

INCH - POUND

MS20029G  
31 August 2010  
SUPERSEDING  
MS20029F  
20 May 2005

## DETAIL SPECIFICATION SHEET

CONNECTORS, RECEPTACLE, ELECTRICAL, JAM NUT MOUNTING,  
SOLDER TYPE, BAYONET COUPLING, CLASS P, SERIES I

Inactive for new design after 7 December 1998.

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

The requirements for acquiring the product described herein  
shall consist of this specification sheet and MIL-DTL-27599.

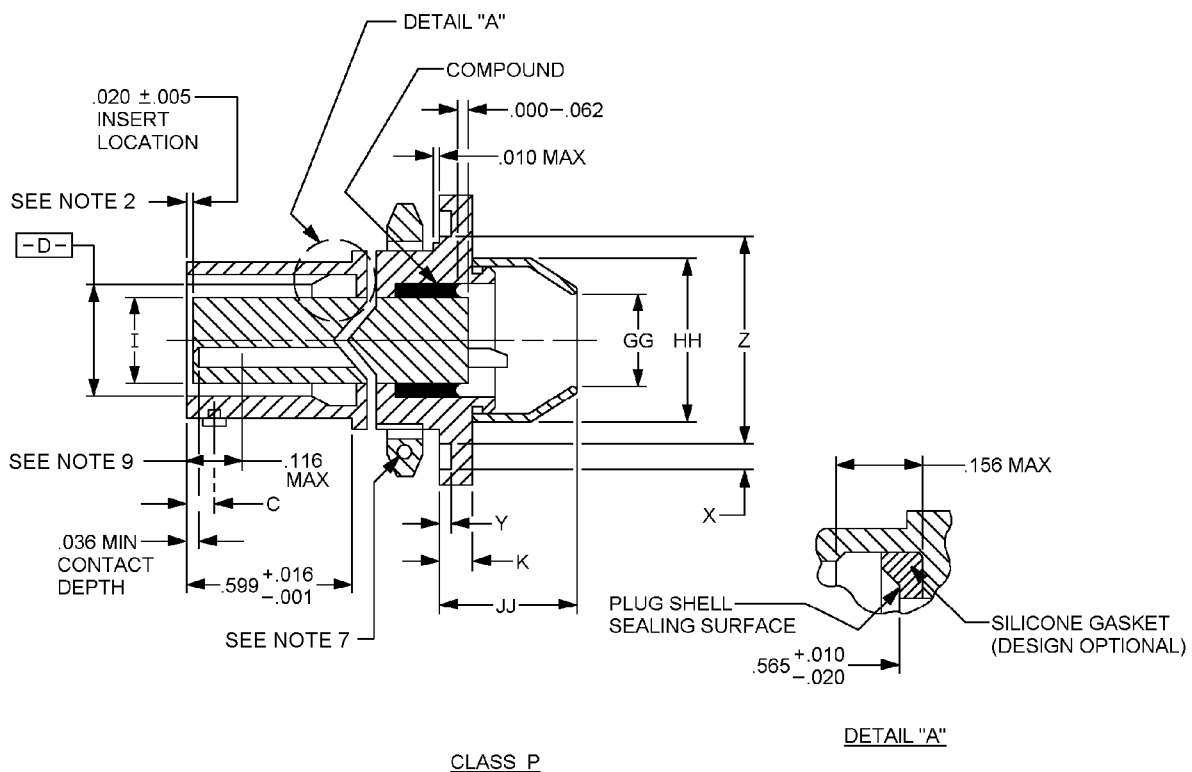
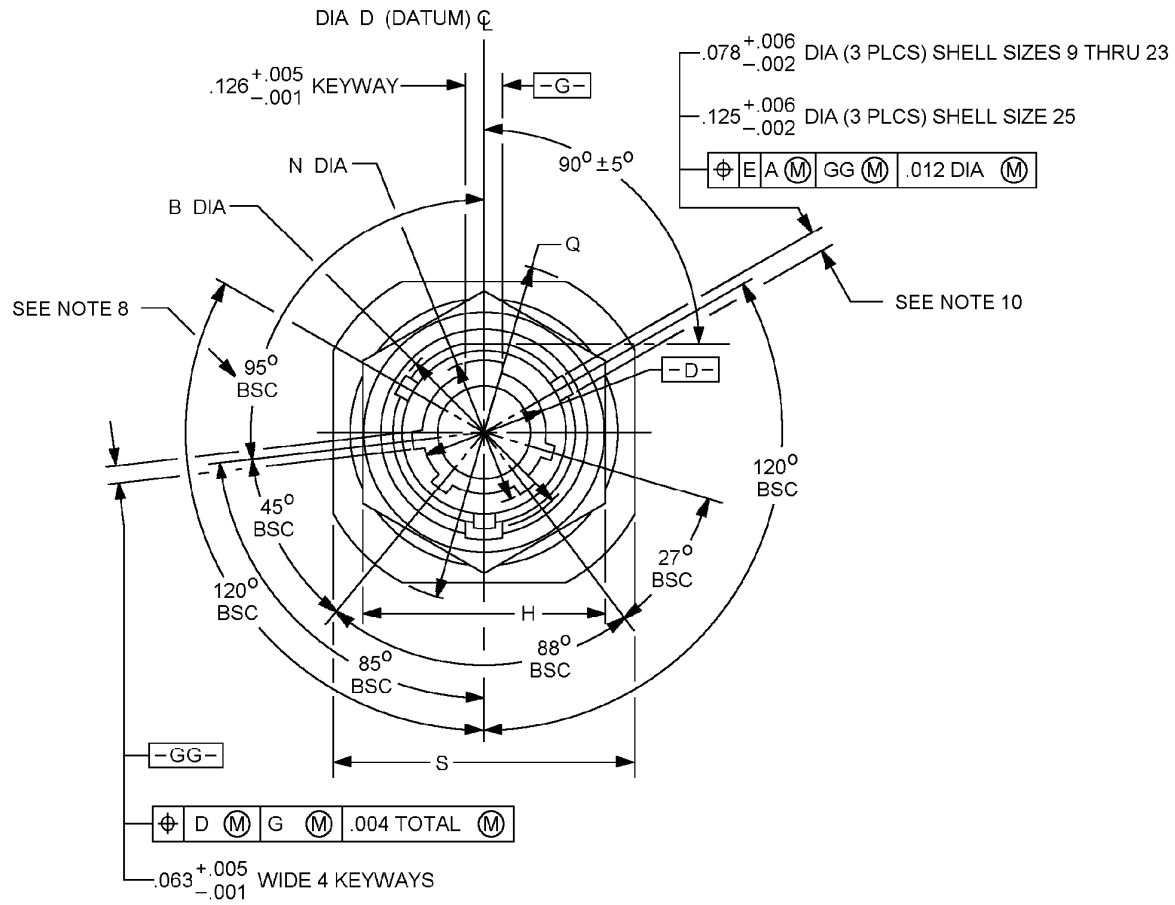


