

PERFORMANCE SPECIFICATION SHEET

SWITCHES, SENSITIVE, 2 CIRCUIT (5 AMPERES), SPST (8 AMPERES), OR LOW LEVEL
FORM X, FORM Y, FORM C, OR FORM Z, UNSEALED

This specification is approved for use by all Departments and Agencies of the Department of Defense. The complete requirements for acquiring the switch described herein shall consist of this specification and the latest issue [MIL-PRF-8805](#).

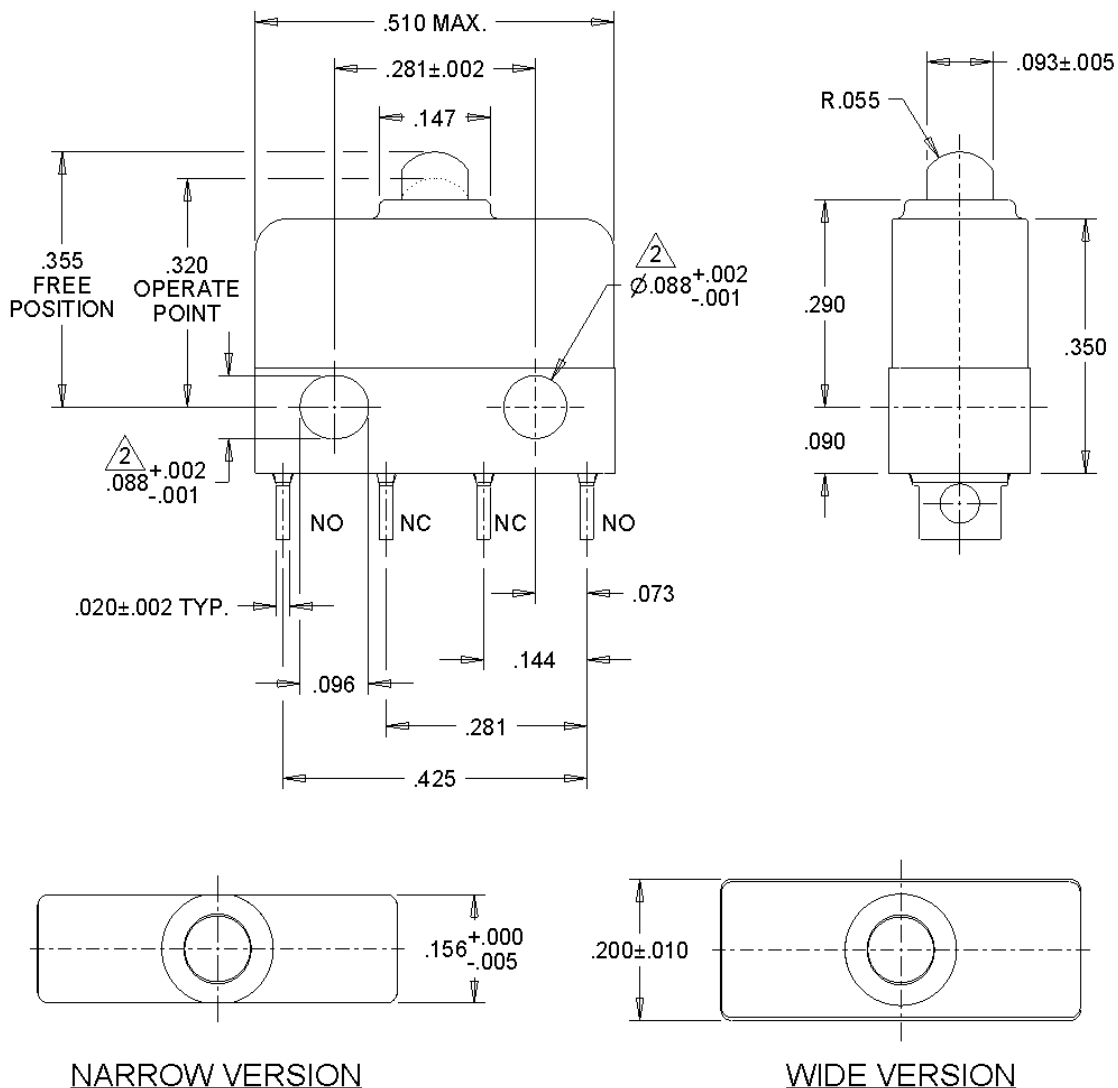


FIGURE 1. Dimensions and configuration.



