

PERFORMANCE SPECIFICATION SHEET

SWITCH, ASSEMBLIES, SENSITIVE, INTERLOCK, UNSEALED

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

The complete requirements for acquiring the switch described herein shall consist of this specification and the latest issue of MIL-PRF-8805.

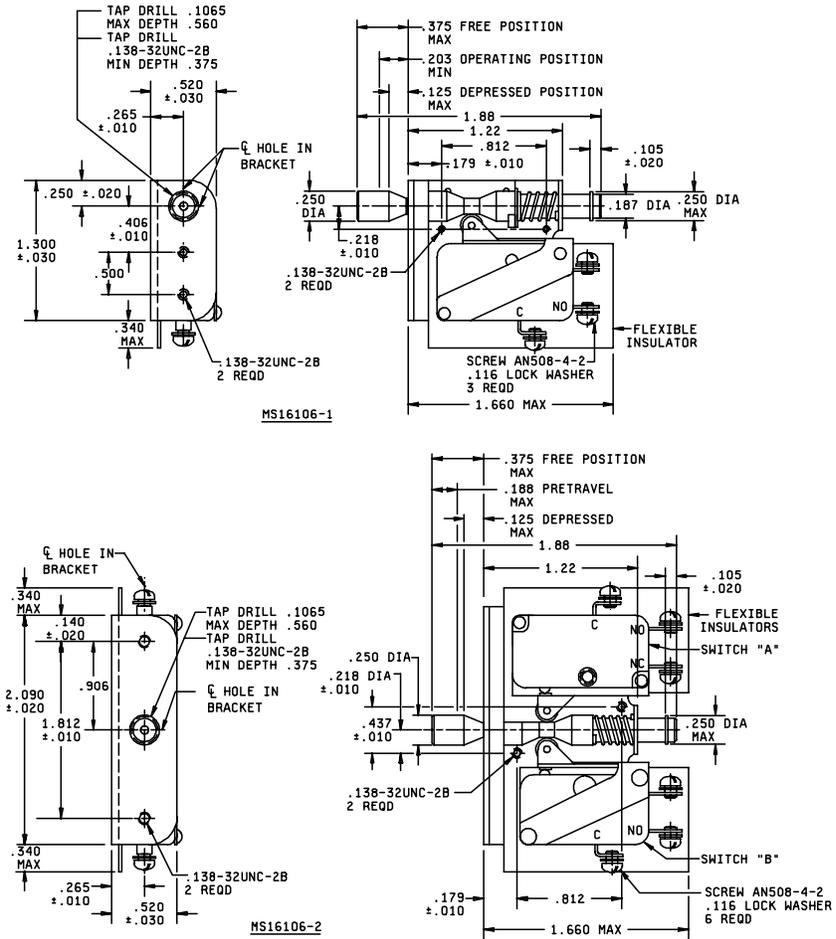
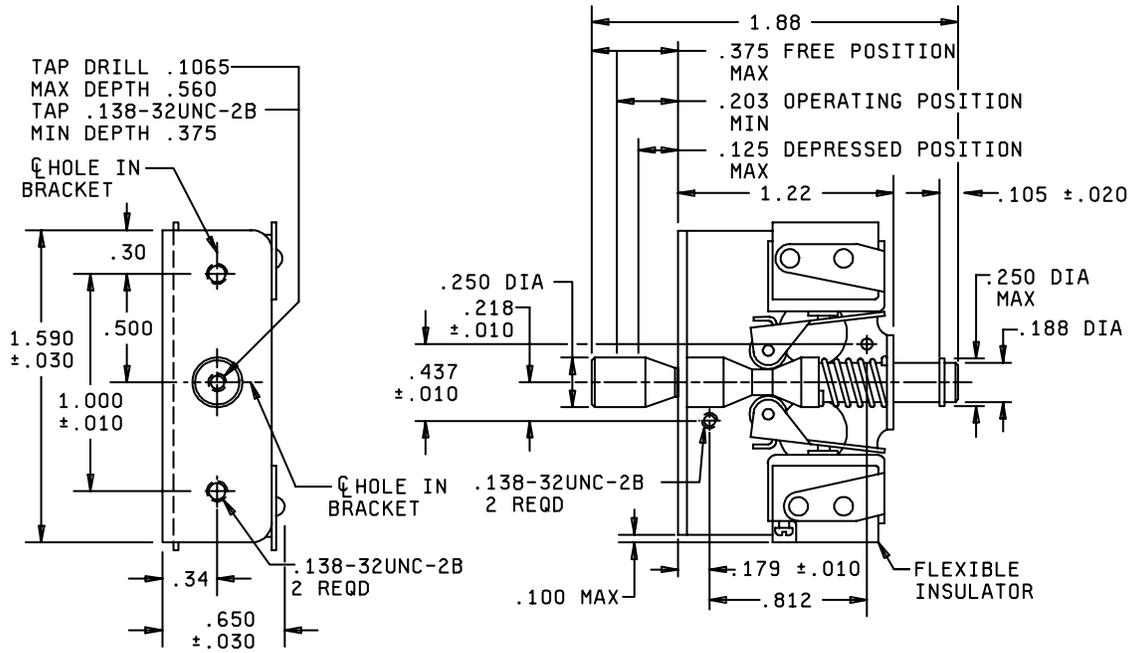
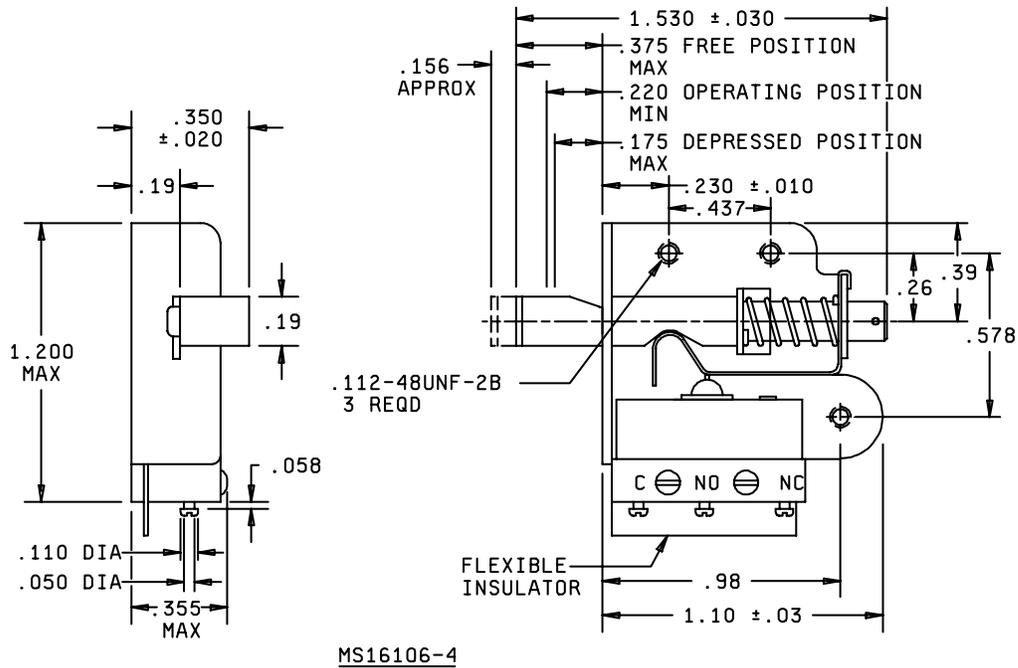


