

INCH-POUND

MIL-PRF-24236/29

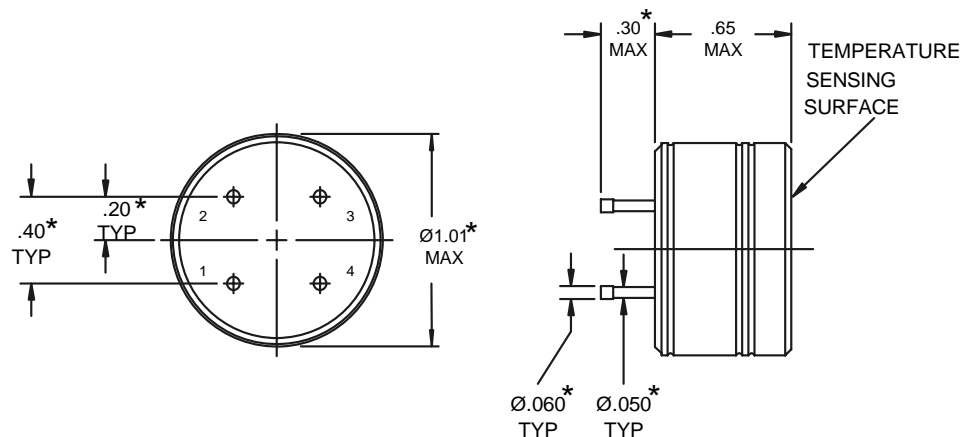
21 October 2006

## PERFORMANCE SPECIFICATION SHEET

SWITCHES, THERMOSTATIC, (BIMETALLIC), TYPE I,  
HERMETICALLY SEALED, SINGLE POLE,  
SINGLE THROW (SPST), 10 AMPERE

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

The requirements for acquiring the switches described herein shall consist of this  
specification and the latest issue of MIL-PRF-24236.



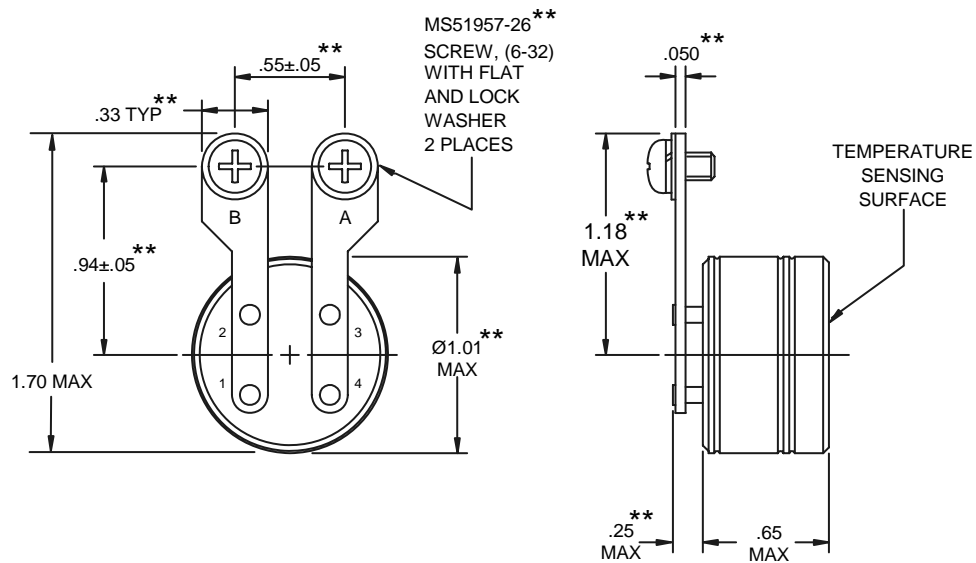
CONFIGURATION 1

WEIGHT: 0.07 pound maximum (30 grams)

\* Typical all solder terminal configurations

FIGURE 1. Switches.

