INCH-POUND
MIL-PRF-22885/18L
25 May 2016
SUPERSEDING
MIL-PRF-22885/18k
24 November 2010

PERFORMANCE SPECIFICATION SHEET

SWITCH, PUSH BUTTON, ILLUMINATED, DRIPPROOF SEAL, MOMENTARY AND ALTERNATE ACTION (DPDT/TWO CIRCUIT - 2 AMPERES)

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.

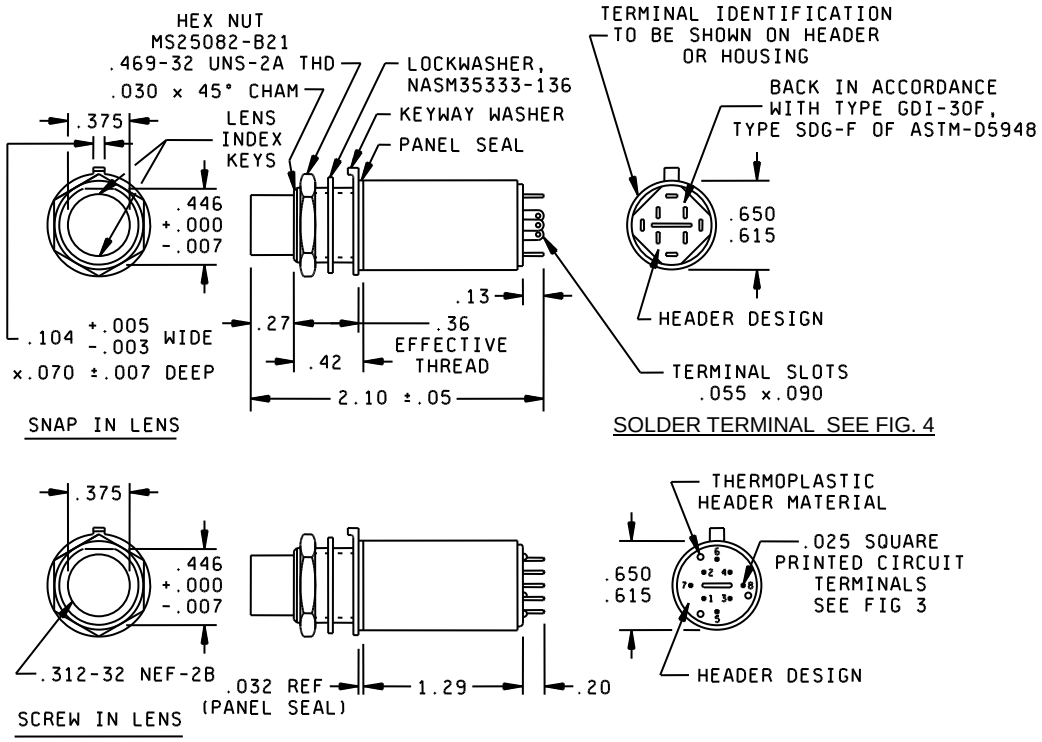


FIGURE 1. Switch, housing (without pushbutton lens).