FIGURE 1. Dimensions and configuration.

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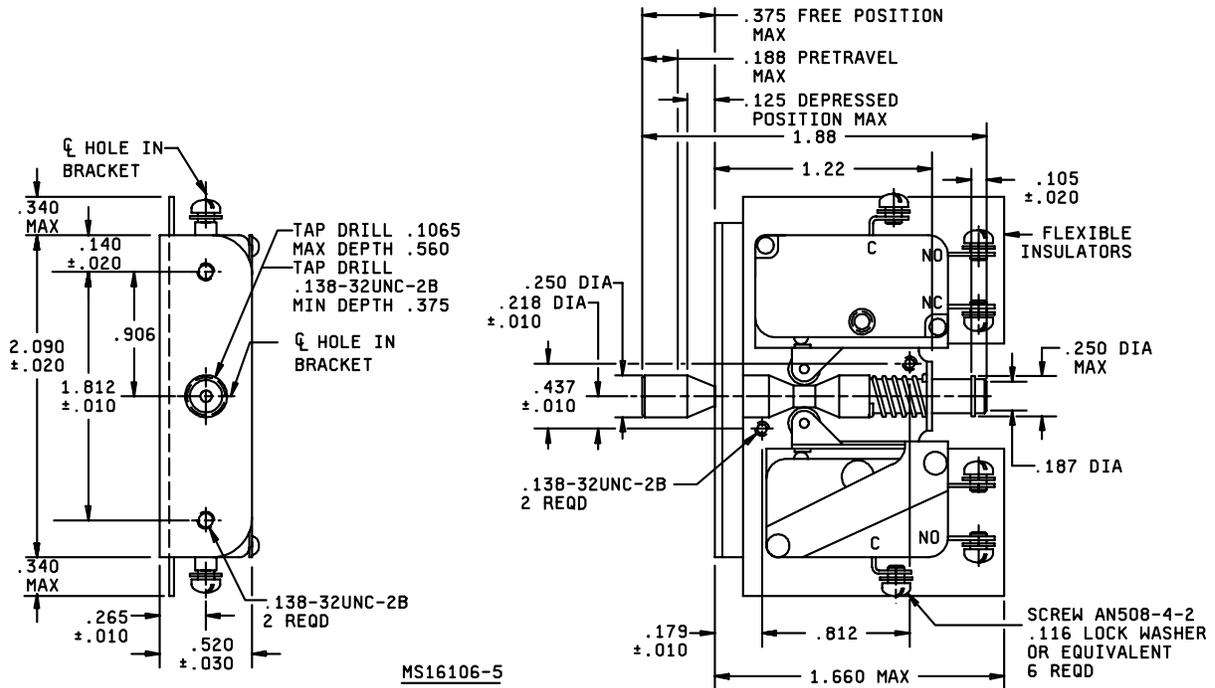
MS16106-3



MS16106-4

FIGURE 1. Dimensions and configuration - Continued.

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Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.010	.25	.156	3.96	.250	6.35	.437	11.10	1.200	30.48
.020	.51	.175	4.45	.26	6.60	.500	12.70	1.22	30.99
.030	.76	.179	4.55	.265	6.73	.520	13.21	1.300	33.02
.050	1.27	.187	4.75	.30	7.62	.578	14.68	1.530	38.86
.058	1.47	.188	4.78	.340	8.64	.650	16.51	1.590	40.39
.100	2.54	.19	4.83	.350	8.89	.812	20.62	1.660	42.16
.105	2.67	.203	5.16	.355	9.02	.906	23.01	1.812	46.02
.110	2.79	.218	5.54	.375	9.53	.98	24.89	1.88	47.75
.125	3.18	.220	5.59	.39	9.91	1.000	25.40	2.090	53.09
.140	3.56	.230	5.84	.406	10.31	1.10	27.94		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1 inch = 25.4 mm.
3. Unless otherwise specified, tolerances are ± 0.005 (.13 mm) for three place decimals and ± 0.02 (.51 mm) for two place decimals.
4. Notch in actuator rod will permit up to .038 (.97 mm) displacement between the rod and the hole in the bracket in the free position on MS16106-1, MS16106-2, MS16106-3 and MS16106-5 and up to .062 (1.57 mm) displacement between the rod and the hole in the bracket when the rod is fully extended on MS16106-4.
5. Exact shape of switch assembly optional provided dimensions are not exceeded. Internal configuration optional.
6. Positive overtravel stop shall be provided on the rod for operation in either direction.
7. Push to operate. Returns automatically to position shown. Pull to operate. Remains in operated position until reset for automatic return by next full stroke 'push' operation.
8. All switches shall be permanently fixed to the assembly.
9. Military Standard Drawing MS16106 is canceled and superseded by MIL-PRF-8805/56.

