



DEFENSE LOGISTICS AGENCY
DLA LAND AND MARITIME
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COLUMBUS, OH 43218-3990

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

2 October 2024

SUBJECT: Initial Drafts of MIL-PRF-22885/9N, /10L, /13M, /58K, and /59G.
Project Numbers: 5930-2024-086 through -090.

The subject documents are now available for viewing and downloading from the DLA Land and Maritime - VA website:

<https://landandmaritimeapps.dla.mil/programs/milspec/initialdrafts.aspx>

The following is a synopsis of the changes:

- Updated to current MIL-STD-961 and Land and Maritime SOP requirements.
- Meet 508 compliance requirement.
- Reference documents updated.

Concurrence or comments are required at this Center no later than 1 November 2024. If comments are not received during the allotted coordination period, concurrence may be assumed. Late comments may be held for the next specification action. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians or this office, as applicable, in sufficient time to allow for consolidating the department reply.

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MICHAEL A. RADECKI
Chief
Electronic Components Branch

NOTE: This draft, dated October 2, 2024 prepared by DLA-CC,
has not been approved and is subject to modification.
DO NOT USE PRIOR TO APPROVAL.
(Project 5930-2024-086)

INCH-POUND
MIL-PRF-22885/9N
DRAFT
SUPERSEDING
MIL-PRF-22885/9M
18 June 2019

PERFORMANCE SPECIFICATION SHEET

SWITCH, PUSH BUTTON, ILLUMINATED, 4-LAMP, SOLID MOUNT, (MODULAR CONSTRUCTED)

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

The complete requirements for acquiring the switches described herein shall consist of this specification and the latest issue of [MIL-PRF-22885](#).

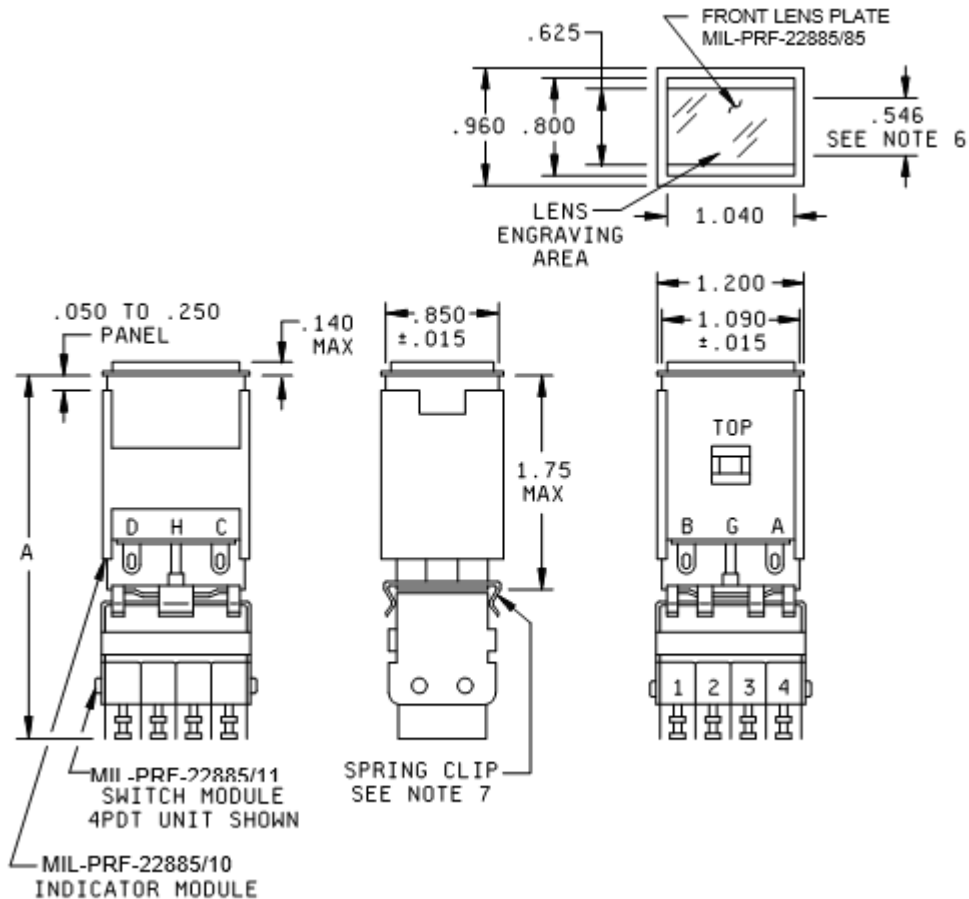


FIGURE 1. Switch, pushbutton, illuminated.



