43) |
| 16                                     | -.201 (5.11) | -.270 (6.86) | 49                  | +.123 (3.12) | -.225 (5.72) |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

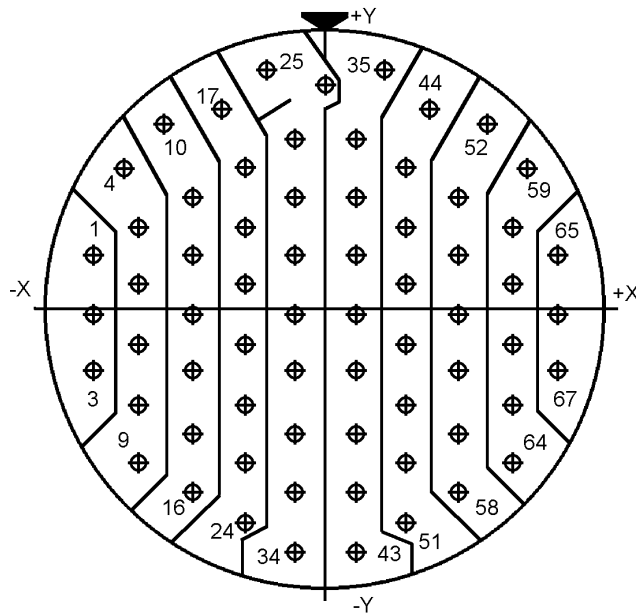
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-66) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 17                                     | -.123 (3.12) | +.315 (8.00) | 50                  | +.123 (3.12) | -.315 (8.00) |
| 18                                     | -.123 (3.12) | +.225 (5.72) | 51                  | +.201 (5.11) | +.270 (6.86) |
| 19                                     | -.123 (3.12) | +.135 (3.43) | 52                  | +.201 (5.11) | +.180 (4.57) |
| 20                                     | -.123 (3.12) | +.045 (1.14) | 53                  | +.201 (5.11) | +.090 (2.29) |
| 21                                     | -.123 (3.12) | -.045 (1.14) | 54                  | +.201 (5.11) | +.000 (0.00) |
| 22                                     | -.123 (3.12) | -.135 (3.43) | 55                  | +.201 (5.11) | -.090 (2.29) |
| 23                                     | -.123 (3.12) | -.225 (5.72) | 56                  | +.201 (5.11) | -.180 (4.57) |
| 24                                     | -.123 (3.12) | -.315 (8.00) | 57                  | +.201 (5.11) | -.270 (6.86) |
| 25                                     | -.045 (1.14) | +.360 (9.14) | 58                  | +.279 (7.09) | +.225 (5.72) |
| 26                                     | -.045 (1.14) | +.270 (6.86) | 59                  | +.279 (7.09) | +.135 (3.43) |
| 27                                     | -.045 (1.14) | +.180 (4.57) | 60                  | +.279 (7.09) | +.045 (1.14) |
| 28                                     | -.045 (1.14) | +.090 (2.29) | 61                  | +.279 (7.09) | -.045 (1.14) |
| 29                                     | -.045 (1.14) | +.000 (0.00) | 62                  | +.279 (7.09) | -.135 (3.43) |
| 30                                     | -.045 (1.14) | -.090 (2.29) | 63                  | +.279 (7.09) | -.225 (5.72) |
| 31                                     | -.045 (1.14) | -.180 (4.57) | 64                  | +.357 (9.07) | +.090 (2.29) |
| 32                                     | -.045 (1.14) | -.270 (6.86) | 65                  | +.357 (9.07) | +.000 (0.00) |
| 33                                     | -.045 (1.14) | -.360 (9.14) | 66                  | +.357 (9.07) | -.090 (2.29) |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 18         | -66             | 66                 | 22M           | M              | All              | MS27348-66 |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-67) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 1                                      | -.357 (9.07) | +.081 (2.06) | 35                  | +.088 (2.24) | +.360 (9.14) |
| 2                                      | -.357 (9.07) | -.009 (0.23) | 36                  | +.045 (1.14) | +.261 (6.63) |
| 3                                      | -.357 (9.07) | -.099 (2.51) | 37                  | +.045 (1.14) | +.171 (4.34) |
| 4                                      | -.304 (7.72) | +.213 (5.41) | 38                  | +.045 (1.14) | +.081 (2.06) |
| 5                                      | -.279 (7.09) | +.126 (3.20) | 39                  | +.045 (1.14) | -.009 (0.23) |
| 6                                      | -.279 (7.09) | +.036 (0.91) | 40                  | +.045 (1.14) | -.099 (2.51) |
| 7                                      | -.279 (7.09) | -.054 (1.37) | 41                  | +.045 (1.14) | -.189 (4.80) |
| 8                                      | -.279 (7.09) | -.144 (3.66) | 42                  | +.045 (1.14) | -.279 (7.09) |
| 9                                      | -.279 (7.09) | -.234 (5.94) | 43                  | +.045 (1.14) | -.369 (9.37) |
| 10                                     | -.244 (6.20) | +.280 (7.11) | 44                  | +.156 (3.96) | +.301 (7.65) |
| 11                                     | -.201 (5.11) | +.171 (4.34) | 45                  | +.123 (3.12) | +.216 (5.49) |
| 12                                     | -.201 (5.11) | +.081 (2.06) | 46                  | +.123 (3.12) | +.126 (3.20) |
| 13                                     | -.201 (5.11) | -.009 (0.23) | 47                  | +.123 (3.12) | +.036 (0.91) |
| 14                                     | -.201 (5.11) | -.099 (2.51) | 48                  | +.123 (3.12) | -.054 (1.37) |
| 15                                     | -.201 (5.11) | -.189 (4.80) | 49                  | +.123 (3.12) | -.144 (3.66) |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

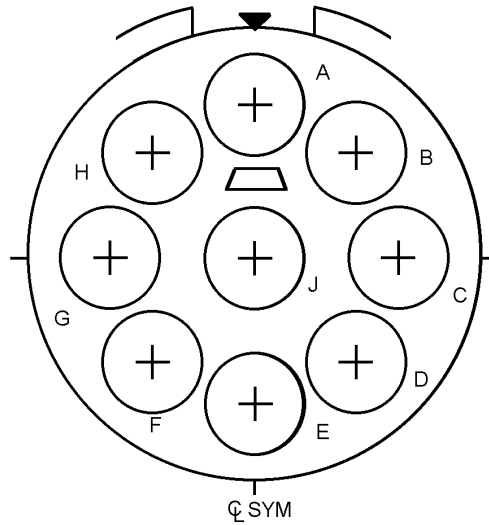
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-67) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| 16                                     | -.201 (5.11) | -.279 (7.09) | 50                  | +.123 (3.12) | -.234 (5.94) |
| 17                                     | -.156 (3.96) | +.301 (7.65) | 51                  | +.123 (3.12) | -.324 (8.23) |
| 18                                     | -.123 (3.12) | +.216 (5.49) | 52                  | +.244 (6.20) | +.280 (7.11) |
| 19                                     | -.123 (3.12) | +.126 (3.20) | 53                  | +.201 (5.11) | +.171 (4.34) |
| 20                                     | -.123 (3.12) | +.036 (0.91) | 54                  | +.201 (5.11) | +.081 (2.06) |
| 21                                     | -.123 (3.12) | -.054 (1.37) | 55                  | +.201 (5.11) | -.009 (0.23) |
| 22                                     | -.123 (3.12) | -.144 (3.66) | 56                  | +.201 (5.11) | -.099 (2.51) |
| 23                                     | -.123 (3.12) | -.234 (5.94) | 57                  | +.201 (5.11) | -.189 (4.80) |
| 24                                     | -.123 (3.12) | -.324 (8.23) | 58                  | +.201 (5.11) | -.279 (7.09) |
| 25                                     | -.088 (2.24) | +.360 (9.14) | 59                  | +.304 (7.72) | +.213 (5.41) |
| 26                                     | -.000 (0.00) | +.339 (8.61) | 60                  | +.279 (7.09) | +.126 (3.20) |
| 27                                     | -.045 (1.14) | +.261 (6.63) | 61                  | +.279 (7.09) | +.036 (0.91) |
| 28                                     | -.045 (1.14) | +.171 (4.34) | 62                  | +.279 (7.09) | -.054 (1.37) |
| 29                                     | -.045 (1.14) | +.081 (2.06) | 63                  | +.279 (7.09) | -.144 (3.66) |
| 30                                     | -.045 (1.14) | -.009 (0.23) | 64                  | +.279 (7.09) | -.234 (5.94) |
| 31                                     | -.045 (1.14) | -.099 (2.51) | 65                  | +.357 (9.07) | +.081 (2.06) |
| 32                                     | -.045 (1.14) | -.189 (4.80) | 66                  | +.357 (9.07) | -.009 (0.23) |
| 33                                     | -.045 (1.14) | -.279 (7.09) | 67                  | +.357 (9.07) | -.099 (2.51) |
| 34                                     | -.045 (1.14) | -.369 (9.37) | ---                 | ---          | ---          |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 18         | -67             | 67                 | 22M           | M              | All              | MS27348-67 |

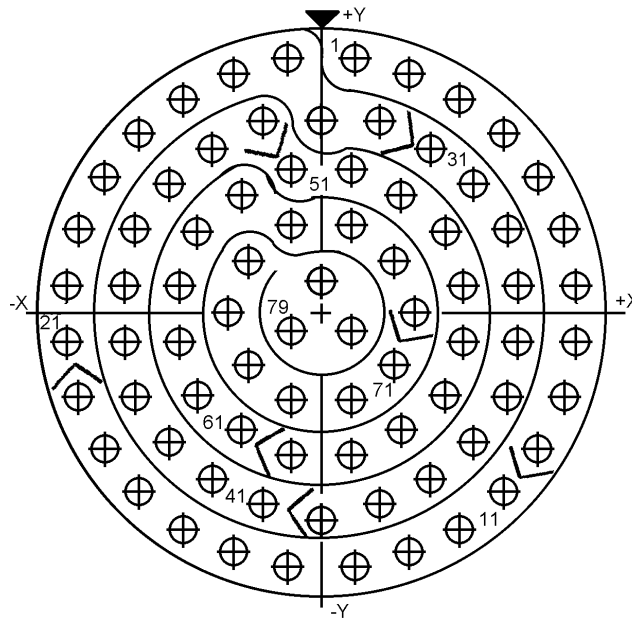
FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 18-96) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.000 (0.00) | +0.301 (7.65) | F                   | -0.213 (5.41) | -0.213 (5.41) |
| B                                      | +0.213 (5.41) | +0.213 (5.41) | G                   | -0.301 (7.65) | +0.000 (0.00) |
| C                                      | +0.301 (7.65) | +0.000 (0.00) | H                   | -0.213 (5.41) | +0.213 (5.41) |
| D                                      | +0.213 (5.41) | -0.213 (5.41) | J                   | +0.000 (0.00) | +0.000 (0.00) |
| E                                      | +0.000 (0.00) | -0.301 (7.65) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location |
|------------|-----------------|--------------------|---------------|----------------|------------------|
| 18         | -96             | 9                  | 12            | I              | All              |

FIGURE 15. Insert arrangement, electrical connector, shell size 18 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 20-1) |                |                |                     |               |               |
|---------------------------------------|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                   | Location       |                | Contact position ID | Location      |               |
|                                       | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                     | +0.053 (1.35)  | +4.26 (10.82)  | 41                  | -0.098 (2.49) | -.322 (8.18)  |
| 2                                     | +0.146 (3.71)  | +0.404 (10.26) | 42                  | -.184 (4.67)  | -.280 (7.11)  |
| 3                                     | +0.232 (5.89)  | +0.362 (9.19)  | 43                  | -.258 (6.55)  | -.220 (5.59)  |
| 4                                     | +0.306 (7.77)  | +0.302 (7.67)  | 44                  | -.311 (7.90)  | -.141 (3.58)  |
| 5                                     | +0.365 (9.27)  | +0.227 (5.77)  | 45                  | -.332 (8.43)  | -.048 (1.22)  |
| 6                                     | +0.406 (10.31) | +0.141 (3.58)  | 46                  | -.332 (8.43)  | +0.048 (1.22) |
| 7                                     | +0.427 (10.85) | +0.048 (1.22)  | 47                  | -.311 (7.90)  | +0.141 (3.58) |
| 8                                     | +0.427 (10.85) | -.048 (1.22)   | 48                  | -.258 (6.55)  | +0.220 (5.59) |
| 9                                     | +0.406 (10.31) | -.141 (3.58)   | 49                  | -.184 (4.67)  | +0.280 (7.11) |
| 10                                    | +0.365 (9.27)  | -.227 (5.77)   | 50                  | -.098 (2.49)  | +0.322 (8.18) |
| 11                                    | +0.306 (7.77)  | -.302 (7.67)   | 51                  | -.048 (1.22)  | +0.241 (6.12) |
| 12                                    | +0.232 (5.89)  | -.362 (9.19)   | 52                  | +0.048 (1.22) | +0.241 (6.12) |
| 13                                    | +0.146 (3.71)  | -.404 (10.26)  | 53                  | +0.134 (3.40) | +0.199 (5.05) |
| 14                                    | +0.053 (1.35)  | -.426 (10.82)  | 54                  | +0.208 (5.28) | +0.139 (3.53) |
| 15                                    | -.053 (1.35)   | -.426 (10.82)  | 55                  | +0.237 (6.02) | +0.048 (1.22) |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599).



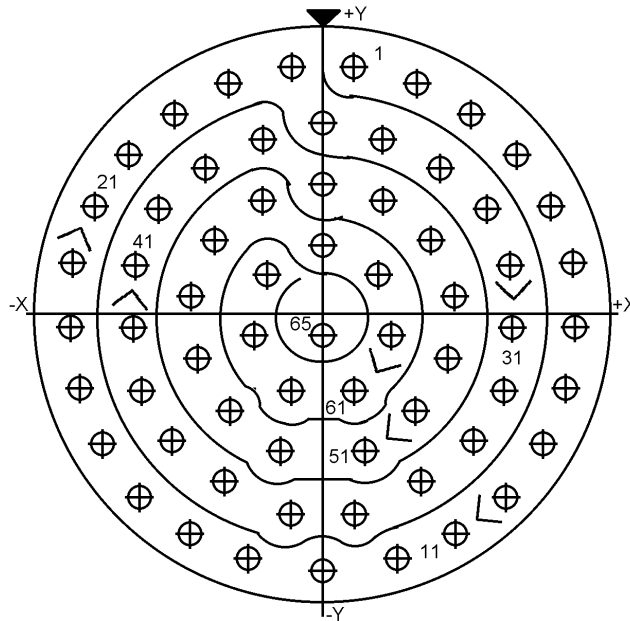
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 20-1) |               |               |                     |              |              |
|---------------------------------------|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |              |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| 16                                    | -.146 (3.71)  | -.404 (10.26) | 56                  | +.237 (6.02) | -.048 (1.22) |
| 17                                    | -.232 (5.89)  | -.362 (9.19)  | 57                  | +.208 (5.28) | -.139 (3.53) |
| 18                                    | -.306 (7.77)  | -.302 (7.67)  | 58                  | +.134 (3.40) | -.199 (5.05) |
| 19                                    | -.365 (9.27)  | -.227 (5.77)  | 59                  | +.048 (1.22) | -.241 (6.12) |
| 20                                    | -.406 (10.31) | -.141 (3.58)  | 60                  | -.048 (1.22) | -.241 (6.12) |
| 21                                    | -.427 (10.85) | -.048 (1.22)  | 61                  | -.134 (3.40) | -.199 (5.05) |
| 22                                    | -.427 (10.85) | +.048 (1.22)  | 62                  | -.208 (5.28) | -.139 (3.53) |
| 23                                    | -.406 (10.31) | +.141 (3.58)  | 63                  | -.237 (6.02) | -.048 (1.22) |
| 24                                    | -.365 (9.27)  | +.227 (5.77)  | 64                  | -.237 (6.02) | +.048 (1.22) |
| 25                                    | -.306 (7.77)  | +.302 (7.67)  | 65                  | -.208 (5.28) | +.139 (3.53) |
| 26                                    | -.232 (5.89)  | +.362 (9.19)  | 66                  | -.134 (3.40) | +.199 (5.05) |
| 27                                    | -.146 (3.71)  | +.404 (10.26) | 67                  | -.048 (1.22) | +.146 (3.71) |
| 28                                    | -.053 (1.35)  | +.426 (10.82) | 68                  | +.048 (1.22) | +.146 (3.71) |
| 29                                    | +.000 (0.00)  | +.323 (8.20)  | 69                  | +.125 (3.18) | +.090 (2.29) |
| 30                                    | +.098 (2.49)  | +.322 (8.18)  | 70                  | +.155 (3.94) | +.000 (0.00) |
| 31                                    | +.184 (4.67)  | +.280 (7.11)  | 71                  | +.125 (3.18) | -.090 (2.29) |
| 32                                    | +.258 (6.55)  | +.220 (5.59)  | 72                  | +.048 (1.22) | -.146 (3.71) |
| 33                                    | +.311 (7.90)  | +.141 (3.58)  | 73                  | -.048 (1.22) | -.146 (3.71) |
| 34                                    | +.332 (8.43)  | +.048 (1.22)  | 74                  | -.125 (3.18) | -.090 (2.29) |
| 35                                    | +.332 (8.43)  | -.048 (1.22)  | 75                  | -.155 (3.94) | +.000 (0.00) |
| 36                                    | +.311 (7.90)  | -.141 (3.58)  | 76                  | -.125 (3.18) | +.090 (2.29) |
| 37                                    | +.258 (6.55)  | -.220 (5.59)  | 77                  | +.000 (0.00) | +.053 (1.35) |
| 38                                    | +.184 (4.67)  | -.280 (7.11)  | 78                  | +.048 (1.22) | -.029 (0.74) |
| 39                                    | +.098 (2.49)  | -.322 (8.18)  | 79                  | -.048 (1.22) | -.029 (0.74) |
| 40                                    | +.000 (0.00)  | -.347 (8.81)  | ---                 | ---          | ---          |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 20         | -1              | 79                 | 22M           | M              | All              | MS27349-1  |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 20-2) |                |                |                     |               |               |
|---------------------------------------|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                   | Location       |                | Contact position ID | Location      |               |
|                                       | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                     | +0.052 (1.32)  | +0.424 (10.77) | 34                  | +0.165 (4.19) | -0.273 (6.93) |
| 2                                     | +0.154 (3.91)  | +0.399 (10.13) | 35                  | +0.053 (1.35) | -0.331 (8.41) |
| 3                                     | +0.246 (6.25)  | +0.348 (8.84)  | 36                  | -0.053 (1.35) | -0.331 (8.41) |
| 4                                     | +0.326 (8.28)  | +0.280 (7.11)  | 37                  | -0.165 (4.19) | -0.273 (6.93) |
| 5                                     | +0.382 (9.70)  | +0.191 (4.85)  | 38                  | -0.252 (6.40) | -0.210 (5.33) |
| 6                                     | +0.417 (10.59) | +0.092 (2.34)  | 39                  | -0.305 (7.75) | -0.119 (3.02) |
| 7                                     | +0.425 (10.80) | -0.013 (.33)   | 40                  | -0.320 (8.13) | -0.015 (0.38) |
| 8                                     | +0.410 (10.41) | -0.117 (2.97)  | 41                  | -0.312 (7.92) | +0.090 (2.29) |
| 9                                     | +0.370 (9.40)  | -0.214 (5.44)  | 42                  | -0.274 (6.96) | +0.188 (4.78) |
| 10                                    | +0.308 (7.82)  | -0.299 (7.59)  | 43                  | -0.194 (4.93) | +0.256 (6.50) |
| 11                                    | +0.224 (5.69)  | -0.362 (9.19)  | 44                  | -0.102 (2.59) | +0.307 (7.80) |
| 12                                    | +0.128 (3.25)  | -0.405 (10.29) | 45                  | +0.000 (0.00) | +0.227 (5.77) |
| 13                                    | +0.000 (0.00)  | -0.422 (10.72) | 46                  | +0.102 (2.59) | +0.202 (5.13) |
| 14                                    | -0.128 (3.25)  | -0.405 (10.29) | 47                  | +0.183 (4.65) | +0.135 (3.43) |
| 15                                    | -0.224 (5.69)  | -0.362 (9.19)  | 48                  | +0.220 (5.59) | +0.037 (0.94) |
| 16                                    | -0.308 (7.82)  | -0.299 (7.59)  | 49                  | +0.213 (5.41) | -0.068 (1.73) |
| 17                                    | -0.370 (9.40)  | -0.214 (5.44)  | 50                  | +0.158 (4.01) | -0.158 (4.01) |
| 18                                    | -0.410 (10.41) | -0.117 (2.97)  | 51                  | +0.072 (1.83) | -0.224 (5.69) |
| 19                                    | -0.425 (10.80) | -0.013 (0.33)  | 52                  | -0.072 (1.83) | -0.224 (5.69) |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

