

METRIC

MIL-DTL-38999/23C  
10 July 2008  
SUPERSEDING  
MIL-DTL-38999/23B  
11 June 2001

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, CIRCULAR, THREADED, RECEPTACLE,  
JAM-NUT MOUNTING, HERMETIC, HERMETIC SOLDER CONTACTS,  
SERIES III, METRIC

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

The requirements for acquiring the connectors described herein  
shall consist of this specification sheet and MIL-DTL-38999.

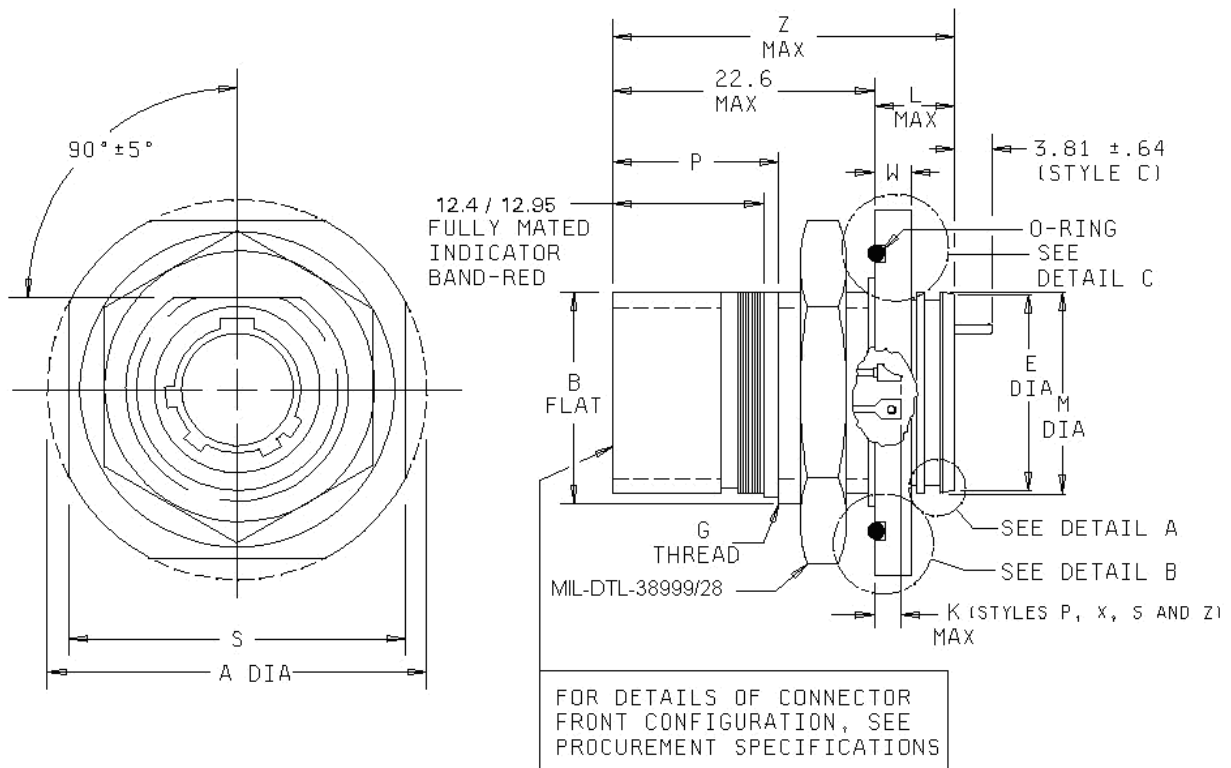
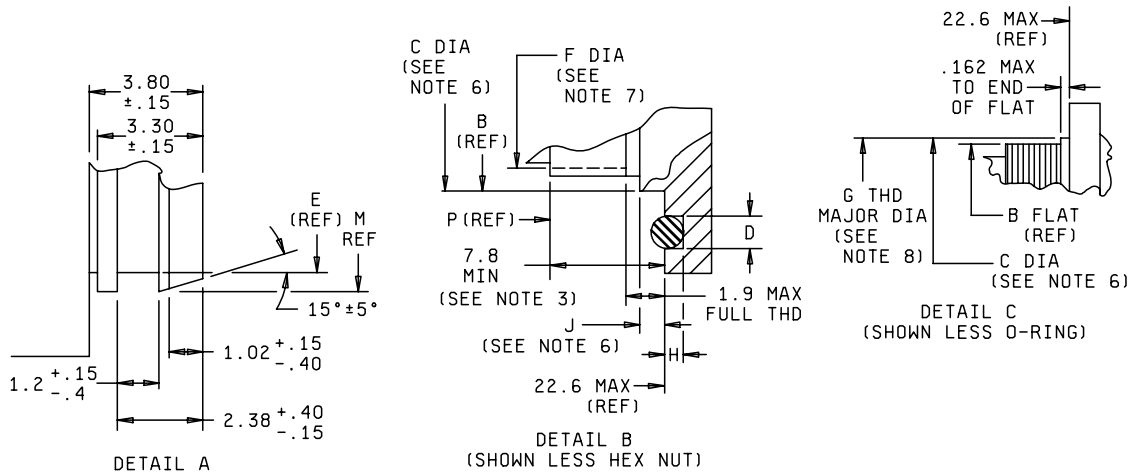


FIGURE 1. Receptacle, classes N and Y.



