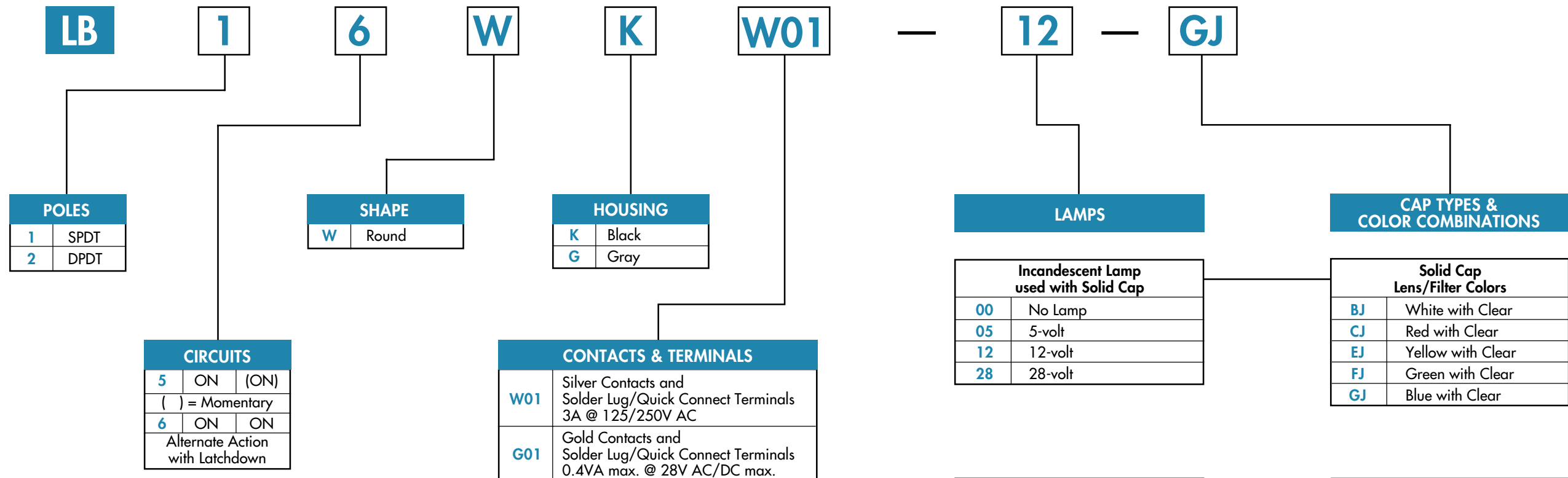


TYPICAL SWITCH ORDERING EXAMPLE



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

LB16WKW01-12-GJ



IMPORTANT:



Switches are supplied without UL & CSA marking unless specified. Specific models & ratings noted on General Specifications page.



GENERAL SPECIFICATIONS

Electrical Capacity (Resistive Load)

Power Level (silver): 3A @ 125V AC or 3A @ 250V AC

Logic Level (gold): 0.4VA maximum @ 28V AC/DC maximum

Note: See [Supplement Index](#) to find explanation of operating range.

Other Ratings

Contact Resistance: 50 milliohms maximum for silver; 100 milliohms maximum for gold

Insulation Resistance: 200 megohms minimum @ 500V DC

Dielectric Strength: 1,000V AC minimum between contacts; 1,500V AC minimum between contacts & case

Mechanical Life: 1,000,000 operations minimum for momentary circuit

200,000 operations minimum for maintained circuit

Electrical Life: 100,000 operations minimum

Nominal Operating Force: 550 grams

Contact Timing: Nonshorting (break-before-make)

Travel for Momentary Circuit: 1.7mm (.067") pretravel; 1.3mm (.051") overtravel; 3.0mm (.118") total travel

Travel for Maintained Circuit: 1.6mm (.063") pretravel; 0.8mm (.031") overtravel; 2.4mm (.094") total travel

Materials & Finishes

Housing: Fiberglass reinforced polyamide

O-ring: Nitrile butadiene rubber

Inner Seal: Silicone rubber

Movable Contact: Silver alloy or copper with gold plating over nickel plating

Stationary Contacts: Silver alloy or copper with gold plating over nickel plating

Base: Diallyl phthalate

Common Terminals: Phosphor bronze with silver or gold plating

End Terminals: Phosphor bronze with silver or gold plating

Lamp Terminals: Brass with silver plating

Environmental Data

Operating Temp Range: -25°C through +50°C (-13°F through +122°F) for illuminated

-25°C through +70°C (-13°F through +158°F) for nonilluminated

Note: When used with a polyvinyl chloride splash cover, the lowest limit is 0°C (32°F)

Humidity: 93% humidity for 96 hours @ 40°C (104°F)

Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours

Shock: 50g acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Sealing: IP 65 of IEC 529 standard (similar to NEMA 4 & 13)

Installation

Cap Installation Force: 0.4 kg (.88 lb) maximum downward force on actuator

Quick Connect Force: 5.4 kg (11.9 lbs) maximum downward force on connector

Soldering Time & Temperature: 3 seconds @ 350°C or 5 seconds @ 270°C

Process Seal: See [Supplement Index](#) for specific processing data.

