

General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver): 3A @ 125V AC or 3A @ 250V AC or 3A @ 30V DC

Other Ratings

Contact Resistance: 50 milliohms maximum (DC2 ~ 4V 100mA)
Insulation Resistance: 200 megohms minimum @ 500V DC
Dielectric Strength: 1,000V AC minimum between contacts for 1 minute minimum
 1,500V AC minimum between contacts and case for 1 minute minimum
Mechanical Life: 500,000 operations minimum
Electrical Life: 50,000 operations minimum for 3A @ 125V/250V AC & 3A @ 30V DC
 100,000 operations minimum for 1A @ 125V/250V AC & 1A @ 30V DC
Nominal Operating Force: 1.5 ± 0.7N for Single Pole; 3.0 ± 1.2N for Double Pole
Contact Timing: Nonshorting (break-before-make)
Travel: Total Travel .118" (3.0mm)

Materials & Finishes

Actuator: Polycarbonate
Housing: Bushing mount: Glass fiber reinforced polyamide (UL94V-0);
 Snap in mount: Polybutylene terephthalate (PBT) (UL94V-0)
Base: Glass fiber reinforced polyamide (UL94V-0)
Movable Contact: Phosphor bronze & silver with silver plating
Stationary Contacts: Common terminal: Phosphor bronze with silver plating;
 Contact terminals: Phosphor bronze with tin plating
Lamp Terminals: Phosphor bronze with tin plating

Environmental Data

Operating Temperature Range: -10°C through +50°C (+14°F through +122°F) for Illuminated
 -25°C through +70°C (-13°F through +158°F) for Nonilluminated
Humidity: 90 ~ 95% humidity for 240 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 (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

Mounting Torque: 0.8Nm (7.08 lb•in) maximum
Soldering Time & Temperature: Manual Soldering: See Profile A in Supplement section.
Cleaning: Hand clean locally with alcohol based solution

Standards & Certifications

Flammability Standards: UL94V-0 housing & base
UL: **File No. E44145 - Recognized only when ordered with marking on switch.**
 Add "/U" or "/CUL" to end of part number to order UL recognized switch.
 All single & double pole models recognized at 3A @ 125V/250V AC or 3A @ 30V DC.

Note: The spot illuminated switches do not have UL approval and cannot be ordered with the markings.

Distinctive Characteristics

Environmentally friendly components and packaging materials meet RoHS Directive restricting use of hazardous materials. Suited for lead-free soldering because of heat resistant resin materials.

Smooth, slightly concave surface of cap designed to fit fingertip. Unique design and construction of cap prevents its removal and limits tampering.

Bright LED illumination in choice of red, green or amber through translucent white cap. Spot illumination in red, green or amber enhanced by black cap.

Short body of .551" (14.0mm) conserves behind-panel space.

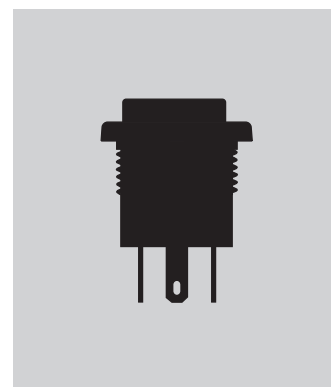
Installation options include 16.0mm bushing mount or 17.3mm snap-in mount.

Combination solder lug and .110" quick connect terminals are epoxy sealed to prevent entry of flux, dust, or other contaminants.

Crisp actuation and clear circuit status provided by snap-action contact mechanism. Arc barrier between movable contacts protects against crossover.



Actual Size



TYPICAL SWITCH ORDERING EXAMPLE

LP01 1 5 C C K W01 5C B

Poles	
1	SPDT
2	DPDT

Mounting Types	
C	Bushing
M	Snap-in

Contacts & Terminals	
W01	Silver Rated 3A @ 125V AC/250V AC Solder Lug/ Quick Connect Terminals