Connector dimensions

| Shell size | Shell size code | A Dia<br>± .3   | B Flat<br>+ .10<br>- .15 | C Dia<br>+ .1<br>- .2 | D<br>+ .13<br>- .03 | E Dia<br>± .3   | F Dia<br>max    | G thread                        |
|------------|-----------------|-----------------|--------------------------|-----------------------|---------------------|-----------------|-----------------|---------------------------------|
| 9          | A               | 30.2<br>(1.189) | 16.53<br>(.651)          | 17.4 (.685)           | 2.39<br>(.094)      | 15.3<br>(.602)  | 15.9<br>(.626)  | M17X1-6g 0.100R                 |
| 11         | B               | 34.9<br>(1.374) | 19.07<br>(.751)          | 20.6 (.811)           | 2.39<br>(.094)      | 18.4<br>(.724)  | 18.8<br>(.740)  | M20X1-6g 0.100R                 |
| 13         | C               | 38.1<br>(1.500) | 23.82<br>(.938)          | 25.4 (1.000)          | 2.39<br>(.094)      | 21.6<br>(.850)  | 23.8<br>(.937)  | M25X1-6g 0.100R                 |
| 15         | D               | 41.3<br>(1.626) | 26.97<br>(1.062)         | 28.5<br>(1.122)       | 2.39<br>(.094)      | 24.8<br>(.976)  | 26.8<br>(1.055) | M28X1-6g 0.100R                 |
| 17         | E               | 44.5<br>(1.752) | 30.15<br>(1.187)         | See note 6            | 2.39<br>(.094)      | 28.0<br>(1.102) | 30.8<br>(1.213) | M32X1-6g 0.100R<br>(see note 2) |
| 19         | F               | 49.2<br>(1.937) | 33.32<br>(1.312)         | See note 6            | 3.58<br>(.141)      | 31.2<br>(1.228) | 33.8<br>(1.331) | M35X1-6g 0.100R                 |
| 21         | G               | 52.4<br>(2.063) | 36.50<br>(1.437)         | See note 6            | 3.58<br>(.141)      | 34.3<br>(1.350) | 36.8<br>(1.449) | M38X1-6g 0.100R                 |
| 23         | H               | 55.6<br>(2.189) | 39.67<br>(1.562)         | 41.2<br>(1.622)       | 3.58<br>(.141)      | 37.5<br>(1.476) | 39.8<br>(1.567) | M41X1-6g 0.100R                 |
| 25         | J               | 58.7<br>(2.311) | 42.85<br>(1.687)         | 44.4<br>(1.748)       | 3.58<br>(.141)      | 40.7<br>(1.602) | 42.8<br>(1.685) | M44X1-6g 0.100R                 |

FIGURE 1. Receptacle, classes N and Y- Continued.

| Shell size | Shell size code | H<br>± .13     | J<br>+ .0<br>- .71 | K max         |               | L<br>max      |
|------------|-----------------|----------------|--------------------|---------------|---------------|---------------|
|            |                 |                |                    | With pin      | With socket   |               |
| 9          | A               | 1.14<br>(.045) | 1.5<br>(.059)      | 5.3<br>(.209) | 5.9<br>(.232) | 9.1<br>(.358) |
| 11         | B               | 1.14<br>(.045) | 1.5<br>(.059)      | 5.3<br>(.209) | 5.9<br>(.232) | 9.1<br>(.358) |
| 13         | C               | 1.14<br>(.045) | 1.5<br>(.059)      | 5.1<br>(.201) | 5.7<br>(.224) | 9.1<br>(.358) |
| 15         | D               | 1.14<br>(.045) | 1.5<br>(.059)      | 5.1<br>(.201) | 5.7<br>(.224) | 9.1<br>(.358) |
| 17         | E               | 1.14<br>(.045) | ---                | 5.1<br>(.201) | 5.7<br>(.224) | 9.1<br>(.358) |
| 19         | F               | 1.91<br>(.075) | ---                | 5.1<br>(.201) | 5.7<br>(.224) | 9.7<br>(.382) |
| 21         | G               | 1.91<br>(.075) | ---                | 5.1<br>(.201) | 5.7<br>(.224) | 9.7<br>(.382) |
| 23         | H               | 1.91<br>(.075) | 1.5<br>(.059)      | 5.1<br>(.201) | 5.7<br>(.224) | 9.7<br>(.382) |
| 25         | J               | 1.91<br>(.075) | 1.5<br>(.059)      | 5.1<br>(.201) | 5.7<br>(.224) | 9.7<br>(.382) |

FIGURE 1. Receptacle, classes N and Y - Continued.

