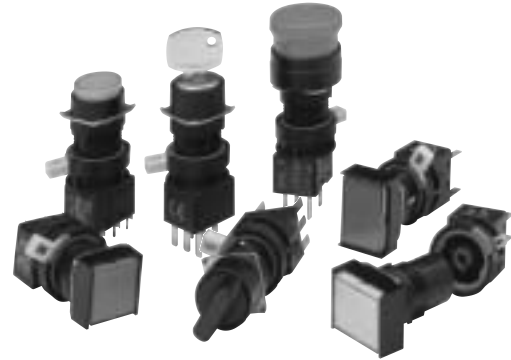


## L6 Series — Miniature Switches and Pilot Devices

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



A2

Switches & Pilot Devices



UL Recognized  
File No. E55996



CSA Certified  
File No. LR21451



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

Contact Ratings	<b>Conforming to Standards</b>	EN60947-1, EN60947-5-1, VDE0660-200, UL508, CSA C22-2 NO.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 m/sec <sup>2</sup> (approximately 10G) Damage limit: 1000 m/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						
	<b>Rated Operating Current</b>		<b>Silver Contacts</b> (Solder Terminals)				<b>Gold Clad Contacts</b> (PCB terminals)	
			30V	125V	250V		30V	125V
	AC resistive	-	3A	2A	AC inductive	-	0.1A	
	AC inductive	-	2A	1.5A	DC resistive	0.1A	-	
	DC resistive	2A	0.4A	-	DC inductive	-	-	
	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 LED: 7mA 12V LED: 8mA 24V LED: 8mA 6V incandescent: 100 mA 12V incandescent: 50 mA 24V incandescent: 25 mA						
	<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							

## Selector Switches (Assembled)

### Part Numbers: Selector Switches

A2

Switches & Pilot Devices

Style	Position	Position	Contact	Terminal Style		
				Solder Tab	PCB	
Round 	90° 2-Position	Maintained		DPDT	LA1S-2C6	LA1S-2C2V
		Spring return from right		DPDT	LA1S-21C6	LA1S-21C2V
	45° 3-Position	Maintained		DPDT	LA1S-3C6	LA1S-3C2V
		Spring return from right		DPDT	LA1S-31C6	LA1S-31C2V
		Spring return from left		DPDT	LA1S-32C6	LA1S-32C2V
		2-Way spring return		DPDT	LA1S-33C6	LA1S-33C2V
Square 	90° 2-Position	Maintained		DPDT	LA2S-2C6	LA2S-2C2V
		Spring return from right		DPDT	LA2S-21C6	LA2S-21C2V
	45° 3-Position	Maintained		DPDT	LA2S-3C6	LA2S-3C2V
		Spring return from right		DPDT	LA2S-31C6	LA2S-31C2V
		Spring return from left		DPDT	LA2S-32C6	LA2S-32C2V
		2-Way spring Return		DPDT	LA2S-33C6	LA2S-33C2V
Rectangular 	90° 2-Position	Maintained		DPDT	LA3S-2C6	LA3S-2C2V
		Spring return from right		DPDT	LA3S-21C6	LA3S-21C2V
	45° 3-Position	Maintained		DPDT	LA3S-3C6	LA3S-3C2V
		Spring return from right		DPDT	LA3S-31C6	LA3S-31C2V
		Spring return from left		DPDT	LA3S-32C6	LA3S-32C2V
		2-Way spring Return		DPDT	LA3S-33C6	LA3S-33C2V
Oversize Round 	90° 2-Position	Maintained		DPDT	HA1S-2C6	HA1S-2C2V
		Spring return from right		DPDT	HA1S-21C6	HA1S-21C2V
	45° 3-Position	Maintained		DPDT	HA1S-3C6	HA1S-3C2V
		Spring return from right		DPDT	HA1S-31C6	HA1S-31C2V
		Spring return from left		DPDT	HA1S-32C6	HA1S-32C2V
		2-Way spring Return		DPDT	HA1S-33C6	HA1S-33C2V

