

INCH-POUND
MIL-PRF-22885/96C
2 April 2004
SUPERSEDING
MIL-PRF-22885/96B(EC)
27 September 1991

PERFORMANCE SPECIFICATION SHEET
SWITCHES, PUSHBUTTON, ILLUMINATED,
4-LAMP, RFI SHIELDED

INACTIVE FOR NEW DESIGN AS OF 15 JANUARY 1999
DO NOT USE EXCEPT FOR REPLACEMENT PURPOSES

This specification sheet 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 sheet and MIL-PRF-22885.

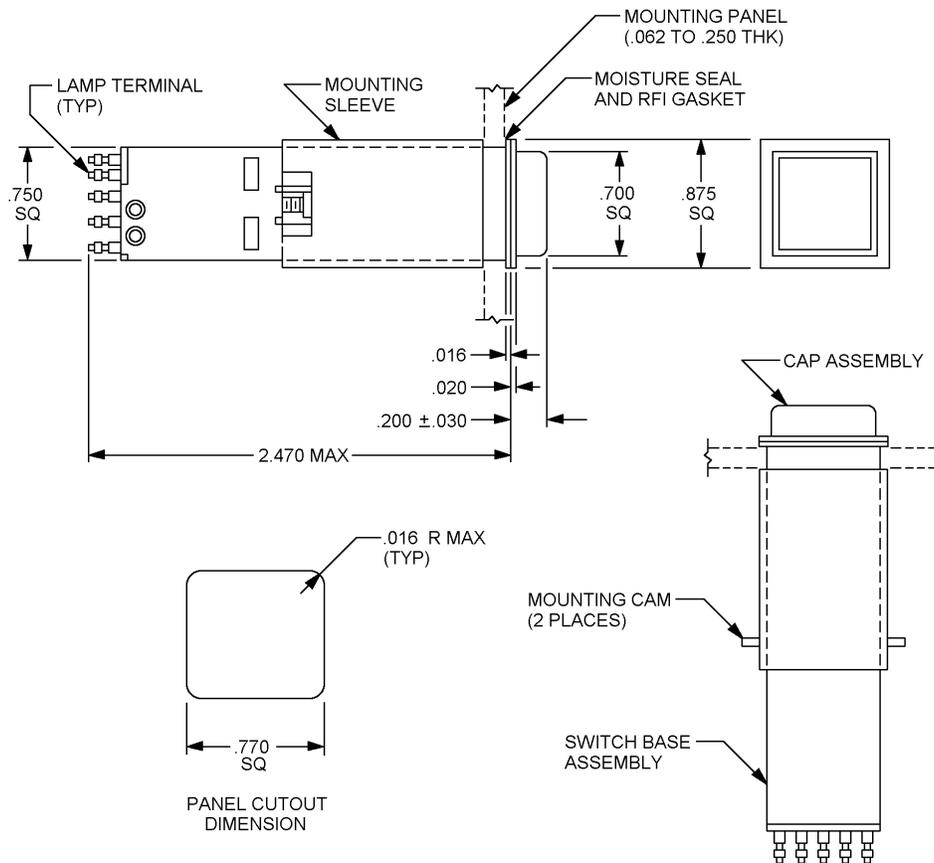
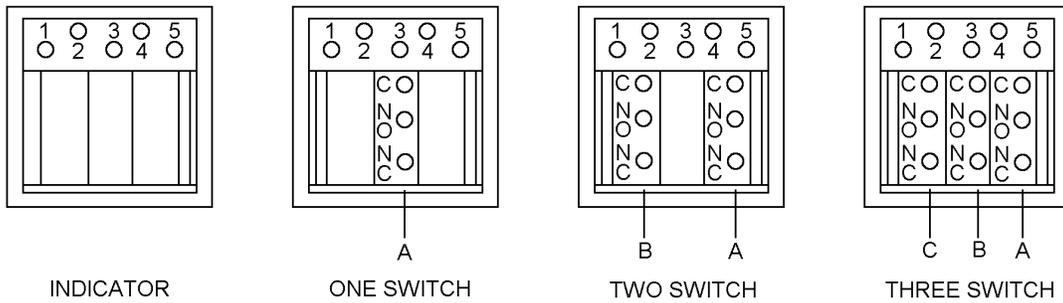
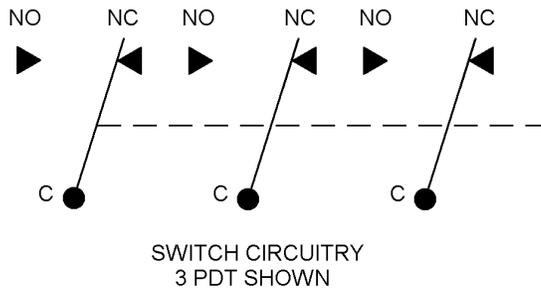


