

# MINIATURE POSITIVE ACTION SWITCHES

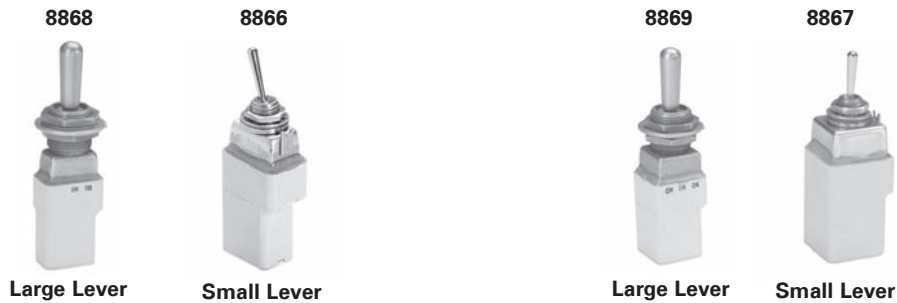
Series - 8855, 8856, 8866-69

MIL-DTL-8834 Miniature Positive Action Switches  
Toggle and Lever Lock/IWTS Terminals

| FEATURES   |  | SPECIFICATIONS |                      | CURRENT RATINGS          |                          |                |  |                |      |       |  |  |
|--|--|----------------|----------------------|--------------------------|--------------------------|----------------|--|----------------|------|-------|--|--|
| <ul style="list-style-type: none"> <li>Sealed bushing</li> <li>Dry circuit (logic level loads) to power switching levels</li> <li>1 and 2 pole circuitry</li> <li>Non-teasible mechanism for all but center "ON" circuit</li> <li>Small and large size bushings and Actuator</li> <li>Toggle and lever lock Actuator</li> <li>Wiping action contacts</li> <li>Positive make and break action</li> <li>Integrated Wire Termination System (IWTS)</li> </ul> | <ul style="list-style-type: none"> <li>Bushing seal or bonded seal per MIL-DTL-8834</li> <li>MS approved and QPL listed to MIL-DTL-8834</li> <li>Temperature Range: -67°F to +160°F (-55°C to +71°C)</li> <li>Life: 20,000 operations at rated load<br/>40,000 operations mechanical life</li> <li>Bushing thread sizes:<br/>Small Toggle: ¼" - 40 thread<br/>Large Toggle and Lever Lock: 15/32" - 32 thread</li> <li>Accepts SAE-AS39029/1-101 Pins (pins not included)</li> </ul> | No. of Poles   | Catalog Number       | Type of Operation        | 28VDC (Amperes per pole) |                | 115VAC 60Hz and 400Hz (Amperes per pole) |                |      |       |  |  |
|  |  |                |                      |                          | Resistive Load           | Inductive Load | Resistive Load                           | Inductive Load |      |       |  |  |
|  |  |                |                      |                          | 28VDC                    | 28VDC          | 60Hz                                     | 400Hz          | 60Hz | 400Hz |  |  |
|  |  | 1              | 8855<br>8866<br>8868 | Maintained and Momentary | 5                        | 1              | 2  | 3              | 1    | 2     |  |  |
|  |  | 2              | 8856<br>8867<br>8869 | Maintained and Momentary | 5                        | 1              | 2  | 3              | 1    | 2     |  |  |

Minimum Rating: 25 microamperes at 5 millivolts.

