

## HB22 Series Pushbutton Switches

### Product Overview

#### Specs

The product contains pilot lamp, pushbutton, illuminated pushbutton, selector switch key- lock switch, emergency pushbutton, double head pushbutton and so on. Its normal diameter of installation hole is  $\Phi 22\text{mm}$ ; and some types can be installed in  $\Phi 30\text{mm}$  hole with the  $\Phi 30\text{mm}$  diameter changing nut.

#### Performance

Switch unit is separated independently and the insulating performance is very well. The product meets standards of IEC 60947- 5- 1, GB14048. 5 etc.

#### Structure

The switch unit is slow- break and self- cleaning. It uses modular combination mode and you can combine from one to eight switch units optional, so can make the product meet the requirement of many special control circuits.

#### Protective Degree

The protective degree is IP 40.

#### Lamp Ratings

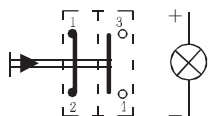
Lamp Type	AC LED Lamp			Neon Lamp		
Rated Voltage	AC/DC 6V	AC/DC 12V	AC/DC 24V	AC/DC 110V	AC/DC 220V	
Lamp Color	R	G	Y	O	B	W
Life	About 40,000 hours			About 20,000 hours		

Note: 1. Use LED lamp below 60V; use neon lamp above 60V.

2. The lamp contains current- limiting resistor inside and doesn't need connect outside..

3. The standard is using AC/DC LED lamp, DC LED lamp, dual- color LED lamp and other voltages can be customized.

#### Circuit Diagram



Switch Code : 11

1, 2 are normal closed;

3, 4 are normal opened;

### Specifications

Operating Environment	Temperature: - 25~ + 55°C (no freezing) Humidity: 45~ 85%RH (no condensation)
Contact Material	- silver - silver alloy - gold- clad silver, cladding thickness is $3\mu\text{m}$
Contact Resistance	$\leq 50\text{m}\Omega$
Insulation Resistance	$\geq 100\text{M}\Omega$
Dielectric Strength	3000V, Alternating Current 50Hz
Vibration Resistance	50Hz, Amplitude 1.0mm p-p
Shock Resistance	$\geq 10\text{g}$
Life	Momentary type: $\geq 1,000,000$ times, Selector type: $\geq 500,000$ times, Key- lock type, Emergency type: $\geq 200,000$ times
	Electrical
Terminal	Thread connection, diameter of welded wire: $2 \times 0.8\text{mm}$ max Connecting link: $6.3 \times 0.8\text{mm}$

### Switch Ratings

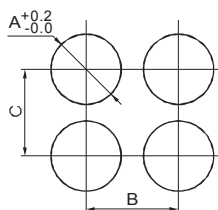
Rated Insulation Voltage	Ui: 600V					
Thermal Current	Ith: 10A					
Rated Voltage	24V	48V	110V	220V	380V	500V
Direct Current	10A	5A	2.2A	1.1A		
Alternating Current P.F.=0.7			10A	6A	4A	2A

### Implication of Type

HB22	-	□	■	/	◇	◆	/	△	/	▲
Code of series	Contact Structure: 11 1NO1NC 22 2NO2NC 33 3NO3NC 44 4NO4NC	Operating type: BD domed pilot lamp PD round flat pilot lamp X selector type XB lever type Y key- lock type M mushroom type TS emergency type S double head type No letter means momentary.	◇ expresses selector and key- lock operating position: 2 two position 3 three position ◆ expresses operating type: 1 maintain 2 half return 3 self return	Lamp Voltage (Please check the lamp rating)	Color: R red G green Y yellow O orange B blue W white N black					

### Installation Dimensions


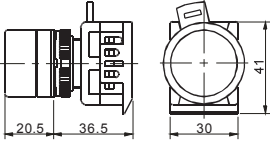

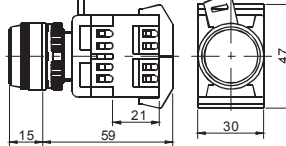

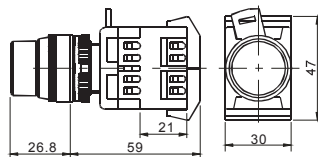

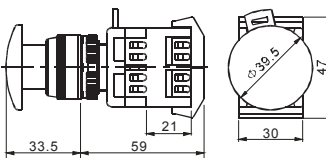

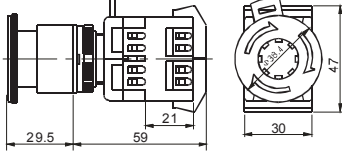

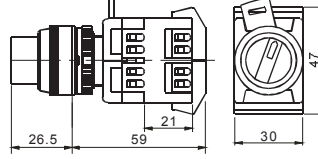

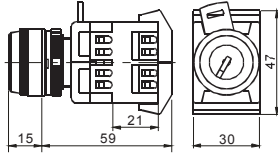

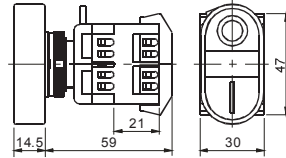
Panel thickness is 0.5~ 5mm



Type	A	B	C	Remarks
Normal, Key- lock	$\Phi 22$ or $\Phi 25$	$\geq 40$	$\geq 50$	1. Unit mm 2. Can be used in 25mm installation hole with a diameter changing circle. 3. B and C are both the minimum dimensions.
Lever		$\geq 40$	$\geq 55$	
Mushroom		$\geq 50$	$\geq 50$	
Big Mushroom		$\geq 70$	$\geq 70$	

### Product Outline

Shape	Operating Type	Type Number	Dimensions	Remarks
Domed Pilot Lamp 	Pilot Lamp	HB22- BD/△/▲		R G Y O B W

Shape	Operating Type	Type Number	Shape & Dimensions	Remarks
Flat Round Head Pilot Lamp 	Pilot Lamp	HB22- PD/△/▲		R G Y B W
Flat Head (can be illuminated) 	Momentary	HB22- □/△/▲		R G Y B W ⊙ The black cover can't be used with lamp. ⊙ The height not is changed for the illuminated type
Long Head (can be illuminated) 	Momentary	HB22- □G/△/▲		R G ⊙ The height not is changed for the illuminated type
Mushroom (Can be illuminated) 	Momentary	HB22- □M/△/▲		R G ⊙ Dimension of the head: $\phi 35\text{mm}$ ⊙ The height not is changed for the illuminated type
Emergency Pushbutton 	Push- lock Turn- reset	HB22- □TS/△/▲		⊙ The height not is changed for the illuminated type
Selector Switch (can be illuminated) 	$\begin{matrix} L & R \\ & \searrow \nearrow \\ & 90^\circ \end{matrix}$ 2 position maintain $\begin{matrix} L & C & R \\ & \searrow \nearrow \\ & 45^\circ \end{matrix}$ 3 position maintain	HB22- □X/21/△/▲ HB22- □X/31/△/▲		R G N ⊙ The black cover can't be used with lamp. ⊙ The height is not changed for the illuminated type
Key- lock Switch 	$\begin{matrix} L & R \\ & \searrow \nearrow \\ & 90^\circ \end{matrix}$ 2 position maintain $\begin{matrix} L & C & R \\ & \searrow \nearrow \\ & 45^\circ \end{matrix}$ 3 position maintain	HB22- □Y/21 HB22- □Y/31		⊙ Two keys are supplied. The key can be out in both positions.
Rectangular (can be illuminated) 	Double Head Momentary	HB22- □S/▲		R G ⊙ The height is not changed for the illuminated type