

## LAY5 Series Button Switch

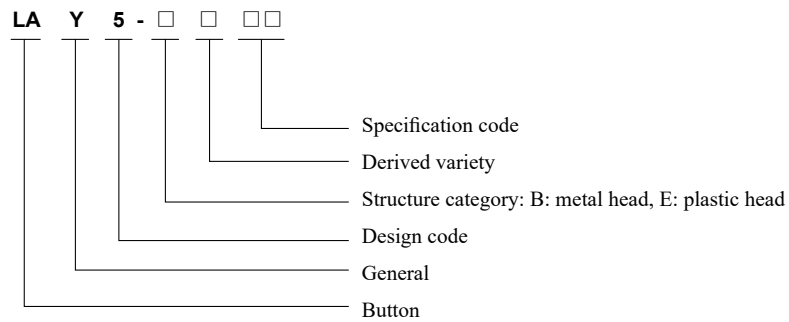
### 1 Overview



LAY5 series button switch is suitable for AC 50Hz industrial control circuit with rated working voltage up to 380V and with DC working voltage up to 220V as line control for electrical devices such as magnetic starter, contactor, and relay, and for light signal indication application with its indicator button.

Standard: GB/T 14048.5.

### 2 Type Designation



Derived variety and specification code

Derived variety	Specification code		
A: Flat button C: φ40 mushroom reset button R: φ60 mushroom reset button	1: White 2: Black 3: Green 4: Red 5: Yellow 6: Blue	1: NO 2: NC 3: 2 NO 4: 2 NC 5: NO + NC	-
S: Mushroom self-lock, rotation reset	4: φ30 5: φ40	4: Red	2: NC
D: Knob J: Rotary handle G: Key button	2: Two-position lock 3: Three-position lock 4: Two-position reset 5: Three-position reset	1: NO 2: NC 3: Two NO 4: Two NC 5: NO + NC	-
W3: Illuminated button	1: White 3: Green 4: Red 5: Yellow 6: Blue	6: Direct type 7: Resistance type	1: NO 2: NC 3: Two NO 4: Two NC 5: NO + NC
S1: φ40 mushroom self-lock key button	4: Red	1: NO 2: NC 3: Two NO 4: Two NC 5: NO + NC	-
BE: Accessories (without structural classification code)	101: NO contact set 102: NC contact set	-	-



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### 3 Technical Parameters

Table 1

Rated insulation voltage $U_i$ (V)	660		
Resistive current $I_{th}$ (A)	10		
Rated working voltage $U_e$ (V)		380	220
Rated working current $I_e$ (A)	AC-15	2.5	-
	DC-13	-	0.3

Table 2

Power frequency withstand voltage	AC 1890V, 50Hz 5s
Contact resistance	$\leq 50m\Omega$
Mechanical life	Flat-end and mushroom head: 1 million times; illuminated type: 300,000 times; others: 100,000
Electrical life	Flat-end, mushroom head, and double-end AC: 500,000 times, DC: 200,000 times; others: 100,000 times
Protection grade	IP40



Rated voltage (V)	Direct-type							Resistance-type	Transformer type	
Electric light source	6	12	24	48	110	220	380	220	220	380
LED light	√	√	√	-	-	-	-	-	√	√
Neon light	-	-	-	-	√	√	√	√	-	-
Incandescent light	√	√	√	√	√	√	√	-	√	√