Circuit		
5	ON	(ON)
() = Momentary		

Housing	
K	Black

LEDs	
5C	Red
5D	Amber
5F	Green

Cap Color	
A	Black with Spot Illumination
B	White

Nonilluminated	
No Code	Nonilluminated

Nonilluminated Cap Colors	
A	Black
C	Red
F	Green

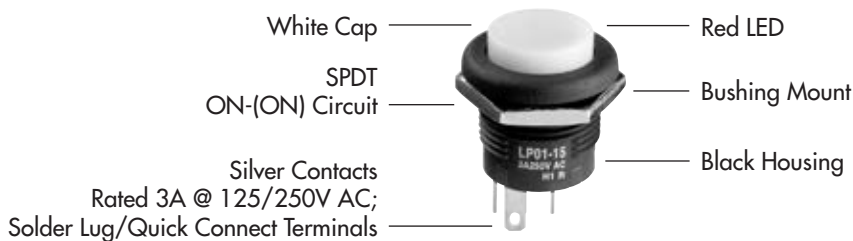
IMPORTANT:

Switches are supplied without UL & cULus markings unless specified. **UL & cULus recognized only when ordered with marking on switch.** Specific models, ratings, & ordering instructions are noted on the General Specifications page. Spot illuminated switches do not have UL approval and cannot be ordered with the markings.



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

LP0115CCKW015CB



POLES & CIRCUIT

Pole	Model	Plunger Position () = Momentary		Connected Terminals		Throw & Power/Lamp Schematics
		Normal	Down	Normal	Down	
SP	LP0115	ON	(ON)	1-3	1-2	SPDT
DP	LP0125	ON	(ON)	1-3 4-6	1-2 4-5	DPDT

Note: Terminal markings "COM, NO, NC, L, + and -" are actually on the switch; terminal numbers are not on the switch.

MOUNTING TYPES

C **Bushing**
 .630" (16.0mm) Diameter

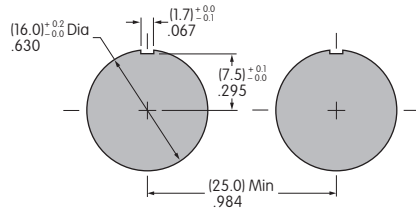
This mounting option is supplied with a steel hexagon nut with nickel plating.



M **Snap-in**
 .681" (17.3mm) Diameter

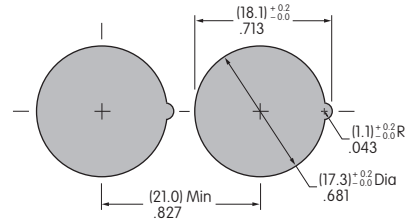


Recommended Panel Thickness:
 .079" ~ .256"
 (2.0mm ~ 6.5mm)



Allow .984" (25.0mm) distance from center-to-center between switches when mounted side-by-side.

Recommended Panel Thickness:
 .039" ~ .126"
 (1.0mm ~ 3.2mm)



Allow .827" (21.0mm) distance from center-to-center between switches when mounted side-by-side.

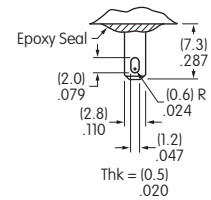
HOUSING

K **Black** Housing available in black only. The one-piece body and bezel have a matte finish.

CONTACT MATERIALS, RATINGS, & TERMINALS


W01 **Silver Contacts** **Power Level** **Solder Lug/ .110" (2.8mm) Quick Connect**
3A @ 125V AC/250V AC; 3A @ 30V DC

Note: If used at 1A @ 125V AC/250V AC or 1A @ 30V DC, electrical life will be 100,000 operations minimum.



LED COLORS & SPECIFICATIONS

The electrical specifications shown are determined at a basic temperature of 25°C. LED circuit is isolated and requires external power source. Polarity marks are on the switch. If the source voltage exceeds the rated voltage, a ballast resistor is required. The resistor value can be calculated by using the formula in the Supplement section.

LEDs are an integral part of the switch and are not available separately.	Single Color LED with 1 Element		5C	5D	5F
		Colors	Red	Amber	Green
	Maximum Forward Current	I_{FM}	30mA	30mA	30mA
	Typical Forward Current	I_F	20mA	20mA	20mA
	Forward Voltage	V_F	1.95V	2.0V	2.1V
	Maximum Reverse Voltage	V_{RM}	5V	5V	5V
	Current Reduction Rate Above 25°C	ΔI_F	0.41mA/°C	0.29mA/°C	0.39mA/°C
	Ambient Temperature Range		-10°C ~ +50°C		

No Code No Lamp

Toggles
Rocker
Pushbuttons
Illuminated PB
Programmable
Keylocks
Rotaries
Slides
Tactiles
Tilt
Touch
Indicators
Accessories
Supplement

