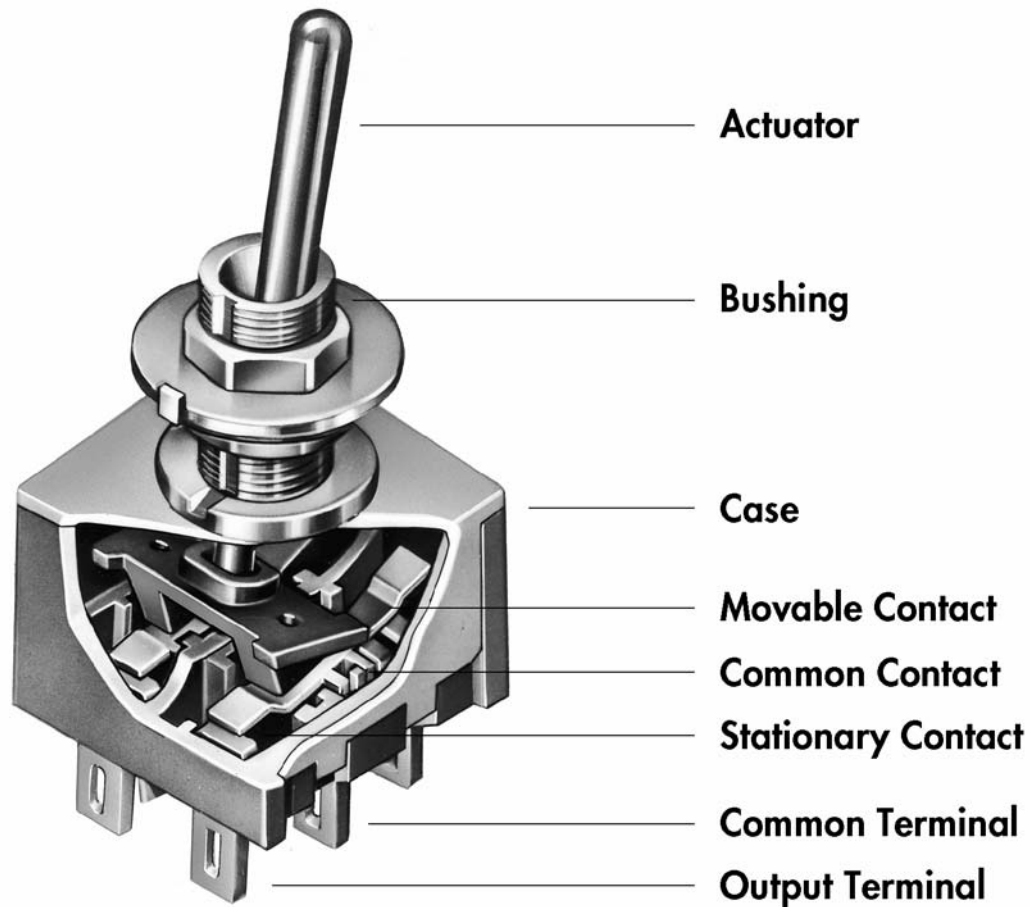
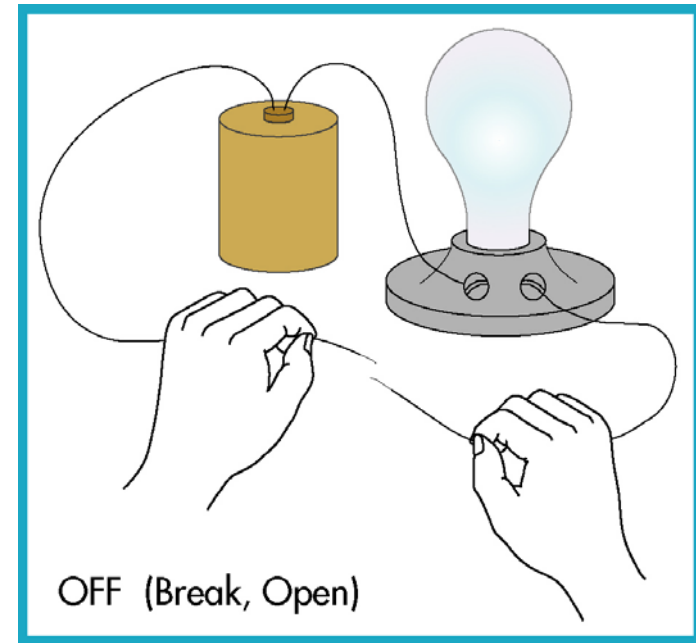
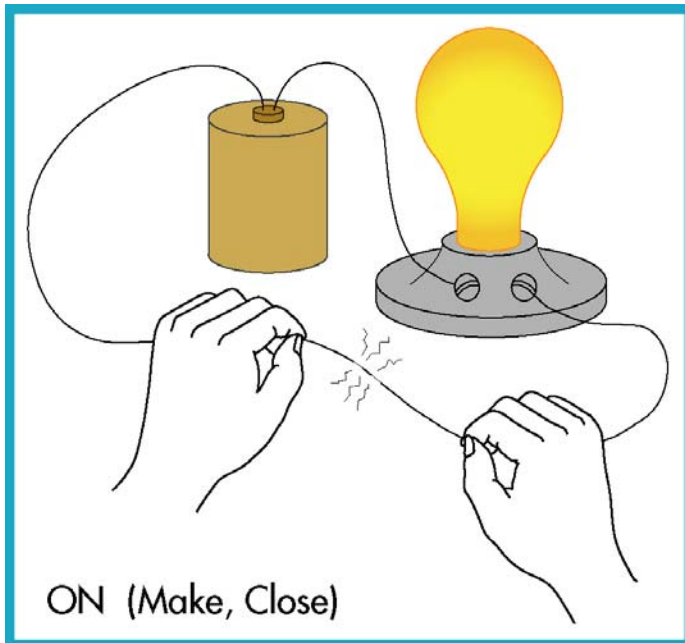


