

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

AS39029/56

FEDERAL SUPPLY CLASS
5935

NOTICE

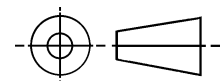
THIS DOCUMENT HAS BEEN TAKEN DIRECTLY FROM U.S. MILITARY SPECIFICATION MIL-C-39029/56E AND CONTAINS ONLY MINOR EDITORIAL AND FORMAT CHANGES REQUIRED TO BRING IT INTO CONFORMANCE WITH THE PUBLISHING REQUIREMENTS OF SAE TECHNICAL STANDARDS. THE INITIAL RELEASE OF THIS DOCUMENT IS INTENDED TO REPLACE MIL-C-39029/56E. ANY PART NUMBERS ESTABLISHED BY THE ORIGINAL SPECIFICATION REMAIN UNCHANGED.

THE ORIGINAL MILITARY SPECIFICATION WAS ADOPTED AS AN SAE STANDARD UNDER THE PROVISIONS OF THE SAE TECHNICAL STANDARDS BOARD (TSB) RULES AND REGULATIONS (TSB 001) PERTAINING TO ACCELERATED ADOPTION OF GOVERNMENT SPECIFICATIONS AND STANDARDS. TSB RULES PROVIDE FOR (A) THE PUBLICATION OF PORTIONS OF UNREVISED GOVERNMENT SPECIFICATIONS AND STANDARDS WITHOUT CONSENSUS VOTING AT THE SAE COMMITTEE LEVEL, AND (B) THE USE OF THE EXISTING GOVERNMENT SPECIFICATION OR STANDARD FORMAT.

UNDER DEPARTMENT OF DEFENSE POLICIES AND PROCEDURES, ANY QUALIFICATION REQUIREMENTS AND ASSOCIATED QUALIFIED PRODUCTS LISTS ARE MANDATORY FOR DOD CONTRACTS. ANY REQUIREMENT RELATING TO QUALIFIED PRODUCTS LISTS (QPL'S) HAS NOT BEEN ADOPTED BY SAE AND IS NOT PART OF THIS SAE TECHNICAL DOCUMENT.

SAENORM.COM : Click to view the full PDF of as39029 - 56

THIRD ANGLE PROJECTION



ISSUED 2000-07

PREPARED BY SAE SUBCOMMITTEE AE-8C1

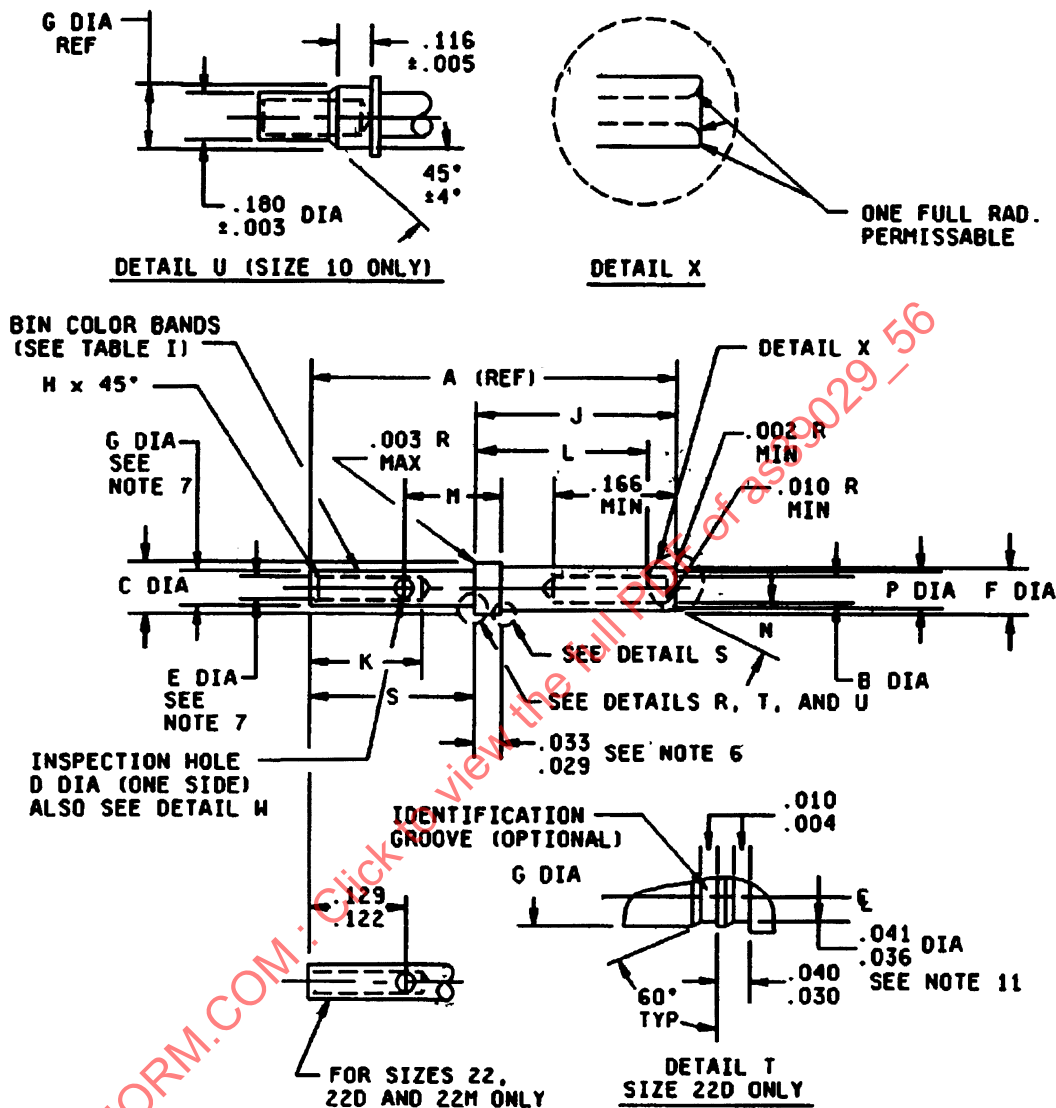
SAE The Engineering Society
For Advancing Mobility
INTERNATIONAL
Land Sea Air and Space®
400 Commonwealth Drive, Warrendale, PA 15096-0001

