

REV.  
A

SAE AS39029/44

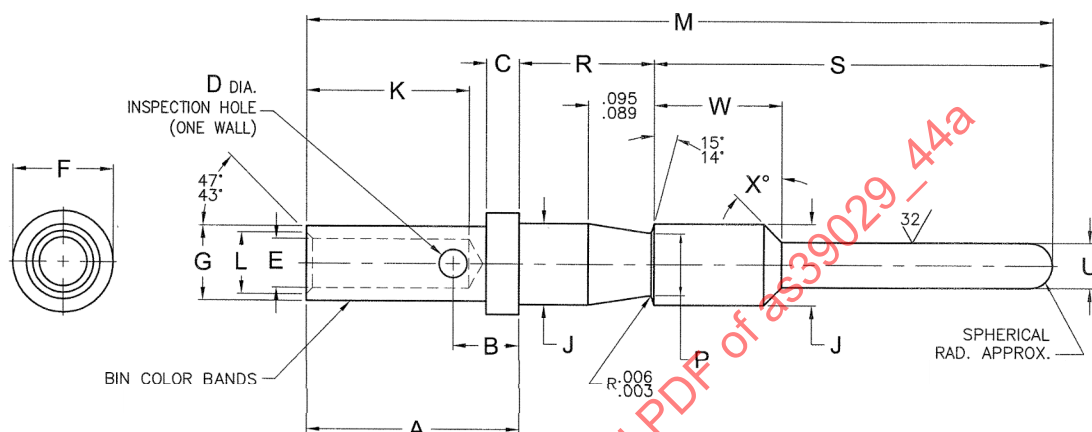
FEDERAL SUPPLY CLASS  
5999

## RATIONALE

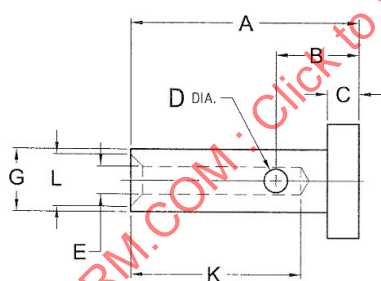
REVISE TO INCLUDE COMMENTS RECEIVED BY THE GOVERNMENT AND INDUSTRY SINCE 1988, INCORPORATES VARIOUS AMENDMENTS, CORRECT THE "W" DIMENSION, REMOVE GOVERNMENT JARGON AS A RESULT OF THE WORD-FOR-WORD TRANSFERENCE OF AS39029 TO SAE, UPDATE SPECIFICATION REFERENCES, AND ALIGN SPECIFICATIONS WITH SAE GUIDELINES.

## NOTICE

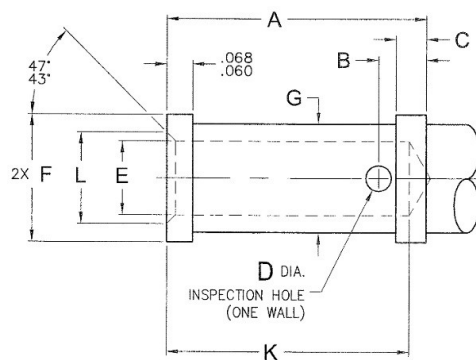
THE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE LATEST ISSUE OF: SAE AS39029.



PIN INTERFACE DESIGN FOR ALL BIN CODES  
WIRE BARREL DESIGN FOR BIN CODES 288 THRU 290 (SIZES 16 AND 12 CONTACTS)



WIRE BARREL DESIGN  
BIN CODE 287 (16-22)

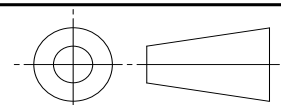


WIRE BARREL DESIGN  
BIN CODES 291-293 (SIZES 8, 4, 0)

FIGURE 1 - PIN CONTACT

SAE values your input. To provide feedback  
on this Technical Report, please visit  
<http://www.sae.org/technical/standards/AS39029/44a>