Switch Basics

Basic Structure of a Switch



Electrical Circuit



Poles and Schematics

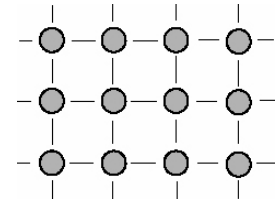
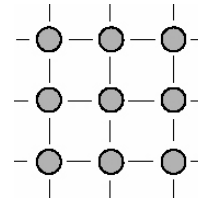
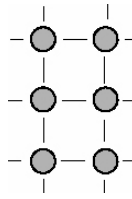
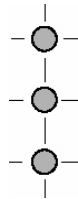
Single Pole

Double Pole

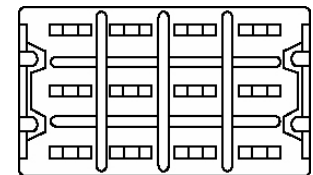
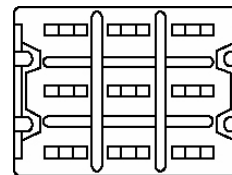
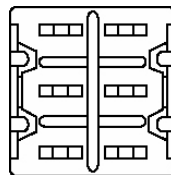
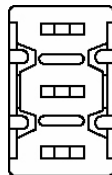
Three Pole

Four Pole

Footprint

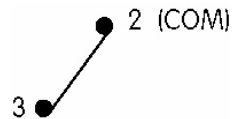


Bottom View
of Switch

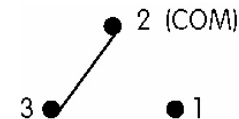


Pole - Number of circuits the switch can control at one time

Throw



Single Throw Switch
ON-NONE-OFF

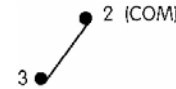


Double Throw Switch
ON-NONE-ON

Throw - Number of electrical circuits within a pole

Examples of Pole and Throw

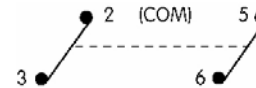
- **SPST – Single Pole Single Throw**



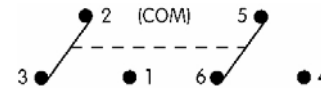
- **SPDT – Single Pole Double Throw**



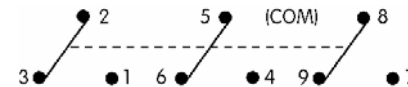
- **DPST – Double Pole Single Throw**



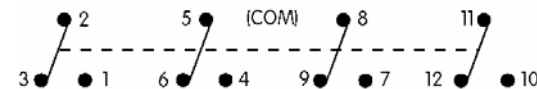
- **DPDT – Double Pole Double Throw**



- **3PDT – Three Pole Double Throw**

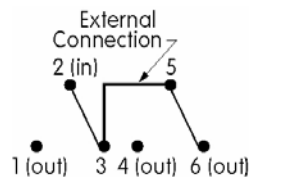
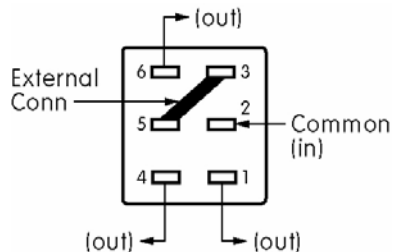