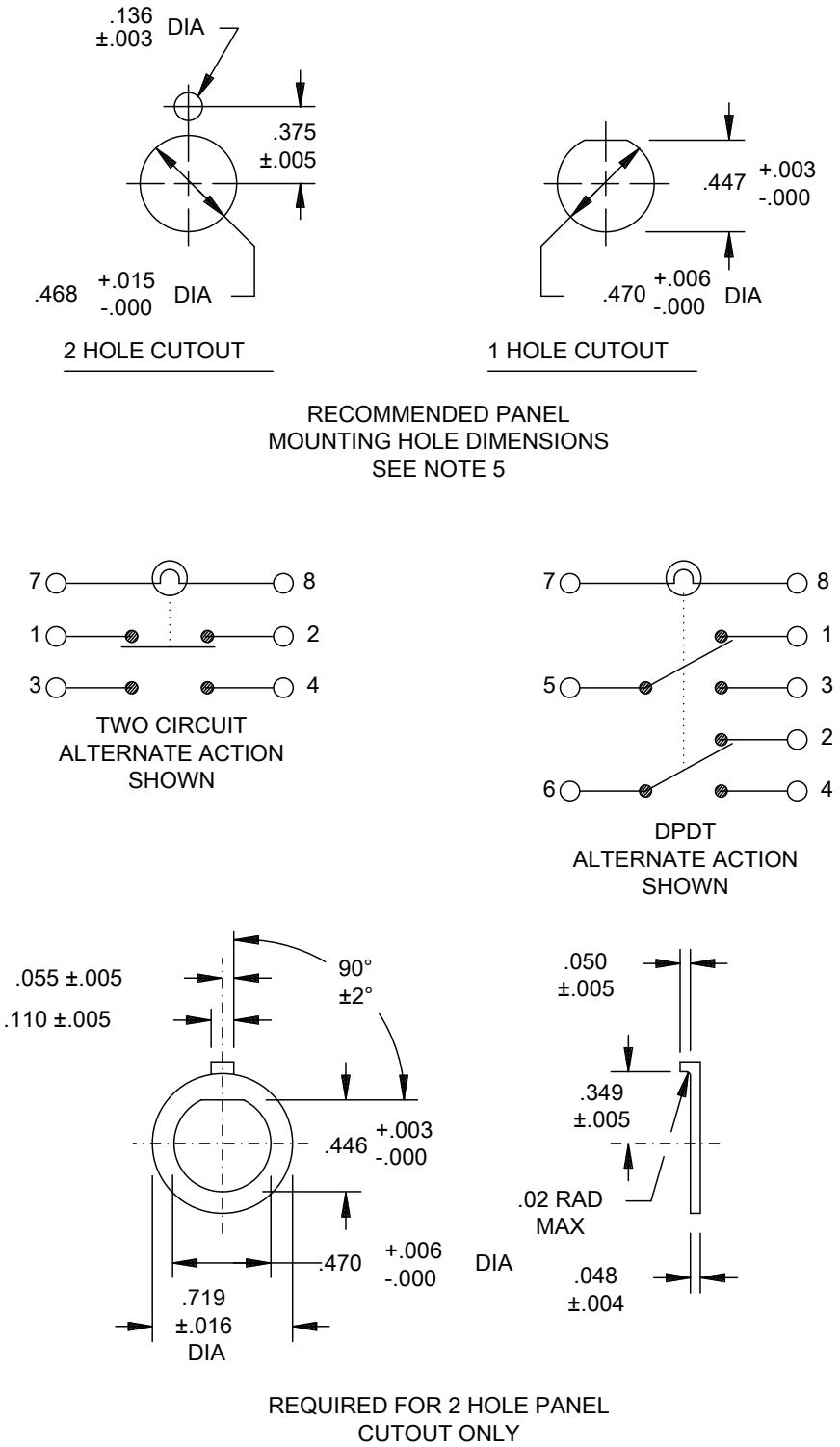
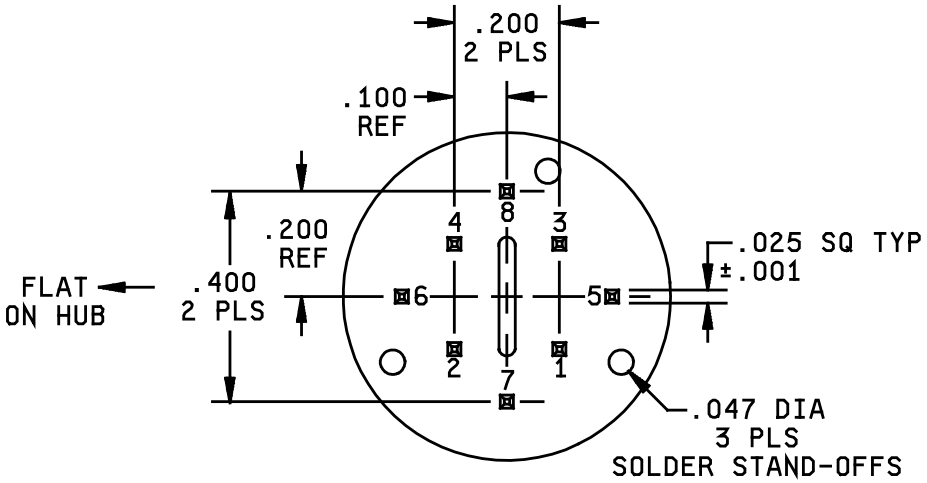