THIRD ANGLE PROJECTION



CUSTODIAN: SAE AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029

**SAE Aerospace**  
An SAE International Group

## AEROSPACE STANDARD

(R) CONTACTS, ELECTRICAL CONNECTOR, PIN,  
CRIMP REMOVABLE (FOR MIL-DTL-5015 SERIES  
MS3400 CONNECTORS)

SAE AS39029/44  
SHEET 1 OF 4

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TABLE 1 - CONTACT D SIZE DIMENSIONS

| BIN Code | E Dia            | F Dia                                | J Dia          | M Ref            | P Dia          | R              | S              | U Dia            | W              | X*       | A              | B              | C              | D Dia          | G Dia          | K              | L              |
|----------|------------------|--------------------------------------|----------------|------------------|----------------|----------------|----------------|------------------|----------------|----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 287      | 0.0355<br>0.0335 | 0.148<br>(3.76)                      | 0.113          | 1.159            | 0.087          |                | 0.694<br>0.684 | 0.0635<br>0.0615 |                |          | 0.285<br>0.280 | 0.106<br>0.100 | 0.042<br>0.036 | 0.032<br>0.026 | 0.078<br>0.076 | 0.216<br>0.206 | 0.067<br>0.061 |
| 288      | 0.068<br>0.066   | 0.133<br>(3.38)                      | 0.110          | 1.172<br>(29.77) | 0.083          |                |                |                  |                |          | 0.298<br>0.294 | 0.079<br>0.073 |                | 0.042<br>0.036 | 0.105<br>0.101 | 0.281<br>0.250 | 0.090<br>0.080 |
| 289      |                  | 0.202<br>(5.13)                      | 0.161<br>0.158 | 1.360<br>(34.54) | 0.135<br>0.131 |                |                | 0.095<br>0.093   | 0.183<br>0.173 | 50<br>40 |                |                |                |                |                |                |                |
| 290      | 0.102<br>0.098   | 0.189                                |                |                  |                | 0.189<br>0.185 | 0.882<br>0.872 |                  |                |          |                |                |                |                |                |                |                |
| 291      | 0.184<br>0.179   | 0.313<br>(7.95)<br>0.309<br>(7.85)   | 0.252<br>0.249 |                  | 0.225<br>0.221 |                |                | 0.143<br>0.141   |                |          |                |                |                |                | 0.269<br>0.263 |                | 0.230<br>0.220 |
| 292      | 0.286<br>0.279   | 0.419<br>(10.64)<br>0.409<br>(10.39) | 0.336<br>0.333 | 1.579<br>(40.11) | 0.310<br>0.307 |                |                | 0.226<br>0.224   |                |          | 0.520<br>0.510 | 0.094<br>0.084 |                | 0.048<br>0.044 | 0.269<br>0.263 | 0.534<br>0.480 | 0.230<br>0.220 |
| 293      | 0.458<br>0.451   | 0.611<br>(15.52)<br>0.601<br>(15.27) | 0.518<br>0.515 | 1.733<br>(44.02) | 0.492<br>0.489 | 0.253<br>0.249 | 0.817<br>0.807 |                  | 0.118<br>0.108 | 32<br>28 |                |                |                | 0.066<br>0.060 | 0.380<br>0.370 |                | 0.364<br>0.354 |
|          |                  |                                      |                |                  |                |                |                | 0.358<br>0.356   |                |          | 0.675<br>0.665 |                |                |                | 0.568<br>0.558 | 0.690<br>0.636 | 0.542<br>0.532 |

TABLE 2 - MARKING AND DESIGN CHARACTERISTICS

| BIN Codes | Color Bands |       |        | Mating End Size | Wire Barrel Size | Type Size | Class |
|-----------|-------------|-------|--------|-----------------|------------------|-----------|-------|
|           | 1st         | 2nd   | 3rd    |                 |                  |           |       |
| 287       | Red         | Gray  | Violet | 16              | 22               | A         | B     |
| 288       | Red         | Gray  | Gray   | 16              | 16               |           |       |
| 289       | Red         | Gray  | White  | 12              | 16               |           |       |
| 290       | Red         | White | Black  | 12              | 12               |           |       |
| 291       | Red         | White | Brown  | 8               | 8                |           |       |
| 292       | Red         | White | Red    | 4               | 4                |           |       |
| 293       | Red         | White | Orange | 0               | 0                |           |       |

