

HBY5

Product Overview

HBY5 series are suitable to industrial control circuit with AC 50Hz or 60HZ, rated voltage and D C operating voltage, used for the control of magnetic starter, contactor, relay and other electric circuit.

Specs The product has two types: normal type and economical type, containing pilot lamp, pushbuttons, illuminated pushbuttons, mushroom push button, emergency pushbuttons, selector switches, key-lock switches, mushroom key-lock switches, double head switches, The installation hole is $\Phi 22\text{mm}$ It used in wide area.

Performance Using high quality inflaming retarding materials. Switch unit is separated independently, the insulating performance and antivibration is very well. The product meets standards of IEC60947-5-1, 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. It can be connected more safely and installed firmly. Economical plastic type can be used in acid environment.

Protective Degree Protection class have IP40 and IP65



Switch Ratings

Rated Insulation Voltage(Ui)		660V						
Terminal Current (Ith)		10A Temperature rise does not exceed the current allowed by the maximum rating						
Rated Voltage		24V	48V	110V	220V	380V	500V	
Rated Current	AC	Resistive load	10A	—	10A	6A	—	—
		Inductive load	10A	—	6A	3A	1.8A	1.4A
	DC	Resistive load	8A	4A	2.2A	1.1A	—	—
		Inductive load	4A	2A	1.1A	0.6A	—	—
Contact material		Silver alloy						

Minimum adaptable load: 3VAC/DC 5mA (available range depends on the use environment and load type)

Installation Dimensions and circuit diagram

Installation Dimensions

Circuit Diagram

The switch code is 11.
1, 2 are normal closed;
3, 4 are normal opened;

Type	A	B	C	Remark
Normal, Key-lock	50	40		1. Unit: mm 2. A and B both refer to the minimum size
Selector	50	40	$\Phi 22$	
Mushroom	50	50	$\Phi 25$	
Big Mushroom	70	70	$\Phi 30$	

Performance Characteristics

Operating temperature	-25 ~ + 55°C (no freezing) keep the air flowing around illuminated push button
Operation Humidity	45~85%RH (no condensation)
Use altitude	Installation location should not exceed 2000m above sea level
Contact Resistor	$\leq 50\text{m}\Omega$
Insulation Resistor	$\geq 100\text{M}\Omega(500\text{VDC})$
Maximum withstand voltage	3000V, AC 50Hz, 1min
Vibration Resistance	50Hz, Amplitude 1.0mm
Mechanical Life	Momentary knob ≥ 1 million times
	key knob, emergency stop button $\geq 200,000$ times
	Latching knob, selection knob $\geq 500,000$ times
Electrical Life	$\geq 50,000$ times
Connection	Screw terminal, connecting ability: Min : $1 \times 0.5\text{mm}$
	Max: $2 \times 1.5\text{mm}^2$ (with connecting link) Max: $1 \times 2.5\text{mm}^2$ (without connecting link)
Operating force	8N(1NO1NC), 14N(2NO2NC)
Operation Travel	Approx. 5.5 mm (button)
Pollution Degree	3 degrees

Lamp Ratings

LED Life	Rated Current	Voltage fluctuation	Lamp Circuit Diagram
40000 hours	24V approx. 15mA 110V approx. 2mA	DC: $\pm 10\%$ AC : 20%	<p>Use inner protection resistors and no positive or negative distinction.</p>

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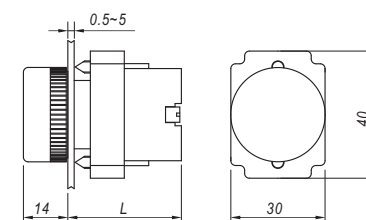
HBY5 Series model description

HBY5 ☆ ★ - / / / ※ /

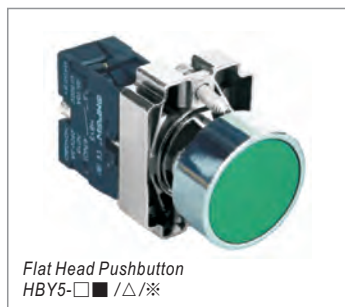
Symbol	Symbol name	Specify
☆	Structure type	E1: Simple type without letter means metal head
★	The front shape	J: double head without light / S: double head with light / No letter means round
□	Contact structure	one group of switching elements 11(1NO1NC) / 10(1NO) / 01(1NC) / 20(2NO) / 02(2NC)
		two groups of switching elements 22(2NO2NC) / 40(4NO) / 04(4NC) / 31(3NO1NC) / 13(1NO3NC) / 30(3NO) / 03(3NC) / 21(2NO1NC) / 12(1NO2NC)
		Three groups of switching elements configuration and so on, can choose the combination according to the need
■	Operation type	No letter means Momentary / D: Signal indicator / Z: latching button / M: Mushroom button / ZM: latching mushroom button / MT: Push-pull emergency stop button / TS: Emergency stop knob / X: Knob / XB: Knob / Y: Key knob
◇	Selector button and key button operation position	2: Two position / 3: Three position
◆	Selector Knob and Key Knob operation Type	1 maintain / 2 half return / 3 self return
△	Lamp color	R: Red / G: Green / Y: Yellow / B: Blue / W: White / N: Black
▲	Lamp voltage	6V / 12V / 24V / 110V / 220V / No letter means no light
※	IP Degree	FP: IP67 / P: IP65 / No letter means IP40