FIGURE 1. Design and construction.

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TERMINAL IDENTIFICATION



Inches	mm	Inches	mm
.016	0.41	.700	17.78
.020	0.51	.750	19.05
.030	0.76	.770	19.56
.062	1.57	.875	22.22
.200	5.08	2.470	62.74
.250	6.35		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Unless otherwise specified, tolerances are $\pm .010$ (0.25 mm).
4. Basic switch shall be MIL-PRF-8805/4.
5. Lens holder can slide off when cap is removed from base. Each cap assembly shall accommodate a film legend of $.645 \times .645 \pm .010 \times .004 \pm .001$ ($16.38 \times 16.38 \pm 0.25 \times 0.10 \pm 0.03$ mm) not supplied (available legend area .600 square).
6. Cap assemblies shall be held captive to base assemblies by retaining element to prevent accidental interchange.
7. Lamp terminals shall be permanently identified as shown. Switch terminals shall be identified as "C", "NC", and "NO".

FIGURE 1. Design and construction - Continued.

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REQUIREMENTS:

Dimensions and configurations: See figure 1.

Complete switch shall consist of:

Base assembly: Includes basic switches (MIL-PRF-8805/4), mounting sleeve and moisture/RFI gasket.

Cap assembly: Includes necessary color filters, diffusers and front lens plate (.600 square lens engraving area). Accepts 4 T-1-3/4 midget flange base incandescent lamps, not included, order separately. Accommodates a film legend of .645 x .645 ±.010 x .004 ±.001, not supplied. Includes RFI screen.

Enclosure design: 2 (dripproof) panel seal only. Cap assembly and lamp circuit not sealed.

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

Vibration grade: 2 (10-500 Hz).

Dielectric withstanding voltage: Dielectric withstanding voltage on lamp circuit not applicable after seal test:

Dielectric withstanding voltage at reduced barometric pressure:

Altitude: 50,000 feet (method 105, MIL-STD-202, test condition B).

Operating characteristics:

Operation force: 45 ounces maximum.

Cap assembly extraction force: 4 pounds ± 1 pound.

Lamps: Accommodates 4 T-1-3/4 midget flange base lamps. Not included, order separately. Select lamps of .75 watt or less power rating.

Display type: W, translucent white, which when illuminated shows the required color.

Material: Base assembly and mounting sleeve: Stainless steel.

Electrical ratings: See tables I and II.

Luminance and color: See table III.

Weight: .12 pound maximum.

EMI/RFI: Cap-lampholder assembly to have screen and contact for RFI shielding. Switches shall be tested to determine shielding effectiveness in accordance with the shielding efficiency test of MIL-PRF-22885. The test shall consist of electric field and plane wave measurements performed at the following frequencies. Attenuation shall not be less than specified below.

<u>Electric field</u>	<u>Minimum attenuation</u>	<u>Plane wave</u>	<u>Minimum attenuation</u>
15 kHz	60 dB	100 MHz	47 dB
150 kHz	60 dB	400 MHz	39 dB
500 kHz	60 dB	1 GHz	33 dB
1 MHz	60 dB	2.5 GHz	28 dB
10 MHz	60 dB	10 GHz	20 dB