FIGURE 1. Receptacle, jam nut mounting.

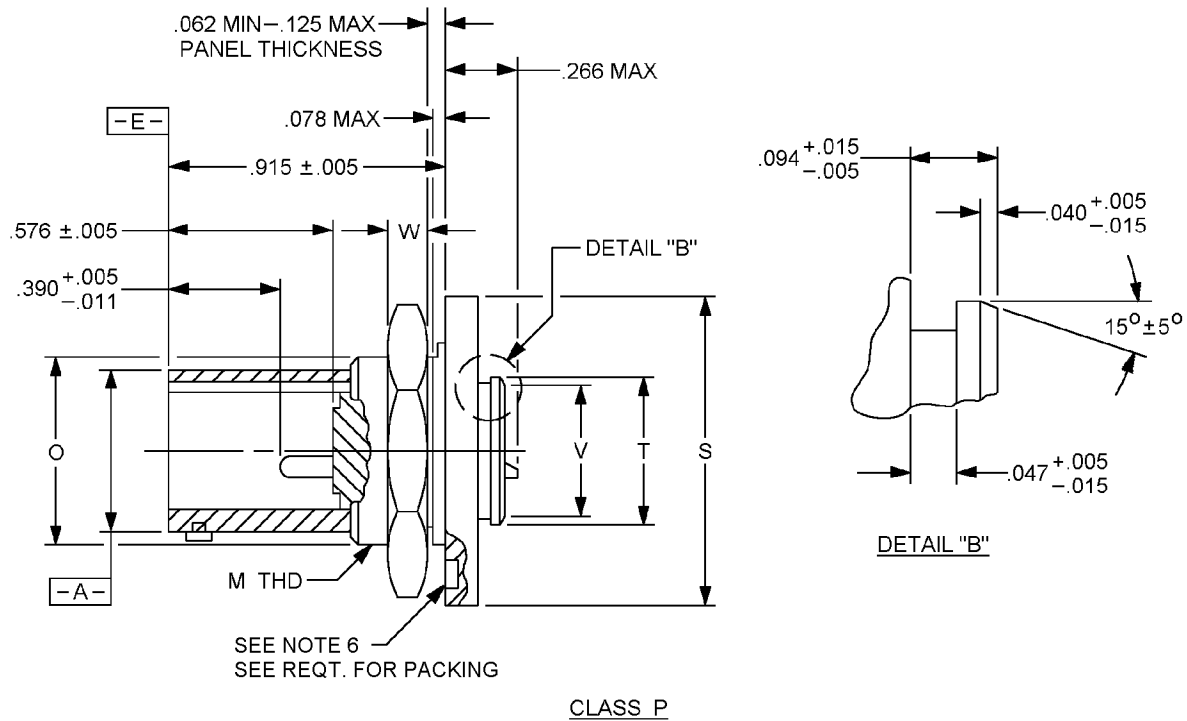
MS20029G



CLASS P

FIGURE 1. Receptacle, jam nut mounting - Continued.

MS20029G



NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only.
2. Insert front surface shall be flat within .005 T.I.R.
3. Diameters A, D, M, Q and Z shall be concentric within .015 T.I.R.
4. Diameters D and I shall be concentric within .005 T.I.R. at MMC.
5. Diameter A with respect to diameter B, and diameter D with respect to diameter N, shall be concentric at MMC.
6. Sides of groove may have 5° max taper.
7. .062 ± .005 dia., 3 lockwire holes, shell sizes 9 through 25.
8. Normal keyway position. For other keyway positions, see MIL-DTL-27599.
9. The point at which a gauge pin having the same basic diameter as the mating contact and a square face, touches socket contact spring.
10. The gauge features for GG shall be CC smaller than their MMC size.

FIGURE 1. Receptacle, jam nut mounting - Continued.

MS20029G

| Inches | mm     | Inches | mm   | Inches | mm   | Inches | mm    |
|--------|--------|--------|------|--------|------|--------|-------|
| 0.001  | 0.0254 | 0.016  | 0.40 | 0.078  | 1.98 | 0.390  | 9.90  |
| 0.002  | 0.051  | 0.020  | 0.51 | 0.094  | 2.39 | 0.565  | 14.35 |
| 0.005  | 0.127  | 0.036  | 0.91 | 0.116  | 2.95 | 0.576  | 14.63 |
| 0.006  | 0.152  | 0.040  | 1.02 | 0.125  | 3.17 | 0.599  | 15.21 |
| 0.010  | 0.254  | 0.047  | 1.19 | 0.126  | 3.20 | 0.915  | 23.24 |
| 0.011  | 0.28   | 0.062  | 1.57 | 0.156  | 3.96 |        |       |
| 0.015  | 0.38   | 0.063  | 1.60 | 0.266  | 6.76 |        |       |

FIGURE 1. Receptacle, jam nut mounting - Continued.

TABLE I. Dimensions. 1/ 2/

| Shell Size | A dia<br>+ .001<br>- .005 | B dia<br>+ .000<br>- .016 | C<br>BSC           | D dia<br>+ .005<br>- .001 | H<br>hex<br>+ .017<br>- .016 | I dia<br>± .005  | CC                 |