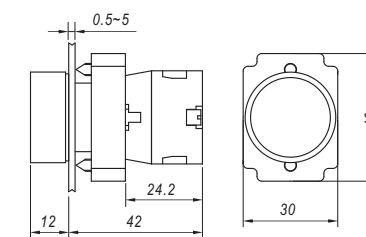
LED color **R G Y B W**
 LED voltage 6V / 12V / 24V / 110V / 220V
 IP degree IP40
 Accessory T04 Sign Frame/Protective cover T17



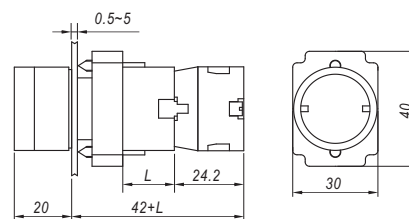
⊙ Voltage 60V, L=18; >60V, L=23.



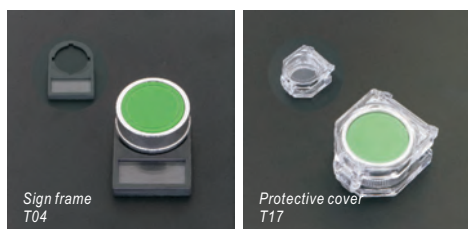
Contact 11: 1NO1NC / 10: 1NO / 01: 1NC
 Other switch combinations refer to the model description
 Operation Z: Latching / No letter: Momentary
 LED color **R G Y B W N**
 IP degree※ P: IP65 / No letter means IP40
 Accessory Sign frame T04/Protective cover T17




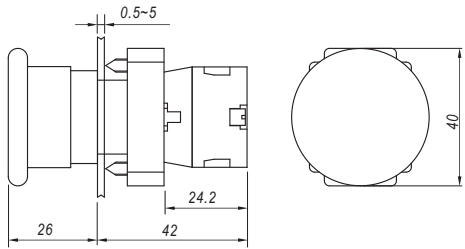

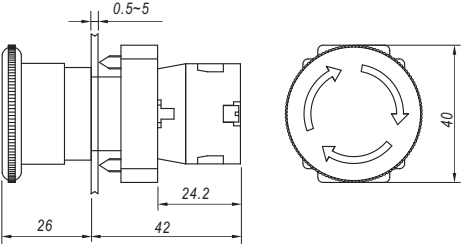

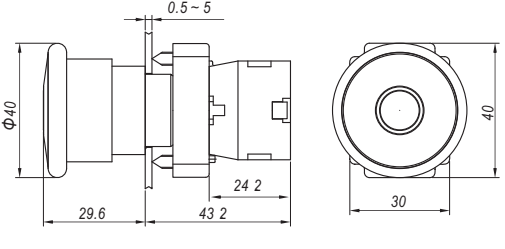

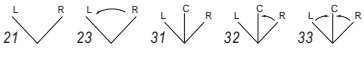
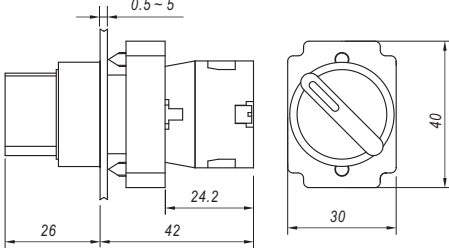
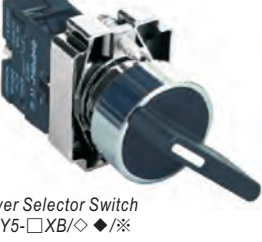
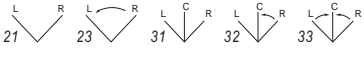
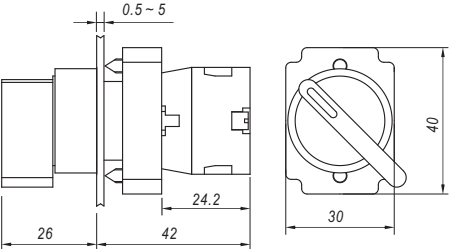
Contact 11: 1NO1NC / 10: 1NO / 01: 1NC
 Other switch combinations refer to the model description
 Operation Z: Latching / No letter: Momentary
 LED color **R G Y B W**
 LED voltage 6V / 12V / 24V / 110V / 220V
 IP degree※ P: IP65 / No letter means IP40
 Accessory Sign frame T04/Protective cover T17



⊙ Voltage 60V, L=18; >60V, L=23.



