INCH POUND

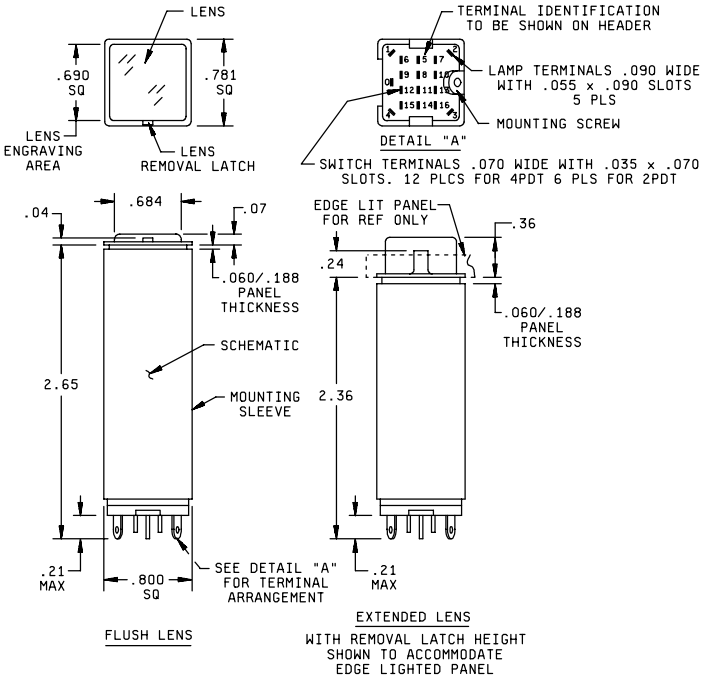
MIL-PRF-22885/56G
1 March 2001
SUPERSEDING
MIL-PRF-22885/56F
23 November 1981

PERFORMANCE SPECIFICATION SHEET

SWITCH, PUSH BUTTON, ILLUMINATED, 2PDT, 4PDT, AND INDICATOR ASSEMBLIES, 4-LAMP, SOLID MOUNTING

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

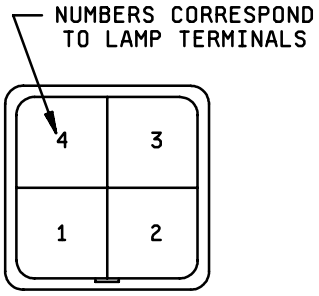
The requirements for acquiring the indicator lights described herein shall consist of this specification sheet and MIL-PRF-22885.



Inches	mm
.035	.89
.04	1.02
.055	1.40
.060	1.52
.070	1.78
.090	2.29
.188	4.78
.21	5.33
.24	6.10
.36	9.14
.684	17.37
.690	17.53
.781	19.84
.800	20.32
2.36	59.94
2.65	67.31

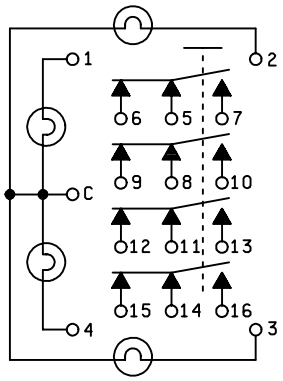
NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ±.015 (.038) for three place decimals and ±.03 (.76 mm) for two place decimals.
4. On 2 PDT switches, terminals are deleted in positions 8 thru 13.
5. Circuit schematic shall be marked on housing (see figure 3).

FIGURE 1. Pushbutton switch and indicator.



TOP VIEW OF PUSH BUTTON

FIGURE 2. Top view of push button.



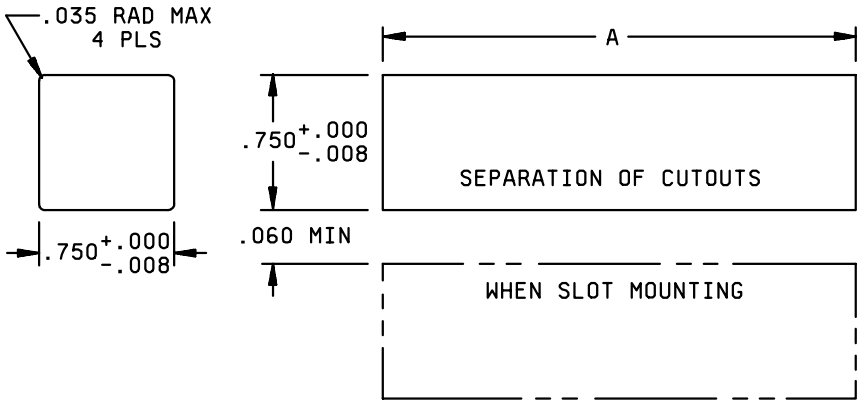
NOTES:
1. Terminals 5, 8, 11 and 14 are pole terminals.
2. Terminals 8 through 13 are omitted for 2 PDT configurations.
3. Terminals 5 through 16 are omitted for indicator configurations.