|------------|---------------------------|---------------------------|--------------------|---------------------------|------------------------------|------------------|--------------------|
| 9          | .572<br>(14.53)           | .662<br>(16.81)           | .100<br><br>(2.54) | .442<br>(11.22)           | .875<br>(22.22)              | .296<br>(7.52)   | .010<br><br>(.254) |
| 11         | .700<br>(17.78)           | .810<br>(20.57)           |                    | .570<br>(14.48)           | 1.000<br>(25.40)             | .413<br>(10.50)  |                    |
| 13         | .850<br>(21.60)           | .960<br>(24.38)           |                    | .687<br>(17.45)           | 1.188<br>(30.17)             | .527<br>(13.38)  |                    |
| 15         | .975<br>(24.76)           | 1.085<br>(27.56)          |                    | .812<br>(20.62)           | 1.312<br>(33.32)             | .652<br>(16.56)  |                    |
| 17         | 1.100<br>(27.94)          | 1.210<br>(30.73)          |                    | .937<br>(23.80)           | 1.438<br>(36.52)             | .777<br>(19.73)  |                    |
| 19         | 1.207<br>(30.65)          | 1.317<br>(33.45)          |                    | 1.042<br>(26.46)          | 1.562<br>(39.67)             | .866<br>(22.00)  |                    |
| 21         | 1.332<br>(33.83)          | 1.442<br>(36.62)          |                    | 1.167<br>(29.64)          | 1.688<br>(42.87)             | .991<br>(25.17)  |                    |
| 23         | 1.457<br>(37.01)          | 1.567<br>(39.80)          |                    | 1.292<br>(32.81)          | 1.812<br>(46.02)             | 1.116<br>(28.34) |                    |
| 25         | 1.582<br>(40.18)          | 1.692<br>(42.97)          | .109<br>(2.77)     | 1.417<br>(35.60)          | 2.000<br>(50.80)             | 1.241<br>(31.52) |                    |