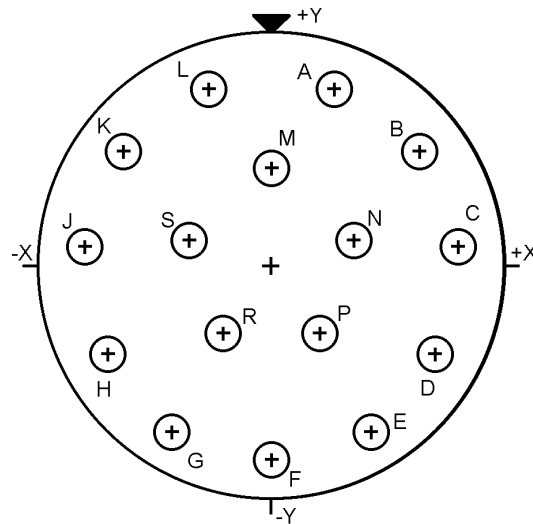
| Contacts<br>(Insert arrangement 20-2) |               |               |                     |              |              |
|---------------------------------------|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |              |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| 20                                    | -.417 (10.59) | +.092 (2.34)  | 53                  | -.158 (4.01) | -.158 (4.01) |
| 21                                    | -.382 (9.70)  | +.191 (4.85)  | 54                  | -.213 (5.41) | -.068 (1.73) |
| 22                                    | -.326 (8.28)  | +.280 (7.11)  | 55                  | -.220 (5.59) | +.037 (0.94) |
| 23                                    | -.246 (6.25)  | +.348 (8.84)  | 56                  | -.183 (4.65) | +.135 (3.43) |
| 24                                    | -.154 (3.91)  | +.399 (10.13) | 57                  | -.102 (2.59) | +.202 (5.13) |
| 25                                    | -.052 (1.32)  | +.424 (10.77) | 58                  | +.000 (0.00) | +.122 (3.10) |
| 26                                    | +.000 (0.00)  | +.332 (8.43)  | 59                  | +.095 (2.41) | +.075 (1.91) |
| 27                                    | +.102 (2.59)  | +.307 (7.80)  | 60                  | +.115 (2.92) | -.029 (0.74) |
| 28                                    | +.194 (4.93)  | +.256 (6.50)  | 61                  | +.056 (1.42) | -.120 (3.05) |
| 29                                    | +.274 (6.96)  | +.188 (4.78)  | 62                  | -.056 (1.42) | -.120 (3.05) |
| 30                                    | +.312 (7.92)  | +.090 (2.29)  | 63                  | -.115 (2.92) | -.029 (0.74) |
| 31                                    | +.320 (8.13)  | -.015 (0.38)  | 64                  | -.095 (2.41) | +.075 (1.91) |
| 32                                    | +.305 (7.75)  | -.119 (3.02)  | 65                  | +.000 (0.00) | -.029 (0.74) |
| 33                                    | +.252 (6.40)  | -.210 (5.33)  | ---                 | ---          | ---          |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 20         | -2              | 65                 | 22            | M              | All              | MS27349-2  |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

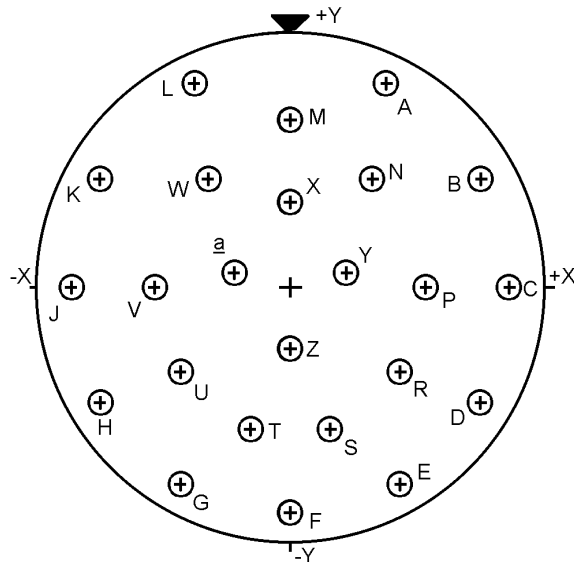
MIL-STD-1560C  
w/CHANGE 1



| Contacts<br>(Insert arrangement 20-16) |              |              |                     |              |              |
|--|--------------|--------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |              | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)  |
| A                                      | +1.18 (3.00) | +3.22 (8.18) | J                   | -3.41 (8.66) | +0.36 (0.91) |
| B                                      | +2.71 (6.88) | +2.11 (5.36) | K                   | -2.71 (6.88) | +2.11 (5.36) |
| C                                      | +3.41 (8.66) | +0.36 (0.91) | L                   | -1.18 (3.00) | +3.22 (8.18) |
| D                                      | +3.08 (7.82) | -1.50 (3.81) | M                   | +0.00 (0.00) | +1.75 (4.45) |
| E                                      | +1.82 (4.62) | -2.90 (7.37) | N                   | +1.54 (3.91) | +0.62 (1.57) |
| F                                      | +0.00 (0.00) | -3.43 (8.71) | P                   | +0.94 (2.39) | -1.22 (3.10) |
| G                                      | -1.82 (4.62) | -2.90 (7.37) | R                   | -0.94 (2.39) | -1.22 (3.10) |
| H                                      | -3.08 (7.82) | -1.50 (3.81) | S                   | -1.54 (3.91) | +0.62 (1.57) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 20         | -16             | 16                 | 16            | II             | All              | MS27349-16 |

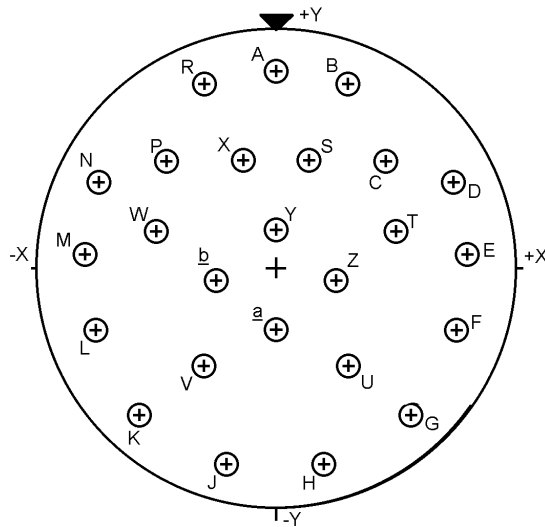
FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 20-24) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | + .175 (4.45)  | + .375 (9.53)  | N                   | + .150 (3.81) | + .200 (5.08) |
| B                                      | + .350 (8.89)  | + .200 (5.08)  | P                   | + .250 (6.35) | + .000 (0.00) |
| C                                      | + .400 (10.16) | + .000 (0.00)  | R                   | + .200 (5.08) | - .150 (3.81) |
| D                                      | + .350 (8.89)  | - .200 (5.08)  | S                   | + .075 (1.91) | - .250 (6.35) |
| E                                      | + .200 (5.08)  | - .350 (8.89)  | T                   | - .075 (1.91) | - .250 (6.35) |
| F                                      | + .000 (0.00)  | - .400 (10.16) | U                   | - .200 (5.08) | - .150 (3.81) |
| G                                      | - .200 (5.08)  | - .350 (8.89)  | V                   | - .250 (6.35) | + .000 (0.00) |
| H                                      | - .350 (8.89)  | - .200 (5.08)  | W                   | - .150 (3.81) | + .200 (5.08) |
| J                                      | - .400 (10.16) | + .000 (0.00)  | X                   | + .000 (0.00) | + .150 (3.81) |
| K                                      | - .350 (8.89)  | + .200 (5.08)  | Y                   | + .100 (2.54) | + .025 (0.64) |
| L                                      | - .175 (4.45)  | + .375 (9.53)  | Z                   | + .000 (0.00) | - .100 (2.54) |
| M                                      | + .000 (0.00)  | + .300 (7.62)  | a                   | - .100 (2.54) | + .025 (.64)  |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 20         | -24             | 24                 | 20            | I              | All              | MS27349-24 |

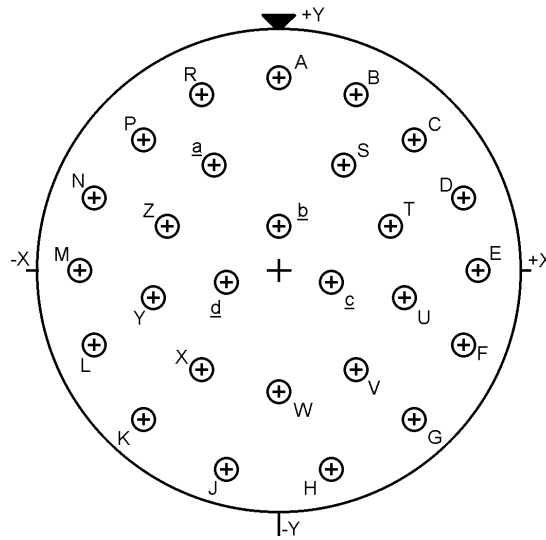
FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 20-25) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.00 (0.00)   | +0.400 (10.16) | P                   | -0.225 (5.72) | +0.225 (5.72) |
| B                                      | +0.150 (3.81)  | +0.375 (9.53)  | R                   | -0.150 (3.81) | +0.375 (9.53) |
| C                                      | +0.225 (5.72)  | +0.225 (5.72)  | S                   | +0.075 (1.91) | +0.225 (5.72) |
| D                                      | +0.375 (9.53)  | +0.175 (4.45)  | T                   | +0.250 (6.35) | +0.075 (1.91) |
| E                                      | +0.400 (10.16) | +0.025 (0.64)  | U                   | +0.150 (3.81) | -0.200 (5.08) |
| F                                      | +0.375 (9.53)  | -0.125 (3.18)  | V                   | -0.150 (3.81) | -0.200 (5.08) |
| G                                      | +0.275 (6.99)  | -0.300 (7.62)  | W                   | -0.250 (6.35) | +0.075 (1.91) |
| H                                      | +0.100 (2.54)  | -0.400 (10.16) | X                   | -0.075 (1.91) | +0.225 (5.72) |
| J                                      | -0.100 (2.54)  | -0.400 (10.16) | Y                   | +0.000 (0.00) | +0.075 (1.91) |
| K                                      | -0.275 (6.99)  | -0.300 (7.62)  | Z                   | +0.125 (3.18) | -0.025 (0.64) |
| L                                      | -0.375 (9.53)  | -0.125 (3.18)  | a                   | +0.000 (0.00) | -0.125 (3.18) |
| M                                      | -0.400 (10.16) | +0.025 (0.64)  | b                   | -0.125 (3.18) | -0.025 (0.64) |
| N                                      | -0.375 (9.53)  | +0.175 (4.45)  | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 20         | -25             | 25                 | 20            | I              | All              | MS27349-25 |

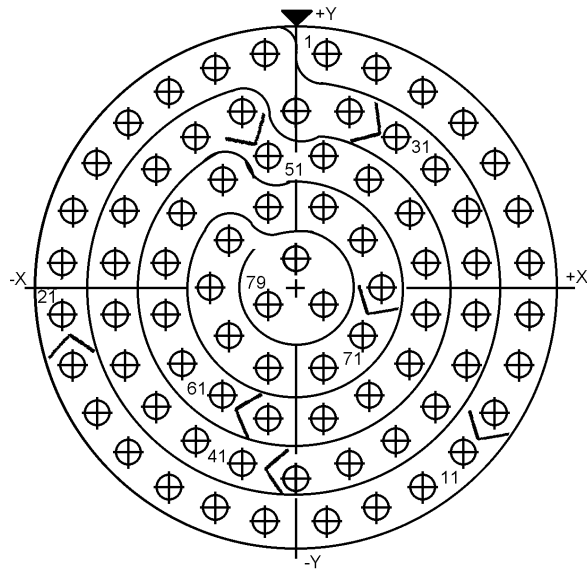
FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 20-27) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.00 (0.00)   | +0.400 (10.16) | R                   | -0.150 (3.81) | +0.375 (9.53) |
| B                                      | +0.150 (3.81)  | +0.375 (9.53)  | S                   | +0.125 (3.18) | +0.225 (5.72) |
| C                                      | +0.275 (6.99)  | +0.275 (6.99)  | T                   | +0.225 (5.72) | +0.100 (2.54) |
| D                                      | +0.375 (9.53)  | +0.150 (3.81)  | U                   | +0.250 (6.35) | -0.050 (1.27) |
| E                                      | +0.400 (10.16) | +0.000 (0.00)  | V                   | +0.150 (3.81) | -0.200 (5.08) |
| F                                      | +0.375 (9.53)  | -0.150 (3.81)  | W                   | +0.000 (0.00) | -0.250 (6.35) |
| G                                      | +0.275 (6.99)  | -0.300 (7.62)  | X                   | -0.150 (3.81) | -0.200 (5.08) |
| H                                      | +0.100 (2.54)  | -0.400 (10.16) | Y                   | -0.250 (6.35) | -0.050 (1.27) |
| J                                      | -0.100 (2.54)  | -0.400 (10.16) | Z                   | -0.225 (5.72) | +0.100 (2.54) |
| K                                      | -0.275 (6.99)  | -0.300 (7.62)  | a                   | -0.125 (3.18) | +0.225 (5.72) |
| L                                      | -0.375 (9.53)  | -0.150 (3.81)  | b                   | +0.000 (0.00) | +0.100 (2.54) |
| M                                      | -0.400 (10.16) | +0.000 (0.00)  | c                   | +0.100 (2.54) | -0.025 (0.64) |
| N                                      | -0.375 (9.53)  | +0.150 (3.81)  | d                   | -0.100 (2.54) | -0.025 (0.64) |
| P                                      | -0.275 (6.99)  | +0.275 (6.99)  | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 20         | -27             | 27                 | 20            | I              | All              | MS27349-27 |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 20-35) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| 1                                      | +0.053 (1.35)  | +0.426 (10.82) | 41                  | -0.098 (2.49) | -0.322 (8.18) |
| 2                                      | +0.146 (3.71)  | +0.404 (10.26) | 42                  | -0.184 (4.67) | -0.280 (7.11) |
| 3                                      | +0.232 (5.89)  | +0.362 (9.19)  | 43                  | -0.258 (6.55) | -0.220 (5.59) |
| 4                                      | +0.306 (7.77)  | +0.302 (7.67)  | 44                  | -0.311 (7.90) | -0.141 (3.58) |
| 5                                      | +0.365 (9.27)  | +0.227 (5.77)  | 45                  | -0.332 (8.43) | -0.048 (1.22) |
| 6                                      | +0.406 (10.31) | +0.141 (3.58)  | 46                  | -0.332 (8.43) | +0.048 (1.22) |
| 7                                      | +0.427 (10.85) | +0.048 (1.22)  | 47                  | -0.311 (7.90) | +0.141 (3.58) |
| 8                                      | +0.427 (10.85) | -0.048 (1.22)  | 48                  | -0.258 (6.55) | +0.220 (5.59) |
| 9                                      | +0.406 (10.31) | -0.141 (3.58)  | 49                  | -0.184 (4.67) | +0.280 (7.11) |
| 10                                     | +0.365 (9.27)  | -0.227 (5.77)  | 50                  | -0.098 (2.49) | +0.322 (8.18) |
| 11                                     | +0.306 (7.77)  | -0.302 (7.67)  | 51                  | -0.048 (1.22) | +0.241 (6.12) |
| 12                                     | +0.232 (5.89)  | -0.362 (9.19)  | 52                  | +0.048 (1.22) | +0.241 (6.12) |
| 13                                     | +0.146 (3.71)  | -0.404 (10.26) | 53                  | +0.134 (3.40) | +0.199 (5.05) |
| 14                                     | +0.053 (1.35)  | -0.426 (10.82) | 54                  | +0.208 (5.28) | +0.139 (3.53) |
| 15                                     | -0.053 (1.35)  | -0.426 (10.82) | 55                  | +0.237 (6.02) | +0.048 (1.22) |
| 16                                     | -0.146 (3.71)  | -0.404 (10.26) | 56                  | +0.237 (6.02) | -0.048 (1.22) |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



