

PERFORMANCE SPECIFICATION SHEET

SWITCHES, SENSITIVE, SWITCH ASSEMBLY, TOGGLE, 7 AMPERES, PANEL SEAL, TOGGLE SEAL

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

The requirements for acquiring the switches described herein shall consist of this specification sheet and [MIL-PRF-8805](#).

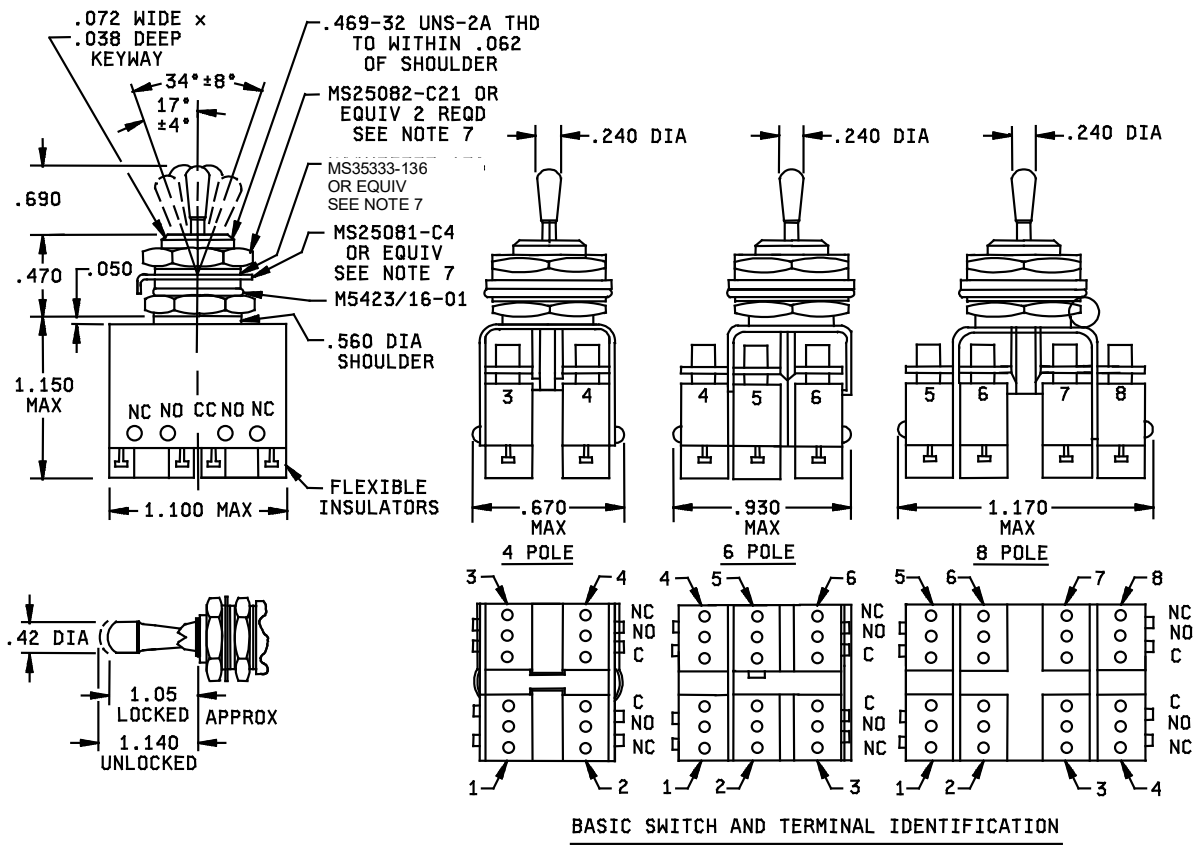
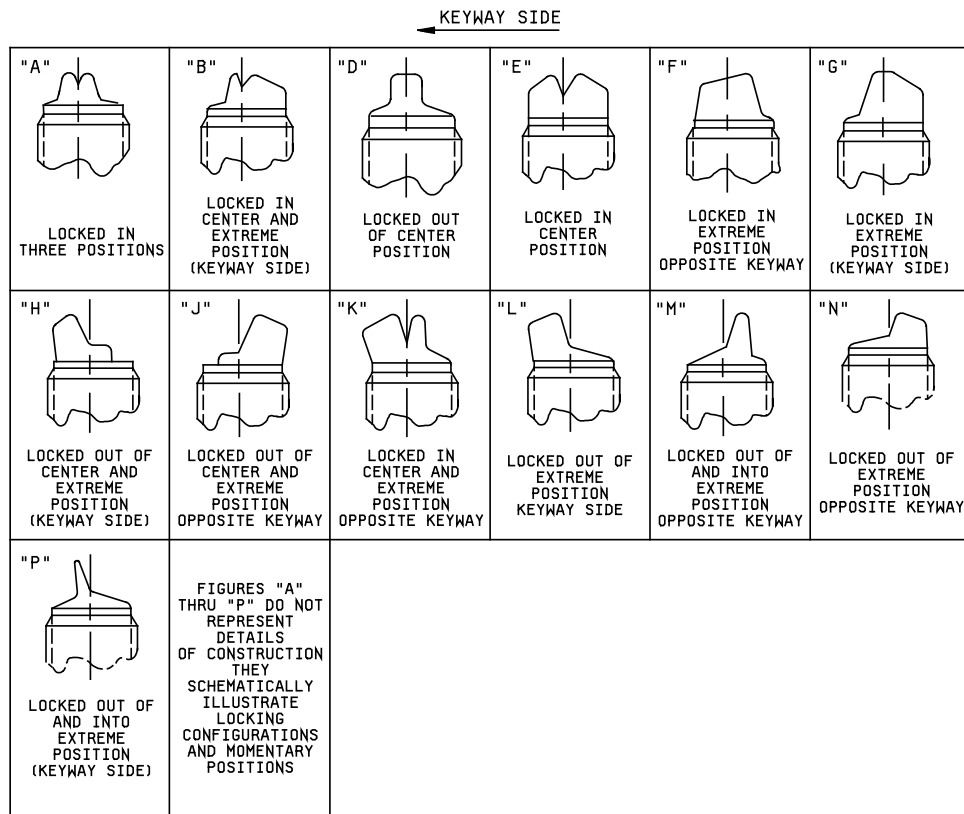


