

INCH-POUND

MIL-PRF-24236/24D

22 January 2001

SUPERSEDING

MIL-S-24236/24C

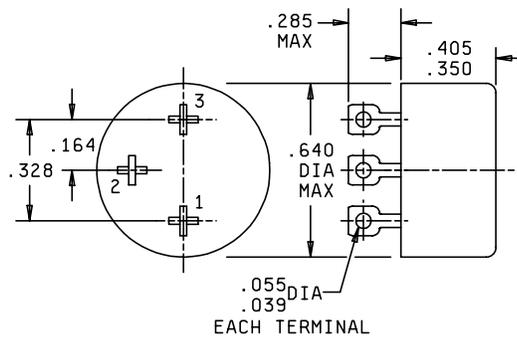
25 July 1990

PERFORMANCE SPECIFICATION SHEET

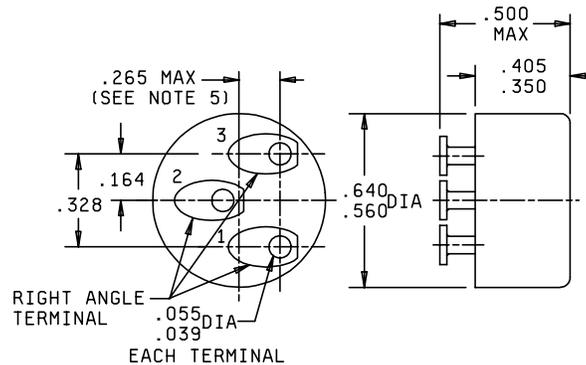
SWITCHES, THERMOSTATIC, (BIMETALLIC),  
SUBMINIATURE, TYPE I, HERMETICALLY SEALED,  
SINGLE POLE, DOUBLE THROW (SPDT), 2 AMPERES AND LOW LEVEL

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 Specification and Standards (DODISS) specified in the solicitation: MIL-PRF-24236.

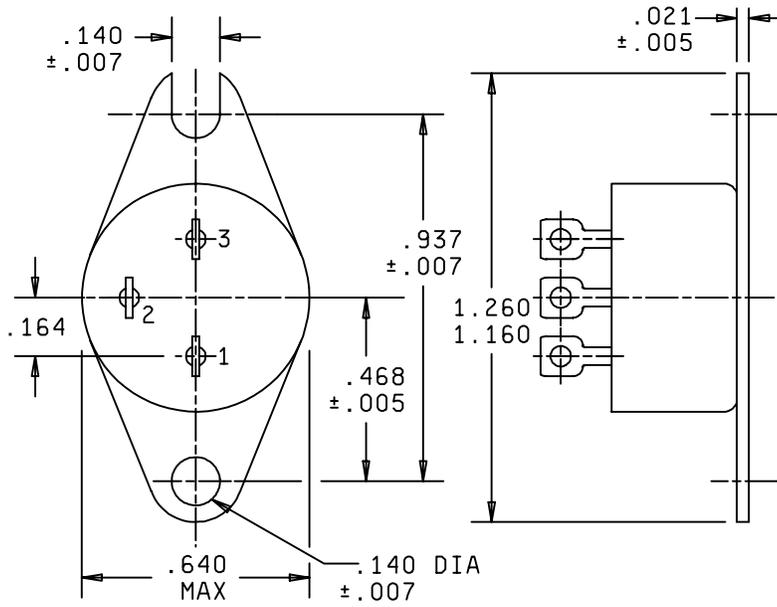


Configuration A (see note 6)

