

REV.  
A

SAE AS18029

# RATIONALE

FEDERAL SUPPLY CLASS  
5940

REVISE TO REMOVE FIRST ARTICLE TESTING FOR MATERIALS, UPDATE REFERENCES, ALIGN SPECIFICATION WITH SAE GUIDELINES, AND REVIEW SPECIFICATION FOR KNOWN TECHNICAL PROBLEMS.

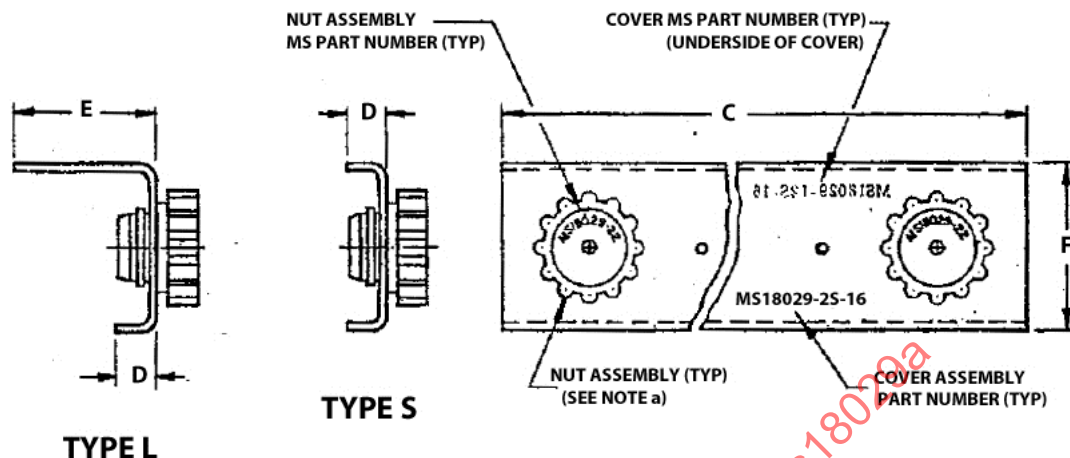


FIGURE 1 – COVER ASSEMBLY

NOTE (a): COVER ASSEMBLIES MS18029-1L-2 OR MS18029-1S-2 USE NUT ASSEMBLY MS18029-21 (QTY 1). ALL OTHERS REQUIRE TWO NUT ASSEMBLIES.

TABLE 1 – DIMENSIONS

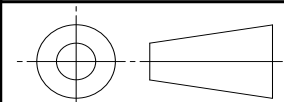
| ASSEMBLY NO.     | COVER DASH NO. |          | STUDS   |         | NUT ASSEMBLY DASH NO. | C (REF) | D (REF) | E (REF) | F (REF) |
|------------------|----------------|----------|---------|---------|-----------------------|---------|---------|---------|---------|
|                  | TYPE L         | TYPE S   | (N) MAX | SIZE    |                       |         |         |         |         |
| MS18029-1(*)-(N) | -11L-(N)       | -11S-(N) | 20      | .138-32 | -21                   | 12.334  | .234    | .734    | .813    |
| MS18029-2(*)-(N) | -12L-(N)       | -12S-(N) | 16      | .190-32 | -22                   | 12.454  |         | .906    | 1.063   |
| MS18029-3(*)-(N) | -13L-(N)       | -13S-(N) | 8       | .250-28 | -23                   | 12.641  | .375    | 1.312   | 1.500   |
| MS18029-4(*)-(N) |                |          |         | .312-24 | -24                   |         |         |         |         |
| MS18029-5(*)-(N) |                |          |         | .375-24 | -25                   |         |         |         |         |
| MS18029-6(*)-(N) | -14L-(N)       | -14S-(N) | 16      | .164-32 | -26                   | 12.454  | .234    | .734    | .813    |

(\*) USE LETTER L OR S TO INDICATE TYPE COVER DESIRED.

(N) INDICATES THE NUMBER OF STUDS IN A MS27212 TERMINAL BOARD ASSEMBLY TO BE COVERED.