FIGURE 3. Lamp and 4 PDT switch schematic.

TABLE I LENS CODE,STYLE, AND POSITION

LENS CODE	LENS STYLE	COLOR SYMBOL POSITION (SEE NOTE)
A	4-WAY SPLIT	1 2 / 3 4
B	3-WAY SPLIT	1 2 / 3
C	SPLIT HORIZONTALLY	1 / 2
D	SOLID	1
E	3-WAY SPLIT	1 / 2 3
F	SPLIT VERTICALLY	1 | 2
G	3-WAY SPLIT	1 | 2 / 3
H	3-WAY SPLIT	1 3 / 2

1/ Lens assembly removal latch is shown for orientation.



Inches	mm
.008	.20
.035	.89
.060	1.52
.742	18.85

TABLE II. Panel cutout dimensions.

NO UNITS	DIMENSION A +000/-.008
1	.750 (19.05)
2	1.550 (39.37)
3	2.360 (59.94)
4	3.165 (80.39)
5	3.970 (100.84)
6	4.775 (121.29)
N	.805 (N-1)+.750 (20.45)(N-)+(19.05)

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Metric equivalents are in parentheses.
4. Dimensions apply for both vertical and horizontal (shown) slot mounting.

FIGURE 4. Horizontal and vertical slot mountings.

REQUIREMENTS:

Dimensions and configuration: See figures 1 through 5.

Design and construction:

Enclosure design: 1 (unsealed).

Material and finish:

Lens display screen: Shall be clear transparent thermoplastic material.

Lens housing: Finished black.

Switch housing and mounting sleeve.

Without RFI shielding, finished black.

With RFI shielding, chemical filmed in accordance with MIL-C-5541.

Illuminated push button switch shall consist of:

1 - Lamp module (lens) in accordance with MIL-PRF-22885/52 or /53 (see table IV) accommodates four midget-flange-base T-1-3/4 incandescent lamps. Lens design permits application of photographic or engraved legends.

1 - Switch housing with mounting sleeve.

4 - Lamps (T-1-3/4 midget-flange-base) - Not included, order separately.

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

Electrical ratings:

Contact rated load:

Load	28 V dc amperes	115 V ac amperes
Resistive	2.0	2.0
Inductive	1.0	1.0
Lamp	0.75	0.75

RFI

Requirement: When switches are tested in accordance with the following test method, the attenuation shall not be less than specified in figure 5.

Test method: Switches shall be tested to determine shielding effectiveness in accordance with the general procedures specified in MIL-STD-285. The test shall consist of electric field and plane wave measurements performed at the following frequencies:

Electric Field	Minimum attenuation	Plane wave	Minimum attenuation
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

Weight: 0.075 pound plus or minus 10 percent (including lens and 4 lamps)

Lens color: When nonilluminated, the lens shall appear translucent white. When illuminated, the lens shall show the required color (see table IV).

Operating characteristics:

Actuation force: 3.5 pounds ±1.0 pound.

Return force: 0.5 pound minimum.

Actuation travel: 0.200 inch maximum.

Thermal shock: During high temperature portion of thermal shock test, all four lamps in lens module shall be energized with full rated voltage.

Vibration grade: 2 (10-500 Hz).

Dielectric withstanding voltage: 450 V rms at 70,000 feet.

Part number: M22885/56- (dash number from table IV).

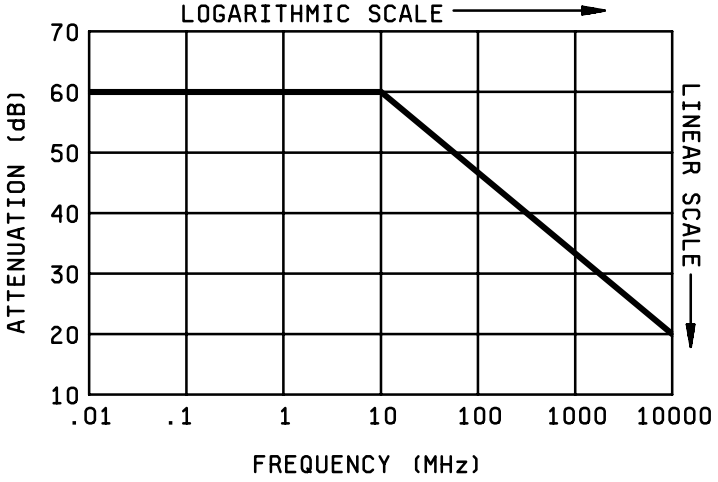


FIGURE 5. Minimum attenuation.