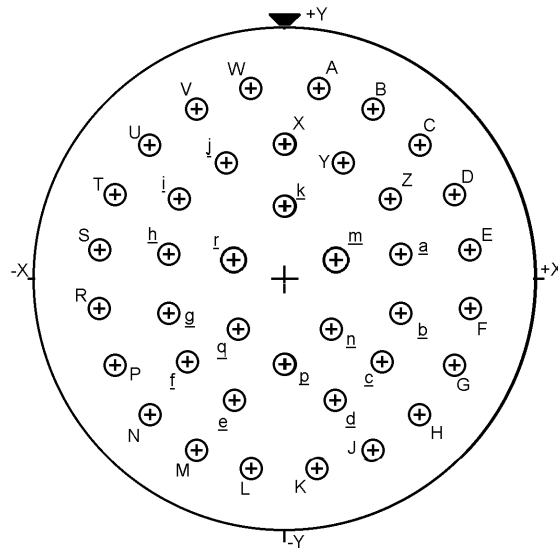
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 20-35) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| 17                                     | -.232 (5.89)  | -.362 (9.19)  | 57                  | +.208 (5.28) | -.139 (3.53) |
| 18                                     | -.306 (7.77)  | -.302 (7.67)  | 58                  | +.134 (3.40) | -.199 (5.05) |
| 19                                     | -.365 (9.27)  | -.227 (5.77)  | 59                  | +.048 (1.22) | -.241 (6.12) |
| 20                                     | -.406 (10.31) | -.141 (3.58)  | 60                  | -.048 (1.22) | -.241 (6.12) |
| 21                                     | -.427 (10.85) | -.048 (1.22)  | 61                  | -.134 (3.40) | -.199 (5.05) |
| 22                                     | -.427 (10.85) | +.048 (1.22)  | 62                  | -.208 (5.28) | -.139 (3.53) |
| 23                                     | -.406 (10.31) | +.141 (3.58)  | 63                  | -.237 (6.02) | -.048 (1.22) |
| 24                                     | -.365 (9.27)  | +.227 (5.77)  | 64                  | -.237 (6.02) | +.048 (1.22) |
| 25                                     | -.306 (7.77)  | +.302 (7.67)  | 65                  | -.208 (5.28) | +.139 (3.53) |
| 26                                     | -.232 (5.89)  | +.362 (9.19)  | 66                  | -.134 (3.40) | +.199 (5.05) |
| 27                                     | -.146 (3.71)  | +.404 (10.26) | 67                  | -.048 (1.22) | +.146 (3.71) |
| 28                                     | -.053 (1.35)  | +.426 (10.82) | 68                  | +.048 (1.22) | +.146 (3.71) |
| 29                                     | +.000 (0.00)  | +.323 (8.20)  | 69                  | +.125 (3.18) | +.090 (2.29) |
| 30                                     | +.098 (2.49)  | +.322 (8.18)  | 70                  | +.155 (3.94) | +.000 (0.00) |
| 31                                     | +.184 (4.67)  | +.280 (7.11)  | 71                  | +.125 (3.18) | -.090 (2.29) |
| 32                                     | +.258 (6.55)  | +.220 (5.59)  | 72                  | +.048 (1.22) | -.146 (3.71) |
| 33                                     | +.311 (7.90)  | +.141 (3.58)  | 73                  | -.048 (1.22) | -.146 (3.71) |
| 34                                     | +.332 (8.43)  | +.048 (1.22)  | 74                  | -.125 (3.18) | -.090 (2.29) |
| 35                                     | +.332 (8.43)  | -.048 (1.22)  | 75                  | -.155 (3.94) | +.000 (0.00) |
| 36                                     | +.311 (7.90)  | -.141 (3.58)  | 76                  | -.125 (3.18) | +.090 (2.29) |
| 37                                     | +.258 (6.55)  | -.220 (5.59)  | 77                  | +.000 (0.00) | +.053 (1.35) |
| 38                                     | +.184 (4.67)  | -.280 (7.11)  | 78                  | +.048 (1.22) | -.029 (0.74) |
| 39                                     | +.098 (2.49)  | -.322 (8.18)  | 79                  | -.048 (1.22) | -.029 (0.74) |
| 40                                     | +.000 (0.00)  | -.347 (8.81)  | ---                 | ---          | ---          |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 20         | -35             | 79                 | 22D           | M              | All              | MS27522-35 |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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| Contacts<br>(Insert arrangement 20-39) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.065 (1.65)  | +0.411 (10.44) | X                   | +0.000 (0.00) | +0.295 (7.49) |
| B                                      | +0.189 (4.80)  | +0.371 (9.42)  | Y                   | +0.126 (3.20) | +0.256 (6.50) |
| C                                      | +0.294 (7.47)  | +0.295 (7.49)  | Z                   | +0.232 (5.89) | +0.179 (4.55) |
| D                                      | +0.371 (9.42)  | +0.189 (4.80)  | a                   | +0.280 (7.11) | +0.057 (1.45) |
| E                                      | +0.411 (10.44) | +0.065 (1.65)  | b                   | +0.280 (7.11) | -0.074 (1.88) |
| F                                      | +0.411 (10.44) | -0.065 (1.65)  | c                   | +0.217 (5.51) | -0.189 (4.80) |
| G                                      | +0.371 (9.42)  | -0.189 (4.80)  | d                   | +0.112 (2.84) | -0.265 (6.73) |
| H                                      | +0.294 (7.47)  | -0.294 (7.47)  | e                   | -0.112 (2.84) | -0.265 (6.73) |
| J                                      | +0.189 (4.80)  | -0.371 (9.42)  | f                   | -0.217 (5.51) | -0.189 (4.80) |
| K                                      | +0.065 (1.65)  | -0.411 (10.44) | g                   | -0.280 (7.11) | -0.074 (1.88) |
| L                                      | -0.065 (1.65)  | -0.411 (10.44) | h                   | -0.280 (7.11) | +0.057 (1.45) |
| M                                      | -0.189 (4.80)  | -0.371 (9.42)  | i                   | -0.232 (5.89) | +0.179 (4.55) |
| N                                      | -0.294 (7.47)  | -0.294 (7.47)  | j                   | -0.126 (3.20) | +0.256 (6.50) |
| P                                      | -0.371 (9.42)  | -0.189 (4.80)  | k                   | +0.000 (0.00) | +0.164 (4.17) |
| R                                      | -0.411 (10.44) | -0.065 (1.65)  | m                   | +0.114 (2.90) | +0.048 (1.22) |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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w/CHANGE 1

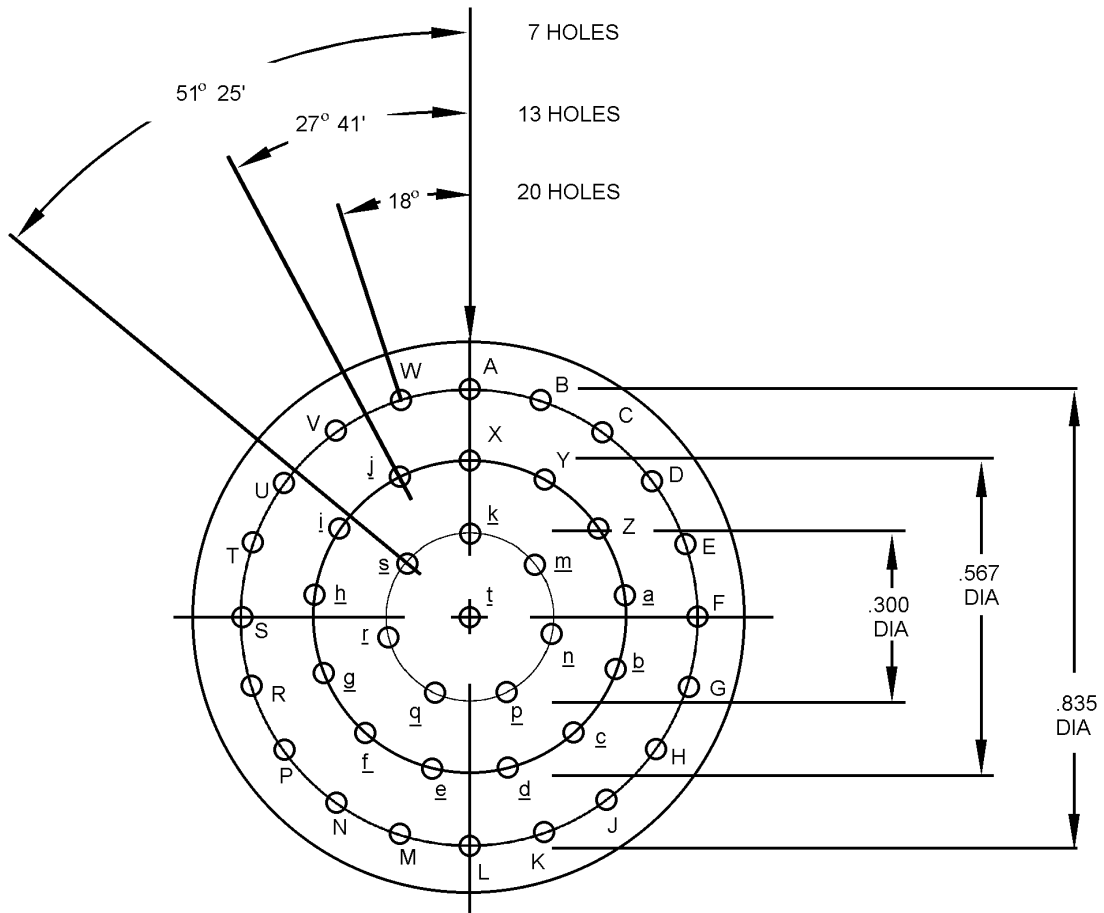
| Contacts<br>(Insert arrangement 20-39) |               |               |                     |               |              |  |
|--|---------------|---------------|---------------------|---------------|--------------|--|
| Contact position ID                    | Location      |               | Contact position ID | Location      |              |  |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)  |  |
| S                                      | -.411 (10.44) | +.065 (1.65)  | <u>n</u>            | + .106 (2.69) | -.107 (2.72) |  |
| T                                      | -.371 (9.42)  | +.189 (4.80)  | <u>p</u>            | + .000 (0.00) | -.189 (4.80) |  |
| U                                      | -.294 (7.47)  | +.295 (7.49)  | <u>q</u>            | -.106 (2.69)  | -.107 (2.72) |  |
| V                                      | -.189 (4.80)  | +.371 (9.42)  | <u>r</u>            | -.114 (2.90)  | +.048 (1.22) |  |
| W                                      | -.065 (1.65)  | +.411 (10.44) | ---                 | ---           | ---          |  |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 20         | -39             | 2                  | 16            | I              | <u>m, r</u>      | MS27349-39 |
|            |                 | 37                 | 20            |                | All others       |            |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

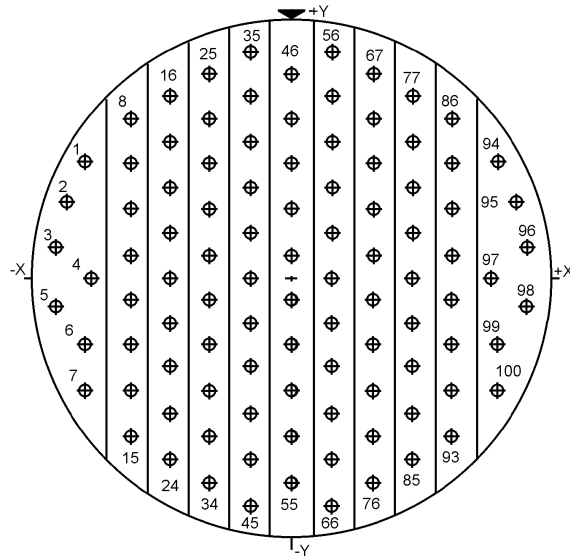
MIL-STD-1560C  
w/CHANGE 1



| Inches | mm    |
|--------|-------|
| .300   | 7.62  |
| .567   | 14.40 |
| .835   | 21.21 |

| Insert arrangement (20-41) |                 |                    |               |                |                  |            |
|----------------------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| Shell size                 | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
| 20                         | -41             | 41                 | 20            | I              | All              | MS27349-41 |

FIGURE 16. Insert arrangement, electrical connector, shell size 20 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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w/CHANGE 1

| Contacts<br>(Insert arrangement 22-1) |               |              |                     |              |               |
|---------------------------------------|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |              | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.428 (10.87) | +.241 (6.12) | 51                  | +.000 (0.00) | -.047 (1.19)  |
| 2                                     | -.467 (11.86) | +.154 (3.91) | 52                  | +.000 (0.00) | -.142 (3.61)  |
| 3                                     | -.488 (12.40) | +.061 (1.55) | 53                  | +.000 (0.00) | -.237 (6.02)  |
| 4                                     | -.415 (10.54) | +.000 (0.00) | 54                  | +.000 (0.00) | -.332 (8.43)  |
| 5                                     | -.488 (12.40) | -.061 (1.55) | 55                  | +.000 (0.00) | -.427 (10.85) |
| 6                                     | -.428 (10.87) | -.142 (3.61) | 56                  | +.083 (2.11) | +.475 (12.07) |
| 7                                     | -.428 (10.87) | -.237 (6.02) | 57                  | +.083 (2.11) | +.380 (9.65)  |
| 8                                     | -.332 (8.43)  | +.333 (8.46) | 58                  | +.083 (2.11) | +.285 (7.24)  |
| 9                                     | -.332 (8.43)  | +.238 (6.05) | 59                  | +.083 (2.11) | +.190 (4.83)  |
| 10                                    | -.332 (8.43)  | +.143 (3.63) | 60                  | +.083 (2.11) | +.095 (2.41)  |
| 11                                    | -.332 (8.43)  | +.048 (1.22) | 61                  | +.083 (2.11) | +.000 (0.00)  |
| 12                                    | -.332 (8.43)  | -.047 (1.19) | 62                  | +.083 (2.11) | -.095 (2.41)  |
| 13                                    | -.332 (8.43)  | -.142 (3.61) | 63                  | +.083 (2.11) | -.190 (4.83)  |
| 14                                    | -.332 (8.43)  | -.237 (6.02) | 64                  | +.083 (2.11) | -.285 (7.24)  |
| 15                                    | -.332 (8.43)  | -.332 (8.43) | 65                  | +.083 (2.11) | -.380 (9.65)  |
| 16                                    | -.249 (6.32)  | +.380 (9.65) | 66                  | +.083 (2.11) | -.475 (12.07) |
| 17                                    | -.249 (6.32)  | +.285 (7.24) | 67                  | +.166 (4.22) | +.428 (10.87) |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599).

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w/CHANGE 1

| Contacts<br>(Insert arrangement 22-1) |                |                |                        |                |                |
|---------------------------------------|----------------|----------------|------------------------|----------------|----------------|
| Contact<br>position ID                | Location       |                | Contact<br>position ID | Location       |                |
|                                       | X-axis<br>(mm) | Y-axis<br>(mm) |                        | X-axis<br>(mm) | Y-axis<br>(mm) |
| 18                                    | -.249 (6.32)   | +.190 (4.83)   | 68                     | +.166 (4.22)   | +.333 (8.46)   |
| 19                                    | -.249 (6.32)   | +.095 (2.41)   | 69                     | +.166 (4.22)   | +.238 (6.05)   |
| 20                                    | -.249 (6.32)   | +.000 (0.00)   | 70                     | +.166 (4.22)   | +.143 (3.63)   |
| 21                                    | -.249 (6.32)   | -.095 (2.41)   | 71                     | +.166 (4.22)   | +.048 (1.22)   |
| 22                                    | -.249 (6.32)   | -.190 (4.83)   | 72                     | +.166 (4.22)   | -.047 (1.19)   |
| 23                                    | -.249 (6.32)   | -.285 (7.24)   | 73                     | +.166 (4.22)   | -.142 (3.61)   |
| 24                                    | -.249 (6.32)   | -.380 (9.65)   | 74                     | +.166 (4.22)   | -.237 (6.02)   |
| 25                                    | -.166 (4.22)   | +.428 (10.87)  | 75                     | +.166 (4.22)   | -.332 (8.43)   |
| 26                                    | -.166 (4.22)   | +.333 (8.46)   | 76                     | +.166 (4.22)   | -.427 (10.85)  |
| 27                                    | -.166 (4.22)   | +.238 (6.05)   | 77                     | +.249 (6.32)   | +.380 (9.65)   |
| 28                                    | -.166 (4.22)   | +.143 (3.63)   | 78                     | +.249 (6.32)   | +.285 (7.24)   |
| 29                                    | -.166 (4.22)   | +.048 (1.22)   | 79                     | +.249 (6.32)   | +.190 (4.83)   |
| 30                                    | -.166 (4.22)   | -.047 (1.19)   | 80                     | +.249 (6.32)   | +.095 (2.41)   |
| 31                                    | -.166 (4.22)   | -.142 (3.61)   | 81                     | +.249 (6.32)   | +.000 (0.00)   |
| 32                                    | -.166 (4.22)   | -.237 (6.02)   | 82                     | +.249 (6.32)   | -.095 (2.41)   |
| 33                                    | -.166 (4.22)   | -.332 (8.43)   | 83                     | +.249 (6.32)   | -.190 (4.83)   |
| 34                                    | -.166 (4.22)   | -.427 (10.85)  | 84                     | +.249 (6.32)   | -.285 (7.24)   |
| 35                                    | -.083 (2.11)   | +.475 (12.07)  | 85                     | +.249 (6.32)   | -.380 (9.65)   |
| 36                                    | -.083 (2.11)   | +.380 (9.65)   | 86                     | +.332 (8.43)   | +.333 (8.46)   |
| 37                                    | -.083 (2.11)   | +.285 (7.24)   | 87                     | +.332 (8.43)   | +.238 (6.05)   |
| 38                                    | -.083 (2.11)   | +.190 (4.83)   | 88                     | +.332 (8.43)   | +.143 (3.63)   |
| 39                                    | -.083 (2.11)   | +.095 (2.41)   | 89                     | +.332 (8.43)   | +.048 (1.22)   |
| 40                                    | -.083 (2.11)   | +.000 (0.00)   | 90                     | +.332 (8.43)   | -.047 (1.19)   |
| 41                                    | -.083 (2.11)   | -.095 (2.41)   | 91                     | +.332 (8.43)   | -.142 (3.61)   |
| 42                                    | -.083 (2.11)   | -.190 (4.83)   | 92                     | +.332 (8.43)   | -.237 (6.02)   |
| 43                                    | -.083 (2.11)   | -.285 (7.24)   | 93                     | +.332 (8.43)   | -.332 (8.43)   |
| 44                                    | -.083 (2.11)   | -.380 (9.65)   | 94                     | +.428 (10.87)  | +.241 (6.12)   |
| 45                                    | -.083 (2.11)   | -.475 (12.07)  | 95                     | +.467 (11.86)  | +.154 (3.91)   |
| 46                                    | +.000 (0.00)   | +.428 (10.87)  | 96                     | +.488 (12.40)  | +.061 (1.55)   |
| 47                                    | +.000 (0.00)   | +.333 (8.46)   | 97                     | +.415 (10.54)  | +.000 (0.00)   |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

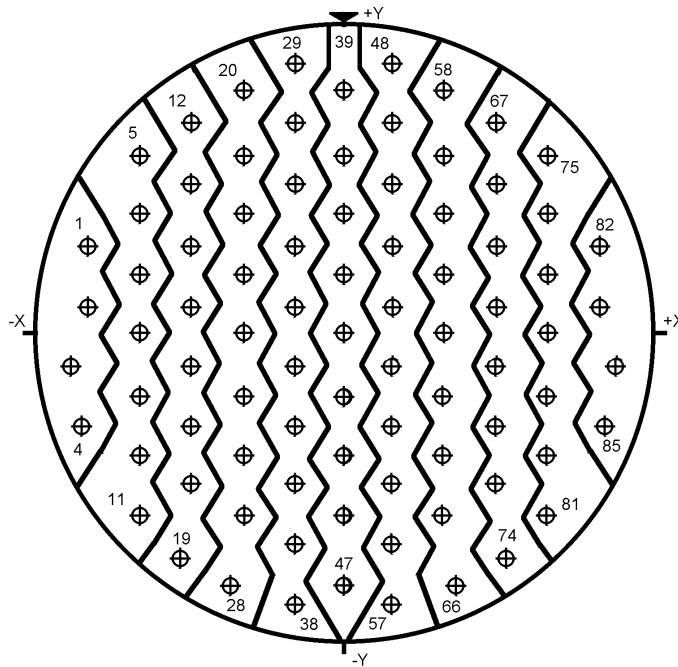
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-1) |                |                |                        |                |                |
|---------------------------------------|----------------|----------------|------------------------|----------------|----------------|
| Contact<br>position ID                | Location       |                | Contact<br>position ID | Location       |                |
|                                       | X-axis<br>(mm) | Y-axis<br>(mm) |                        | X-axis<br>(mm) | Y-axis<br>(mm) |
| 48                                    | +0.000 (0.00)  | +0.238 (6.05)  | 98                     | +0.488 (12.40) | -0.061 (1.55)  |
| 49                                    | +0.000 (0.00)  | +0.143 (3.63)  | 99                     | +0.428 (10.87) | -0.142 (3.61)  |
| 50                                    | +0.000 (0.00)  | +0.048 (1.22)  | 100                    | +0.428 (10.87) | -0.237 (6.02)  |

