

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



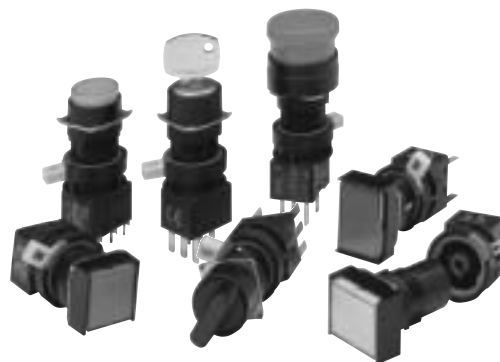
UL Recognized
File No. E55996



CSA Certified
File No. LR21451



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



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Switches & Pilot Devices

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

Selector Switches (Assembled)

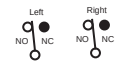
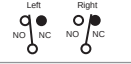
Part Numbers: Selector Switches

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Switches & Pilot Devices

Style		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.



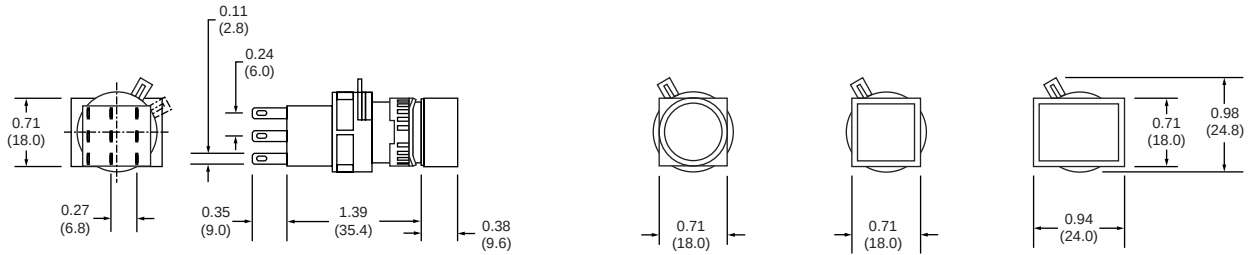
1. All assembled selector switches use DPDT contacts.
2. For SPDT contacts see sub-components on next page.
3. PCB terminal models also available with silver contacts (change "1" or "2" to "5" or "6" respectively, ie LA1S-21C2V becomes LA1S-21C6V).

Dimensions in inches

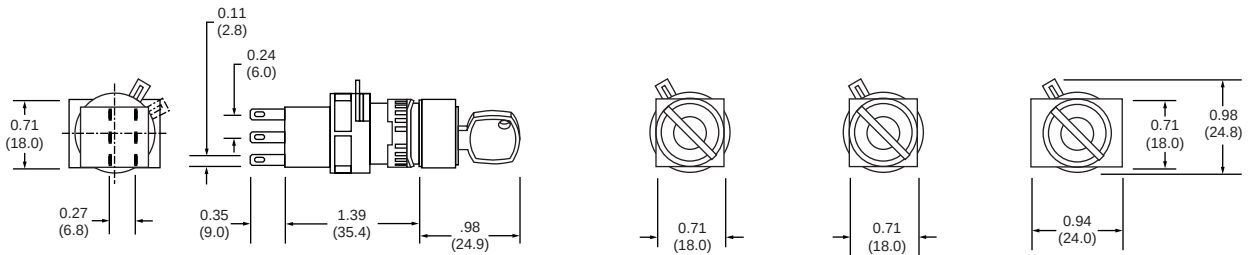
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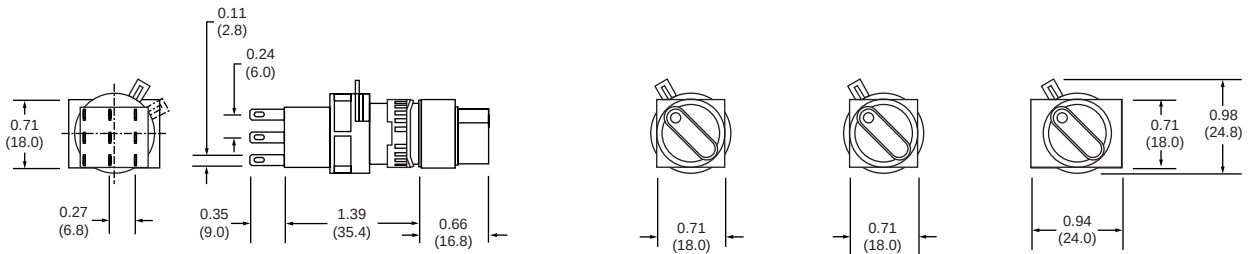
Illuminated Pushbuttons (LA*L)



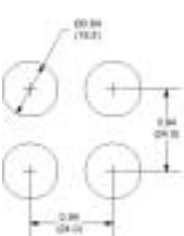
Key Switches (LA*K)



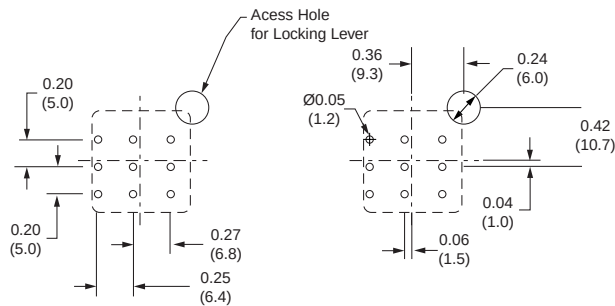
Selector Switches (LA*S)



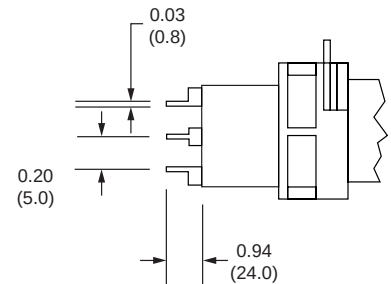
Panel Cut-Out



PCB Layout (except for Buzzer and E-Stop)



PCB Pins



HA1B E-Stop

PCB Mounting Pattern

