

INCH-POUND  
MIL-PRF-22885/81C  
1 March 2010  
SUPERSEDING  
MIL-PRF-22885/81B  
28 April 2004

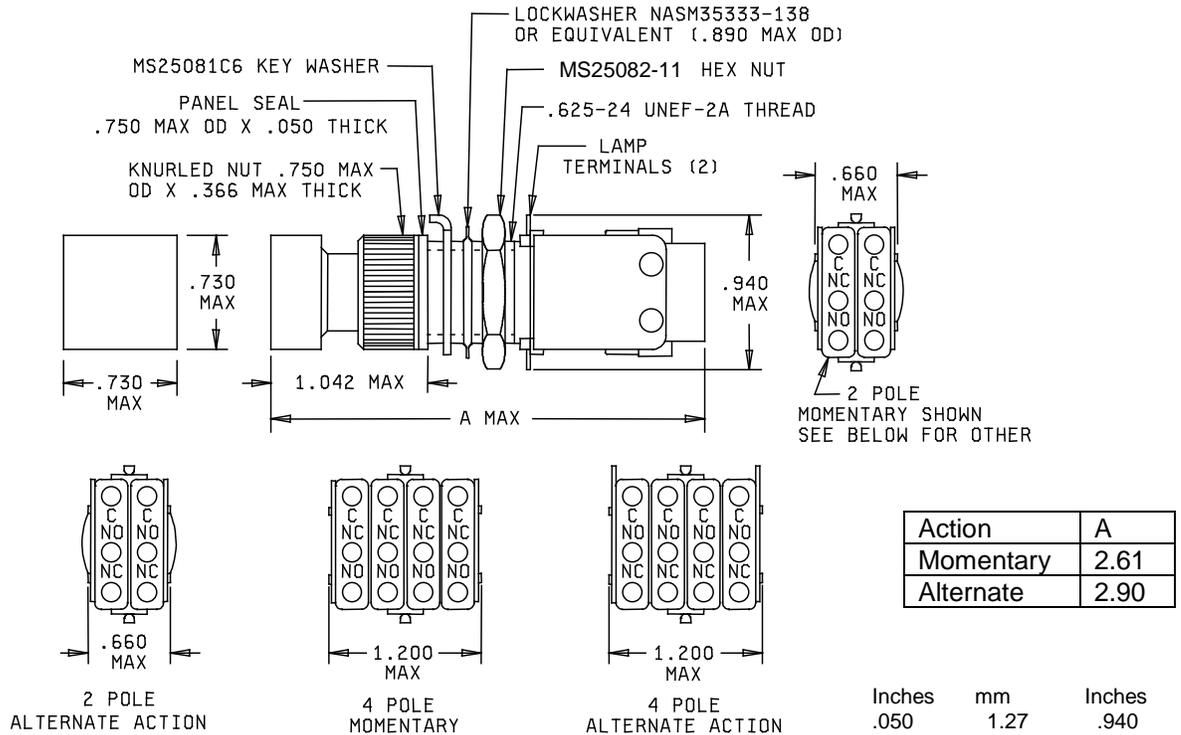
PERFORMANCE SPECIFICATION SHEET

SWITCHES, PUSH BUTTON, ILLUMINATED, 5 AMPERES, 1-LAMP, DRIPPROOF

**INACTIVE FOR NEW DESIGN AFTER 20 August 1987**

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

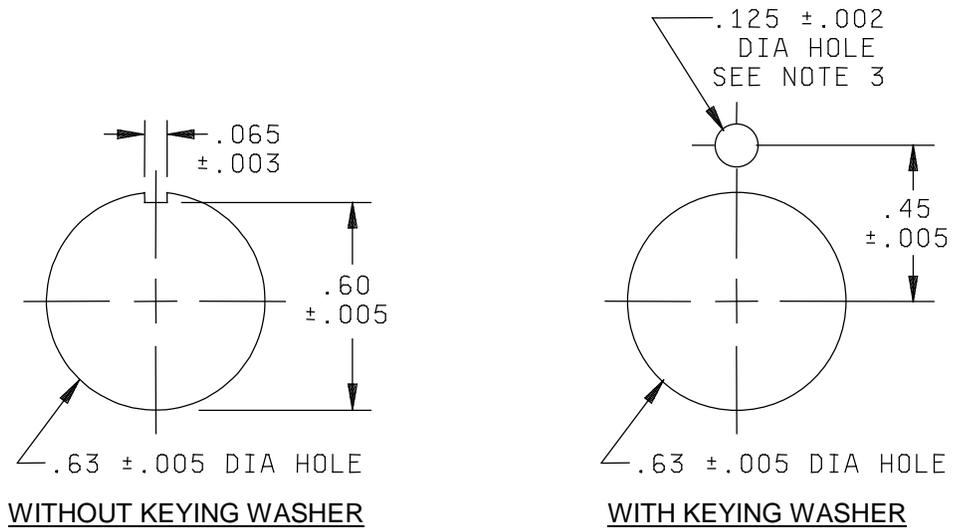
The requirements for procuring the product described herein shall consist of this specification sheet and MIL-PRF-22885.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified tolerances are  $\pm 0.005$  (.13 mm).
4. Switches shall mount on .062 (1.57 mm) to .225 (5.72 mm) thick panels.
5. Design configuration is optional within the maximum dimensions specified.

