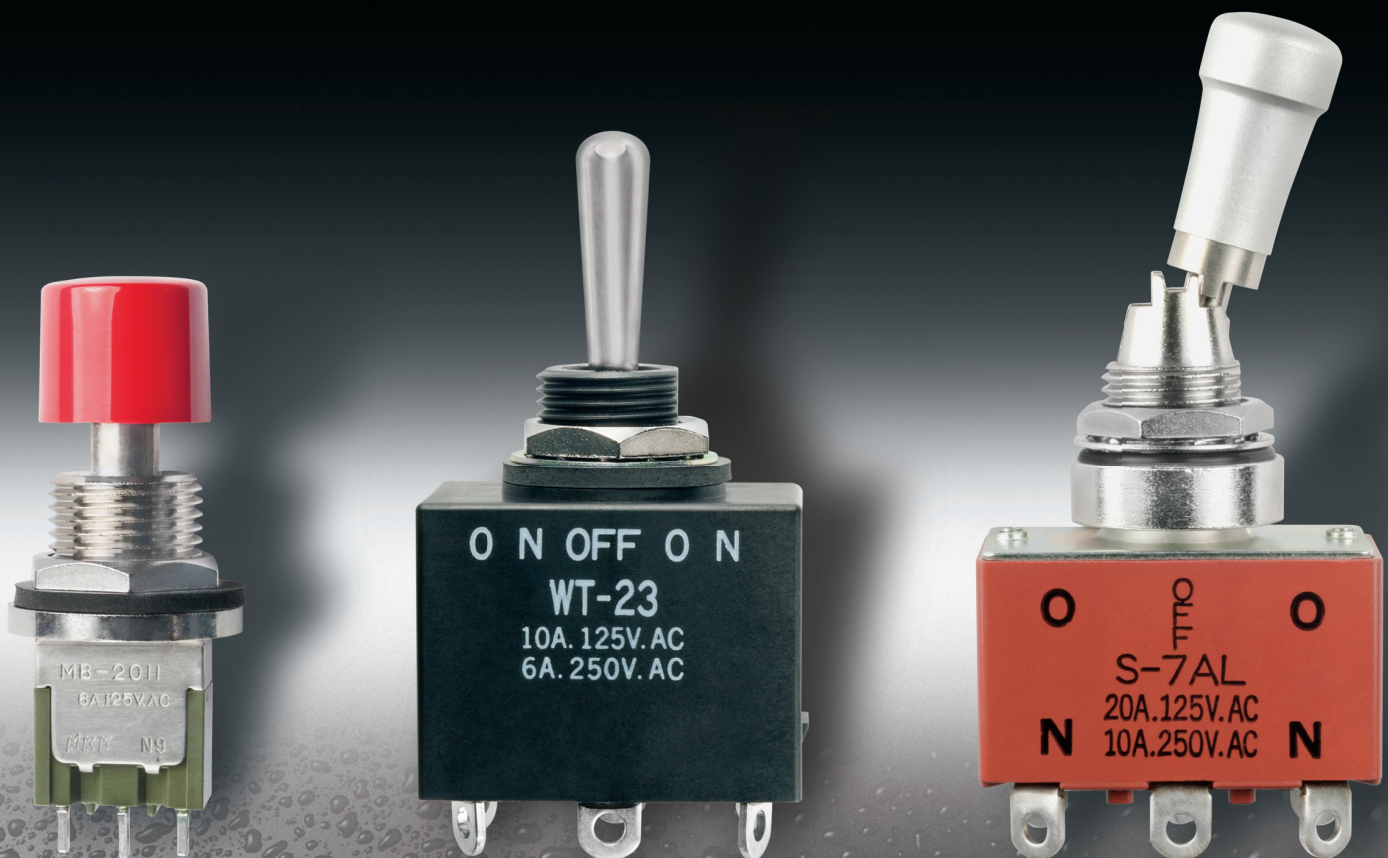


# Industrial & IP Rated Switches

For Tough Environments



**nikk**  
SWITCHES

[www.nkk.com](http://www.nkk.com)

## Switches for Your Toughest Applications



NKK Switches has a full range of illuminated and non-illuminated switches with electrical and temperature ratings for the toughest applications. This brochure covers switches rated from 3A to 50A, and sealed switches with IP ratings for protection against entry of dust, water, and other liquids.

