

INCH-POUND

MIL-PRF-22885/58H
28 April 2004

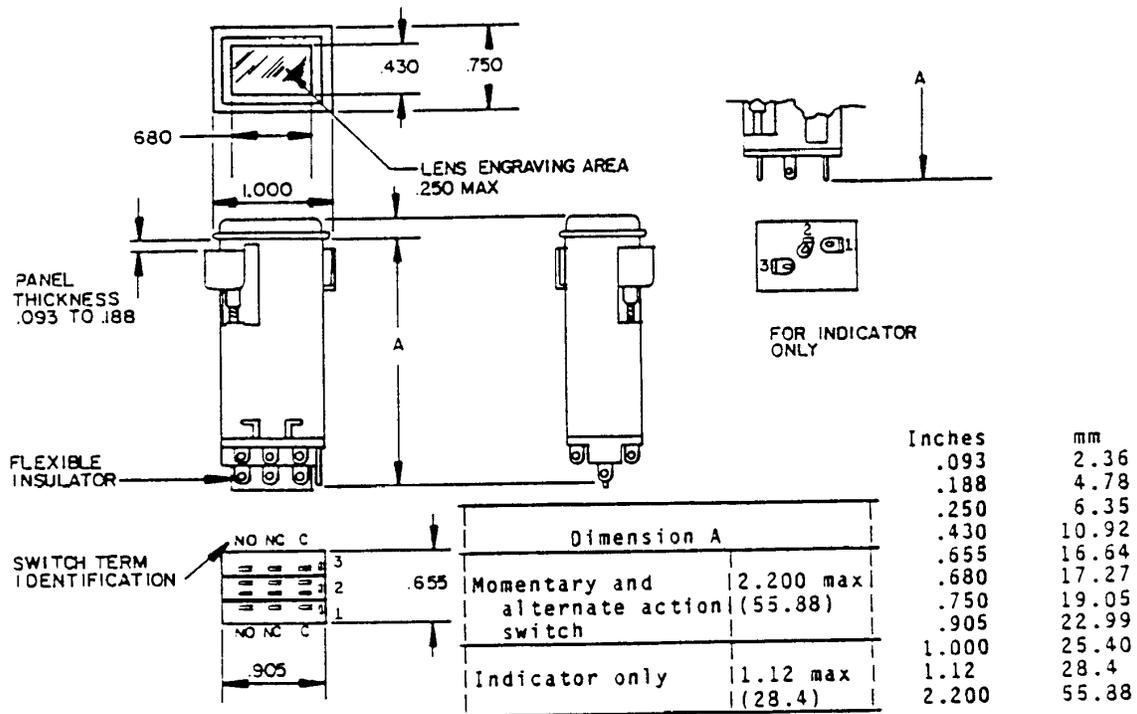
SUPERSEDING
MIL-PRF-22885/58G
17 MARCH 1999

PERFORMANCE SPECIFICATION SHEET

SWITCH, PUSHBUTTON, ILLUMINATED,
2-LAMP, SOLID MOUNT, 3 AMPERES, UNSEALED

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

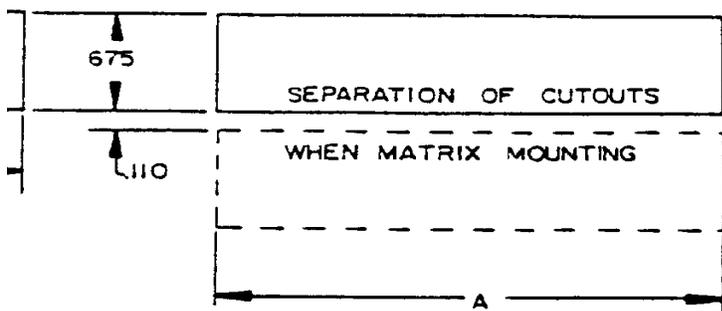
The requirements for acquiring the switch described herein shall consist of this specification sheet and MIL-PRF-22885.