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

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

TABLE III. Qualification inspection (group submission).

Switch	Qualification inspection table X of MIL-PRF-22885		Extent of approval
	Group	Number of sample units	
M22885/56-077 4PDT alternate	I II III IV V VI VII VIII	24 1/ 4 2/ 2 from group I 4/ 2 from group I 4/ 2 from group I 4/ 12 2/ from group I 4/ 2 from group I 4/ 2 each color 3/	All
M22885/56-005 4PDT momentary	I II	4 4 from group 1	

1/ Two samples shall be subjected to the RFI test of this specification sheet.
2/ Electrical endurance at reduced barometric pressure test applicable.
3/ Two lenses of each color may be installed on samples submitted to the tests of groups II thru VII for use in group VIII tests.
4/ Seal test to be performed groups II and III only.

TABLE IV. Dash numbers, design and operating characteristics.

Dash number 1/	Circuit description	Lens code 2/	Lens height	RFI shielded
-001 3/	4 PDT momentary	-	extended	no
-002 3/	4 PDT alternate	-	extended	no
-003 3/	4 PDT momentary	-	flush	no
-004 3/	4 PDT alternate	-	flush	no
-005(XXXX)	4 PDT momentary	A	extended	no
-006(XXX)	4 PDT momentary	B	extended	no
-007(XX)	4 PDT momentary	C	extended	no
-008(X)	4 PDT momentary	D	extended	no
-009(XXX)	4 PDT momentary	E	extended	no
-010(XX)	4 PDT momentary	F	extended	no
-011(XXX)	4 PDT momentary	G	extended	no
-012(XXX)	4 PDT momentary	H	extended	no
-013(XXXX)	4 PDT alternate	A	extended	no
-014(XXX)	4 PDT alternate	B	extended	no
-015(XX)	4 PDT alternate	C	extended	no
-016(X)	4 PDT alternate	D	extended	no
-017(XXX)	4 PDT alternate	E	extended	no
-018(XX)	4 PDT alternate	F	extended	no
-019(XXX)	4 PDT alternate	G	extended	no
-020(XXX)	4 PDT alternate	H	extended	no
-021(XXXX)	2 PDT momentary	A	extended	no
-022(XXX)	2 PDT momentary	B	extended	no
-023(XX)	2 PDT momentary	C	extended	no
-024(X)	2 PDT momentary	D	extended	no

See footnotes at end of table.

TABLE IV. Dash numbers, design and operating characteristics - Continued.

Dash number 1/	Circuit description	Lens code 2/	Lens height	RFI shielded
-025(XXX)	2 PDT momentary	E	extended	no
-026(XX)	2 PDT momentary	F	extended	no
-027(XXX)	2 PDT momentary	G	extended	no
-028(XXX)	2 PDT momentary	H	extended	no
-029(XXXX)	2 PDT alternate	A	extended	no
-030(XXX)	2 PDT alternate	B	extended	no
-031(XX)	2 PDT alternate	C	extended	no
-032(X)	2 PDT alternate	D	extended	no
-033(XXX)	2 PDT alternate	E	extended	no
-034(XX)	2 PDT alternate	F	extended	no
-035(XXX)	2 PDT alternate	G	extended	no
-036(XXX)	2 PDT alternate	H	extended	no
-037(XXXX)	4 PDT momentary	A	flush	no
-038(XXX)	4 PDT momentary	B	flush	no
-039(XX)	4 PDT momentary	C	flush	no
-040(X)	4 PDT momentary	D	flush	no
-041(XXX)	4 PDT momentary	E	flush	no
-042(XX)	4 PDT momentary	F	flush	no
-043(XXX)	4 PDT momentary	G	flush	no
-044(XXX)	4 PDT momentary	H	flush	no
-045(XXXX)	4 PDT alternate	A	flush	no
-046(XXX)	4 PDT alternate	B	flush	no
-047(XX)	4 PDT alternate	C	flush	no
-048(X)	4 PDT alternate	D	flush	no
-049(XXX)	4 PDT alternate	E	flush	no
-050(XX)	4 PDT alternate	F	flush	no
-051(XXX)	4 PDT alternate	G	flush	no
-052(XXX)	4 PDT alternate	H	flush	no
-053(XXXX)	2 PDT momentary	A	flush	no
-054(XXX)	2 PDT momentary	B	flush	no
-055(XX)	2 PDT momentary	C	flush	no
-056(X)	2 PDT momentary	D	flush	no
-057(XXX)	2 PDT momentary	E	flush	no
-058(XX)	2 PDT momentary	F	flush	no
-059(XXX)	2 PDT momentary	G	flush	no
-060(XXX)	2 PDT momentary	H	flush	no
-061(XXXX)	2 PDT alternate	A	flush	no
-062(XXX)	2 PDT alternate	B	flush	no
-063(XX)	2 PDT alternate	C	flush	no
-064(X)	2 PDT alternate	D	flush	no
-065(XXX)	2 PDT alternate	E	flush	no
-066(XX)	2 PDT alternate	F	flush	no
-067(XXX)	2 PDT alternate	G	flush	no
-068(XXX)	2 PDT alternate	H	flush	no
-069(XXXX)	4 PDT momentary	A	extended	yes