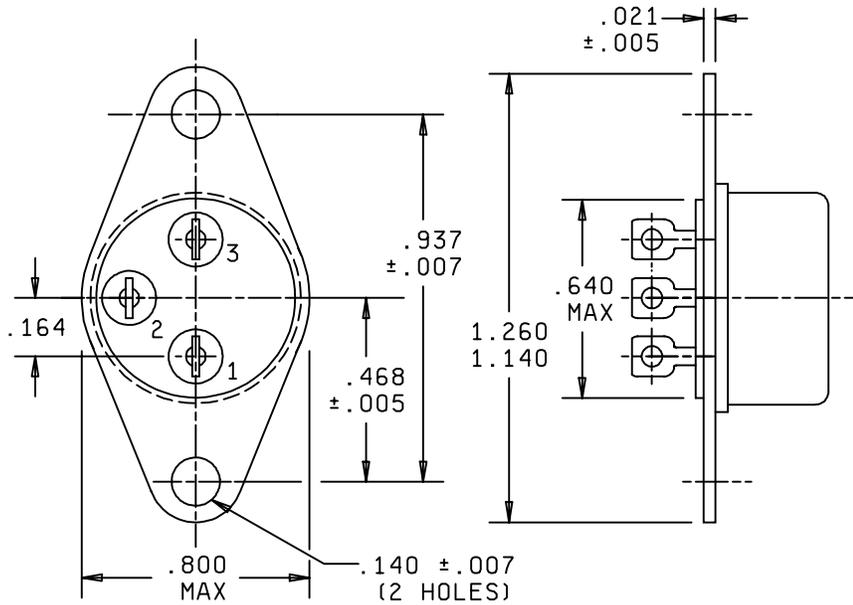


Configuration B (see note 6)

FIGURE 1. Switches.

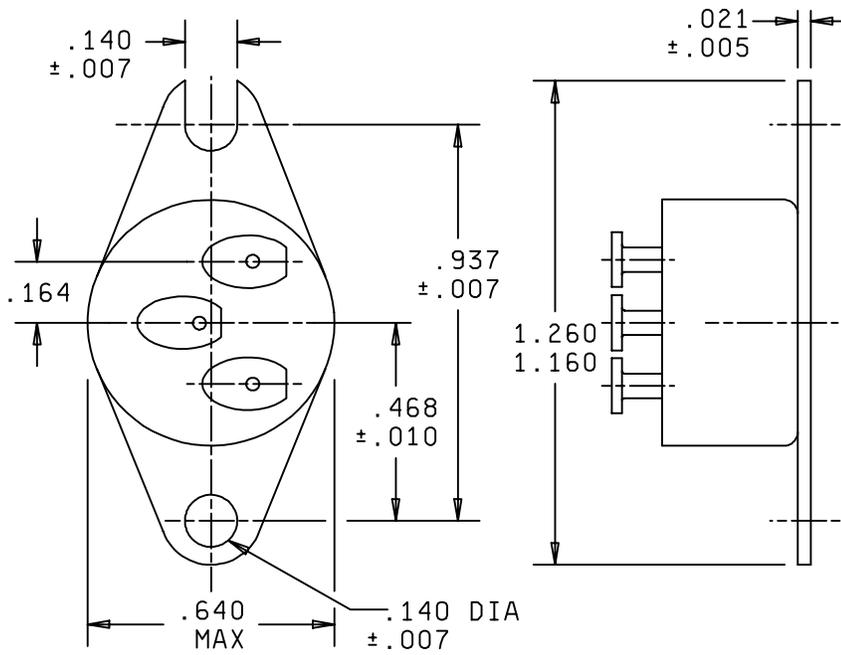
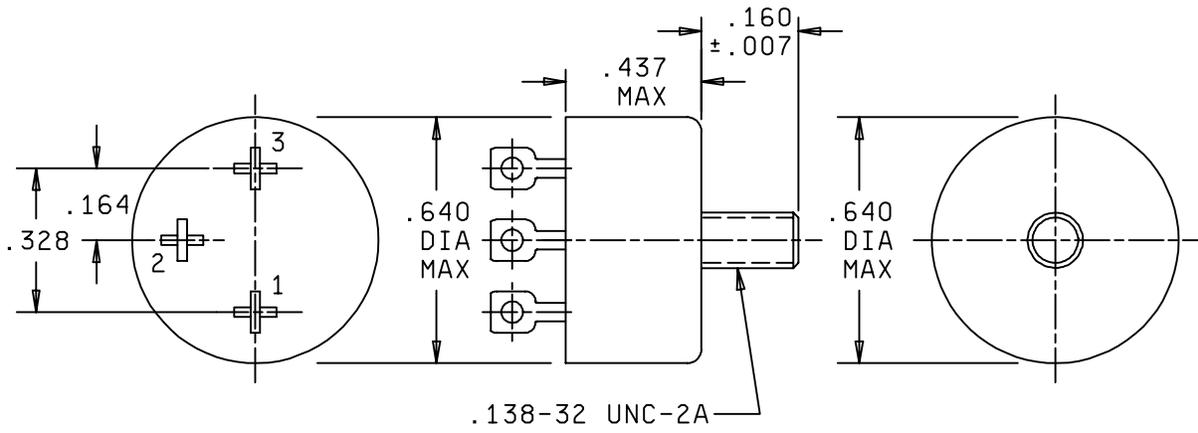


