

INCH-POUND

MIL-S-3786/31B(EC)
20 July 1989
SUPERSEDING
MIL-S-3786/31A(EC)
24 March 1969

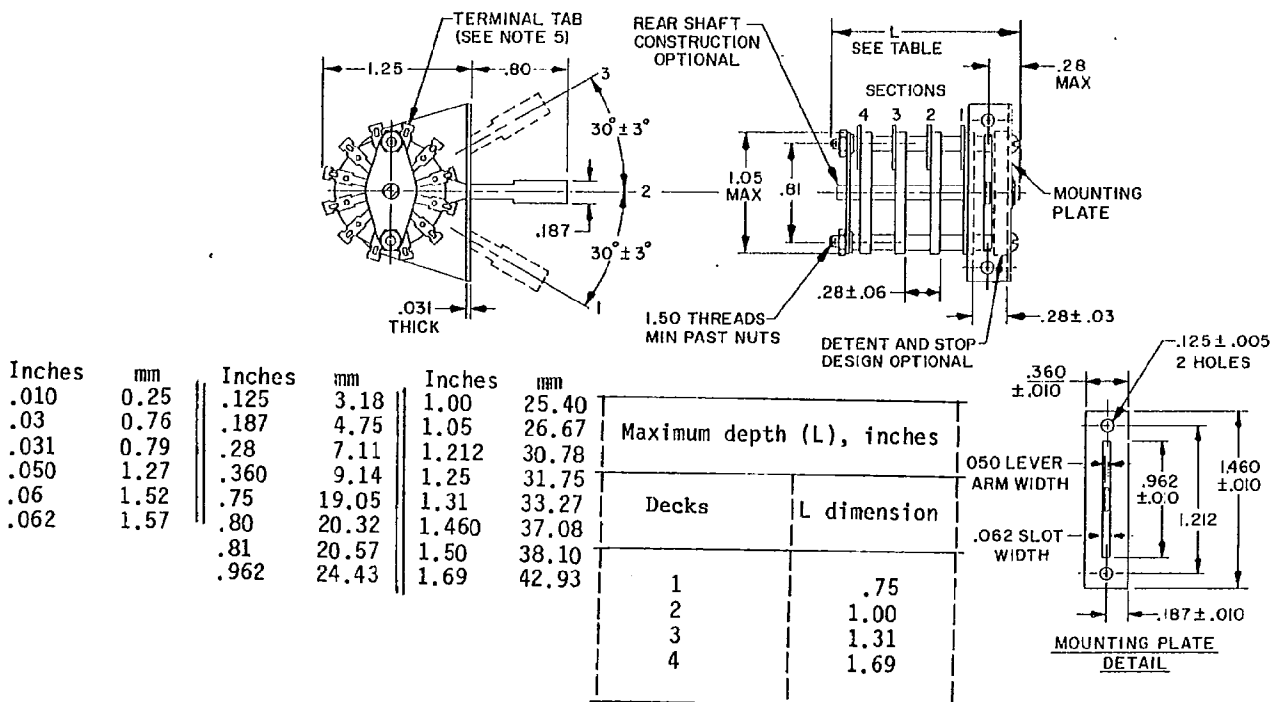
MILITARY SPECIFICATION SHEET

SWITCH, ROTARY, OPEN CONSTRUCTION
LEVER ACTUATED, 0.25 AMPERE,
STYLE SR31

Inactive for new design after 20 July 1989

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

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-S-3786E.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are $\pm .02$ and $\pm .005$.
4. The number of sections is optional with a maximum of four.

FIGURE 1. Style SR31 switch.

AMSC N/A

1 of 5

FSC 5930

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

REQUIREMENTS:

Dimensions and configuration: See figure 1 and table IV.

Angle of throw: 30 degrees.

Terminals: The terminal tabs shall project in a direction parallel to the plane of the section.

Rotational torque: The minimum and maximum values of torque determined for shaft rotation shall be within the limits specified in table I.

TABLE I. Rotational-torque limits.

Temperature	Torque (lb-in)	
	Minimum	Maximum
Room	0.75	4
Minimum	0.75	6

Terminal strength (pull): A force of 3 pounds shall be applied to the terminals.

Life (rotational): The test loads for the applicable circuit conditions shall be as shown in table II. Each of the loads specified for the applicable environmental condition shall be switched by at least one rotor contact of the switch. At the finish of the test, the rotational torque average shall not have changed more than +20 or -40 percent from the initial value.

TABLE II. Circuit values for life (rotational) test.

