New Brushed Chrome Cap and Bezel

Thin Flush Mount Pushbuttons
YB2 Panel Seal

NKK
SWITCHES

Series YB2

General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver):	3A @ 125V AC or 3A @ 250V AC or 3A @ 30V DC
Logic Level (gold):	0.4VA maximum @ 28V AC/DC maximum
	(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

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 for 1 minute minimum;
	1,500V AC minimum between contacts & case for 1 minute minimum
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:	Single pole: 1.5N
	Double pole: 3.0N
Contact Timing:	Nonshorting (break-before-make)
Travel:	Pretravel .059" (1.5mm); Overtravel .059" (1.5mm); Total Travel .118" (3.0mm)
	.098" (2.5mm) in Latchdown Position

Materials & Finishes

Bezel:	Black: Glass fiber reinforced polyamide (UL94V-0); Silver: Polycarbonate
Housing:	Glass fiber reinforced polyamide (UL94V-0)
Base:	Diallyl phthalate resin (UL94V-0)
Movable Contactor:	Phosphor bronze with silver or gold plating
Movable Contacts:	Phosphor bronze & silver alloy
Stationary Contacts:	Silver alloy or copper with gold plating
Switch Terminals:	Phosphor bronze with tin plating
Lamp Terminals:	Phosphor bronze with tin plating

Environmental Data

|	
Operating Temperature 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
Humidity:	90 ~ 95% 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 (490m/s^2) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)
Sealing:	IP65 of IEC60529 standard

Installation

Mounting Torque:	0.785Nm (6.95 lb•in) maximum
Soldering Time & Temperature:	Manual Soldering: 390°C maximum for 4 seconds maximum

Standards & Certifications

Flammability Standards:	UL94V-0 housing, base & black or metallic silver bezel
UL:	File No. E44145
	All solder lug models recognized at 3A @ 125/250V AC or 0.4VA @ 28V AC/DC maximum.
	Add "/CUL" to end of part number to order cULus mark on switch.

nkk SWITCHES

Distinctive Characteristics

- High quality brushed chrome cap and bezel options.

- Improved weather durability against ultaviolet rays.

- Meets IP65 of IEC60529 standards (similar to NEMA 4 and 13), providing dust tight and splashproof panel seal protection.

- Short body of .965" (24.5mm) conserves behind-panel space.

- Tamper resistant 19mm diameter actuator and 18mm square actuator.

- Shortest above-panel dimension (1.8mm) in the industry for splashproof design making panel flat and preventing operator error.

- Light weight compared to actual metal switches due to metal plating on resin.

- Distinctive long stroke and light touch actuation for smooth actuation and clear indication of circuit status.

- Choice of cap colors includes clear, red, green, amber, or brushed chrome for enhanced panel appearance.

- Metallic silver cap option has bright ring illumination (round only).

- Bezel color options in brushed chrome or black.

- Available in momentary and alternate action with latchdown.

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

- Combination solder lug and .110" quick connect terminals. Terminals are epoxy sealed to lock out flux, dust, solvents, and other contaminants, as well as to secure terminals and improve contact stability.

(1.8) .071

(24.5) .965
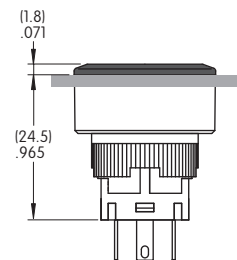
Brushed Chrome Bezel + Brushed Chrome Cap