Sealed switches meet standards from IP60 to IP67. IP ratings are a measure of ingress protection. These ratings conform to the IEC 60529 (EN 60529) standard. Worldwide approvals such as UL, CSA, and others are available on many models.

Environmentally sealed switches are ideally suited to meet the challenges of heat, humidity and exposure to the elements. Whenever an application requires water, liquids, oil or dust protection combined with harsh temperature and humidity conditions, NKK has the products and the technical expertise to help engineers choose the right switch for their application.

### Boots for Additional Protection

In addition to sealed switches, NKK also offers a variety of boots to achieve IP65 ratings. These boots are compatible with many of NKK's toggle and pushbutton switches. Refer to last page of this brochure for details.

## NKK Product Offering

NKK's switches are designed for tens of thousands of reliable operations, and are proven in real-world applications, such as: industrial, HVAC, elevator controls, construction equipment, transportation, military, medical, and telecom.

Illuminated switches can enhance your designs. NKK has the greatest number of illuminated options available in the industry. Illumination is achieved with LEDs, including Super Bright models (high brightness).

In addition, NKK offers a wide range of switches with current ratings below 3A. Often these switches are PCB mounted and are used in a wide range of applications, including industrial and factory automation. View NKK's Switch Guide to see entire product range.

**New products** include the award winning programmable OLED Rocker, YB2 Series 22mm Pushbuttons, and JWLW Rocker Switches.



**New YB2 Series 22mm Pushbuttons**  
*Square Models Also Available*

## Custom Solutions

NKK's engineering team works closely with customers to develop application specific solutions for complex challenges. Let us know your specific switch needs.

Visit our website for data sheets, free 3D CAD models, and a powerful product configuration tool. Or contact us directly! NKK has the right switch for your applications.

## More Than 60 Years of Engineering Excellence

- Design and Manufacturing of All Products
- Widest Selection of Electromechanical Switches in the Industry
- Free Online 3D CAD Models with over 500,000 Product Variations
- Custom Products for Specific Applications
- High Quality and Environmentally Safe Products (RoHS, REACH, etc.)
- ISO Certified Facilities



*Military*



*Industrial*



*Medical*





*Transportation*











*Construction*

# Industrial & IP Rated Switches



OLED Rocker		Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
		IS SmartSwitch	Yes OLED Display	IP64	Power Level: 3VA max DC	-20 ~ +70°C -4 ~ +158°F	12 Pin Connector	Snap-in  Cutout: 1.913" x 1.394" (48.6 x 35.4mm)

Toggle Switches		Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
		B Toggles	Yes Full & None	IP65 Panel Seal Models with A1 Bushing (Nonilluminated only)	Logic Level: 0.4VA max @ 28V AC/DC max	-30 ~ +85°C -22 ~ +185°F  Illuminated Models: -25 ~ +55°C -13 ~ +131°F	PC	6mm Bushing  Cutout: 6mm with Double Flat
 	 AT401 AT4181 AT402 AT428	M Toggles	No	IP67 with Bushings D3 D8 B3 L3 L8	Power Level: 6A @ 125V AC; 3A @ 250V AC; 3~4A @ 30V DC  Logic Level: 0.4VA max @ 28V AC/DC max	-30 ~ +85°C -22 ~ +185°F	Solder Lug Quick Connect PC Wirewrap	6mm, 1/4-40 Thd or 12mm Bushing  Cutout: See Details in NKK's Switch Guide or <a href="http://nkkswitches.com">nkkswitches.com</a>
 	 AT401 AT402 AT4181	P Toggles	No	IP65 with Boots AT401 AT402 AT4181	Power Level: 10A @ 125V AC; 6A @ 250V AC  Motor Load: 400W @ 125V AC  Lamp Load: 2~3A @ 125V AC	-10 ~ +85°C +14 ~ +185°F	Solder Lug Quick Connect PC	6mm, 1/4-40 Thd or 12mm Bushing  Cutout: See Details in NKK's Switch Guide or <a href="http://nkkswitches.com">nkkswitches.com</a>

