

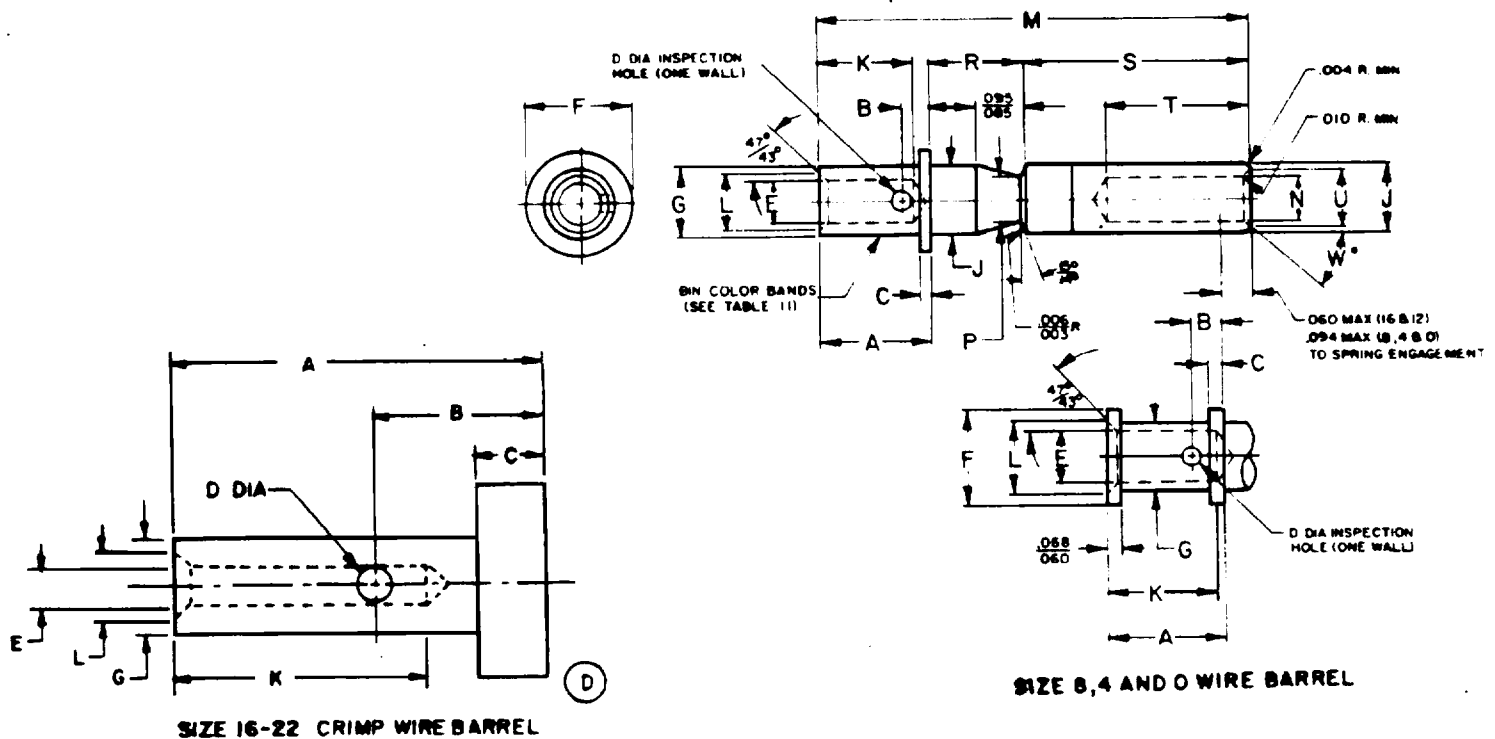
MIL-C-39029/45D  
15 November 1988  
~~SUPERSEDED~~  
MIL-C-39029/45C  
9 April 1987

# MILITARY SPECIFICATION SHEET

## CONTACTS, ELECTRICAL CONNECTOR, SOCKET, CRIMP REMOVABLE (FOR MIL-C-5015 SERIES MS3400 CONNECTORS)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the contacts described herein shall consist of this document and the latest issue of specification MIL-C-39029.



### NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Metric equivalents are in parentheses for overall length and diameter only.
4. Dimensions shown apply after plating.
5. Manufacturers are permitted to supply MIL-C-39029/45A size 16-22 contacts until 15 May 1989 or deplete their inventory, whichever comes first.

(D) Denotes changes.