Brushed Chrome Bezel + Ring Illuminated Metallic Silver Cap
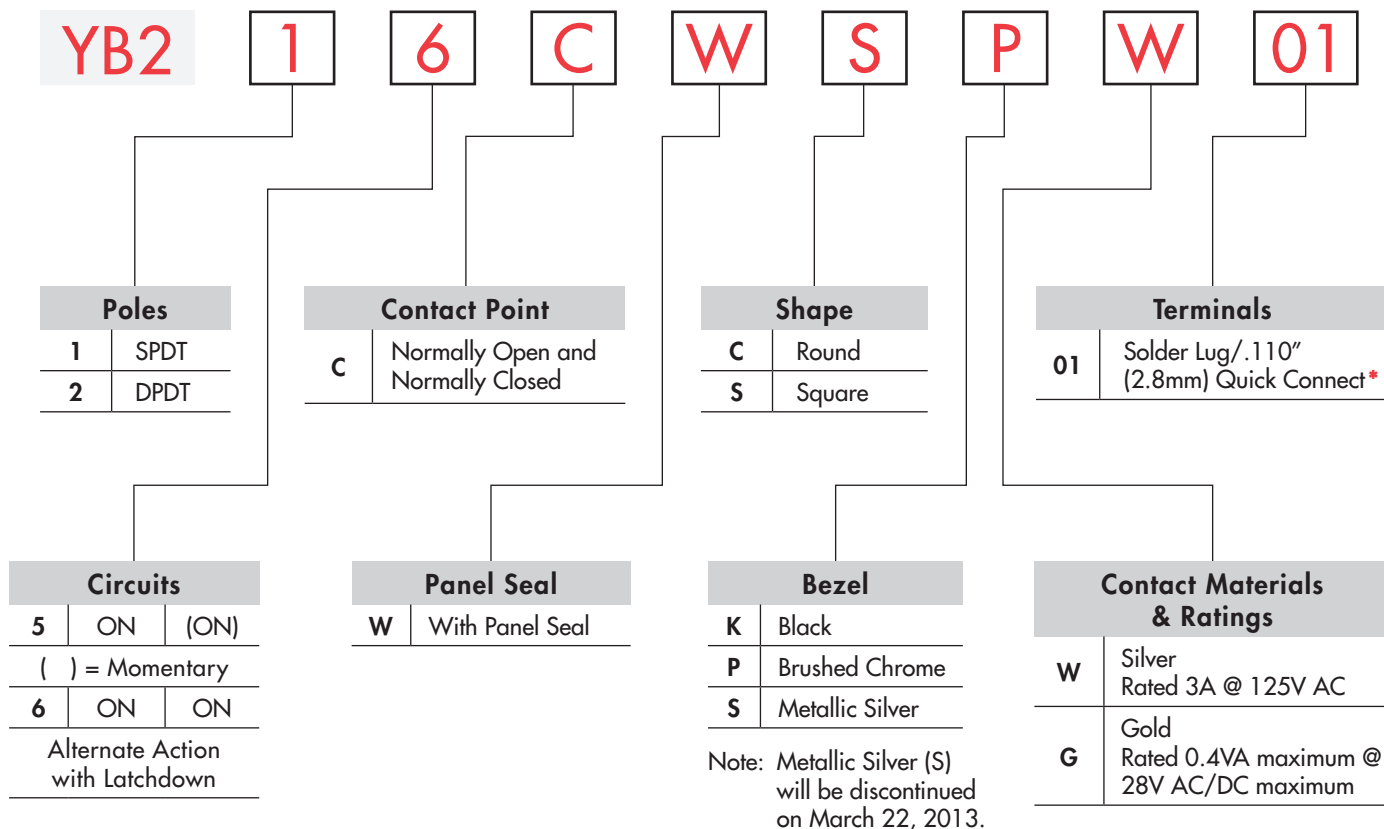
Brushed Chrome Bezel + Illuminated Cap

Brushed Chrome Bezel + Brushed Chrome Plated Cap

Brushed Chrome Bezel + Illuminated Cap

TYPICAL SWITCH

| YB2 | 1 | 6 | C | W | S | P | W | 01 |

Poles
| 1 | SPDT |
| 2 | DPDT |

Contact Point
| C | Normally Open and Normally Closed |

Shape
| C | Round |
| S | Square |

Terminals
| 01 | Solder Lug/.110" (2.8mm) Quick Connect* |

Circuits
5	ON	(ON)
	( ) = Momentary	
6	ON	ON
Alternate Action with Latchdown		

Panel Seal
| W | With Panel Seal |

Bezel
K	Black
P	Brushed Chrome
S	Metallic Silver

Note: Metallic Silver (S) will be discontinued on March 22, 2013.

Contact Materials & Ratings
| W | Silver Rated 3A @ 125V AC |
| G | Gold Rated 0.4VA maximum @ 28V AC/DC maximum |

IMPORTANT:

Switches are supplied without cULus marking unless specified. **cULus recognized only when ordered with marking on the switch.** Specific models, ratings, & ordering instructions are noted on General Specifications page.

