

INCH-POUND

MIL-PRF-8805/47G  
4 October 2004  
SUPERSEDING  
MIL-PRF-8805/47F  
3 September 1999

PERFORMANCE SPECIFICATION SHEET  
SWITCHES, SENSITIVE, SPDT, LEVER, 25 AMPERES, HERMETIC

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

The complete requirements for acquiring the switches described herein shall consist of this specification and the latest issue of MIL-PRF-8805.

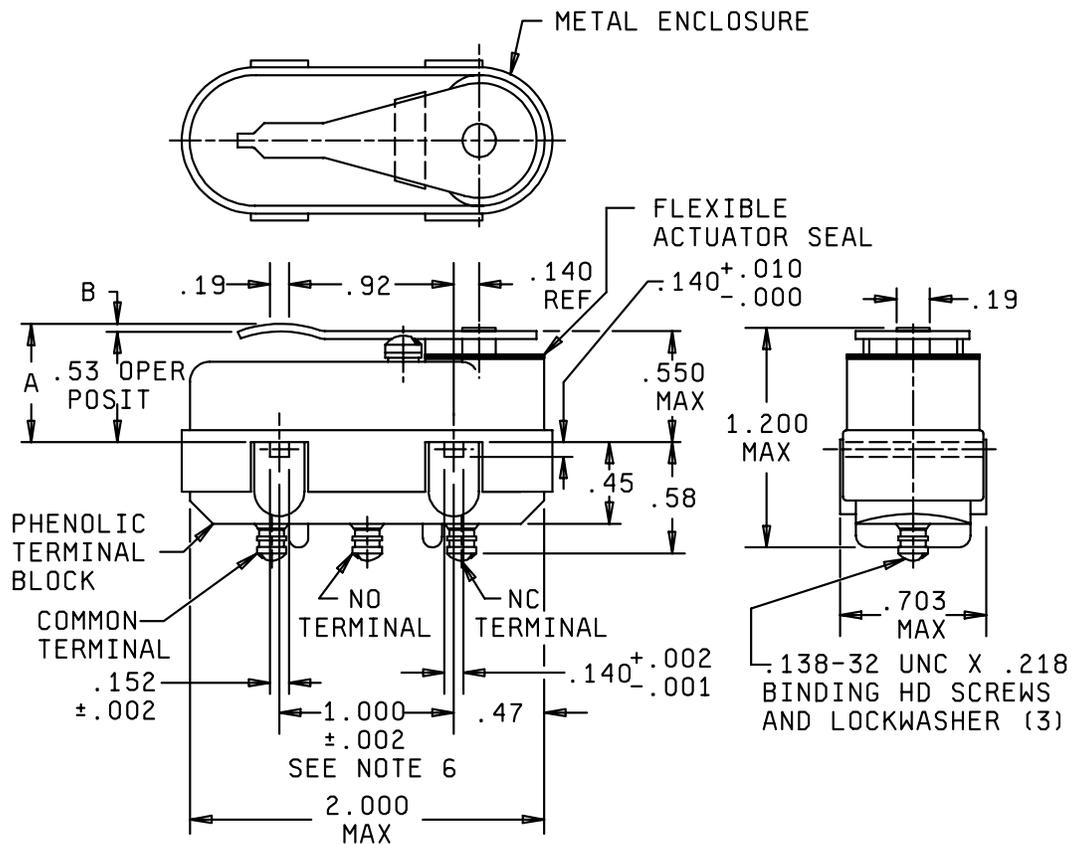


Figure 1. Dimensions and configurations.

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| Inches | mm   | Inches | mm    |
|--------|------|--------|-------|
| .003   | 0.08 | .375   | 9.53  |
| .004   | 0.10 | .437   | 11.10 |
| .012   | 0.30 | .469   | 11.91 |
| .015   | 0.38 | .625   | 15.88 |
| .030   | 0.76 | .630   | 16.00 |
| .031   | 0.79 | .680   | 17.27 |
| .042   | 1.06 | .876   | 22.23 |
| .072   | 1.83 | 1.0    | 25.   |
| .093   | 2.36 | 1.295  | 32.89 |
| .120   | 3.05 | 2.0    | 50.   |
| .250   | 6.35 | 72.0   | 1828. |
| .257   | 6.53 |        |       |

NOTES:

1. Dimensions are in inches.
2. Unless otherwise stated, tolerance is  $\pm 0.015$  (0.38 mm).
3. Exact shape of switch optional provided dimensions specified are not exceeded.
4. Mark, stamp, or mold NO and NC terminal designations on adjacent area of switch.
5. Metric equivalents are given for general information only.
6. Mounting holes accept .139 (3.53 mm) maximum diameter pins or screws on  $1,000 \pm 0.002$  (25.40 mm  $\pm 0.05$  mm) centers.