 Water Proof  High Power  Applicable for Panel Seal Boots  DC Rating  Military

## Toggle Switches



	Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
 <p>Wb</p> <p>AT401 AT402 AT4181</p>	<p><b>S Toggles</b> 2~5A Low Capacity</p> 	No	IP65 with Boots AT401 AT402 AT4181	<p><b>Power Level:</b> 5A @ 125V AC; 2A @ 250V AC; 5A @ 30V DC</p>	-10 ~ +70°C +14 ~ +158°F	Solder Lug	12mm Bushing  Cutout: 12.5mm with Keyway
 <p>H W Wb</p> <p>AT401 AT402 AT4181</p>	<p><b>S Toggles</b> 6~25A Medium/ Medium High Capacity</p> 	No	IP67 Panel Seal Models with AW Bushing or AL Bushing for Locking Lever	<p><b>Power Level:</b> 15~25A @ 125V AC or 30V DC; 6~25A @ 250V AC</p> <p><b>Motor Load:</b> 400~750W @ 125V AC</p>	-10 ~ +70°C +14 ~ +158°F	Solder Lug  Screw Lug  Quick Connect	12mm Bushing  Cutout: See Details in NKK's Switch Guide or nkkswitches.com
 <p>H Wb</p> <p>AT401</p>	<p><b>S Toggles</b> 15~50A High Capacity</p> 	No	IP65 with AT401 Boot  15~30A Models Only	<p><b>Power Level:</b> 30~50A @ 125V AC or 30V DC; 15-30A @ 250V AC; 30A @ 48V DC</p> <p><b>Motor Load:</b> 750W @ 125V AC</p>	-10 ~ +70°C +14 ~ +158°F	Screw Lug	12mm Bushing  Cutout: See Details in NKK's Switch Guide or nkkswitches.com
 <p>H Wb DC</p>	<p><b>S 821D</b> <b>S 822D</b> Toggles 4~30A High Capacity</p>  <p>30A @ 30V DC, 15A @ 125V DC</p>	No	No	<p><b>Power Level:</b> 20A @ 125V DC; 15A @ 250V DC; 30A @ 30V DC or 48V DC; 4A @ 400V DC; (10A @ 400V DC)</p> <p>( ) capacity is due to series wiring</p>	-10 ~ +70°C +14 ~ +158°F	Screw Lug	12mm Bushing  Cutout: See Details in NKK's Switch Guide or nkkswitches.com
 <p>W</p>	<p><b>TL Toggles</b></p>	Yes Full	IP65 with AT401P O-ring	<p><b>Power Level:</b> 6A @ 125V AC; 3A @ 250V AC; 6A @ 12V DC</p>	-10 ~ +55°C +14 ~ +131°F	Solder Lug	12mm Bushing  Cutout: 12.5mm with Keyway

W Water Proof H High Power Wb Applicable for Panel Seal Boots DC DC Rating M Military



# Industrial & IP Rated Switches




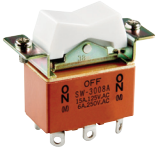












## Toggle Switches

	Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
 H W AT401 AT4181	WT Toggles	No	Front Panel IP67 Behind Panel IP67 for Wire IP60 for Solder, Screw	<b>Power Level:</b> 10A @ 125V AC; 6A @ 250V AC; 10A @ 30V DC	-30 ~ +70°C -22 ~ +158°F	Solder Lug Screw Wire Lead	12mm Bushing Cutout: 12.5mm with D-flat
 H W M	ST Toggles Explosion Proof	No	IP67 with AT401P O-ring Hermetically Sealed Withstands 5 Actuations in 13mm Water	<b>Power Level:</b> 10~25A @ 125V AC; 15~30A @ 30V DC	-63 ~ +71°C -81 ~ +159°F	Screw	12mm Bushing Cutout: 12.5mm with D-flat