## SELECTION TABLE



| CIRCUIT WITH LEVER IN . . . |                 |                        | ONE POLE       |                  |                |                  | TWO POLE       |                      |                |                      |                |                       |
|-----------------------------|-----------------|------------------------|----------------|------------------|----------------|------------------|----------------|----------------------|----------------|----------------------|----------------|-----------------------|
| Up Position                 | Center Position | Down Position (Keyway) | MS Part Number | Catalog Number   | MS Part Number | Catalog Number   | MS Part Number | Catalog Number       | MS Part Number | Catalog Number       | MS Part Number | Catalog Number        |
|                             |                 |                        |                | Large Lever      |                | Small Lever      | Large Lever    | Small Lever          | Large Lever    | Small Lever          | Large Lever    | Small Lever           |
| ON                          | OFF             | ON                     | MS21346-211    | 8868K51          | MS24655-211W   | 8866K51          | MS21347-211    | 8869K51              | MS24656-211W   | 8867K51              | MS21347-711    | 8869K51X              |
| ON                          | NONE            | OFF                    | -221           | K57              | -221W          | K57              | -221           | K57                  | -221W          | K57                  | -721           | K57X                  |
| ON                          | NONE            | ON                     | -231           | K54              | -231W          | K54              | -231           | K54                  | -231W          | K54                  | -731           | K54X                  |
| ON                          | OFF             | NONE                   | -241           | K55              | -241W          | K55              | -241           | K55                  | -241W          | K55                  | -741           | K55X                  |
| *ON                         | OFF             | ON*                    | MS21346-271    | 8868K52          | -271W          | 8866K52          | MS21347-271    | 8869K52              | -271W          | 8867K52              | MS21347-771    | 8869K52X              |
| NONE                        | OFF             | ON*                    | -281           | K56              | -281W          | K56              | -281           | K56                  | -281W          | K56                  | -781           | K56X                  |
| ON                          | OFF             | ON*                    | -311           | K53              | -311W          | K53              | -311           | K53                  | -311W          | K53                  | -811           | K53X                  |
| NONE                        | ON              | ON*                    | MS21346-321    | K58 <sup>①</sup> | -321W          | K58 <sup>①</sup> | MS21347-321    | 8869K58 <sup>①</sup> | -321W          | 8867K58 <sup>①</sup> | MS21347-821    | 8869K58X <sup>①</sup> |
| ON                          | ON              | ON                     | -              | -                | -331W          | -                | -331           | K59 <sup>①</sup>     | -331W          | K59 <sup>①</sup>     | -831           | K59X <sup>①</sup>     |
| ON                          | ON              | ON*                    | -              | -                | -351W          | -                | -351           | K510 <sup>①</sup>    | -351W          | K510 <sup>①</sup>    | -851           | K510X <sup>①</sup>    |
| *ON                         | ON              | ON*                    | -              | -                | -341W          | -                | -341           | K511 <sup>①</sup>    | -341W          | K511 <sup>①</sup>    | -841           | K511X <sup>①</sup>    |

**\* Momentary contact.**

① Dielectric per MIL-DTL-8834 except limited to 1250 volts. Delayed action of the switch toggle lever may cause circuit to close or open before snap action mechanism trips.

② Furnished with Bonded Seal feature. (Meets 15' head of water level requirement.)