Standards & Certifications

Flammability Standards: UL94V-0 base

UL Recognized: All models recognized at 3A @ 125V or 250V AC or 0.4VA maximum @ 28V AC/DC maximum; UL File No. E44145

CSA Certified: All models certified at 3A @ 125V or 250V AC or 0.4VA maximum @ 28V AC/DC maximum; CSA File Nos. LR23535



Series LB

Standard Size Pushbutton Switches

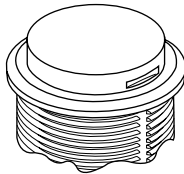
POLES & CIRCUITS

		Plunger Position () = Momentary		Connected Terminals		Throw & Power/Lamp Schematics
Pole	Model	Normal 	Down 	Normal 	Down 	
SP	LB15 *LB16	ON ON	(ON) ON	1-3	1-2	SPDT
DP	LB25 *LB26	ON ON	(ON) ON	1-3 4-6	1-2 4-5	DPDT

* When in latched position for the alternate circuit, cap position is 1.0mm (.039") above the built-in bezel.

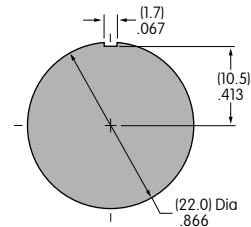
SHAPE

W 22mm Diameter Round



Panel Cutout

Recommended Panel Thickness:
1 ~ 4mm (.039" ~ .157")
Recommended Panel Thickness
with Splash Cover:
1 ~ 3.5mm (.039" ~ .138")



HOUSING

Housing Colors Available:

K Black

G Gray

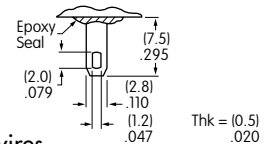
CONTACT MATERIALS, RATINGS, & TERMINALS

W01 Silver Contacts	Power Level 3A @ 125V AC & 250V AC
G01 Gold Contacts	Logic Level 0.4VA max. @ 28V AC/DC max.

See Supplement Index for complete explanation of operating range.

Solder Lug/Quick Connect

The 1.2mm x 2mm oblong hole accommodates one solid 18-gauge wire or two solid or stranded 20-gauge wires.



Optional PCB adaptors AT711 & AT712 available; illustrated in previous snap-in subsection.

LAMP CODES & SPECIFICATIONS


Neon Lamp for Colored Insert Cap

AT607N T-1 Standard Bi-pin		01	
	Voltage	V	110V AC
	Current	I	1.5mA
	Endurance	Hours	10,000 average
	Recommended Resistors:	33K ohms for 110V AC	100K ohms for 220V AC





LAMP CODES & SPECIFICATIONS

Incandescent Lamp for Solid Colored and Colored Insert Caps

AT607  T-1 Standard Bi-pin		05	12	28 *	* Lamp life is significantly reduced in applications with DC current, high shock, vibration, or continuous illumination.	
	Voltage	V	5V AC	12V AC		28V AC
	Current	I	115mA	60mA		24mA
	Endurance	Hours	7,000 average			

Single Element LED for LED Caps

AT614 Red, Yellow, Green  T-1½ Cylindrical	Color	10C	10E	10F	10G	
		Red	Yellow	Green	Blue	
AT625 Blue  T-1 Standard Bi-pin	Forward Peak Current	I_{FM}	50mA	50mA	50mA	30mA
	Continuous Forward Current	I_F	40mA	40mA	40mA	20mA
	Forward Voltage	V_F	1.75V	2.35V	2.35V	3.6V
	Reverse Peak Voltage	V_{RM}	4V	4V	4V	5V
	Current Reduction Rate Above 25°C	ΔI_F	0.67mA/°C	0.67mA/°C	0.67mA/°C	0.50mA/°C

Electrical specifications are determined at a basic temperature of 25°C.

Lamp circuit is independent of switch operation.

Single color LEDs are colored in OFF state. Bicolor LED is translucent white in OFF state.

For dimension drawings of lamps see [Accessories & Hardware Index](#).

If the source voltage is greater than rated voltage, a ballast resistor is required.

The ballast resistor calculation and more lamp detail are shown in the Supplement; see [Supplement Index](#).