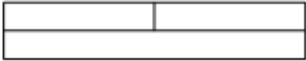
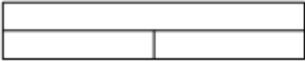
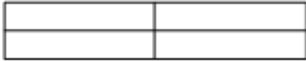
Dimension A	Switch Module
2.828 Max	2PDT Mom 4PDT Mom
3.11 Max	2PDT Alt 4PDT Alt

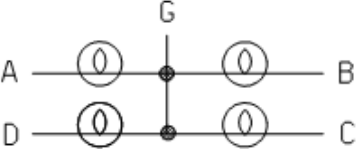
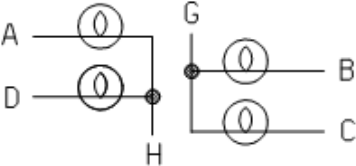
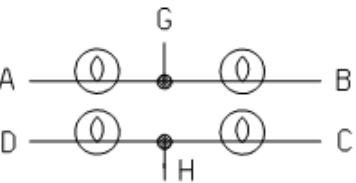
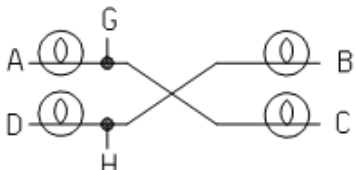
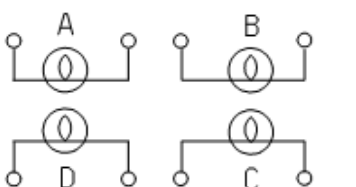
NOTES:

1. Dimensions are in inches.
2. DELETED.
3. Unless otherwise specified, tolerance is ± 0.016 .
4. Terminals shall be permanently identified with letters as shown in table I.
5. Circuit schematic shall be marked on the module housing as shown in table I.
6. Engraving area recommended for uniform lighting.
7. Switch clip design optional-must interface with [MIL-PRF-22885/11](#).
8. Terminal and plunger stop design is optional.
9. The design configuration is optional within envelope dimensions shown.

FIGURE 1. Switch, pushbutton, illuminated - Continued.

TABLE I. Lens style, lamp circuit and lamp terminal identification. 1/

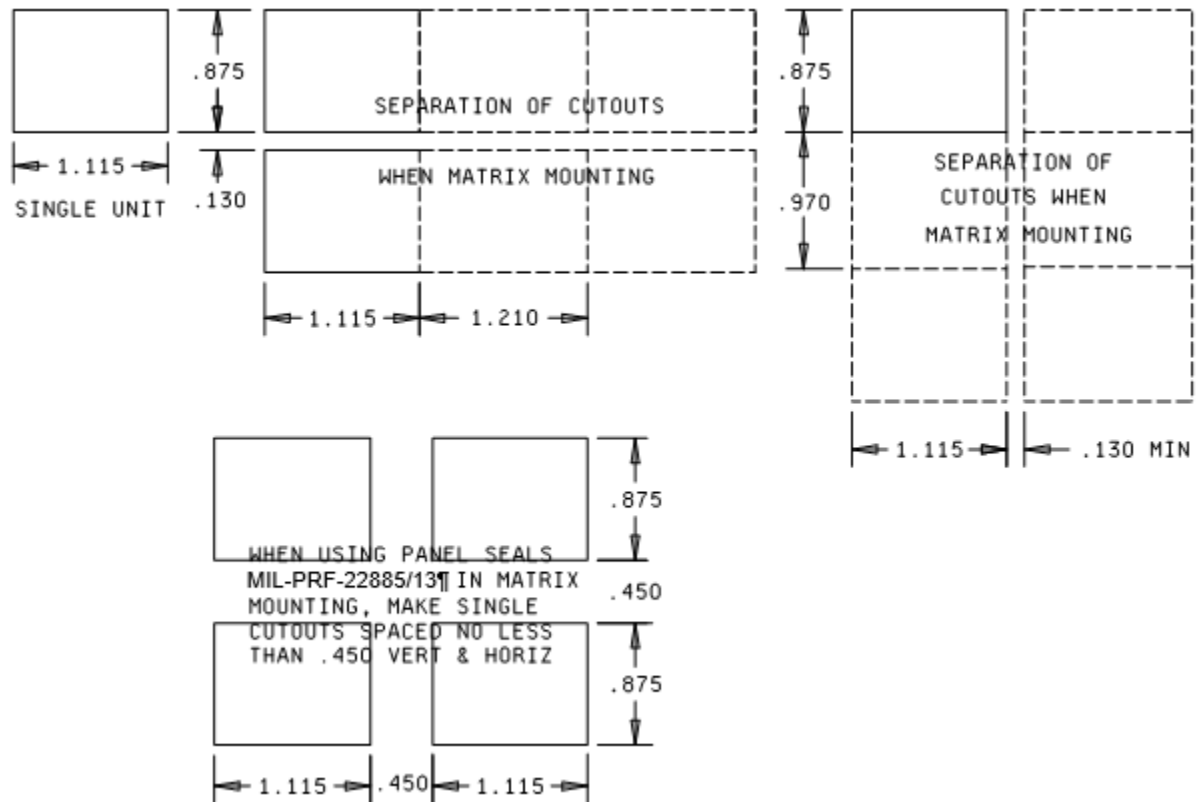
LENS STYLE (DIFFUSER CONFIGURATION)		
CODE A SOLID 	CODE B SPLIT VERTICALLY 	CODE C SPLIT HORIZONTALLY 
CODE D 3-WAY SPLIT 	CODE E 3-WAY SPLIT 	CODE F 4-WAY SPLIT 

