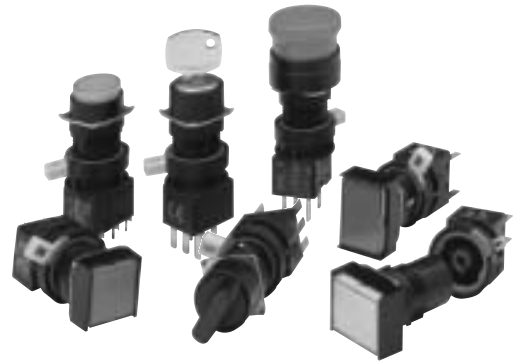


L6 Series — Miniature Switches and Pilot Devices

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	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 in/sec ² (approximately 10G) Damage limit: 1000 in/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						
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	3A	2A	AC inductive	-	0.1A
		AC inductive	2A	2A	1.5A	DC resistive	0.1A	-
		DC resistive	2A	0.4A	-			
		DC inductive	1A	0.2A	-			
Minimum Recommended Load (reference value for silver contacts)	5 VAC/DC, 1mA							
Terminal Style	0.110" Solder Tab /PCB							
Contact Form	Snap Action, Double Throw							
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 incandescent: 100 mA				
		6V LED: 7mA		12V incandescent: 50 mA				
		12V LED: 8mA		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	-20 to 55 C (no freezing), 45 to 85% rh						

Illuminated Pushbuttons (Assembled)

Part Numbers: Illuminated Pushbuttons

Style	Operation	Lamp Voltage	Contact	Terminal Style	
				Solder Tab	PCB
Round 	Momentary	24V AC/DC LED	SPDT	LA1L-M1C54-②	LA1L-M1C14V-②
		24V AC/DC Incandescent	DPDT	LA1L-M1C64-②	LA1L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	LA1L-A1C54-②	LA1L-A1C14V-②
		24V AC/DC Incandescent	DPDT	LA1L-A1C64-②	LA1L-A1C24V-②
Square 	Momentary	24V AC/DC LED	SPDT	LA2L-M1C54-②	LA2L-M1C14V-②
		24V AC/DC Incandescent	DPDT	LA2L-M1C64-②	LA2L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	LA2L-A1C54-②	LA2L-A1C14V-②
		24V AC/DC Incandescent	DPDT	LA2L-A1C64-②	LA2L-A1C24V-②
Rectangular 	Momentary	24V AC/DC LED	SPDT	LA3L-M1C54-②	LA3L-M1C14V-②
		24V AC/DC Incandescent	DPDT	LA3L-M1C64-②	LA3L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	LA3L-A1C54-②	LA3L-A1C14V-②
		24V AC/DC Incandescent	DPDT	LA3L-A1C64-②	LA3L-A1C24V-②
Oversize Round 	Momentary	24V AC/DC LED	SPDT	HA1L-M1C54-②	HA1L-M1C14V-②
		24V AC/DC Incandescent	DPDT	HA1L-M1C64-②	HA1L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	HA1L-A1C54-②	HA1L-A1C14V-②
		24V AC/DC Incandescent	DPDT	HA1L-A1C64-②	HA1L-A1C24V-②
Oversize Square 	Momentary	24V AC/DC LED	SPDT	HA2L-M1C54-②	HA2L-M1C14V-②
		24V AC/DC Incandescent	DPDT	HA2L-M1C64-②	HA2L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	HA2L-A1C54-②	HA2L-A1C14V-②
		24V AC/DC Incandescent	DPDT	HA2L-A1C64-②	HA2L-A1C24V-②
Mushroom 	Momentary	24V AC/DC LED	SPDT	HA1L-M3C54-②	HA1L-M3C14V-②
		24V AC/DC Incandescent	DPDT	HA1L-M3C64-②	HA1L-M3C24V-②
	Maintained	24V AC/DC LED	SPDT	HA1L-A3C54-②	HA1L-A3C14V-②
		24V AC/DC Incandescent	DPDT	HA1L-A3C64-②	HA1L-A3C24V-②

② Lens Color Codes

Color	Code
Amber	A
Green	G
Red	R
Blue	S
Yellow	Y
White	W

Voltage/Lamp Code

Voltage	Code
5V DC LED	1
6V AC/DC LED	2
12V AC/DC LED	3
24V AC/DC LED	4
120V AC LED	8
6V AC/DC Incandescent	5
12V AC/DC Incandescent	6
24V AC/DC Incandescent	7

