

INCH-POUND

MIL-PRF-83504/4E

23 February 2001

SUPERSEDING

MIL-PRF-83504/4D

27 October 1993

### PERFORMANCE SPECIFICATION SHEET

#### SWITCHES, SLIDE, DUAL IN-LINE PACKAGE (DIP), SINGLE AND DOUBLE POLE, SINGLE THROW STATIONS, SEALED BASE

This specification is approved 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-PRF-83504.

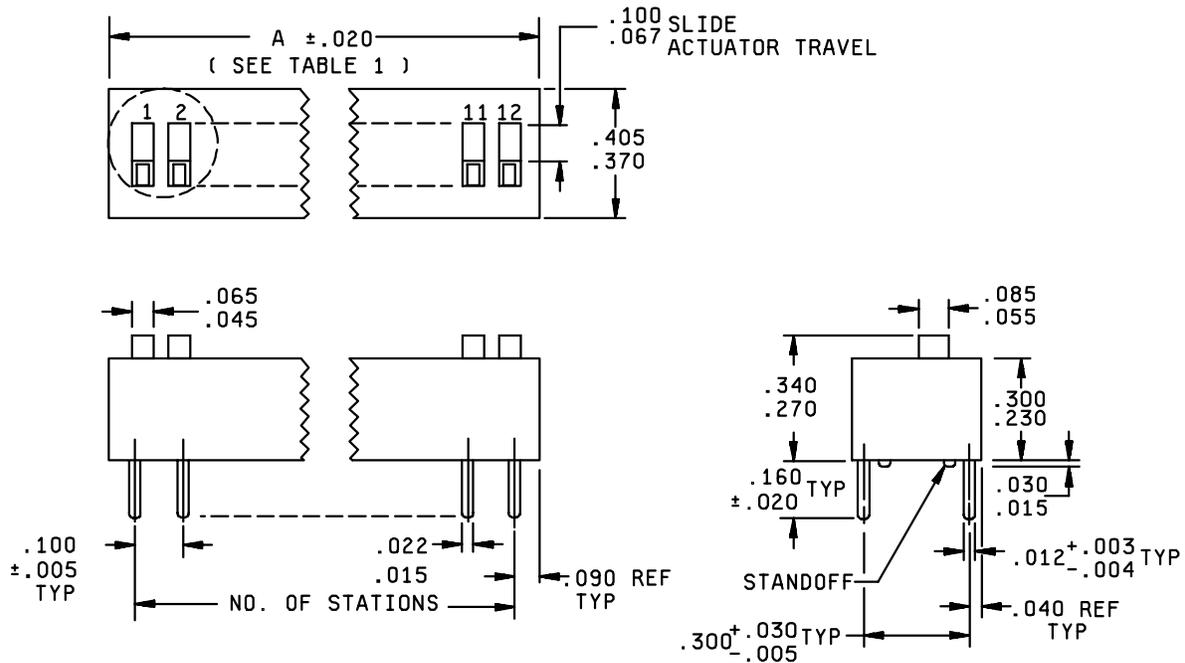
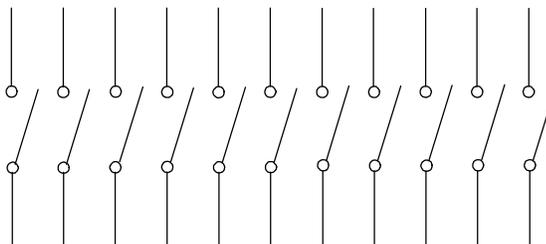


FIGURE 1. Dimensions and configuration, single pole stations (SPST).

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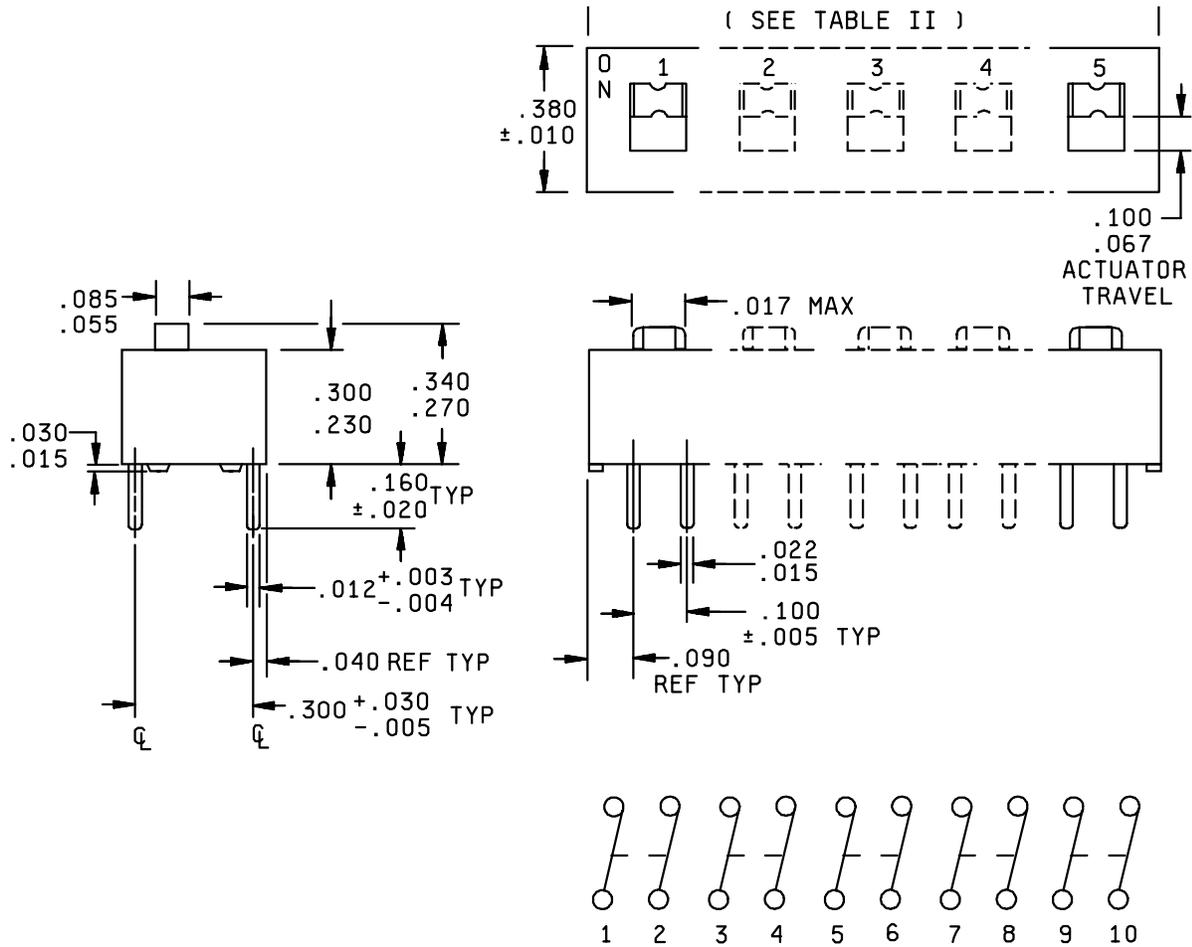
Typical contacts circuit arrangement 12 station switch.  
(Contacts shown in open position)