### 4 Operating Conditions


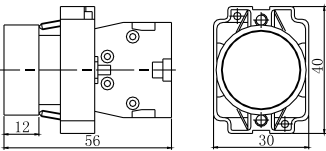

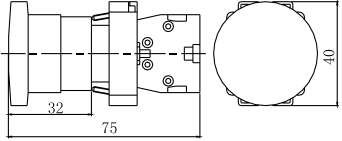

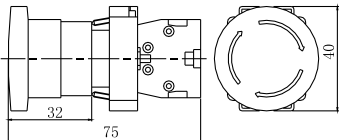

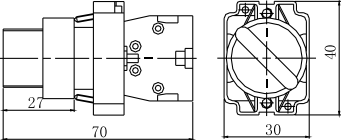

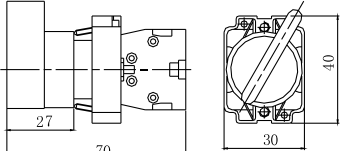

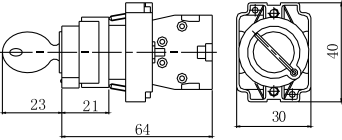
- 4.1 Ambient temperature: Not exceed  $+40^{\circ}\text{C}$ , and the mean temperature within 24h does not exceed  $+35^{\circ}\text{C}$ ; the lower limit of ambient air temperature is  $-5^{\circ}\text{C}$ .
- 4.2 Altitude: Not exceed 2,000 meters.
- 4.3 Atmospheric condition: The relative air humidity does not exceed 50% at the highest temperature  $+40^{\circ}\text{C}$ ; a higher relative humidity is allowed at a lower temperature, such as up to 90% at  $+20^{\circ}\text{C}$ ; special measures are taken for condensation occurred occasionally due to temperature changes.
- 4.4 Pollution degree: 3.
- 4.5 Installation category: Class II.




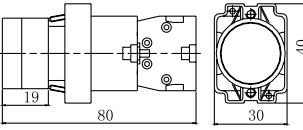

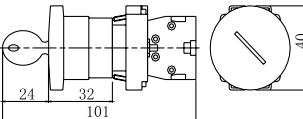

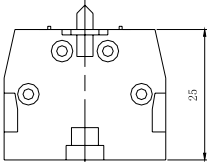

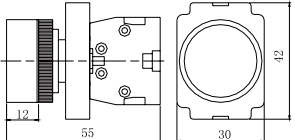

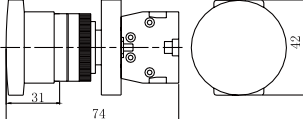

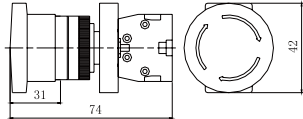
### 5 Structure Features

- 5.1 The metal button adopts anti-play operating head, and cannot be removed from the front side.
- 5.2 All contacts have dual functions of switching circuit and self-cleaning, and the contacting reliability can still be guaranteed under low voltage and small current.
- 5.3 The NO contact set is independent from the NC contact set, and they can be combined as required for convenient replacement.
- 5.4 The concealed wiring terminal is used for safer and more reliably operation. The operating head of metal-head button and its base are made of galvanized alloy, providing artistic shape and solid structure.
- 5.5 BA9S lamp base is used for both illuminated bush and signal lamp, and different light source is selected as required.