* Wire harness & cable assemblies offered only in Americas

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

YB216CWSPW01-N-P

- Brushed Chrome Cap
- Brushed Chrome Bezel
- Square Black Housing
- SPDT ON-ON Circuit
- With Panel Seal
- Silver Contacts with 3 Amp Rating
- Solder Lug/.110" (2.8mm) Quick Connect Terminals

ORDERING EXAMPLE

—　　　　　N　　　　　—　　　　　P

| LEDS | | Cap Types & Colors | |

Bright LED / Lens/Diffuser Colors

LED Colors		Resistor	
5C	Red	No Code	No Resistor (not for Green)
5D	Amber	05	5-volt
5F	Green	12	12-volt
		24	24-volt

Lens/Diffuser Colors

JB	Clear/White
JS	Metallic Silver Cap/Clear Ring (round only)
CB	Red/White
EB	Yellow/White
FB	Green/White

LED & cap need to be the same color.
Yellow cap pairs with amber LED to achieve
amber illumination. Codes JB & JS (round only)
may be combined with all LED colors.

Super Bright LED

6B	White
6F	Green
6G	Blue

Lens/Diffuser Cap Colors

JB	Clear/White
JS	Metallic Silver Cap/Clear Ring (round only)

Nonilluminated

N	No Lamp

Cap Color

JB	Clear/White
CB	Red/White
EB	Yellow/White
FB	Green/White
P	Brushed Chrome
S	Metallic Silver

Note: Metallic Silver (S) will be discontinued on
March 22, 013.

POLES & CIRCUITS

Pole	Model	Plunger Position ( ) = Momentary		Connected Terminals		Throw & Switch/Lamp Schematics
		Normal	Down	Normal	Down	Notes: Switch is marked with NC, NO, COM, L+, L–. Lamp circuit is isolated and requires an external power source.
SP	**YB215** **YB216**	ON ON	(ON) ON	1-3	1-2	SPDT 1 (COM) / 3 NC 2 NO L (+) ●─○─● (-) L
DP	**YB225** **YB226**	ON ON	(ON) ON	1-3 4-6	1-2 4-5	DPDT 1 (COM) 4 / 3 NC 2 NO 6 NC 5 NO L (+) ●─○─● (-) L

CONTACT POINT

C   **Normally Open and Normally Closed**

Contact points are both Normally Open and Normally Closed.

PANEL SEAL

W   **Panel Seal (round and square)**

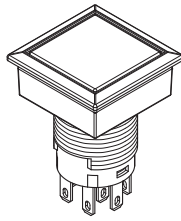Two o-rings provide panel seal protection meeting IP65 of IEC60529 standards.
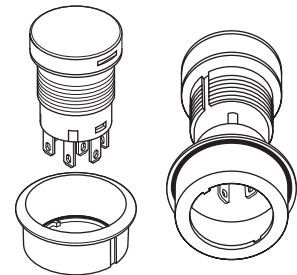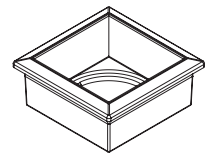
SHAPE

C Round
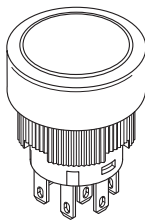
S Square

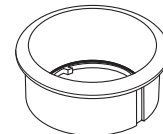## BEZEL

K   Black

P   Brushed Chrome

S   Metallic Silver

CONTACT MATERIALS & RATINGS

W   Silver Contacts
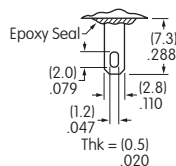
Power Level: 3A @ 125/250V AC

Switch base is green

G   Gold Contacts

Logic Level: 0.4VA max. @ 28V AC/DC max.