- **4PDT – Four Pole Double Throw**

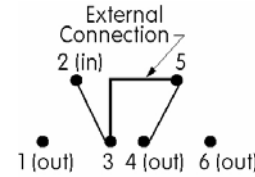


Special Circuits Three-Throw ON-ON-ON

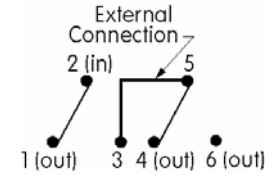
Single Pole Three Throw



2-3, 5-6 connected

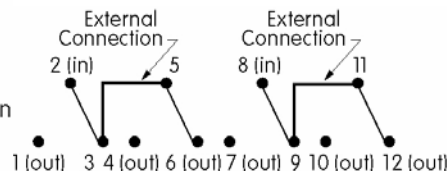
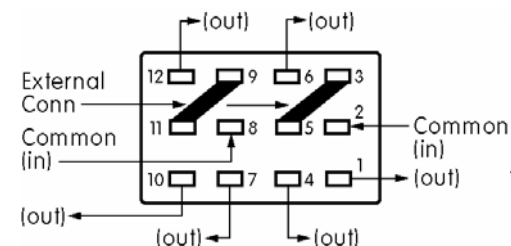


2-3, 5-4 connected

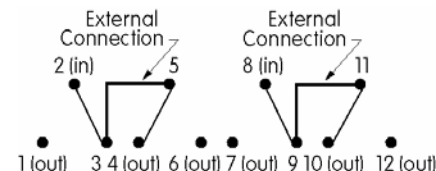


2-1, 5-4 connected

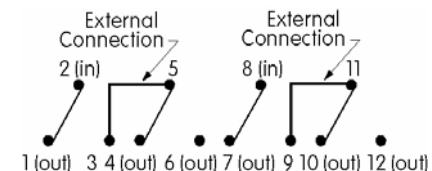
Double Pole Three Throw



2-3, 5-6 connected
8-9, 11-12 connected



2-3, 5-4 connected
8-9, 11-10 connected

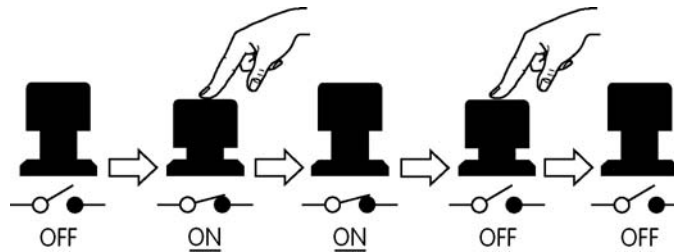


2-1, 5-4 connected
8-7, 11-10 connected

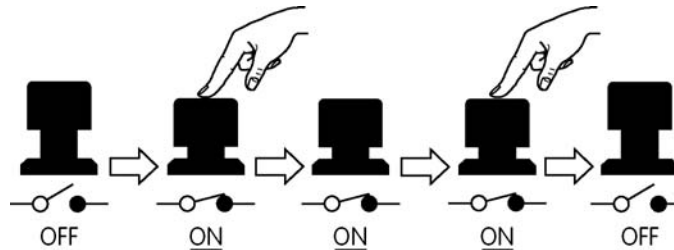
3-5 and 9-11 External Connection must be made during field installation