Configuration A1



Configuration A2

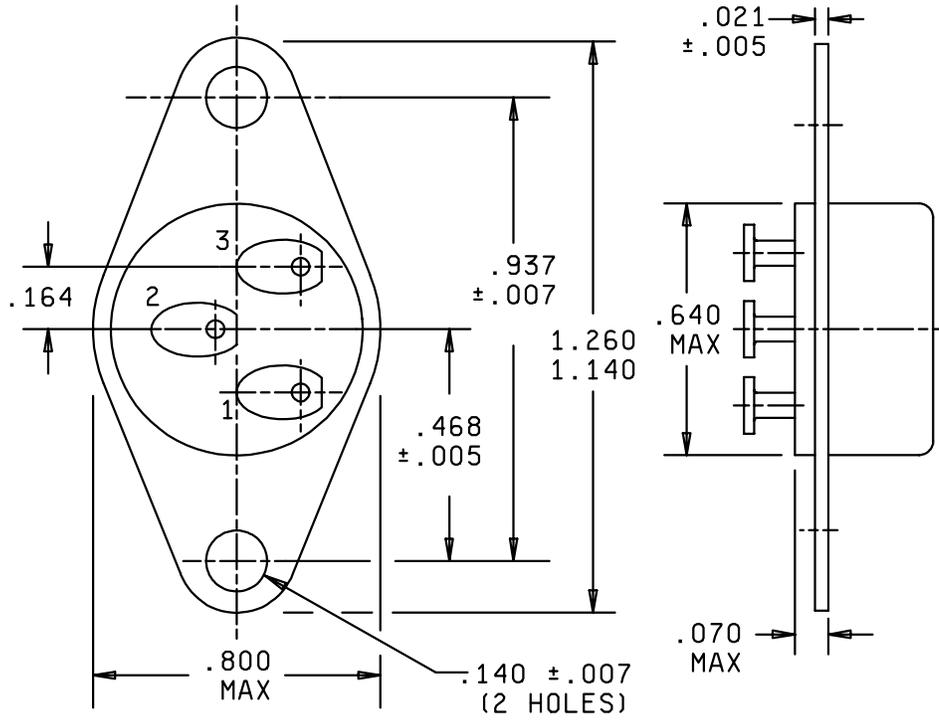
FIGURE 1. Switches - Continued.



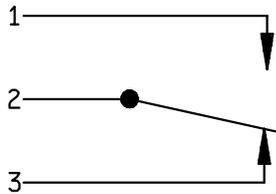
Configuration B1

Configuration A3 (stud mounted)

FIGURE 1. Switches - Continued.



Configuration B2



WIRING DIAGRAM

Below low temperature setting, circuit 1-2 is open.  
Above high temperature setting, circuit 2-3 is open.

FIGURE 1. Switches - Continued.

Inches	mm	Inches	mm	Inches	mm
.005	0.13	.164	4.17	.531	13.49
.007	0.18	.187	4.75	.560	14.22
.021	0.53	.265	6.73	.640	16.26
.039	0.99	.285	7.24	.680	17.27
.049	1.24	.328	8.33	.800	20.32
.055	1.40	.350	8.89	.937	23.80
.070	1.78	.395	10.03	1.140	28.96
.071	1.80	.405	10.29	1.160	29.46
.125	3.18	.460	11.68	1.200	30.48
.140	3.56	.468	11.89	1.260	32.00
.160	4.06	.500	12.70		

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm 0.015$  (0.38 mm).
4. Exact shape of switch and terminals are optional provided dimensions specified are not exceeded.
5. This dimension not to exceed extended envelope of the switch.
6. Mounting brackets are not to be furnished.
7. Configurations A1, A2, and A3 use basic switches of configuration A.  
Configurations B1, B2, and B3 use basic switches of configuration B.

FIGURE 1. Switches - Continued.

REQUIREMENTS:

- Dimensions and configuration: See figure 1 and table I.
- Operating temperature range: -65°F to 400°F.
- Class: Class 4, except 80,000 feet and vibration 10 - 2,000 Hz, 10G.
- Mounting: See figure 1.
- Weight: Not to exceed .025 pound.
- Creepage: Applicable.
- Operating temperature and tolerance: See table II and table III.
- Torque (switch mounting): 15 foot-pounds.
- Electrical ratings: See table IV.
- Endurance test: See table IV.
- Low level: When specified, see PIN information.

QUALIFICATION:

- Single submission: Restricted to switch submitted.
- Group submission: See table V.