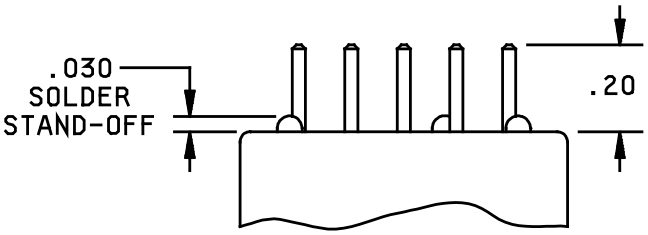
FIGURE 2. Panel cutout, circuit diagram and nonturn washer.

Inches	mm	Inches	mm	Inches	mm
.003	.08	.050	1.27	.375	9.53
.004	.10	.055	1.40	.42	10.7
.005	.13	.070	1.78	.446	11.33
.006	.15	.090	2.29	.447	11.35
.007	.18	.104	2.64	.468	11.89
.015	.38	.110	2.79	.470	11.94
.016	.41	.13	3.3	.615	15.62
.02	.5	.136	3.45	.650	16.51
.025	.64	.27	6.9	.719	18.26
.030	.76	.349	8.86	2.10	53.3
.048	1.22	.36	9.2		

NOTES:
1. Dimensions are in inches.
2. Unless otherwise specified, tolerance is ±.016 (.41 mm) for three place decimals and ±.03 (8 mm) for two place decimals.
3. Metric equivalents are given for general information only.
4. Alignment of lens index slot to mounting flat 90° ±2°. Applicable to units with snap-in lens.
5. One hole mounting is recommended when panel seal is utilized.
6. Terminals shall be permanently identified as shown.

FIGURE 2. Panel cutout, circuit diagram and nonturn washer - Continued.