LAMP CIRCUIT AND LAMP TERMINAL IDENTIFICATION		
CODE 1 	CODE 2 	CODE 3 
CODE 4 SEE NOTE 2 		CODE 5 

1/ For reliability, it is recommended that selection of lens styles and lamp circuits be limited to those providing at least 2 lamps per display area.

2/ Inactive for new design.

DRAFT MIL-PRF-22885/9N DRAFT



NOTES:

1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is $\pm .010$.

FIGURE 2. Recommended panel cutouts.

REQUIREMENTS:

Dimensions and configuration: See figures 1 and 2.

Complete switch shall consist of:

- 1 - Modular indicator light ([MIL-PRF-22885/10](#)).
- 1 - Switch assembly ([MIL-PRF-22885/11](#)).
- 4 - Color filters ([MIL-PRF-22885/12](#)), when specified (see table IV).
- 1 - Panel seal ([MIL-PRF-22885/13](#)) not included, order separately.
- 4 - Lamps (T-1-3/4 midget-flange base) not included, order separately.
- 1 - EMI screen, when specified (see table IV).

Enclosure design: 2 (dripproof), when [MIL-PRF-22885/13](#) panel seal is utilized, otherwise 1 (unsealed) when used without panel seal.

Electrical ratings: See table II.

Vibration grade: 2 (10 to 500 Hz).

Shock: Method I.

Operating force: See [MIL-PRF-22885/11](#).

EMI shielding: When specified (see table IV), these switches shall be equipped with a fine mesh EMI screen installed between the lamps and diffuser, making electrical contact to the unit's housing. See [MIL-PRF-22885/10](#) for test procedure.

Color and luminance values: As specified in [MIL-PRF-22885/12](#) (brightness is reduced by approximately 50 percent when EMI screen is installed).

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

Marking: M22885/9 part numbers shall not appear on the items, but may be marked on shipping containers. The individual part numbers for indicator modules ([MIL-PRF-22885/10](#)) and switch modules ([MIL-PRF-22885/11](#)) shall be marked on the parts as required.

Part number: M22885/9-(dash number from table IV). For acquisition of government spares, MIL-PRF-22885/10 through/13, as applicable, shall be used. Provisioning documentation shall show parts breakdown by associated military part number.

TABLE II. Electrical Ratings.

Load	Sea level		50,000 feet
	28 Vdc	115 Vac	28 Vdc
	<u>amperes</u>		<u>amperes</u>
Resistive	5.0	5.0	5.0
Inductive	3.0	5.0	2.5
Lamp	2.4	1.5	2.4

DRAFT MIL-PRF-22885/9N DRAFT

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

When the basic sensitive switches are qualified to [MIL-PRF-8805](#), switches shall be tested in accordance with table III.

When the basic sensitive switches are not qualified to [MIL-PRF-8805](#), the switch type for which qualification is sought shall be submitted to the complete tests in accordance with table X of [MIL-PRF-22885](#).

Group A inspection: Tests may be performed on individual [MIL-PRF-22885/11](#) units and indicator modules prior to assembly as a [MIL-PRF-22885/9](#) switch, when applicable. Contact resistance may be performed on individual basic sensitive switches prior to assembly as a [MIL-PRF-22885/11](#) unit.

TABLE III. Qualification inspection (group submission).

