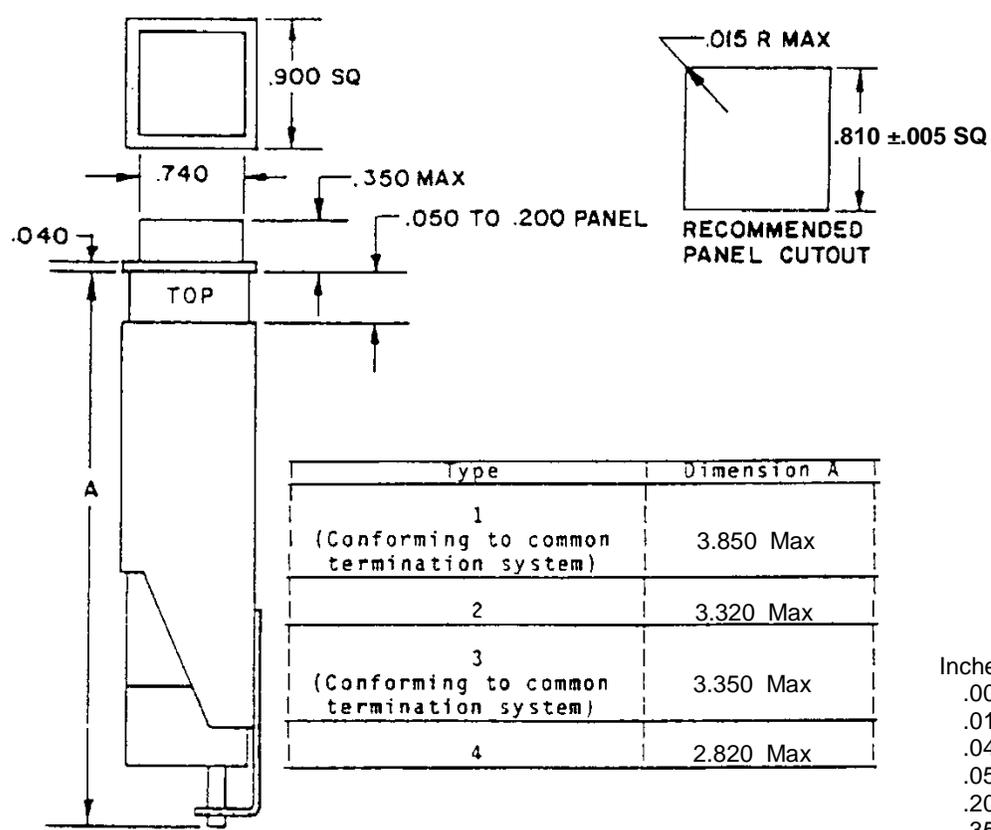


PERFORMANCE SPECIFICATION SHEET

SWITCH, PUSHBUTTON, ILLUMINATED,  
4-LAMP, SOLID MOUNT, PLUG-IN MODULE  
(ININSERTABLE TYPE TERMINATION)