See footnotes at end of table.

TABLE IV. Dash numbers, design and operating characteristics - Continued.

Dash number 1/	Circuit description	Lens code 2/	Lens height	RFI shielded
-070(XXX)	4 PDT momentary	B	extended	yes
-071(XX)	4 PDT momentary	C	extended	yes
-072(X)	4 PDT momentary	D	extended	yes
-073(XXX)	4 PDT momentary	E	extended	yes
-074(XX)	4 PDT momentary	F	extended	yes
-075(XXX)	4 PDT momentary	G	extended	yes
-076(XXX)	4 PDT momentary	H	extended	yes
-077(XXXX)	4 PDT alternate	A	extended	yes
-078(XXX)	4 PDT alternate	B	extended	yes
-079(XX)	4 PDT alternate	C	extended	yes
-080(X)	4 PDT alternate	D	extended	yes
-081(XXX)	4 PDT alternate	E	extended	yes
-082(XX)	4 PDT alternate	F	extended	yes
-083(XXX)	4 PDT alternate	G	extended	yes
-084(XXX)	4 PDT alternate	H	extended	yes
-085(XXXX)	2PDT momentary	A	extended	yes
-086(XXX)	2PDT momentary	B	extended	yes
-087(XX)	2PDT momentary	C	extended	yes
-088(X)	2PDT momentary	D	extended	yes
-089(XXX)	2PDT momentary	E	extended	yes
-090(XX)	2PDT momentary	F	extended	yes
-091(XXX)	2PDT momentary	G	extended	yes
-092(XXX)	2PDT momentary	H	extended	yes
-093(XXXX)	2 PDT alternate	A	extended	yes
-094(XXX)	2 PDT alternate	B	extended	yes
-095(XX)	2 PDT alternate	C	extended	yes
-096(X)	2 PDT alternate	D	extended	yes
-097(XXX)	2 PDT alternate	E	extended	yes
-098(XX)	2 PDT alternate	F	extended	yes
-099(XXX)	2 PDT alternate	G	extended	yes
-100(XXX)	2 PDT alternate	H	extended	yes
-101(XXXX)	4 PDT momentary	A	flush	yes
-102(XXX)	4 PDT momentary	B	flush	yes
-103(XX)	4 PDT momentary	C	flush	yes
-104(X)	4 PDT momentary	D	flush	yes
-105(XXX)	4 PDT momentary	E	flush	yes
-106(XX)	4 PDT momentary	F	flush	yes
-107(XXX)	4 PDT momentary	G	flush	yes
-108(XXX)	4 PDT momentary	H	flush	yes
-109(XXXX)	4 PDT alternate	A	flush	yes
-110(XXX)	4 PDT alternate	B	flush	yes
-111(XX)	4 PDT alternate	C	flush	yes
-112(X)	4 PDT alternate	D	flush	yes
-113(XXX)	4 PDT alternate	E	flush	yes
-114(XX)	4 PDT alternate	F	flush	yes

See footnotes at end of table.

TABLE IV. Dash numbers, design and operating characteristics - Continued.