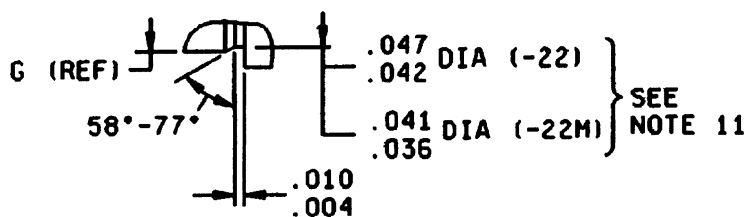
AEROSPACE STANDARD

CONTACTS, ELECTRICAL CONNECTOR, SOCKET,
CRIMP REMOVABLE (FOR MIL-C-38999 SERIES I,
III, AND IV CONNECTORS)

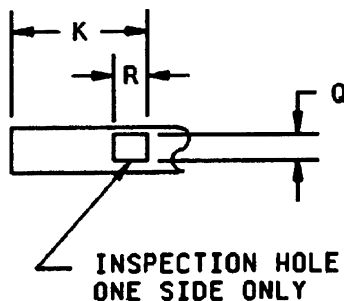
AS39029/56
SHEET 1 OF 7

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) SPECIFIED IN THE SOLICITATION: MIL-C-39029.

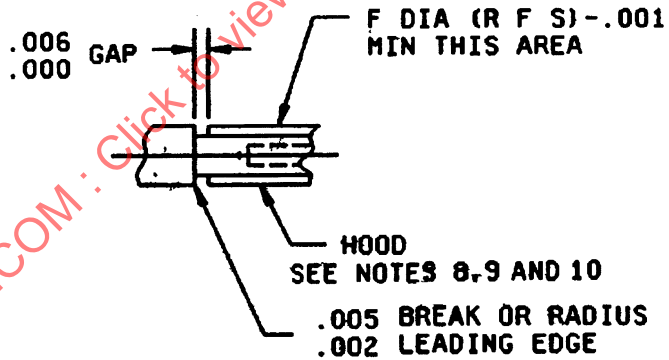




DETAIL R
SIZES 22, 22M ONLY



DETAIL W
(OPTIONAL DESIGN)



DETAIL S (ALL SIZES)

FIGURE 1. CONNECTOR CONTACT - CONTINUED.