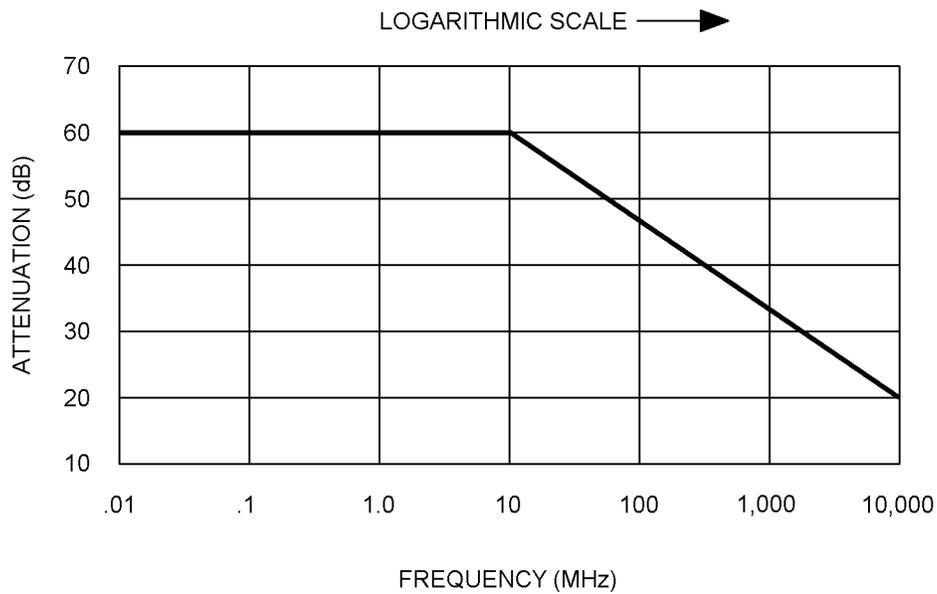


TABLE I. Electrical ratings. (silver contacts).

Load	Sea level		50,000 feet 28 V dc (amperes)
	28 V dc (amperes)	115 V ac, 60 Hz (amperes)	
Resistive	7	7	4
Inductive	4	7	2.5
Lamp	2.5	2	2.5

TABLE II. Electrical ratings (gold contacts).

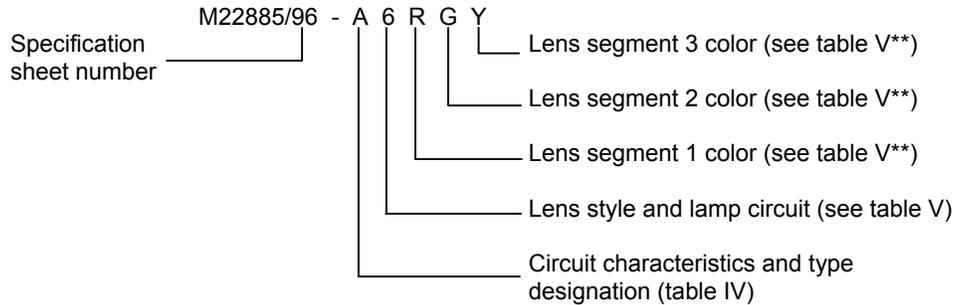
Load	Sea level 28 V dc (amperes)	50,000 feet 28 V dc (amperes)
Resistive	1	1
Inductive	.5	.5

TABLE III. Luminance and color.

Color	Chromaticity limits at 2,360° Kelvin		Luminance <u>1/</u> (footlamberts) minimum average
	X	Y	
Green (G)	.260	.570	13
	.325	SL <u>2/</u>	
	.160	.660	
	.225	SL <u>2/</u>	
Red (R)	.695	.285	28
	.703	SL <u>2/</u>	
	.655	.325	
	.660	SL <u>2/</u>	
White (W)	.400	.460	30
	.460	.460	
	.460	.380	
	.400	.380	
Yellow (Y)	.562	.415	65
	.570	SL <u>2/</u>	
	.596	.382	
	.605	SL <u>2/</u>	
Blue (B)	.150	.420	10
	.220	.420	
	.150	.320	
	.220	.320	

- 1/ When illuminated by two MIL-DTL-6363/8 lamps of 0.34 ± 0.02 mean spherical candle power or by four lamps of $.15 \pm 0.02$ mean spherical candle power with a maximum power output of 2.5 watts.
2/ SL - Spectrum locus (where intersected by other coordinate pair).