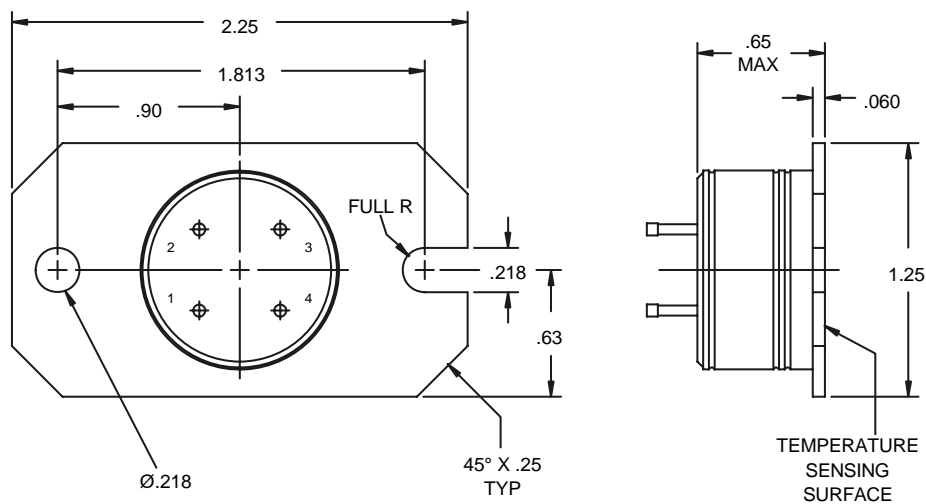
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CONFIGURATION 2

WEIGHT: 0.08 pound maximum (36 grams)

\*\* Typical all screw terminal configurations



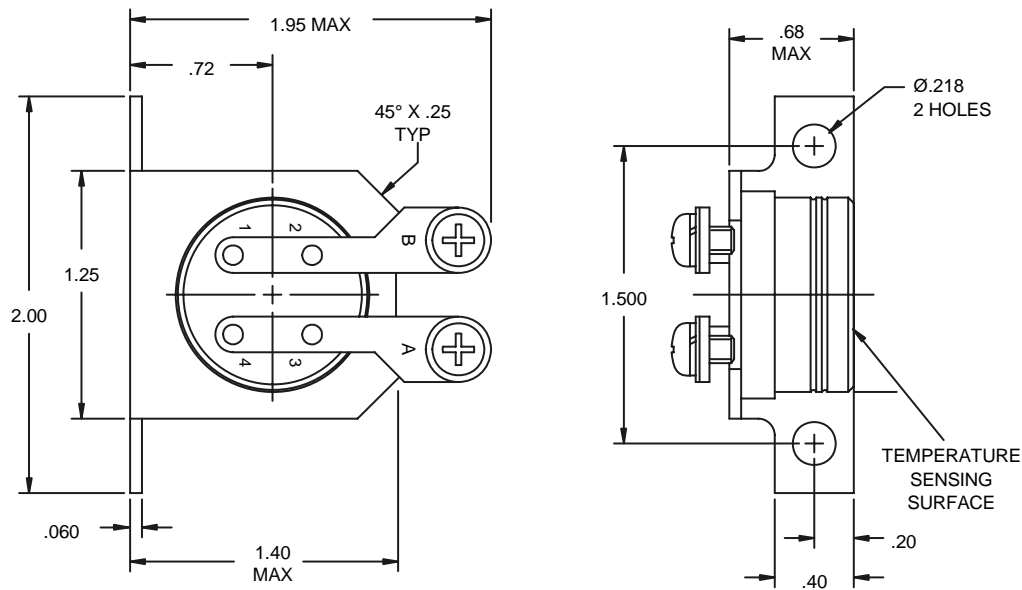
CONFIGURATION 3

WEIGHT: 0.11 pound maximum (50 grams)