## Rocker Switches

	Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
 H W	JWL JWLW Rockers	No	JWL: IP50 with AT4126 Dust Cover JWLW: IP67	<b>Power Level:</b> 16A @ 125/250V AC; 5A @ 72V DC JWL: TV-8 Rated High Inrush (117A)	JWL: -25 ~ +70°C -13 ~ +158°F JWLW: -25 ~ +85°C -13 ~ +185°F	Solder Lug .187" (4.75mm) Quick Connect	Snap-in Cutout JWL: 1.161" x .807" (29.5 x 20.5mm) Cutout JWLW: 1.209" x .807" (30.7 x 20.5mm)
 H W	JWM JMMW Rockers	No	JWM: No JMMW: IP67	<b>Power Level:</b> 10A @ 125/250V AC 10A @ 30V DC for JMMW only JWM: TV-5 Rated High Inrush (78A)	JWM: -25 ~ +70°C -13 ~ +158°F JMMW: -25 ~ +85°C -13 ~ +185°F	Solder Lug .110" (2.79mm) Quick Connect	Snap-in Cutout JWM: .945" x .606" (24.0 x 15.4mm) Cutout JMMW: .984" x .606" (25.0 x 15.4mm)
 H	JWS Rockers	Yes Spot & None	No	<b>Power Level:</b> 5~10A @ 125/250V AC	-25 ~ +70°C -13 ~ +158°F <b>Illuminated Models:</b> -25 ~ +50°C -13 ~ +122°F	Solder Lug .187" (4.75mm) Quick Connect	Snap-in Cutout: .756" x .508" (19.2 x 12.9mm)

W Water Proof 
 H High Power 
 Wb Applicable for Panel Seal Boots 
 DC DC Rating 
 M Military

Rocker Switches		Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
		<b>SW Rockers Medium Capacity</b> 	No	No	<b>Power Level:</b> 15~20A @ 125V AC or 30V DC; 6~10A @ 250V AC	-10 ~ +70°C +14 ~ +158°F	Solder Lug	2-screw Panel or Subpanel Mount  Cutout: See Details in NKK's Switch Guide or <a href="http://nkkswitches.com">nkkswitches.com</a>
		<b>SW Rockers High Capacity</b> 	No	No	<b>Power Level:</b> 30A @ 125/250V AC or 30V DC	-10 ~ +70°C +14 ~ +158°F	Screw Lug	2-screw Panel or Subpanel Mount  Cutout: See Details in NKK's Switch Guide or <a href="http://nkkswitches.com">nkkswitches.com</a>
 		<b>SW 3821D SW 3822D Rockers High Capacity</b>  30A @ 30V DC, 15A @ 125V DC	No	No	<b>Power Level:</b> 20A @ 125V DC; 15A @ 250V DC; 30A @ 30V DC or 48V DC; 4A @ 400V DC (10A @ 400V DC)  ( ) capacity is due to series wiring	-10 ~ +70°C +14 ~ +158°F	Screw Lug	2-screw Panel or Subpanel Mount  Cutout: See Details in NKK's Switch Guide or <a href="http://nkkswitches.com">nkkswitches.com</a>
 		<b>WR Rockers</b> 	No	Front Panel IP67 Behind Panel IP67 for Wire Solder, Screw, QC	<b>Power Level:</b> 15A @ 125/250V AC or 30V DC	-25 ~ +85°C -13 ~ +185°F	Solder Lug Screw Lug Quick Connect Wire Lead	Snap-in  Cutout: 1.346" x .677" (34.2 x 17.2mm)










## Pushbutton Switches

Pushbutton Switches		Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
		<b>JPL Pushbuttons</b> 	No	No	<b>Power Level:</b> 16A @ 125/250V AC TV-8 Rated High Inrush (117A)	-10 ~ +70°C +14 ~ +158°F	Solder Lug .187" (4.75mm) Quick Connect	Snap-in  Cutout: 1.102" x .835" (28.0 x 21.2mm)