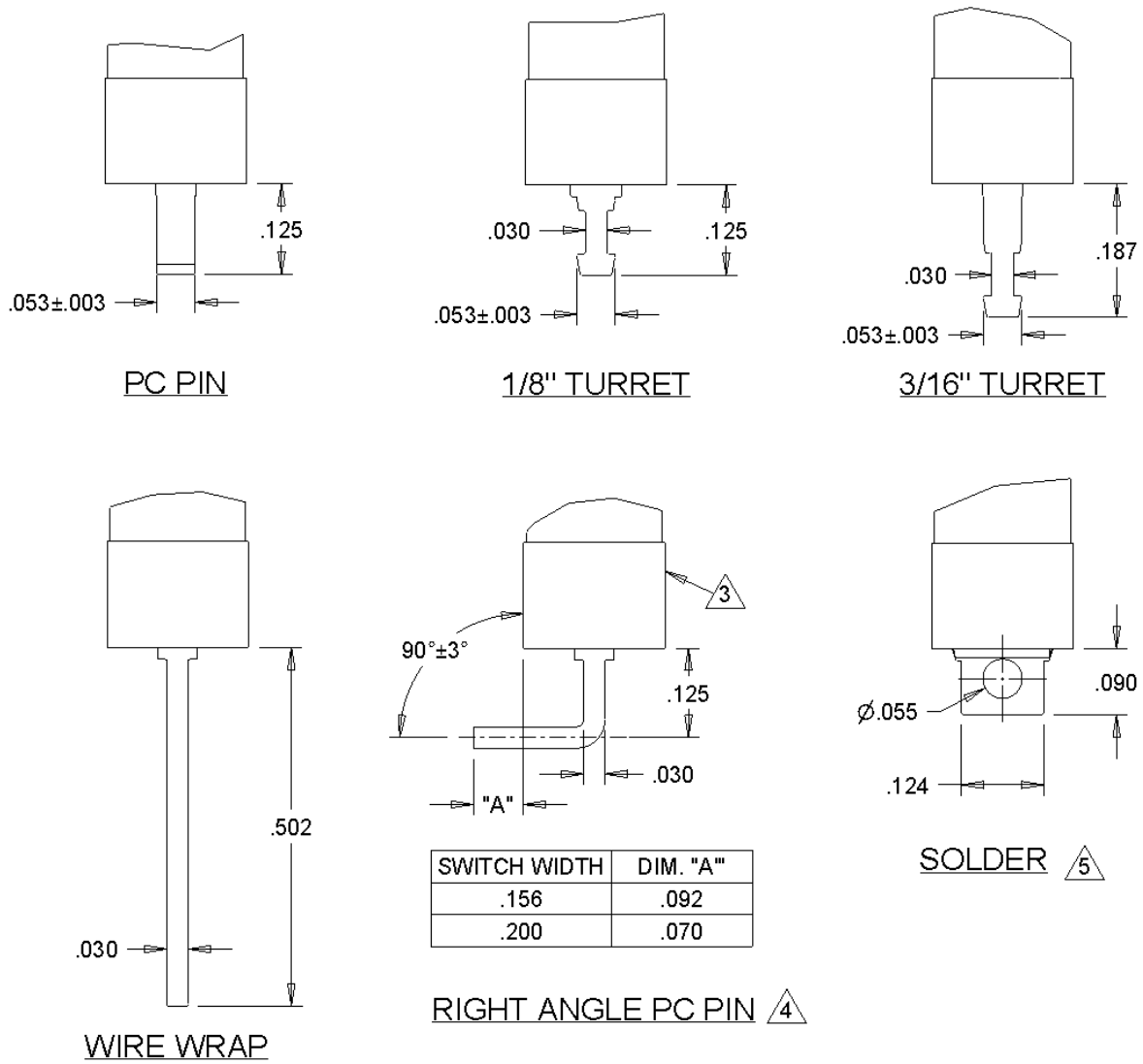


FIGURE 1. Dimensions and configuration - Continued.

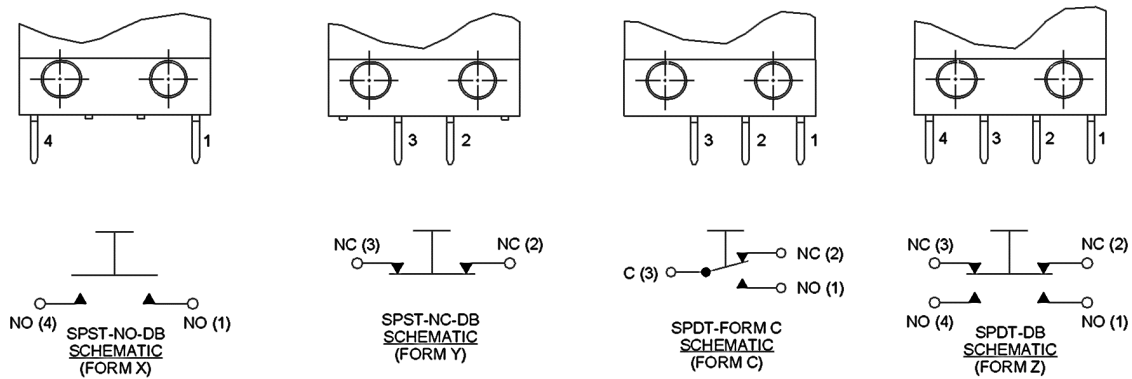


FIGURE 2. Circuit style

NOTES:

1. Unless otherwise specified, dimensions are in inches, tolerances are $\pm .015$.
2. Mounting holes will accept pins or screws of .087 maximum diameter on $.188 \pm .002$ centers.
3. Identification marking on this side.
4. PC pins are bent outward with the oval hole on the left side of switch.
5. Solder terminals only available on .200" wide switch.
6. Terminal pattern is the same on all circuit styles, but only Form Z has all 4 terminals.
7. Terminal marking may be on the bottom of the switch.

REQUIREMENTS:

Dimensions and configurations: See figure 1 and figure 2.

Enclosure design: 1 (unsealed).

Temperature characteristic: 2 (-65°C to $+125^{\circ}\text{C}$).

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

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

Weight: .003 pound maximum.

Operating characteristics:

Actuating force: 8 ounces maximum, ± 20 percent variation from specified values acceptable after test.

Overtravel: .004 inch minimum, ± 20 percent variation from specified values acceptable after test.

Movement differential: .010 inch minimum, ± 20 percent variation from specified values acceptable after test.

Strength of actuator: 10 pounds.

Terminal strength: 5 pounds, all directions.

Dielectric withstanding voltage:

Sea level: 1,050 V rms initial.

Altitude: 70,000 feet - 400 V rms.

Mechanical endurance: 1,000,000 cycles (cycle rate 300 cpm permissible)

Electrical endurance: 50,000 cycles.

Electrical ratings: See Table I.

Application note: The alternate ratings range includes potential arcing loads which could affect switch performance, including contact resistance, etc. So, switches intended for use in applications within the primary (low level) range are only to be tested and used with low level loads.