| Shell size | Shell Size code | M Dia<br>+ .3, - .0 | P<br>+ .4<br>- .1 | S<br>$\pm .4$   | W<br>+ .3<br>- .1 | Z<br>Max        | Recommended O-ring SAE-AS3578<br>(see note 5) |
|------------|-----------------|---------------------|-------------------|-----------------|-------------------|-----------------|---|
| 9          | A               | 16.3<br>(.642)      | 14.1<br>(.555)    | 27.0<br>(1.063) | 2.6<br>(.102)     | 29.2<br>(1.150) | 019   |
| 11         | B               | 19.4<br>(.764)      | 14.1<br>(.555)    | 31.8<br>(1.252) | 2.6<br>(.102)     | 29.2<br>(1.150) | 022   |
| 13         | C               | 22.7<br>(.894)      | 14.3<br>(.563)    | 34.9<br>(1.374) | 2.6<br>(.102)     | 29.3<br>(1.154) | 024   |
| 15         | D               | 25.9<br>(1.020)     | 14.3<br>(.563)    | 38.1<br>(1.500) | 2.6<br>(.102)     | 29.3<br>(1.154) | 026   |
| 17         | E               | 29.0<br>(1.142)     | 14.3<br>(.563)    | 41.3<br>(1.626) | 2.6<br>(.102)     | 29.3<br>(1.154) | 028   |
| 19         | F               | 32.2<br>(1.268)     | 14.3<br>(.563)    | 46.0<br>(1.811) | 3.4<br>(.134)     | 30.1<br>(1.185) | 128   |
| 21         | G               | 35.4<br>(1.394)     | 14.3<br>(.563)    | 49.2<br>(1.937) | 3.4<br>(.134)     | 30.1<br>(1.185) | 130   |
| 23         | H               | 38.6<br>(1.520)     | 14.3<br>(.563)    | 52.4<br>(2.063) | 3.4<br>(.134)     | 30.1<br>(1.185) | 132   |
| 25         | J               | 41.7<br>(1.642)     | 14.3<br>(.563)    | 55.6<br>(2.189) | 3.4<br>(.134)     | 30.1<br>(1.185) | 134   |

## NOTES:

1. Dimensions are in millimeters.
2. Modified major diameter: 31.95 - 31.80 mm.
3. Panel thickness: 3.2 - 1.58 mm.
4. Polarizing position N is shown.
5. Alternate "O-ring" material may be SAE-AMS3325.
6. C and J dimensions define feature required for proper fit in type E panel.
7. F diameter defines thread start.
8. This dimension applies to sizes 17, 19, and 21 only (C diameter and G diameter are the same).
9. Inch equivalents are given for general information only.

FIGURE 1. Receptacle, classes N and Y - Continued.

REQUIREMENTS:

Dimensions and configurations: See figure 1. Interface dimensions shall conform to MIL-DTL-38999.

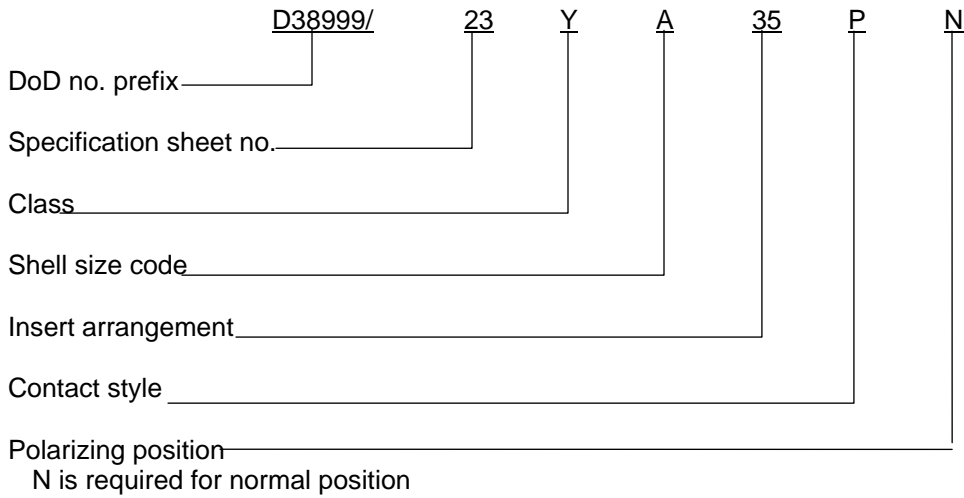
This connector mates with MIL-DTL-38999/26.

O-ring shall be provided with jam-nut receptacles.

For insert arrangements: See MIL-STD-1560.

Connectors accessories: See SAE-AS85049.

Part or Identifying Number (PIN) example:



Eyelet contact termination: See MIL-DTL-38999.

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-38999, this document references the following:

- MIL-DTL-38999/28
- MIL-DTL-38999/26
- MIL-STD-1560
- SAE-AS85049
- SAE-AMS3325
- SAE-AS3578

CONCLUDING MATERIAL

Custodians:

Army – CR  
Navy - AS  
Air Force - 85  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5935-2008-066)

Review activities:

Army - AR, MI  
Navy - EC, MC, OS  
Air Force - 19, 99

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 <http://assist.daps.dla.mil>