FIGURE 1. Dimensions and configuration - Continued.

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REQUIREMENTS:

Dimensions and configuration: See figure 1.

Switch assembly: Basic switch shall be as specified in table I and listed on QPL-8805.

Enclosure design: 1 (unsealed).

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

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

Vibration grade: 1 (10 to 500 Hz).

Weight: See table I.

Contact arrangement: See table I.

Operating characteristics: See table I.

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

TABLE I. PIN's, operating characteristics, contact arrangement, and weight.

PIN MS16106-	Total travel <u>1/</u>		Contact arrangement	Weight	Basic switch
	Push direction	Pull direction			
	Inch (approx)	Inch (approx)		lb. max	
1	.250	.187	SPDT	.09	MS25253-1 (MIL-PRF-8805/27)
2	.250	.187	<u>2/</u>	.14	MS25253-1 (MIL-PRF-8805/27)
3	.250	.188	4PDT	.11	M8805/22-001
4	.156	.156	SPDT	.03	M8805/22-001
5	.250	.187	DPDT	.14	MS25253-1 <u>3/</u>

1/ For information only.

2/ Switch "B" only operates on push stroke (SPDT), switches "A" and "B" operate on pull stroke (DPDT).

3/ Military Standard Drawing MS25253 is cancelled and superceded by MIL-S-8805/27.

Contact resistance: Not applicable.

Dielectric withstanding voltage:

Sea level: 1,000 Vrms.

Altitude 1/: 400 Vrms at 50,000 feet.

In qualification inspection table after electrical endurance the dielectric withstanding voltage points of application between all unconnected terminals of the same pole is not applicable.

1/ To be performed only after electrical endurance.

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Mechanical endurance: 25,000 cycles.

Electrical endurance: 25,000 cycles.

Electrical ratings: See table II.

TABLE II. Electrical ratings.

Load	MS16106-1, -2, -5				MS16106-3, -4		
	28 V dc	125 V dc <u>1/</u>	250 V dc <u>1/</u>	115 V ac 60 Hz	28 V dc	115 V ac 60 Hz	250 V ac <u>1/</u> 60 Hz
	amperes	amperes	amperes	amperes	amperes	amperes	amperes
Sea level:							
Resistive	10	.5	.25	10	5	5	5
Inductive	10	.1	.1	10	3	5	5
50,000 ft.							
Resistive	10	---	---	10	5	---	---
Inductive	6	---	---	10	2.5	---	---

1/ Application information only.

Qualification (group submission): See table III.

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TABLE III. Qualification inspection (group submission).

Examination or test	Basic switch assemblies	Additional sample units for combined submission	Extent of approval
<u>Group I</u> Visual and mechanical examination Operating characteristics	MS16106-3 and MS16106-5 (12 sample units each)	MS16106-1 (2 sample units) MS16106-2 (2 sample units) MS16106-4 (8 sample units)	All
<u>Group II</u> Strength of actuating means <u>1/</u> Strength of mounting <u>1/</u> Thermal shock Vibration Shock Operating characteristics Dielectric withstanding voltage Visual and mechanical examination	(4 sample units each from group I)	MS16106-4 (4 sample units each from group I)	
<u>Group III</u> Salt spray (corrosion) Visual and mechanical examination	(2 sample units each from group I)	-----	
<u>Group IV</u> Low temperature operation (2 sample units only) Mechanical endurance at low temperature (2 units) <u>2/</u> Mechanical endurance at high temperature (2 units) Operating characteristics Dielectric withstanding voltage Visual and mechanical examination	(4 sample units each from group I)	MS16106-4 (4 sample units each from group I)	
<u>Group V</u> Electrical endurance Resistive load, 115 V ac	(2 sample units each from group I)	-----	

1/ Two sample units only.

2/ Same sample units as for low temperature operation.

Referenced documents. In addition to MIL-PRF-8805, this document references the following:

- MIL-S-8805/27
- MIL-STD-202
- AN508

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

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Custodians:

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

Preparing activity:

DLA - CC

(Project 5930-2006-023)

Review activities:

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

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 <http://assist.daps.dla.mil/>