

PERFORMANCE SPECIFICATION SHEET

SWITCH, PUSH, LOW LEVEL OR 10 AMPERES, WATERTIGHT OR DUSTTIGHT

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](#).

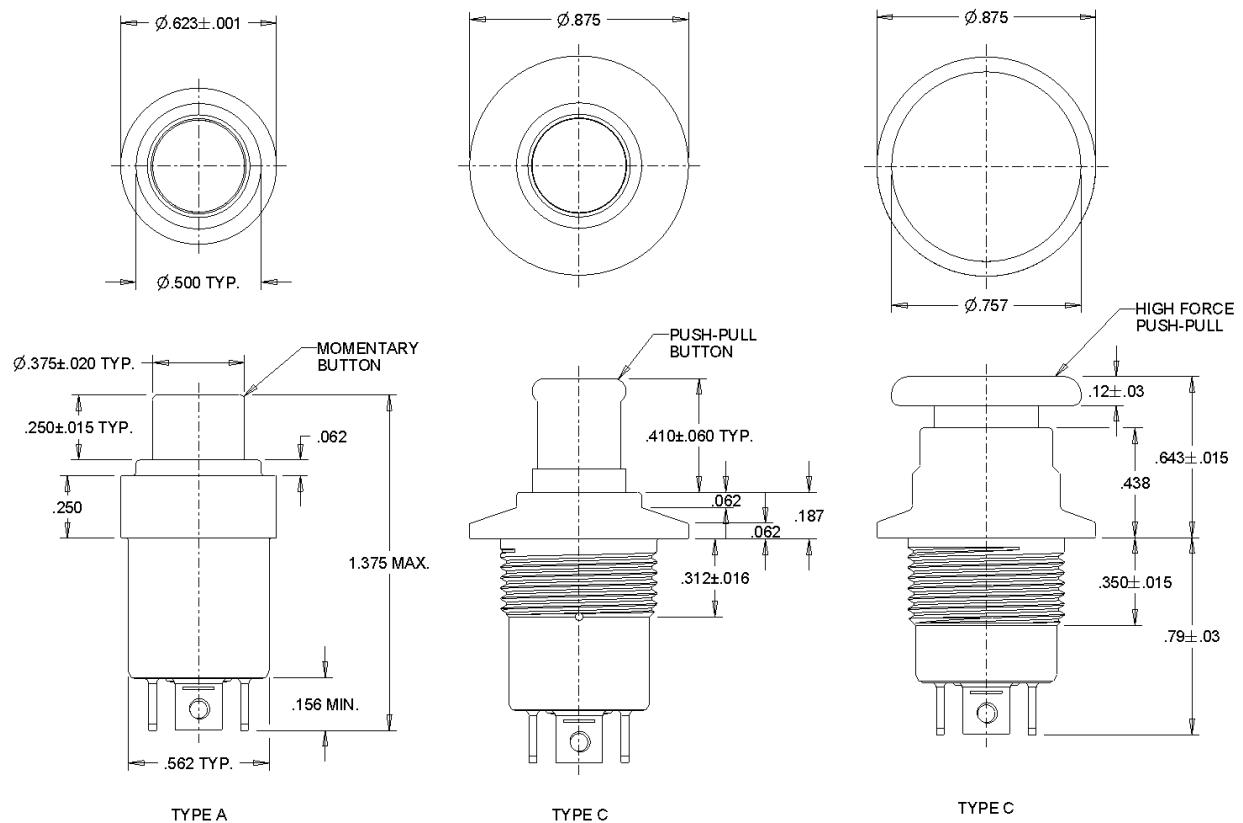


FIGURE 1. Configuration and dimensions.



