

REV.  
A

AS25244

FEDERAL SUPPLY CLASS  
5925

# RATIONALE

MANUFACTURER CAPABILITY PROCESS IMPROVEMENT THAT WILL NOT HAVE EFFECT IN APPLICATION.

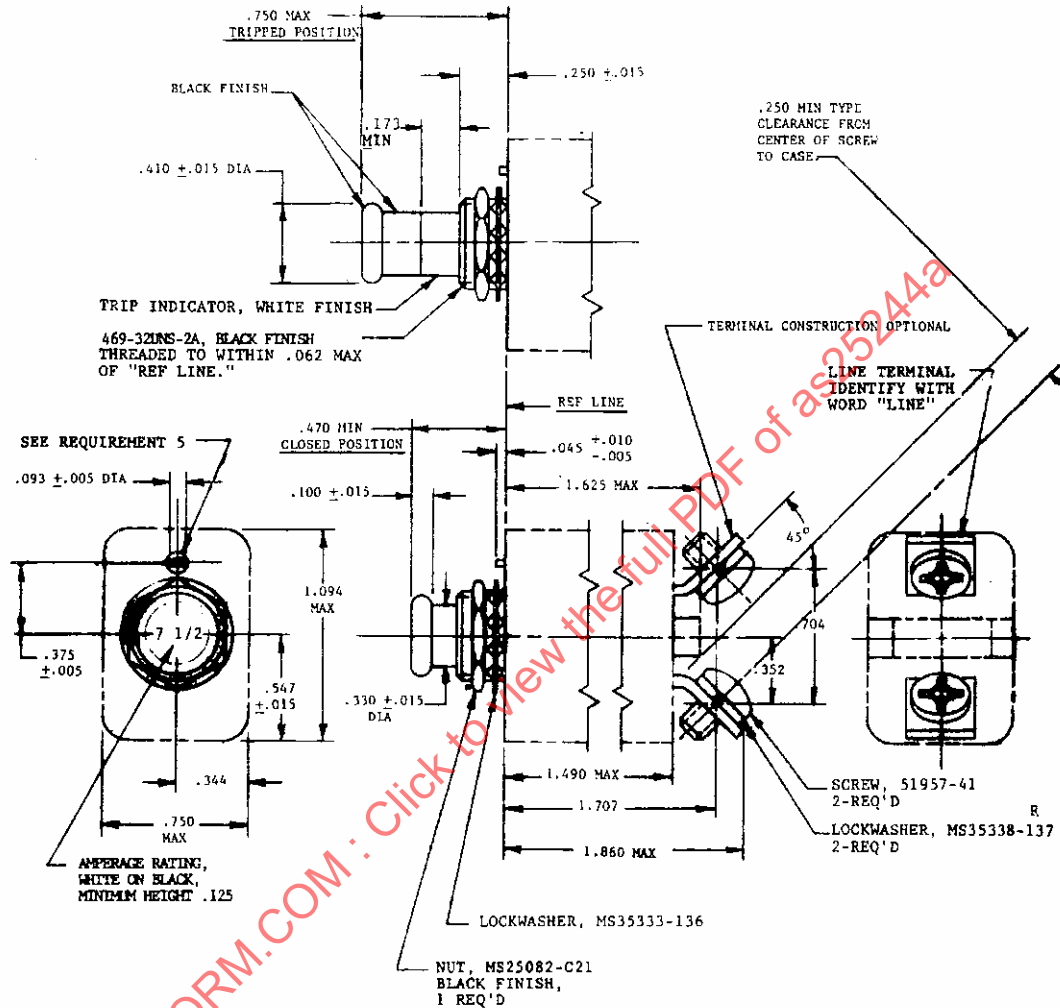
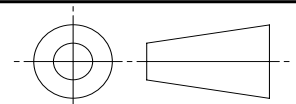