FIGURE 1. Switches – Continued

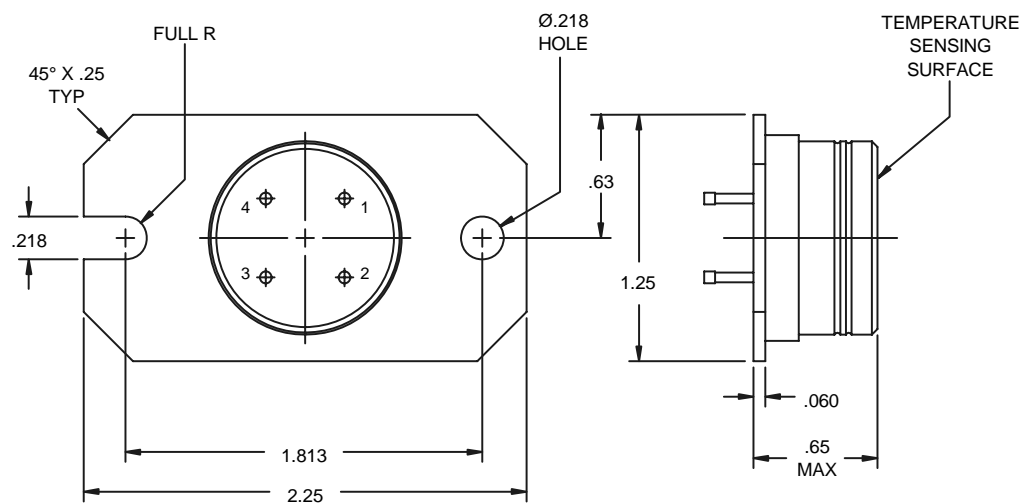


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CONFIGURATION 6

WEIGHT: 0.12 pound maximum (55 grams)

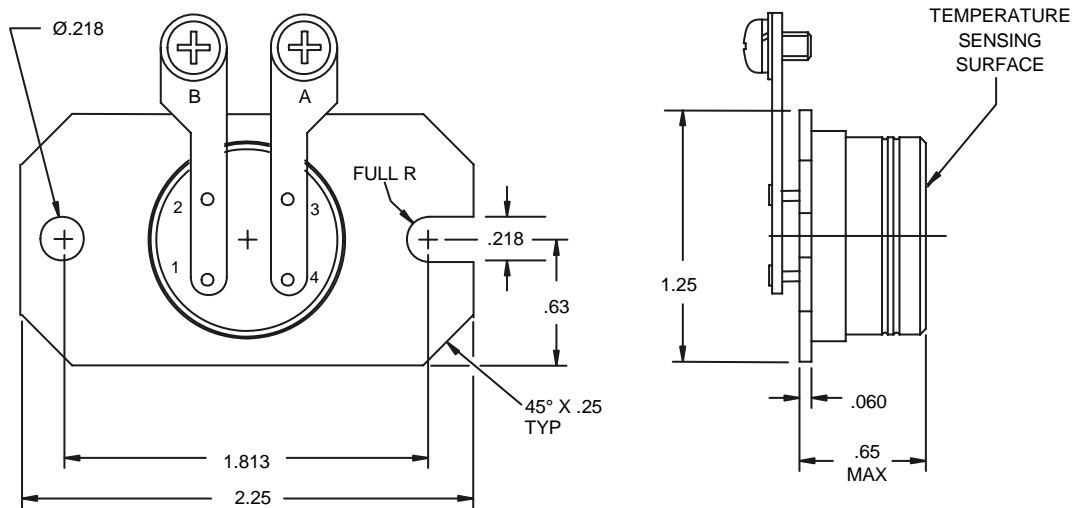


CONFIGURATION 7

WEIGHT: 0.11 pound maximum (50 grams)

