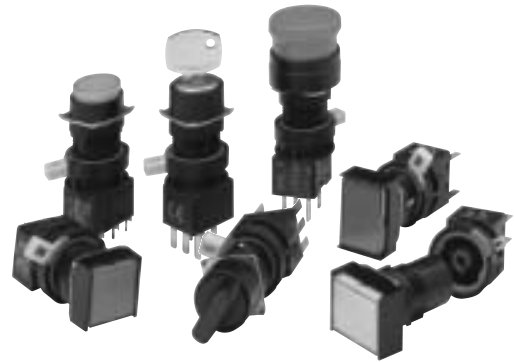


## L6 Series — Miniature Switches and Pilot Devices

Key features of the 5/8" L6 Series include:

- 5/8" (16mm) mounting holes
- Locking lever removable contact blocks
- Solder terminal or PCB terminal options
- Available assembled or as sub-components
- Worldwide approvals
- Incandescent or LED illumination
- Snap action contacts



CSA Certified  
File No. LR21451































Registration No. R9551089 (E-stops)  
Registration No. J9551458 (all other switches)  
Registration No. J9650511 (Pilot Lights)

Switches & Pilot Devices











Contact Ratings	<b>Conforming to Standards</b>	EN60947-1, EN60947-5-1, VDE0660-200, UL508, CSA C22-2 N0.14					
	<b>Operating Temperature</b>	Operation: -25 to +55°C (without freezing), 45 to 85% rh Storage: -30 to +80°C (without freezing)					
	<b>Vibration Resistance</b>	5 to 55Hz, 1.0 peak-peak amplitude max					
	<b>Shock Resistance</b>	Operating limit: 100 in/sec <sup>2</sup> (approximately 10G) Damage limit: 1000 in/sec <sup>2</sup> (approximately 100G)					
	<b>Mechanical Life</b>	Momentary pushbuttons 2,000,000 operations minimum All others: 250,000 operations minimum					
	<b>Degree of Protection</b>	IP65 (conforming to IEC 60529)					
	<b>Dielectric Strength</b>	Switch unit: between live and ground: 2500 volt AC, 1 minute between terminals of different poles: 2500 volt AC, 1 minute between terminals of same pole: 1000 volt AC, 1 minute Illumination unit: between live part and ground: 2500 volt AC, 1 minute					
	<b>Insulation Resistance</b>	100 MΩ minimum (using 500V DC megger)					
	<b>Rated Insulation Voltage</b>	250 V AC/DC					
	<b>Rated Thermal Current</b>	Gold Contacts (pcb): 3A Silver Contacts (solder): 5A					
<b>Contact Resistance</b>	50 Ω maximum initial value						
Rated Operating Current		<b>Silver Contacts</b> (Solder Terminals)			<b>Gold Clad Contacts</b> (PCB terminals)		
		30V	125V	250V	30V	125V	
	AC resistive	3A	3A	2A	-	0.1A	
	AC inductive	2A	2A	1.5A	0.1A	-	
DC resistive		2A	0.4A	-			
	DC inductive	1A	0.2A	-			
<b>Minimum Recommended Load</b> (reference value for silver contacts)	5 VAC/DC, 1mA						
<b>Terminal Style</b>	0.110" Solder Tab /PCB						
<b>Contact Form</b>	Snap Action, Double Throw						
<b>Contact Material</b>	Solder Tab: Pure Silver /PCB thermal Gold Plated Silver						
<b>Electrical Life</b> (at full load)	Momentary pushbuttons: 100,000 operations minimum (1800 operations / hour) All others: 100,000 operations minimum (1200 operations / hour)						
Lamp Ratings	<b>Lamp Current Draw</b>	5V DC LED: 8mA		6V incandescent: 100 mA			
		6V LED: 7mA		12V incandescent: 50 mA			
		12V LED: 8mA		24V incandescent: 25 mA			
		24V LED: 8mA					
<b>Lamp Life</b>	Incandescent: 2000 hours./LED: 50,000 hours. (on pure DC, half-life intensity)						
Buzzer Ratings	<b>Frequency</b>	2 khz ± 500 HZ					
	<b>Amplitude</b>	80db @ 0.1m (at rated voltage)					
	<b>Operating Voltage</b>	6V AC/DC or 12 - 24V AC/DC ± 10%					
	<b>Adjustable Cycle</b>	55 to 600 cycles per minute					
	<b>Current Draw</b>	DC: 7mA AC: 20mA					
	<b>Life</b>	1000 hrs. minimum					
	<b>Insulation Voltage</b>	60V AC/DC					
<b>Operating Temperature</b>	-20 to 55 C (no freezing), 45 to 85% rh						