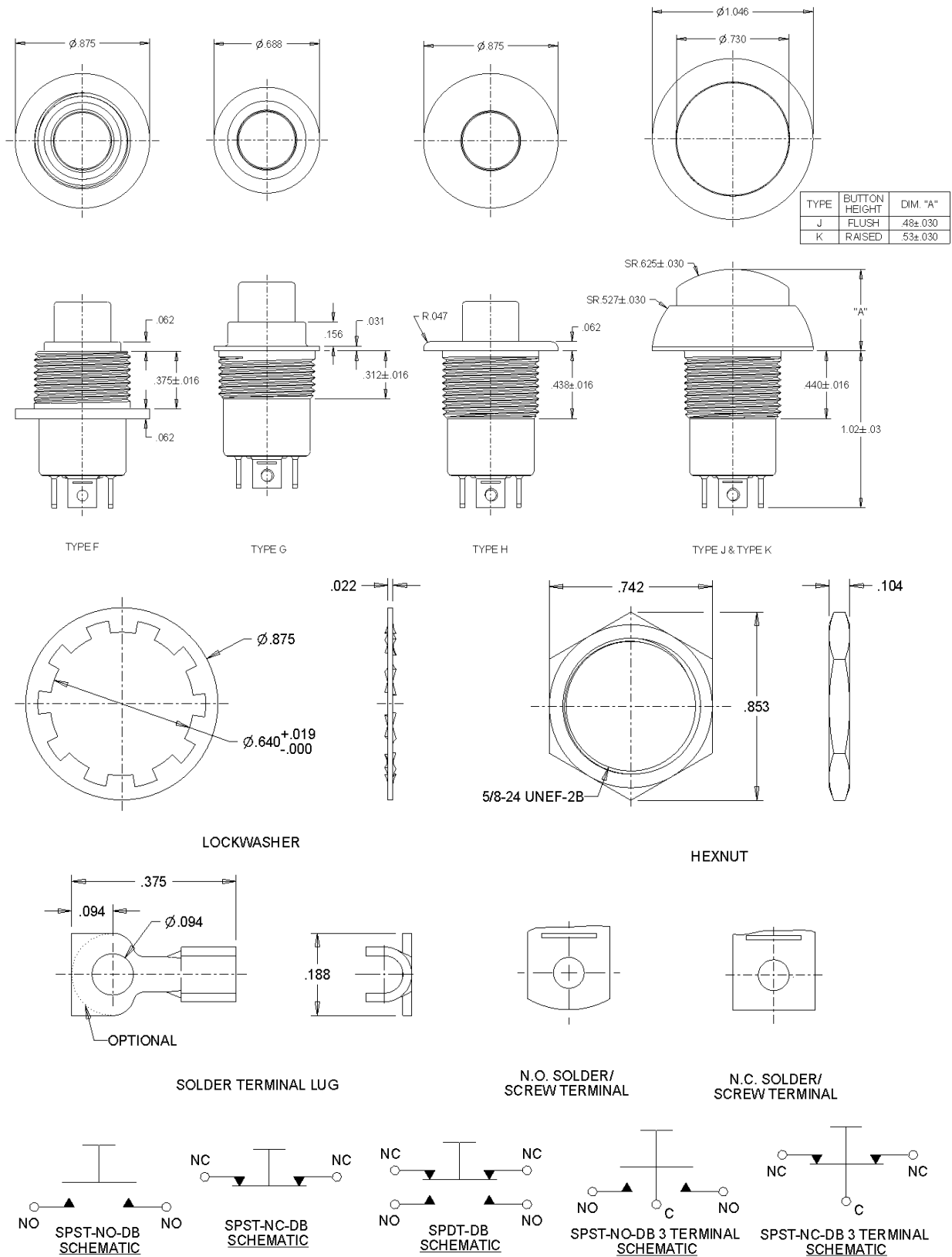


FIGURE 1. Configuration and dimensions - Continued.

NOTES:

1. Unless otherwise specified, dimensions are in inches, tolerances are $\pm .010$.
2. Mounting thread 5/8-24 UNEF-2A applies to types C, F, G, H, J and K. All threads to be within .10 of shoulder. Switch shall be furnished with one of each mounting nut MS25082-B11 per MS25082 or equivalent and lockwasher MS35333-138 per NASM 35333 or equivalent with the exception of washer O.D. of $\varnothing 0.875$. Alternative base metals and protective finished, as approved by the qualifying activity, may be utilized for hardware metal.
3. All terminal threads are #2-56 UNC-2B.
4. Hardware for each screw terminal includes one screw, one terminal lug, and one lock-washer and is only provided with the screw terminal option.
5. Push-pull option only available on types C, F, G, H, J and K.
6. Types C, F, G, and H shall be furnished with suitable mounting hardware.
7. Overall height of switch with push-pull activator is 1.610 maximum in extended position.
8. For push-pull configuration, circuit schematic is shown with actuator in extended position.
9. High force push-pull option only available on Type C switches.

FIGURE 1. Configuration and dimensions - Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Enclosure design: 2 (dust-tight) or 3 (watertight)

Temperature characteristic:

Momentary and Standard Push-Pull Options:

Symbol 1 (-55°C to +85°C).

High Force Push-Pull Option:

-40°C to +85°C

Shock type: H for momentary type only (no contact opening or closing in excess of 20 milliseconds).

M for other units.

Sinusoidal vibration grade: 2 (10 to 2,000 Hz).

Weight: .050 pound maximum.

Solderability: Applicable to solder terminals and screw tabs with solder lugs.

Operating characteristics:

Total plunger travel:

Case styles A, C, F, G & H: $.085 \pm .015$ inch.

Case styles J & K: $.075 \pm .015$ inch.

Operating force:

Momentary: $2.5^{+0.5}_{-1.0}$ pounds or 4 ± 1 pounds.

Push-pull: 0.5 to 2 pounds.

High force push-pull: 3 lbs. min.

Releasing force: .75 pounds or 1 pound minimum respectively for momentary switches.

Terminals:

Terminal strength torque test: Not applicable.

Terminal plating: Silver plating as an external coating is acceptable.