### Contact Operations (for all selectors)

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



*As viewed from front of switch.*



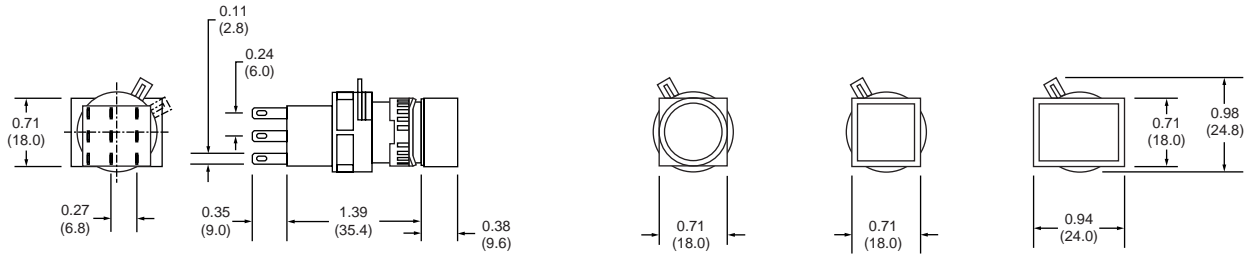
1. All assembled selector switches use DPDT contacts.
2. For SPDT contacts see sub-components on next page.
3. PCB terminal models also available with silver contacts (change "1" or "2" to "5" or "6" respectively, ie LA1S-21C2V becomes LA1S-21C6V).

## Dimensions con't

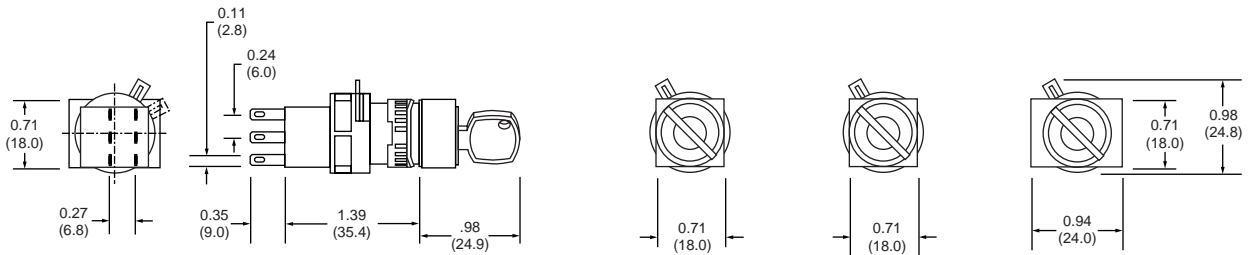
A2

Switches & Pilot Devices

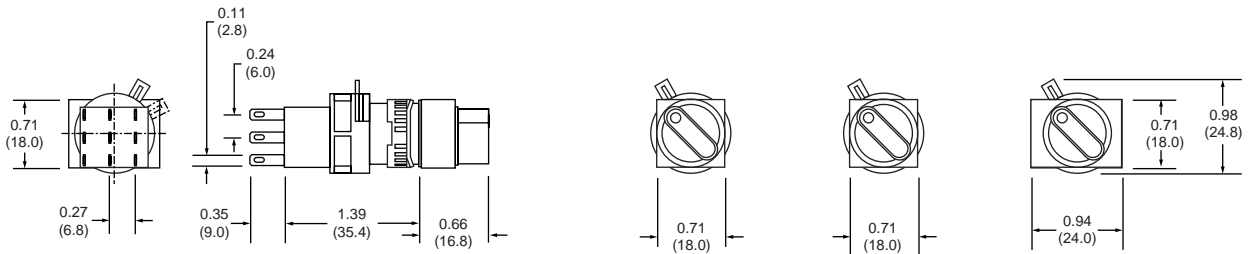
### Illuminated Pushbuttons (LA\*L)



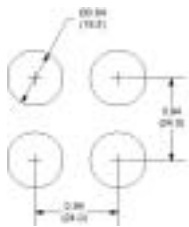
### Key Switches (LA\*K)



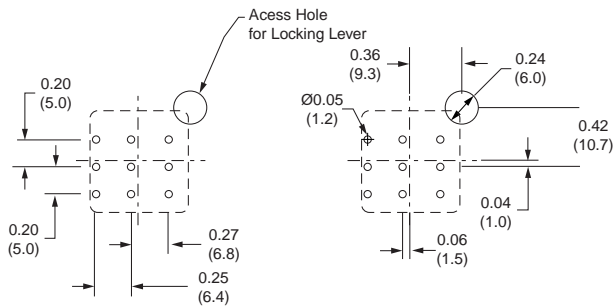
### Selector Switches (LA\*S)



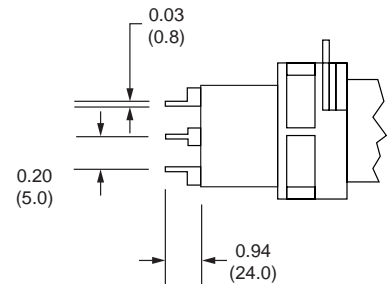
### Panel Cut-Out



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



### PCB Pins



### HA1B E-Stop

#### PCB Mounting Pattern

