

PERFORMANCE SPECIFICATION SHEET

SWITCHES, SENSITIVE, SPST, 5 AMPERES, RESILIENT SEAL

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 and MIL-PRF-8805.

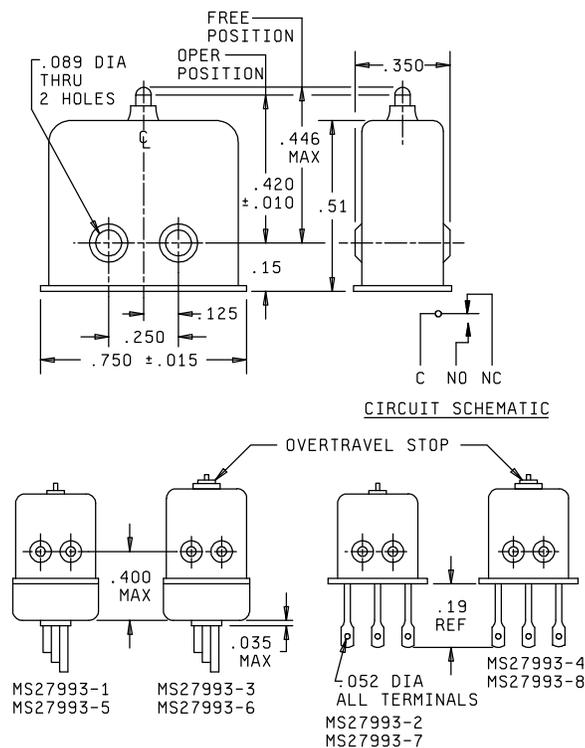


FIGURE 1. Dimensions and configuration.

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Inches	mm	Inches	mm	Inches	Mm
.005	0.13	.089	2.26	.350	8.89
.010	0.25	.125	3.18	.400	10.16
.015	0.38	.130	3.30	.420	10.67
.020	0.51	.150	3.81	.446	11.33
.035	0.89	.190	4.83	.510	12.95
.052	1.32	.250	6.35	.750	19.05

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ± 0.02 (0.51 mm) for two place decimals and ± 0.005 (.13 mm) for 3 place decimals.
4. Switch configuration optional provided dimensions specified are not exceeded.
5. Insulated conductors in accordance with M5086/1-22 or equivalent, 18 inches long.

FIGURE 1. Dimensions and configuration - Continued.

REQUIREMENTS:

Dimensions and configurations: See figure 1.

Enclosure design: 4 (resilient).

Temperature characteristic:

MS27993-1:	1 (- 55°C to + 85°C).
MS27993-2:	(- 55°C to + 125°C).
MS27993-3:	1 (- 55°C to + 85°C).
MS27993-4:	(- 55°C to + 125°C).
MS27993-5:	1 (- 55°C to + 85°C).
MS27993-6:	1 (- 55°C to + 85°C).
MS27993-7:	(- 55°C to + 125°C).
MS27993-8:	(- 55°C to + 125°C).

Shock type: M (100 g, test condition I, method 213 of MIL-STD-202).

Vibration grade: 2 (10 Hz to 2,000 Hz).

Weight: See table I.

Operating characteristics: See table I.

Contact resistance: 80 milliohms maximum.

Dielectric withstanding voltage:

Sea level: 1,250 V rms for one second.

Seal test: Only water tight test shall be performed in group A. Switches need not be removed from underwater during test.

Mechanical endurance:

MS27993-1 thru -4 100,000 cycles at a rate of 10 to 12 cycles per minute.

MS27993-5 thru -8 100,000 cycles.

Electrical endurance: 50,000 cycles.

Electrical ratings: See table II.

Part or Identifying Number (PIN): See table I.

Quality assurance: Group B inspection – See table IV.

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TABLE I. PIN's and operating characteristics.

PIN	Actuating force	Releasing force	Movement differential	Over travel	Weight	Weight with wire	Applied actuator force	Termination
MS27993-1	22 oz. Max.	6 oz. Min.	.0005 to .005 inch	.007 inch max. <u>1/</u>	-----	.0616 pound max.	Does not apply	Lead wire
MS27993-2	22 oz. Max.	6 oz. Min.	.0005 to .005 inch	.007 inch max. <u>1/</u>	.02 pound max.	-----	Does not apply	Solder
MS27993-3	22 oz. Max.	6 oz. Min.	.0005 to .005 inch	.006 inch min.	-----	.0616 pound max.	10 pounds max	Lead wire
MS27993-4	22 oz. Max.	6 oz. Min.	.0005 to .005inch	.006 inch min.	.02 pound max.	-----	10 pounds max	Solder
MS27993-5	10 oz. Max.	3 oz. Min.	.0005 to .005 inch	.007 inch max. <u>1/</u>	-----	.0616 pound max.	Does not apply	Lead wire
MS27993-6	10 oz. Max.	3 oz. Min.	.0005 to .005 inch	.006 inch min.	-----	.0616 pound max.	10 pounds max	Lead wire
MS27993-7	10 oz. Max.	3 oz. Min.	.0005 to .005 inch	.007 inch max. <u>1/</u>	.02 pound max.	-----	Does not apply	Solder
MS27993-8	10 oz. Max.	3 oz. Min.	.0005 to .005 inch	.006 inch min.	.02 pound max.	-----	10 pounds max	Solder

1/ Overtravel stop not provided. In use, do not exceed.

TABLE II. Electrical ratings.

Load	Sea level		50,000 feet
	28 V dc	115 V ac 400 Hz	28 V dc
	Amperes	Amperes	Amperes
Resistive	5	5	5
Inductive	3	3	3
Lamp	1.5	1.5	1.5

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TABLE III. Qualification group submission.

Examination or test	Basic switch	Other switch samples	Extent of approval
Qualification inspection table of MIL-PRF-8805 Groups I. through VIII. Inclusive	MS27993-8 (All sample units)	MS27993-1 MS27993-2 MS27993-3 MS27993-4 MS27993-5 MS27993-6 MS27993-7 (3 sample units) Visual and mechanical inspection	All

TABLE IV. Group B inspection.

Examination or test	Basic switch	Other switches
Group B inspection table of MIL-PRF-8805 group I. thru IV.	MS27993-8 (All sample units)	MS27993-1 MS27993-2 MS27993-3 MS27993-4 MS27993-5 MS27993-6 MS27993-7 Visual and mechanical inspection

Custodians:

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

Preparing activity:

DLA - CC

(Project 5930-1697-01)

Review activities:

Army - AR, AV, CR4, MI
Navy - AS, MC, OS, SH
Air force - 99