 Water Proof  High Power  Applicable for Panel Seal Boots  DC Rating  Military

# Industrial & IP Rated Switches






Pushbutton Switches	Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
	<b>JPM Pushbuttons</b> 	No	No	<b>Power Level:</b> 10A @ 125/250V AC <b>TV-5 Rated</b> High Inrush (78A)	-10 ~ +70°C +14 ~ +158°F	Solder Lug .187" (4.75mm) Quick Connect	Snap-in Cutout: 1.102" x .835" (28.0 x 21.2mm)
	<b>LB Pushbuttons</b> <b>Round, Square &amp; Rectangular Models</b> 	Yes Full, Spot & None	IP65 Panel Seal Models IP60 with Dust Covers AT4001 AT4002 AT4011	<b>Power Level:</b> 3A @ 125/250V AC or 30V DC <b>Logic Level:</b> 0.4VA max @ 28V AC/DC max	-25 ~ +70°C -13 ~ +158°F <b>Illuminated Models:</b> -25 ~ +50°C -13 ~ +122°F	Solder Lug .110" (2.79mm) Quick Connect PCB Adaptors Available	Bushing Cutout: See Details in NKK's Switch Guide or <a href="http://nkkswitches.com">nkkswitches.com</a>
 AT4041 AT4042 AT4043	<b>MB2000 Pushbuttons</b> 	No	IP67 with Bushings B3 D3 IP65 with Boots AT4041 AT4042 AT4043	<b>Power Level:</b> 6A @ 125V AC; 3A @ 250V AC or 30V DC <b>Logic Level:</b> 0.4VA max @ 28V AC/DCmax	-30 ~ +85°C -22 ~ +185°F	Solder Lug Quick Connect PC Wirewrap	Bushing Cutout: See Details in NKK's Switch Guide or <a href="http://nkkswitches.com">nkkswitches.com</a>
 AT4043	<b>WB Pushbuttons</b>	No	Front Panel IP67 Behind Panel IP67 for Wire IP60 for Solder & Screw	<b>Power Level:</b> 6A @ 125V AC or 30V DC; 3A @ 250V AC	-30 ~ +70°C -22 ~ +158°F	Solder Lug Screw Lug Wire Lead	12mm Bushing Cutout: 12.5mm with D-flat
	<b>YB Pushbuttons</b> <b>Round, Square &amp; Rectangular Models</b> 	Yes Full, Spot & None	IP65 with Panel Seal Bushing Mount IP60 with AT4115 Dust Cover	<b>Power Level:</b> 3A @ 125/250V AC or 30V DC <b>Logic Level:</b> 0.4VA max @ 28V AC/DC max	-25 ~ +70°C -13 ~ +158°F <b>Illuminated Models:</b> -25 ~ +50°C -13 ~ +122°F	Solder Lug .110" (2.79mm) Quick Connect	Bushing Snap-in Cutout: See Details in NKK's Switch Guide or <a href="http://nkkswitches.com">nkkswitches.com</a>



 Water Proof  High Power  Applicable for Panel Seal Boots  DC Rating  Military



## Pushbutton Switches

	Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
	 <b>YB2 Pushbuttons</b> <b>Round &amp; Square Models</b> 	Yes Full, Ring & None	IP65 Panel Seal Flush Mount	<b>Power Level:</b> 3A @ 125/250V AC or 30V DC  <b>Logic Level:</b> 0.4VA max @ 28V AC/DC max	-25 ~ +70°C -13 ~ +158°F  <b>Illuminated Models:</b> -25 ~ +50°C -13 ~ +122°F	Solder Lug .110" (2.79mm) Quick Connect	Bushing  Cutout: 22mm with Keyway

## Rotary Switches

	Switch Series	Illuminated	IP Rating	Electrical Rating	Operating Temperature	Terminal Options	Mounting Type/Panel Cutout
	 <b>PS Rotaries</b>	No	No	<b>Power Level:</b> 30A @ 125/250V AC	-10 ~ +70°C +14 ~ +158°F	Screw Lug	10mm Bushing  Cutout: See Details in NKK's Switch Guide or nkkswitches.com

 Water Proof 
  High Power 
  Applicable for Panel Seal Boots 
  DC Rating 
  Military

## IP Code for Degrees of Protection for Enclosures

The IP code is part of the IEC 60529 (EN 60529) standard specifying the degree of protection by enclosures for low-voltage switch gear; specifically, concerned with protection of persons against contact with live or moving parts and the prevention of ingress of solid foreign bodies and liquid. The IP code is a specification used internationally and is similar to the NEMA standard.