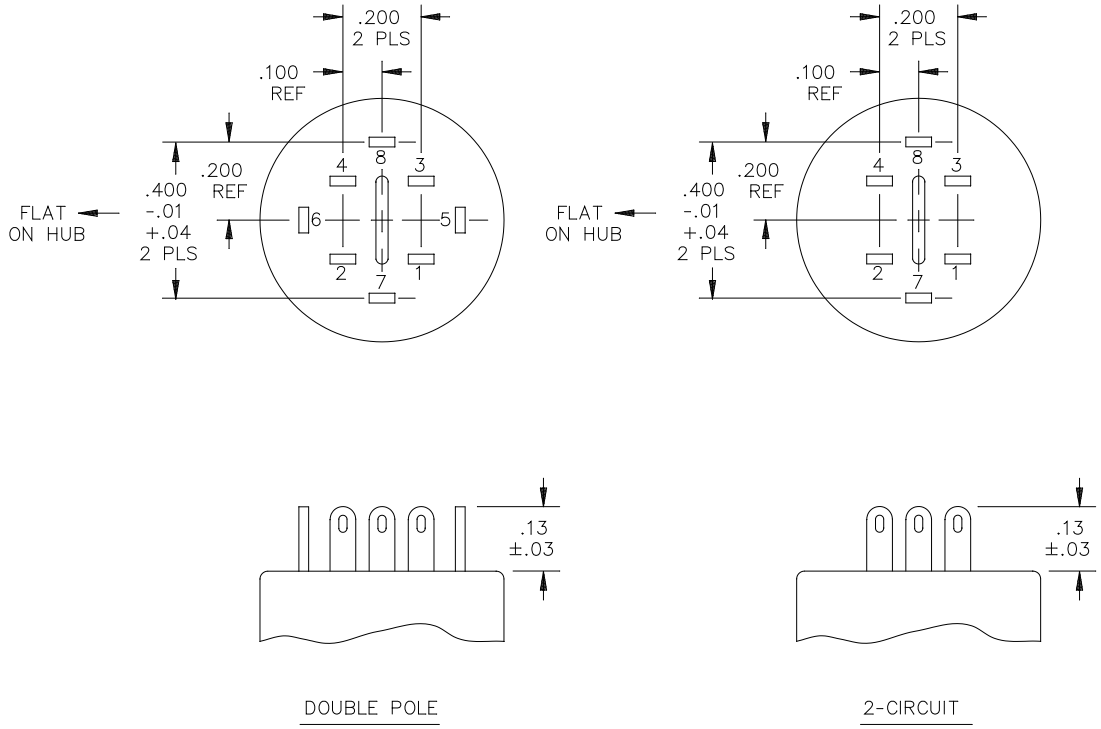




Inches	mm	Inches	mm
.001	.03	.100	2.54
.010	.25	.200	5.08
.025	.64	.20	5.1
.030	.76	.400	10.16
.03	.8		
.047	1.19		

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ±.010 (25 mm) for three place decimals and ±.03 (.8mm) for two place decimals.

FIGURE 3. Printed circuit terminal positions and identification.



Inches	mm	Inches	mm
.001	.03	.100	2.54
.010	.25	.200	5.08
.025	.64	.20	5.1
.030	.76	.400	10.16
.03	.8		
.047	1.19		

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ±.010 (25 mm) for three place decimals and ±.03 (.8mm) for two place decimals.

FIGURE 4. Solder terminal positions and identification.

REQUIREMENTS:

Dimensions and configuration: See figures 1, 2, 3, and tables I and II.

Enclosure design: 2 (dripproof).

Operation: See tables I and II.

Color and display type: See MIL-PRF-22885/99 as applicable.

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

Vibration grade: 2 (10 - 500 Hz).

Weight: 1.11 ounces maximum (includes lens and lamp).

Operating characteristics:

Operating force: 2 ±1 pounds.

Plunger travel: .160 inch maximum.

Shock (specified pulse): Method I (75 g's) except 50 g's for switches with M22885/22-01 through -05 lens. No opening of closed contacts in excess of 5 milliseconds. No closing of open contacts in excess of 10 microseconds.

Electrical ratings: See table III.

Contact resistance after electrical endurance: 1.5 ohms maximum.

Part number: M22885/18- (dash number from table I or II). Dash numbers from table II are inactive for new design.

Complete switch shall consist of:

a. Switch housing in accordance with figures 1, 2, and 3.

b. Lens. (MIL-PRF-22885/99).

c. Lamp (T-1-3/4 midget flange base, incandescent type): Not included, order separately.

TABLE I. Dash numbers for switch housings.

Dash numbers		Circuit characteristic	Operation	Pushbutton lens type
Printed circuit terminals 1/	Solder terminals 1/			
149	01	DPDT	Momentary	Threaded
150	02	DPDT	Alternate action	Threaded
151	03	Two circuit	Momentary	Threaded
152	04	Two circuit	Alternate action	Threaded
153	05	DPDT	Momentary	Snap-in
154	06	DPDT	Alternate action	Snap-in
155	07	Two circuit	Momentary	Snap-in
156	08	Two circuit	Alternate action	Snap-in

1/ These are switch housings that do not include pushbutton lens. Acquire pushbutton lens separately. See MIL-PRF-22885/99.