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

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



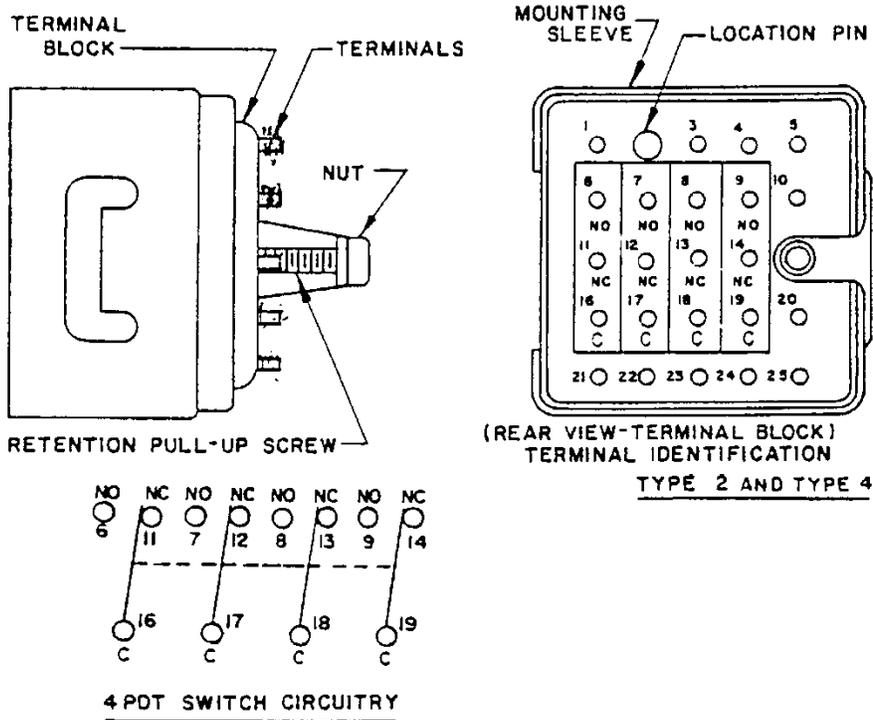
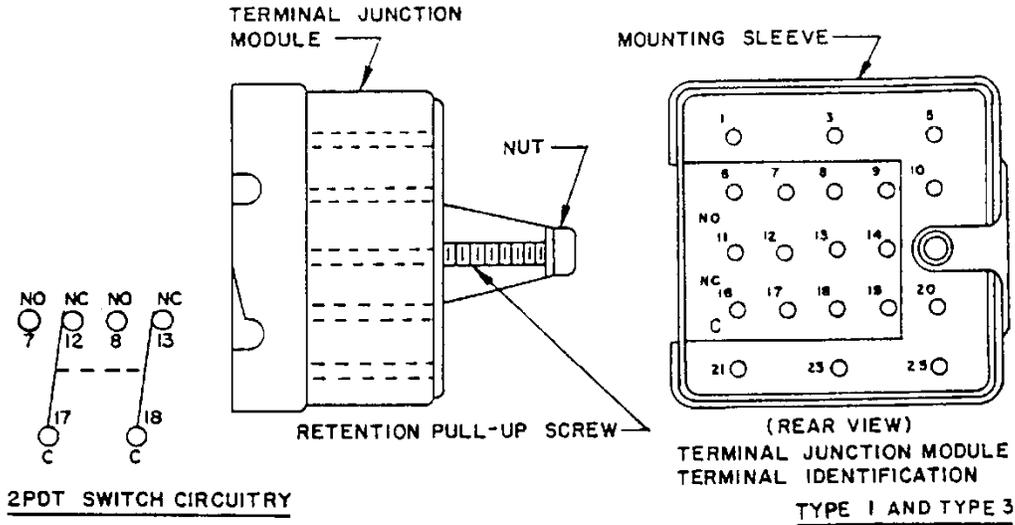
Type	Dimension A
1 (Conforming to common termination system)	3.850 Max
2	3.320 Max
3 (Conforming to common termination system)	3.350 Max
4	2.820 Max

Inches	mm
.005	.13
.015	.38
.040	1.02
.050	1.27
.200	5.08
.350	8.89
.740	18.80
.810	20.57
.900	22.86
2.820	71.63
3.320	84.33
3.350	85.09
3.850	97.79

NOTES:

1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is ± .016 (.41 mm).
3. The design configuration is optional within envelope dimensions shown.
4. Metric equivalents are given for general information only.
5. Terminals shall be permanently identified as shown in figure 2.
6. Types 3 and 4 (shorter versions of types 1 and 2) are available in momentary action and indicator versions only.

