

# SB2, SB4, SB5 Push button series



## General

SB2, SB4, SB5 series are suitable to industrial control circuit with AC 50Hz/60Hz, 0~380V rated voltage and 0~220V DC operating voltage, used for the control of magnetic starter, contactor, relay and other electric circuit.

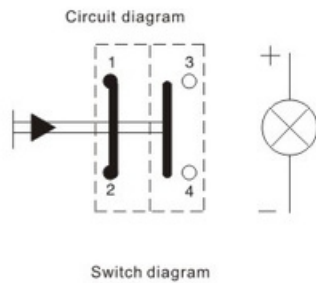
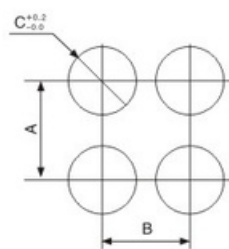
Structure: the switch unit slow-break and self-cleaning. It uses modular combustion mode and you can combine from one to eight switch units optional, so can make the product meet requirement of many special control circuits. It can be connected more safely and installed firmly. Economical plastic type can be used in acid environment.

Protective Degree: The standard is IP40, IP65 and some types can reach IP67 with the seal cover.

Operating temperature	-25°C~+55°C (no freezing) The average value in 24h no more than +35°C
Operating humidity	45~85%RH (no condensation)
Contact resistance	≤ 30mΩ
Insulation resistance	≥ 100M
The highest Dielectric strength	3000V, AC50Hz
Vibration resistance	50Hz, Amplitude 1.0mm
Shock resistance	> 10g
Mechanical life	Momentary: >2000000 times; alternate, selector, key-lock, emergency >1000000 times
Electrical life	>500000 times
Terminal	Terminal: Screw terminal, connecting ability: min 1 × 0.5mm <sup>2</sup> , max: 2 × 1.5mm <sup>2</sup> or 1 × 2.5mm <sup>2</sup> (with or without connecting link)
Operation	Operation: 80gf~2200gf, according to the quantity of switch units Operation travel: About 5.5mm (For push button type)
Pollution Degree	degree

Ui Nominal insulation voltage (Ui)		440V						
Ith Thermal current (Ith)		Temperature no more than rated current						
V Rated voltage (V)		24V	48V	110V	220V	380V	500V	
Working current	AC 50/60Hz	AC12	10A	-	10A	6A	-	-
		AC15	10A	-	6A	3A	1.8A	1.4A
	DC	DC12	8A	4A	2.2A	1.1A	-	-
		DC13	4A	2A	1.1A	0.6A	-	-
Contact material		Silver alloy						

### The installation hole size



#### Switch code 11

- 1, 2 are normal closed;
- 3, 4 are normal opened;

Pushbutton type	A	B	C
Normal type, key-lock	>50mm	>40mm	φ 22
Selector switch type	>55mm	>40mm	φ 22
Mushroom type	>50mm	>50mm	φ 22



# SB2 Push button series


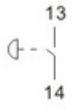
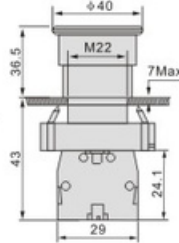
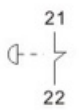

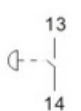
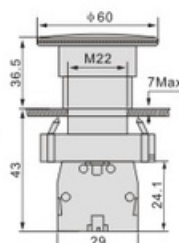


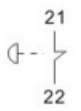
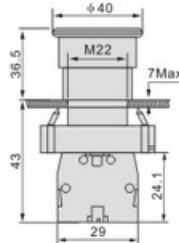

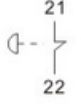
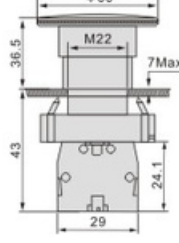

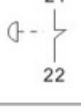
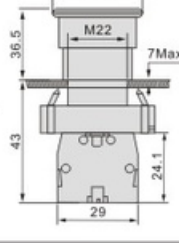
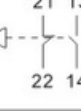

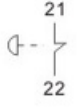
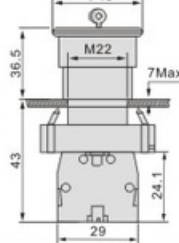
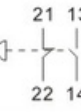


Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Flush button Spring return	N/O		○ White ● Black ● Green ● Yellow ● Blue	SB2-BA11 SB2-BA21 SB2-BA31 SB2-BA51 SB2-BA61	
		N/C		● Red	SB2-BA42	
	Flush button Spring return	N/O+N/C		● Black ● Green ● Yellow ● Blue	SB2-BA25 SB2-BA35 SB2-BA55 SB2-BA65	
		N/O+N/C		● Red	SB2-BA45	
	Flush button (With water-proof cover) Unmarked IP65	N/O		○ White ● Black ● Green ● Yellow ● Blue	SB2-BP11 SB2-BP21 SB2-BP31 SB2-BP51 SB2-BP61	
		N/C		● Red	SB2-BP42	
	Flush button Spring return Marked	N/O		● Green ● Green ○ White ● Black ● Green Start ● Black Start	SB2-BA3311 SB2-BA3361 SB2-BA3341 SB2-BA3351 SB2-BA5331 SB2-BA5321	
		N/C		● Red ● Red Stop	SB2-BA4322 SB2-BA4342	
	Convex button Spring return	N/O		● Black ● Green ● Yellow ● Blue	SB2-BL21 SB2-BL31 SB2-BL51 SB2-BL61	
		N/C		● Red	SB2-BL42	
	Convex button Spring return Marked	N/O		● Green ● Green ○ White ● Black	SB2-BL3311 SB2-BL3361 SB2-BL3341 SB2-BL3351	
		N/C		● Red ● Red Stop	SB2-BL4322 SB2-BL4342	



# SB2 Push button series

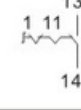


Push button	Description	Contact type	Circuit	Color	Type	Dimensions
 <b>SB2-BC42</b>	Mushroom head Spring return	N/O		● Black $\phi 40$ ● Green $\phi 40$	SB2-BC21 SB2-BC31	
		N/C		● Red $\phi 40$	SB2-BC42	
 <b>SB2-BR42</b>	Mushroom head Spring return	N/O		● Black $\phi 60$ ● Green $\phi 60$	SB2-BR21 SB2-BR31	
		N/C		● Red $\phi 60$	SB2-BR42	
 <b>SB2-BS542</b>	Turn to release	N/C		● Red $\phi 30$	SB2-BS442	
				● Red $\phi 40$	SB2-BS542	
 <b>SB2-BS642</b>	Turn to release	N/C		● Red $\phi 60$	SB2-BS642	
 <b>SB2-BT42</b>	Push-pull	N/C		● Red $\phi 40$	SB2-BT42	
		N/O + N/C		● Red $\phi 40$	SB2-BT45	
 <b>SB2-BS142</b>	Turn to release by key (Key n° 445)	N/C		$\phi 30$	SB2-BS742	
				$\phi 40$	SB2-BS142	
				$\phi 60$	SB2-BS242	
		N/O + N/C		● Red $\phi 40$	SB2-BS145	



# SB2 Push button series









Push button	Description	Contact type	Circuit	Locality	Type	Dimensions
 <b>SB2-BD21</b>	Standard handle 2 position	N/O			SB2-BD21 SB2-BD41	
		N/O+N/C			SB2-BD25 SB2-BD45	
 <b>SB2-BD21C</b>	Standard handle 2 position	N/O			SB2-BD21C SB2-BD41C	
		N/O+N/C			SB2-BD25C SB2-BD45C	
 <b>SB2-BD33</b>	Standard handle 3 position	N/O+N/O			SB2-BD33	
		N/O+N/O			SB2-BD53 SB2-BD73 SB2-BD83	
 <b>SB2-BJ21</b>	Long handle 2 position	N/O			SB2-BJ21 SB2-BJ41	
		N/O+N/C			SB2-BJ25 SB2-BJ45	
 <b>SB2-BJ21C</b>	Long handle 2 position	N/O			SB2-BJ21C SB2-BJ41C	
		N/O+N/C			SB2-BJ25C SB2-BJ45C	
 <b>SB2-BJ33</b>	Long handle 3 position	N/O+N/O			SB2-BJ33	
		N/O+N/O			SB2-BJ53 SB2-BJ73 SB2-BJ83	

Description :    