AMSC N/A

FSC 5935

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

TABLE I. Dimensions.

| BIN Code | (D) E Dia    | F Dia                              | J Dia        | M Ref            | N Dia        | P Dia        | R            | S            | T Min | U Min | W°       | A            | B            | C            | D Dia        | G Dia        | K            | L            |
|----------|--------------|------------------------------------|--------------|------------------|--------------|--------------|--------------|--------------|-------|-------|----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 294      | .0355        | .118<br>(3.76)                     | .113         | 1.272            | .064<br>1/   | .087         |              |              | .510  | .086  |          | .285<br>.280 | .106<br>.100 | .042<br>.036 | .032<br>.026 | .078<br>.076 | .206<br>.216 | .067<br>.061 |
| 295      | .0335        | .133<br>(3.33)                     | .110         |                  |              | .083         |              |              |       |       |          | .296<br>.294 |              |              |              |              |              |              |
| 296      | .068<br>.066 |                                    |              | 1.286<br>(32.66) | .0955<br>1/  | .135<br>.131 | .169<br>.165 | .808<br>.798 |       |       | 53<br>43 |              | .079<br>.073 | .042<br>.036 | .042<br>.036 | .105<br>.101 | .281<br>.250 | .090<br>.080 |
| 297      | .102<br>.098 | .202<br>(5.13)<br>.199<br>(4.60)   | .161<br>.158 |                  |              |              |              |              | .625  | .125  |          |              |              | .046<br>.044 |              | .153<br>.147 |              | .125<br>.115 |
| 298      | .184<br>.179 | .313<br>(7.95)<br>.309<br>(7.85)   | .252<br>.249 | 1.505<br>(38.23) | .149<br>.145 | .225<br>.221 |              |              |       | .193  |          | .520<br>.510 | .094<br>.084 |              | .066<br>.060 | .269<br>.263 | .534<br>.480 | .230<br>.220 |
| 299      | .286<br>.279 | .419<br>(10.64)<br>.409<br>(10.39) | .336<br>.333 |                  | .232<br>.228 | .310<br>.307 | .253<br>.249 | .744<br>.734 |       | .280  | 31<br>29 |              |              |              |              | .380<br>.370 |              | .364<br>.354 |
| 300      | .453<br>.451 | .611<br>(15.52)<br>.601<br>(15.27) | .518<br>.515 | 1.660<br>(42.16) | .364<br>.360 | .492<br>.489 | .249         | .734         |       | .386  |          | .675<br>.665 |              |              |              | .568<br>.558 | .690<br>.636 | .542<br>.532 |

## MIL-C-39029/45D

| INCH  | mm   | INCH | mm   | INCH | mm    | INCH  | mm    |
|-------|------|------|------|------|-------|-------|-------|
| .026  | .66  | .098 | 2.49 | .230 | 5.84  | .419  | 10.64 |
| .029  | .74  | .101 | 2.57 | .232 | 5.89  | .451  | 11.46 |
| .032  | .81  | .102 | 2.59 | .249 | 6.33  | .458  | 11.63 |
| .033  | .84  | .105 | 2.67 | .250 | 6.35  | .480  | 12.19 |
| .036  | .91  | .110 | 2.74 | .252 | 6.40  | .489  | 12.42 |
| .042  | .61  | .113 | 2.79 | .253 | 6.43  | .492  | 12.50 |
| .044  | 1.12 | .115 | 2.92 | .263 | 6.68  | .510  | 12.95 |
| .048  | 1.22 | .125 | 3.18 | .269 | 6.83  | .515  | 13.08 |
| .050  | 1.27 | .131 | 3.33 | .279 | 7.09  | .518  | 13.16 |
| .057  | 1.45 | .133 | 3.38 | .280 | 7.11  | .520  | 13.21 |
| .060  | 1.52 | .135 | 3.43 | .281 | 7.14  | .532  | 13.51 |
| .063  | 1.6  | .145 | 3.68 | .286 | 7.26  | .534  | 13.56 |
| .064  | 1.63 | .147 | 3.73 | .294 | 7.47  | .542  | 13.77 |
| .066  | 1.68 | .148 | 3.76 | .298 | 7.57  | .558  | 14.17 |
| .068  | 1.73 | .149 | 3.78 | .307 | 7.80  | .568  | 14.43 |
| .070  | 1.78 | .153 | 3.89 | .309 | 7.85  | .601  | 15.27 |
| .073  | 1.85 | .158 | 4.01 | .310 | 7.87  | .611  | 15.52 |
| .076  | 1.93 | .161 | 4.09 | .313 | 7.95  | .625  | 15.88 |
| .078  | 1.98 | .179 | 4.55 | .333 | 8.46  | .636  | 16.15 |
| .079  | 2.00 | .184 | 4.67 | .336 | 8.53  | .690  | 17.53 |
| .083  | 2.11 | .185 | 4.70 | .354 | 8.99  | .734  | 18.64 |
| .084  | 2.13 | .189 | 4.80 | .360 | 9.14  | .744  | 18.90 |
| .086  | 2.18 | .193 | 4.90 | .364 | 9.25  | .798  | 20.27 |
| .087  | 2.21 | .202 | 5.13 | .370 | 9.40  | .808  | 20.52 |
| .090  | 2.29 | .220 | 5.59 | .380 | 9.65  | 1.286 | 32.66 |
| .094  | 2.39 | .225 | 5.72 | .386 | 9.80  | 1.505 | 38.23 |
| .0955 | 2.43 | .228 | 5.74 | .409 | 10.39 | 1.660 | 42.16 |