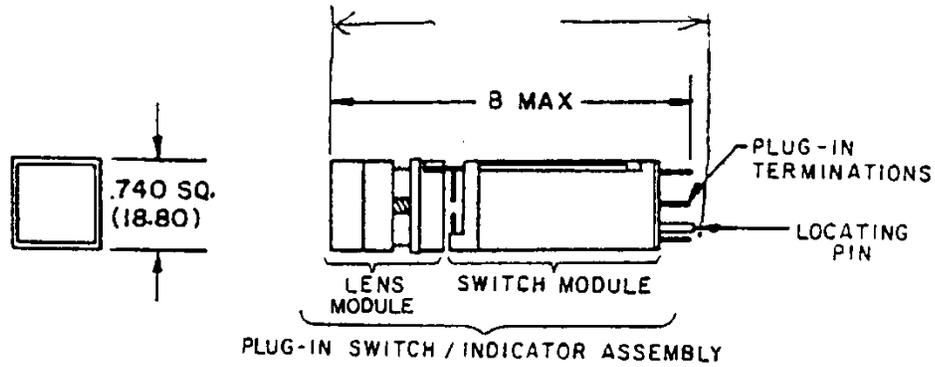
FIGURE 1. Complete switch assembly.



NOTES:

1. Type 1 terminal junction module accepts M39029/1-16-20 pin contacts.
2. Type 2 terminal block accepts M22885/80-50, -51 and -52.

FIGURE 2. Switch circuitry schematics.



Type	Dimension B
Types 1 and 2	2.960 (75.18)
Types 3 and 4	2.650 (67.31)

NOTES:

1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is  $\pm 0.016$  (.41 mm).
3. Metric equivalents are in parentheses.
4. Metric equivalents are given for general information only.
5. Types 3 and 4 (shorter versions of types 1 and 2) are available in momentary action and indicator versions only.

FIGURE 3. Plug-in switch/indicator assembly.

REQUIREMENTS:

Design and construction: See figures 1 through 3.

Complete switch assembly shall consist of:

- 1 - Plug-in switch/indicator assembly (see figure 3).
- 1 - Housing.

Plug-in switch/indicator assembly shall include:

- 1 - Switch module.
- 1 - Lens module: Consists of lens assembly (in accordance with MIL-PRF-22885/82, type 1) as specified (see tables V and VII), and lens retainer (MIL-PRF-22885/82-50). Will accept 4 T-1-3/4 midget-flanged base lamps, not included, order separately. The lamps and lens assembly shall be capable of being installed or removed from the panel front without the use of special tools.

Housing shall include:

- Types 1 - Terminal junction module: In accordance with SAE-AS81714.
- and 3 Terminal junction pin contact: M39029/1-16-20 (package of 25).  
Mounting sleeve.

- Types 2 - Terminal block.
- And 4 Terminals: Not included. See MIL-PRF-22885/80 for available part numbers.  
Mounting sleeve.

Classification:

Enclosure design: 1 (unsealed).

Temperature characteristic: -55°C to +71°C (+55°C with lamps energized).

Vibration grade: 2 (10-500 Hz).

Operation:

- A (Momentary action).
- B (Alternate action).
- H (Indicator only).

Color: See table II.

Display type: W (white background - white until illuminated, then background appears in color).

Weight: 3.5 ounces maximum (includes lamps).

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Operating characteristics:

Actuation force: 4 pounds maximum.

Shock: Method I.

Electrical endurance: See table I for test loads.

Intermediate current: Applicable.

Illuminated chromaticity limits: See MIL-PRF-22885/82.

Luminance: See table II.

TABLE I. Electrical ratings.

Load	28 V dc (amperes)	115 V ac, 60 Hz (amperes)
Resistive	5.0	5.0
Inductive	2.5	2.5
Lamp	1.5	1.5

TABLE II. Luminance.

Color	Minimum switch photometric brightness (foot lamberts)
Green (G)	15
Yellow (Y)	200
Red (R)	60
Blue (B)	5
White (W)	110

Application information:

Mounting torque (mounting screw): 4 inch-pounds maximum.

Quality assurance provisions:

Group submission: The following applies when the momentary and alternate action switches, types 1 through 4, are submitted for qualification at the same time.

Qualification inspection: See table III.

Retention of qualification: See table IV. Table IV is applicable provided that qualification is being maintained on similar MIL-PRF-22885/80 switches.

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TABLE III. Qualification inspection (group submission).