# SB2 Push button series









Push button	Description	Contact type	Circuit	Color	Type	Dimensions
 <b>SB2-BG21</b>	Key switches key n° 455 2 position	N/O			SB2-BG21	 28, 23, 7Max, 43, 24.1, 29
		N/O+N/C			SB2-BG41	
					SB2-BG61	
					SB2-BG25	
					SB2-BG45	
 <b>SB2-BG33</b>	Key switches key n° 455 3 position	N/O+N/O			SB2-BG33	 28, 23, 7Max, 43, 24.1, 29
					SB2-BG53	
					SB2-BG03	
					SB2-BG73	
 <b>SB2-BV63</b>	Direct bulb included BA9S base fitting Neon LED	130V 220-240V 50-60Hz		<ul style="list-style-type: none"> <li> White</li> <li> Green</li> <li> Red</li> <li> Yellow</li> <li> Blue</li> </ul>	SB2-BV61	 30, 14, 7Max, 37
					SB2-BV63	
					SB2-BV64	
					SB2-BV65	
					SB2-BV66	
 <b>SB2-BV74</b>	Via integral resistance BA9S bulb supplied LED 24V			<ul style="list-style-type: none"> <li> White/PW</li> <li> Green/PG</li> <li> Red</li> <li> Yellow</li> <li> Pure Blue</li> </ul>	SB2-BV71	 30, 14, 7Max, 42
					SB2-BV73	
					SB2-BV74	
					SB2-BV75	
					SB2-BV76	
 <b>SB2-BW3361</b>	Direct bulb supplied Neon LED (BA9S)	N/O 220-240V		<ul style="list-style-type: none"> <li> White</li> <li> Green</li> <li> Yellow</li> <li> Blue</li> </ul>	SB2-BW3161	 29, 18, 7Max, 61, 29
					SB2-BW3361	
					SB2-BW3561	
					SB2-BW3661	
 <b>SB2-BW3371</b>	Via integral resistance BA9S LED 24V bulb supplied	N/O 220-240V		<ul style="list-style-type: none"> <li> White/PW</li> <li> Green/PG</li> <li> Yellow</li> <li> Pure Blue</li> </ul>	SB2-BW3171	 29, 18, 7Max, 61, 29
					SB2-BW3371	
					SB2-BW3571	
					SB2-BW3671	
	N/C 220-240V			Red	SB2-BW3472	

Description : Locked Spring reset Key out



# SB2 Push button series


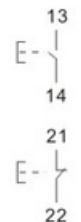
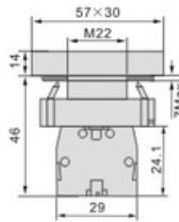

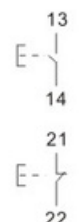
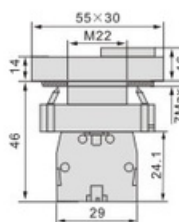

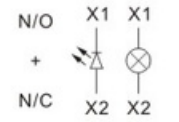
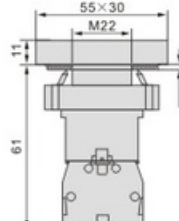

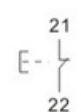
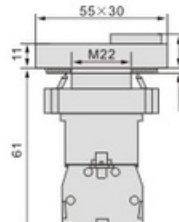

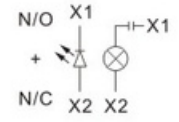
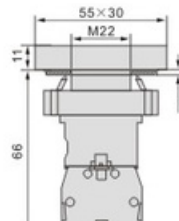

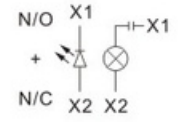
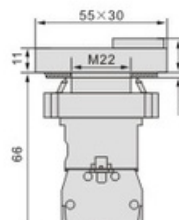


Push button	Description	Contact type	Circuit	Locality	Type	Dimensions
 <b>SB2-BPW3361</b>	Direct bulb supplied Neon LED (BA9S) (with water-proof cover) IP65	N/O 220-240V		<ul style="list-style-type: none"> <li> White/PW</li> <li> Green/PG</li> <li> Yellow</li> <li> Pure Blue</li> </ul>	SB2-BPW3161	 29, 18, 7Max, 61, 29
					SB2-BPW3171	
					SB2-BPW3361	
					SB2-BPW3561	
					SB2-BPW3571	
 <b>SB2-BK2365</b>	2 Position stay put Standard handle Direct supply Max 380V BA9S bulb Neon LED	N/O + N/C		<ul style="list-style-type: none"> <li> Green/PG</li> <li> Yellow</li> <li> Pure Blue</li> <li> White/PW</li> <li> Red</li> </ul>	SB2-BK2365	 30, 26, 7Max, 66, 29
					SB2-BK2565	
					SB2-BK2665	
					SB2-BK2765	
					SB2-BK2465	
 <b>SB2-BK3465</b>	2 Position stay put Standard handle Direct supply 220/240V BAS9 24V LED with resistance	N/O + N/C		<ul style="list-style-type: none"> <li> Green</li> <li> Yellow</li> <li> Pure Blue</li> <li> White</li> <li> Red</li> </ul>	SB2-BK2375	 30, 26, 7Max, 66, 29
					SB2-BK2575	
					SB2-BK2675	
					SB2-BK2775	
					SB2-BK2475	
 <b>SB2-BK3365</b>	3 Position stay put Standard handle Direct supply 220/240V BAS9 bulb Neon LED	N/O + N/O		<ul style="list-style-type: none"> <li> Green/PG</li> <li> Yellow</li> <li> Pure Blue</li> <li> White/PW</li> <li> Red</li> </ul>	SB2-BK3365	 30, 26, 7Max, 66, 29
					SB2-BK3565	
					SB2-BK3665	
					SB2-BK3765	
					SB2-BK3465	
 <b>SB2-BL8325</b>	Without pilot light 1 flush green button 1 flush red button IP40	N/O + N/C		<ul style="list-style-type: none"> <li> Green</li> <li> Red</li> </ul>	SB2-BL8325	 55x30, 11, 7Max, 46, 29
 <b>SB2-BL8425</b>	Without pilot light 1 flush green button 1 convex red button marked IP40	N/O + N/C		<ul style="list-style-type: none"> <li> Green</li> <li> Red</li> </ul>	SB2-BL8425	 55x30, 11, 7Max, 46, 29