TABLE II. Inactive for new design dash numbers. 1/

Dash numbers		Lens M22885/	Circuit characteristic	Operation	Lens type
Printed circuit terminals	Solder terminals				
157 2/	09 2/	22-01 (Yellow)	DPDT	Momentary	Threaded
158 2/	10 2/	22-02 (White)	DPDT	Momentary	Threaded
159 2/	11 2/	22-03 (Red)	DPDT	Momentary	Threaded
160 2/	12 2/	22-04 (Green)	DPDT	Momentary	Threaded
161 2/	13 2/	22-05 (Blue)	DPDT	Momentary	Threaded
162	14	22-06 (Yellow)	DPDT	Momentary	Threaded
163	15	22-07 (White)	DPDT	Momentary	Threaded
164	16	22-08 (Red)	DPDT	Momentary	Threaded
165	17	22-09 (Green)	DPDT	Momentary	Threaded
166	18	22-10 (Blue)	DPDT	Momentary	Threaded
167	19	22-11 (Yellow)	DPDT	Momentary	Threaded
168	20	22-12 (White)	DPDT	Momentary	Threaded
169	21	22-13 (Red)	DPDT	Momentary	Threaded
170	22	22-14 (Green)	DPDT	Momentary	Threaded
171	23	22-15 (Blue)	DPDT	Momentary	Threaded
172	24	22-16 (Yellow)	DPDT	Momentary	Threaded
173	25	22-17 (White)	DPDT	Momentary	Threaded
174	26	22-18 (Red)	DPDT	Momentary	Threaded
175	27	22-19 (Green)	DPDT	Momentary	Threaded
176	28	22-20 (Blue)	DPDT	Momentary	Threaded
177 2/	29 2/	22-01 (Yellow)	DPDT	Alternate action	Threaded
178 2/	30 2/	22-02 (White)	DPDT	Alternate action	Threaded
179 2/	31 2/	22-03 (Red)	DPDT	Alternate action	Threaded
180 2/	32 2/	22-04 (Green)	DPDT	Alternate action	Threaded
181 2/	33 2/	22-05 (Blue)	DPDT	Alternate action	Threaded

See footnotes at end of table.

TABLE II. Inactive for new design dash numbers - 1/ Continued.

Dash numbers		Lens M22885/	Circuit characteristic	Operation	Lens type
Printed circuit terminals	Solder terminals				
182	34	22-06 (Yellow)	DPDT	Alternate action	Threaded
183	35	22-07 (White)	DPDT	Alternate action	Threaded
184	36	22-08 (Red)	DPDT	Alternate action	Threaded
185	37	22-09 (Green)	DPDT	Alternate action	Threaded
186	38	22-10 (Blue)	DPDT	Alternate action	Threaded
187	39	22-11 (Yellow)	DPDT	Alternate action	Threaded
188	40	22-12 (White)	DPDT	Alternate action	Threaded
189	41	22-13 (Red)	DPDT	Alternate action	Threaded
190	42	22-14 (Green)	DPDT	Alternate action	Threaded
191	43	22-15 (Blue)	DPDT	Alternate action	Threaded
192	44	22-16 (Yellow)	DPDT	Alternate action	Threaded
193	45	22-17 (White)	DPDT	Alternate action	Threaded
194	46	22-18 (Red)	DPDT	Alternate action	Threaded
195	47	22-19 (Green)	DPDT	Alternate action	Threaded
196	48	22-20 (Blue)	DPDT	Alternate action	Threaded
197 2/	49 2/	22-01 (Yellow)	Two circuit	Momentary	Threaded
198 2/	50 2/	22-02 (White)	Two circuit	Momentary	Threaded
199 2/	51 2/	22-03 (Red)	Two circuit	Momentary	Threaded
200 2/	52 2/	22-04 (Green)	Two circuit	Momentary	Threaded
201 2/	53 2/	22-05 (Blue)	Two circuit	Momentary	Threaded
202	54	22-06 (Yellow)	Two circuit	Momentary	Threaded
203	55	22-07 (White)	Two circuit	Momentary	Threaded
204	56	22-08 (Red)	Two circuit	Momentary	Threaded
205	57	22-09 (Green)	Two circuit	Momentary	Threaded
206	58	22-10 (Blue)	Two circuit	Momentary	Threaded
207	59	22-11 (Yellow)	Two circuit	Momentary	Threaded
208	60	22-12 (White)	Two circuit	Momentary	Threaded
209	61	22-13 (Red)	Two circuit	Momentary	Threaded
210	62	22-14 (Green)	Two circuit	Momentary	Threaded
211	63	22-15 (Blue)	Two circuit	Momentary	Threaded
212	64	22-16 (Yellow)	Two circuit	Momentary	Threaded
213	65	22-17 (White)	Two circuit	Momentary	Threaded
214	66	22-18 (Red)	Two circuit	Momentary	Threaded
215	67	22-19 (Green)	Two circuit	Momentary	Threaded
216	68	22-20 (Blue)	Two circuit	Momentary	Threaded
217 2/	69 2/	22-01 (Yellow)	Two circuit	Alternate action	Threaded
218 2/	70 2/	22-02 (White)	Two circuit	Alternate action	Threaded
219 2/	71 2/	22-03 (Red)	Two circuit	Alternate action	Threaded
220 2/	72 2/	22-04 (Green)	Two circuit	Alternate action	Threaded
221 2/	73 2/	22-05 (Blue)	Two circuit	Alternate action	Threaded
222	74	22-06 (Yellow)	Two circuit	Alternate action	Threaded
223	75	22-07 (White)	Two circuit	Alternate action	Threaded
224	76	22-08 (Red)	Two circuit	Alternate action	Threaded
225	77	22-09 (Green)	Two circuit	Alternate action	Threaded
226	78	22-10 (Blue)	Two circuit	Alternate action	Threaded