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Product Picture	Description	Dimension
 <p>Mushroom Push button HBY5-□■M/△/※</p>	<p>Contact 11: 1NO1NC / 10: 1NO / 01: 1NC Other switch combinations refer to the model description</p> <p>LED color R G</p> <p>IP degree※ P:IP65 / No letter means IP40</p> <p>Accessory Protective cover T31</p>	
 <p>Emergency stop button HBY5-□TS/※</p>	<p>Contact 11: 1NO1NC / 10: 1NO / 01: 1NC Other switch combinations refer to the model description</p> <p>IP degree※ P:IP65 / No letter means IP40</p> <p>Accessory Warning ring T14-2260 / T26 protection ring</p>	
 <p>Push-pull emergency stop button HBY5-□MT/※</p>	<p>Contact 11: 1NO1NC / 10: 1NO / 01: 1NC Other switch combinations refer to the model description</p> <p>IP degree※ P:IP65 / No letter means IP40</p> <p>Accessory Warning ring T14-2260 / T26 protection ring</p>	
 <p>Selector Switch HBY5-□X/◇◆/※</p>	<p>Contact 11: 1NO1NC / 20: 2NO / 02: 2NC Other switch combinations refer to the model description</p> <p>Operation </p> <p>(32 Default right momentary, left momentary can be customized)</p> <p>IP degree※ P:IP65 / No letter means IP40</p> <p>Accessory T04 sign frame</p>	
 <p>Lever Selector Switch HBY5-□XB/◇◆/※</p>	<p>Contact 11: 1NO1NC / 20: 2NO / 02: 2NC Other switch combinations refer to the model description</p> <p>Operation </p> <p>(32 Default right momentary, left momentary can be customized)</p> <p>IP degree※ P:IP65 / No letter means IP40</p> <p>Accessory T04 sign frame</p>	

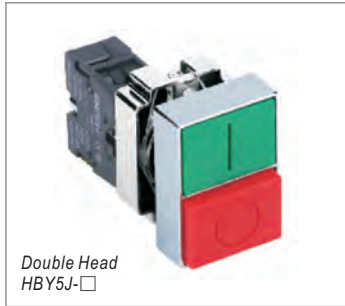
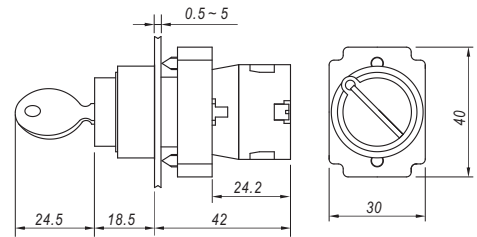


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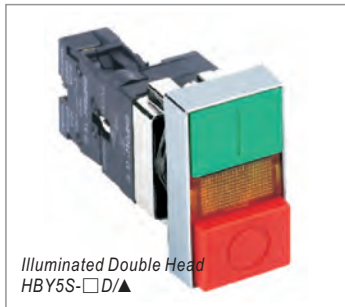
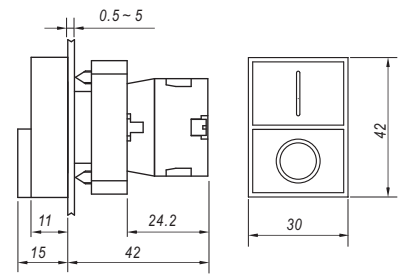
Product Picture	Description	Dimension
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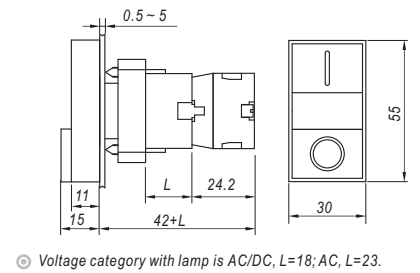
Contact 11: 1NO1NC / 20: 2NO / 02: 2NC
 Other switch combinations refer to the model description
 Operation (32 Default right momentary, left momentary can be customized)
 IP degree P: IP65 / No letter means IP40
 Accessory T04 sign frame
 Two keys are supplied. The key can be pull out in one position or in both position.



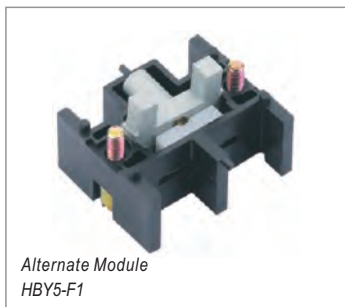
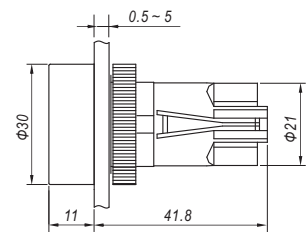
Contact 11: 1NO1NC / 10: 1NO / 01: 1NC
 Other switch combinations refer to the model description
 IP degree IP40
 Red & Green, Can't be used with lamp.



Contact 11: 1NO1NC / 10: 1NO / 01: 1NC
 Other switch combinations refer to the model description
 IP degree IP40
 Red & Green



Contact 11: 1NO1NC / 10: 1NO / 01: 1NC
 LED color **R** **G** **Y** **B** **W** **N**
 IP degree IP40
 Switch rating Ue:220V Ui:0.3AAC-14



Alternate function can be added to latching type using this fitting.