TABLE II. Design characteristics.

| BIN<br>Code       | Color Bands |       |        | Mating<br>End<br>Size | Wire<br>Barrel<br>Size | Type<br>Size | Class |
|-------------------|-------------|-------|--------|-----------------------|------------------------|--------------|-------|
|                   | 1st         | 2nd   | 3rd    |                       |                        |              |       |
| 294               | Red         | White | Yellow | 16                    | 22                     | A            | B     |
| 295               | Red         | White | Green  | 16                    | 16                     |              |       |
| 296 <sup>1/</sup> | Red         | White | Blue   | 12                    | 16                     |              |       |
| 297               | Red         | White | Violet | 12                    | 12                     |              |       |
| 298               | Red         | White | Gray   | 8                     | 8                      |              |       |
| 299               | Red         | White | White  | 4                     | 4                      |              |       |
| 300               | Orange      | Black | Black  | 0                     | 0                      |              |       |

<sup>1/</sup> 296 shall meet all applicable test requirements for size 12-14 in MIL-C-39029.

TABLE III. Tools.

| BIN Code | Basic Crimping Tool | Die Set      | Locator      | Positioner         | Installing Tool | Removal Tool |
|----------|---------------------|--------------|--------------|--------------------|-----------------|--------------|
| 294      | M22520/1-01         | ---          | ---          | M22520/1-02 Blue   | M81969/17-09    | M81969/19-01 |
| 295      | M22520/1-01         | ---          | ---          | M22520/1-02 Blue   | M81969/17-01    | M81969/19-01 |
| 296      | M22520/1-01         | ---          | ---          | M22520/1-02 Yellow | M81969/17-02    | M81969/19-02 |
| 297      | M22520/1-01         | ---          | ---          | M22520/1-02 Yellow | M81969/17-02    | M81969/19-02 |
| 298      | M22520/23-01        | M22520/23-02 | M22520/23-09 | ---                | M81969/17-06    | M81969/19-03 |
| 299      | M22520/23-01        | M22520/23-04 | M22520/23-11 | ---                | M81969/17-07    | M81969/19-04 |
| 300      | M22520/23-01        | M22520/23-05 | M22520/23-13 | ---                | M81969/17-08    | M81969/19-05 |

TABLE IV. Size 16-22 crimp wire barrel selector data.

| <u>Wire Size</u> | <u>Selector No.</u> |
|------------------|---------------------|
| 22               | 3                   |
| 24               | 2                   |
| 26               | 1                   |

## REQUIREMENTS:

Dimensions, design characteristics and configuration: See figure and Tables I and II.

Tools: See Table III.

Vibration: Method 2005 of MIL-STD-1344A, test condition III; following the test the contacts shall be tested for endurance in accordance with MIL-STD-167-1 (SHIPS).

Shock (specified pulse): Method 2004 of MIL-STD-1344, test condition A.

Mating contact: MIL-C-39029/44.

QPL evaluating activity: Naval Avionics Center, Code B-714, Indianapolis, IN 46219-2189.

International interest: NEPR 57.

Military part number: See Table IV.

TABLE V. Military part number.

| BIN Code | Military Part Number | Supersedes    |
|----------|----------------------|---------------|
| 294      | M39029/45-294        | MS90454-16-22 |
| 295      | M39029/45-295        | MS90454-16-16 |
| 296      | M39029/45-296        | MS90454-12-16 |
| 297      | M39029/45-297        | MS90454-12-12 |
| 298      | M39029/45-298        | MS90454-8-8   |
| 299      | M39029/45-299        | MS90454-4-4   |
| 300      | M39029/45-300        | MS90454-0-0   |

## Custodians:

Army - CR  
 Navy - AS  
 Air Force - 85

## Preparing activity:

Navy - AS  
 (Project No. 5935-3719-02)

## Review activities:

Army - MU, MI  
 Navy - EC, MC  
 Air Force - 11, 99  
 DLA - ES

## User activities:

Navy - SH