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INCH-POUND

MIL-PRF-8805/107B

3 September 1999

SUPERSEDING

MIL-S-8805/107A

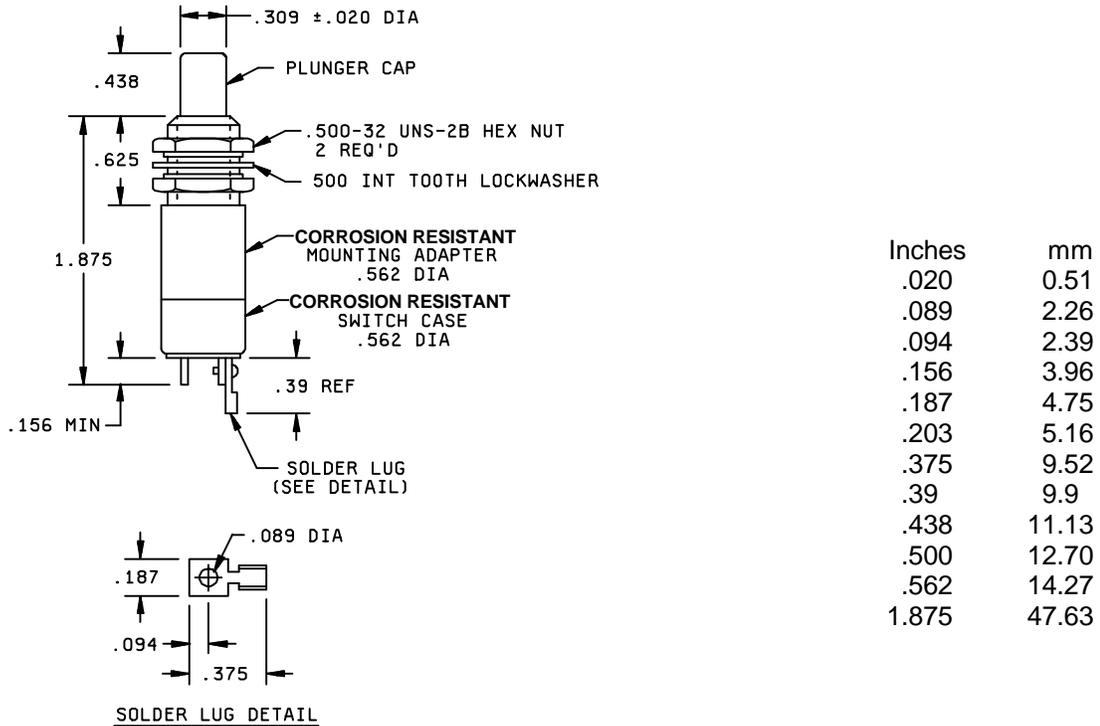
28 July 1986

PERFORMANCE SPECIFICATION SHEET

SWITCHES, PUSH, MOMENTARY AND PUSH-PULL,  
 10 AMPERES, DUSTTIGHT

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

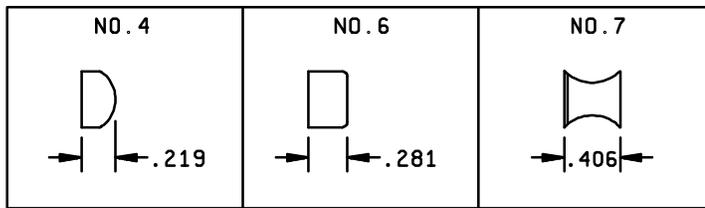
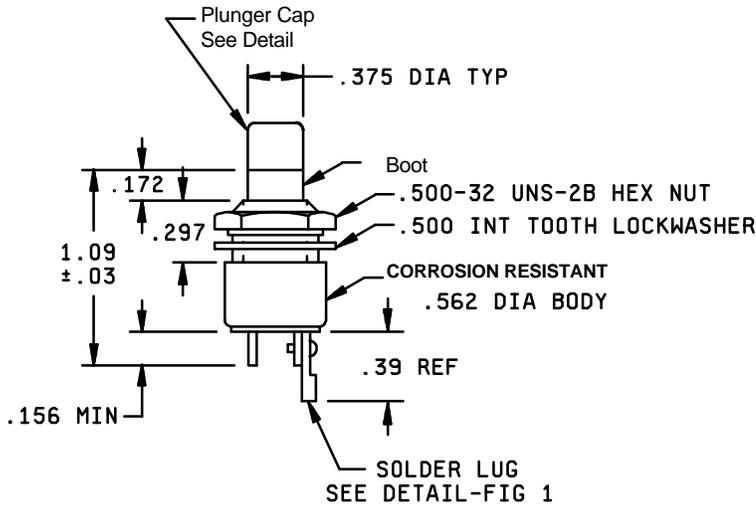


NOTES:

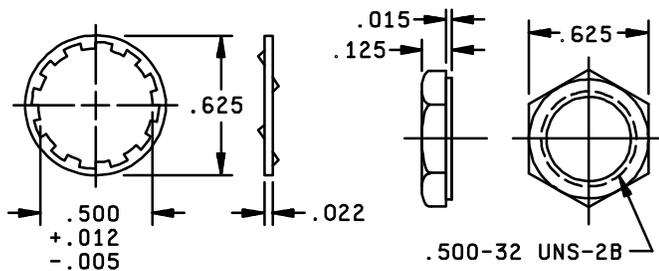
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm 0.010$  (0.25 mm).
4. All terminal threads are .086-56UNC-2B.
5. Hardware for each terminal includes one screw, one terminal lug and one lockwasher.
6. See figure 2 for mounting hardware detail.

FIGURE 1. Basic switch with mounting adapter.

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PLUNGER CAP STYLES



MOUNTING HARDWARE

Inches	mm
.005	0.13
.012	0.30
.015	0.38
.022	0.56
.03	0.76
.125	3.17
.156	3.96
.172	4.37
.219	5.56
.281	7.14
.297	7.54
.375	9.52
.39	9.9
.406	10.31
.500	12.70
.562	14.27
.625	15.88
1.09	27.7

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm 0.010$  (0.25 mm).
4. All terminal threads are .086-56UNC-2B.
5. Hardware for each terminal includes one screw, one terminal lug and one lockwasher.

FIGURE 2. Basic switch without mounting adapter.