Alternate and Momentary

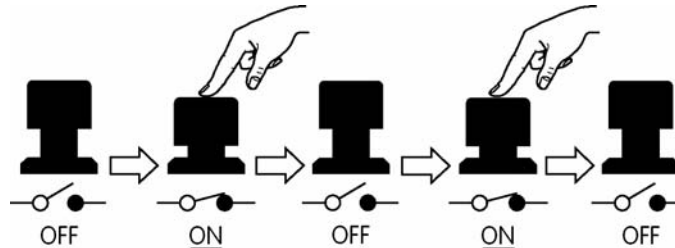
Alternate with
No Latchdown



Alternate with
Latchdown

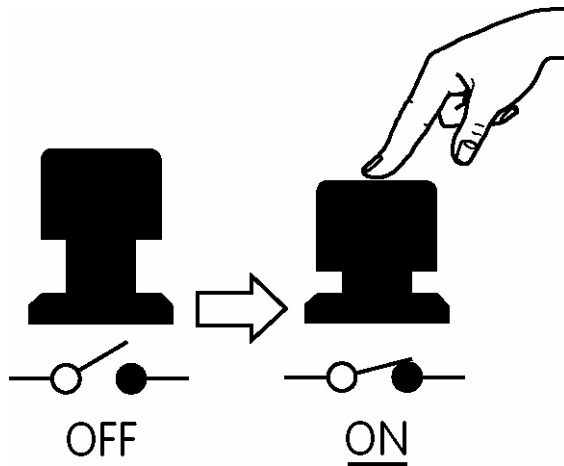


Momentary

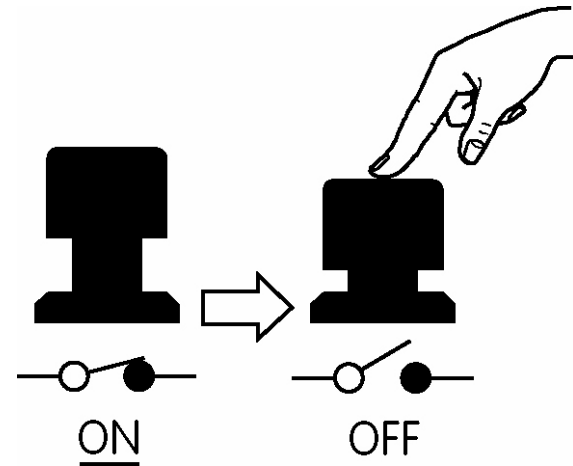


N/O and N/C

N/O = Normally Open

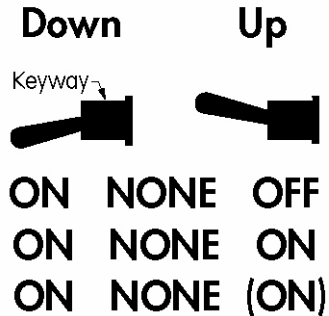


N/C = Normally Closed

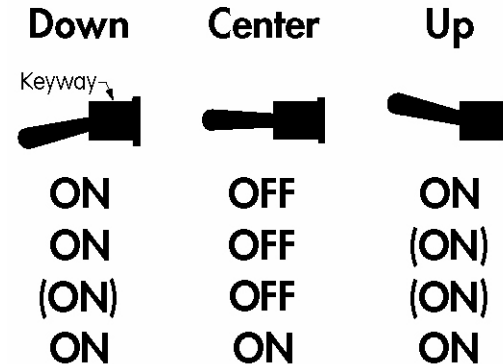


Lever Position and Circuits

Two Position Toggle



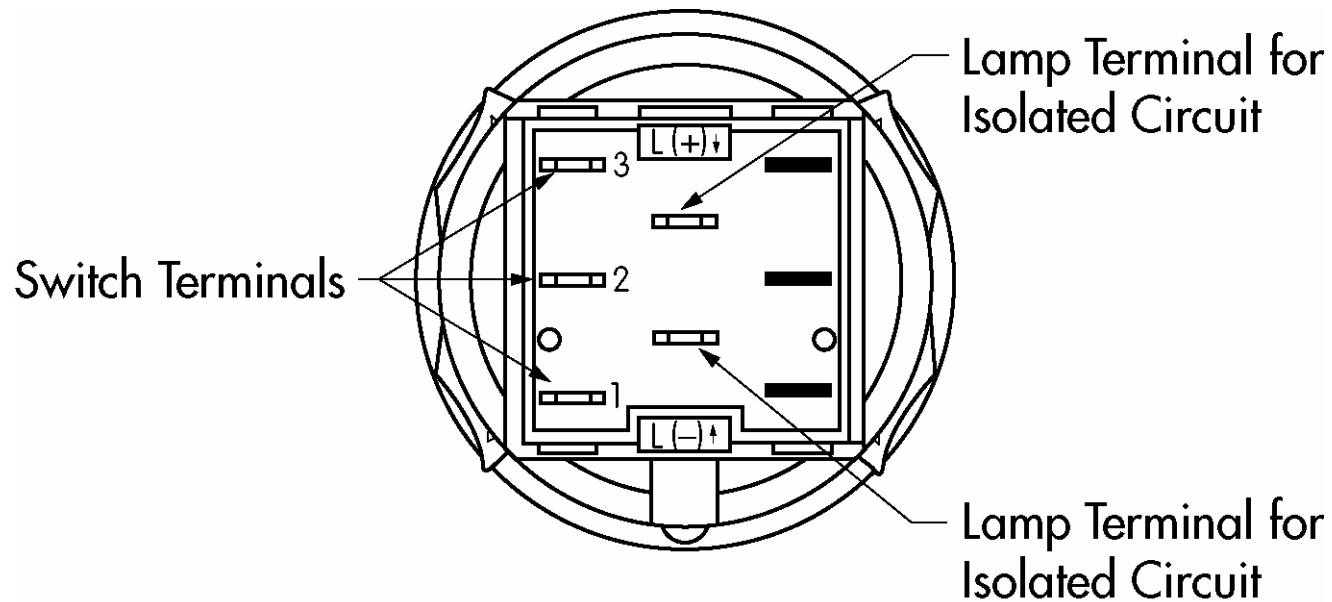
Three Position Toggle



(ON) is momentary

Note: There is a distinction between “throw” and “position”. Among two position switches there are single throw ON-NONE-OFF and double throw ON-NONE-ON.

Isolated Circuits for Illumination



Types of Terminals

SMD



SMD with Bracket



Right Angle SMD
with Bracket



Solder Lug



Wire-wrap



Straight PC



Straight PC
with Bracket



Right Angle PC



Vertical PC



Screw Lug



Quick Connect



Solder Lug



Solder Lug/
Quick Connect

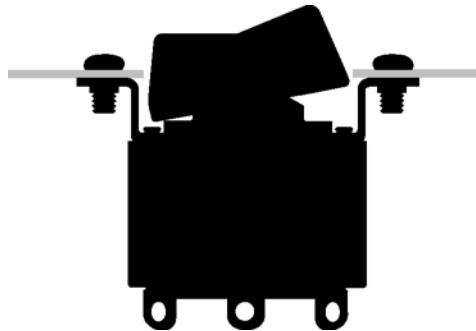


Mounting Options