### SELECTION TABLE



8855



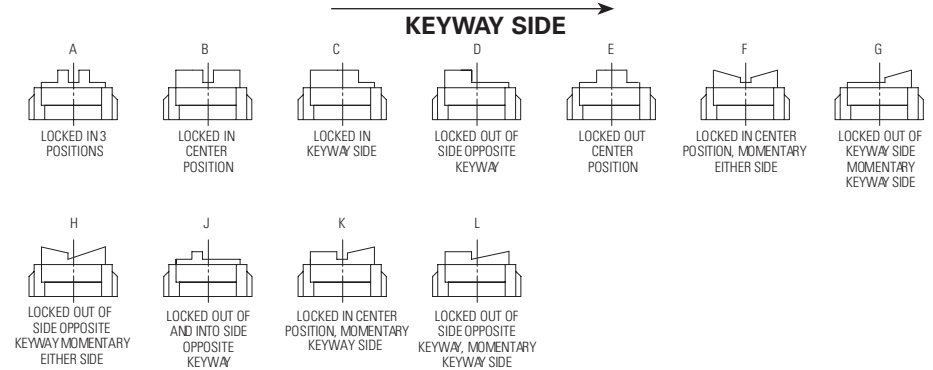
8856

| CIRCUIT WITH LEVER IN . . . |                 |                        | ONE POLE                 |                | TWO POLE       |                |                |
|-----------------------------|-----------------|------------------------|--------------------------|----------------|----------------|----------------|----------------|
| Up Position                 | Center Position | Down Position (Keyway) | Lever Lock Bushing Style | MS Part Number | Catalog Number | MS Part Number | Catalog Number |
| ON →                        | ← OFF →         | ← ON                   | A                        | MS21346-A211   | 8855K54        | MS21347-A211   | 8856K54        |
| ON                          | ← OFF →         | ON                     | B                        | -B211          | K55            | -B211          | K55            |
| ON                          | ← OFF           | NONE                   | B                        | -B241          | K519           | -B241          | K519           |
| ON                          | NONE            | ← OFF                  | C                        | -C221          | K513           | -C221          | K513           |
| ON                          | NONE            | ← ON                   | C                        | -C231          | K57            | -C231          | K57            |
| ON                          | ← OFF           | ON                     | D                        | MS21346-D211   | 8855K510       | MS21347-D211   | 8856K510       |
| ON →                        | NONE            | ← OFF                  | E                        | -E221          | K514           | -E221          | K514           |
| ON →                        | NONE            | ← ON                   | E                        | -E231          | K58            | -E231          | K58            |
| * ON                        | ← OFF →         | ON*                    | F                        | -F271          | K515           | -F271          | K515           |
| ON                          | OFF →           | ON*                    | G                        | -G311          | K516           | -G311          | K516           |
| * ON                        | ← OFF           | ON*                    | H                        | MS21346-H271   | 8855K517       | MS21347-H271   | 8856K517       |
| ON →                        | ← OFF           | NONE                   | J                        | -J241          | K59            | -J241          | K59            |
| NONE                        | OFF →           | ON*                    | K                        | -K281          | K518           | -K281          | K518           |
| ON                          | ← OFF →         | ON*                    | K                        | -K311          | K520           | -K311          | K520           |
| ON                          | ← OFF           | ON*                    | L                        | -L311          | K512           | -L311          | L512           |

**\* Momentary contact.**  
 → Indicates direction against which lever is locked.  
 See page A75 for special circuit diagrams.

### OPTIONS/ACCESSORIES LEVER LOCK - BUSHING STYLES

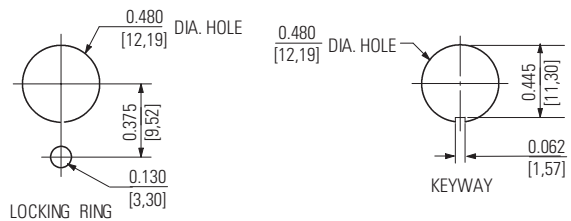
- Special mounting hardware
- Special marking
- Mounting hardware furnished assembled
- Panel seal, Part Number 32-341 (15/32" - 32 bushing only)
- Special circuits
- Special bushing and lever finish
- Special locking cap style on lever lock switches
- EMI/RFI capability on two pole (15/32" - 32 bushing only)



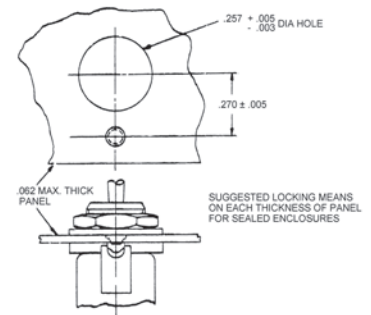
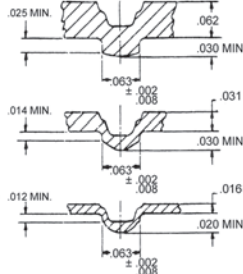
Figures A thru L do not represent details of construction. They schematically illustrate locking function.