Part number M22885/	Qualification inspection table of MIL-PRF-22885		Additional testing	Extent of approval
	Group	No. of samples		
9-250WWWW <u>6/</u>	I <u>1/</u> II <u>3/</u> III VI <u>2/ 5/</u>	6 2 (From group I) 2 2	---	MIL-PRF-22885/9, /10, /11, /12, /13
9-38BBBB	I II	2 2 (From group I)	Plunger stop test of MIL-PRF- 22885/10 <u>4/</u>	
9-21 9-23	---	1 each	Visual and mechanical examination Operating characteristics	
10-01XXXX	VIII	10 (2 each color)	Color fade test of MIL-PRF-22885/12	
	---	2 <u>3/</u>	Sunshine test of MIL-PRF-22885/13	

1/ Solderability and resistance to soldering heat are not applicable.

2/ Sea level, dc resistive load only. Contact resistance after electrical endurance not applicable.

3/ When approval of seal M22885/13-02, per [MIL-PRF-22885/13](#), is desired, the seal shall be properly assembled to the switch during the tests. There shall be no more than 10 percent change in transmittance after completion of the tests, nor shall there be any crazing or cracking.

4/ The plunger stop test shall be performed by removing the switch assembly and installing the stop.

5/ For approval of units with EMI screens, resistance between EMI screen and housing shall be tested before and after electrical endurance.

6/ For approval of units without EMI screens, substitute M22885/9-04WWWW for M22885/9-250WWWW.

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TABLE IV. Part numbers. 4/

1/ 2/ Part No. M22885/9-				Lens style code	Lamp wiring code	Indicator light module M22885/10-
Momentary		Alternate				
Switch module M22885/11		Switch module M22885/11				
-01 2PDT	-02 4PDT	-03 2PDT	-04 4PDT			
Without EMI screen - NARROW FRONT LENS PLATE, M22885/85-01.						
01	02	03	04	A	1	01
05 <u>3/</u>	06 <u>3/</u>	07 <u>3/</u>	08 <u>3/</u>	A	4	02
09	10	11	12	B	1	03
13	14	15	16	B	2	04
17	18	19	20	C	1	05
21	22	23	24	C	3	06
25	26	27	28	A	3	07
167 <u>3/</u>	168 <u>3/</u>	169 <u>3/</u>	170 <u>3/</u>	A	2	08
215	216	217	218	D	1	23
219	220	221	222	D	3	24
223	224	225	226	D	5	25
227	228	229	230	E	1	26
231	232	233	234	E	3	27
235	236	237	238	E	5	28
239	240	241	242	F	1	29
243	244	245	246	F	5	30
With EMI screen - NARROW FRONT LENS PLATE, M22885/85-01.						
247	248	249	250	A	1	47
251	252	253	254	B	1	48
255	256	257	258	B	2	49
259	260	261	262	C	1	50
263	264	265	266	C	3	51
267	268	269	270	A	3	52
271	272	273	274	D	1	53
275	276	277	278	D	3	54
279	280	281	282	D	5	55
283	284	285	286	E	1	56
287	288	289	290	E	3	57
291	292	293	294	E	5	58
295	296	297	298	F	1	59
299	300	301	302	F	5	60
Without EMI screen - EXTENDED FRONT LENS PLATE, M22885/85-02.						
29	30	31	32	A	1	09
33	34	35	36	B	1	10
37	38	39	40	B	2	11
41	42	43	44	C	1	12
45	46	47	48	C	3	13
49	50	51	52	A	3	14
171 <u>3/</u>	172 <u>3/</u>	173 <u>3/</u>	174 <u>3/</u>	A	2	15
303	304	305	306	D	1	31

See footnotes at end of table.