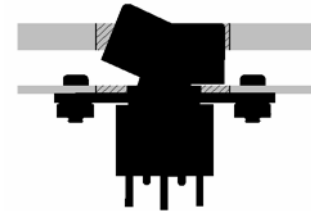
Panel Mount



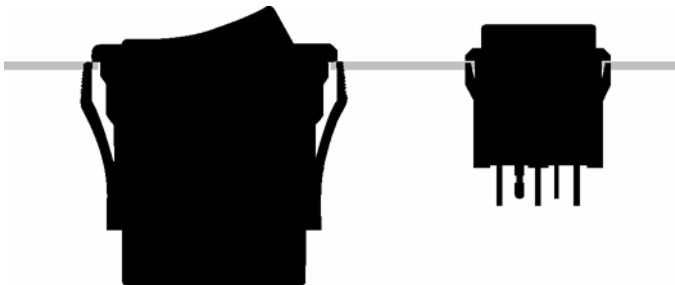
Front Panel Mount



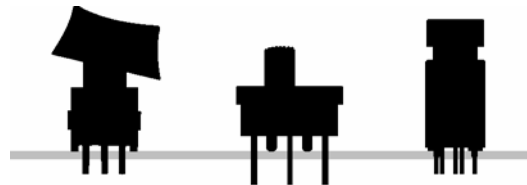
Subpanel Mount



Snap-in Mount



PC Mount



Surface Mount



Type of Actuators

Toggles



Standard



Flat



Locking Lever



Cone



Large Bat

Rockers



Paddles



Pushbuttons



Types of Actuators

Slides



Rotaries



Keylocks



DIP Rotaries



Panel Seal



Environmentally Sealed

WT



Sealing at front and back panel meets IP67 and IP60 of IEC60529 Standards.

WB



Conforms to IP67 of IEC60529 Standards at front and behind panel (dust and water protected for temporary immersion).

YB



Dust and oil tight and splashproof panel seal meet IP65 of IEC60529 Standards. Panel seal models come with exterior o-ring.

Panel Seal with O-ring

S2AW



Panel seal model conforms to IP65 of IEC60529 specifications.

Splashproof Boot

S1A with AT402



Boot protects interior parts of the switch as well as the front panel from entry of dust, liquid spills, and splashes.