Switch base is red

TERMINALS

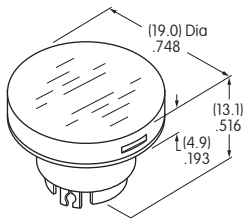**01**   **Solder Lug/ .110" (2.8mm) Quick Connect**

Epoxy Seal

(7.3) .288
(2.0) .079
(2.8) .110
(1.2) .047
Thk = (0.5) .020

NKK SWITCHES

CAPS & CAP COLORS

**AT3017 Cap for
Bright LED**

Lens/Diffuser Colors Available:

JB	Clear/White
CB	Red/White
EB	*Yellow/White
FB	Green/White

**AT3018 Cap for
Super Bright LED**

Lens/Diffuser Colors Available:
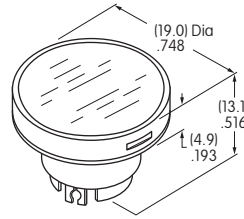
| JB | Clear/White |
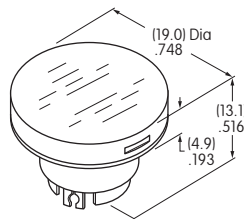
**AT3019 Cap for
Nonilluminated**

Cap Color Available:

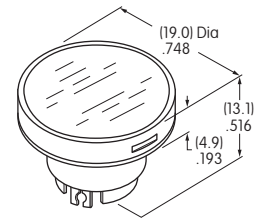| P | Brushed Chrome |
| S | Metallic Silver |

Note: AT3017 Cap can
also be used without
illumination.

**AT3020 Cap with
Illumination Ring for
Bright or Super Bright LED**

Cap Color Available:

| JS | Metallic Silver with
Clear Ring |

(19.0) Dia .748
(13.1) .516
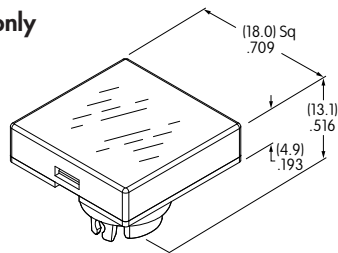(4.9) .193

Material for Lens & Diffuser: Polycarbonate

Materials
Lens: Polycarbonate
Insert: Polyester

*Yellow cap pairs with amber LED to achieve amber illumination.

**AT3025 Cap for
Illuminated**

Lens/Diffuser Colors Available:

| JB | Clear/White
For Bright & Superbright LEDs |
| CB | Red/White
For Bright LED only |
| EB | *Yellow/White
For Bright LED only |
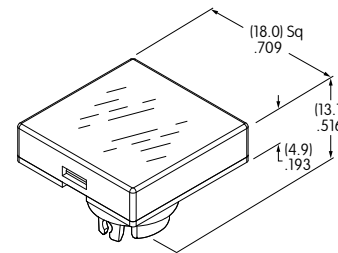| FB | Green/White
For Bright LED only |

**AT3027 Cap for
Nonilluminated**

Cap Color Available:

| P | Brushed Chrome |
| S | Metallic Silver |

Note: AT3025 Cap can also be
used without illumination.

(18.0) Sq .709
(13.1) .516
(4.9) .193

Material for Lens & Diffuser: Polycarbonate

*Yellow cap
pairs with amber LED
to achieve amber illumination.

Series YB2

TYPICAL SWITCH DIMENSIONS

Single Pole **Double Pole**

M16 P1

(1.2) x (2.0) Typ
.047 x .079

(0.5) Typ
.020

(2.8) Typ
.110

(18.0) Sq
.709

(1.8)
.071

(24.5)
.965

(7.3)
.288

(7.3)
.288

(24.0) Sq
.945

(31.8)
1.252

(3.7)
.146

(2.8)
.110

(9.7)
.382

(3.0)
.118

(5.55)
.219

(3.7)
.146

(2.8)
.110

(9.7)
.382

(6.0)
.236

(11.1)
.437

YB216CWSPW01-N-P

PANEL THICKNESS & CUTOUT

Panel Thickness
.020" ~ .197"
(0.5mm ~ 5.0mm)

(25.4) Min
1.00

(22.0) ±0.3 −0.0 Dia Typ
.866

(25.4) Min
1.00

(10.5)
.413

(1.7) Typ
.067

Side-by-side Mounting

Panel Thickness
.020" ~ .197"
(0.5mm ~ 5.0mm)

.965 Typ
(24.5)

.827 Typ +.012 (0.3) 0
(21.0)

Side-by-side Mounting

Availability
October 22, 2012