(Inactive for new design for MIL-DTL-38999)

| Shell<br>size | Arrangement<br>no. | Number of<br>contacts | Size<br>contacts | Service<br>rating | Contact<br>location | Supersedes |
|---------------|--------------------|-----------------------|------------------|-------------------|---------------------|------------|
| 22            | -1                 | 100                   | 22M              | M                 | All                 | MS27350-1  |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-2) |               |              |                     |              |               |
|---------------------------------------|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |              | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.455 (11.56) | +.159 (4.04) | 44                  | +.000 (0.00) | -.106 (2.69)  |
| 2                                     | -.455 (11.56) | +.053 (1.35) | 45                  | +.000 (0.00) | -.212 (5.38)  |
| 3                                     | -.482 (12.24) | -.053 (1.35) | 46                  | +.000 (0.00) | -.318 (8.08)  |
| 4                                     | -.455 (11.56) | -.159 (4.04) | 47                  | +.000 (0.00) | -.424 (10.77) |
| 5                                     | -.364 (9.25)  | +.318 (8.08) | 48                  | +.091 (2.31) | +.477 (12.12) |
| 6                                     | -.364 (9.25)  | +.212 (5.38) | 49                  | +.091 (2.31) | +.371 (9.42)  |
| 7                                     | -.364 (9.25)  | +.106 (2.69) | 50                  | +.091 (2.31) | +.265 (6.73)  |
| 8                                     | -.364 (9.25)  | +.000 (0.00) | 51                  | +.091 (2.31) | +.159 (4.04)  |
| 9                                     | -.364 (9.25)  | -.106 (2.69) | 52                  | +.091 (2.31) | +.053 (1.35)  |
| 10                                    | -.364 (9.25)  | -.212 (5.38) | 53                  | +.091 (2.31) | -.053 (1.35)  |
| 11                                    | -.364 (9.25)  | -.318 (8.08) | 54                  | +.091 (2.31) | -.159 (4.04)  |
| 12                                    | -.273 (6.93)  | +.371 (9.42) | 55                  | +.091 (2.31) | -.265 (6.73)  |
| 13                                    | -.273 (6.93)  | +.265 (6.73) | 56                  | +.091 (2.31) | -.371 (9.42)  |
| 14                                    | -.273 (6.93)  | +.159 (4.04) | 57                  | +.091 (2.31) | -.477 (12.12) |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



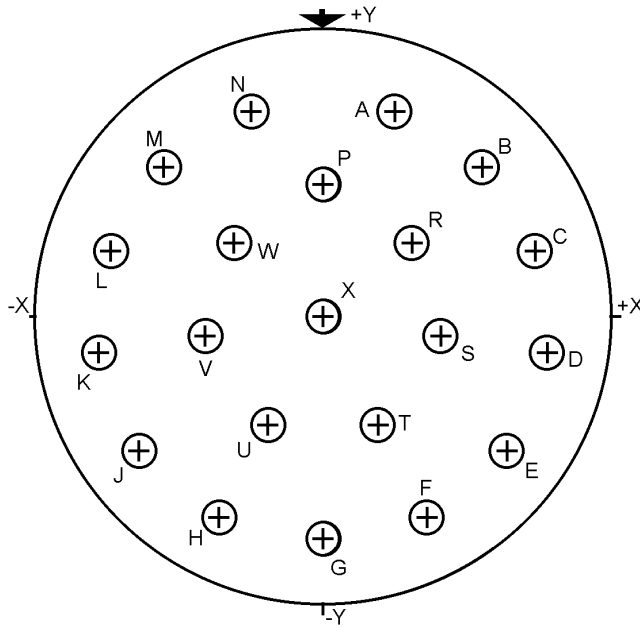
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-2) |              |               |                     |               |               |
|---------------------------------------|--------------|---------------|---------------------|---------------|---------------|
| Contact position ID                   | Location     |               | Contact position ID | Location      |               |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 15                                    | -.273 (6.93) | +.053 (1.35)  | 58                  | +.182 (4.62)  | +.424 (10.77) |
| 16                                    | -.273 (6.93) | -.053 (1.35)  | 59                  | +.182 (4.62)  | +.318 (8.08)  |
| 17                                    | -.273 (6.93) | -.159 (4.04)  | 60                  | +.182 (4.62)  | +.212 (5.38)  |
| 18                                    | -.273 (6.93) | -.265 (6.73)  | 61                  | +.182 (4.62)  | +.106 (2.69)  |
| 19                                    | -.287 (7.29) | -.390 (9.91)  | 62                  | +.182 (4.62)  | +.000 (0.00)  |
| 20                                    | -.182 (4.62) | +.424 (10.77) | 63                  | +.182 (4.62)  | -.106 (2.69)  |
| 21                                    | -.182 (4.62) | +.318 (8.08)  | 64                  | +.182 (4.62)  | -.212 (5.38)  |
| 22                                    | -.182 (4.62) | +.212 (5.38)  | 65                  | +.182 (4.62)  | -.318 (8.08)  |
| 23                                    | -.182 (4.62) | +.106 (2.69)  | 66                  | +.192 (4.88)  | -.446 (11.33) |
| 24                                    | -.182 (4.62) | +.000 (0.00)  | 67                  | +.273 (6.93)  | +.371 (9.42)  |
| 25                                    | -.182 (4.62) | -.106 (2.69)  | 68                  | +.273 (6.93)  | +.265 (6.73)  |
| 26                                    | -.182 (4.62) | -.212 (5.38)  | 69                  | +.273 (6.93)  | +.159 (4.04)  |
| 27                                    | -.182 (4.62) | -.318 (8.08)  | 70                  | +.273 (6.93)  | +.053 (1.35)  |
| 28                                    | -.192 (4.88) | -.446 (11.33) | 71                  | +.273 (6.93)  | -.053 (1.35)  |
| 29                                    | -.091 (2.31) | +.477 (12.12) | 72                  | +.273 (6.93)  | -.159 (4.04)  |
| 30                                    | -.091 (2.31) | +.371 (9.42)  | 73                  | +.273 (6.93)  | -.265 (6.73)  |
| 31                                    | -.091 (2.31) | +.265 (6.73)  | 74                  | +.287 (7.29)  | -.390 (9.91)  |
| 32                                    | -.091 (2.31) | +.159 (4.04)  | 75                  | +.364 (9.25)  | +.318 (8.08)  |
| 33                                    | -.091 (2.31) | +.053 (1.35)  | 76                  | +.364 (9.25)  | +.212 (5.38)  |
| 34                                    | -.091 (2.31) | -.053 (1.35)  | 77                  | +.364 (9.25)  | +.106 (2.69)  |
| 35                                    | -.091 (2.31) | -.159 (4.04)  | 78                  | +.364 (9.25)  | +.000 (0.00)  |
| 36                                    | -.091 (2.31) | -.265 (6.73)  | 79                  | +.364 (9.25)  | -.106 (2.69)  |
| 37                                    | -.091 (2.31) | -.371 (9.42)  | 80                  | +.364 (9.25)  | -.212 (5.38)  |
| 38                                    | -.091 (2.31) | -.477 (12.12) | 81                  | +.364 (9.25)  | -.318 (8.08)  |
| 39                                    | +.000 (0.00) | +.424 (10.77) | 82                  | +.455 (11.56) | +.159 (4.04)  |
| 40                                    | +.000 (0.00) | +.318 (8.08)  | 83                  | +.455 (11.56) | +.053 (1.35)  |
| 41                                    | +.000 (0.00) | +.212 (5.38)  | 84                  | +.482 (12.24) | -.053 (1.35)  |
| 42                                    | +.000 (0.00) | +.106 (2.69)  | 85                  | +.455 (11.56) | -.159 (4.04)  |
| 43                                    | +.000 (0.00) | +.000 (0.00)  | --                  | ---           | ---           |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -2              | 85                 | 22            | M              | All              | MS27350-2  |

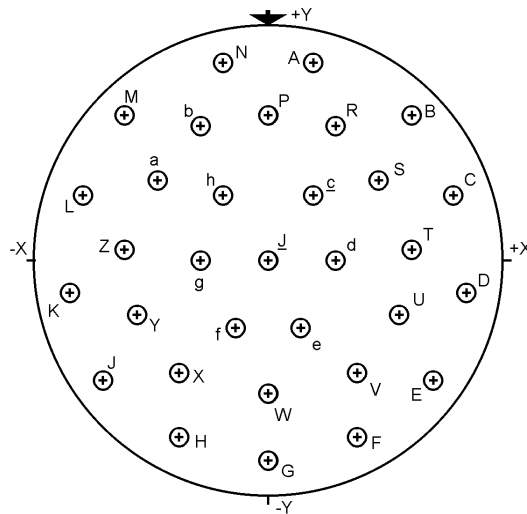
FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-21) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| A                                      | +.128 (3.25)  | +.385 (9.78)  | M                   | -.289 (7.34) | +.285 (7.24) |
| B                                      | +.289 (7.34)  | +.285 (7.24)  | N                   | -.128 (3.25) | +.385 (9.78) |
| C                                      | +.386 (9.80)  | +.123 (3.12)  | P                   | +.000 (0.00) | +.245 (6.22) |
| D                                      | +.400 (10.16) | -.065 (1.65)  | R                   | +.160 (4.06) | +.146 (3.71) |
| E                                      | +.328 (8.33)  | -.239 (6.07)  | S                   | +.214 (5.44) | -.035 (.89)  |
| F                                      | +.183 (4.65)  | -.362 (9.19)  | T                   | +.094 (2.39) | -.194 (4.93) |
| G                                      | +.000 (0.00)  | -.406 (10.31) | U                   | -.094 (2.39) | -.194 (4.93) |
| H                                      | -.183 (4.65)  | -.362 (9.19)  | V                   | -.214 (5.44) | -.035 (0.89) |
| J                                      | -.328 (8.33)  | -.239 (6.07)  | W                   | -.160 (4.06) | +.146 (3.71) |
| K                                      | -.400 (10.16) | -.065 (1.65)  | X                   | +.000 (0.00) | +.000 (0.00) |
| L                                      | -.386 (9.80)  | +.123 (3.12)  | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -21             | 21                 | 16            | II             | All              | MS27350-21 |

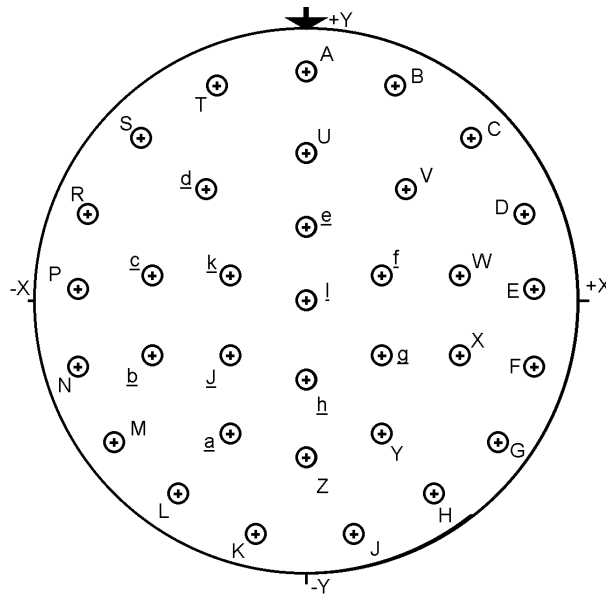
FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-32) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| A                                      | +1.00 (2.54)  | +4.50 (11.43) | T                   | +3.25 (8.26) | +0.25 (0.64) |
| B                                      | +3.25 (8.26)  | +3.25 (8.26)  | U                   | +3.00 (7.62) | -1.25 (3.18) |
| C                                      | +4.25 (10.80) | +1.50 (3.81)  | V                   | +2.00 (5.08) | -2.50 (6.35) |
| D                                      | +4.50 (11.43) | -0.75 (1.91)  | W                   | +0.00 (0.00) | -3.00 (7.62) |
| E                                      | +3.75 (9.53)  | -2.75 (6.99)  | X                   | -2.00 (5.08) | -2.50 (6.35) |
| F                                      | +2.00 (5.08)  | -4.00 (10.16) | Y                   | -3.00 (7.62) | -1.25 (3.18) |
| G                                      | +0.00 (0.00)  | -4.50 (11.43) | Z                   | -3.25 (8.26) | +0.25 (0.64) |
| H                                      | -2.00 (5.08)  | -4.00 (10.16) | a                   | -2.50 (6.35) | +1.75 (4.45) |
| J                                      | -3.75 (9.53)  | -2.75 (6.99)  | b                   | -1.50 (3.81) | +3.00 (7.62) |
| K                                      | -4.50 (11.43) | -0.75 (1.91)  | c                   | +1.00 (2.54) | +1.50 (3.81) |
| L                                      | -4.25 (10.80) | +1.50 (3.81)  | d                   | +1.50 (3.81) | +0.00 (0.00) |
| M                                      | -3.25 (8.26)  | +3.25 (8.26)  | e                   | +0.75 (1.91) | -1.50 (3.81) |
| N                                      | -1.00 (2.54)  | +4.50 (11.43) | f                   | -0.75 (1.91) | -1.50 (3.81) |
| P                                      | +0.00 (0.00)  | +3.25 (8.26)  | g                   | -1.50 (3.81) | +0.00 (0.00) |
| R                                      | +1.50 (3.81)  | +3.00 (7.62)  | h                   | -1.00 (2.54) | +1.50 (3.81) |
| S                                      | +2.50 (6.35)  | +1.75 (4.45)  | j                   | +0.00 (0.00) | +0.00 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -32             | 32                 | 20            | I              | All              | MS27350-32 |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-34) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.00 (0.00)   | +0.450 (11.43) | U                   | +0.00 (0.00)  | +0.300 (7.62) |
| B                                      | +0.175 (4.45)  | +0.425 (10.80) | V                   | +0.200 (5.08) | +0.225 (5.72) |
| C                                      | +0.325 (8.26)  | +0.325 (8.26)  | W                   | +0.300 (7.62) | +0.050 (1.27) |
| D                                      | +0.425 (10.80) | +0.175 (4.45)  | X                   | +0.300 (7.62) | -0.100 (2.54) |
| E                                      | +0.450 (11.43) | +0.025 (0.64)  | Y                   | +0.150 (3.81) | -0.250 (6.35) |
| F                                      | +0.450 (11.43) | -0.125 (3.18)  | Z                   | +0.000 (0.00) | -0.300 (7.62) |
| G                                      | +0.375 (9.53)  | -0.275 (6.99)  | <u>a</u>            | -0.150 (3.81) | -0.250 (6.35) |
| H                                      | +0.250 (6.35)  | -0.375 (9.53)  | <u>b</u>            | -0.300 (7.62) | -0.100 (2.54) |
| J                                      | +0.100 (2.54)  | -0.450 (11.43) | <u>c</u>            | -0.300 (7.62) | +0.050 (1.27) |
| K                                      | -0.100 (2.54)  | -0.450 (11.43) | <u>d</u>            | -0.200 (5.08) | +0.225 (5.72) |
| L                                      | -0.250 (6.35)  | -0.375 (9.53)  | <u>e</u>            | +0.000 (0.00) | +0.150 (3.81) |
| M                                      | -0.375 (9.53)  | -0.275 (6.99)  | <u>f</u>            | +0.150 (3.81) | +0.050 (1.27) |
| N                                      | -0.450 (11.43) | -0.125 (3.18)  | <u>g</u>            | +0.150 (3.81) | -0.100 (2.54) |
| P                                      | -0.450 (11.43) | +0.025 (0.64)  | <u>h</u>            | +0.000 (0.00) | -0.150 (3.81) |

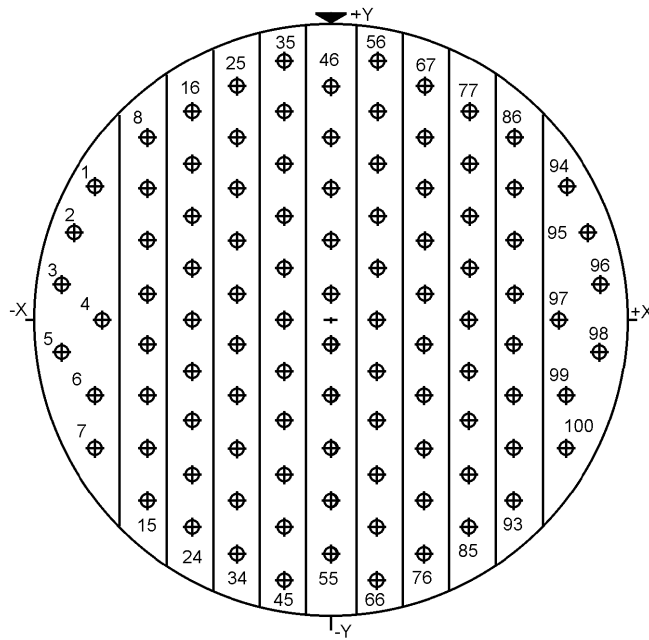
FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-34) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| R                                      | -.425 (10.80) | +.175 (4.45)  | <u>J</u>            | -.150 (3.81) | -.100 (2.54) |
| S                                      | -.325 (8.26)  | +.325 (8.26)  | <u>k</u>            | -.150 (3.81) | +.050 (1.27) |
| T                                      | -.175 (4.45)  | +.425 (10.80) | <u>l</u>            | +.000 (0.00) | +.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -34             | 34                 | 20            | I              | All              | MS27350-34 |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-35) |               |              |                     |              |               |
|--|---------------|--------------|---------------------|--------------|---------------|
| Contact position ID                    | Location      |              | Contact position ID | Location     |               |
|  | X-axis (mm)   | Y-axis (mm)  |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                      | -.428 (10.87) | +.241 (6.12) | 51                  | +.000 (0.00) | -.047 (1.19)  |
| 2                                      | -.467 (11.86) | +.154 (3.91) | 52                  | +.000 (0.00) | -.142 (3.61)  |
| 3                                      | -.488 (12.40) | +.061 (1.55) | 53                  | +.000 (0.00) | -.237 (6.02)  |
| 4                                      | -.415 (10.54) | +.000 (0.00) | 54                  | +.000 (0.00) | -.332 (8.43)  |
| 5                                      | -.488 (12.40) | -.061 (1.55) | 55                  | +.000 (0.00) | -.427 (10.85) |
| 6                                      | -.428 (10.87) | -.142 (3.61) | 56                  | +.083 (2.11) | +.475 (12.07) |
| 7                                      | -.428 (10.87) | -.237 (6.02) | 57                  | +.083 (2.11) | +.380 (9.65)  |
| 8                                      | -.332 (8.43)  | +.333 (8.46) | 58                  | +.083 (2.11) | +.285 (7.24)  |
| 9                                      | -.332 (8.43)  | +.238 (6.05) | 59                  | +.083 (2.11) | +.190 (4.83)  |
| 10                                     | -.332 (8.43)  | +.143 (3.63) | 60                  | +.083 (2.11) | +.095 (2.41)  |
| 11                                     | -.332 (8.43)  | +.048 (1.22) | 61                  | +.083 (2.11) | +.000 (0.00)  |
| 12                                     | -.332 (8.43)  | -.047 (1.19) | 62                  | +.083 (2.11) | -.095 (2.41)  |
| 13                                     | -.332 (8.43)  | -.142 (3.61) | 63                  | +.083 (2.11) | -.190 (4.83)  |
| 14                                     | -.332 (8.43)  | -.237 (6.02) | 64                  | +.083 (2.11) | -.285 (7.24)  |
| 15                                     | -.332 (8.43)  | -.332 (8.43) | 65                  | +.083 (2.11) | -.380 (9.65)  |
| 16                                     | -.249 (6.32)  | +.380 (9.65) | 66                  | +.083 (2.11) | -.475 (12.07) |

