

INCH-POUND

MIL-PRF-8805/8F
31 October 2001
SUPERSEDING
MIL-PRF-8805/8E
24 August 1978

PERFORMANCE SPECIFICATION SHEET
SWITCHES, SENSITIVE, SPDT, LEAF ACTUATOR,
LOW LEVEL TO 4 AMPERES, HERMETIC SEAL

This specification forms a part of MIL-PRF-8805, dated 23 January 1998, and 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.

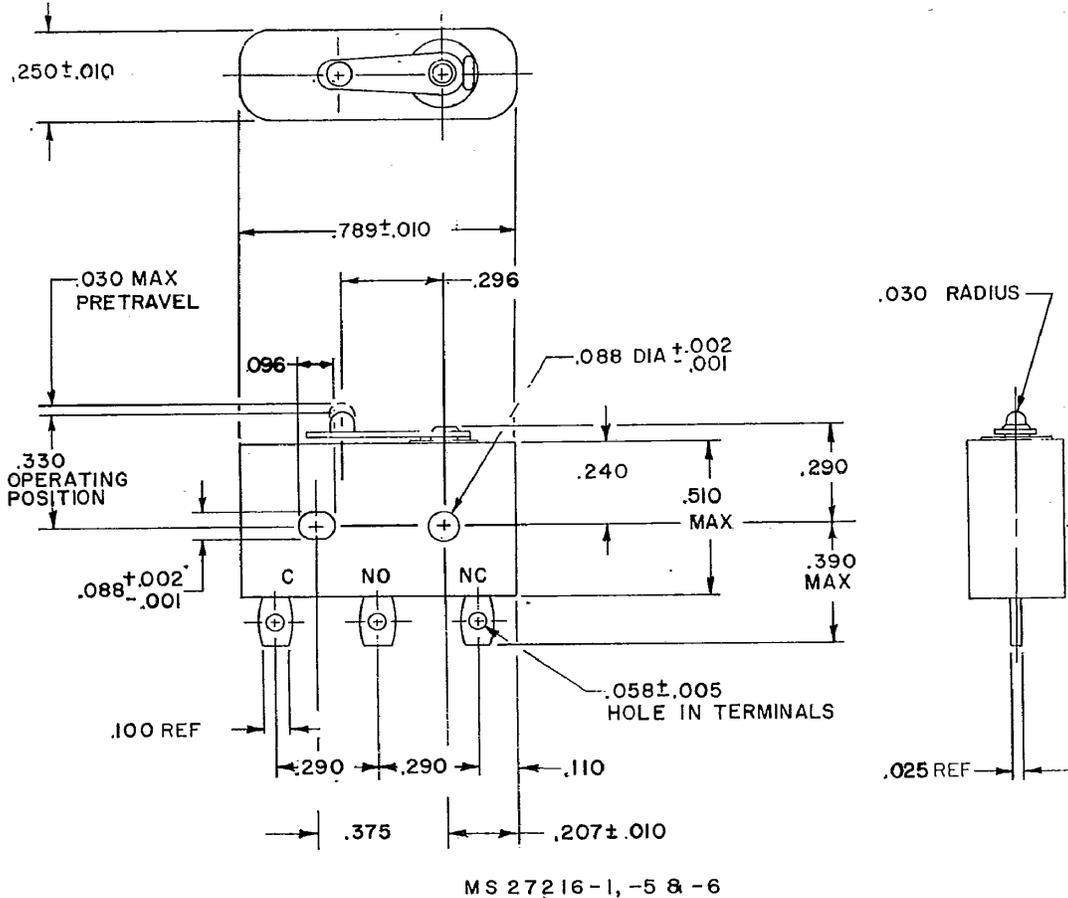
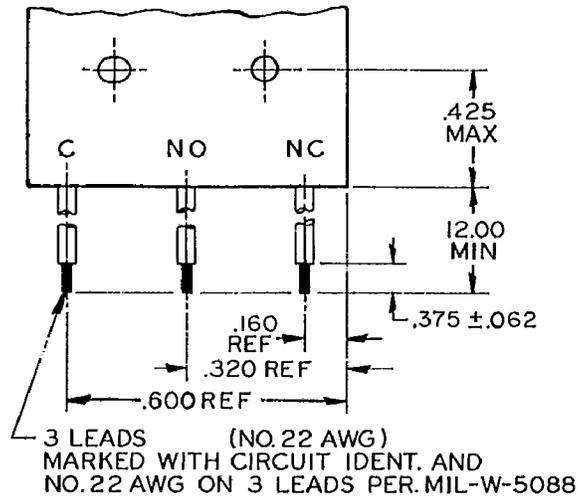
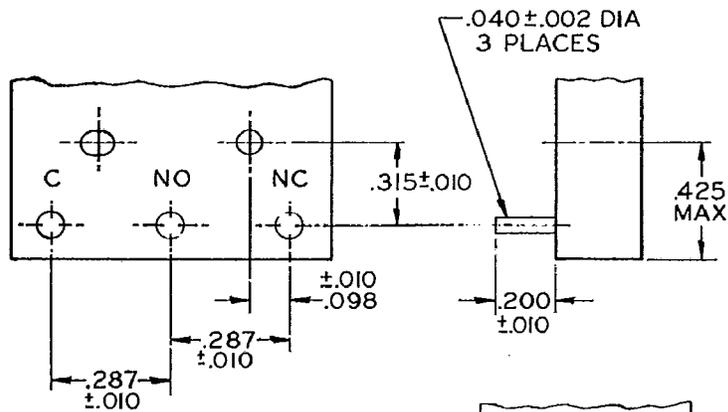


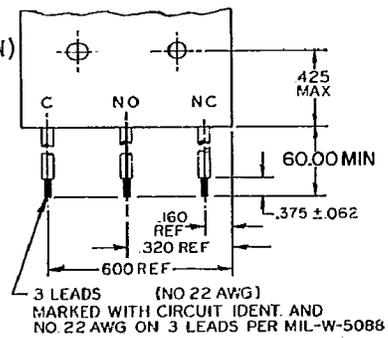
FIGURE 1. Dimensions and configurations.