1/ BIN 289 SHALL MEET ALL APPLICABLE TEST REQUIREMENTS FOR SIZE 12-14

TABLE 3 - TOOL REQUIREMENTS

| BIN CODE  | BASIC CRIMPING TOOL | DIE SET      | LOCATOR      | POSITIONER            | INSTALLING TOOL | REMOVAL TOOL |
|-----------|---------------------|--------------|--------------|-----------------------|-----------------|--------------|
| 287<br>1/ | M22520/1-01         | ---          | ---          | M22520/1-02<br>BLUE   | M81969/17-09    | M81969/19-01 |
| 288       | M22520/1-01         | ---          | ---          | M22520/1-02<br>BLUE   | M81969/17-04    | M81969/19-01 |
| 289       | M22520/1-01         | ---          | ---          | M22520/1-02<br>YELLOW | M81969/17-04    | M81969/19-02 |
| 290       | M22520/1-01         | ---          | ---          | M22520/1-02<br>YELLOW | M81969/17-05    | M81969/19-02 |
| 291       | M22520/23-01        | M22520/23-02 | M22520/23-09 | ---                   | M81969/17-06    | M81969/19-03 |
| 292       | M22520/23-01        | M22520/23-04 | M22520/23-11 | ---                   | M81969/17-07    | M81969/19-04 |
| 293       | M22520/23-01        | M22520/23-05 | M22520/23-13 | ---                   | M81969/17-08    | M81969/19-05 |

1/ USED SELECTOR NUMBER 3, 2, 1 FOR WIRE SIZE 22, 24, 26 RESPECTIVELY

TABLE 4 - PART NUMBERS

| AS39029<br>PART NUMBER | BIN<br>CODE | SUPERSEDED<br>PART NUMBER(S) |
|------------------------|-------------|------------------------------|
| M39029/44-287          | 287         | MS90453-16-22                |
| M39029/44-288          | 288         | MS90453-16-16                |
| M39029/44-289          | 289         | MS90453-12-16                |
| M39029/44-290          | 290         | MS90453-12-12                |
| M39029/44-291          | 291         | MS90453-8-8                  |
| M39029/44-292          | 292         | MS90453-4-4                  |
| M39029/44-293          | 293         | MS90453-0-0                  |

## DETAIL SPECIFICATION REQUIREMENTS:

## 1. DESIGN:

CONTACT SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1, TABLE 1 AND 2. DIMENSIONS ARE IN INCHES AND SHOWN AFTER PLATING. UNLESS OTHERWISE SPECIFIED, SPHERICAL END DIMENSIONS SHALL CONFORM TO AS39029. ALL DIMENSIONS IN PARENTHESES ARE METRIC EQUIVALENTS AND PROVIDED FOR GENERAL INFORMATION ONLY (SEE AS39029 SECTION 6).

## 2. TOOLS:

TOOLS REQUIRED FOR CRIMPING CONTACTS TO WIRE/CABLE AND THE INSTALLING/REMOVAL FROM THE CONNECTOR SHALL BE IN ACCORDANCE WITH TABLE 3.

|                                                                                                                   |                                                                                                            |  |                                       |                         |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|--|---------------------------------------|-------------------------|
| <br>An SAE International Group | <b>AEROSPACE STANDARD</b>                                                                                  |  | <b>SAE AS39029/44</b><br>SHEET 3 OF 4 | <b>REV.</b><br><b>A</b> |
|                                                                                                                   | (R) CONTACTS, ELECTRICAL CONNECTOR, PIN,<br>CRIMP REMOVABLE (FOR MIL-DTL-5015 SERIES<br>MS3400 CONNECTORS) |  |                                       |                         |