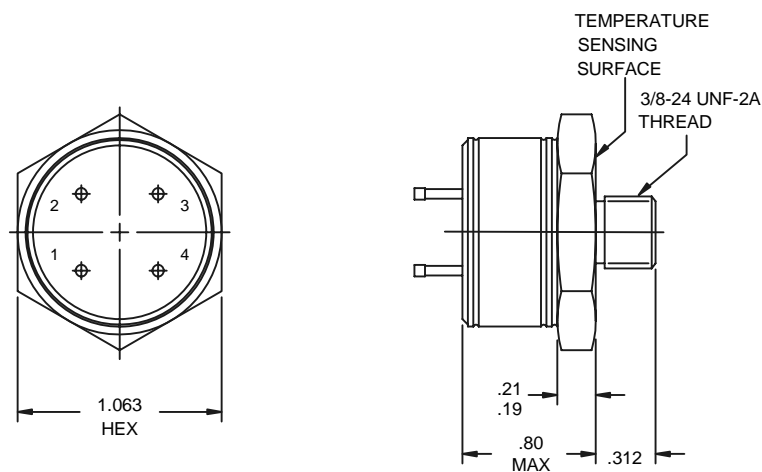
FIGURE 1. Switches – Continued

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CONFIGURATION 8

WEIGHT: 0.12 pound maximum (56 grams)

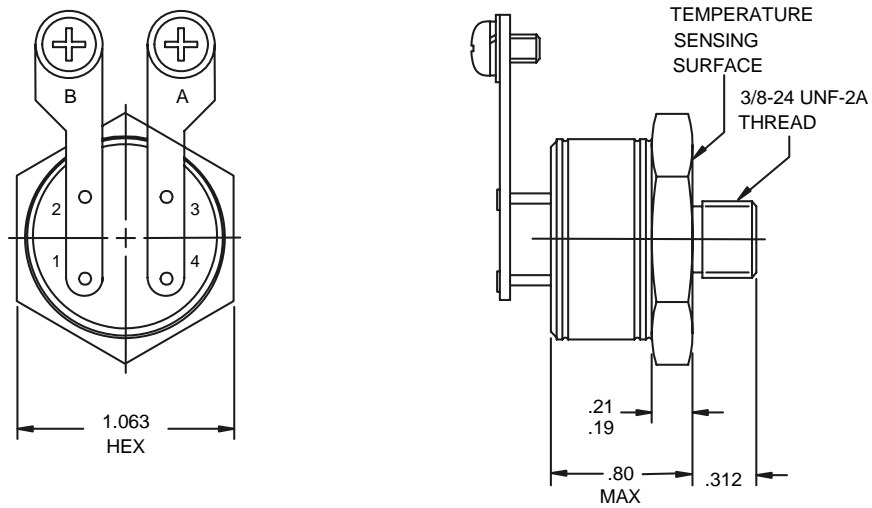


CONFIGURATION 9

WEIGHT: 0.10 pound maximum (43 grams)

FIGURE 1. Switches – Continued

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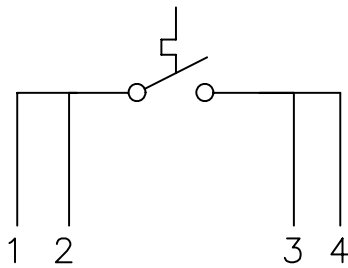


CONFIGURATION 10

WEIGHT: 0.11 pound maximum (50 grams)

FIGURE 1. Switches – Continued

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FIGURE 2. Schematic Diagram

| Inches | mm   | Inches | mm   | Inches | mm   | Inches | mm    | Inches | mm    |
|--------|------|--------|------|--------|------|--------|-------|--------|-------|
| 0.050  | 1.27 | 0.25   | 6.4  | 0.63   | 16.0 | 0.94   | 23.9  | 1.40   | 35.6  |
| 0.060  | 1.52 | 0.30   | 7.6  | 0.65   | 16.5 | 0.98   | 24.9  | 1.50   | 38.1  |
| 0.19   | 4.8  | 0.31   | 7.9  | 0.68   | 17.3 | 1.01   | 25.7  | 1.813  | 46.05 |
| 0.20   | 5.1  | 0.33   | 8.4  | 0.72   | 18.3 | 1.063  | 27.00 | 1.95   | 49.5  |
| 0.218  | 5.54 | 0.40   | 10.2 | 0.80   | 20.3 | 1.18   | 30.0  | 2.00   | 50.8  |
| 0.22   | 5.5  | 0.55   | 14.0 | 0.90   | 22.9 | 1.25   | 31.8  | 2.25   | 57.2  |

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified tolerances are  $\pm 0.020$  (0.51 mm)

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## REQUIREMENTS:

Dimensions and configuration: See Figure 1 and Table I.