- IP60** Dust tight but not protected against water
- IP64** Dust tight and protected against splashing water from any direction
- IP65** Dust tight and protected against water jets from any direction
- IP67** Dust tight and protected against effects of temporary immersion



# Industrial & IP Rated Switches



## Wide Selection of Panel Seal Boots

NKK offers a variety of boots to seal switches to achieve IP65 rating of IEC 60529 at the front panel. These boots are compatible with many of NKK's toggle and pushbutton switches.



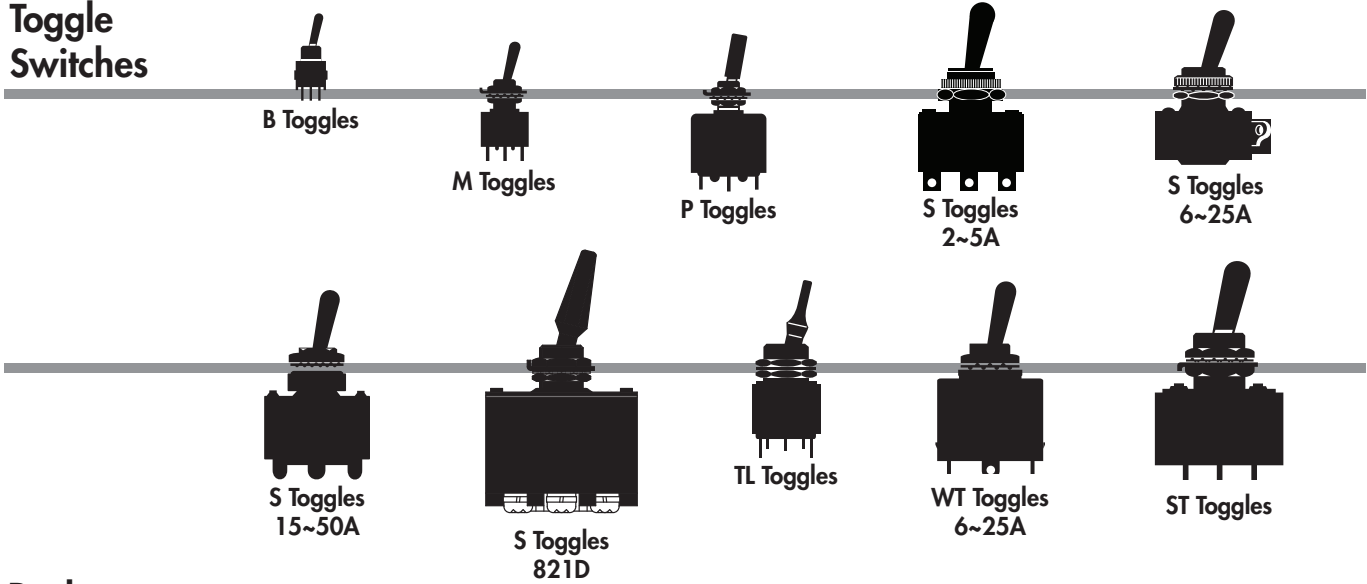
PN	AT401 Half Boot	AT402, AT402S Full Boots	AT428 Full Boot	AT4041, AT4042 Full Boots	AT4043 Full Boot	AT4181 Full Boot
<b>Material</b>	AT401A: Nitrile butadiene rubber AT401H: Ethylene propylene rubber AT401S: Silicone rubber	Silicone rubber	Silicone rubber	Silicone rubber	Silicone rubber	Silicone rubber
<b>Color</b>	Black for AT401A Gray for AT401H Black for AT401S	Black, Red, Yellow, Green, and Gray	Black	Black	Black	Black
<b>Bushing</b>	12mm	12mm	M6 or 1/4-40 Thd	M6 or 1/4-40 Thd	12mm	12mm