2

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-35) |              |               |                     |               |               |
|--|--------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location     |               | Contact position ID | Location      |               |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 17                                     | -.249 (6.32) | +.285 (7.24)  | 67                  | +.166 (4.22)  | +.428 (10.87) |
| 18                                     | -.249 (6.32) | +.190 (4.83)  | 68                  | +.166 (4.22)  | +.333 (8.46)  |
| 19                                     | -.249 (6.32) | +.095 (2.41)  | 69                  | +.166 (4.22)  | +.238 (6.05)  |
| 20                                     | -.249 (6.32) | +.000 (0.00)  | 70                  | +.166 (4.22)  | +.143 (3.63)  |
| 21                                     | -.249 (6.32) | -.095 (2.41)  | 71                  | +.166 (4.22)  | +.048 (1.22)  |
| 22                                     | -.249 (6.32) | -.190 (4.83)  | 72                  | +.166 (4.22)  | -.047 (1.19)  |
| 23                                     | -.249 (6.32) | -.285 (7.24)  | 73                  | +.166 (4.22)  | -.142 (3.61)  |
| 24                                     | -.249 (6.32) | -.380 (9.65)  | 74                  | +.166 (4.22)  | -.237 (6.02)  |
| 25                                     | -.166 (4.22) | +.428 (10.87) | 75                  | +.166 (4.22)  | -.332 (8.43)  |
| 26                                     | -.166 (4.22) | +.333 (8.46)  | 76                  | +.166 (4.22)  | -.427 (10.85) |
| 27                                     | -.166 (4.22) | +.238 (6.05)  | 77                  | +.249 (6.32)  | +.380 (9.65)  |
| 28                                     | -.166 (4.22) | +.143 (3.63)  | 78                  | +.249 (6.32)  | +.285 (7.24)  |
| 29                                     | -.166 (4.22) | +.048 (1.22)  | 79                  | +.249 (6.32)  | +.190 (4.83)  |
| 30                                     | -.166 (4.22) | -.047 (1.19)  | 80                  | +.249 (6.32)  | +.095 (2.41)  |
| 31                                     | -.166 (4.22) | -.142 (3.61)  | 81                  | +.249 (6.32)  | +.000 (0.00)  |
| 32                                     | -.166 (4.22) | -.237 (6.02)  | 82                  | +.249 (6.32)  | -.095 (2.41)  |
| 33                                     | -.166 (4.22) | -.332 (8.43)  | 83                  | +.249 (6.32)  | -.190 (4.83)  |
| 34                                     | -.166 (4.22) | -.427 (10.85) | 84                  | +.249 (6.32)  | -.285 (7.24)  |
| 35                                     | -.083 (2.11) | +.475 (12.07) | 85                  | +.249 (6.32)  | -.380 (9.65)  |
| 36                                     | -.083 (2.11) | +.380 (9.65)  | 86                  | +.332 (8.43)  | +.333 (8.46)  |
| 37                                     | -.083 (2.11) | +.285 (7.24)  | 87                  | +.332 (8.43)  | +.238 (6.05)  |
| 38                                     | -.083 (2.11) | +.190 (4.83)  | 88                  | +.332 (8.43)  | +.143 (3.63)  |
| 39                                     | -.083 (2.11) | +.095 (2.41)  | 89                  | +.332 (8.43)  | +.048 (1.22)  |
| 40                                     | -.083 (2.11) | +.000 (0.00)  | 90                  | +.332 (8.43)  | -.047 (1.19)  |
| 41                                     | -.083 (2.11) | -.095 (2.41)  | 91                  | +.332 (8.43)  | -.142 (3.61)  |
| 42                                     | -.083 (2.11) | -.190 (4.83)  | 92                  | +.332 (8.43)  | -.237 (6.02)  |
| 43                                     | -.083 (2.11) | -.285 (7.24)  | 93                  | +.332 (8.43)  | -.332 (8.43)  |
| 44                                     | -.083 (2.11) | -.380 (9.65)  | 94                  | +.428 (10.87) | +.241 (6.12)  |
| 45                                     | -.083 (2.11) | -.475 (12.07) | 95                  | +.467 (11.86) | +.154 (3.91)  |
| 46                                     | +.000 (0.00) | +.428 (10.87) | 96                  | +.488 (12.40) | +.061 (1.55)  |
| 47                                     | +.000 (0.00) | +.333 (8.46)  | 97                  | +.415 (10.54) | +.000 (0.00)  |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

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w/CHANGE 1

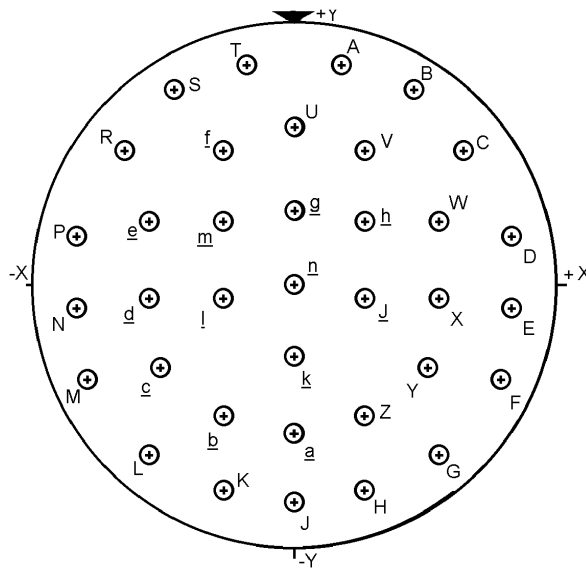
| Contacts<br>(Insert arrangement 22-35) |               |               |                     |                |               |
|--|---------------|---------------|---------------------|----------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location       |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)    | Y-axis (mm)   |
| 48                                     | +0.000 (0.00) | +0.238 (6.05) | 98                  | +0.488 (12.40) | -0.061 (1.55) |
| 49                                     | +0.000 (0.00) | +0.143 (3.63) | 99                  | +0.428 (10.87) | -0.142 (3.61) |
| 50                                     | +0.000 (0.00) | +0.048 (1.22) | 100                 | +0.428 (10.87) | -0.237 (6.02) |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -35             | 100                | 22D           | M              | All              | MS27523-35 |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-36) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +1.100 (2.54)  | +0.450 (11.43) | V                   | +0.150 (3.81) | +0.275 (6.99) |
| B                                      | +0.250 (6.35)  | +0.400 (10.16) | W                   | +0.300 (7.62) | +0.125 (3.18) |
| C                                      | +0.350 (8.89)  | +0.275 (6.99)  | X                   | +0.300 (7.62) | -0.025 (0.64) |
| D                                      | +0.450 (11.43) | +0.100 (2.54)  | Y                   | +0.275 (6.99) | -0.175 (4.45) |
| E                                      | +0.450 (11.43) | -0.050 (1.27)  | Z                   | +0.150 (3.81) | -0.275 (6.99) |
| F                                      | +0.425 (10.80) | -0.200 (5.08)  | a                   | +0.000 (0.00) | -0.300 (7.62) |
| G                                      | +0.300 (7.62)  | -0.350 (8.89)  | b                   | -0.150 (3.81) | -0.275 (6.99) |
| H                                      | +0.150 (3.81)  | -0.425 (10.80) | c                   | -0.275 (6.99) | -0.175 (4.45) |
| J                                      | +0.000 (0.00)  | -0.450 (11.43) | d                   | -0.300 (7.62) | -0.025 (0.64) |
| K                                      | -0.150 (3.81)  | -0.425 (10.80) | e                   | -0.300 (7.62) | +0.125 (3.18) |
| L                                      | -0.300 (7.62)  | -0.350 (8.89)  | f                   | -0.150 (3.81) | +0.275 (6.99) |
| M                                      | -0.425 (10.80) | -0.200 (5.08)  | g                   | +0.000 (0.00) | +0.150 (3.81) |
| N                                      | -0.450 (11.43) | -0.050 (1.27)  | h                   | +0.150 (3.81) | +0.125 (3.18) |
| P                                      | -0.450 (11.43) | +0.100 (2.54)  | j                   | +0.150 (3.81) | -0.025 (0.64) |
| R                                      | -0.350 (8.89)  | +0.275 (6.99)  | k                   | +0.000 (0.00) | -0.150 (3.81) |

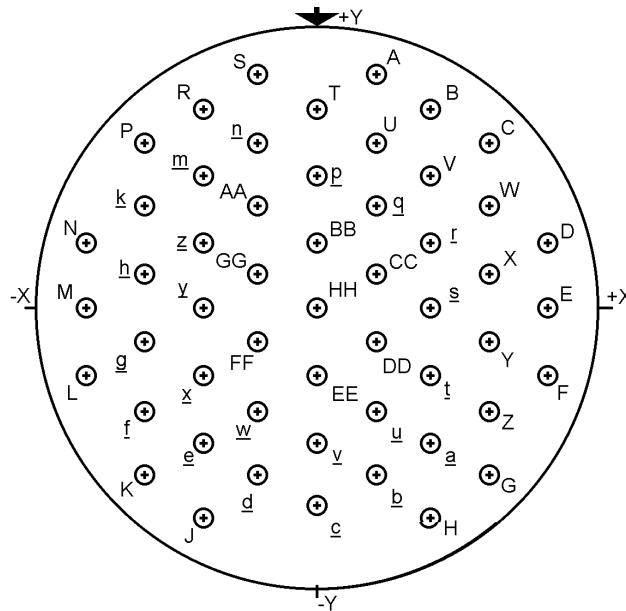
FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-36) |              |               |                     |              |              |
|--|--------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |               | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| S                                      | -.250 (6.35) | +.400 (10.16) | <u>l</u>            | -.150 (3.81) | -.025 (0.64) |
| T                                      | -.100 (2.54) | +.450 (11.43) | <u>m</u>            | -.150 (3.81) | +.125 (3.18) |
| U                                      | +.000 (0.00) | +.325 (8.26)  | <u>n</u>            | +.000 (0.00) | +.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -36             | 36                 | 20            | I              | All              | MS27350-36 |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-53) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| A                                      | +1.12 (2.84)  | +4.55 (11.56) | e                   | -2.25 (5.72) | -2.60 (6.60) |
| B                                      | +2.25 (5.72)  | +3.90 (9.91)  | f                   | -3.36 (8.53) | -1.95 (4.95) |
| C                                      | +3.36 (8.53)  | +3.25 (8.26)  | g                   | -3.36 (8.53) | -0.65 (1.65) |
| D                                      | +4.50 (11.43) | +1.30 (3.30)  | h                   | -3.36 (8.53) | +0.65 (1.65) |
| E                                      | +4.50 (11.43) | +0.00 (0.00)  | k                   | -3.36 (8.53) | +1.95 (4.95) |
| F                                      | +4.50 (11.43) | -1.30 (3.30)  | m                   | -2.25 (5.72) | +2.60 (6.60) |
| G                                      | +3.36 (8.53)  | -3.25 (8.26)  | n                   | -1.12 (2.84) | +3.25 (8.26) |
| H                                      | +2.25 (5.72)  | -4.10 (10.41) | p                   | +0.00 (0.00) | +2.60 (6.60) |
| J                                      | -2.25 (5.72)  | -4.10 (10.41) | q                   | +1.12 (2.84) | +1.95 (4.95) |
| K                                      | -3.36 (8.53)  | -3.25 (8.26)  | r                   | +2.25 (5.72) | +1.30 (3.30) |
| L                                      | -4.50 (11.43) | -1.30 (3.30)  | s                   | +2.25 (5.72) | +0.00 (0.00) |
| M                                      | -4.50 (11.43) | +0.00 (0.00)  | t                   | +2.25 (5.72) | -1.30 (3.30) |
| N                                      | -4.50 (11.43) | +1.30 (3.30)  | u                   | +1.12 (2.84) | -1.95 (4.95) |
| P                                      | -3.36 (8.53)  | +3.25 (8.26)  | v                   | +0.00 (0.00) | -2.60 (6.60) |
| R                                      | -2.25 (5.72)  | +3.90 (9.91)  | w                   | -1.12 (2.84) | -1.95 (4.95) |
| S                                      | -1.12 (2.84)  | +4.55 (11.56) | x                   | -2.25 (5.72) | -1.30 (3.30) |

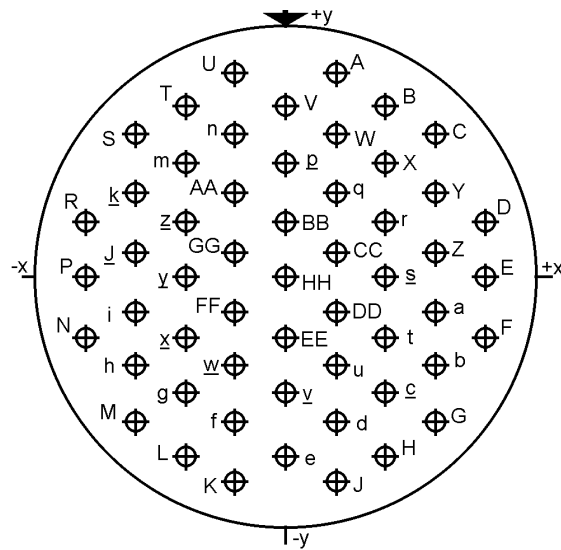
FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-53) |              |             |                     |              |              |
|--|--------------|-------------|---------------------|--------------|--------------|
| Contact position ID                    | Location     |             | Contact position ID | Location     |              |
|  | X-axis (mm)  | Y-axis (mm) |                     | X-axis (mm)  | Y-axis (mm)  |
| T                                      | +0.00 (0.00) | +390 (9.91) | <u>y</u>            | -225 (5.72)  | +0.00 (0.00) |
| U                                      | +112 (2.84)  | +325 (8.26) | <u>z</u>            | -225 (5.72)  | +130 (3.30)  |
| V                                      | +225 (5.72)  | +260 (6.60) | AA                  | -112 (2.84)  | +195 (4.95)  |
| W                                      | +336 (8.53)  | +195 (4.95) | BB                  | +0.00 (0.00) | +130 (3.30)  |
| X                                      | +336 (8.53)  | +065 (1.65) | CC                  | +112 (2.84)  | +065 (1.65)  |
| Y                                      | +336 (8.53)  | -065 (1.65) | DD                  | +112 (2.84)  | -065 (1.65)  |
| Z                                      | +336 (8.53)  | -195 (4.95) | EE                  | +0.00 (.00)  | -130 (3.30)  |
| <u>a</u>                               | +225 (5.72)  | -260 (6.60) | FF                  | -112 (2.84)  | -065 (1.65)  |
| <u>b</u>                               | +112 (2.84)  | -325 (8.26) | GG                  | -112 (2.84)  | +065 (1.65)  |
| <u>c</u>                               | +0.00 (0.00) | -390 (9.91) | HH                  | +0.00 (0.00) | +0.00 (0.00) |
| <u>d</u>                               | -112 (2.84)  | -325 (8.26) | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -53             | 53                 | 20            | I              | All              | MS27350-53 |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-55) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| A                                      | +1.12 (2.84)  | +4.55 (11.56) | f                   | -.112 (2.84) | -.325 (8.26) |
| B                                      | +.225 (5.72)  | +.390 (9.91)  | g                   | -.225 (5.72) | -.260 (6.60) |
| C                                      | +.336 (8.53)  | +.325 (8.26)  | h                   | -.336 (8.53) | -.195 (4.95) |
| D                                      | +.450 (11.43) | +.130 (3.30)  | i                   | -.336 (8.53) | -.065 (1.65) |
| E                                      | +.450 (11.43) | +.000 (0.00)  | j                   | -.336 (8.53) | +.065 (1.65) |
| F                                      | +.450 (11.43) | -.130 (3.30)  | k                   | -.336 (8.53) | +.195 (4.95) |
| G                                      | +.336 (8.53)  | -.325 (8.26)  | m                   | -.225 (5.72) | +.260 (6.60) |
| H                                      | +.225 (5.72)  | -.390 (9.91)  | n                   | -.112 (2.84) | +.325 (8.26) |
| J                                      | +1.12 (2.84)  | -.455 (11.56) | p                   | +.000 (0.00) | +.260 (6.60) |
| K                                      | -.112 (2.84)  | -.455 (11.56) | q                   | +1.12 (2.84) | +.195 (4.95) |
| L                                      | -.225 (5.72)  | -.390 (9.91)  | r                   | +.225 (5.72) | +.130 (3.30) |
| M                                      | -.336 (8.53)  | -.325 (8.26)  | s                   | +.225 (5.72) | +.000 (0.00) |
| N                                      | -.450 (11.43) | -.130 (3.30)  | t                   | +.225 (5.72) | -.130 (3.30) |
| P                                      | -.450 (11.43) | +.000 (0.00)  | u                   | +1.12 (2.84) | -.195 (4.95) |
| R                                      | -.450 (11.43) | +.130 (3.30)  | v                   | +.000 (0.00) | -.260 (6.60) |
| S                                      | -.336 (8.53)  | +.325 (8.26)  | w                   | -.112 (2.84) | -.195 (4.95) |
| T                                      | -.225 (5.72)  | +.390 (9.91)  | x                   | -.225 (5.72) | -.130 (3.30) |
| U                                      | -.112 (2.84)  | +4.55 (11.56) | y                   | -.225 (5.72) | +.000 (0.00) |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