Screw terminals: Lock washers are not captive to the screw.

Strength of actuator and stop: 75 pounds for 3 terminals circuitry; 40 pounds for all others.

Finish: The switch case shall be corrosion resistant, silver.

Dielectric withstanding voltage:

Sea level: 1,000 V rms.

After electrical endurance: 200 V rms.

Intermediate current: (Prior to test, units preconditioned at 85°C for 48 hours.)

Momentary and Standard Push-Pull Options:

N.O., N.C., 2 Circuit Options: 200,000 cycles.

N.O. 3 Terminal and N.C. 3 Terminal Options: 50,000 cycles.

High Force Push-Pull Option:

Any terminal configuration: 5,000 cycles.

Mechanical endurance (10 to 15 cpm):

Momentary and Standard Push-Pull Options:

N.O., N.C., 2 Circuit Options:

At room temperature: 200,000 cycles.

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

N.O. 3 Terminal and N.C. 3 Terminal Options: 50,000 cycles.

High Force Push-Pull Option

Any configuration: 5,000 cycles.

Electrical endurance:

Momentary and Standard Push-Pull Options:

25,000 cycles at sea level.

5,000 cycles at 50,000 feet.

High Force Push-Pull Option:

5,000 cycles at sea level and 50,000 feet.

Electrical ratings:

Central terminal ratings: 3 amperes maximum.

Other than center terminals: See table I.

TABLE I. Electrical ratings, power circuit switches. 1/

Load	Sea level		50,000 feet
	28 V dc	115/V ac, 60/400 Hz 2/	28 V dc
	Amperes	Amperes	Amperes
Resistive	10	10	---
Inductive	5	5	5
Lamp 3/	3	3	---

1/ Center terminal rating: 3 amperes maximum.

2/ The 400 Hz ratings are shown for information only and do not require electrical endurance testing.

3/ Lamp loads apply to legacy designs only and should not be used in new design activity.

Sand and dust: Applicable.

Electrical logic circuit (5.0 V dc, .010 ampere): Applicable when specified (see Table I): 25,000 cycles at an actuation rate of 120 cycles per minute maximum with no "stick", or "misses", allowed when tested in accordance with [ECIA RS-448](#), method 17 as follows:

Test condition:

Each switch contact shall be tested using a 5.0 ± 0.5 V dc, 10 ± 1 mA resistive load. During each closure of the contacts, the voltage drop across the switch terminals shall be monitored for a duration of no less than 50 percent of each contact static closure. The switch contacts need not be monitored until 10 milliseconds after the initial contact closure to exclude any contact bounce. During each opening of the contacts, the voltage drop across the switch terminals shall be monitored for a duration of no less than 50 percent of each contact opening.

A voltage of 2.1 volts or greater across the switch terminals shall constitute a contact "miss" (failure to properly close the circuit). A voltage drop of less than 90 percent of the open-circuit voltage shall constitute a contact "stick" (failure to properly open the circuit).

The monitoring device shall either record the number of contact closures at which "sticks" and/or "misses" occur, or discontinue the test when "sticks" and/or "misses" occur.

Operating temperature:

- 25 percent of the test cycle at -55°C specified.
- 25 percent of the test cycle at room ambient conditions.
- 50 percent of the test cycle at +85°C.

Qualification:

Switches are qualified by similarity to [MIL-PRF-8805/3](#).

Part or Identifying Number (PIN) and characteristics.

M8805/121-	Case Style	Terminal Style/ Current	Circuit Form	Switch Action	Button Color	Seal Rating
	1. Style A	1. Solder/Std.	1. N.O.	1. 2.5 lbs. Momentary	1. Red	1. Dust-tight (Design 2)
	2. Style C	2. Screw/Std.	2. N.C.	2. 4.0 lbs. Momentary	2. Black	2. Watertight (Design 3)
	3. Style F	3. Solder/Low Level	3. 2 Circuit	3. Push-Pull	3. White	
	4. Style G	4. Screw/Low Level	4. N.C. 3 Terminal	4. High Force Push-Pull		
	5. Style H		5. N.O. 3 Terminal			
	6. Style J					
	7. Style K					

Example switch: M8805/121-315121

Case style C, solder terminal, standard current, 2 circuit configuration, 2.5 lbs. momentary action, with black button top and a dust-tight (design 2) seal rating.

Not all combinations of part numbers and characteristics are applicable to this slash sheet. See [MIL-PRF-8805/3](#) and [MIL-PRF-8805/120](#) for additional MIL part numbers.

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue 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 and relationship to the previous issue.

Referenced documents:

[MIL-PRF-8805](#)
[ECIA RS-448](#)

[MS25082](#)
[MIL-PRF-8805/3](#)

[NASM 35333](#)
[MIL-PRF-8805/120](#)

Custodians:

Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5930-2025-032)

Review activities:

Army - AR, AV, MI
Navy - AS, MC, OS, SH
Air Force - 19

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