Part number	Inspection table X of MIL-PRF-22885		Extent of approval
	Group	Number of samples	
M22885/74-ABC	I	24 (from group I)	All
	I	4 (from group I)	
	II	2 (from group I)	
	III	2 (from group I)	
	IV	2 (from group I)	
	V	12 (from group I)	
	VI	2 (from group I)	
	VII	2 (from group I)	
VIII	2 each color <u>1/</u>		
M22885/74-FDC	I	4 (from group I)	
	II	4 (from group I)	
M22885/74-PBC	I	4 (from group I)	
	VII	4 (from group I)	

1/ Two lens of each color may be installed on samples of groups II through VII.

TABLE IV. Retention of qualification (group B inspection).

Inspection	Switch assembly	Extent of approval
Visual and mechanical inspection Operating characteristics	(all sample units)	All
Vibration Shock Operating characteristics	M2885/74-FDC (2 sample units)	
Intermediate current Operating characteristics	M22885/74-PBC (2 sample units) M22885/74-FDC (2 sample units)	

Part number: Part numbers shall be assigned as illustrated below. The following part number, M22885/74-DBJRRGG, identifies a plug-in switch/indicator assembly without front lens plate, with 4 PDT momentary action, common ground lamp circuit, 4-way split lens style with red color filters in top 2 positions, and green color filters in bottom 2 positions.

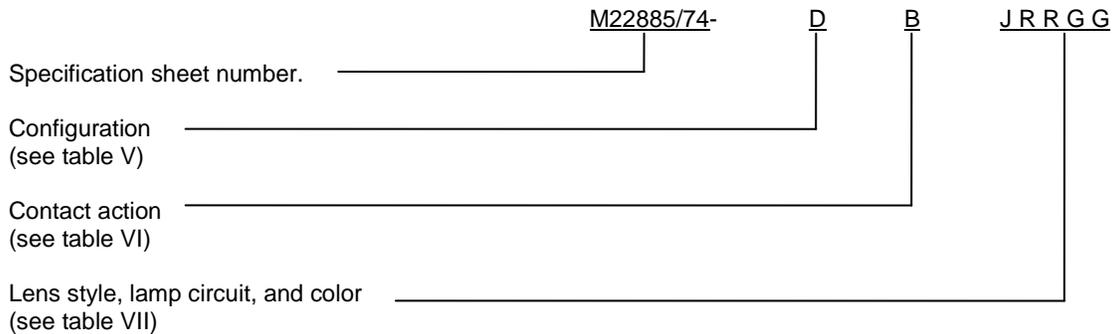


TABLE V. Configuration.

Code	Configuration		
A <u>1/</u>	Type 1	Complete assembly with front lens plate	{see figure 1}
B <u>1/</u>		Complete assembly without front lens plate	{see figure 1}
C		Plug-in switch/indicator assembly with front lens plate	{see figure 3}
D		Plug-in switch/indicator assembly without front lens plate	{see figure 3}
E		Housing only	
F <u>1/</u>	Type 2	Complete assembly with front lens plate	{see figure 1}
G <u>1/</u>		Complete assembly without front lens plate	{see figure 1}
C		Plug-in switch/indicator assembly with front lens plate	{see figure 3}
D		Plug-in switch/indicator assembly without front lens plate	{see figure 3}
K		Housing only	
H <u>1/</u>	Type 3	Complete assembly with front lens plate	{see figure 1}
J <u>1/</u>		Complete assembly without front lens plate	{see figure 1}
L		Plug-in switch/indicator assembly with front lens plate	{see figure 3}
M		Plug-in switch/indicator assembly without front lens plate	{see figure 3}
N		Housing only	
P <u>1/</u>	Type 4	Complete assembly with front lens plate	{see figure 1}
R <u>1/</u>		Complete assembly without front lens plate	{see figure 1}
L		Plug-in switch/indicator assembly with front lens plate	{see figure 3}
M		Plug-in switch/indicator assembly without front lens plate	{see figure 3}
S		Housing only	

1/ For other than direct government stocking, acquisition of assembled units may be made with the code letters indicated. These part numbers shall not appear on the items, but may be marked on shipping containers. The individual part numbers for plug-in switch indicator assembly and housing shall be marked as required.

