

INCH-POUND
MIL-PRF-8805/46D
19 September, 2000

SUPERSEDING
MIL-S-8805/46C
10 April 1979

PERFORMANCE SPECIFICATION SHEET

SWITCHES, SENSITIVE, SPST, 4 AMPERES, HERMETIC

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 and MIL-PRF-8805.

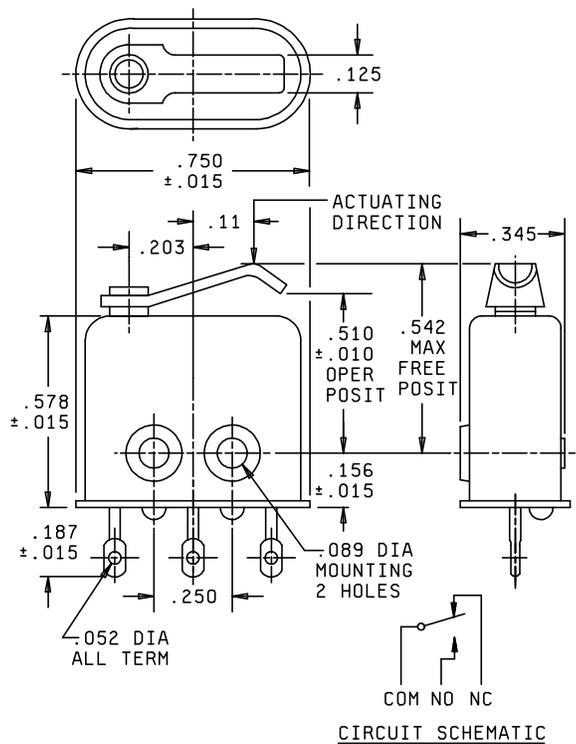


FIGURE 1. Dimensions and configuration.

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| Inches | mm | Inches | mm | Inches | Mm |
|--------|------|--------|------|--------|-------|
| .005 | 0.13 | .089 | 2.26 | .350 | 8.89 |
| .010 | 0.25 | .125 | 3.18 | .400 | 10.16 |
| .015 | 0.38 | .130 | 3.30 | .420 | 10.67 |
| .020 | 0.51 | .150 | 3.81 | .446 | 11.33 |
| .035 | 0.89 | .190 | 4.83 | .510 | 12.95 |
| .052 | 1.32 | .250 | 6.35 | .750 | 19.05 |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ± 0.02 (0.51 mm) for two place decimals and ± 0.005 (.13mm) for 3 place decimals.
4. Switch configuration optional provided dimensions specified are not exceeded.

FIGURE 1. Dimensions and configuration - Continued.

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REQUIREMENTS:

Dimensions and configurations: See figure 1.

Enclosure design: 5 (Hermetic).

Temperature characteristic:

- M8805/46-001: (- 65°C to + 125°C).
- M8805/46-002: (- 65°C to + 260°C).
- M8805/46-003: (- 125°F to + 350°F).

Shock type: M (100 g, test condition I, method 213 of MIL-STD-202).

Vibration grade: 2 (10 Hz to 2,000 Hz), except that the acceleration level shall be 30 G (M8805/46-001 and -002) or 40 G (M8805/46-003).

Weight: See table I.

Operating characteristics: See table I.

Contact resistance:

- M8805/46-001 and -002: 125 milliohms maximum.
- M8805/46-003: 125 milliohms maximum initial, 1.0 ohm maximum during and after life test.

Dielectric withstanding voltage:

Sea level: 1,250 V rms for one second.

Low level circuit (M8805/46-003 only): 15,000 cycles.

Electrical and mechanical endurance: 15,000 cycles at 10 to 12 cycles per minute.

Short circuit: 90 amperes maximum.

Electrical ratings: See table II.

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

TABLE I. PIN's and operating characteristics.

| PIN | Actuating force | Release force | Differential travel | Over travel | Maximum weight | Termination |
|--------------|-----------------|---------------|---------------------|----------------|----------------|-------------|
| M8805/46-001 | 26 oz max. | 6 oz min. | .020 inch max | .006 inch min. | .020 pound | Solder |
| M8805/46-002 | 26 oz max. | 6 oz min. | .020 inch max. | .006 inch min. | .020 pound | Solder |
| M8805/46-003 | 32 oz max. | 6 oz min. | .020 inch max. | .006 inch min. | .020 pound | Solder |

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TABLE II. Electrical ratings.

| PIN | Load | Sea level and 70,000 feet 115 V ac, 400 Hz and 28 V dc |
|-------------------------------------|-------------------|---|
| M8805/46-001 and M8805/46-002 | | <u>Amperes</u> |
| | Resistive | 4 |
| | Inductive Lamp | 3 1.5 |
| M8805/46-003 | Resistive | 2 |
| | Inductive | .5 |
| | Lamp | .5 |
| Low level circuit test applicable | | |

Qualification:

Group submission: See table III.

TABLE III. Qualification testing – group submission.

| Examination or test (See qualification inspection table of MIL-PRF-8805) | Sample | Extent of Approval |
|--|--------------------------------|--------------------|
| Groups I, II, III, VI, VII, and VIII. Group VII test are required at sea level only. | M8805/46-002 | All PINs |
| Visual and mechanical examination | M8805/46-001 3 sample units | |
| Group I Visual and mechanical examination Operating characteristics | M8805/46-003 | |
| Group II Thermal shock Vibration Dielectric withstanding voltage Operating characteristics | | |
| Group VI Mechanical and endurance at high Temperature not required | | |
| Group VII Electrical endurance test required at sea level only | | |
| Group VIII Group X | | |

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QUALITY ASSURANCE:

Group A inspection:

Seal: Only the watertight test shall be performed, in Group A. Switches need not be removed from underwater during the test.

M8805/46-003: Do not exceed low level electrical ratings during any testing.

Group B inspection: M8805/46-002 shall be submitted to the tests of the group B inspection table of MIL-PRF-8805. In addition, M8805/46-003 shall be submitted to the tests of table IV.

TABLE IV. Group B inspection requirements for M8805/46-003.

| Examination or test | Sample numbers | | | | | | | | | | | |
|---|----------------|---|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Thermal shock ----- | X | X | | | | | | | | | | |
| Low temperature operation ----- | | | | | X | | | | | | | |
| Mechanical endurance at low temperature ----- | | | | | X | | | | | | | |
| Contact resistance ----- | | | | | X | X | | | | | | |
| Overload cycling ----- | | | | | | | X | X | X | X | | |
| Inductive load, dc ----- | | | | | | | | X | X | | | |
| Resistive load, ac ----- | | | | | | | X | X | | | | |
| Low level circuit ----- | | | | | | | | | | | X | X |
| Dielectric withstanding voltage ----- | | | | | | | X | X | X | X | | |
| Operating characteristics ----- | X | X | X | X | X | X | X | X | X | X | | |
| Seal ----- | X | X | X | X | | | | | | | | |

Custodians:

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

Preparing activity:

DLA - CC

(Project 5930-1697-02)

Review activities:

Army – AM, AT, AV, MI
 Navy – AS, MC, OS, SH
 Air force – 19, 99