See footnotes at end of table.

TABLE II. Inactive for new design dash numbers - 1/ Continued.

Dash numbers		Lens M22885/	Circuit characteristic	Operation	Lens type
Printed circuit terminals	Solder terminals				
227	79	22-11 (Yellow)	Two circuit	Alternate action	Threaded
228	80	22-12 (White)	Two circuit	Alternate action	Threaded
229	81	22-13 (Red)	Two circuit	Alternate action	Threaded
230	82	22-14 (Green)	Two circuit	Alternate action	Threaded
231	83	22-15 (Blue)	Two circuit	Alternate action	Threaded
232	84	22-16 (Yellow)	Two circuit	Alternate action	Threaded
233	85	22-17 (White)	Two circuit	Alternate action	Threaded
234	86	22-18 (Red)	Two circuit	Alternate action	Threaded
235	87	22-19 (Green)	Two circuit	Alternate action	Threaded
236	88	22-20 (Blue)	Two circuit	Alternate action	Threaded
237	89	19-01 (Yellow)	DPDT	Momentary	Snap-in
238	90	19-02 (White)	DPDT	Momentary	Snap-in
239	91	19-03 (Red)	DPDT	Momentary	Snap-in
240	92	19-04 (Green)	DPDT	Momentary	Snap-in
241	93	19-05 (Blue)	DPDT	Momentary	Snap-in
242	94	19-06 (Yellow)	DPDT	Momentary	Snap-in
243	95	19-07 (White)	DPDT	Momentary	Snap-in
244	96	19-08 (Red)	DPDT	Momentary	Snap-in
245	97	19-09 (Green)	DPDT	Momentary	Snap-in
246	98	19-10 (Blue)	DPDT	Momentary	Snap-in
247	99	19-11 (Yellow)	DPDT	Momentary	Snap-in
248	100	19-12 (White)	DPDT	Momentary	Snap-in
249	101	19-13 (Red)	DPDT	Momentary	Snap-in
250	102	19-14 (Green)	DPDT	Momentary	Snap-in
251	103	19-15 (Blue)	DPDT	Momentary	Snap-in
252	104	19-01 (Yellow)	DPDT	Alternate action	Snap-in
253	105	19-02 (White)	DPDT	Alternate action	Snap-in
254	106	19-03 (Red)	DPDT	Alternate action	Snap-in
255	107	19-04 (Green)	DPDT	Alternate action	Snap-in
256	108	19-05 (Blue)	DPDT	Alternate action	Snap-in
257	109	19-06 (Yellow)	DPDT	Alternate action	Snap-in
258	110	19-07 (White)	DPDT	Alternate action	Snap-in
259	111	19-08 (Red)	DPDT	Alternate action	Snap-in
260	112	19-09 (Green)	DPDT	Alternate action	Snap-in
261	113	19-10 (Blue)	DPDT	Alternate action	Snap-in
262	114	19-11 (Yellow)	DPDT	Alternate action	Snap-in
263	115	19-12 (White)	DPDT	Alternate action	Snap-in
264	116	19-13 (Red)	DPDT	Alternate action	Snap-in
265	117	19-14 (Green)	DPDT	Alternate action	Snap-in
266	118	19-15 (Blue)	DPDT	Alternate action	Snap-in
267	119	19-01 (Yellow)	Two circuit	Momentary	Snap-in
268	120	19-02 (White)	Two circuit	Momentary	Snap-in
269	121	19-03 (Red)	Two circuit	Momentary	Snap-in
270	122	19-04 (Green)	Two circuit	Momentary	Snap-in
271	123	19-05 (Blue)	Two circuit	Momentary	Snap-in

See footnotes at end of table.