CAP COLORS

Spot Illuminated Cap

Cap Color Available:

A Black with Spot Illumination



Illuminated Cap

Cap Color Available:

B White



Nonilluminated Cap

Cap Colors Available:

A Black

C Red

F Green



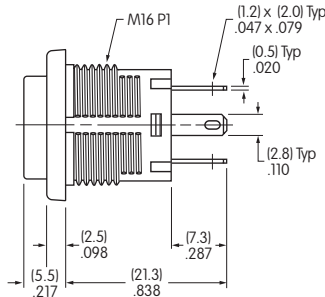
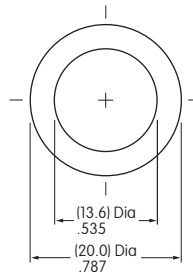
Material: Polycarbonate Finish: Matte
Spot illuminated, illuminated, and nonilluminated caps are an integral part of the switch and are not available separately.

TYPICAL SWITCH DIMENSIONS

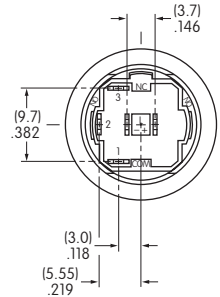
Bushing Mount



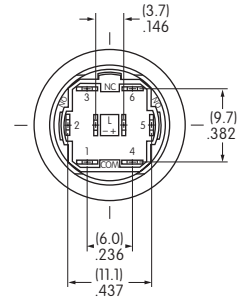
LP0115CCKW015CB



Single Pole



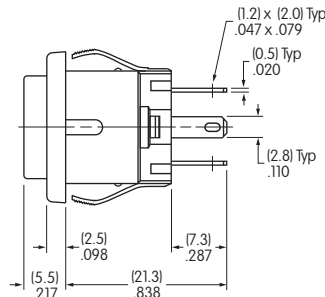
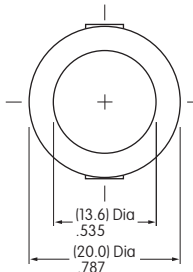
Double Pole



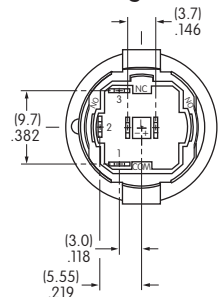
Snap-in Mount



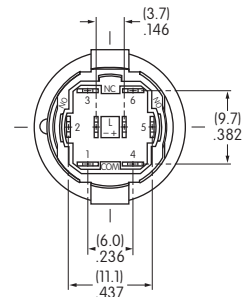
LP0115CMKW015CB



Single Pole



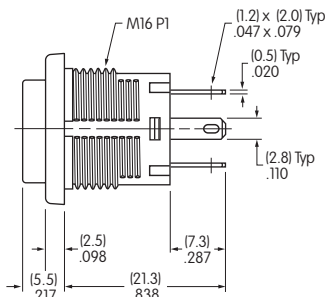
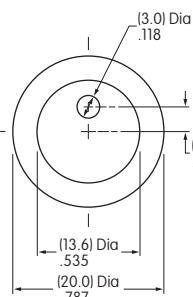
Double Pole



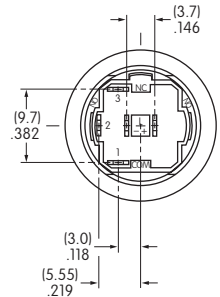
Bushing Mount & Spot Illumination



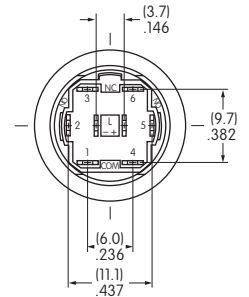
LP0115CCKW015CA



Single Pole



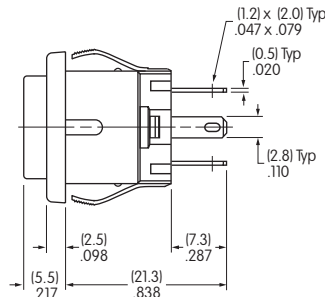
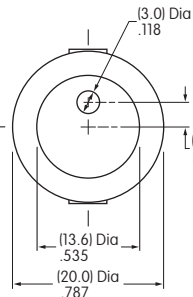
Double Pole