See notes at end of table.

## MS20029G

TABLE I. Dimensions - Continued. 1/ 2/

| Shell size | K<br>+ .011<br>- .010 | M Thread<br>class 2A,<br>plated, UNEF | N dia<br>+ .005<br>- .006 | O<br>+ .000<br>- .010 | Q dia<br>± .016  | S<br>± .016      |
|------------|-----------------------|---------------------------------------|---------------------------|-----------------------|------------------|------------------|
| 9          | .109<br>(2.77)        | .6875 - 24                            | .492<br>(12.50)           | .655<br>(16.64)       | 1.188<br>(30.17) | 1.062<br>(26.97) |
| 11         |                       | .8125 - 20                            | .620<br>(15.75)           | .755<br>(19.17)       | 1.375<br>(34.92) | 1.250<br>(31.75) |
| 13         |                       | 1.0000 - 20                           | .769<br>(19.53)           | .942<br>(23.92)       | 1.500<br>(38.10) | 1.375<br>(34.92) |
| 15         |                       | 1.1250 - 18                           | .894<br>(22.70)           | 1.066<br>(27.07)      | 1.625<br>(41.27) | 1.500<br>(38.10) |
| 17         |                       | 1.2500 - 18                           | 1.019<br>(25.88)          | 1.191<br>(30.25)      | 1.750<br>(44.45) | 1.625<br>(41.27) |
| 19         |                       | 1.3750 - 18                           | 1.124<br>(28.55)          | 1.316<br>(33.42)      | 1.938<br>(49.22) | 1.812<br>(46.02) |
| 21         | .140<br>(3.55)        | 1.5000 - 18                           | 1.249<br>(31.72)          | 1.441<br>(36.60)      | 2.062<br>(52.37) | 1.938<br>(49.22) |
| 23         |                       | 1.6250 - 18                           | 1.374<br>(34.89)          | 1.566<br>(39.77)      | 2.188<br>(55.57) | 2.062<br>(52.37) |
| 25         |                       | 1.7500 - 18                           | 1.499<br>(38.07)          | 1.691<br>(42.95)      | 2.312<br>(58.72) | 2.188<br>(55.57) |

See notes at end of table.

TABLE I. Dimensions - Continued. 1/ 2/

| Shell size | T dia<br>+ .011<br>- .000 | V dia<br>± .011  | W<br>+ .017<br>- .000 | X<br>+ .005<br>- .001 | Y dia<br>± .005    | Z dia<br>+ .006<br>- .005 |
|------------|---------------------------|------------------|-----------------------|-----------------------|--------------------|---------------------------|
| 9          | .516<br>(13.10)           | .476<br>(12.10)  | .125<br><br>(3.17)    | .094<br><br>(2.38)    | .045<br><br>(1.14) | .777<br>(19.73)           |
| 11         | .642<br>(16.30)           | .602<br>(15.30)  |                       |                       |                    | .965<br>(24.51)           |
| 13         | .766<br>(19.45)           | .726<br>(18.44)  |                       |                       |                    | 1.090<br>(27.68)          |
| 15         | .892<br>(22.65)           | .852<br>(21.64)  |                       |                       |                    | 1.215<br>(30.86)          |
| 17         | 1.018<br>(25.86)          | .978<br>(24.84)  |                       |                       |                    | 1.340<br>(34.04)          |
| 19         | 1.142<br>(29.01)          | 1.102<br>(28.00) |                       | .141<br><br>(3.58)    | .075<br><br>(1.90) | 1.449<br>(36.80)          |
| 21         | 1.268<br>(32.20)          | 1.228<br>(31.20) |                       |                       |                    | 1.574<br>(39.98)          |
| 23         | 1.392<br>(35.35)          | 1.352<br>(34.34) |                       |                       |                    | 1.699<br>(43.15)          |
| 25         | 1.518<br>(38.55)          | 1.478<br>(37.54) |                       |                       |                    | 1.824<br>(46.33)          |

See notes at end of table.