### PANEL CUTOUT DIMENSIONS

#### 15/32 DIA. BUSHING



#### 1/4 DIA. BUSHING



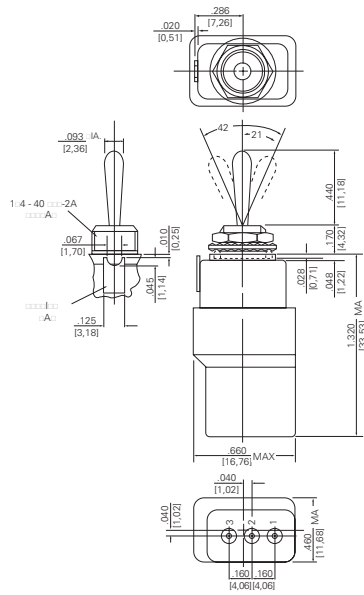
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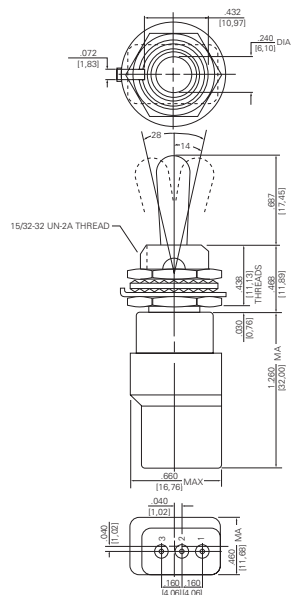
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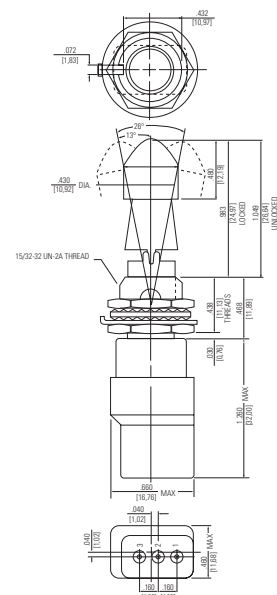
## MOUNTING DIMENSIONS - ONE POLE / 8855, 8866, 8868



**Small Toggle**

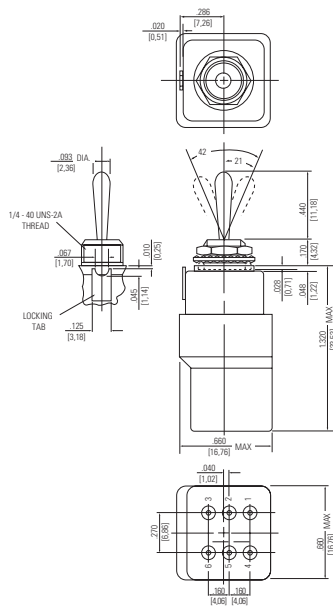


**Large Toggle/ Terminal Identification**

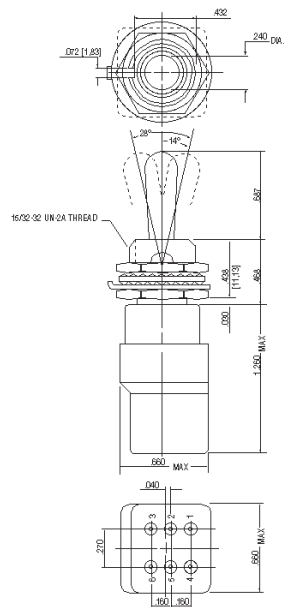


**Lever Lock**

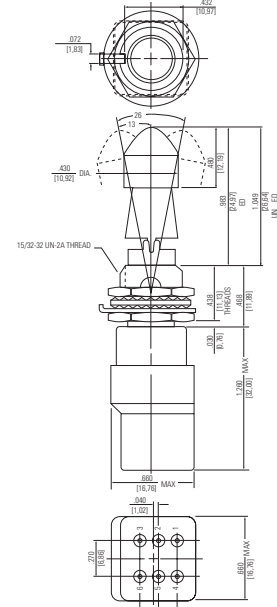
## MOUNTING DIMENSIONS - TWO POLE / 8856, 8867, 8869



**Small Toggle**



**Large Toggle/ Terminal Identification**



**Lever Lock**

**STANDARD**  
0.00 = inches  
[0,0] = mm

Mounting dimensions for reference only.