Inches	mm	Inches	mm
.003	0.08	.067	1.70
.004	0.10	.085	2.16
.005	0.13	.090	2.29
.010	0.25	.100	2.54
.012	0.30	.160	4.06
.015	0.38	.230	5.84
.020	0.51	.270	6.86
.022	0.56	.300	7.62
.030	0.76	.340	8.64
.040	1.02	.370	9.40
.055	1.40	.405	10.29

NOTES

1. Dimensions are in inches. Metric equivalents are given for information only.
2. Each switch station is shown in the "OFF" position. Continuity is established (switch is turned "ON") when the rocker extension nearer the number is depressed.
3. Each switch position shall be numbered as shown.
4. Exact shape of switch is optional, provided outline dimensions are not exceeded.
5. Design of terminals and standoffs are optional

FIGURE 1. Dimensions and configuration, single pole stations (SPST) - Continued.



**CIRCUIT DIAGRAM - 5 STATION SWITCH**

As viewed in the position shown  
(Closed position)

Inches	mm	Inches	mm
.003	0.08	.067	1.70
.004	0.10	.085	2.16
.005	0.13	.090	2.29
.010	0.25	.100	2.54
.012	0.30	.160	4.06
.015	0.38	.230	5.84
.020	0.51	.270	6.86
.022	0.56	.300	7.62
.030	0.76	.340	8.64
.040	1.02	.370	9.40
.055	1.40	.405	10.29

**NOTES**

1. Dimensions are in inches. Metric equivalents are given for information only.
2. Each switch station is shown in the "ON" position. Continuity is broken (switch is turned "OFF") when the slider actuator is away from the station identification number.
3. Each switch position shall be numbered as shown.
4. Exact shape of switch is optional, provided outline dimensions are not exceeded.
5. Design of terminals and standoffs are optional

FIGURE 1. Dimensions and configuration, single pole stations (SPST) - Continued.

REQUIREMENTS:

Material:

Body and actuator rocker: Molded plastic.

Terminals: Plug-in or solderable. See tables I and II. The solderable terminals shall be equivalent to or better than solder over nickel over copper over brass. Both plug-in and solderable must meet solderability requirements.

Terminal sealing and solderability: The terminal potting material meniscus may extend to .030 inch maximum beyond the solder standoff.

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

Seal: Sealed base. Temporary tape top seal.

Switch position and setting identification: See figures 1 and 2.

Orientation: See figures 1 and 2.

Operating force: 2.5 to 32 ounces.

Electrical ratings:

- 10 mA maximum at 50 mV, switching (resistive load)
- 100 mA maximum at 6 V dc, switching (resistive load)
- 25 mA maximum at 24 V dc, switching (resistive load).

Application note: In applications where the switch will mate with sockets or with panel boards, the user should consider the compatibility of the mating terminals with respect to finished and mechanical configurations.

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Part or Identifying Number (PIN): M83504/04- (and dash number from table I).

TABLE I. Dash numbers and characteristics

Dash number		Number of stations	Dimension "A" inches (mm)	
Terminal finish				
Gold <sup>1/</sup> (Plug-in)	Solderable			
001	021	1	.280	(7.11)
002	022	2	.280	(7.11)
003	023	3	.380	(9.65)
004	024	4	.480	(12.19)
005	025	5	.580	(14.73)
006	026	6	.680	(17.27)
007	027	7	.780	(19.81)
008	028	8	.880	(22.35)
009	029	9	.980	(24.89)
010	030	10	1.080	(27.43)
011	031	11	1.180	(29.97)
012	032	12	1.280	(32.51)

<sup>1/</sup> PIN's for switches equipped with gold terminations are inactive for new design.

Custodians:

Army - CR  
 Navy - EC  
 Air Force - 11  
 DLA - CC

Preparing activity:

DLA - CC

(Project 5930-1128-03)

Review activities:

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