Dash number 1/	Circuit description	Lens code 2/	Lens height	RFI shielded
-115(XXX)	4 PDT alternate	F	flush	yes
-116(XXX)	4 PDT alternate	G	flush	yes
-117(XXXX)	2 PDT momentary	A	flush	yes
-118(XXX)	2 PDT momentary	B	flush	yes
-119(XX)	2 PDT momentary	C	flush	yes
-120(X)	2 PDT momentary	D	flush	yes
-121(XXX)	2 PDT momentary	E	flush	yes
-122(XX)	2 PDT momentary	F	flush	yes
-123(XXX)	2 PDT momentary	G	flush	yes
-124(XXX)	2 PDT momentary	H	flush	yes
-125(XXXX)	2 PDT alternate	A	flush	yes
-126(XXX)	2 PDT alternate	B	flush	yes
-127(XX)	2 PDT alternate	C	flush	yes
-128(X)	2 PDT alternate	D	flush	yes
-129(XXX)	2 PDT alternate	E	flush	yes
-130(XX)	2 PDT alternate	F	flush	yes
-131(XXX)	2 PDT alternate	G	flush	yes
-132(XXX)	2 PDT alternate	H	flush	yes
-133 3/	4 PDT momentary	A	extended	yes
-134 3/	4 PDT alternate	B	extended	yes
-135 3/	4 PDT momentary	C	flush	yes
-136 3/	4 PDT alternate	D	flush	yes
-137 3/	2 PDT momentary	E	extended	yes
-138 3/	2 PDT alternate	F	extended	yes
-139 3/	2 PDT momentary	G	flush	yes
-140 3/	2 PDT alternate	H	flush	yes
-141 3/	2 PDT momentary	A	extended	no
-142 3/	2 PDT alternate	B	extended	no
-143 3/	2 PDT momentary	C	flush	no
-144 3/	2 PDT alternate	D	flush	no
-145 3/	Indicator	E	extended	no
-146 3/	Indicator	F	flush	no
-147 3/	Indicator	G	extended	yes
-148 3/	Indicator	H	flush	yes
-149(XXXX)	Indicator	A	extended	no
-150(XXX)	Indicator	B	extended	no
-151(XX)	Indicator	C	extended	no
-152(X)	Indicator	D	extended	no
-153(XXX)	Indicator	E	extended	no
-154(XX)	Indicator	F	extended	no
-155(XXX)	Indicator	G	extended	no
-156(XXX)	Indicator	H	extended	no
-157(XXXX)	Indicator	A	flush	no
-158(XXX)	Indicator	B	flush	no
-159(XX)	Indicator	C	flush	no

See footnotes at end of table.

TABLE IV. Dash numbers, design and operating characteristics - Continued.

Dash number 1/	Circuit description	Lens code 2/	Lens height	RFI shielded
-160(X)	Indicator	D	flush	no
-161(XXX)	Indicator	E	flush	no
-162(XX)	Indicator	F	flush	no
-163(XXX)	Indicator	G	flush	no
-164(XXX)	Indicator	H	flush	no
-165(XXXX)	Indicator	A	extended	yes
-166(XXX)	Indicator	B	extended	yes
-167(XX)	Indicator	C	extended	yes
-168(X)	Indicator	D	extended	yes
-169(XXX)	Indicator	E	extended	yes
-170(XX)	Indicator	F	extended	yes
-171(XXX)	Indicator	G	extended	yes
-172(XXX)	Indicator	H	extended	yes
-173(XXXX)	Indicator	A	flush	yes
-174(XXX)	Indicator	B	flush	yes
-175(XX)	Indicator	C	flush	yes
-176(X)	Indicator	D	flush	yes
-177(XXX)	Indicator	E	flush	yes
-178(XX)	Indicator	F	flush	yes
-179(XXX)	Indicator	G	flush	yes
-180(XXX)	Indicator	H	flush	yes

1/ Dash numbers shown are for units with color filters or caps. Replace the X(s) with the desired color symbol(s) of table V in the position sequence as shown in table I.
Example: M22885/56-006R1G1Y1.
2/ See table I.
3/ Dash numbers 001 thru 004 and 133 thru 148 are for switch or indicator housings that do not contain lamp modules.

TABLE V. Color symbols.

Dash number 1/	Color symbols 1/	Color cap 2/
Blue	B1	B2
Green	G1	G2
Red	R1	R2
White	W1	W2
Yellow	Y1	Y2

1/ Color filters are in accordance with MIL-PRF-22885/54.
2/ Color caps are in accordance with MIL-PRF-22885/55.

Custodians:
Army - CR
Navy - EC
Air Force - 11

Review activities:
Army - AR, CR4, MI
Navy - AS, MC, OS, SH
Air Force - 19,99

Preparing activity:
DLA - CC

(Project 5930-1716-08)