

INCH-POUND

MS21353K

5 May 2008

MS21353J

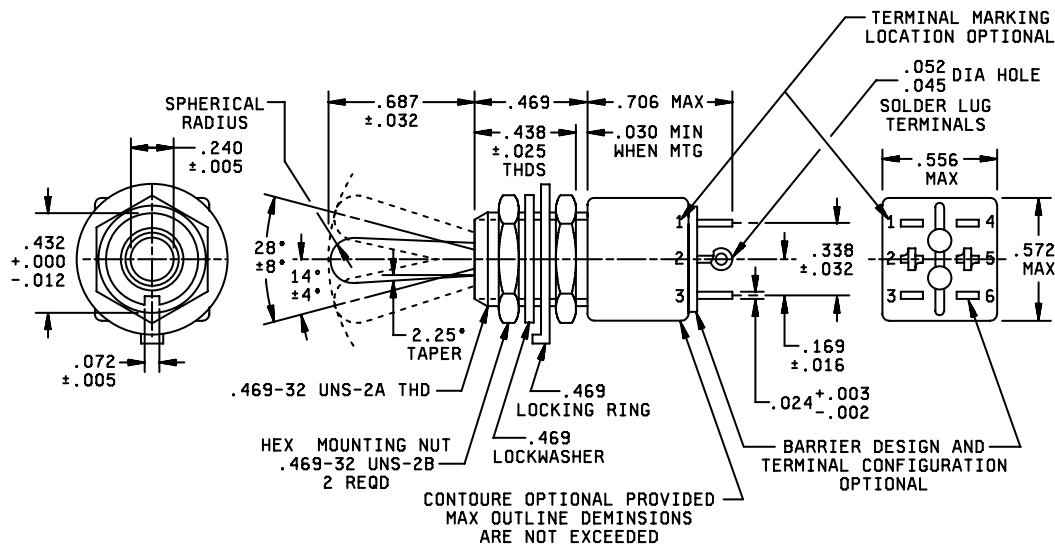
18 October 1985

## DETAIL SPECIFICATION SHEET

SWITCH, TOGGLE, POSITIVE BREAK, SPECIAL CIRCUIT, MINIATURE, TOGGLE  
SEALED, SOLDER LUG, DOUBLE POLE, .469 MOUNTING BUSHING

This specification sheet 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  
MIL-DTL-5423.



## Notes

1. Dimensions are in inches. Metric equivalents are given for general information only.
2. Unless otherwise specified, tolerances are  $\pm 0.10$  (0.25 mm) on decimals and  $\pm 5^\circ$  on angles.
3. For hardware detail specifications see appendix of MIL-DTL-8834.
4. In the event of conflict between the text of this standard and the references cited herein, the text of this specification sheet shall take precedence.

FIGURE 1. Dimensions and configuration.

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INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
.002	.05	.016	.41	.045	1.14	.338	8.59	.556	14.12
.003	.08	.024	.61	.052	1.32	.432	10.97	.572	14.53
.005	.13	.025	.64	.072	1.83	.438	11.13	.687	17.45
.010	.25	.030	.76	.169	4.29	.469	11.91	.706	17.93
.012	.30	.032	.81	.240	6.10				

MS DASH NO.  <u>1/</u> <u>2/</u>		Circuit Made Between Terminals as Indicated with Toggle Lever in these Positions (a)			Current Capacity In Amperes						Life Low Current Level Switching 5 mV
					Resistive Load			Inductive Load			
					28 Volts DC	115 Volts		28 Volts DC	115 Volts		
		60 Hertz AC	400 Hertz AC	60 Hertz AC		400 Hertz AC					
-831	-331	2-3 5-6 ON	2-3 4-5 ON	1-2 4-5 ON	5	2	3	(b) 1	1	2	(c) 25µA
-841	-341	2-3 5-6 MOM-ON	2-3 4-5 ON	1-2 4-5 MOM-ON							
-821	-321	NONE	2-3 5-6 ON	1-2 4-5 MOM-ON							
-851	-351	2-3 5-6 ON	2-3 4-5 ON	1-2 4-5 MOM-ON							

(a) Direction of movement of internal mechanism is opposite to the direction of the toggle movement.

(b) With time constant of .020 ± .002 seconds.

(c) Contact resistance not to exceed 50 ohms during life, low current level switching.

1/ 800 series toggle seal (water) 15' head, 300 series toggle seal (water) 1/2" head.

2/ Delayed action of the switch toggle lever may cause circuit to close or open before snap action mechanism trips.

FIGURE 1. Dimensions and configuration – continued.

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## REQUIREMENTS

Toggle seal test: Method I for 800 series, Method II for 300 series.

Shock Method I and Method II (high impact): The switch shall be electrically and mechanically operative at the conclusion of the shock test except there can be mechanical transfer of the contact mechanism at all levels when tested in accordance with Method II (high impact).

Weight: .0463 pound maximum (21 grams).

Strength of terminal: 5 pounds pull perpendicular to mounting plane and 2 pounds in other planes.

Dielectric withstanding voltage: 1,200 V rms at sea level.

Altitude: 50,000 feet.

115 V ac, 60 Hertz electrical endurance test: Shall be performed at room temperature and pressure.

## QUALIFICATION

At the request of the manufacturer with the qualifying activity's approval, Table II of MIL-DTL-8834 may be superseded by the following Table and used for Qualification Inspection, if qualification of MS90311 has already been successfully completed and approved by the qualifying activity. If the design, material, construction, or processing is changed or if there are any quality problems or failures, the qualifying activity may require resumption of the original testing requirement. Regardless of reduction of tests, the manufacturer shall supply product capable of passing the prescribed tests.

Table I: Qualification Inspection

Inspection	Requirement paragraph	Test paragraph	1	2	3	4
Examination of product	3.1	4.8.1	X	X	X	X
Switching characteristics	3.6.3	4.8.4	X	X	X	X
Contact voltage drop	3.6.9	4.8.10	X	X		
Overload	3.6.11	4.8.12.1	X	X		
Electrical endurance, inductive load 28VDC, 1A, 50,00 feet altitude, 20,000 cycles	3.6.11	4.8.12.3	X	X		
Dielectric withstanding voltage, 1,200Vrms at sea level	3.6.10	4.8.11	X	X		
Examination of product	3.1	4.8.1	X	X		
Shock, Method I	3.6.13	4.8.14.1			X	X
Shock, Method II	3.6.13	4.8.14.31			X	X
Vibration, high frequency	3.6.14	4.8.15			X	X
Moisture resistance	3.6.16	4.8.17			X	X
Dielectric withstanding voltage, 1,200Vrms at sea level	3.6.10	4.8.11			X	X
Sealing/Toggle seal, Method II	3.6.20.1	4.8.21.1			X	X
Examination of product	3.1	4.8.1			X	X

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The margins of this specification are marked with vertical lines to indicate where modifications were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents:

MIL-DTL-8834  
MS90311

Custodians:

Army – CR  
Navy – AS  
Air Force – 11  
DLA – CC

Preparing activity:

DLA – CC

(Project 5930-2008-042)

Review activities:

Army – AR, MI  
Navy – EC  
Air Force – 99

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>.