DRAFT MIL-PRF-22885/9N DRAFT

TABLE IV. Part numbers - Continued. 4/

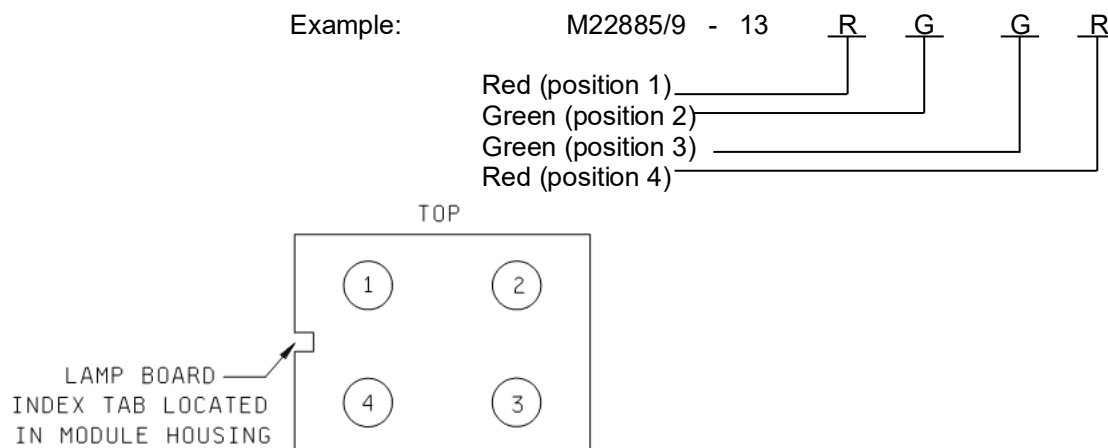
1/ Part No. M22885/9-				Lens style code	Lamp wiring code	Indicator light module M22885/10-
Momentary		Alternate				
Switch module M22885/11		Switch module M22885/11				
-01 2PDT	-02 4PDT	-03 2PDT	-04 4PDT			
Without EMI screen - EXTENDED FRONT LENS PLATE, M22885/85-02.						
307	308	309	310	D	3	32
311	312	313	314	D	5	33
315	316	317	318	E	1	34
319	320	321	322	E	3	35
323	324	325	326	E	5	36
327	328	329	330	F	1	37
331	332	333	334	F	5	38
With EMI screen - EXTENDED FRONT LENS PLATE, M22885/85-02.						
335	336	337	338	A	1	61
339	340	341	342	B	1	62
343	344	345	346	B	2	63
347	348	349	350	C	1	64
351	352	353	354	C	3	65
355	356	357	358	A	3	66
359	360	361	362	D	1	67
363	364	365	366	D	3	68
367	368	369	370	D	5	69
371	372	373	374	E	1	70
375	376	377	378	E	3	71
379	380	381	382	E	5	72
383	384	385	386	F	1	73
387	388	389	390	F	5	74
Without EMI screen - WITHOUT LENS PLATE.						
53	54	55	56	A	1	16
57	58	59	60	B	1	17
61	62	63	64	B	2	18
65	66	67	68	C	1	19
69	70	71	72	C	3	20
73	74	75	76	A	3	21
175 3/	176 3/	177 3/	178 3/	A	2	22
391	392	393	394	D	1	39
395	396	397	398	D	3	40
399	400	401	402	D	5	41
403	404	405	406	E	1	42
407	408	409	410	E	3	43
411	412	413	414	E	5	44
415	416	417	418	F	1	45
419	420	421	422	F	5	46

See footnotes at end of table.

TABLE IV. Part numbers - Continued. 4/

1/ Part No. M22885/9-				Lens style code	Lamp wiring code	Indicator light module M22885/10-
Momentary		Alternate				
Switch module M22885/11		Switch module M22885/11				
-01 2PDT	-02 4PDT	-03 2PDT	-04 4PDT			
With EMI screen - WITHOUT LENS PLATE.						
423	424	425	426	A	1	75
427	428	429	430	B	1	76
431	432	433	434	B	2	77
435	436	437	438	C	1	78
439	440	441	442	C	3	79
443	444	445	446	A	3	80
447	448	449	450	D	1	81
451	452	453	454	D	3	82
455	456	457	458	D	5	83
459	460	461	462	E	1	84
463	464	465	466	E	3	85
467	468	469	470	E	5	86
471	472	473	474	F	1	87
475	476	477	478	F	5	88

1/ Part numbers shown are for units without color filters. When color filters are required, add the color symbols of MIL-PRF-22885 with the location sequence as shown below.

FIGURE 3. Color filter location with respect to modular indicator light (housing).

- 2/ Dash numbers 01 thru 28 are interchangeable with and replace former dash numbers that contained an additional zero.
- 3/ Inactive for new design.
- 4/ Part numbers M22885/9-77 thru -166, and -179 thru -214, for switches utilizing [MIL-PRF-22885/26](#) (cancelled 17 Sep 1993) switch modules, have been canceled.

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue 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 and relationship to the previous issue.

Referenced documents:

MIL-PRF-8805	MIL-PRF-22885	MIL-PRF-22885/10
MIL-PRF-22885/11	MIL-PRF-22885/12	MIL-PRF-22885/13
MIL-PRF-22885/26	MIL-PRF-22885/85	

Custodians:

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

Preparing activity:

DLA - CC

Review activities:

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

(Project 5930-2024-086)

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.dla.mil/>.