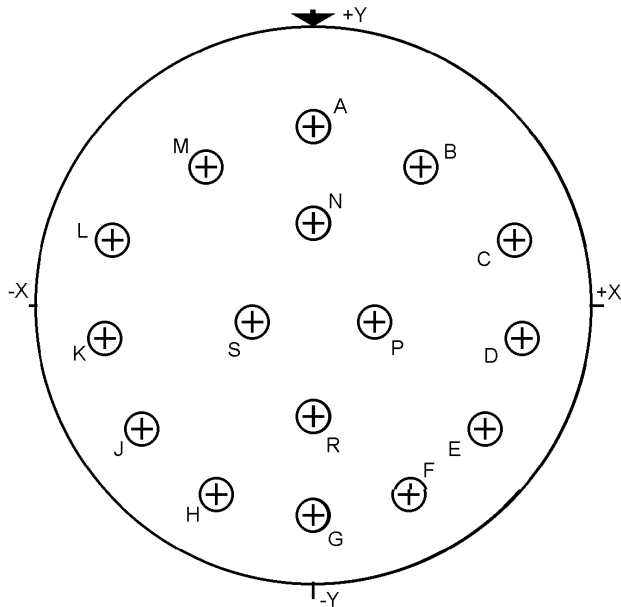
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-55) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| V                                      | +0.000 (0.00) | +0.390 (9.91) | <u>z</u>            | -0.225 (5.72) | +0.130 (3.30) |
| W                                      | +0.112 (2.84) | +0.325 (8.26) | AA                  | -0.112 (2.84) | +0.195 (4.95) |
| X                                      | +0.225 (5.72) | +0.260 (6.60) | BB                  | +0.000 (0.00) | +0.130 (3.30) |
| Y                                      | +0.336 (8.53) | +0.195 (4.95) | CC                  | +0.112 (2.84) | +0.065 (1.65) |
| Z                                      | +0.336 (8.53) | +0.065 (1.65) | DD                  | +0.112 (2.84) | -0.065 (1.65) |
| a                                      | +0.336 (8.53) | -0.065 (1.65) | EE                  | +0.000 (0.00) | -0.130 (3.30) |
| b                                      | +0.336 (8.53) | -0.195 (4.95) | FF                  | -0.112 (2.84) | -0.065 (1.65) |
| <u>c</u>                               | +0.225 (5.72) | -0.260 (6.60) | GG                  | -0.112 (2.84) | +0.065 (1.65) |
| d                                      | +0.112 (2.84) | -0.325 (8.26) | HH                  | +0.000 (0.00) | +0.000 (0.00) |
| e                                      | +0.000 (0.00) | -0.390 (9.91) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -55             | 55                 | 20            | I              | All              | MS27350-55 |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

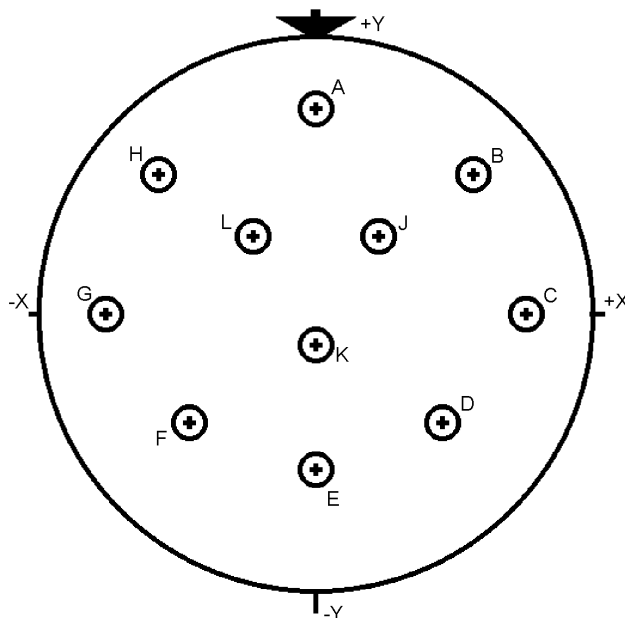
MIL-STD-1560C  
w/CHANGE 1



| Contacts<br>(Insert arrangement 22-97) |                |                |                     |                |               |
|--|----------------|----------------|---------------------|----------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)   |
| A                                      | +0.000 (0.00)  | +0.344 (8.74)  | J                   | -0.328 (8.33)  | -0.239 (6.07) |
| B                                      | +0.210 (5.33)  | +0.270 (6.86)  | K                   | -0.400 (10.16) | -0.065 (1.65) |
| C                                      | +0.386 (9.80)  | +0.123 (3.12)  | L                   | -0.386 (9.80)  | +0.123 (3.12) |
| D                                      | +0.400 (10.16) | -0.065 (1.65)  | M                   | -0.210 (5.33)  | +0.270 (6.86) |
| E                                      | +0.328 (8.33)  | -0.239 (6.07)  | N                   | +0.000 (0.00)  | +0.156 (3.96) |
| F                                      | +0.183 (4.65)  | -0.362 (9.19)  | P                   | +0.120 (3.05)  | -0.030 (0.76) |
| G                                      | +0.000 (0.00)  | -0.406 (10.31) | R                   | +0.000 (0.00)  | -0.218 (5.54) |
| H                                      | -0.183 (4.65)  | -0.362 (9.19)  | S                   | -0.120 (3.05)  | -0.030 (0.76) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -97             | 16                 | 16            | I              | All              | MS27350-97 |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

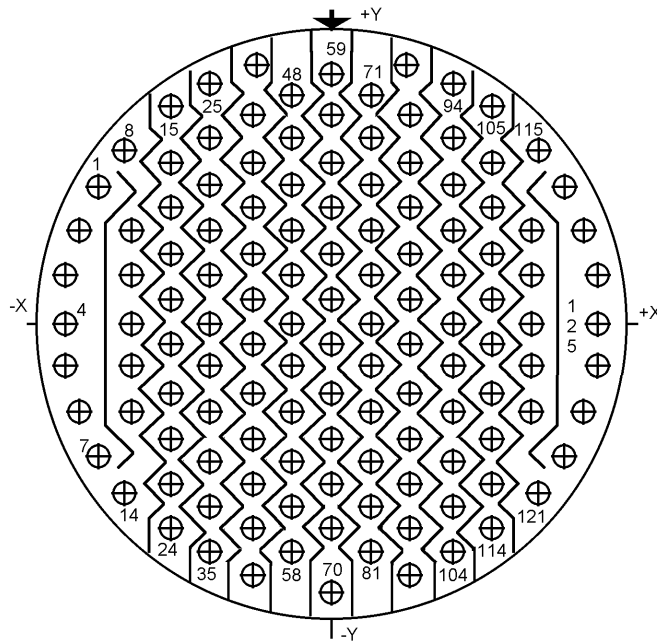
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 22-99) |                |                |                     |                |               |
|--|----------------|----------------|---------------------|----------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)   |
| A                                      | +0.00 (0.00)   | +0.404 (10.26) | G                   | -0.404 (10.26) | +0.00 (0.00)  |
| B                                      | +0.300 (7.62)  | +0.270 (6.86)  | H                   | -0.300 (7.62)  | +0.270 (6.86) |
| C                                      | +0.404 (10.26) | +0.00 (0.00)   | J                   | +0.120 (3.05)  | +0.150 (3.81) |
| D                                      | +0.240 (6.10)  | -0.210 (5.33)  | K                   | +0.00 (0.00)   | -0.060 (1.52) |
| E                                      | +0.00 (0.00)   | -0.300 (7.62)  | L                   | -0.120 (3.05)  | +0.150 (3.81) |
| F                                      | -0.240 (6.10)  | -0.210 (5.33)  | ---                 | ---            | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 22         | -99             | 11                 | 16            | II             | All              | MS27350-99 |

FIGURE 17. Insert arrangement, electrical connector, shell size 22 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-1) |               |               |                     |              |               |
|---------------------------------------|---------------|---------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.479 (12.17) | +.279 (7.09)  | 65                  | +.000 (0.00) | -.047 (1.19)  |
| 2                                     | -.520 (13.21) | +.190 (4.83)  | 66                  | +.000 (0.00) | -.142 (3.61)  |
| 3                                     | -.546 (13.87) | +.095 (2.41)  | 67                  | +.000 (0.00) | -.237 (6.02)  |
| 4                                     | -.555 (14.10) | +.000 (0.00)  | 68                  | +.000 (0.00) | -.332 (8.43)  |
| 5                                     | -.546 (13.87) | -.095 (2.41)  | 69                  | +.000 (0.00) | -.427 (10.85) |
| 6                                     | -.520 (13.21) | -.190 (4.83)  | 70                  | +.000 (0.00) | -.555 (14.10) |
| 7                                     | -.479 (12.17) | -.279 (7.09)  | 71                  | +.083 (2.11) | +.475 (12.07) |
| 8                                     | -.424 (10.77) | +.357 (9.07)  | 72                  | +.083 (2.11) | +.380 (9.65)  |
| 9                                     | -.415 (10.54) | +.190 (4.83)  | 73                  | +.083 (2.11) | +.285 (7.24)  |
| 10                                    | -.415 (10.54) | +.095 (2.41)  | 74                  | +.083 (2.11) | +.190 (4.83)  |
| 11                                    | -.415 (10.54) | +.000 (0.00)  | 75                  | +.083 (2.11) | +.095 (2.41)  |
| 12                                    | -.415 (10.54) | -.095 (2.41)  | 76                  | +.083 (2.11) | +.000 (0.00)  |
| 13                                    | -.415 (10.54) | -.190 (4.83)  | 77                  | +.083 (2.11) | -.095 (2.41)  |
| 14                                    | -.424 (10.77) | -.357 (9.07)  | 78                  | +.083 (2.11) | -.190 (4.83)  |
| 15                                    | -.332 (8.43)  | +.444 (11.28) | 79                  | +.083 (2.11) | -.285 (7.24)  |
| 16                                    | -.332 (8.43)  | +.332 (8.43)  | 80                  | +.083 (2.11) | -.380 (9.65)  |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599).

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-1) |              |               |                     |              |               |
|---------------------------------------|--------------|---------------|---------------------|--------------|---------------|
| Contact position ID                   | Location     |               | Contact position ID | Location     |               |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)   |
| 17                                    | -.332 (8.43) | +.237 (6.02)  | 81                  | +.083 (2.11) | -.475 (12.07) |
| 18                                    | -.332 (8.43) | +.142 (3.61)  | 82                  | +.160 (4.06) | +.531 (13.49) |
| 19                                    | -.332 (8.43) | +.047 (1.19)  | 83                  | +.166 (4.22) | +.427 (10.85) |
| 20                                    | -.332 (8.43) | -.047 (1.19)  | 84                  | +.166 (4.22) | +.332 (8.43)  |
| 21                                    | -.332 (8.43) | -.142 (3.61)  | 85                  | +.166 (4.22) | +.237 (6.02)  |
| 22                                    | -.332 (8.43) | -.237 (6.02)  | 86                  | +.166 (4.22) | +.142 (3.61)  |
| 23                                    | -.332 (8.43) | -.332 (8.43)  | 87                  | +.166 (4.22) | +.047 (1.19)  |
| 24                                    | -.332 (8.43) | -.427 (10.85) | 88                  | +.166 (4.22) | -.047 (1.19)  |
| 25                                    | -.249 (6.32) | +.496 (12.60) | 89                  | +.166 (4.22) | -.142 (3.61)  |
| 26                                    | -.249 (6.32) | +.380 (9.65)  | 90                  | +.166 (4.22) | -.237 (6.02)  |
| 27                                    | -.249 (6.32) | +.285 (7.24)  | 91                  | +.166 (4.22) | -.332 (8.43)  |
| 28                                    | -.249 (6.32) | +.190 (4.83)  | 92                  | +.166 (4.22) | -.427 (10.85) |
| 29                                    | -.249 (6.32) | +.095 (2.41)  | 93                  | +.166 (4.22) | -.522 (13.26) |
| 30                                    | -.249 (6.32) | +.000 (0.00)  | 94                  | +.249 (6.32) | +.496 (12.60) |
| 31                                    | -.249 (6.32) | -.095 (2.41)  | 95                  | +.249 (6.32) | +.380 (9.65)  |
| 32                                    | -.249 (6.32) | -.190 (4.83)  | 96                  | +.249 (6.32) | +.285 (7.24)  |
| 33                                    | -.249 (6.32) | -.285 (7.24)  | 97                  | +.249 (6.32) | +.190 (4.83)  |
| 34                                    | -.249 (6.32) | -.380 (9.65)  | 98                  | +.249 (6.32) | +.095 (2.41)  |
| 35                                    | -.249 (6.32) | -.475 (12.07) | 99                  | +.249 (6.32) | +.000 (0.00)  |
| 36                                    | -.160 (4.06) | +.531 (13.49) | 100                 | +.249 (6.32) | -.095 (2.41)  |
| 37                                    | -.166 (4.22) | +.427 (10.85) | 101                 | +.249 (6.32) | -.190 (4.83)  |
| 38                                    | -.166 (4.22) | +.332 (8.43)  | 102                 | +.249 (6.32) | -.285 (7.24)  |
| 39                                    | -.166 (4.22) | +.237 (6.02)  | 103                 | +.249 (6.32) | -.380 (9.65)  |
| 40                                    | -.166 (4.22) | +.142 (3.61)  | 104                 | +.249 (6.32) | -.475 (12.07) |
| 41                                    | -.166 (4.22) | +.047 (1.19)  | 105                 | +.332 (8.43) | +.444 (11.28) |
| 42                                    | -.166 (4.22) | -.047 (1.19)  | 106                 | +.332 (8.43) | +.332 (8.43)  |
| 43                                    | -.166 (4.22) | -.142 (3.61)  | 107                 | +.332 (8.43) | +.237 (6.02)  |
| 44                                    | -.166 (4.22) | -.237 (6.02)  | 108                 | +.332 (8.43) | +.142 (3.61)  |
| 45                                    | -.166 (4.22) | -.332 (8.43)  | 109                 | +.332 (8.43) | +.047 (1.19)  |
| 46                                    | -.166 (4.22) | -.427 (10.85) | 110                 | +.332 (8.43) | -.047 (1.19)  |
| 47                                    | -.166 (4.22) | -.522 (13.26) | 111                 | +.332 (8.43) | -.142 (3.61)  |
| 48                                    | -.083 (2.11) | +.475 (12.07) | 112                 | +.332 (8.43) | -.237 (6.02)  |
| 49                                    | -.083 (2.11) | +.380 (9.65)  | 113                 | +.332 (8.43) | -.332 (8.43)  |
| 50                                    | -.083 (2.11) | +.285 (7.24)  | 114                 | +.332 (8.43) | -.427 (10.85) |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

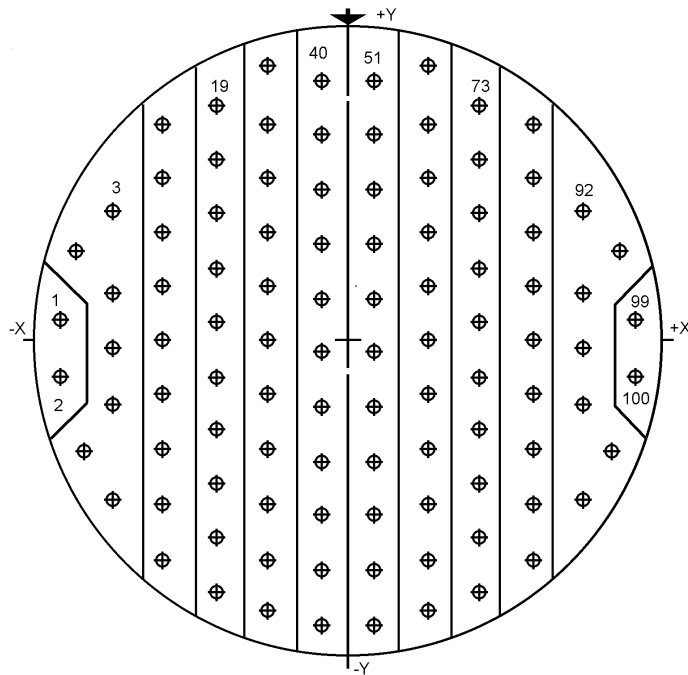
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-1) |               |                |                     |                |               |
|---------------------------------------|---------------|----------------|---------------------|----------------|---------------|
| Contact position ID                   | Location      |                | Contact position ID | Location       |               |
|                                       | X-axis (mm)   | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)   |
| 51                                    | -.083 (2.11)  | + .190 (4.83)  | 115                 | + .424 (10.77) | + .357 (9.07) |
| 52                                    | -.083 (2.11)  | + .095 (2.41)  | 116                 | + .415 (10.54) | + .190 (4.83) |
| 53                                    | -.083 (2.11)  | + .000 (0.00)  | 117                 | + .415 (10.54) | + .095 (2.41) |
| 54                                    | -.083 (2.11)  | - .095 (2.41)  | 118                 | + .415 (10.54) | + .000 (0.00) |
| 55                                    | -.083 (2.11)  | - .190 (4.83)  | 119                 | + .415 (10.54) | - .095 (2.41) |
| 56                                    | -.083 (2.11)  | - .285 (7.24)  | 120                 | + .415 (10.54) | - .190 (4.83) |
| 57                                    | -.083 (2.11)  | - .380 (9.65)  | 121                 | + .424 (10.77) | - .357 (9.07) |
| 58                                    | -.083 (2.11)  | - .475 (12.07) | 122                 | + .479 (12.17) | + .279 (7.09) |
| 59                                    | + .000 (0.00) | + .522 (13.26) | 123                 | + .520 (13.21) | + .190 (4.83) |
| 60                                    | + .000 (0.00) | + .427 (10.85) | 124                 | + .546 (13.87) | + .095 (2.41) |
| 61                                    | + .000 (0.00) | + .332 (8.43)  | 125                 | + .555 (14.10) | + .000 (0.00) |
| 62                                    | + .000 (0.00) | + .237 (6.02)  | 126                 | + .546 (13.87) | - .095 (2.41) |
| 63                                    | + .000 (0.00) | + .142 (3.61)  | 127                 | + .520 (13.21) | - .190 (4.83) |
| 64                                    | + .000 (0.00) | + .047 (1.19)  | 128                 | + .479 (12.17) | - .279 (7.09) |