FIGURE 1

THIRD ANGLE PROJECTION



CUSTODIAN: SAE AE-8/AE-8B1

PROCUREMENT SPECIFICATION: MIL-C-5809

**SAE Aerospace**  
An SAE International Group

## AEROSPACE STANDARD

CIRCUIT BREAKER,  
TRIP-FREE, PUSH-PULL,  
5 THRU 50 AMP, TYPE I

**AS25244**  
SHEET 1 OF 6

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TABLE 1

| ELECTRICAL AND MECHANICAL CHARACTERISTICS |                                  |                            |                       |                             |       |                     |                     |                                                               |                     |                    |
|-------------------------------------------|----------------------------------|----------------------------|-----------------------|-----------------------------|-------|---------------------|---------------------|---------------------------------------------------------------|---------------------|--------------------|
| DASH<br>NUMBER                            | NOMINAL<br>CAPACITY<br>(AMPERES) | VOLTAGE<br>DROP<br>MAX (V) | WEIGHT<br>MAX<br>(LB) | OPERATING FORCE<br>MAX (LB) |       | ENDURANCE CYCLES    |                     |                                                               |                     | MECH<br>NO<br>LOAD |
|                                           |                                  |                            |                       | PULLOUT                     | RESET | RESISTIVE           |                     | INDUCTIVE                                                     |                     |                    |
|                                           |                                  |                            |                       |                             |       | AC                  | DC                  | AC                                                            | DC                  |                    |
| 5                                         | 5                                | 0.25                       | 0.1                   | 8                           | 12    | 5,000 <sup>1/</sup> | 5,000 <sup>2/</sup> | 2,500 <sup>1/</sup><br>.6 TO .7<br>LAGGING<br>POWER<br>FACTOR | 2,500 <sup>2/</sup> | 5,000              |
| 7-1/2                                     | 7.5 (7-1/2)                      |                            |                       |                             |       |                     |                     |                                                               |                     |                    |
| 10                                        | 10                               |                            |                       |                             |       |                     |                     |                                                               |                     |                    |
| 15                                        | 15                               |                            |                       |                             |       |                     |                     |                                                               |                     |                    |
| 20                                        | 20                               |                            |                       |                             |       |                     |                     |                                                               |                     |                    |
| 25                                        | 25                               |                            |                       |                             |       |                     |                     |                                                               |                     |                    |
| 30                                        | 30                               |                            |                       |                             |       |                     |                     |                                                               |                     |                    |
| 35                                        | 35                               |                            |                       |                             |       |                     |                     |                                                               |                     |                    |
| 50                                        | 50                               |                            |                       |                             |       |                     |                     |                                                               |                     |                    |

<sup>1/</sup> 400 CYCLES 115/200 VOLT SYSTEM, TESTED AT  $120 \pm 5$  VOLTS 380-420 HZ.

<sup>2/</sup> 28 VOLTS DC, TESTED AT  $30 \pm 3$  VOLTS.

TABLE 2

| DETAIL CALIBRATION REQUIREMENTS - TRIP IN SECONDS |                         |                         |                |              |                |                       |                            |                            |                            |     |                            |     |
|---------------------------------------------------|-------------------------|-------------------------|----------------|--------------|----------------|-----------------------|----------------------------|----------------------------|----------------------------|-----|----------------------------|-----|
| NOMINAL<br>CAPACITY<br>(AMPERES)                  | +25 °C                  |                         |                |              |                | -40 °C                |                            |                            | +71 °C                     |     |                            |     |
|                                                   | PERCENT RATED CURRENT   |                         |                |              |                | PERCENT RATED CURRENT |                            |                            | PERCENT RATED CURRENT      |     |                            |     |
|                                                   | 115                     | 138                     | 200            | 400          | 600            | 148                   | 156                        | 178                        | 60                         | 70  | 108                        | 114 |
| 5                                                 | MUST HOLD - 1 HOUR MIN. | MUST TRIP - 1 HOUR MAX. | 15<br>TO<br>55 | 2<br>TO<br>7 | 3<br>TO<br>5.5 | (*)                   | MUST HOLD -<br>1 HOUR MIN. | MUST HOLD -<br>1 HOUR MIN. | MUST HOLD -<br>1 HOUR MIN. | (*) | MUST TRIP -<br>1 HOUR MAX. | (*) |
| 7.5 (7½)                                          |                         |                         |                |              |                |                       |                            |                            |                            |     |                            |     |
| 10                                                |                         |                         |                |              |                |                       |                            |                            |                            |     |                            |     |
| 15                                                |                         |                         |                |              |                |                       |                            |                            |                            |     |                            |     |
| 20                                                |                         |                         |                |              |                |                       |                            |                            |                            |     |                            |     |
| 25                                                |                         |                         |                |              |                |                       |                            |                            |                            |     |                            |     |
| 30                                                |                         |                         |                |              |                |                       |                            |                            |                            |     |                            |     |
| 35                                                |                         |                         |                |              |                |                       |                            |                            |                            |     |                            |     |
| 50                                                |                         |                         |                |              |                |                       |                            |                            |                            |     |                            |     |

(a) TEMPERATURE TOLERANCE  $\pm 2$  °C.

