New Product

High Visibility
Spot Illumination

LP01 Series
New Addition to Compact Body
Illuminated Pushbutton Switches

2016-10-28
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 @ 125/250V AC & 3A @ 30V DC; 100,000 operations minimum for 1A @ 125/250V AC & 1A @ 30V DC
Nominal Operating Force: 1.5 ± 0.7N for Single Pole; 3.0 ± 1.2N for Double Pole
Travel: 3.0mm (.118")

Environmental Data

Operating Temperature Range: −10°C through +50°C (+14°F through +122°F)

Processing

Soldering: Manual Soldering: 390°C maximum @ 4 seconds maximum, 2 cycles

Distinctive Characteristics

Vivid, super bright LED spot illumination in red, amber or green provides easy status recognition.

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

Installation options include 16mm bushing mount or 17.3mm snap-in mount.

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

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

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

Applications

- Communication Equipment
- Test Instruments
- Automation Equipment
- Wireless Devices
- Office Equipment
- Household Appliances
Spotted Illuminated Short Body Pushbuttons

TYPICAL SWITCH ORDERING EXAMPLE

LP01 1 5 C C K W01 5F A

Poles

1 SPDT
2 DPDT

Circuit

5 ON (ON)

{ } = Momentary

Mounting Types

C Bushing
M Snap-in

Contacts & Terminals

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

W01

LEDs

5C Red
5D Amber
5F Green

Cap Colors

A Black with Spot Illumination

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

LP0115CCKW015FA

POLES & CIRCUIT

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Plunger Position</th>
<th>Normal</th>
<th>Down</th>
<th>Connected Terminals</th>
<th>Throw &amp; Power/Lamp Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>LP0115</td>
<td>( ) = Momentary</td>
<td></td>
<td></td>
<td>1-3 1-2</td>
<td>SPDT</td>
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<td></td>
<td></td>
<td></td>
<td>1-3</td>
<td>1-2</td>
<td></td>
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</tr>
<tr>
<td>DP</td>
<td>LP0125</td>
<td></td>
<td>1-3</td>
<td>4-6</td>
<td>1-2 4-5</td>
<td>DPDT</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>1-3</td>
<td>4-6</td>
<td></td>
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</tbody>
</table>

MOUNTING TYPES

C Bushing

.630” (16.0mm) 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.

Supplied with a steel hexagon nut with nickel plating.

M Snap-in

.669” (17.0mm) Diameter

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.

Cut hole in panel with nub as shown to prevent rotation. Position switch vertically in cutout.

www.nkkswitches.com
LED COLORS & SPECIFICATIONS

LEDs are an integral part of the switch and are not available separately. 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 shown here.

<table>
<thead>
<tr>
<th>Color</th>
<th>Maximum Forward Current $I_{FM}$ (mA)</th>
<th>Typical Forward Current $I_F$ (mA)</th>
<th>Forward Voltage $V_F$ (V)</th>
<th>Maximum Reverse Voltage $V_{RM}$ (V)</th>
<th>Current Reduction Rate Above 25°C $\Delta I_F$ (mA/°C)</th>
<th>Ambient Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>30mA</td>
<td>20mA</td>
<td>1.95V</td>
<td>5V</td>
<td>0.41mA/°C</td>
<td>-10°C ~ +50°C</td>
</tr>
<tr>
<td>Amber</td>
<td>30mA</td>
<td>20mA</td>
<td>2.0V</td>
<td>5V</td>
<td>0.29mA/°C</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>30mA</td>
<td>20mA</td>
<td>2.1V</td>
<td>5V</td>
<td>0.39mA/°C</td>
<td></td>
</tr>
</tbody>
</table>

Where: $R = \frac{E - V_F}{I_F}$

Where: $E$ = Source Voltage (V)

$V_F$ = Forward Voltage (V)

$I_F$ = Forward Current (A)

CAP COLORS

Cap Color Available:

Black with Spot Illumination

Spot Illuminated Cap

Material: Polycarbonate Finish: Matte

The cap is an integral part of the switch and is not available separately.

TYPICAL SWITCH DIMENSIONS

Bushin Mount

Snap-in Mount

Effective Date October 2016