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS18029A>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C2

PROCUREMENT SPECIFICATION: NONE

**SAE Aerospace**  
An SAE International Group

## AEROSPACE STANDARD

(R) COVER ASSEMBLY, ELECTRICAL,  
FOR MS27212  
TERMINAL BOARD ASSEMBLY

**SAE AS18029**  
SHEET 1 OF 5

REV.  
A

REQUIREMENTS:

1. EXAMPLE OF PART NUMBER

MS18029-2S-16 INDICATES A COVER ASSEMBLY FOR A MS27212 TERMINAL BOARD ASSEMBLY HAVING 16 STUDS, .190-32 UNF  
THIS COVER ASSEMBLY WILL CONSIST OF THE FOLLOWING:

- A. MS18029-12S-18 TYPE S COVER
- B. MS18029-22 NUT ASSEMBLIES

COVER ASSEMBLY MS PART NUMBER SHALL BE MARKED ON TOP OF COVER.

- 3. THE GOVERNMENT SERVICES SHALL PROCURE AND STOCK ONLY COVERS MS18029-11L-20, -11S-20, -12L-16, 12S-16, -13L-8, 13S-8, -14L-16, 14S-18, AND NUT ASSEMBLIES MS18029-21 THROUGH -26.
- 4. THE INSTALLING ACTIVITY SHALL ASSEMBLE COVER ASSEMBLIES FROM PARTS TO BE STOCKED.
- 5. (N) CODE IS FOR INDUSTRY USE ONLY, FOR THE PROCUREMENT OF COVER ASSEMBLIES OF VARIOUS LENGTHS.
- 6. COVER ASSEMBLIES ARE NOT TO BE USED IN INSTALLATIONS WHERE THE TEMPERATURE EXCEEDS 475 °F.
- 7. A MINIMUM OF THREE THREADS MUST BE EXPOSED AFTER TERMINAL STACKING ON THE END STUDS FOR COVER INSTALLATION.

FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN, REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

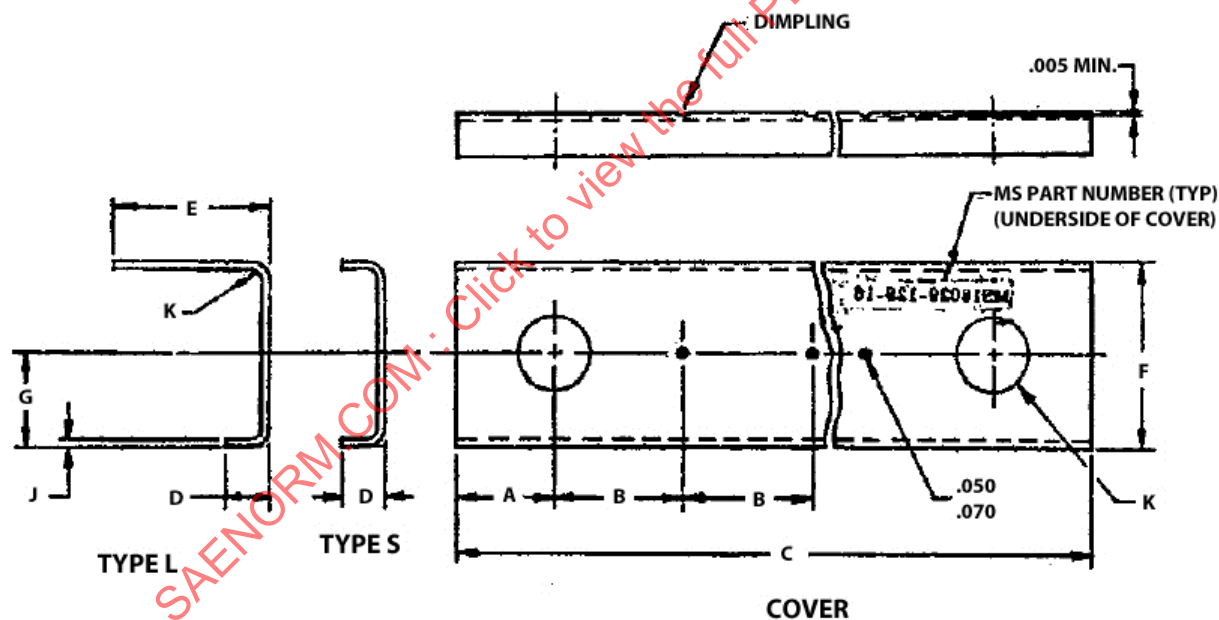


FIGURE 2 – COVER ASSEMBLY (CONTINUED)