TABLE I. Dimensions - Continued. 1/ 2/

| Shell size | N dia Min        | HH dia Max       | JJ max          | Recommended packing -ring |
|------------|------------------|------------------|-----------------|---------------------------|
| 9          | .317<br>(8.05)   | .625<br>(15.87)  | .688<br>(17.47) | SAE-AS3578-019            |
| 11         | .434<br>(11.02)  | .750<br>(19.05)  |                 | SAE-AS3578-022            |
| 13         | .548<br>(13.92)  | .875<br>(22.22)  |                 | SAE-AS3578-024            |
| 15         | .673<br>(17.09)  | 1.000<br>(25.40) |                 | SAE-AS3578-026            |
| 17         | .798<br>(20.27)  | 1.125<br>(28.57) |                 | SAE-AS3578-028            |
| 19         | .899<br>(22.83)  | 1.250<br>(31.75) | .719<br>(18.26) | SAE-AS3578-128            |
| 21         | 1.024<br>(26.01) | 1.375<br>(34.92) | .812<br>(20.62) | SAE-AS3578-130            |
| 23         | 1.149<br>(29.18) | 1.500<br>(38.10) |                 | SAE-AS3578-132            |
| 25         | 1.274<br>(32.36) | 1.625<br>(41.27) |                 | SAE-AS3578-134            |

1/ Dimensions are in inches.2/ Metric equivalents are given for information only.**REQUIREMENTS:**

Dimensions and configurations: See figure 1 and table I.

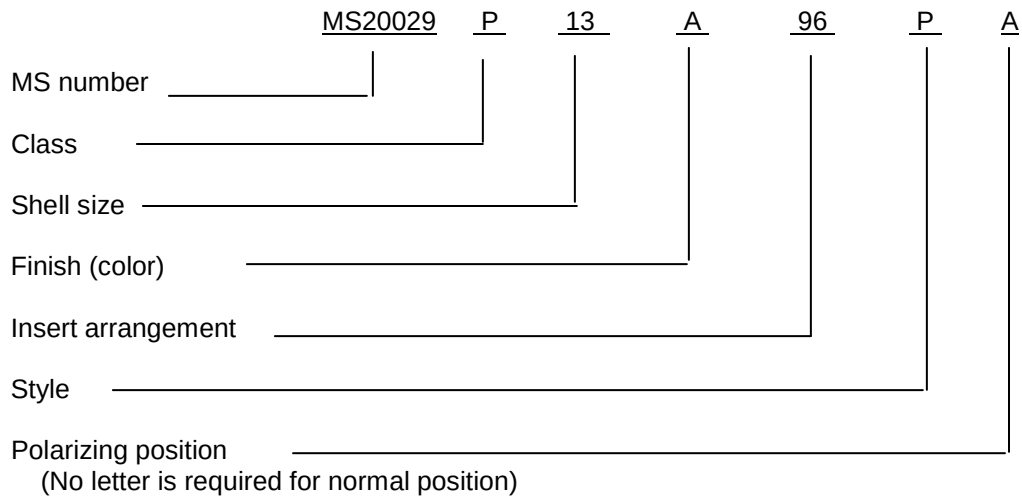
This connector mates with MS20027 and MS20028.

Insert arrangement shall be in accordance with MIL-STD-1560.

Recommended packing for o-ring shall be in accordance with SAE-AS3578. Recommended packing is for dimensions only. Material is optional.

## MS20029G

Part or Identifying Number (PIN) example:



Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Referenced documents. In addition to MIL-DTL-27599, this document references the following:

MIL-STD-1560  
MS20027  
MS20028  
SAE-AS3578

## CONCLUDING MATERIAL

Custodians:  
Air Force - 85  
DLA - CC

Preparing activity:  
DLA - CC

Review activities:  
Air Force - 99  
DLA - IS

(Project 5935-2010-099)

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.daps.dla.mil>.