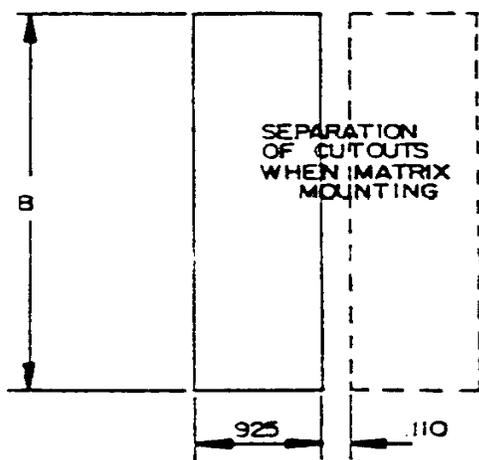
NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ± 0.010 (.25 mm).
4. On 2 PDT switches, terminals are furnished in 2 center positions only.
5. The design configuration is optional within envelope dimensions shown.
6. Terminals shall be permanently identified as shown.

FIGURE 1. Switch, 2-lamp, solid mount.



A. HORIZONTAL MOUNTING



B. VERTICAL MOUNTING

No Units	Dimensions	
	A	B
1	.925 (23.50)	.675 (17.14)
2	1.925 (48.90)	1.425 (36.20)
3	2.930 (74.42)	2.180 (55.37)
4	3.935 (99.95)	2.935 (74.55)
5	4.940 (125.48)	3.690 (93.73)
6	5.945 (151.00)	4.445 (112.90)
7	6.950 (176.53)	5.200 (132.08)
8	7.955 (202.06)	5.955 (151.26)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Metric equivalents are in parentheses.
4. Unless otherwise specified, the tolerance for three place decimals is ± 0.010 (0.25 mm).

FIGURE 2. Recommended panel outputs.

FRONT VIEW - NUMBER CORRESPONDS TO LAMP TERMINAL

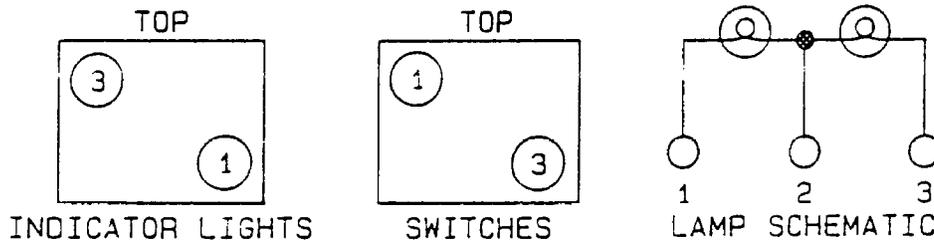


FIGURE 3. Lamp position and schematic.

REQUIREMENTS:

Dimensions and configuration: See figures 1 through 3 and table I through VI.

Design and construction:

Enclosure design: 1 (unsealed).

Switch or indicator unit shall consist of:

1 lamp module.

1 switch or indicator housing.

2 lamps, T-1-3/4, midget flanged base not included - order separately.

Lamp module: Includes lens assembly in accordance with MIL-PRF-22885/59 as specified (see table VI), holder, and divider when applicable (see table III). The lamps and lens assembly shall be capable of being installed or removed from the panel front without the use of special tools.

Positive grounding: Applicable when specified (see table VI).

Color and luminance values: In accordance with MIL-PRF-22885/12 (brightness is reduced by approximately 50 percent when EMI screen is installed).

Mounting flange: Front face of the mounting flange shall be of a material, which will allow the switch to meet the performance requirements, with a natural lusterless finish.

Ratings: (Switch unit only.)

Electrical: See table II.

Operating force: 4.0 pounds maximum.

Weight: 2.0 ounces maximum.

Color: Shall appear white in the unlighted condition. In the lighted condition it shall appear in a color determined by the color filters (see MIL-PRF-22885/59).

Contact resistance: Not applicable after inductive load endurance tests.

Thermal shock: Temperature extremes shall be -55°C and +71°C (+55°C with lamps energized).

Vibration grade: 2 (10-500 Hz).

Part or Identifying Number (PIN): The PIN's shall be M22885/58- (dash number from table VI).

Qualification inspection:

Group submission: The following applies when the momentary and alternate action switches are submitted for qualification at the same time.

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TABLE I. Qualification inspection (group submission).

Sample part number	Test	Extent of approval
M22885/58-31W	Qualification inspection table of MIL-PRF-22885	All part numbers
2 each M22885/58-04W M22885/58-25W	Visual and mechanical inspection	

1/ Separate additional lamp modules shall be utilized for each color for group VIII tests.

TABLE II. Electrical ratings.