(\*) NOT APPLICABLE.

TABLE 3

| INTERRUPTING CURRENT (AMPERES) REQUIREMENTS |                                 |       |       |       |                                   |                                     |
|---------------------------------------------|---------------------------------|-------|-------|-------|-----------------------------------|-------------------------------------|
| NOMINAL CAPACITY (AMPERES)                  | TEST DESIGNATION PER MIL-C-5809 |       |       |       |                                   |                                     |
|                                             | A                               | B     | C     | D     | E                                 | F                                   |
| 5                                           | 3,500                           | 3,500 | 6,000 | 6,000 | (a) 2,000<br>(b) 1,000<br>(c) 750 | (a) 3,000<br>(b) 1,500<br>(c) 1,000 |
| 7.5 (7½)                                    |                                 |       |       |       |                                   |                                     |
| 10                                          |                                 |       |       |       |                                   |                                     |
| 15                                          |                                 |       |       |       |                                   |                                     |
| 20                                          |                                 |       |       |       |                                   |                                     |
| 25                                          |                                 |       |       |       |                                   |                                     |
| 30                                          |                                 |       |       |       |                                   |                                     |
| 35                                          |                                 |       |       |       |                                   |                                     |
| 50                                          |                                 |       |       |       |                                   |                                     |

TABLE 4

| ENVIRONMENTAL PERFORMANCE                 |                                                 |
|-------------------------------------------|-------------------------------------------------|
| MAXIMUM OPERATING ALTITUDE - FT           | 65,000                                          |
| OPERATING AMBIENT TEMPERATURE RANGE       | -40 TO +71 °C                                   |
| VIBRATION - IN ACCORDANCE WITH MIL-C-5809 | SINE - REQUIRED<br>RANDOM - (OPTIONAL)          |
| SHOCK                                     | 30 G, MIL-STD-202, METHOD 213, TEST CONDITION J |
| ACCELERATION                              | 10 G                                            |

## REQUIREMENTS:

1. THE PART NUMBERS FOR CIRCUIT BREAKERS IN ACCORDANCE WITH THIS SPECIFICATION SHALL CONFORM TO THE EXAMPLE BELOW.

MS25244 - P D5  
 ————— AMPERAGE RATING  
 ————— RANDOM VIBRATION LEVEL (OPTION)  
 ————— MOUNTING AND/OR TERMINAL CONFIGURATION  
 ————— BASIC PART NUMBER

2. CIRCUIT BREAKERS ARE NONRECYCLING AS DEFINED IN MIL-C-5809.
3. MS25244-1 AND MS25244-3 ARE CANCELLED. NO SUPERSEDING STANDARD.
4. MS25244-PT SUPERSEDES MS25017 AND MS25005. PART NUMBERS OF MS25244-PT ARE INACTIVE FOR NEW DESIGN.
5. MS25244 CIRCUIT BREAKERS MAY BE SUPPLIED WITH A RECTANGULAR KEYTAB OF .093 ± .005" WIDTH AND .031 ± .005 HEIGHT.

## NOTES:

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED. TOLERANCE: DECIMALS  $\pm .031$ " ANGLES  $\pm 2^\circ$ .
2. PHANTOM LINES INDICATE THAT CONTOUR IS OPTIONAL PROVIDED MAXIMUM DIMENSIONS ARE NOT EXCEEDED.
3. CERTAIN PROVISIONS OF THIS STANDARD ARE THE SUBJECT OF INTERNATIONAL STANDARDIZATION AGREEMENT ASCC 12/3 WHEN REVISION OR CANCELLATION OF THIS STANDARD IS PROPOSED WHICH WILL EFFECT OR VIOLATE THE INTERNATIONAL AGREEMENT CONCERNED. THE PREPARING ACTIVITY WILL TAKE APPROPRIATE RECONCILIATION ACTION THROUGH INTERNATIONAL STANDARDIZATION CHANNELS, INCLUDING DEPARTMENTAL STANDARDIZATION OFFICES, IF REQUIRED.
4. FOR DESIGN FEATURE PURPOSES THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN. REFERENCE DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.
5. VOLTAGE RATING 28 VOLTS DC NOMINAL OR 115 VOLTS 400 HZ NOMINAL.
6. THE 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.

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