## Key Switches (Assembled)

### Part Numbers: Key Switches

Style	Operation	Contacts	Terminal Type			
			Solder Tab	PCB		
Round 	90° 2-Position Maintained		DPDT	LA1K-2C6 <sup>ⓐ</sup>	LA1K-2C2V <sup>ⓐ</sup>	
			DPDT	LA1K-21C6B	LA1K-21C2VB	
	45° 3-Position	Maintained		DPDT	LA1K-3C6 <sup>ⓐ</sup>	LA1K-3C2V <sup>ⓐ</sup>
		Spring return from right		DPDT	LA1K-31C6 <sup>ⓐ</sup>	LA1K-31C2V <sup>ⓐ</sup>
		Spring return from left		DPDT	LA1K-32C6 <sup>ⓐ</sup>	LA1K-32C2V <sup>ⓐ</sup>
		2-Way spring return		DPDT	LA1K-33C6D	LA1K-33C2VD
Square 	90° 2-Position Maintained		DPDT	LA2K-2C6 <sup>ⓐ</sup>	LA2K-2C2V <sup>ⓐ</sup>	
			DPDT	LA2K-21C6B	LA2K-21C2VB	
	45° 3-Position	Maintained		DPDT	LA2K-3C6 <sup>ⓐ</sup>	LA2K-3C2V <sup>ⓐ</sup>
		Spring return from right		DPDT	LA2K-31C6 <sup>ⓐ</sup>	LA2K-31C2V <sup>ⓐ</sup>
		Spring return from left		DPDT	LA2K-32C6 <sup>ⓐ</sup>	LA2K-32C2V <sup>ⓐ</sup>
		2-Way spring return		DPDT	LA2K-33C6D	LA2K-33C2VD
Rectangular 	90° 2-Position Maintained		DPDT	LA3K-2C6 <sup>ⓐ</sup>	LA3K-2C2V <sup>ⓐ</sup>	
			DPDT	LA3K-21C6B	LA3K-21C2VB	
	45° 3-Position	Maintained		DPDT	LA3K-3C6 <sup>ⓐ</sup>	LA3K-3C2V <sup>ⓐ</sup>
		Spring return from right		DPDT	LA3K-31C6 <sup>ⓐ</sup>	LA3K-31C2V <sup>ⓐ</sup>
		Spring return from left		DPDT	LA3K-32C6 <sup>ⓐ</sup>	LA3K-32C2V <sup>ⓐ</sup>
		2-Way spring return		DPDT	LA3K-33C6D	LA3K-33C2VD
Oversize Round 	90° 2-Position Maintained		DPDT	HA1K-2C6 <sup>ⓐ</sup>	HA1K-2C2V <sup>ⓐ</sup>	
			DPDT	HA1K-21C6B	HA1K-21C2VB	
	45° 3-Position	Maintained		DPDT	HA1K-3C6 <sup>ⓐ</sup>	HA1K-3C2V <sup>ⓐ</sup>
		Spring return from right		DPDT	HA1K-31C6 <sup>ⓐ</sup>	HA1K-31C2V <sup>ⓐ</sup>
		Spring return from left		DPDT	HA1K-32C6 <sup>ⓐ</sup>	HA1K-32C2V <sup>ⓐ</sup>
		2-Way spring return		DPDT	HA1K-33C6D	HA1K-33C2VD


### Contact Operations (for all selectors)

Contacts	Operator Position and Contact Operation	
	Left	Right
2-pos. (DPDT)		
		
3-pos. (DPDT)		
		
		

 As viewed from front of switch.

### ⓐ Key Retention Option Codes

Code	Description
A	Key not retained in any position (removable in all positions)
B	Key retained in right position only
C	Key retained in left position only
D	Key retained in left and right (3 position only)
E	Key retained in center only (3 position only)
G	Key retained in right and center (3 position only)
H	Key retained left and center (3 position only)