FIGURE 1. Configurations and dimensions.

NOTES:

1. Dimensions are in inches.
2. DELETED.
3. Unless otherwise specified, tolerances are ± 0.015 (0.38 mm) for decimals and $\pm 5^\circ$ for angles.
4. Design configuration optional provided maximum dimensions are not exceeded.
5. Basic switch identification shall be permanently marked on the basic switch as shown.
6. Basic switch terminals shall be single turret (as shown) and shall accept AN-20 wire or equivalent.
7. Alternative base metals and protective finishes, as approved by the qualifying activity, may be utilized for hexagon nut, lock washer and key washer material. Dimensions shall be in accordance with the referenced hardware specifications.
8. MS28081-C4 per [MS25081](#). MS25082-C21 per [MS25082](#). MS35333-136 per [NASM 35333](#). M5423/16-01 per [MIL-DTL-5423/16](#).

FIGURE 1. Configurations and dimensions - continued.FIGURE 2. Locking arrangement.

REQUIREMENTS:

Dimensions and configuration: See figure 1 and 2.

Enclosure design: 1 (Unsealed). Switches shall have molded silicone rubber toggle to bushing seal and panel seal.

Seal test: Not applicable.

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

Shock type: 50 g, sawtooth, test condition G, [MIL-STD-202-213](#).

Vibration grade: Random vibration, tested in accordance with [MIL-STD-202-214](#) as follows:

20 - 300 Hz, 3 db/octave increase
300 - 1000 Hz, 0.02 G² Hz
1000 - 2000 Hz, 6 db/octave decrease

Weight (pounds maximum):

4 pole switches: .095 without lever lock, .110 with lever lock.
6 pole switches: .100 without lever lock, .115 with lever lock.
8 pole switches: .110 without lever lock, .125 with lever lock.

Toggle lever: The toggle lever shall be metal with a lusterless finish and shall have a fixed pivot.

Locking arrangement: The locking combination for the lever lock toggle lever shall provide positive locking and shall not permit a change in toggle lever position until the locking mechanism is manually released.

Panel seal: There shall be no leakage of water through the seals following the toggle seal test of [MIL-DTL-83731](#).

Dielectric withstanding voltage:

Sea level: 1,000 V rms.
Altitude: 400 V rms at 50,000 feet.

Terminal strength: 5 pounds.

Contact resistance: Not applicable.

Strength of actuating means: 25 pounds.

Strength of mounting bushing: 25 pound-inches shall be applied to the mounting nut.

Mechanical endurance: 50,000 cycles. Lever lock switches shall also be tested for 50,000 cycles by pulling the lever to its fully extended position and returning to its fully locked position without causing contact transfer at a rate of 60 cycles per minute maximum.

Electrical endurance: 25,000 cycles.

Electrical ratings: See table I.

TABLE I. Electrical ratings.

Load	Sea level		50,000 feet
	28 V dc amperes	115 V ac, 60 Hz amperes	28 V dc amperes
Resistive	7.0	7.0	4.0
Inductive	4.0	7.0	2.5

Qualification:

The following tables for quality assurance inspections shall apply only when the basic sensitive switch is approved under specification sheet MIL-PRF-8805/4.

Qualification inspection: In accordance with table II.

Group A inspection: In accordance with table III, provided in process dielectric withstanding voltage is performed.

TABLE II. Qualification group submission inspection.