TABLE 2 – DIMENSIONS

| MS DASH NO. |          | STUD<br>SIZE<br>(REF) | MAX NO.<br>OF STUDS<br>(REF) | A     | B<br>±.016 | C<br>MAX<br>(REF) | D<br>±.030 | E<br>±.030<br>TYPE L | F     | G    | H<br>DIA<br>±.002 | J<br>±.010 | K<br>RAD |
|-------------|----------|-----------------------|------------------------------|-------|------------|-------------------|------------|----------------------|-------|------|-------------------|------------|----------|
| TYPE L      | TYPE S   |                       |                              |       |            |                   |            |                      |       |      |                   |            |          |
| -11L-(N)    | -11S-(N) | .138-32               | 20                           | .515  | .594       | 12.334            | .234       | .734                 | .813  | .406 | .430              | .034       | .062     |
| -12L-(N)    | -12S-(N) | .190-32               | 16                           | .593  | .750       | 12.454            | .234       | .906                 | 1.063 | .531 |                   |            |          |
| -13L-(N)    | -13S-(N) | .250-28               | 8                            | 1.062 | 1.500      | 12.641            | .375       | 1.312                | 1.500 | .750 | .664              | .050       | .125     |
|             |          | .312-24               |                              |       |            |                   |            |                      |       |      |                   |            |          |
|             |          | .375-24               |                              |       |            |                   |            |                      |       |      |                   |            |          |
| -14L-(N)    | -14S-(N) | .164-32               | 16                           | .593  | .750       | 12.454            | .234       | .734                 | .813  | .406 | .430              | .034       | .062     |

## NOTES

1. MATERIAL: PLASTIC, LAMINATE, IN ACCORDANCE WITH THE PHYSICAL AND MECHANICAL PROPERTIES IN TABLE VII OF MIL-P-25518, TYPE I. MANUFACTURER TO SPECIFY SPECIFIC GRAVITY, RESIN CONTENT AND BARCOL HARDNESS.
2. TOLERANCE BETWEEN ANY TWO "B" DIMENSIONS SHALL BE WITHIN ±.010.
3. DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED; TOLERANCE: DECIMALS ±.016.
4. DIMPLES ARE NECESSARY ONLY WHEN PROCURED BY THE GOVERNMENT IN FULL LENGTH UNASSEMBLED FORM FOR ALTERATION TO SHORTER CONFIGURATIONS AS NEEDED. DIMPLING IS TO ENSURE CORRECT POSITIONING OF HOLE FOR THE NUT ASSEMBLY WHEN COVER IS USED ON TERMINAL BOARD ASSEMBLY HAVING LESS STUDS THAN THE MAXIMUM NUMBER SPECIFIED IN ABOVE TABLE.
5. EXAMPLE OF CALLOUT FOR SHORTER LENGTHS: MS18029-13L-5 IS A COVER OF THE TYPE L WITH TWO .334 DIA HOLES SPACED 6.00 INCHES FROM CENTER TO CENTER. THIS COVER WHEN ASSEMBLED WITH TWO MS18029-23 NUT ASSEMBLIES BECOMES COVER ASSEMBLY MS18029-3L-5 AND IS USED TO COVER TERMINAL BOARD ASSEMBLY MS27212-3-5.
6. COVER MS PART NUMBER SHALL BE MARKED ON UNDERSIDE OF COVER.
7. VISUAL INSPECTION FOR WORKMANSHIP AND FOREIGN MATERIAL SHALL BE IN ACCORDANCE WITH TABLE V OF MIL-P-25518.
8. A CHANGE BAR (I) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT, INCLUDING TECHNICAL REVISIONS. CHANGE BARS AND (R) ARE NOT USED IN ORIGINAL PUBLICATIONS NOR IN DOCUMENTS THAT CONTAIN EDITORIAL CHANGES ONLY.