Switches used in L.E.D. circuits without an inline resistor can experience loads between 1.7 and 4.0 volts at 10 to 20 milliamps. These loads are comparable to low level ratings and can be qualified by similarity. When resistors are included, other voltages are acceptable such as 6, 12, or 24 volts.

TABLE I. Electrical ratings.

Rating		Sea Level				70,000 Feet	
		28 VDC		115 VAC, 60 Hz.		28 VDC	
Standard ratings (2 or 4 terminal switch)	Load	NC or NO (Form Z)	SPDT-DB Form Z	NC or NO (Form Z)	SPDT-DB Form Z	NC or NO (Form Z)	SPDT-DB Form Z
	Resistive	8 amps	5 amps	8 amps	5 amps	8 amps	5 amps
	Inductive	5 amps	3 amps	5 amps	3 amps	3 amps	2 amps
	Motor	5 amps	---	---	---	---	---
	Lamp <u>1/</u>	1 amp	---	1 amp	---	---	---

		Sea Level				70,000 Feet	
		28 VDC		115 VAC, 60 Hz.		28 VDC	
Standard ratings (3 terminal switch)	Load	NC or NO (Form C)	SPDT-DB Form C	NC or NO (Form C)	SPDT-DB Form C	NC or NO (Form C)	SPDT-DB Form C
	Resistive	8 amps	5 amps	8 amps	5 amps	8 amps	5 amps
	Inductive	3.5 amps	2.5 amps	3.5 amps	2.5 amps	2 amps	1.5 amps
	Motor	5 amps	---	---	---	---	---
	Lamp <u>1/</u>	1 amp	---	1 amp	---	---	---
Low Level <u>2/</u>	Load	30 mV	Per Section 4.7.33 MIL-PRF-8805				
	Resistive	10 mA					

		Sea Level		70,000 Feet	
		28 VDC		28 VDC	
Alternative ratings <u>3/</u>	Load	NC or NO (Form Z)	SPDT-DB Form Z	NC or NO (Form Z)	SPDT-DB Form Z
	Resistive	5 amps	5 amps	5 amps	5 amps
	Inductive	2.5 amps	3 amps	1.5 amps	2 amps

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

2/ Low level ratings void if low level loads exceeded at any time.

3/ Low level switches are primarily intended for use under low level ratings; however, if used in other applications, then they are capable of the alternate ratings shown.

Part or Identifying Number (PIN) and terminal configurations.

M8805/118-

<u>Switch Width</u>	<u>Terminal Style</u>	<u>Operate Force</u>	<u>Circuitry</u>	<u>Contact Material</u>
1: 0.156" max.	1: PC Pins	1: 5^{+3}_{-2} oz.	1: SPNO-DB Form X	1: Silver/Gold High Current
2: 0.210" max.	2: Turret 1/8"	2: 5 oz min.	2: SPNC-DB Form Y	2: Silver/Gold Low Current
	3: Turret 3/16"	3: 6 oz max.	3: SPDT Form C	
	4: Wire wrap		4: SPDT-DB Form Z	
	5: Right Angle PC Pins			
	6: Solder <u>1/</u>			

1/ Solder terminal style only available on 0.210" max width.

Example switch: M8805/118-13212

0.156" max. width, 3/16" turret terminals, 5 oz min. operate force, NO (Form X) circuit, low level current rating

Not all combinations of part numbers and characteristics are applicable to this slash sheet. See [MIL-PRF-8805/76](#) and [MIL-PRF-8805-101](#) for additional MIL part numbers.

QUALIFICATION:

Wide and narrow switches are qualified by similarity to [MIL-PRF-8805/76](#) and [MIL-PRF-8805-101](#) respectively.

Reference documents:

[MIL-PRF-8805](#) [MIL-PRF-8805/76](#)
[MIL-PRF-8805-101](#) [MIL-STD-202-213](#)

Custodians:

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

Preparing activity:
DLA - CC

(Project 5930-2024-063)

Review activities:

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

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/>.