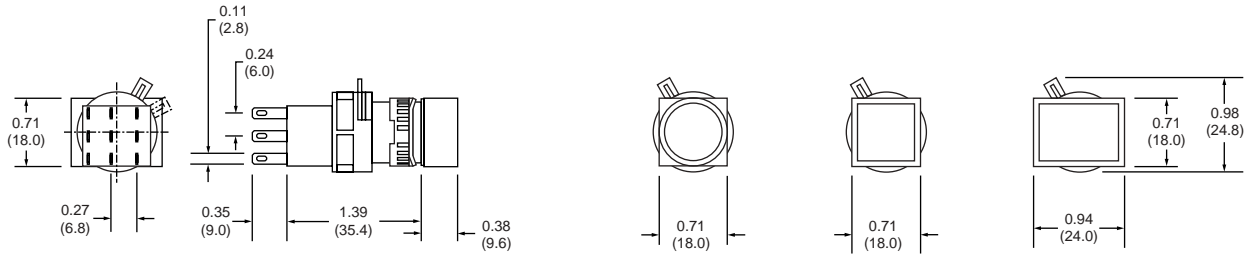


- In place of ② specify lens color code from table at right.
- Lamps also available in 5V DC, 6V AC/DC, 12V AC/DC or 120V AC, change “4” or “7” using voltage/lamp codes (ie LA1P-1C03-② uses 12V AC/DC LED).
- PCB terminal models also available with silver contacts (change “1” or “2” to “5” or “6” respectively, ie LA1L-M1C14V-① becomes LA1L-M1C54V-①).

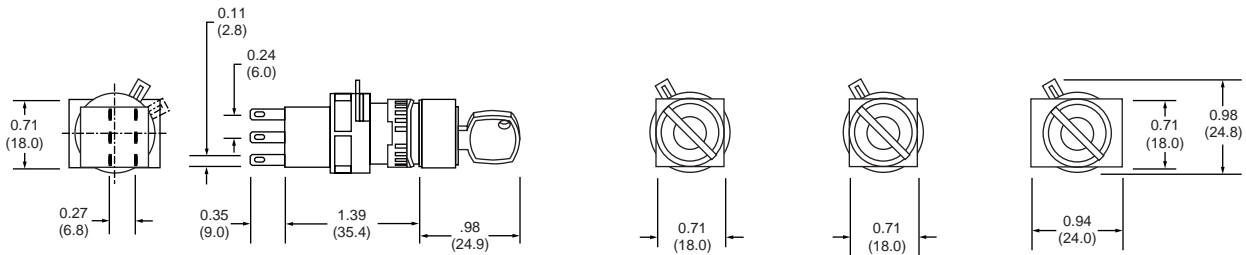
Dimensions con't

Switches & Pilot Devices

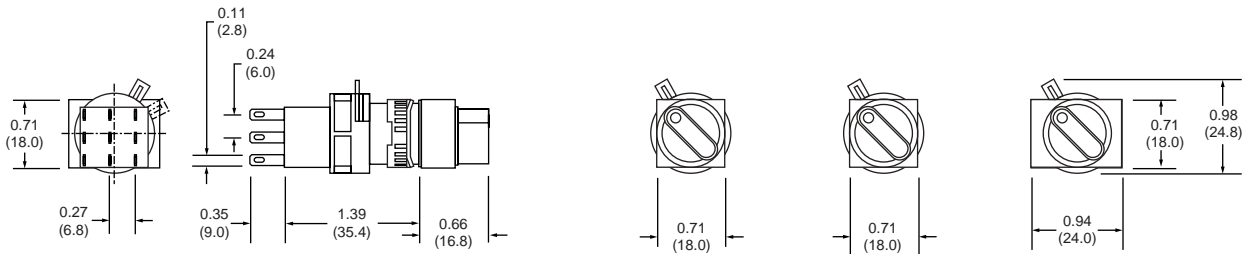
Illuminated Pushbuttons (LA*L)



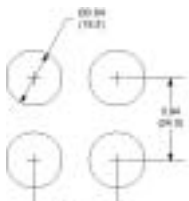
Key Switches (LA*K)



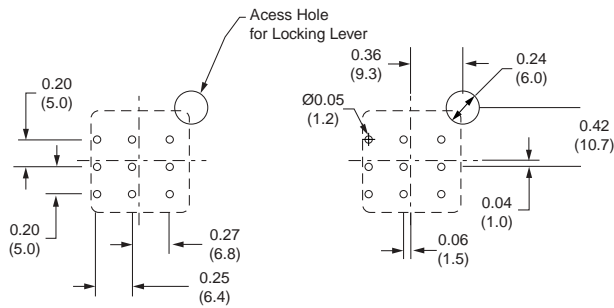
Selector Switches (LA*S)



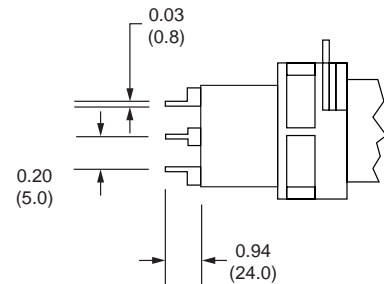
Panel Cut-Out



PCB Layout (except for Buzzer and E-Stop)



PCB Pins



HA1B E-Stop

PCB Mounting Pattern