MS 27216-2



MS27216-3 (INACTIVE FOR NEW DESIGN)



MS 27216-4

FIGURE 1. Dimensions and configurations -Continued.

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Inches	mm	Inches	mm	Inches	mm
.001	.03	.098	2.49	.315	8.00
.002	.05	.100	2.54	.320	8.13
.005	.13	.110	2.79	.330	8.38
.010	.25	.160	4.06	.375	9.52
.025	.64	.200	5.08	.390	9.91
.030	.76	.207	5.26	.425	10.80
.040	1.02	.240	6.10	.510	12.95
.058	1.47	.250	6.35	.600	15.24
.062	1.57	.287	7.29	.789	20.04
.088	2.24	.290	7.37	12.00	304.8
.096	2.44	.296	7.52	60.00	1524.0

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise stated, tolerance is ± 0.015 (0.38 mm).
4. Exact shape of switch optional provided dimensions specified are not exceeded.
5. The terminal designation shall be permanently and legibly marked on switch enclosure.
6. Mounting holes will accept pins or screws of .087 (2.21 mm) maximum diameter on $.375 \pm 0.002$ (9.53 \pm 0.05 mm) centers.

FIGURE 1. Dimensions and configurations -Continued.

REQUIREMENTS:

Dimensions and configurations: See figure 1.

Enclosure design: 5 (Hermetic).

Temperature characteristic: 2 (-65° to +125°C).

Shock type:

MS27216-1, -2, -3, and -4: M(100 g's).

MS27216-5, and -6: H (high impact).

Vibration grade: 2 (10 to 2000 Hz).

Weight:

MS27216-1, -5 and -6: .014 pound maximum.

MS27216-2: .026 pound maximum.

MS27216-3: .020 pound maximum.

MS27216-4: .090 pound maximum.

Operating characteristics:

Actuating force: 7 ounces maximum.

Release force: 1 ounce minimum.

Movement differential: .006 inch maximum.

Pretravel: .030 inch maximum.

Overtravel: .003 inch minimum.

Terminal strength: See table I.

Dielectric withstanding voltage:

At atmospheric pressure:

MS27216-1, -2, -3, -4, and -5: 1000 V rms.

MS27216-6: 800 V rms.

At reduced barometric pressure: 400 V rms

Following electrical endurance: In qualification inspection table, the dielectric withstanding voltage points of application between all unconnected terminals of the same pole shall be tested at 200 V rms minimum.

Contact resistance:

MS27216-1 through -5: Not applicable.

MS27216-6: 50 milliohms maximum initial, 100 milliohms maximum after mechanical endurance.

Mechanical endurance: 25,000 cycles.

Electrical endurance: 25,000 cycles.

Electrical ratings: See table II.

Low level circuit:

Applicable to MS27216-6: 25,000 cycles.

TABLE I. Terminal strength requirements.

Part or Identifying Number (PIN)	Applied force
MS27216-1, -5, -6	9 lbs.
MS27216-2, -3, -4	10 lbs.

TABLE II. Electrical ratings.

Load	Sea level		70,000 feet
	28 V dc	115 V ac, 400 Hz	28 V dc
	<u>amperes</u>	<u>amperes</u>	<u>amperes</u>
MS27216-1, -2, -3, -4			
Resistive	4	2	4
Inductive	2	2	2
Lamp	1	.5	1
MS27216-5			
Resistive	3	1	3
Inductive	1	1	1
MS27216-6			
Resistive	0.5	---	0.5
Inductive	0.25	---	0.25

Qualification:

Group submission:

Sample: The number of sample units for each PIN covered by this specification sheet shall be as specified in table III.

Test routine: All sample units shall be subjected to visual and mechanical examination. The sample units shall then be divided as specified in table III and subjected to the inspections indicated.

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TABLE III. Qualification inspection.

Switches for testing	Number of sample units	Examination or test	Extent of approval
MS27216-1	30	Complete qualification table, as applicable, of MIL-PRF-8805	MS27216-1 MS27216-2 MS27216-4 MS27216-5 MS27216-6
MS27216-2	2	Insulation resistance Operating characteristics Terminal strength Vibration Shock Operating characteristics Visual and mechanical examination Seal	
MS27216-4	2	Visual and mechanical examination	
MS27216-5	24	Complete qualification table, as applicable, of MIL-PRF-8805 except for terminal strength, solderability, and explosion	
MS27216-6	6	Visual and mechanical examination Seal Dielectric withstanding voltage Insulation resistance Operating characteristics Overload Electrical endurance Low level circuit Dielectric withstanding voltage Operating characteristics	

Group C inspection:
Explosion test: Not applicable.

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

Preparing activity:
DLA - CC

(Project 5930-1126-06)

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