Environmental condition	Inductive loads per MIL-I-81023		Resistive loads	
	Milliamperes	Volts, dc	Milliamperes	Volts
At atmospheric pressure	25	28	250 100	28 dc 115 vrms
At reduced barometric pressure			120 50	28 dc 115 vrms
At room ambient	100 <u>1</u>	28 <u>1</u> /	300 <u>1</u> / 200 <u>I</u> /	28 dc <u>1</u> / 115 vrms <u>1</u> /

1/ For information only.

Dielectric withstanding voltage: The applicable voltage specified in table III shall be applied.

TABLE III. Dielectric-test voltages.

Altitude	Test voltage (volts rms)
At atmospheric pressure	750
At reduced barometric pressure	375

Vibration grade: 3(10 - 2,000 Hz).

Shock type: H(high impact).
M(medium impact).

Part number: See table IV.

TABLE IV. Switching characteristics and part numbers.

Part number M3786/31	Position	Shorting	Nonshorting	Poles per section	Total
-001	2	X		1	1
002	2		X	1	1
003	2	X		2	1
004	2		X	2	1
005	2	X		3	1
006	2		X	3	1
007	2	X		4	1
008	2		X	4	1
009	2	X		1	2
010	2		X	1	2
011	2	X		2	2
012	2		X	2	2
013	2	X		3	2
014	2		X	3	2
015	2	X		4	2
016	2		X	4	2
017	2	X		1	3
018	2		X	1	3
019	2	X		2	3
020	2		X	2	3
021	2	X		3	3
022	2		X	3	3
023	2	X		4	3
024	2		X	4	3
025	2	X		1	4
026	2		X	1	4
027	2	X		2	4
028	2		X	2	4
029	2	X		3	4
030	2		X	3	4
031	2	X		4	4
032	2		X	4	4
033	3	X		1	1
034	3		X	1	1
035	3	X		2	1
036	3		X	2	1
037	3	X		3	1
038	3		X	3	1
039	3	X		4	1
040	3		X	4	1
041	3	X		1	2
042	3		X	1	2
043	3	X		2	2
044	3		X	2	2
045	3	X		3	2
046	3		X	3	2
047	3	X		4	2
048	3		X	4	2
049	3	X		1	3
050	3		X	1	3
051	3	X		2	3
052	3		X	2	3

TABLE IV. Switching characteristics and part numbers. Continued

Part number M3786/31	Position	Shorting	Nonshorting	Poles per section	Total
-053	3	X		3	3
054	3		X	3	3
055	3	X		4	3
056	3		X	4	3
057	3	X		1	4
058	3		X	1	4
059	3	X		2	4
060	3		X	2	4
061	3	X		3	4
062	3		X	3	4
063	3	X		4	4
064	3		X	4	4
065 ^{1/}	2	X		2	1
066	2		X	2	1
067	2	X		4	1
068	2		X	4	1
069	2	X		6	1
070	2		X	6	1
071	2	X		8	1
072	2		X	8	1
073	2	X		2	2
074	2		X	2	2
075	2	X		4	2
076	2		X	4	2
077	2	X		6	2
078	2		X	6	2
079	2	X		8	2
080	2		X	8	2
081	2	X		2	3
082	2		X	2	3
083	2	X		4	3
084	2		X	4	3
085	2	X		6	3
086	2		X	6	3
087	2	X		8	3
088	2		X	8	3
089	2	X		2	4
090	2		X	2	4
091	2	X		4	4
092	2		X	4	4
093	2	X		6	4
094	2		X	6	4
095	2	X		8	4
096	2		X	8	4
097	3	X		2	1
098	3		X	2	1
099	3	X		4	1
100	3		X	4	1
101	3	X		6	1
102	3		X	6	1
103	3	X		8	1
104	3		X	8	1
105	3	X		2	2

TABLE IV. Switching characteristics and part numbers. Continued

Part number M3786/31	Position	Shorting	Nonshorting	Poles per section	Total
-106	3		X	2	2
107	3	X		4	2
108	3		X	4	2
109	3	X		6	2
110	3		X	6	2
111	3	X		8	2
112	3		X	8	2
113	3	X		2	3
114	3		X	2	3
115	3	X		4	3
116	3		X	4	3
117	3	X		6	3
118	3		X	6	3
119	3	X		8	3
120	3		X	8	3
121	3	X		2	4
122	3		X	2	4
123	3	X		4	4
124	3		X	4	4
125	3	X		6	4
126	3		X	6	4
127	3	X		8	4
128	3		X	8	4

1/ Dash numbers 065 thru 128 have circuitry both sides of switch sections.

CONCLUDING MATERIAL

Custodian:
Navy - EC

Preparing activity:
Navy - EC

Agent:
DLA - ES

(Project 5930-N657)