Part or Identifying Number (PIN): Consists of "M" prefix followed by specification sheet number; a dash (-); and a five- or six-letter code. The five-letter code identifies the configuration (code from table I); high temperature setting to the nearest 25°F (code from table II); high-temperature setting to the nearest 5°F and applicable tolerance (code from table III); low-temperature setting to the nearest 25°F (code from table II); and low-temperature setting to the nearest 5°F and applicable tolerance (code from table III). The six-letter code used in the following example identifies a switch of configuration A (figure 1) which actuates at 65°F ±6°F and deactuates at 25°F ±6°F and has low level capabilities.

Note: Refer to table VI to avoid generating a PIN that can not be acquired.

EXAMPLE:

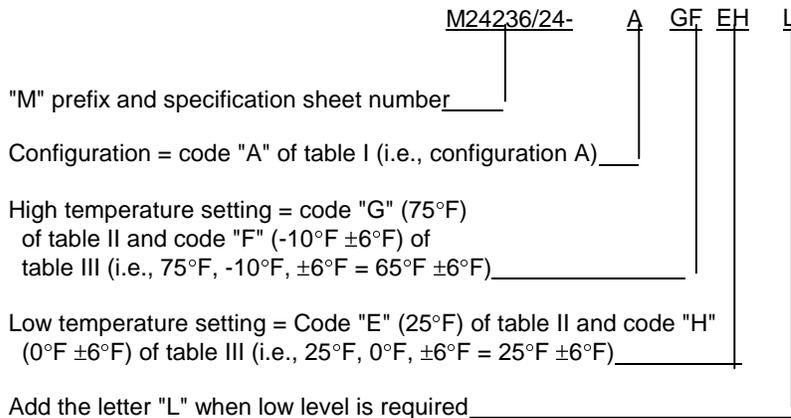


TABLE I. Configuration.

Code -----	Configuration						
	A	A1	A2	A3	B	B1	B2
	A	B	C	D	E	F	G

TABLE II. High temperature setting to the nearest 25°F.

Code	Temperature	Code	Temperature	Code	Temperature
	(°F)		(°F)		(°F)
A ----	-75	H ----	100	Q ----	275
B ----	-50	J ----	125	R ----	300
C ----	-25	K ----	150	S ----	325
D ----	0	L ----	175	T ----	350
E ----	25	M ----	200	U ----	375
F ----	50	N ----	225	V ----	400
G ----	75	P ----	250		

TABLE III. Temperature setting to the nearest 5°F.

Code -----	Unit					Tolerance
	-10	-5	0	+5	+10	
	A	B	C	D	E	
Code -----	F	G	H	J	K	±4°F
Code -----	L	M	N	P	Q	±6°F
Code -----	R	S	T	U	V	±8°F
Code -----	W	X	Y	Z	1	±10°F
Code -----						±12°F

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TABLE IV. Electrical ratings.

Load	Altitude			Life cycles
	Sea level		80,000 feet	
	28 V	115 V, 60 Hz	28 V	
	(amperes)	(amperes)	(amperes)	
Resistive	2.0	2.0	2.0	100,000
inductive	1.0	1.0	1.0	100,000
Lamp	0.5	0.5	0.5	100,000
Low level ratings				
	30 millivolts dc <sup>1/</sup>			
	10 milliamperes			250,000

<sup>1/</sup> Or 30 millivolts peak ac.

TABLE V. Extent of qualification.

Configuration	Number of samples required	Tests	Qualifies
A1	All in accordance with qualification table of MIL-PRF-24236	Complete in accordance with qualification inspection of MIL-PRF-24236	All
A, A2, B, B1, B2	Two each	Visual and mechanical	
A3	Two each	Visual and mechanical, torque, vibration, and shock	

TABLE VI. Available differential range and recommended tolerance.

Operating temperature range (°F)	Available differential range		Available tolerance	
	Min (°F)	Max (°F)	Low (°F)	High (°F)
-65 to -1	25	200	±8	±10
0 to 300	15	200	±6	±8
301 to 350	15	200	±8	±10
351 to 400	25	200	±12	±12

NOTE: Tolerances not listed in table VI shall be coordinated with manufacturers listed on the QPL for this specification sheet before specifying a particular "M" number. The fact that tolerances can be coded does not necessarily mean that it can be manufactured or acquired.

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

Preparing activity:  
 DLA - CC  
 (Project 5930-1714-08)

Review activities:  
 Army - AR, AT, AV, CR4, MI  
 Navy - MC, OS