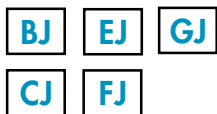
CAP TYPES & COLOR COMBINATIONS

Color Codes: **A** Black **B** White **C** Red **E** Yellow **F** Green **G** Blue **J** Clear

Solid Cap for Incandescent Lamp

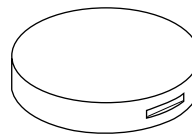
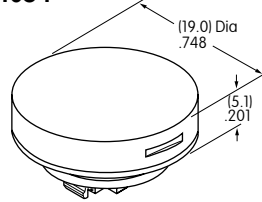
Lens/Filter

Colors Available:

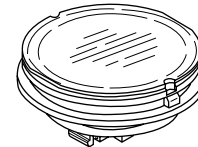


Material: Polycarbonate
Finish: Glossy

AT4054



Translucent Colored Lens



Transparent Clear Filter



Lamp AT607

Insert Cap for Incandescent or Neon Lamp

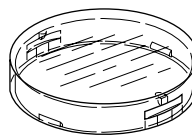
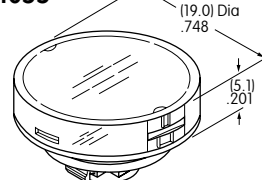
Lens/Filter

Colors Available:

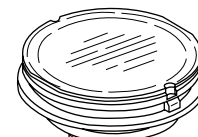


Material: Polycarbonate
Finish: Glossy
JG & JF not suitable with neon

AT4055



Transparent Clear Lens



Translucent Colored Filter



Lamp AT607
or



Lamp AT607N



Series LB

Standard Size Pushbutton Switches

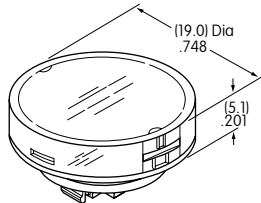
CAP TYPES & COLOR COMBINATIONS

Color Codes: **A** Black **B** White **C** Red **E** Yellow **F** Green **G** Blue **J** Clear

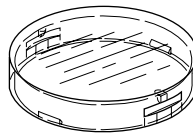
Lens/Diffuser
Colors Available:

JB

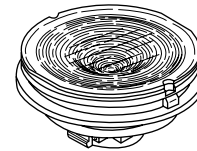
AT4056



Cap for Single Element LED



Transparent
Clear Lens



Translucent
Colored Diffuser



LED
AT614
or



LED
AT625

Material: Polycarbonate

Finish: Glossy

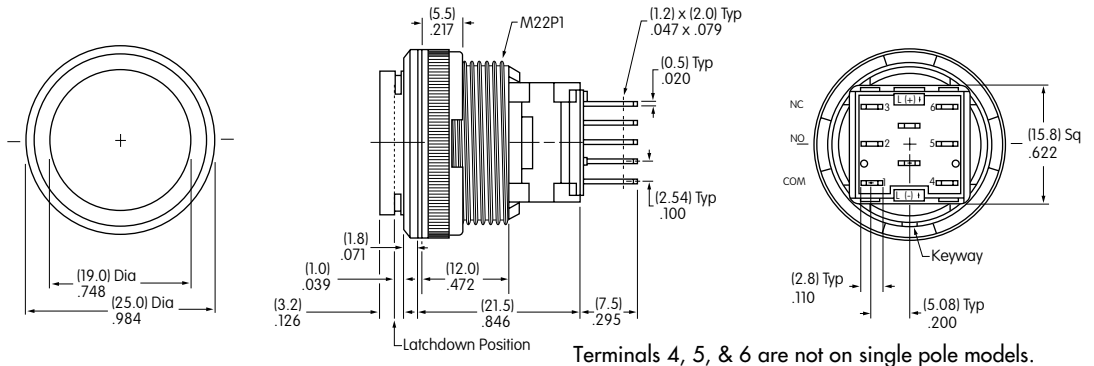
TYPICAL SWITCH DIMENSIONS

Panel Seal



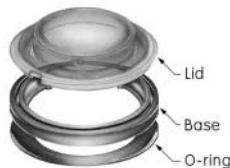
LB25WKW01-12-JC

Single & Double Pole

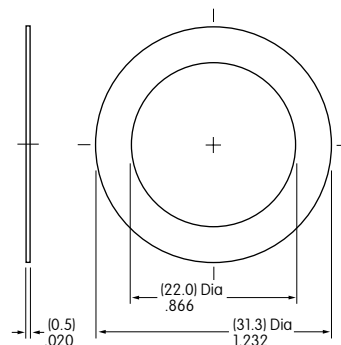
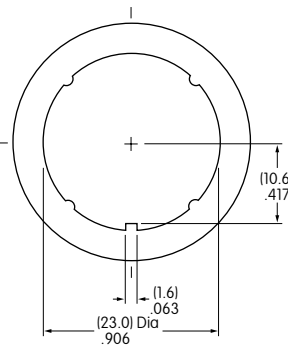
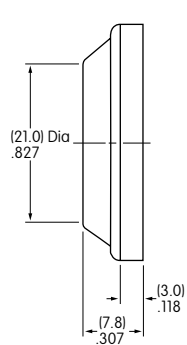
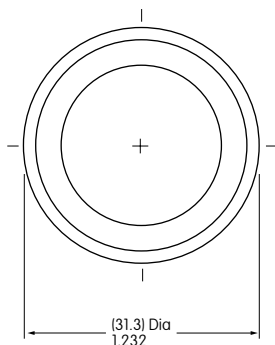