## Applicable Switch Series for Panel Seal Boots

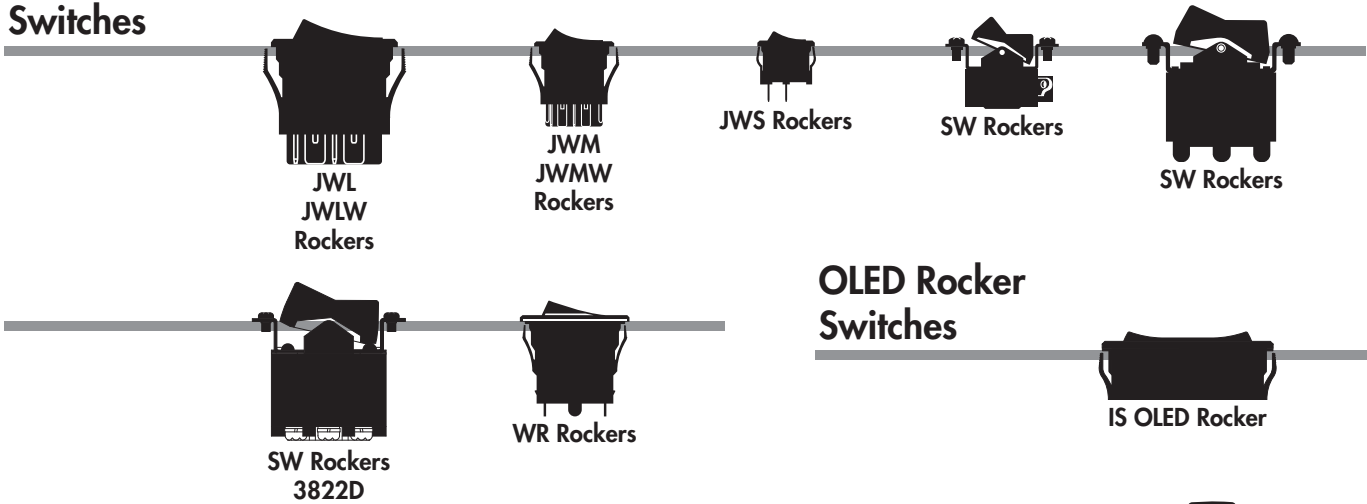
	AT401	AT402	AT402S	AT428	AT4041, AT4042	AT4043	AT4181
	M12 Bushing	M12 Bushing	M12 Bushing	M6 or 1/4-40 Thd	M6 or 1/4-40 Thd	M12 Bushing	M12 Bushing
M Toggles with 10.5mm bat actuator and 6mm or 1/4-40 bushing				•			
M Toggles with 11.5mm bat actuator and 12mm "B1" bushing			•				
M Toggles with 17.5mm bat actuator and 12mm "B1" bushing	•	•					•
MB2000 Pushbuttons with 6mm or 1/4-40 bushing and "S" plunger					•		
MB2000 Pushbuttons with 12mm "B1" bushing						•	
P Toggles with 17.5mm bat actuator and 12mm bushing	•	•					•
S114; S116; S1A~S7A; S1F~S7F; S21A; S21F Toggles	•	•					•
S1AW~S9AW; S21AW; S25AW~S29AW Toggles	•						•
S31~S39; S31F~S33F; S31T~S33T; S41~S49; S41F~S43F; S41T~S43T Toggles	•	•					•
S301~S309; S301F; S301T~S309T; S331~S339; S331T~S339T; S331F~S335F; S421~S429; S421T~S429T Toggles	•	•					•
S821~S823; S831~S833 Toggles	•						
SB61A; SB61B; SB221NC; SB221NO Pushbuttons						•	
WB Pushbuttons all models						•	
WT Toggles all models	•						•