(Inactive for new design for MIL-DTL-38999)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 24         | -1              | 128                | 22M           | M              | All              | MS27351-1  |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-2) |               |               |                     |              |               |
|---------------------------------------|---------------|---------------|---------------------|--------------|---------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |               |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                     | -.550 (13.97) | +.039 (.99)   | 51                  | +.053 (1.35) | +.502 (12.75) |
| 2                                     | -.550 (13.97) | -.068 (1.73)  | 52                  | +.053 (1.35) | +.397 (10.08) |
| 3                                     | -.459 (11.66) | +.253 (6.43)  | 53                  | +.053 (1.35) | +.292 (7.42)  |
| 4                                     | -.523 (13.28) | +.175 (4.45)  | 54                  | +.053 (1.35) | +.187 (4.75)  |
| 5                                     | -.459 (11.66) | +.092 (2.34)  | 55                  | +.053 (1.35) | +.082 (2.08)  |
| 6                                     | -.459 (11.66) | -.014 (0.36)  | 56                  | +.053 (1.35) | -.023 (0.58)  |
| 7                                     | -.459 (11.66) | -.122 (3.10)  | 57                  | +.053 (1.35) | -.128 (3.25)  |
| 8                                     | -.509 (12.93) | -.215 (5.46)  | 58                  | +.053 (1.35) | -.233 (5.92)  |
| 9                                     | -.459 (11.66) | -.307 (7.80)  | 59                  | +.053 (1.35) | -.338 (8.59)  |
| 10                                    | -.354 (8.99)  | +.420 (10.67) | 60                  | +.053 (1.35) | -.443 (11.25) |
| 11                                    | -.354 (8.99)  | +.315 (8.00)  | 61                  | +.053 (1.35) | -.548 (13.92) |
| 12                                    | -.354 (8.99)  | +.210 (5.33)  | 62                  | +.154 (3.91) | +.525 (13.34) |
| 13                                    | -.354 (8.99)  | +.105 (2.67)  | 63                  | +.154 (3.91) | +.420 (10.67) |
| 14                                    | -.354 (8.99)  | +.000 (0.00)  | 64                  | +.154 (3.91) | +.315 (8.00)  |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-2) |                |                |                        |                |                |
|---------------------------------------|----------------|----------------|------------------------|----------------|----------------|
| Contact<br>position ID                | Location       |                | Contact<br>position ID | Location       |                |
|                                       | X-axis<br>(mm) | Y-axis<br>(mm) |                        | X-axis<br>(mm) | Y-axis<br>(mm) |
| 15                                    | -.354 (8.99)   | -.105 (2.67)   | 65                     | +.154 (3.91)   | +.210 (5.33)   |
| 16                                    | -.354 (8.99)   | -.210 (5.33)   | 66                     | +.154 (3.91)   | +.105 (2.67)   |
| 17                                    | -.354 (8.99)   | -.315 (8.00)   | 67                     | +.154 (3.91)   | +.000 (0.00)   |
| 18                                    | -.354 (8.99)   | -.420 (10.67)  | 68                     | +.154 (3.91)   | -.105 (2.67)   |
| 19                                    | -.255 (6.48)   | +.457 (11.61)  | 69                     | +.154 (3.91)   | -.210 (5.33)   |
| 20                                    | -.255 (6.48)   | +.352 (8.94)   | 70                     | +.154 (3.91)   | -.315 (8.00)   |
| 21                                    | -.255 (6.48)   | +.247 (6.27)   | 71                     | +.154 (3.91)   | -.420 (10.67)  |
| 22                                    | -.255 (6.48)   | +.142 (3.61)   | 72                     | +.154 (3.91)   | -.525 (13.34)  |
| 23                                    | -.255 (6.48)   | +.037 (0.94)   | 73                     | +.255 (6.48)   | +.457 (11.61)  |
| 24                                    | -.255 (6.48)   | -.068 (1.73)   | 74                     | +.255 (6.48)   | +.352 (8.94)   |
| 25                                    | -.255 (6.48)   | -.173 (4.39)   | 75                     | +.255 (6.48)   | +.247 (6.27)   |
| 26                                    | -.255 (6.48)   | -.278 (7.06)   | 76                     | +.255 (6.48)   | +.142 (3.61)   |
| 27                                    | -.255 (6.48)   | -.383 (9.73)   | 77                     | +.255 (6.48)   | +.037 (0.94)   |
| 28                                    | -.255 (6.48)   | -.488 (12.40)  | 78                     | +.255 (6.48)   | -.068 (1.73)   |
| 29                                    | -.154 (3.91)   | +.525 (13.34)  | 79                     | +.255 (6.48)   | -.173 (4.39)   |
| 30                                    | -.154 (3.91)   | +.420 (10.67)  | 80                     | +.255 (6.48)   | -.278 (7.06)   |
| 31                                    | -.154 (3.91)   | +.315 (8.00)   | 81                     | +.255 (6.48)   | -.383 (9.73)   |
| 32                                    | -.154 (3.91)   | +.210 (5.33)   | 82                     | +.255 (6.48)   | -.488 (12.40)  |
| 33                                    | -.154 (3.91)   | +.105 (2.67)   | 83                     | +.354 (8.99)   | +.420 (10.67)  |
| 34                                    | -.154 (3.91)   | +.000 (0.00)   | 84                     | +.354 (8.99)   | +.315 (8.00)   |
| 35                                    | -.154 (3.91)   | -.105 (2.67)   | 85                     | +.354 (8.99)   | +.210 (5.33)   |
| 36                                    | -.154 (3.91)   | -.210 (5.33)   | 86                     | +.354 (8.99)   | +.105 (2.67)   |
| 37                                    | -.154 (3.91)   | -.315 (8.00)   | 87                     | +.354 (8.99)   | +.000 (0.00)   |
| 38                                    | -.154 (3.91)   | -.420 (10.67)  | 88                     | +.354 (8.99)   | -.105 (2.67)   |
| 39                                    | -.154 (3.91)   | -.525 (13.34)  | 89                     | +.354 (8.99)   | -.210 (5.33)   |
| 40                                    | -.053 (1.35)   | +.502 (12.75)  | 90                     | +.354 (8.99)   | -.315 (8.00)   |
| 41                                    | -.053 (1.35)   | +.397 (10.08)  | 91                     | +.354 (8.99)   | -.420 (10.67)  |
| 42                                    | -.053 (1.35)   | +.292 (7.42)   | 92                     | +.459 (11.66)  | +.253 (6.43)   |
| 43                                    | -.053 (1.35)   | +.187 (4.75)   | 93                     | +.523 (13.28)  | +.175 (4.45)   |
| 44                                    | -.053 (1.35)   | +.082 (2.08)   | 94                     | +.459 (11.66)  | +.092 (2.34)   |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

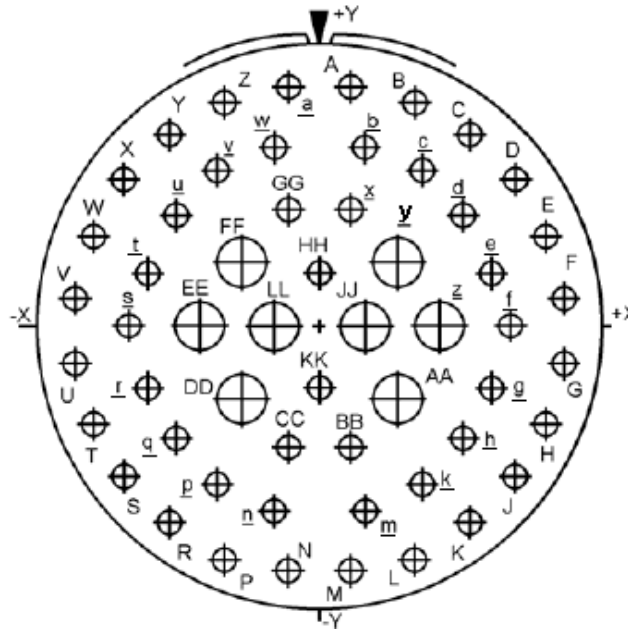
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-2) |              |               |                     |               |              |
|---------------------------------------|--------------|---------------|---------------------|---------------|--------------|
| Contact position ID                   | Location     |               | Contact position ID | Location      |              |
|                                       | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)  |
| 45                                    | -.053 (1.35) | -.023 (0.58)  | 95                  | +.459 (11.66) | -.014 (0.36) |
| 46                                    | -.053 (1.35) | -.128 (3.25)  | 96                  | +.459 (11.66) | -.122 (3.10) |
| 47                                    | -.053 (1.35) | -.233 (5.92)  | 97                  | +.509 (12.93) | -.215 (5.46) |
| 48                                    | -.053 (1.35) | -.338 (8.59)  | 98                  | +.459 (11.66) | -.307 (7.80) |
| 49                                    | -.053 (1.35) | -.443 (11.25) | 99                  | +.550 (13.97) | +.039 (0.99) |
| 50                                    | -.053 (1.35) | -.548 (13.92) | 100                 | +.550 (13.97) | -.068 (1.73) |

(Inactive for new design for MIL-DTL-38999.)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 24         | -2              | 100                | 22            | M              | All              | MS27351-2  |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-4) |                |                |                     |                |                |
|---------------------------------------|----------------|----------------|---------------------|----------------|----------------|
| Contact position ID                   | Location       |                | Contact position ID | Location       |                |
|                                       | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)    |
| A                                     | +0.069 (1.75)  | +0.531 (13.49) | f                   | +0.412 (10.46) | +0.000 (0.00)  |
| B                                     | +0.203 (5.16)  | +0.495 (12.57) | g                   | +0.377 (9.58)  | -0.132 (3.35)  |
| C                                     | +0.324 (8.23)  | +0.425 (10.80) | h                   | +0.311 (7.90)  | -0.251 (6.38)  |
| D                                     | +0.424 (10.77) | +0.326 (8.28)  | k                   | +0.212 (5.38)  | -0.344 (8.74)  |
| E                                     | +0.493 (12.52) | +0.205 (5.21)  | m                   | +0.086 (2.18)  | -0.397 (10.08) |
| F                                     | +0.531 (13.49) | +0.069 (1.75)  | n                   | -0.086 (2.18)  | -0.397 (10.08) |
| G                                     | +0.531 (13.49) | -0.069 (1.75)  | p                   | -0.212 (5.38)  | -0.344 (8.74)  |
| H                                     | +0.493 (12.52) | -0.205 (5.21)  | q                   | -0.311 (7.90)  | -0.251 (6.38)  |
| J                                     | +0.424 (10.77) | -0.326 (8.28)  | r                   | -0.377 (9.58)  | -0.132 (3.35)  |
| K                                     | +0.324 (8.23)  | -0.425 (10.80) | s                   | -0.412 (10.46) | +0.000 (0.00)  |
| L                                     | +0.203 (5.16)  | -0.495 (12.57) | t                   | -0.377 (9.58)  | +0.132 (3.35)  |
| M                                     | +0.069 (1.75)  | -0.531 (13.49) | u                   | -0.311 (7.90)  | +0.251 (6.38)  |
| N                                     | -0.069 (1.75)  | -0.531 (13.49) | v                   | -0.212 (5.38)  | +0.344 (8.74)  |
| P                                     | -0.203 (5.16)  | -0.495 (12.57) | w                   | -0.086 (2.18)  | +0.397 (10.08) |
| R                                     | -0.324 (8.23)  | -0.425 (10.80) | x                   | +0.069 (1.75)  | +0.263 (6.68)  |
| S                                     | -0.424 (10.77) | -0.326 (8.28)  | y                   | +0.172 (4.37)  | +0.149 (3.78)  |
| T                                     | -0.493 (12.52) | -0.205 (5.21)  | z                   | +0.258 (6.55)  | +0.000 (0.00)  |
| U                                     | -0.531 (13.49) | -0.069 (1.75)  | AA                  | +0.172 (4.37)  | -0.149 (3.78)  |
| V                                     | -0.531 (13.49) | +0.069 (1.75)  | BB                  | +0.069 (1.75)  | -0.263 (6.68)  |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

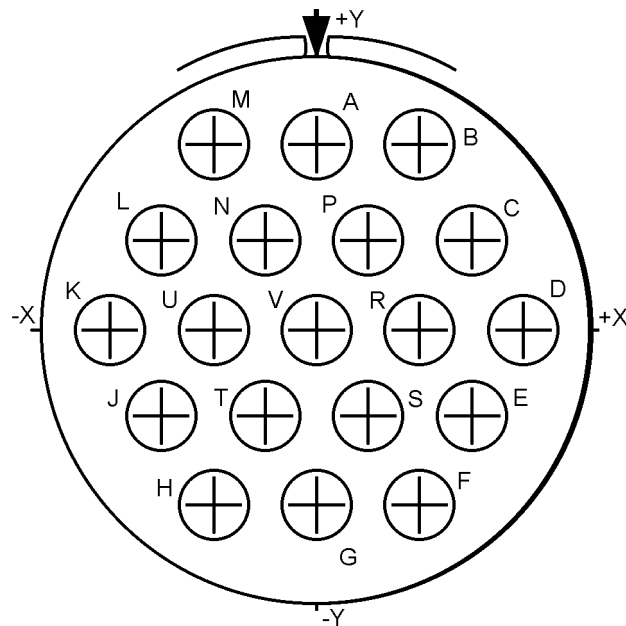
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-4) |               |               |                     |              |              |
|---------------------------------------|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                   | Location      |               | Contact position ID | Location     |              |
|                                       | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| W                                     | -.493 (12.52) | +.205 (5.21)  | CC                  | -.069 (1.75) | -.263 (6.68) |
| X                                     | -.424 (10.77) | +.326 (8.28)  | DD                  | -.172 (4.37) | -.149 (3.78) |
| Y                                     | -.324 (8.23)  | +.425 (10.80) | EE                  | -.258 (6.55) | +.000 (0.00) |
| Z                                     | -.203 (5.16)  | +.495 (12.57) | FF                  | -.172 (4.37) | +.149 (3.78) |
| <u>a</u>                              | -.069 (1.75)  | +.531 (13.49) | GG                  | -.069 (1.75) | +.263 (6.68) |
| <u>b</u>                              | +.086 (2.18)  | +.397 (10.08) | HH                  | +.000 (0.00) | +.132 (3.35) |
| <u>c</u>                              | +.212 (5.38)  | +.344 (8.74)  | JJ                  | +.086 (2.18) | +.000 (0.00) |
| <u>d</u>                              | +.311 (7.90)  | +.251 (6.38)  | KK                  | +.000 (0.00) | -.132 (3.35) |
| <u>e</u>                              | +.377 (9.58)  | +.132 (3.35)  | LL                  | -.086 (2.18) | +.000 (0.00) |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location          | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|---------------------------|------------|
| 24         | -4              | 8                  | 16            | I              | AA,DD,EE,<br>FF,JJ,LL,Y,Z | MS27351-4  |
|            |                 | 48                 | 20            |                | All others                |            |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

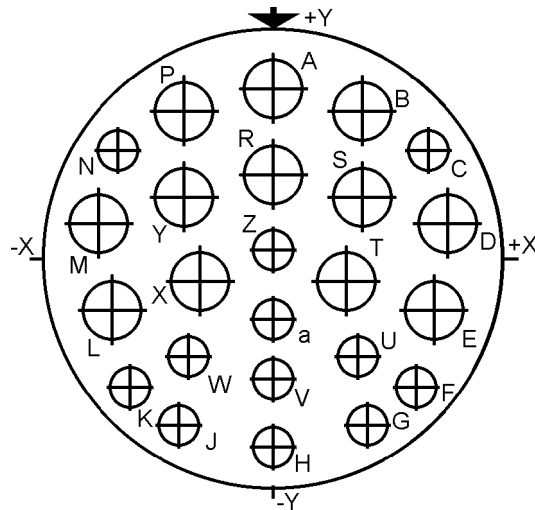


MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-19) |                |                |                     |               |                |
|--|----------------|----------------|---------------------|---------------|----------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |                |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)    |
| A                                      | + .000 (0.00)  | + .409 (10.39) | L                   | - .354 (8.99) | + .205 (5.21)  |
| B                                      | + .236 (5.99)  | + .409 (10.39) | M                   | - .236 (5.99) | + .409 (10.39) |
| C                                      | + .354 (8.99)  | + .205 (5.21)  | N                   | - .118 (3.00) | + .205 (5.21)  |
| D                                      | + .472 (11.99) | + .000 (0.00)  | P                   | + .118 (3.00) | + .205 (5.21)  |
| E                                      | + .354 (8.99)  | - .205 (5.21)  | R                   | + .236 (5.99) | + .000 (0.00)  |
| F                                      | + .236 (5.99)  | - .409 (10.39) | S                   | + .118 (3.00) | - .205 (5.21)  |
| G                                      | + .000 (0.00)  | - .409 (10.39) | T                   | - .118 (3.00) | - .205 (5.21)  |
| H                                      | - .236 (5.99)  | - .409 (10.39) | U                   | - .236 (5.99) | + .000 (0.00)  |
| J                                      | - .354 (8.99)  | - .205 (5.21)  | V                   | + .000 (.00)  | + .000 (0.00)  |
| K                                      | - .472 (11.99) | + .000 (0.00)  | ---                 | ---           | ---            |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location |
|------------|-----------------|--------------------|---------------|----------------|------------------|
| 24         | -19             | 19                 | 12            | I              | All              |

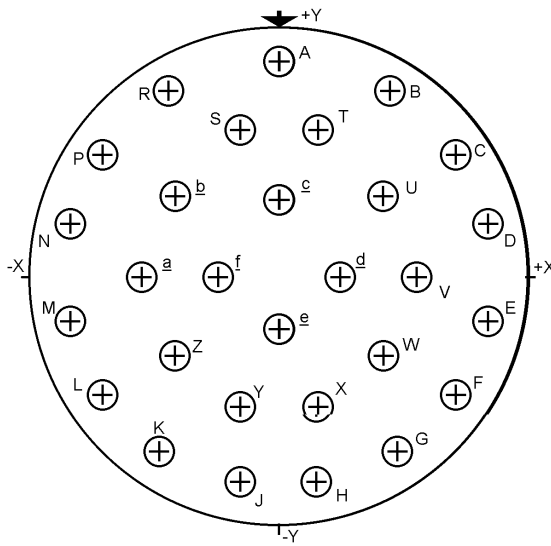
FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-24) |               |               |                     |               |               |
|--|---------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location      |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.00 (0.00)  | +4.72 (11.99) | N                   | -4.03 (10.24) | +2.98 (7.57)  |
| B                                      | +2.30 (5.84)  | +4.10 (10.41) | P                   | -2.30 (5.84)  | +4.10 (10.41) |
| C                                      | +4.03 (10.24) | +2.98 (7.57)  | R                   | +0.00 (0.00)  | +2.34 (5.94)  |
| D                                      | +4.61 (11.71) | +1.00 (2.54)  | S                   | +2.30 (5.84)  | +1.72 (4.37)  |
| E                                      | +4.13 (10.49) | -.134 (3.40)  | T                   | +1.86 (4.72)  | -.062 (1.57)  |
| F                                      | +3.70 (9.40)  | -.336 (8.53)  | U                   | +2.11 (5.36)  | -.267 (6.78)  |
| G                                      | +2.30 (5.84)  | -.441 (11.20) | V                   | +0.00 (0.00)  | -.323 (8.20)  |
| H                                      | +0.00 (0.00)  | -.495 (12.57) | W                   | -.211 (5.36)  | -.267 (6.78)  |
| J                                      | -.230 (5.84)  | -.441 (11.20) | X                   | -.186 (4.72)  | -.062 (1.57)  |
| K                                      | -.370 (9.40)  | -.336 (8.53)  | Y                   | -.230 (5.84)  | +1.72 (4.37)  |
| L                                      | -.413 (10.49) | -.134 (3.40)  | Z                   | +0.00 (0.00)  | +0.28 (0.71)  |
| M                                      | -.461 (11.71) | +1.00 (2.54)  | a                   | +0.00 (0.00)  | -.151 (3.84)  |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location            | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|-----------------------------|------------|
| 24         | -24             | 12                 | 12            | I              | A,B,D,E,L,M,<br>P,R,S,T,X,Y | MS27351-24 |
|            |                 | 12                 | 16            |                | All others                  |            |