| BIN code | A (REF) | B dia (min) | C dia | D dia | E dia | F dia (max) | G dia | H | J | K min | L min (note 5) | M | N° | P dia (min) | Q | R | S |
|--------------|---------|-------------|-------|-------|-------|-------------|-------|------|------|-------|----------------|------|----------|-------------|------|------|------|
| 348 | .855 | .031 | .062 | .022 | .0355 | .062 | .048 | .005 | .626 | .141 | .585 | --- | 50° | .047 | .022 | .046 | .237 |
| | | | .060 | .018 | .0335 | | .046 | .003 | | | | | 44° | | .018 | .018 | .231 |
| 349 (note 2) | | .031 | .062 | .022 | .029 | .062 | .046 | .005 | | .141 | | --- | 50° | .047 | | | |
| | | | .060 | .018 | .027 | | .044 | .003 | | | | | 44° | | | | |
| 350 (note 2) | | .031 | .071 | .022 | .0375 | .062 | .052 | .005 | | .141 | | --- | 50° | .047 | | | |
| | | | .069 | .018 | .0355 | | .050 | .003 | | | | | 44° | | | | |
| 351 | .855 | .0415 | .094 | .032 | .048 | .078 | .070 | .010 | .616 | .209 | .585 | .078 | 47° | .053 | .032 | .063 | |
| | | | | .026 | .046 | | .068 | .005 | | | | .072 | 40° | | .026 | .026 | |
| | | | .091 | | | | | | | | | | | | | | |
| 352 | | .064 | .130 | .042 | .068 | .113 | .103 | .010 | | .209 | | .088 | 47° | .084 | .042 | .073 | |
| | | | | .036 | .066 | | .101 | .005 | | | | .082 | 40° | | .030 | .036 | |
| | | | .127 | | | | | | | | | | | | | | |
| 353 | .855 | .0955 | .182 | .042 | .102 | .161 | .151 | .016 | .616 | .209 | .585 | .088 | 47° | .118 | .042 | .073 | |
| | | | .179 | .036 | .098 | | .148 | .005 | | | | .082 | 40° | | .030 | .036 | |
| | | | | | | | | | | | | | | | | | |
| 527 | | 1.021 | .1265 | .242 | .052 | .140 | .215 | .213 | | .385 | | .115 | NA | .146 | NA | NA | .405 |
| | | | | .238 | .046 | .134 | | .207 | | .355 | | .108 | (note 3) | (note 3) | | | .395 |
| | | | | | | | | | | | | | | | | | |

NOTES:

1. Dimensions are in inches.
2. Inactive for new design.
3. Full radius permissible.
4. Dimensions shown apply after plating.
5. Point at which a square ended pin of the same basic diameter as the mating contact first engages the socket contact spring.
6. Indicated dimension does not apply for -348 and -349.
7. For -348 only, diameters E and G to be concentric within .003 (TIR) regardless of feature size (RFS); for all other contact sizes, diameters E and G to be concentric within .001 (TIR) at maximum material condition (MMC).
8. The mechanical pressure member shall be shrouded. Hoods, if used, shall conform to the requirements specified herein.
9. Hoods shall not exceed contact body diameter regardless of feature size (RFS) in attachment area.
10. Optional design may have a full length corrosion resistant steel hood.
11. Concentric to G dia within .003 TIR (RFS).

FIGURE 1. CONNECTOR CONTACT - CONTINUED.

REQUIREMENTS:

Dimensions, design characteristics, and configuration: See figure 1 and table I.

Tools: See table II.

TABLE I. DESIGN CHARACTERISTICS.

| BIN code | Color bands | | | Mating end size | Wire barrel size | Type | Class |
|----------|-------------|--------|--------|-----------------|------------------|------|-------|
| | 1st | 2nd | 3rd | | | | |
| 348 | Orange | Yellow | Gray | 22 | 22D | A | B |
| 349 1/ | Orange | Yellow | White | 22 | 22M | | |
| 350 1/ | Orange | Green | Black | 22 | 22 | | |
| 351 | Orange | Green | Brown | 20 | 20 | | |
| 352 | Orange | Green | Red | 16 | 16 | | |
| 353 | Orange | Green | Orange | 12 | 12 | | |
| 527 | Green | Red | Violet | 10 | 10 | | |

1/ Inactive for new design.

TABLE II. TOOLS.

| BIN code | Basic crimping tool | Positioner | Installing tool | Removal tool |
|----------|---|--|--------------------------------|--------------------------------|
| 348 | M22520/2-01 M22520/7-01 | M22520/2-07 M22520/7-05 | M81969/14-01 M81969/8-01 | M81969/14-01 M81969/8-02 |
| 349 | M22520/2-01 M22520/7-01 | M22520/2-07 M22520/7-05 | M81969/8-01 M81969/14-01 | M81969/8-02 M81969/14-01 |
| 350 | M22520/2-01 M22520/7-01 | M22520/2-07 M22520/7-05 | M81969/8-03 | M81969/8-04 |
| 351 | M22520/7-01 M22520/2-01 M22520/1-01 | M22520/7-08 M22520/2-10 M22520/1-04 Red | M81969/8-05 M81969/14-02 | M81969/8-06 M81969/14-02 |
| 352 | M22520/1-01 M22520/7-01 | M22520/1-04 Blue M22520/7-04 | M81969/8-07 M81969/14-03 | M81969/8-08 M81969/14-03 |
| 353 | M22520/1-01 | M22520/1-04 Yellow | M81969/8-09 M81969/14-04 | M81969/8-10 M81969/14-04 |
| 527 | M22520/XX 1/ | M22520/XX 1/ | M81969/8-XX 1/ M81969/14-05 | M81969/8-YY 1/ M81969/14-05 |

1/ To be determined.

Random vibration: Connectors shall be subjected to the test specified in test condition V, method 2005 of MIL-STD-1344. The following details shall apply:

- Use the vibration envelope shown on figure 2.
- Vibration to be conducted at standard test conditions.
- Duration shall be 8 hours in the longitudinal direction and 8 hours in a perpendicular direction for a total of 16 hours.