2/ Type 3 and 4 switches are not available in an alternate action configuration.

TABLE VI. Contact action. 1/

Code	Contact action (see figure 2)
A	2PDT Momentary
B	4PDT Momentary
C	2PDT Alternate <u>2/</u>
D	4PDT Alternate <u>2/</u>
E	Indicator function only

1/ This code is not required when specifying housing portion of switch only.

2/ Alternate action switches are not available in short housing configurations.

TABLE VII. Lens style, lamp circuit and color. 1/

CODE <sup>2/</sup>	LENS STYLE <sup>3/</sup>	LAMP SCHEMATIC
C(X)	1	
D(XX)	1 2	
E(XX)	1 2	
F(XXX)	1 2 3	
H(XXX)	1 2 3	
J(XXXX)	1 2 3 4	
K(X)	1	
L(XX)	1 2	
M(XXX)	1 2 3	
N(XXX)	1 2 3	
P(XXXX)	1 2 3 4	
S(XX)	1 2	

1/ This code is not required when specifying housing portion of switch only.

2/ Codes are shown for units without color filters. When color filters are to be included, add the color symbols of table II in place of (X), (XX), (XXX) or (XXXX) in proper sequence. For direct government stocking, do not use color filter codes; color filters shall be acquired separately (see MIL-PRF-22885/82). Part numbers with color filter codes shall not appear on the items, but may be marked on shipping containers.

3/ Numbers indicate color symbol sequence.

TABLE VIII. Supersession data. 1/

Superseded military part number M22885/74-	Superseding military part number M22885/74-
01(X)	ABC(X)
02(X)	ABC(X)
03(X)	ACC(X)
04(X)	ADC(X)
05(XX)	AAL(XX)
06(XX)	ABL(XX)
07(XX)	ACL(XX)
08(XX)	ADL(XX)
09(XX)	AAS(XX)
10(XX)	ABS(XX)
11(XX)	ACS(XX)
12(XX)	ADS(XX)
13(X)	AEC(X)
14(XX)	AEL(XX)
15(XX)	AES(XX)
16(X)	FAC(X)
17(X)	FBC(X)
18(X)	FCC(X)
19(X)	FDC(X)
20(XX)	FAL(XX)
21(XX)	FBL(XX)
22(XX)	FCL(XX)
23(XX)	FDL(XX)
24(XX)	FAS(XX)
25(XX)	FBS(XX)
26(XX)	FCS(XX)
27(XX)	FDS(XX)
28(X)	FEC(X)
29(XX)	FEL(XX)
30(XX)	FES(XX)
39	E
40	K

1/ Part numbers are shown for units without color filters. When color filters are included, the color symbols of table II are added in place of (X) or (XX) in the sequence shown in table VII.

TABLE IX. Inactive part numbers. <sup>1/</sup>

Part number M22885/74-	Configuration (see figure 3)	Contact action action (see table VI)	Lens style and lamp circuit (see table VII)
36(X) <sup>2/</sup>	Lens module	---	C
37(XX) <sup>2/</sup>		---	L
38(XX) <sup>2/</sup>		---	S
41	Switch module	A	C
42		B	C
43		C	C
44		D	C
45		A	L
46		B	L
47		C	L
48		D	L
49		A	S
50		B	S
51		C	S
52		D	S
53		E	C
54		E	L
55		E	S

- <sup>1/</sup> These part numbers are inactive for new design. They cover the individual lens module and switch module portions of the plug-in switch/indicator assembly.
- <sup>2/</sup> Part numbers are shown for units without color filters. When color filters are included, the color symbols of table II are added in place of (X) or (XX) in the sequence shown in table VII.

Referenced Documents:

MIL-PRF-22885  
MIL-PRF-22885/80  
MIL-PRF-22885/82  
SAE-AS81714

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 5930-2009-020)

Review activities:

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

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