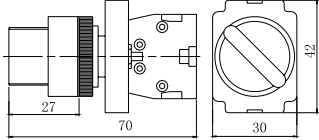

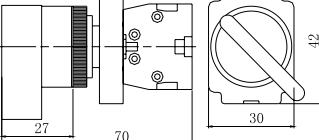

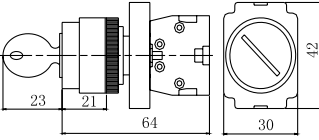

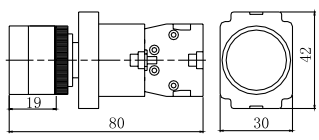
## LAY5 Series Button Switch

Sketch	Outline drawing and dimensions	Enterprise model	Remarks
 Flat button		LAY5-BA21	Black 1 NO
		LAY5-BA31	Green 1 NO
		LAY5-BA42	Red 1 NC
		LAY5-BA51	Yellow 1 NO
		LAY5-BA61	Blue 1 NO
		LAY5-BA25	Black 1 NO + 1 NC
		LAY5-BA35	Green 1 NO + 1 NC
		LAY5-BA45	Red 1 NO + 1 NC
 Mushroom self-reset		LAY5-BC21	Φ40 Black 1 NO
		LAY5-BC31	Φ40 Green 1 NO
		LAY5-BC42	Φ40 Red 1 NC
		LAY5-BC51	Φ40 Yellow 1 NO
		LAY5-BR42	Φ60 Red 1 NC
		 Mushroom self-lock	
LAY5-BS542	Φ40		
 		LAY5-BD21	Two-position lock 1 NO
		LAY5-BD25	Two-position lock 1 NO + 1 NC
		LAY5-BD33	Three-position lock 2 NO
		LAY5-BD41	Two-position reset 1 NO
		LAY5-BD45	Two-position reset 1 NO + 1 NC
		LAY5-BD53	Three-position reset 2 NO
 		LAY5-BJ21	Two-position lock 1 NO
		LAY5-BJ25	Two-position lock 1 NO + 1 NC
		LAY5-BJ33	Three-position lock 2 NO
		LAY5-BJ41	Two-position reset 1 NO
		LAY5-BJ45	Two-position reset 1 NO + 1 NC
		LAY5-BJ53	Three-position reset 2 NO
 		LAY5-BG21	Two-position lock 1 NO
		LAY5-BG25	Two-position lock 1 NO + 1 NC
		LAY5-BG33	Three-position lock 2 NO
		LAY5-BG41	Two-position reset 1 NO
		LAY5-BG53	Three-position reset 2 NO

## LAY5 Series Button Switch

Sketch	Outline drawing and dimensions	Enterprise model	Remarks
 <p>Illuminated button</p>		LAY5-BW3361	Green Direct-type 1 NO
		LAY5-BW3461	Red Resistance-type 1 NO
		LAY5-BW3561	Yellow Direct-type 1 NO
		LAY5-BW3371	Green Direct-type 1 NO
		LAY5-BW3471	Red Resistance-type 1 NO
		LAY5-BW3571	Yellow Direct-type 1 NO
 <p>Mushroom self-lock key button</p>		LAY5-BS142	Red 1 NC
		LAY5-BE101	NO contact set
		LAY5-BE102	NC contact set
 <p>Flat button</p>		LAY5-EA21	Black 1 NO
		LAY5-EA31	Green 1 NO
		LAY5-EA42	Red 1 NC
		LAY5-EA51	Yellow 1 NO
		LAY5-EA61	Blue 1 NO
		LAY5-EA25	Black 1 NO + 1 NC
		LAY5-EA35	Green 1 NO + 1 NC
		LAY5-EA45	Red 1 NO + 1 NC
 <p>Mushroom self-reset</p>		LAY5-EC21	Φ40 Black 1 NO
		LAY5-EC31	Φ40 Green 1 NO
		LAY5-EC42	Φ40 Red 1 NC
		LAY5-EC51	Φ40 Yellow 1 NO
		LAY5-EC21	Φ40 Black 1 NO
 <p>Mushroom self-lock</p>		LAY5-ES442	Φ30 Red 1 NC
		LAY5-ES542	Φ30 Red 1 NC

