

**INCH-POUND**  
 MS18196F  
 w/AMENDMENT 3  
16 May 2014  
 SUPERSEDING  
 w/AMENDMENT 2  
 28 October 2013

DETAIL SPECIFICATION SHEET

JACKSCREW, ELECTRICAL CONNECTOR, MALE AND FEMALE, FIXED

Reinstated after 10 July 2009 and may be used for new and existing designs and acquisitions.

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-28748.

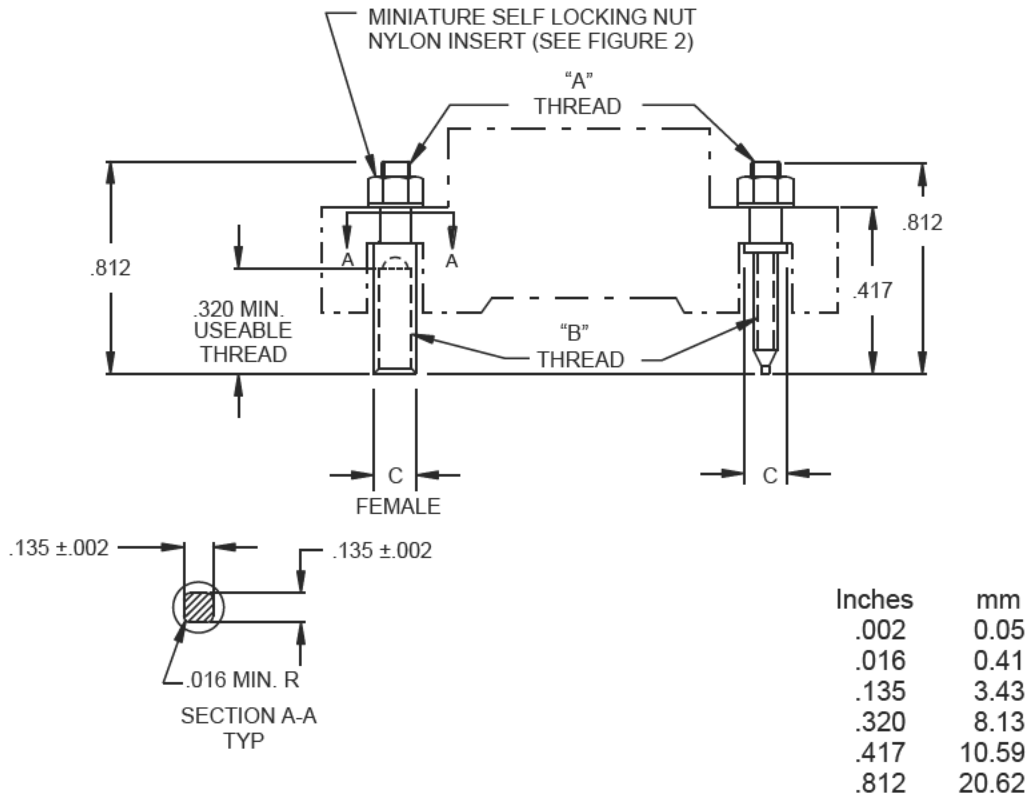


FIGURE 1. Fixed jackscrew male and female.

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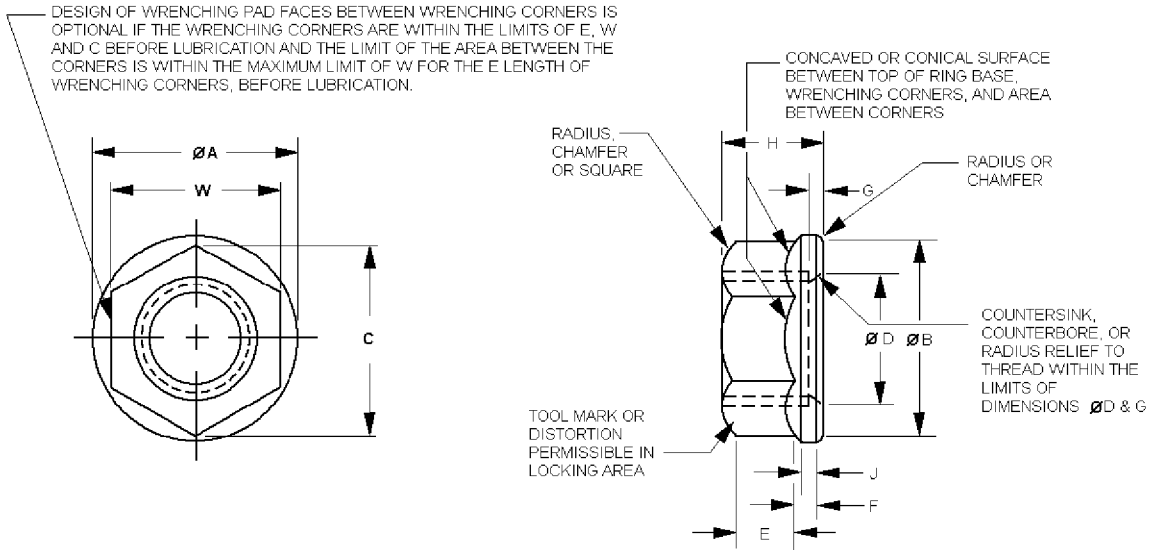
| Fixed jackscrew designator | Gender | Connector size (number of contacts)      | A Thread class 2           | B Thread class 2           | C dia max      |
|----------------------------|--------|--|----------------------------|----------------------------|----------------|
| MS18196-1                  | Male   | 7, 9, 14, 18, 20, 26, 34, 42, 50, 66, 75 | 4-40 UNC-2A<br>.112-40 UNC | 6-32 UNC-2A<br>.138-32 UNC | .190<br>(4.83) |
| MS18196-2                  | Female | 7, 9, 14, 18, 20, 26, 34, 42, 50, 66, 75 | 4-40 UNC-2A<br>.112-40 UNC | 6-32 UNC-2B<br>.138-32 UNC | .190<br>(4.83) |
| MS18196-3                  | Male   | 104                                      | 6-32 UNC-2A<br>.138-32 UNC | 8-32 UNC-2A<br>.164-32 UNC | .137<br>(3.48) |
| MS18196-4                  | Female | 104                                      | 6-32 UNC-2A<br>.138-32 UNC | 8-32 UNC-2B<br>.164-32 UNC | .137<br>(3.48) |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are  $\pm 0.016$  inch (0.41 mm).
4. Material corrosion resistance steel in accordance with ASTM A276, ASTM A473, ASTM A581/A581M, ASTM A582/A582M, SAE AMS5636, SAE AMS5639, SAE AMS5648, classes 302, 303, 303Se, 304 or 316 except for aluminum alloy knob and .040 inch (1.02 mm) flat washer.
5. Finish passivated in accordance with ASTM A967 or SAE AMS2700 except for anodized knob.
6. Jackscrew may have .005 inch (0.13) minimum vertical float.