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REQUIREMENTS:

Design and construction:

Dimensions and configurations: See figures 1, 2, and 3.

Enclosure design: 2 (Dusttight).

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

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

Vibration grade: 2 (10 Hz to 2,000 Hz).

Weight (switches with adapter): .050 pound maximum.

Operating characteristics:

Operating force:

Momentary:  $4 \pm 1$  pounds.

Push-pull:  $\frac{1}{2}$  to 2 pounds.

Releasing force: 1 pound minimum, momentary.

Total plunger travel:

Switches without adapter:  $.085 \pm .015$  inch.

Switches with adapter: .438 inch (approximate).

Overtravel:

Switches with adapter: .312 inch (approximate).

Electrical ratings:

Center terminal (terminal 3, on 3-terminal switches): 3 amperes maximum.

Other than center terminal: See table I.

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TABLE I. Electrical ratings.

Load	Sea level		50,000 feet
	28 V dc (amperes)	115 V ac, 60/400 Hz (amperes)	28 V dc (amperes)
Resistive	10	10	---
Inductive	5	5	5
Lamp	3	3	---

Terminal strength (torque): Not applicable.

Strength of actuator and stop: 75 pounds for 3-terminal circuitry or 40 pounds for all others.

Dielectric withstanding voltage:

At sea level: 1,000 V rms.

After electrical endurance: 200 V rms.