Examination or test	Test sample	Other switch samples	Extent of approval
<u>Group 1.</u> Visual and mechanical examination Dielectric withstanding voltage Insulation resistance Operating characteristics	<u>Group 1.</u> M8805/98-15 (2 units) M8805/98-63 (4 units) M8805/98-81 (6 units)	M8805/98-33 (6 units) 1. Visual and mechanical examination 2. Operating characteristics 3. Lever-lock mechanical endurance (4 units) 4. Salt spray (corrosion) (2 units)	All Part or Identifying Numbers (PIN)
<u>Group 2.</u> Strength of actuating means <u>1/</u> Strength of mounting bushing <u>1/</u> Thermal shock Vibration (random) Shock (50 G) Moisture resistance Dielectric withstanding voltage Operating characteristics Panel seal	<u>Group 2.</u> M8805/98-63 (4 units)	<u>M8805/98-64 (4 units)</u> 1. Strength of actuating means <u>1/</u> 2. Vibration 3. Shock (50 G) 4. Moisture resistance 5. Operating characteristics 6. Panel seal	
<u>Group 3.</u> Salt spray (corrosion)	<u>Group 3.</u> M8805/98-81 (2 units)		
<u>Group 4.</u> Low temperature operation <u>1/</u> Mechanical endurance at low temperature <u>2/</u> Mechanical endurance at high temperature <u>1/</u> Dielectric withstanding voltage Operating characteristics Panel seal	<u>Group 4.</u> M8805/98-81 (4 units)		
<u>Group 5.</u> Electrical endurance Inductive load dc	<u>Group 5.</u> M8805/98-15 (2 units)		

1/ Two sample units only. For low temperature operation, lever shall be held in momentary position.

2/ Same sample units as for low temperature operation.

TABLE III. Group A inspection.

Examination or test
Visual and mechanical examination Operating characteristics

PIN: M8805/98 - (dash number from table IV).

Table IV. Dash number and characteristics.

Dash number	Number of poles	Lever action and circuitry (table V)	Locking arrangement (figure 2)
-001 -002 -003 -004 -005 -006 -007 -008 -009 -010 -011 -012 -013 -014	4 Pole	1	None A B D E F G H J K L M N P
-015 -016 -017 -018		3	None D F G
-019 -020 -021 -022 -023 -024 -025		5	None E F K L M N
-026 -027 -028 -029		7	None E L N
-030 -031		8	None F
-032 -033 -034 -035 -036 -037 -038 -039 -040 -041 -042 -043 -044 -045	6 Pole	1	None A B D E F G H J K L M N P
-046 -047 -048 -049		3	None D F G
-050 -051 -052 -053 -054 -055 -056		5	None E F K L M N
-057 -058 -059 -060		7	None E L N

Table IV. Dash number and characteristics - Continued.

Dash number	Number of poles	Lever action and circuitry (table V)	Locking arrangement (figure 2)
-061 -062	6 Pole	8	None F
-063 -064 -065 -066 -067 -068 -069 -070 -071 -072 -073 -074 -075 -076	8 Pole	1	None A B D E F G H J K L M N P
-077 -078 -079 -080		3	None D F G
-081 -082 -083 -084 -085 -086 -087		5	None E F K L M N
-088 -089 -090 -091		7	None E L N
-092 -093		8	None F
-094 <u>1/</u>	4 Pole	9	P

1/ Inactive for new design.

TABLE V. Lever action and circuitry.

Type number	Basic switch numbers			With toggle lever in position					
	For 4 pole	For 6 Pole	For 8 pole	Keying side		Center		Opposite keying side	
				Toggle action	Circuit closed	Toggle action	Circuit closed	Toggle action	Circuit closed
1	1-2	1-2-3	1-2-3-4	Maintain	C-NC	Maintain	C-NC	Maintain	C-NO
	3-4	4-5-6	5-6-7-8		C-NO		C-NC		C-NC
3	1-2	1-2-3	1-2-3-4	Maintain	C-NC	(None)		Maintain	C-NO
	3-4	4-5-6	5-6-7-8		C-NO				C-NC
5	1-2	1-2-3	1-2-3-4	Momentary	C-NC	Maintain	C-NC	Maintain	C-NO
	3-4	4-5-6	5-6-7-8		C-NO		C-NC		C-NC
7	1-2	1-2-3	1-2-3-4	Momentary	C-NC	Maintain	C-NC	Momentary	C-NO
	3-4	4-5-6	5-6-7-8		C-NO		C-NC		C-NC
8	1-2	1-2-3	1-2-3-4	Momentary	C-NC	(None)		Maintain	C-NO
	3-4	4-5-6	5-6-7-8		C-NO				C-NC
9 ^{1/}	1-2	N/A	N/A	Momentary	C-NC	Momentary	C-NO	Maintain	C-NC
	3-4				C-NO		C-NC		C-NC

^{1/} Inactive for new design.

Reference Documents

[MIL-PRF-8805](#)
[MIL-PRF-8805/4](#)
[MS25081](#)
[MS25082](#)
[MIL-DTL-83731](#)

[MIL-DTL-5423/16](#)
[MIL-STD-202-213](#)
[MIL-STD-202-214](#)
[NASM 35333](#)

The margins of this specification are marked with vertical lines to indicate where modifications from this revision were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Custodians:
 Navy - EC
 Air Force - 85
 DLA - CC

Preparing activity:
 DLA - CC
 (Project 5930-2025-053)

Review activities
 Navy - AS

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 <https://assist.dla.mil/>.