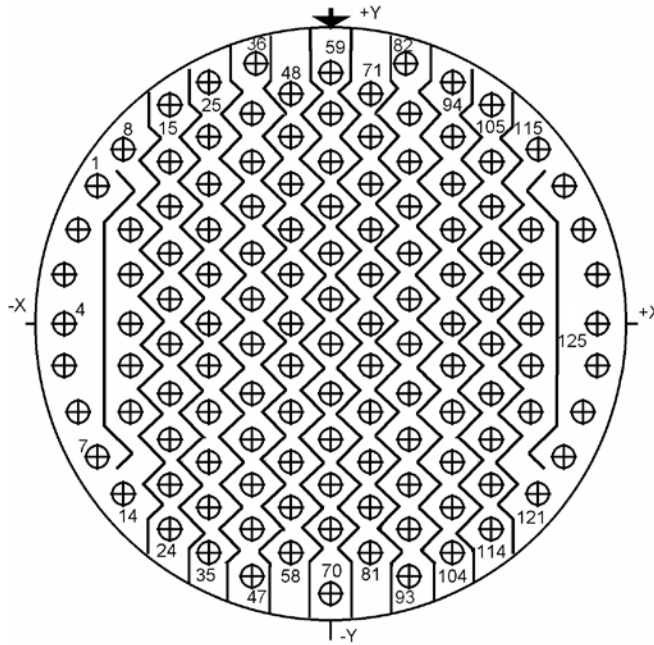
FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-29) |                |                |                     |               |               |
|--|----------------|----------------|---------------------|---------------|---------------|
| Contact position ID                    | Location       |                | Contact position ID | Location      |               |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)   | Y-axis (mm)   |
| A                                      | +0.000 (0.00)  | +0.481 (12.22) | S                   | -0.091 (2.31) | +0.321 (8.15) |
| B                                      | +0.258 (6.55)  | +0.406 (10.31) | T                   | +0.091 (2.31) | +0.321 (8.15) |
| C                                      | +0.395 (10.03) | +0.277 (7.04)  | U                   | +0.228 (5.79) | +0.194 (4.93) |
| D                                      | +0.469 (11.91) | +0.109 (2.77)  | V                   | +0.319 (8.10) | +0.000 (0.00) |
| E                                      | +0.469 (11.91) | -0.109 (2.77)  | W                   | +0.240 (6.10) | -0.181 (4.60) |
| F                                      | +0.395 (10.03) | -0.277 (7.04)  | X                   | +0.091 (2.31) | -0.290 (7.37) |
| G                                      | +0.263 (6.68)  | -0.406 (10.31) | Y                   | -0.091 (2.31) | -0.290 (7.37) |
| H                                      | +0.091 (2.31)  | -0.472 (11.99) | Z                   | -0.240 (6.10) | -0.181 (4.60) |
| J                                      | -0.091 (2.31)  | -0.472 (11.99) | a                   | -0.319 (8.10) | +0.000 (0.00) |
| K                                      | -0.263 (6.68)  | -0.406 (10.31) | b                   | -0.228 (5.79) | +0.194 (4.93) |
| L                                      | -0.395 (10.03) | -0.277 (7.04)  | c                   | +0.000 (0.00) | +0.161 (4.09) |
| M                                      | -0.469 (11.91) | -0.109 (2.77)  | d                   | +0.134 (3.40) | +0.000 (0.00) |
| N                                      | -0.469 (11.91) | +0.109 (2.77)  | e                   | +0.000 (0.00) | -0.130 (3.30) |
| P                                      | -0.395 (10.03) | +0.277 (7.04)  | f                   | -0.134 (3.40) | +0.000 (0.00) |
| R                                      | -0.258 (6.55)  | +0.406 (10.31) | ---                 | ---           | ---           |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 24         | -29             | 29                 | 16            | I              | All              | MS27351-29 |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-35) |               |               |                     |              |               |
|--|---------------|---------------|---------------------|--------------|---------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |               |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)   |
| 1                                      | -.479 (12.17) | +.279 (7.09)  | 65                  | +.000 (0.00) | -.047 (1.19)  |
| 2                                      | -.520 (13.21) | +.190 (4.83)  | 66                  | +.000 (0.00) | -.142 (3.61)  |
| 3                                      | -.546 (13.87) | +.095 (2.41)  | 67                  | +.000 (0.00) | -.237 (6.02)  |
| 4                                      | -.555 (14.10) | +.000 (0.00)  | 68                  | +.000 (0.00) | -.332 (8.43)  |
| 5                                      | -.546 (13.87) | -.095 (2.41)  | 69                  | +.000 (0.00) | -.427 (10.85) |
| 6                                      | -.520 (13.21) | -.190 (4.83)  | 70                  | +.000 (0.00) | -.555 (14.10) |
| 7                                      | -.479 (12.17) | -.279 (7.09)  | 71                  | +.083 (2.11) | +.475 (12.07) |
| 8                                      | -.424 (10.77) | +.357 (9.07)  | 72                  | +.083 (2.11) | +.380 (9.65)  |
| 9                                      | -.415 (10.54) | +.190 (4.83)  | 73                  | +.083 (2.11) | +.285 (7.24)  |
| 10                                     | -.415 (10.54) | +.095 (2.41)  | 74                  | +.083 (2.11) | +.190 (4.83)  |
| 11                                     | -.415 (10.54) | +.000 (0.00)  | 75                  | +.083 (2.11) | +.095 (2.41)  |
| 12                                     | -.415 (10.54) | -.095 (2.41)  | 76                  | +.083 (2.11) | +.000 (.00)   |
| 13                                     | -.415 (10.54) | -.190 (4.83)  | 77                  | +.083 (2.11) | -.095 (2.41)  |
| 14                                     | -.424 (10.77) | -.357 (9.07)  | 78                  | +.083 (2.11) | -.190 (4.83)  |
| 15                                     | -.332 (8.43)  | +.444 (11.28) | 79                  | +.083 (2.11) | -.285 (7.24)  |
| 16                                     | -.332 (8.43)  | +.332 (8.43)  | 80                  | +.083 (2.11) | -.380 (9.65)  |
| 17                                     | -.332 (8.43)  | +.237 (6.02)  | 81                  | +.083 (2.11) | -.475 (12.07) |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-35) |              |               |                     |               |               |
|--|--------------|---------------|---------------------|---------------|---------------|
| Contact position ID                    | Location     |               | Contact position ID | Location      |               |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)   |
| 18                                     | -.332 (8.43) | +.142 (3.61)  | 82                  | +.160 (4.06)  | +.531 (13.49) |
| 19                                     | -.332 (8.43) | +.047 (1.19)  | 83                  | +.166 (4.22)  | +.427 (10.85) |
| 20                                     | -.332 (8.43) | -.047 (1.19)  | 84                  | +.166 (4.22)  | +.332 (8.43)  |
| 21                                     | -.332 (8.43) | -.142 (3.61)  | 85                  | +.166 (4.22)  | +.237 (6.02)  |
| 22                                     | -.332 (8.43) | -.237 (6.02)  | 86                  | +.166 (4.22)  | +.142 (3.61)  |
| 23                                     | -.332 (8.43) | -.332 (8.43)  | 87                  | +.166 (4.22)  | +.047 (1.19)  |
| 24                                     | -.332 (8.43) | -.427 (10.85) | 88                  | +.166 (4.22)  | -.047 (1.19)  |
| 25                                     | -.249 (6.32) | +.496 (12.60) | 89                  | +.166 (4.22)  | -.142 (3.61)  |
| 26                                     | -.249 (6.32) | +.380 (9.65)  | 90                  | +.166 (4.22)  | -.237 (6.02)  |
| 27                                     | -.249 (6.32) | +.285 (7.24)  | 91                  | +.166 (4.22)  | -.332 (8.43)  |
| 28                                     | -.249 (6.32) | +.190 (4.83)  | 92                  | +.166 (4.22)  | -.427 (10.85) |
| 29                                     | -.249 (6.32) | +.095 (2.41)  | 93                  | +.166 (4.22)  | -.522 (13.26) |
| 30                                     | -.249 (6.32) | +.000 (0.00)  | 94                  | +.249 (6.32)  | +.496 (12.60) |
| 31                                     | -.249 (6.32) | -.095 (2.41)  | 95                  | +.249 (6.32)  | +.380 (9.65)  |
| 32                                     | -.249 (6.32) | -.190 (4.83)  | 96                  | +.249 (6.32)  | +.285 (7.24)  |
| 33                                     | -.249 (6.32) | -.285 (7.24)  | 97                  | +.249 (6.32)  | +.190 (4.83)  |
| 34                                     | -.249 (6.32) | -.380 (9.65)  | 98                  | +.249 (6.32)  | +.095 (2.41)  |
| 35                                     | -.249 (6.32) | -.475 (12.07) | 99                  | +.249 (6.32)  | +.000 (0.00)  |
| 36                                     | -.160 (4.06) | +.531 (13.49) | 100                 | +.249 (6.32)  | -.095 (2.41)  |
| 37                                     | -.166 (4.22) | +.427 (10.85) | 101                 | +.249 (6.32)  | -.190 (4.83)  |
| 38                                     | -.166 (4.22) | +.332 (8.43)  | 102                 | +.249 (6.32)  | -.285 (7.24)  |
| 39                                     | -.166 (4.22) | +.237 (6.02)  | 103                 | +.249 (6.32)  | -.380 (9.65)  |
| 40                                     | -.166 (4.22) | +.142 (3.61)  | 104                 | +.249 (6.32)  | -.475 (12.07) |
| 41                                     | -.166 (4.22) | +.047 (1.19)  | 105                 | +.332 (8.43)  | +.444 (11.28) |
| 42                                     | -.166 (4.22) | -.047 (1.19)  | 106                 | +.332 (8.43)  | +.332 (8.43)  |
| 43                                     | -.166 (4.22) | -.142 (3.61)  | 107                 | +.332 (8.43)  | +.237 (6.02)  |
| 44                                     | -.166 (4.22) | -.237 (6.02)  | 108                 | +.332 (8.43)  | +.142 (3.61)  |
| 45                                     | -.166 (4.22) | -.332 (8.43)  | 109                 | +.332 (8.43)  | +.047 (1.19)  |
| 46                                     | -.166 (4.22) | -.427 (10.85) | 110                 | +.332 (8.43)  | -.047 (1.19)  |
| 47                                     | -.166 (4.22) | -.522 (13.26) | 111                 | +.332 (8.43)  | -.142 (3.61)  |
| 48                                     | -.083 (2.11) | +.475 (12.07) | 112                 | +.332 (8.43)  | -.237 (6.02)  |
| 49                                     | -.083 (2.11) | +.380 (9.65)  | 113                 | +.332 (8.43)  | -.332 (8.43)  |
| 50                                     | -.083 (2.11) | +.285 (7.24)  | 114                 | +.332 (8.43)  | -.427 (10.85) |
| 51                                     | -.083 (2.11) | +.190 (4.83)  | 115                 | +.424 (10.77) | +.357 (9.07)  |
| 52                                     | -.083 (2.11) | +.095 (2.41)  | 116                 | +.415 (10.54) | +.190 (4.83)  |
| 53                                     | -.083 (2.11) | +.000 (0.00)  | 117                 | +.415 (10.54) | +.095 (2.41)  |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

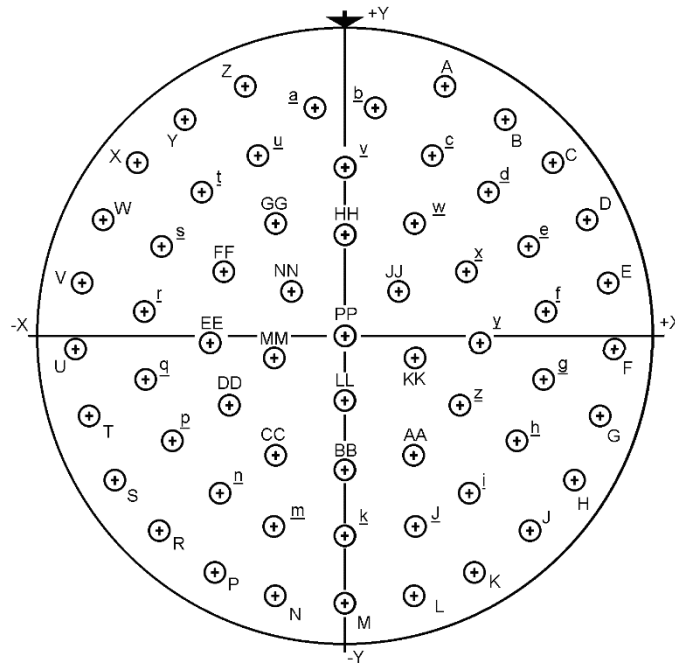
MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-35) |              |               |                     |               |              |
|--|--------------|---------------|---------------------|---------------|--------------|
| Contact position ID                    | Location     |               | Contact position ID | Location      |              |
|  | X-axis (mm)  | Y-axis (mm)   |                     | X-axis (mm)   | Y-axis (mm)  |
| 54                                     | -.083 (2.11) | -.095 (2.41)  | 118                 | +.415 (10.54) | +.000 (0.00) |
| 55                                     | -.083 (2.11) | -.190 (4.83)  | 119                 | +.415 (10.54) | -.095 (2.41) |
| 56                                     | -.083 (2.11) | -.285 (7.24)  | 120                 | +.415 (10.54) | -.190 (4.83) |
| 57                                     | -.083 (2.11) | -.380 (9.65)  | 121                 | +.424 (10.77) | -.357 (9.07) |
| 58                                     | -.083 (2.11) | -.475 (12.07) | 122                 | +.479 (12.17) | +.279 (7.09) |
| 59                                     | +.000 (0.00) | +.522 (13.26) | 123                 | +.520 (13.21) | +.190 (4.83) |
| 60                                     | +.000 (0.00) | +.427 (10.85) | 124                 | +.546 (13.87) | +.095 (2.41) |
| 61                                     | +.000 (0.00) | +.332 (8.43)  | 125                 | +.555 (14.10) | +.000 (.00)  |
| 62                                     | +.000 (0.00) | +.237 (6.02)  | 126                 | +.546 (13.87) | -.095 (2.41) |
| 63                                     | +.000 (0.00) | +.142 (3.61)  | 127                 | +.520 (13.21) | -.190 (4.83) |
| 64                                     | +.000 (0.00) | +.047 (1.19)  | 128                 | +.479 (12.17) | -.279 (7.09) |

(Applicable to MIL-DTL-38999 only)

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 24         | -35             | 128                | 22D           | M              | All              | MS27524-35 |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-61) |                |                |                     |                |                |
|--|----------------|----------------|---------------------|----------------|----------------|
| Contact position ID                    | Location       |                | Contact position ID | Location       |                |
|  | X-axis (mm)    | Y-axis (mm)    |                     | X-axis (mm)    | Y-axis (mm)    |
| A                                      | + .196 (4.98)  | + .500 (12.70) | i                   | + .251 (6.38)  | - .314 (7.98)  |
| B                                      | + .314 (7.98)  | + .435 (11.05) | j                   | + .133 (3.38)  | - .379 (9.63)  |
| C                                      | + .413 (10.49) | + .343 (8.71)  | k                   | + .000 (0.00)  | - .402 (10.21) |
| D                                      | + .485 (12.32) | + .230 (5.84)  | m                   | - .133 (3.38)  | - .379 (9.63)  |
| E                                      | + .527 (13.39) | + .101 (2.57)  | n                   | - .251 (6.38)  | - .314 (7.98)  |
| F                                      | + .536 (13.61) | - .030 (0.76)  | p                   | - .341 (8.66)  | - .213 (5.41)  |
| G                                      | + .511 (12.98) | - .164 (4.17)  | q                   | - .392 (9.96)  | - .088 (2.24)  |
| H                                      | + .454 (11.53) | - .287 (7.29)  | r                   | - .399 (10.13) | + .046 (1.17)  |
| J                                      | + .368 (9.35)  | - .391 (9.93)  | s                   | - .362 (9.19)  | + .175 (4.45)  |
| K                                      | + .259 (6.58)  | - .470 (11.94) | t                   | - .285 (7.24)  | + .283 (7.19)  |
| L                                      | + .134 (3.40)  | - .519 (13.18) | u                   | - .173 (4.39)  | + .363 (9.22)  |
| M                                      | + .000 (0.00)  | - .537 (13.64) | v                   | + .000 (0.00)  | + .338 (8.59)  |
| N                                      | - .134 (3.40)  | - .519 (13.18) | w                   | + .147 (3.73)  | + .223 (5.66)  |
| P                                      | - .259 (6.58)  | - .470 (11.94) | x                   | + .237 (6.02)  | + .122 (3.10)  |
| R                                      | - .368 (9.35)  | - .391 (9.93)  | y                   | + .267 (6.78)  | - .010 (0.25)  |
| S                                      | - .454 (11.53) | - .287 (7.29)  | z                   | + .228 (5.79)  | - .139 (3.53)  |
| T                                      | - .511 (12.98) | - .164 (4.17)  | AA                  | + .131 (3.33)  | - .233 (5.92)  |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.

MIL-STD-1560C  
w/CHANGE 1

| Contacts<br>(Insert arrangement 24-61) |               |               |                     |              |              |
|--|---------------|---------------|---------------------|--------------|--------------|
| Contact position ID                    | Location      |               | Contact position ID | Location     |              |
|  | X-axis (mm)   | Y-axis (mm)   |                     | X-axis (mm)  | Y-axis (mm)  |
| U                                      | -.536 (13.61) | -.030 (.76)   | BB                  | +.000 (.00)  | -.267 (6.78) |
| V                                      | -.527 (13.39) | +.101 (2.57)  | CC                  | -.131 (3.33) | -.233 (5.92) |
| W                                      | -.485 (12.32) | +.230 (5.84)  | DD                  | -.228 (5.79) | -.139 (3.53) |
| X                                      | -.413 (10.49) | +.343 (8.71)  | EE                  | -.267 (6.78) | -.010 (0.25) |
| Y                                      | -.314 (7.98)  | +.435 (11.05) | FF                  | -.237 (6.02) | +.122 (3.10) |
| Z                                      | -.196 (4.98)  | +.500 (12.70) | GG                  | -.147 (3.73) | +.223 (5.66) |
| <u>a</u>                               | -.068 (1.73)  | +.454 (11.53) | HH                  | +.000 (0.00) | +.200 (5.08) |
| <u>b</u>                               | +.068 (1.73)  | +.454 (11.53) | JJ                  | +.105 (2.67) | +.094 (2.39) |
| <u>c</u>                               | +.173 (4.39)  | +.363 (9.22)  | KK                  | +.135 (3.43) | -.041 (1.04) |
| <u>d</u>                               | +.285 (7.24)  | +.283 (7.19)  | LL                  | +.000 (0.00) | -.132 (3.35) |
| <u>e</u>                               | +.362 (9.19)  | +.175 (4.45)  | MM                  | -.135 (3.43) | -.041 (1.04) |
| <u>f</u>                               | +.399 (10.13) | +.046 (1.17)  | NN                  | -.105 (2.67) | +.094 (2.39) |
| <u>g</u>                               | +.392 (9.96)  | -.088 (2.24)  | PP                  | +.000 (0.00) | +.000 (0.00) |
| <u>h</u>                               | +.341 (8.66)  | -.213 (5.41)  | ---                 | ---          | ---          |

| Shell size | Arrangement no. | Number of contacts | Size contacts | Service rating | Contact location | Supersedes |
|------------|-----------------|--------------------|---------------|----------------|------------------|------------|
| 24         | -61             | 61                 | 20            | I              | All              | MS27351-61 |

FIGURE 18. Insert arrangement, electrical connector, shell size 24 (series II of MIL-DTL-38999 and series II of MIL-DTL-27599) – Continued.



MIL-STD-1560C  
w/CHANGE 1

CONCLUDING MATERIAL

Custodians:

Army – CR  
Navy – AS  
Air Force – 85  
DLA - CC

Preparing activity:

DLA - CC

(Project 5935–2016-145)

Review activities:

Army – AR, MI  
Navy – EC, MC, OS

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.