

INCH-POUND

MS27512H
12 May 2015
SUPERSEDING
MS27512G
12 July 2002

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, CIRCULAR, NUT, HEXAGON,
CONNECTOR MOUNTING, FOR MIL-DTL-38999, SERIES II, AND MIL-DTL-27599, SERIES II

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.

Reactivated after 10 June 2005, and may be
used for new and existing designs and acquisitions.

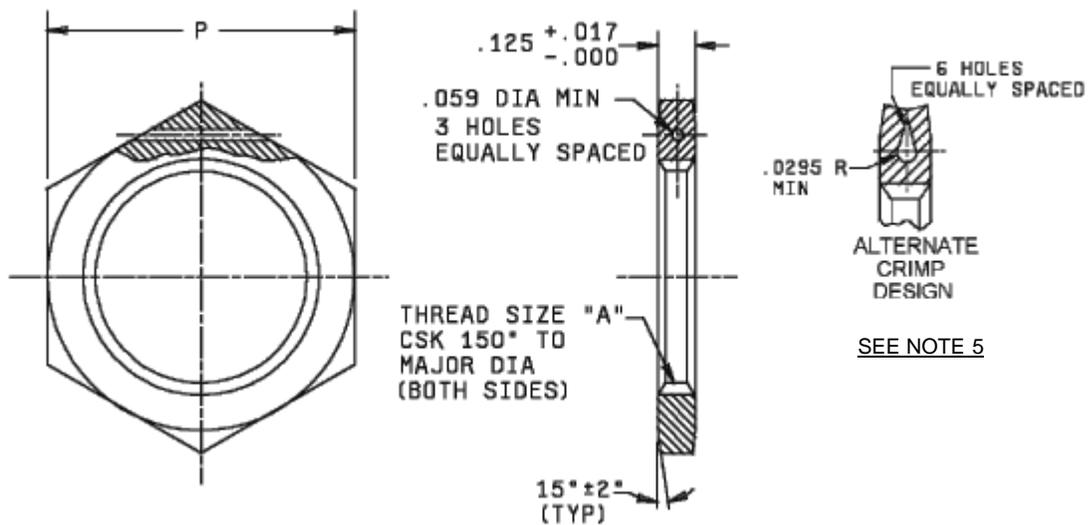


FIGURE 1. Nut, hexagon.



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| Shell size | A Thread size, class 2B | P +.017 -.016 hex | Inches | | mm | |
|------------|-------------------------------|----------------------------|--------|-------|--------|-------|
| | | | Inches | mm | Inches | mm |
| -8 | .8750 – 20 UNEF | 1.062 | .016 | 0.41 | 1.312 | 33.32 |
| -10 | 1.0000 – 20 UNEF | 1.188 | .017 | 0.43 | 1.438 | 36.53 |
| -12 | 1.1250 – 18 UNEF | 1.312 | .0295 | 0.750 | 1.562 | 39.67 |
| -14 | 1.2500 – 18 UNEF | 1.438 | .059 | 1.50 | 1.688 | 42.88 |
| -16 | 1.3750 – 18 UNEF | 1.562 | .125 | 3.18 | 2.000 | 50.80 |
| -18 | 1.5000 – 18 UNEF | 1.688 | 1.062 | 26.97 | 2.125 | 53.98 |
| -20 | 1.6250 – 18 UNEF | 1.812 | 1.188 | 30.18 | | |
| -22 | 1.7500 – 18 UNS | 2.000 | | | | |
| -24 | 1.8750 – 16 UN | 2.125 | | | | |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Threads shall be in accordance with MIL-S-7742.
4. Remove all burrs and sharp edges.
5. Standard safety wire holes are drilled. The safety wire openings depicted in the alternate design are crimped. The alternate hex nut with a crimped edge is specified by adding “-C” to the Part or Identifying Number (PIN).

FIGURE 1. Nut, hexagon – Continued.

REQUIREMENTS:

Dimensions and configurations: See figure 1.

Material: See table I.

Finish: See table I and MIL-DTL-38999.

Applicable jam-nut connectors: See MIL-DTL-38999, series II, and MIL-DTL-27599, series II.

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TABLE I. Material and finish. 1/

| Code | Material | Finish <u>3/</u> |
|------|--------------------------------------------|------------------|
| A | Impact extruded or machined aluminum alloy | A and D |
| B | | B |
| C | | C |
| F | | F |
| E | Corrosion resistant steel <u>2/</u> | E |

1/ See MIL-DTL-38999.

2/ Shall be cleaned, descaled and passivated in accordance with ASTM A380.

3/ Applicable to MIL-DTL-38999 series II and MIL-DTL-275999, series II connectors.

Qualification. Qualification shall be in accordance with MIL-DTL-38999, except only the following tests shall be required:

- Examination of product.
- Safety wire hole pull-out (see requirement below).
- Salt spray (corrosion).

Safety wire pull-out: Safety wire shall not pull out of hex nut with crimped edges when safety wire NI-CU alloy (MONEL™) (UNS NO4400) or NI-CR alloy (INCONEL™) (UNS NO6600) .020 inch (0.51 mm) diameter in accordance with NASM20995 is threaded through a hole and a pull of 30 pounds (133.5 Newton) minimum is applied. Nine pulls total shall be applied. Pulls shall be applied in three directions. Pulling forces shall be applied parallel with the axis of the nut and also perpendicular to the axis of the nut. Three pulls shall be applied parallel to the axis in one direction and three pulls shall be applied parallel to the axis in the opposite direction. An additional three pulls shall be applied perpendicular to axis of nut.

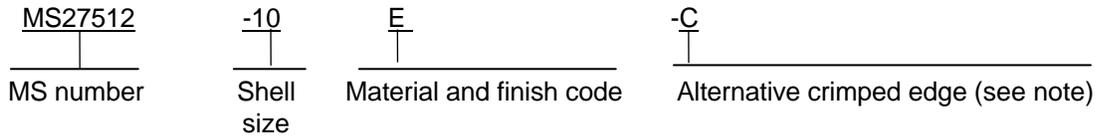
Group A inspection shall consist of examination of product and safety wire pull out. Sampling for group A inspection shall be as specified in table II.

TABLE II. Group A sampling plan.

| Lot size | Sampling size |
|----------------|---------------|
| 1 to 13 | 100 percent |
| 14 to 150 | 13 units |
| 151 to 280 | 20 units |
| 281 to 500 | 29 units |
| 501 to 1,200 | 34 units |
| 1,201 to 3,200 | 42 units |
| 3,201 and up | 54 units |

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Part or Identifying Number (PIN) example:



NOTE: Standard safety wire holes are drilled. No PIN designator code is used when hex nuts with drilled safety wire holes are specified. When a hex nut with crimped edges is required, a “-C” designator shall be added to the end of the PIN to indicate a crimped design.

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. 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 and relationship to the last previous issue.

Referenced documents. In addition to MIL-DTL-38999 and MIL-DTL-27599, this document references the following:

- MIL-S-7742
- ASTM A380
- NASM20995

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA – CC

(Project 5935–2015-117)

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 <https://assist.dla.mil>.