Tolerance: .XX =  $\pm 0.03$   
 .XXX =  $\pm 0.010$   
 Angle =  $\pm 5^\circ$

Temperature Setpoint Range:  $-85^\circ\text{F}$  ( $-65^\circ\text{C}$ ) to  $+350^\circ\text{F}$  ( $+177^\circ\text{C}$ ).

Standard setpoint tolerance:  $\pm 5^\circ\text{F}$  ( $2.8^\circ\text{C}$ )

Standard differential (deadband):  $6$  to  $36^\circ\text{F}$  ( $3.3$  to  $20^\circ\text{C}$ )

Vibration: Class 4, except vibration  $10$  to  $2,000$  Hz,  $16$  G.

Mounting: See Figure 1.

Weight: See Figure 1.

Schematic Diagram: See Figure 2

Dielectric withstanding voltage:  $1,500$  VAC,  $5$  seconds, terminals to case.

Electrical ratings: See Table II.

Endurance: See Table II.

Marking: In accordance with MIL-PRF-24236.

Part or identifying Number (PIN): As shown in the following example:

|   | <u>M24236/29</u> | <u>-050</u> | <u>A</u> | <u>068</u> | <u>5</u> | <u>5</u> | <u>10</u> |
|---|------------------|-------------|----------|------------|----------|----------|-----------|
| Specification Sheet Number                        | _____            | _____       | _____    | _____      | _____    | _____    | _____     |
| Lower nominal setpoint (F)°                       | _____            | _____       | _____    | _____      | _____    | _____    | _____     |
| Configuration and contact<br>Action (see table I) | _____            | _____       | _____    | _____      | _____    | _____    | _____     |
| Upper nominal temperature<br>setpoint (°F)        | _____            | _____       | _____    | _____      | _____    | _____    | _____     |
| Lower temperature tolerance                       | _____            | _____       | _____    | _____      | _____    | _____    | _____     |
| Upper temperature tolerance                       | _____            | _____       | _____    | _____      | _____    | _____    | _____     |
| Minimum differential<br>(deadband)                | _____            | _____       | _____    | _____      | _____    | _____    | _____     |

The above example identifies a switch of configuration 1 which opens on increasing temperature at  $68 \pm 5^\circ\text{F}$ , and closes on decreasing temperature at  $50 \pm 5^\circ\text{F}$  with  $10^\circ\text{F}$  minimum differential.



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TABLE I. Configuration and contact action.

|      | Configuration |   |   |   |   |   |   |   |   |    | Contact action                  |
|------|---------------|---|---|---|---|---|---|---|---|----|---------------------------------|
|      | 1             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |                                 |
| Code | A             | C | E | G | J | L | N | Q | S | U  | Open on increasing temperature  |
| Code | B             | D | F | H | K | M | P | R | T | V  | Close on increasing temperature |

TABLE II. Electrical ratings.

|           | Altitude           |           |              |           | Life cycles |
|-----------|--------------------|-----------|--------------|-----------|-------------|
|           | Sea level to Space |           |              |           |             |
|           | 55VDC              | 28 VDC    | 115 V, 60 Hz | 75 VDC    |             |
|           | (amperes)          | (amperes) | (amperes)    | (amperes) |             |
| Resistive | 3.0                | 10.0      | 15.0         | -         | 100,000     |
| Inductive | -                  | -         | -            | 0.75      | 1,000,000   |
| Motor     | -                  | 4.5       | -            | -         | 10,000      |

TABLE III. Extent of qualification.

| Configuration | Number of samples required                                  | Tests  | Qualifies |
|---------------|---|--|-----------|
| 1             | All in accordance with Qualification table of MIL-PRF-24236 | Complete in accordance with qualification inspection of MIL-PRF-24236. Endurance 28VDC, 10.0 ampere. | All       |

Referenced Documents: MIL-PRF-24236

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

Preparing activity:  
 DLA – CC  
 (Project 5930-2007-001)

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/>.