## Product Overview

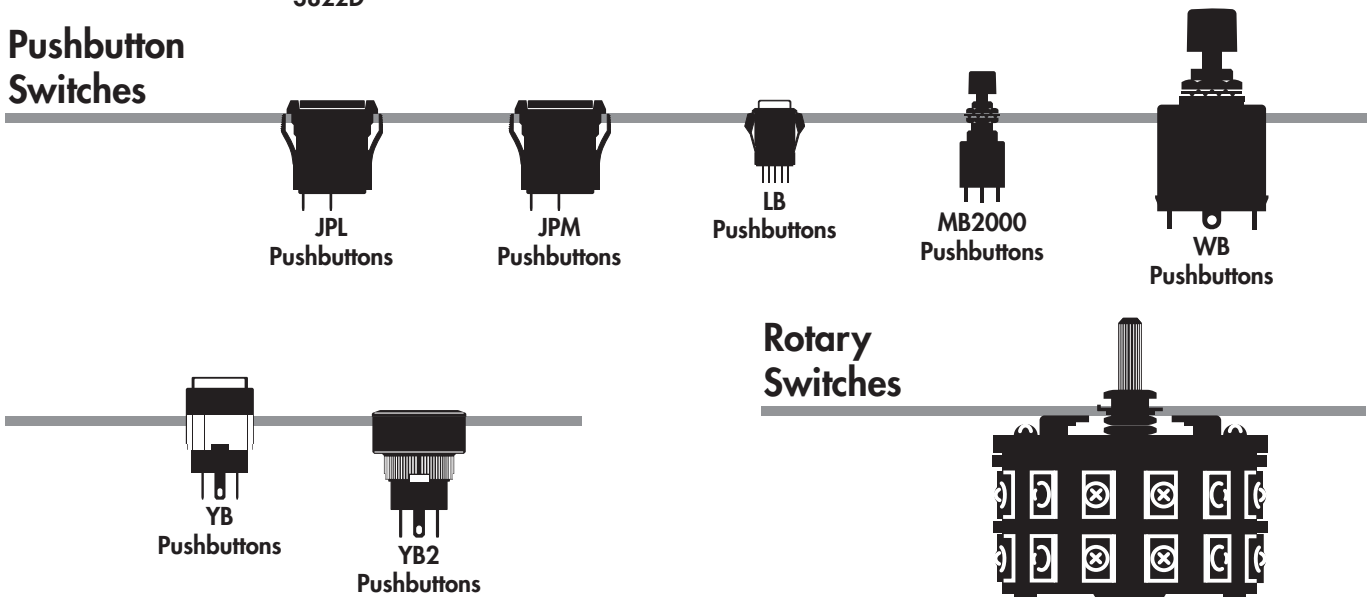
### Toggle Switches



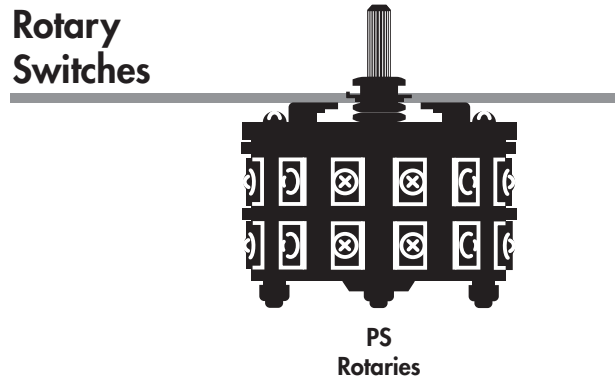
### Rocker Switches



### Pushbutton Switches



### Rotary Switches





# NKK SWITCHES

**NKK Switches Co., Ltd.**

<http://www.nkk.com> E-mail: [contact@nkkswitches.eu](mailto:contact@nkkswitches.eu)

---

**European Liaison Office:**

Mergenthalerallee 10-12 , 65760 Eschborn, Germany  
TEL: +49 61 96 400 187 / +49 61 96 400 189 (German)

**Corporate Headquarters:**

715-1, Unane, Takatsu-ku, Kawasaki-shi, 213-8553 Japan  
TEL: +81 44 813 8008 FAX: +81 44 813 8038

---

**Global Offices:**

Americas: NKK Switches of America, Inc. (Scottsdale, AZ, USA)  
Asia: NKK Switches Hong Kong Co., Ltd. (Hong Kong, PR China)  
China: NKK Switches China. Co., Ltd. (Shanghai, PR China)

**NKK**  
SWITCHES