Part number: Part numbers shall be assigned as illustrated below:



** Leave blank when not applicable.

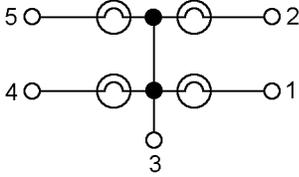
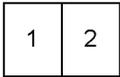
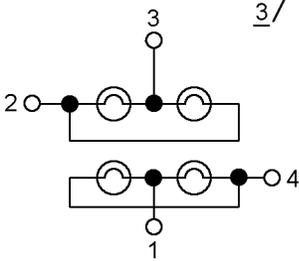
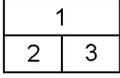
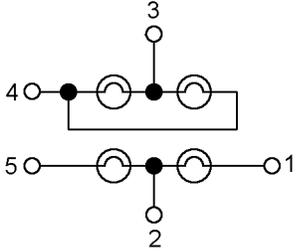
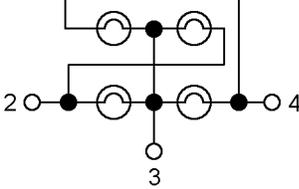
TABLE IV. Circuit characteristics and type designation.

Code <u>1/</u>	Contact material	Circuit characteristics	Switch action
U	Silver	1 PDT	Momentary
A	Silver	2 PDT	Momentary
V	Silver	3 PDT	Momentary
W	Gold	1 PDT	Momentary
C	Gold	2 PDT	Momentary
Y	Gold	3 PDT	Momentary
Z	Silver	1 PDT	Alternate
J	Silver	2 PDT	Alternate
1	Silver	3 PDT	Alternate
2	Gold	1 PDT	Alternate
L	Gold	2 PDT	Alternate
3	Gold	3 PDT	Alternate
4	Silver	1 PDT	Alternate holddown
5	Silver	2 PDT	Alternate holddown
6	Silver	3 PDT	Alternate holddown
7	Gold	1 PDT	Alternate holddown
8	Gold	2 PDT	Alternate holddown
9	Gold	3 PDT	Alternate holddown
S	None	None	Indicator
X <u>2/</u>	None	None	---

1/ Code letters B, D, E, F, G, H, K, M, N, P, Q, R, and T for 4PDT and plug-in module type switches have been canceled.

2/ Use code X to specify cap assembly portion of switch only.

TABLE V. Lens style and lamp circuit.

CODE <u>1/</u>	LENS STYLE <u>2/</u>	LAMP CIRCUIT
1		
2		
3	NONE - SWITCH BODY ONLY	
4		
5	NONE - SWITCH BODY ONLY	
6		
7	NONE - SWITCH BODY ONLY	
8		
9	NONE - SWITCH BODY ONLY	

1/ Previously assigned code letters A, B, and C have been superseded by 1, 4, and 6, respectively. Code letter D has been superseded by 3, 5, or 7, as required.

2/ Numbers indicate color symbol sequence in PIN.

3/ Vertical split lamp circuit is available only by rotating base 90 degrees.

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Qualification inspection: All applicants for qualification approval shall demonstrate that each of their items conforms to all of the requirements specified in the applicable documents singularly and in combination with all other previously qualified items, regardless of manufacturer.

Group submission:

- a. When the basic sensitive switches are qualified to MIL-PRF-8805, switches shall be tested in accordance with table VI.
- b. When the basic sensitive switches are not qualified to MIL-PRF-8805, the switch type for which qualification is sought, shall be subjected to the complete tests in accordance with table X of MIL-PRF-22885.

TABLE VI. Qualification inspection (group submission).

PIN	Inspection table of MIL-PRF-22885		Extent of approval
	Group	Number of samples	
M28855/96-64WW	I	All sample units	All
	II	4 (from group I)	
	III	2 (from group I)	
	VI <u>1/</u>	2 (from group I)	
	VII	2 (from group I)	
	VIII	2 each color <u>2/</u>	
M22885/96-Y1W	I	All sample units	
	II	2 (from group I)	

1/ Sea level, resistive dc load only.

2/ Two cap assemblies for each color (may be installed in switch bodies submitted to previous testing).

Reference documents.

- MIL-DTL-6363/8
- MIL-PRF-8805
- MIL-PRF-8805/4
- MIL-PRF-22885
- MIL-STD-202

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodian:
Navy - EC
DLA - CC

Preparing activity:
DLA - CC

(Project 5930-1793)

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 www.dodssp.daps.mil.