FIGURE 1. Dimensions and configurations.



Inches	mm
.002	0.05
.003	0.07
.005	0.12
.065	1.59
.125	3.06
.45	11.0
.60	14.7
.63	15.4

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. When mounting with keying washer, the tab on the keying washer requires a hole depth of .055. This hole cannot penetrate the panel, or the drip proof integrity of the panel will be lost.

FIGURE 2. Recommended panel mounting hole patterns.

REQUIREMENTS:

Design and configuration: See figures 1 and 2.

Enclosure design: 2 (dripproof)

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

Vibration grade 2 (10-500 Hz, 10 g peak).

Operation: See Table I.

Color: See table II.

Luminance: see table II.

Display type: C (colored background).

Military part number: See table I.

TABLE I. Military part number.

Military part number M22885/81- Silver contacts	Switch circuitry	Lens color
01R 01G 01Y 01B 01W	2 pole momentary	Red Green Yellow Blue White
02R 02G 02Y 02B 02W	2 pole alternate action	Red Green Yellow Blue White
03R 03G 03Y 03B 03W	4 pole momentary	Red Green Yellow Blue White
04R 04G 04Y 04B 04W	4 pole alternate action	Red Green Yellow Blue White

TABLE II. Chromaticity and luminance

Lens color	Color symbol	Chromaticity <u>1/</u>		Luminance <u>2/</u> (foot lamberts)
		x	y	
Red	R	.715	.260	32 minimum
		S.L.	.270	
		.650	.325	
		S.L.	.335	
Green	G	.180	.485	12 minimum
		.265	.580	
		.055	.605	
		.140	.695	
Yellow	Y	.580	.380	224 minimum
		S.L.	.400	
		.510	.455	
		S.L.	.470	
Blue	B	.220	.280	6 minimum
		.220	.365	
		.080	.280	
		.080	.365	
White	W	.530	.365	170 minimum
		.530	.425	
		.420	.365	
		.420	.425	

1/ Illuminated chromaticity limits based on source illuminate of 2200° Kelvin. The specified chromaticity values are the "X" and "Y" coordinates on the CIE chromaticity bound by the specified coordinates.

2/ Luminance values are based upon using T-1 ¾ lamps which have a calibrated mean spherical candlepower of .34±.02.

Plastic: Shall be capable of meeting UL burning rate code 94HB in accordance with UL-94.

Finish: Bushing and mounting hardware shall have a lusterless finish.

Weight: .125 pound maximum.

Basic switch: In accordance with MIL-PRF-8805/2 (category I or II), part number MS25085-2, except may have integral leaf or lever actuators and reverse identification of NO and NC terminals.

Lamps: switch shall accept one T 1-3/4 miniature flange base lamp.

Strength of actuator: Not applicable.

Lamp retention: The lamp shall be held captive within the mounting bushing.

Electrical rating: See table III.

TABLE III. Electrical ratings (silver contacts). <sup>1/</sup>

Load	Sea level		50,000 feet
	28 V dc	115 V ac, 60 Hz	28 V dc
	Amperes	Amperes	Amperes
Resistive	5	5	5
Inductive	3	5	2.5
Lamp	2.4	1.5	2.4

<sup>1/</sup> Silver contacts; Contacts I which the mating surfaces are silver or silver alloy throughout the rated life of the switch.

Quality Assurance

Qualification: Table IV applies for group submission.

Group B inspection: Not applicable.

TABLE IV. Qualification inspection.

Qualification inspection (MIL-PRF-22885)	Test switch	Other inspections	Extent of approval
<p><b>Group I</b> (All samples)</p> <p>Visual and mechanical examination <sup>1/</sup></p> <p>Contact resistance</p> <p>Operating characteristics</p> <p><b>Group II</b> (4 samples)</p> <p>Strength of actuating means <sup>2/</sup></p> <p>Strength of mounting bushing <sup>2/</sup></p> <p>Lamp retention</p> <p>Thermal shock</p> <p>Vibration</p> <p>Shock</p> <p>Moisture resistance</p> <p>Dielectric withstanding voltage</p> <p>Operating characteristics</p> <p>Seal</p> <p>Marking visibility</p> <p><b>Group III</b> (2 samples)</p> <p>Salt spray</p> <p><b>Group VII</b> (2 samples)</p> <p>Low-level life</p> <p>Operating characteristics</p> <p>Seal</p> <p><b>Group VIII</b> (2 samples each color)</p> <p>Illuminated colors</p> <p>Luminance</p> <p>Field of view</p>	M22885/81-04x	<p>M22885/81-01x, -02x, -03x (1 sample each)</p> <p>Visual and mechanical examination[</p> <p>Operating characteristics</p>	All Part numbers

<sup>1/</sup> Only one sample shall be measured for physical dimensions.

<sup>2/</sup> Two sample units only

Referenced documents:

MIL-PRF-22885  
MIL-PRF-8805/2  
UL94

**Changes from previous issue.** 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:

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

Preparing activity:  
DLA - CC

(Project 5930-2009-022)

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.daps.dla.mil/>.