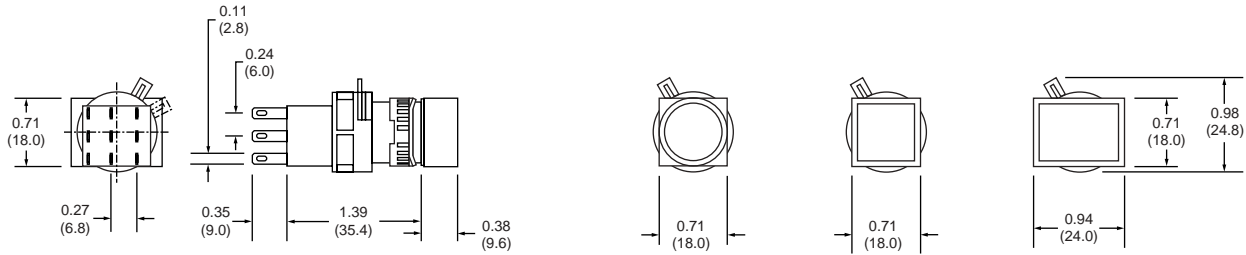
-  1. In place of ⓐ specify Key Retention Code from next page.
2. All assembled key switches have DPDT contacts. For SPDT see sub-assembled on next page.
3. PCB terminal models also available with silver contacts (change "1" or "2" to "5" or "6" respectively, ie LA1K-2C2V<sup>ⓐ</sup> becomes LA1K-2C6V<sup>ⓐ</sup>).

A  
Switches & Pilot Devices

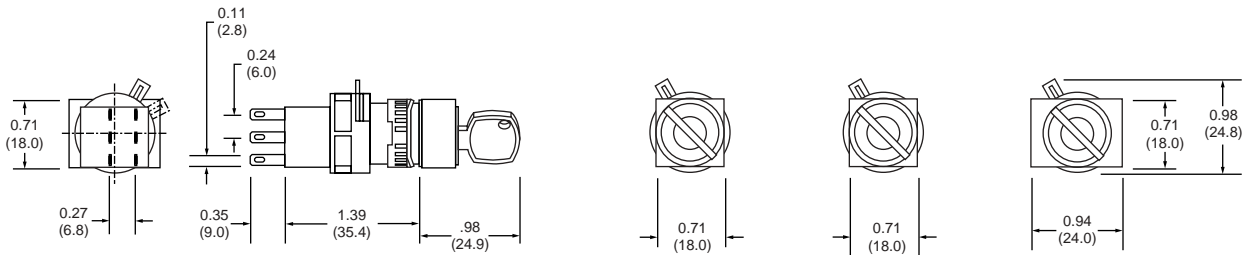
Dimensions con't

Switches & Pilot Devices

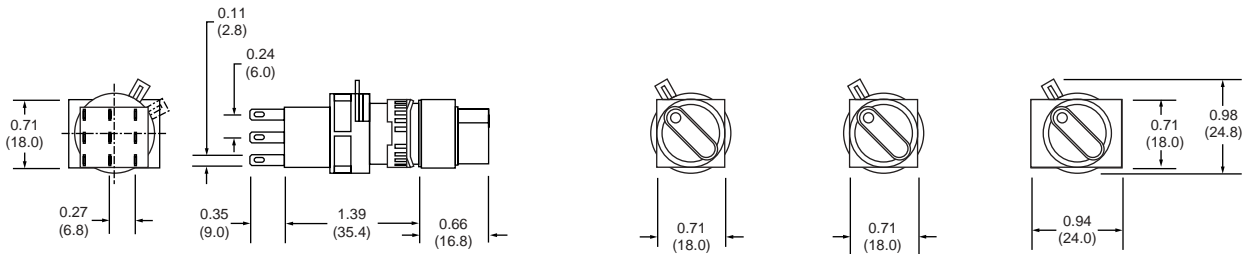
**Illuminated Pushbuttons (LA\*L)**



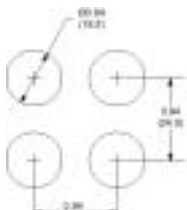
**Key Switches (LA\*K)**



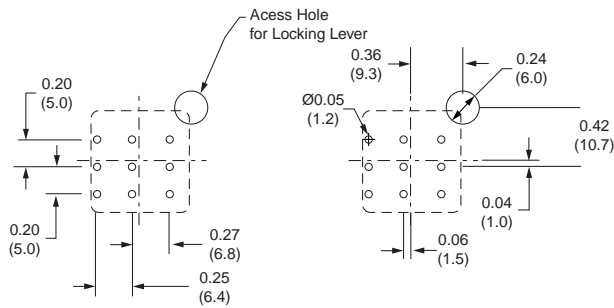
**Selector Switches (LA\*S)**



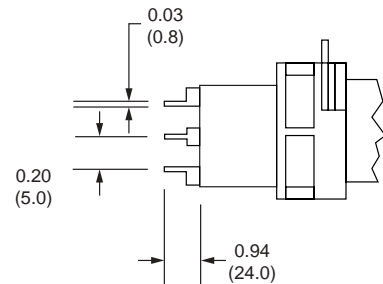
**Panel Cut-Out**



**PCB Layout (except for Buzzer and E-Stop)**



**PCB Pins**



**HA1B E-Stop**

**PCB Mounting Pattern**