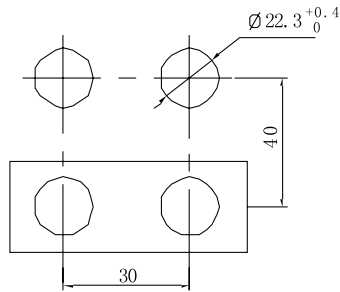
## LAY5 Series Button Switch

Sketch	Outline drawing and dimensions	Enterprise model	Remarks
		LAY5-ED21	Two-position lock 1 NO
		LAY5-ED25	Two-position lock 1 NO + 1 NC
		LAY5-ED33	Three-position lock 2 NO
		LAY5-ED41	Two-position reset 1 NO
		LAY5-ED45	Two-position reset 1 NO + 1 NC
		LAY5-ED53	Three-position reset 2 NO
		LAY5-EJ21	Two-position lock 1 NO
		LAY5-EJ25	Two-position lock 1 NO + 1 NC
		LAY5-EJ33	Three-position lock 2 NO
		LAY5-EJ41	Two-position reset 1 NO
		LAY5-EJ45	Two-position reset 1 NO + 1 NC
		LAY5-EJ53	Three-position reset 2 NO
		LAY5-EG21	Two-position lock 1 NO
		LAY5-EG25	Two-position lock 1 NO + 1 NC
		LAY5-EG33	Three-position lock 2 NO
		LAY5-EG41	Two-position reset 1 NO
		LAY5-EG53	Three-position reset 2 NO
		 <p>Illuminated button</p>	
LAY5-EW3462	Red Direct-type 1 NC		
LAY5-EW3561	Yellow Direct-type 1 NO		
LAY5-EW3371	Green Recessed-type 1 NO		
LAY5-EW3472	Red Recessed-type 1 NC		
LAY5-EW3571	Yellow Recessed-type 1 NO		

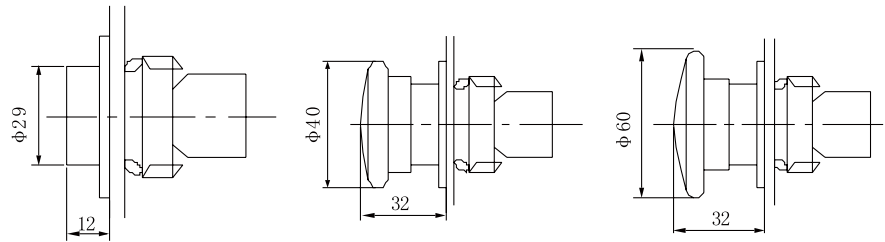
 6~  
 380V

## LAY5 Series Button Switch

### 6 Outline and Installation Dimensions



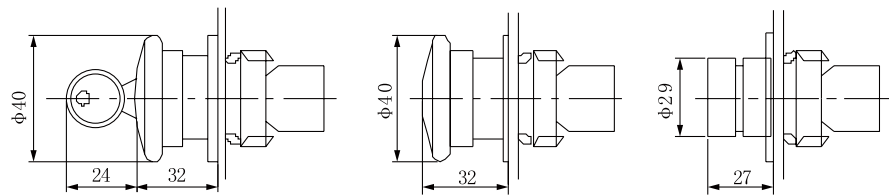
Mounting hole view (thick 1-6mm)



LAY5-BA..

LAY5-BC..

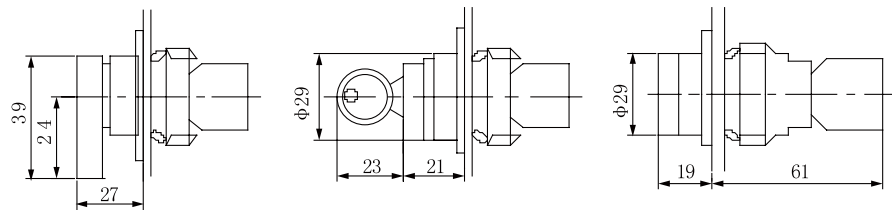
LAY5-BR..



LAY5-BS1..

LAY5-BS5..

LAY5-BD..



LAY5-BJ..

LAY5-BG..

LAY5-BW..

## LAY5 Series Button Switch

### 7 Ordering Notice

7.1 To order the separate button: specify model + color code

For example: LAY5-BA □ , number in □ means color;

□ number meaning: 1. White; 2. Black; 3. Green; 4. Red; 5. Yellow; 6. Blue.

7.2 To order the base with a contact

For example: LY5-BZ10 □ ; number in □ means the number of contacts;

□ number meaning: 1-Open; 2-Closed; 3. Two-open; 4. Two-closed;

5. One-open and one-closed.

7.3 To order the replaceable contact

For example: LAY5-BE10 □ ; number in □ means NO or NC;

□ number meaning: 1. NO; 2. NC.