Load	Sea level	
	28 V dc (amperes)	115 V ac
Resistive	3.0	3.0
Inductive	1.5	1.5
Lamp	1.5	1.0

TABLE III. Lens style.

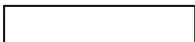
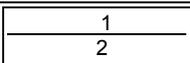
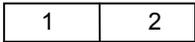
	Lens style	
A	Solid	
B	Split horizontally	
C	Split vertically	

TABLE IV. Color filter symbols.

Color	Symbol
Blue	B
Green	G
Red	R
White	W
Yellow	Y

TABLE V. Chromaticity limits and photometric brightness.

Colors	Chromaticity limits <u>1/</u> 2360° Kelvin		Switch photometric brightness (footlamberts) <u>2/</u>
	x	y	
Green	.260 .300 .160 .200	.570 .630 .660 .720	25 footlamberts minimum
Yellow	.562 .570 .596 .605	.415 SL <u>3/</u> .382 SL <u>3/</u>	300 footlamberts minimum
Red	.695 .703 .655 .660	.285 SL <u>3/</u> .325 SL <u>3/</u>	80 footlamberts minimum
Blue	.150 .220 .220 .150	.260 .260 .320 .320	10 footlamberts minimum
White	.400 .460 .460 .400	.420 .420 .380 .380	150 footlamberts minimum

1/ The chromaticities of the diffusing lenses or colored filters expressed as x and y coordinates on the CIE chromaticity diagram shall lie within areas bounded by the coordinates listed for each color, using a source illuminate of 2360° K.

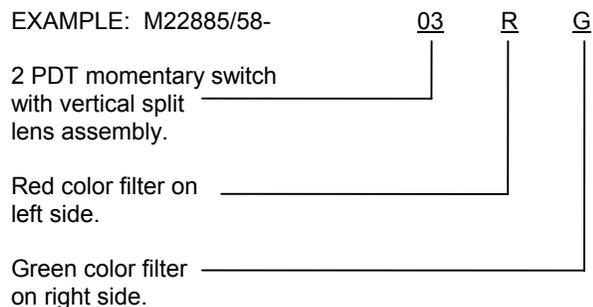
2/ Switch photometric brightness, when viewed from the front of the applicable light housing.

3/ SL: Spectrum locus (where intersected by other of coordinate pair).

TABLE VI. PIN's 1/

Without EMI screen		With EMI screen		Circuit characteristics and operation	Lens style code (see table III)
M22885/58-		M22885/58-			
With front lens	Without front lens	With front lens	Without front lens		
01 (X)	13 (X)	31 (X)	46 (X)	2 PDT momentary	A
02 (XX)	14 (XX)	32 (XX)	47 (XX)	2 PDT momentary	B
03 (XX)	15 (XX)	33 (XX)	48 (XX)	2 PDT momentary	C
04 (X)	16 (X)	34 (X)	49 (X)	4 PDT momentary	A
05 (XX)	17 (XX)	35 (XX)	50 (XX)	4 PDT momentary	B
06 (XX)	18 (XX)	36 (XX)	51 (XX)	4 PDT momentary	C
07 (X)	19 (X)	37 (X)	52 (X)	2 PDT alternate	A
08 (XX)	20 (XX)	38 (XX)	53 (XX)	2 PDT alternate	B
09 (XX)	21 (XX)	39 (XX)	54 (XX)	2 PDT alternate	C
10 (X)	22 (X)	40 (X)	55 (X)	4 PDT alternate	A
11 (XX)	23 (XX)	41 (XX)	56 (XX)	4 PDT alternate	B
12 (XX)	24 (XX)	42 (XX)	57 (XX)	4 PDT alternate	C
25 (X)	28 (X)	43 (X)	58 (X)	Indicator	A
26 (XX)	29 (XX)	44 (XX)	59 (XX)	Indicator	B
27 (XX)	30 (XX)	45 (XX)	60 (XX)	Indicator	C

1/ PIN's are shown for units without color filters. When color filters are to be included, add the color symbols of table IV in place of (X) or (XX) with location sequence as shown in table III.



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Reference Documents:

MIL-PRF-22885
MIL-PRF-22885/12
MIL-PRF-22885/59

Custodians:

Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5930-1809)

Review activities:

Army - AV, MI
Navy - AS, MC, OS
Air Force - 19, 99

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.