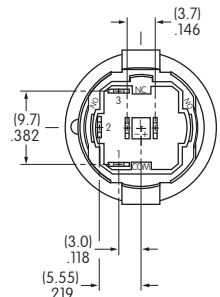
Snap-in Mount & Spot Illumination



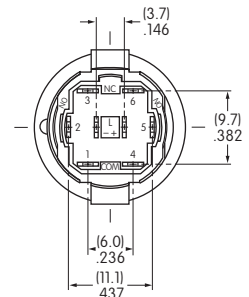
LP0115CMKW015CA



Single Pole



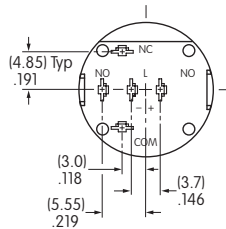
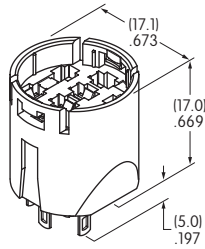
Double Pole



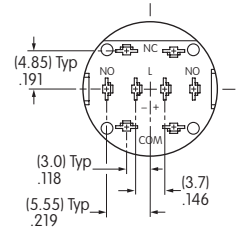
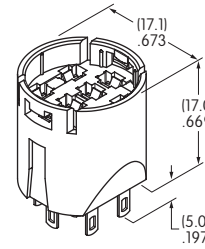
OPTIONAL ACCESSORIES

Adaptors

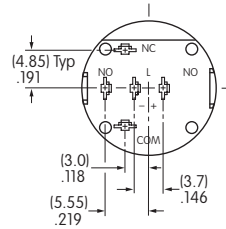
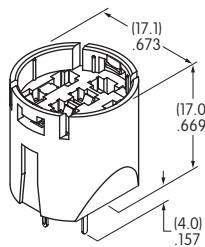
AT716
Single Pole
Solder Lug/
Quick Connect
Terminals



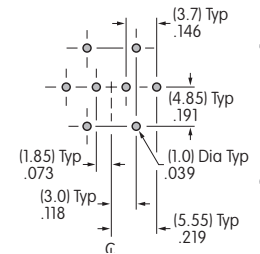
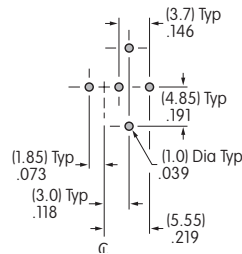
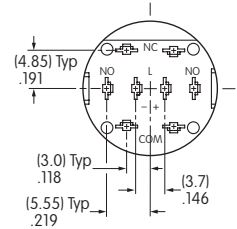
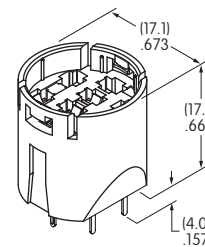
AT717
Double Pole
Solder Lug/
Quick Connect
Terminals



AT718
Single Pole
Straight PC
Terminals



AT719
Double Pole
Straight PC
Terminals

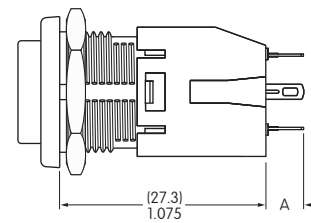


Material: Glass fiber reinforced polyamide Note: Order adaptors separately

Switch Dimensions Shown with Adaptor AT716

Dimension A: Solder Lug .197" (5.0mm); Straight PC .157" (4.0mm)

Panel thickness for LP01 Bushing Mount: .079" ~ .256" (2.0mm ~ 6.5mm)



LEGENDS

NKK Switches can provide custom legends for caps. Contact factory for more information.

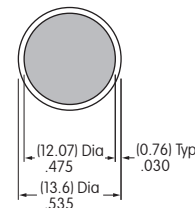
Suggested Printable Area for LP01 Cap



Recommended Methods:

Pad Print or Laser Etch on cap.

Epoxy based ink is recommended.



Shaded area is printable area

Note: Suggested printable area does not apply to spot illuminated cap.

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[67021K512](#) [67081K512X](#) [701PB580](#) [7199K101](#) [810K12910](#) [810KSV30B](#) [MML21EA2ADK](#) [MML21KA3ABK](#) [MML23KA3AC05K-001](#)
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