TABLE II. Inactive for new design dash numbers - 1/ Continued.

Dash numbers		Lens M22885/	Circuit characteristic	Operation	Lens type
Printed circuit terminals	Solder terminals				
272	124	19-06 (Yellow)	Two circuit	Momentary	Snap-in
273	125	19-07 (White)	Two circuit	Momentary	Snap-in
274	126	19-08 (Red)	Two circuit	Momentary	Snap-in
275	127	19-09 (Green)	Two circuit	Momentary	Snap-in
276	128	19-10 (Blue)	Two circuit	Momentary	Snap-in
277	129	19-11 (Yellow)	Two circuit	Momentary	Snap-in
278	130	19-12 (White)	Two circuit	Momentary	Snap-in
279	131	19-13 (Red)	Two circuit	Momentary	Snap-in
280	132	19-14 (Green)	Two circuit	Momentary	Snap-in
281	133	19-15 (Blue)	Two circuit	Momentary	Snap-in
282	134	19-01 (Yellow)	Two circuit	Alternate action	Snap-in
283	135	19-02 (White)	Two circuit	Alternate action	Snap-in
284	136	19-03 (Red)	Two circuit	Alternate action	Snap-in
285	137	19-04 (Green)	Two circuit	Alternate action	Snap-in
286	138	19-05 (Blue)	Two circuit	Alternate action	Snap-in
287	139	19-06 (Yellow)	Two circuit	Alternate action	Snap-in
288	140	19-07 (White)	Two circuit	Alternate action	Snap-in
289	141	19-08 (Red)	Two circuit	Alternate action	Snap-in
290	142	19-09 (Green)	Two circuit	Alternate action	Snap-in
291	143	19-10 (Blue)	Two circuit	Alternate action	Snap-in
292	144	19-11 (Yellow)	Two circuit	Alternate action	Snap-in
293	145	19-12 (White)	Two circuit	Alternate action	Snap-in
294	146	19-13 (Red)	Two circuit	Alternate action	Snap-in
295	147	19-14 (Green)	Two circuit	Alternate action	Snap-in
296	148	19-15 (Blue)	Two circuit	Alternate action	Snap-in

1/ These switch assemblies include MIL-S-22885/19 or MIL-S-22885/22 pushbutton lens which have been cancelled. Replace with separate switch housing (see table I) and pushbutton lens (see MIL-PRF-22885/99)

2/ Switches with lenses M22885/22-01 through M22885/22-05 are not for applications that require greater than 50 g shock loads.

TABLE III. Electrical ratings.

Load	28 V dc	115 V ac (60/400 Hz)
	amperes	amperes
Resistive	2.0	2.0
Inductive	1.5	1.5
Lamp	0.5	0.5

QUALIFICATION:

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 (see table IV).

Group A inspection.

Seal test. Visual examination only.

TABLE IV. Qualification inspection (group submission).

Sample units	Qualification table of MIL-PRF-22885	Extent of approval
Assembly of M22885/18-02 and M22885/99-K108 1/	All tests 2/	All
Assembly of M22885/18-153 and M22885/99-K208	Groups I and II	
Assembly of M22885/18-07and M22885/99-K208 (2 sample units)	Visual and mechanical examination Operating characteristics Contact resistance	
Assembly of M22885/18-08 and M22885/99-K208 (2 sample units)		

1/ For group VIII tests, two samples each of M22885/99-K201 through M22885/99-K215 pushbutton lens shall be assembled to M22885/18-07 switch housing.
2/ Seal test to be performed in group II and group VII only. 115 V ac electrical endurance tests are to be performed at 60 Hz only.

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.

Referenced Documents:
MIL-PRF-22885
MIL-PRF-22885/99
ASTM-D5948

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

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

Preparing activity:
DLA - CC

(Project 5930-2016-023)

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/ .