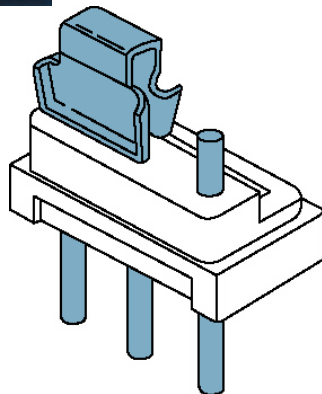
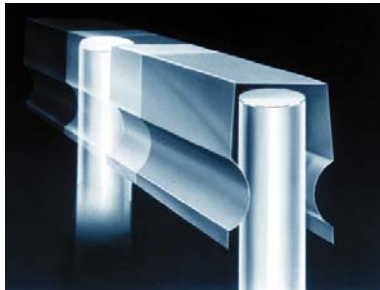
IP Code

IP60: dust tight but not protected from water.

IP65: dust tight and protected against water jets.

IP67: dust tight and protected against effects of temporary immersion.

Sliding Twin Crossbar Contacts



NKK's Sliding Twin Crossbar (STC) contacts provide the industry's most reliable contact mechanism.

The award-winning contact mechanism offers benefits unavailable in conventional mechanisms: smooth, positive detent actuation, increased contact stability, and unparalleled logic-level reliability.

These contacts are available in ultra-miniature and subminiature toggles, rockers, pushbuttons, and slides.

Featured in A, B, G, G3, SS, SS3 series.

Standards and Approvals



Many of NKK's switches are recognized or certified by UL, cULus, and CSA.



VDE approved models include JP, JW, P, SW3006A, and WR

Other Standards

- ✓ UL94V-0 rating on several switch lines
- ✓ TV rating (TV-5, TV-8) for JW rocker series

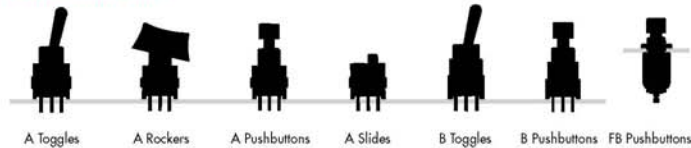
Product Overview

nkik
SWITCHES

Product Overview

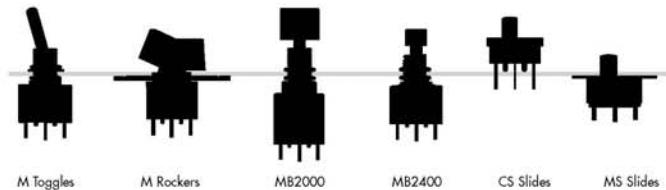
Ultra-Miniature & Subminiature

Toggles
Rockers
Pushbuttons
Slides



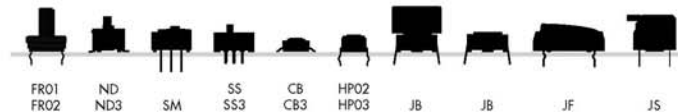
Miniature

Toggles
Rockers
Pushbuttons
Slides



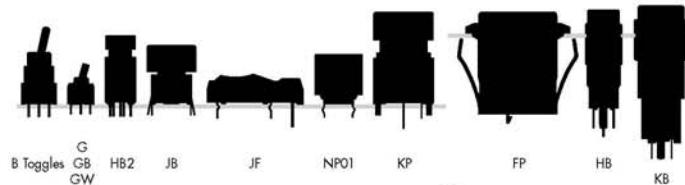
Specialty

Rotaries
DIP Rotaries
Tactiles
Slides
Keylocks
Tilt Switches



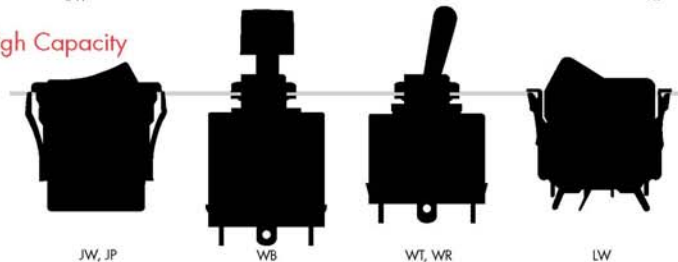
Illuminated

Toggles
Rockers
Pushbuttons
Tactiles
Slides



Standard & High Capacity

Toggles
Rockers
Pushbuttons
Rotaries



Product Overview