FIGURE 1. Fixed jackscrew male and female – Continued.

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Self-locking nut dimensions

| Size Dash No. | Connector size (number of contacts) | Thread           | $\phi A$ MAX   | $\phi B$ MIN   | C MIN          | $\phi D$       |                | E MIN          | F MIN          | G              |                | H              |                | J MIN          | W              |                |
|---------------|-------------------------------------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|               |                                     |                  |                |                |                | MAX            | MIN            |                |                | MAX            | MIN            | MAX            | MIN            |                | MAX            | MIN            |
| MS21042-04    | 7, 9, 14,                           | .1120-40 UNJC-3B | .206<br>(5.23) | .176<br>(4.47) | .171<br>(4.34) | .142<br>(3.61) | .112<br>(2.84) | .050<br>(1.27) | .028<br>(0.71) | .027<br>(0.69) | .005<br>(0.13) | .125<br>(3.18) | .103<br>(2.62) | .010<br>(0.25) | .158<br>(4.01) | .150<br>(3.81) |
|               | 18, 20, 26, 34, 42, 50, 75          |                  |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
| MS21042-06    | 104                                 | .1380-32 UNJC-3B | .244<br>(6.20) | .214<br>(5.44) | .207<br>(5.26) | .168<br>(4.27) | .138<br>(3.51) | .055<br>(1.40) | .039<br>(0.99) | .031<br>(0.79) | .006<br>(0.15) | .141<br>(3.58) | .115<br>(2.92) | .010<br>(0.25) | .190<br>(4.83) | .181<br>(4.60) |

NOTES:

1. Self-locking nut shown for reference purposes only.
2. Dimensions are in inches.
3. Metric equivalents are given for information only.
4. Unless otherwise specified, tolerances are  $\pm 0.016$  inch (0.41mm).
5. Material non-corrosion resistance steel in accordance with NASM21042
6. Finish passivated in accordance with SAE AMS-QQ-P-416.
7. Not to be used where temperatures exceed 250°F (121°C).
8. Do not reuse nylon nut after removal.
9. National Aerospace Standard NASM21042. Not to be ordered with this slash sheet.
10. Copies of NASM 21042 are available online at <http://www.aia-aerospace.org/>, or may be purchased from Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3901.

FIGURE 2. Self-locking nut.

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Fixed jackscrew male and female. See figure 1.  
Self-locking nut. See figure 2.

Qualification: Qualified sources for MIL-DTL-28748/1 through MIL-DTL-28748/6 that meet the qualification testing requirements in MIL-DTL-28748 require no further testing for the hardware.

Qualification of hardware only: the hardware shall be installed in a qualified connector and shall be subjected to the tests below in accordance with MIL-DTL-28748. Sample size, if qualifying all hardware configurations, shall be two connector pairs.

Visual and mechanical inspection  
Vibration  
Shock  
Salt spray

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. In addition to MIL-DTL-28748, this document references the following:

MIL-DTL-28748/1  
MIL-DTL-28748/2  
MIL-DTL-28748/3  
MIL-DTL-28748/4  
MIL-DTL-28748/5  
MIL-DTL-28748/6  
ASTM A276  
ASTM A473  
ASTM A581/A581M  
ASTM A582/A582M  
ASTM A967  
| NASM21042  
SAE AMS2700  
SAE AMS5636  
SAE AMS5639  
SAE AMS5648  
| SAE AMS-QQ-P-416

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CONCLUDING MATERIAL

Custodians:

Army - CR  
Navy - EC  
Air Force - 85  
DLA - CC

Preparing activity:

DLA - CC

Review activities:

Army - AM, AR, AT, CR4, MI  
Navy - AS, MC, OS, SH  
Air Force - 99

(Project 5935-2014-040)

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.dla.mil>.