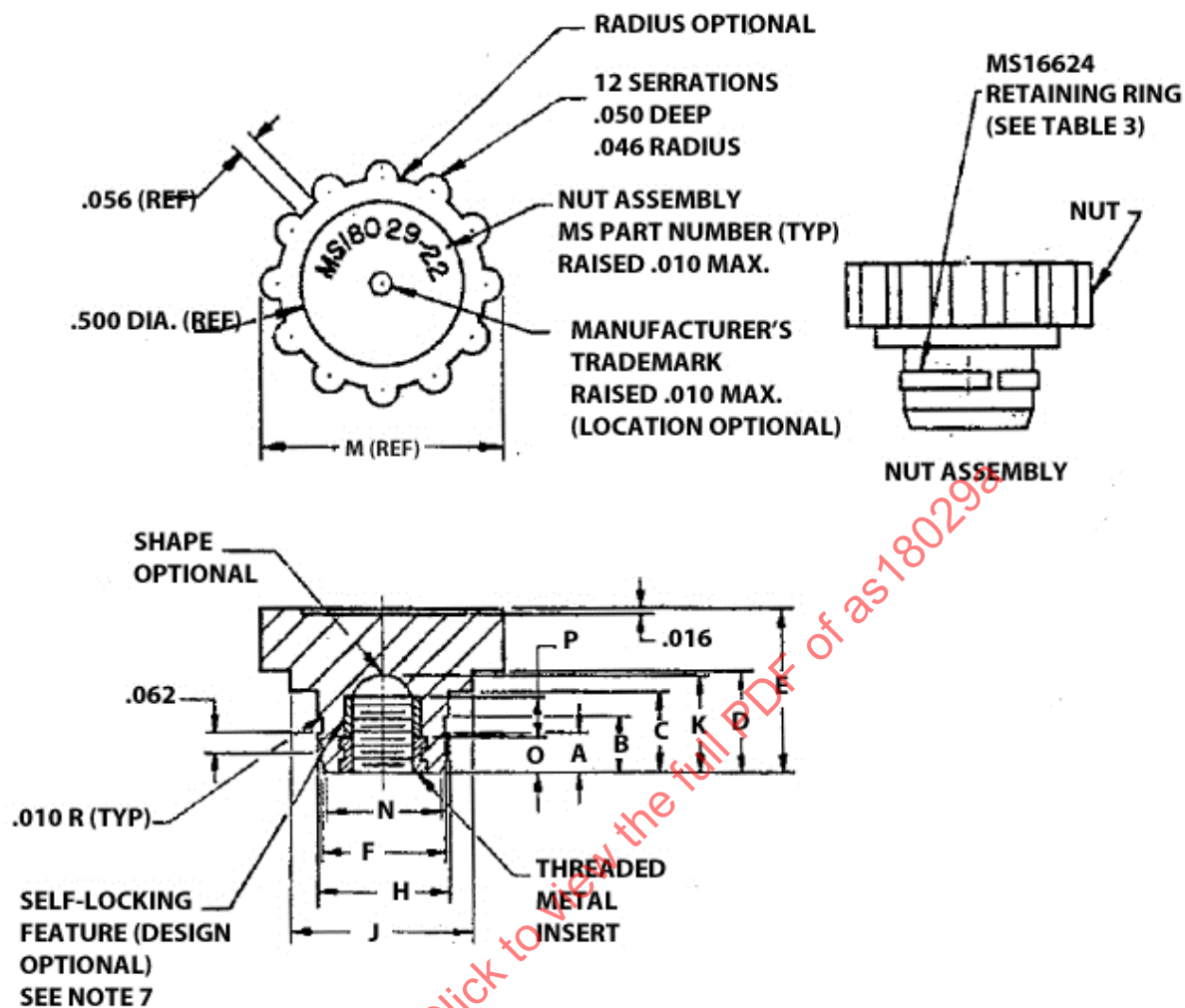


FIGURE 3 – NUT ASSEMBLY CONFIGURATIONS

TABLE 3 – DIMENSIONS

| MS DASH NO. | THREAD T       | RETAINING RING | A    | B    | C    | D REF | E REF | F DIA ±.005 | H DIA | J DIA REF | K REF | M DIA REF | N DIA ±.008 | O    | P ±.0312 (REF.) |
|-------------|----------------|----------------|------|------|------|-------|-------|-------------|-------|-----------|-------|-----------|-------------|------|-----------------|
|             | INSERT         |                |      |      |      |       |       |             |       |           |       |           |             |      |                 |
| -21         | .138-32 UNC-2B | MS16624-1040   | .129 | .176 | .250 | .313  | .500  | .373        | .397  | .562      | .310  | .750      | .365        | .125 | .1250           |
| -22         | .190-32 UNF-2B |                |      |      |      |       |       |             |       |           |       |           |             |      |                 |
| -23         | .250-28 UNF-2B | MS16624-1062   | .212 | .277 | .367 | .430  | .625  | .550        | .625  | .750      | .437  | .875      | .570        | .187 | .1875           |
| -24         | .312-24 UNF-2B |                |      |      |      |       |       |             |       |           |       |           |             |      |                 |
| -25         | .375-24 UNF-2B |                |      |      |      |       |       |             |       |           |       |           |             |      |                 |
| -26         | .164-32 UNC-2B | MS16624-1040   | .129 | .176 | .250 | .313  | .500  | .373        | .397  | .562      | .310  | .750      | .365        | .125 | .1250           |