Minimum current (prior to test, switches shall be preconditioned at 85°C for 48 hours):

Circuit schematics 1, 2, and 3: 200,000 cycles.

Circuit schematics 4 and 5: 50,000 cycles.

Mechanical endurance (10 to 15 cpm):

Circuit schematics 1, 2, and 3:

At room temperature: 200,000 cycles.

At -55°C and +85°C: 100,000 cycles each temperature.

Circuit schematics 4 and 5: 50,000 cycles.

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Electrical endurance:

At sea level: 25,000 cycles.

At 50,000 feet: 5,000 cycles.

Sand and dust: Applicable.

Part numbers: Part numbers are assigned as follows:

Example:

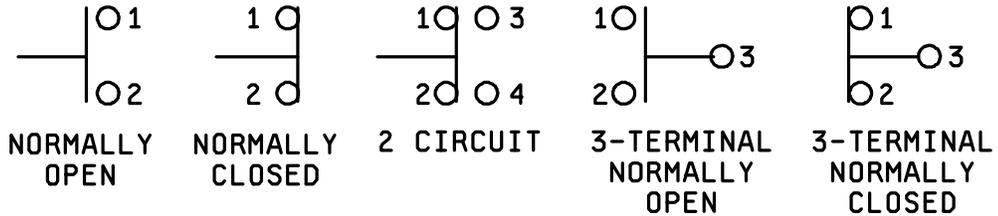
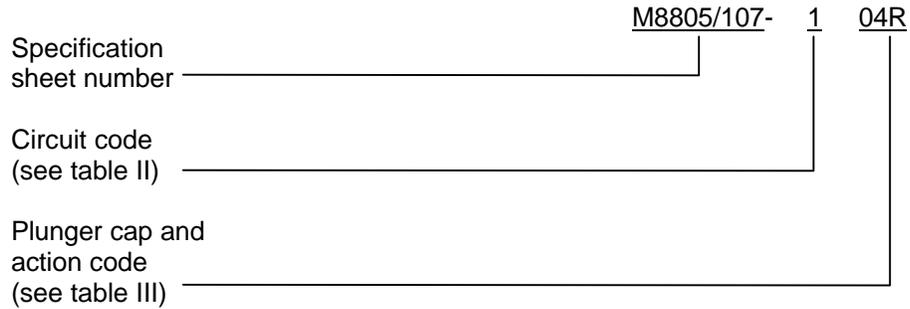


FIGURE 3. Circuit schematic.

TABLE II. Circuit code.

Code	Circuit schematic (see figure 3)
1	Normally open
2	Normally closed
3	Two-circuit
4	Three-terminal normally open
5	Three-terminal normally closed

TABLE III. Plunger cap and action code.

Code	Item	Action	Plunger cap color
04B	1/ Basic switch only, cap style 4	Momentary	Black
04R	1/ Basic switch only, cap style 4	Momentary	Red
04W	1/ Basic switch only, cap style 4	Momentary	White
06B	1/ Basic switch only, cap style 6	Momentary	Black
06R	1/ Basic switch only, cap style 6	Momentary	Red
06W	1/ Basic switch only, cap style 6	Momentary	White
07B	1/ Basic switch only, cap style 7	Push-pull	Black
07R	1/ Basic switch only, cap style 7	Push-pull	Red
07W	1/ Basic switch only, cap style 7	Push-pull	White
L5C	Basic switch with adapter	Momentary	Chrome
L5R	Basic switch with adapter	Momentary	Red
L5B	Basic switch with adapter	Momentary	Black

1/ Use of switches without mounting adapters is not recommended for applications where side force on button is anticipated. See MIL-PRF-8805/3 for additional styles of switches with mounting adapters.

QUALIFICATION: Qualification will be granted on the basis of similarity when similar items, with mounting adapters, are qualified to MIL-PRF-8805/3.

Custodian:  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5930-1691-032)

Review activities:  
Air Force - 99