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS:

Dimensions and configurations: See figure 1.

Enclosure design: 5 (Hermetic).

Temperature characteristic: 1 (-55°C to +85°C).

Shock type: M (100 g's).

Vibration grade: 1 (10 to 500 Hz).

Operating characteristics: See table I.

Part or Identifying Number (PIN): See table I.

Short circuit: 700 amperes.

Strength of actuating means: 25 pounds.

Terminal strength: 30 pounds.

Contact resistance: Not applicable.

Dielectric withstanding voltage:

Sea level: 1,000 V rms initial. 200 V rms after electrical endurance (Application of test potential between unconnected terminals of the same pole is not required.).

Seal tests: Only watertight test shall be performed in group A of table VII and in group I of table VI.

Mechanical endurance: 25,000 cycles at .010 inch minimum overtravel.

Electrical endurance: 10,000 cycles.

Temperature rise: 65°C.

Electrical ratings: See table II.

Qualification inspection:

Group submission: See table III.

Quality assurance:

Group B: Explosion test not applicable.

Group B: Not applicable to inactive part numbers.

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TABLE I. Operating characteristics. 1/

| PIN          | A<br>Maximum<br>Free<br>position | B<br>Maximum<br>pretravel | Operating<br>position | Maximum<br>differential<br>travel | Minimum<br>overtravel | Actuating<br>force | Minimum<br>release<br>force |
|--------------|----------------------------------|---------------------------|-----------------------|-----------------------------------|-----------------------|--------------------|-----------------------------|
| MS25011-1 2/ | <u>Inch</u><br>.600              | <u>Inch</u><br>.065       | <u>Inch</u><br>.53    | <u>Inch</u><br>.020               | <u>Inch</u><br>.010   | <u>oz</u><br>16 ±8 | <u>oz</u><br>4              |
| MS25011-2 2/ | .610                             | .085                      | .53                   | .020                              | .010                  | 25 ±3              | 4                           |
| MS25011-3 3/ | .790                             | .065                      | .72                   | .020                              | .010                  | 16 ±6              | 4                           |
| MS25011-4    | .610                             | .085                      | .53                   | .020                              | .010                  | 25 ±3              | 4                           |

1/ ±20 percent variation from specified values acceptable after test.

2/ MS25011-1 and MS25011-2 - inactive for new design.

3/ MS25011-3 has been canceled without replacement.”

NOTE: MS25011 was superseded by MIL-PRF-8805/47; the MS25011 Part Numbers (PINS) were retained.

TABLE II. Electrical ratings.

| PIN       | Load      | Current capacity (amperes) |                    |          |
|-----------|-----------|----------------------------|--------------------|----------|
|           |           | 28 V dc                    | 115 V ac, 60<br>Hz | 120 V dc |
| MS25011-1 | Resistive | 25                         | 1                  | 1        |
| MS25011-2 | Inductive | 10                         | 1                  | .5       |
| MS25011-4 | Resistive | 25                         | 1                  | .5       |
|           | Inductive | 8                          | 1                  | .5       |

TABLE III. Group submission.

| Examination<br>or test  | Basic<br>switch 1/                                     | Other<br>Switch   | Extent of<br>approval |
|---|--|---|-----------------------|
| Qualification inspection table of MIL-S-8805 (except operating characteristics in group VI shall be tested immediately preceding short circuit, rather than as the final test). | MS25011-2 2/<br>and<br>MS25011-4<br>(all sample units) | MS25011-1 2/<br>(2 sample units)<br>1. Visual and mechanical<br>examination<br>2. Operating characteristics | All                   |

1/ MS25011-1 and MS25011-2 are inactive for new design.

2/ Qualification testing of MS25011-4 may be waived if testing is performed on MS25011-2.

NOTE: MS25011 was superseded by MIL-PRF-8805/47; the MS25011 Part Numbers (PINS) were retained.

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Reference Documents  
MIL-PRF-8805

Custodians:  
Air Force - 11  
Army - CR  
Navy - EC  
DLA - CC

Preparing activity:  
DLA - CC  
  
(Project 5930-1850)

Review activities:  
Air Force - 99  
Army - AR, AV, MI  
Navy - AS, MC, SH

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 [www.dodssp.daps.mil](http://www.dodssp.daps.mil).