OPTIONAL ACCESSORIES

AT9410
Splash Cover
for Panel Seal



Recommended panel thickness
when using splash cover for panel seal switch:
1.0mm ~ 3.5mm (.039" ~ .138")



Materials:

Lid: PVC (loses pliability below 0°C/32°F)

Base: Polyethylene

O-ring: NBR

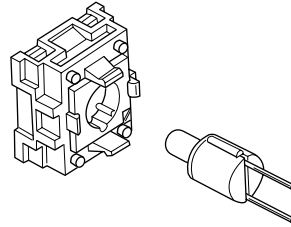
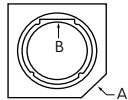
ASSEMBLY INSTRUCTIONS

Lamp Installation & LED Orientation

Incandescent & Neon Lamps ~ AT607 & AT607N

Align projections on lamp with grooves (B) in holder when inserting lamp.

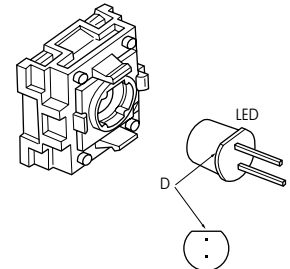
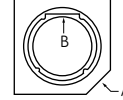
To correctly join the lamp holder and cap base, match the cut corners (A).



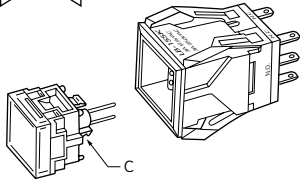
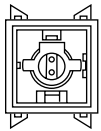
LED ~ AT614

Align D-flat on LED with flat (B) in holder when inserting the LED.

To correctly join the lamp holder and cap base, match the cut corners (A).

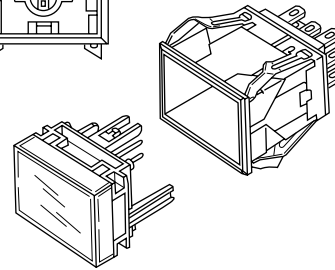
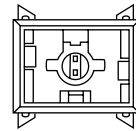


Switch & Cap Assembly



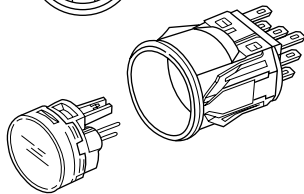
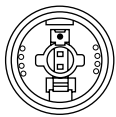
Square

Match projection (C) on cap assembly with groove (C) inside switch. Lamp terminals will then be aligned correctly with lamp socket.



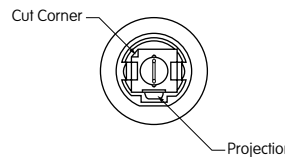
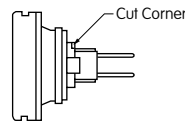
Rectangular

Match clip on cap assembly with receptacle inside switch. Lamp terminals will then be aligned correctly with lamp socket.



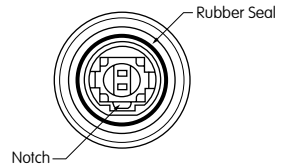
Round

Match clip on cap assembly with receptacle inside switch. Lamp terminals will then be aligned correctly with lamp socket.



Round Panel Seal

Match projection on cap assembly with notch inside switch. Lamp terminals will then be aligned correctly with lamp socket.

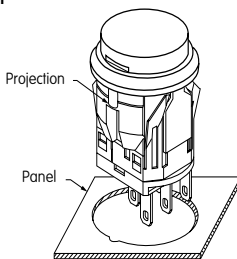


Installation & Maintenance

Snap-in Mount

Snap-in clip holds all switches firmly in place.

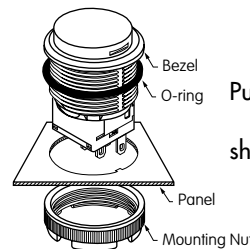
To mount round switch, match the antirotation projection on switch with guide cut in panel. Snap into panel cutout.



Panel Seal Bushing Mount

Insert switch from the front of the panel with the o-ring between the built-in bezel and the panel. Install mounting nut AT074 (supplied with switch) from the rear of the panel.

Overtightening mounting nut may damage the switch housing.



Lamp Replacement

Actuator must be in Up position. Pull off cap with cap extractor AT109. Replace lamp and reassemble as shown above.

AT109 Cap Extractor



AT112 Socket Wrench