# SB2 Push button series


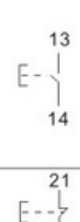
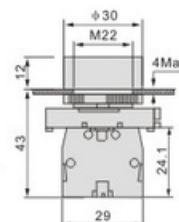

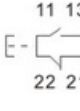
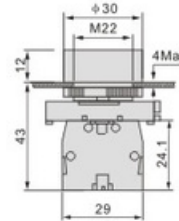


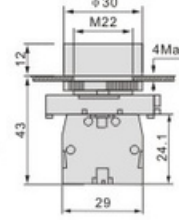


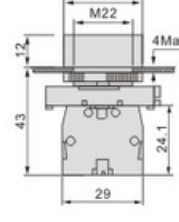

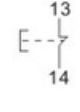
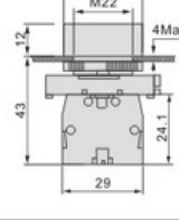

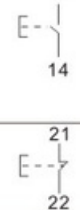
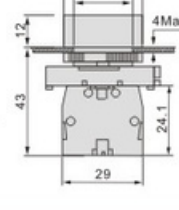


Push button	Description	Contact type	Circuit	Color	Type	Dimensions
 SB2-BL9325	Without pilot light 1 flush green button 1 flush red button (with water-proof cover) Unmarked IP65	N/O + N/C		White Green Red	SB2-BL9325	
 SB2-BL9425	Without pilot light 1 flush green button 1 flush red button (with water-proof cover) Marked IP65	N/O + N/C		White Green Red	SB2-BL9425	
 SB2-BW8365	1 flush green button 1 flush red button Unmarked IP40 with pilot light Yellow lens Direct supply Max 380V BA9S bulb Neon (BA9S) LED	N/O + N/C		Red Yellow/White Green	SB2-BW8365	
 SB2-BW8465	1 flush green button 1 convex red button Marked IP40 Neon (BA9S) LED			Red Yellow/White Green	SB2-BW8465	
 SB2-BW8375	1 flush green button 1 flush red button Unmarked	N/O + N/C		Red Yellow/White Green	SB2-BW8375	
 SB2-BW8475	with pilot light Yellow lens direct supply Max 380V BA9S LED 24V bulb with resistance	N/O + N/C		Red Yellow/White Green	SB2-BW8475	



# SB2 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
 SB2-EA31	Flush button Spring return	N/O  N/C		White Black Green Yellow Blue Red	SB2-EA11 SB2-EA21 SB2-EA31 SB2-EA51 SB2-EA61 SB2-EA42	
 SB2-EA45	Flush button Spring return	N/O+N/C		White Black Green Yellow Blue Red	SB2-EA15 SB2-EA25 SB2-EA35 SB2-EA55 SB2-EA65 SB2-EA45	
 SB2-EP31	Flush button (With water-proof cover) Unmarked IP65	N/O  N/C		White Black Green Yellow Blue Red	SB2-EP11 SB2-EP21 SB2-EP31 SB2-EP51 SB2-EP61 SB2-EP42	
 SB2-EA4322	Flush button Spring return	N/C		Red Red Stop	SB2-EA4322 SB2-EA4342	
 SB2-EA3351	Flush button Spring return Marked	N/O		Green Green White Black Green Start Black Start	SB2-EA3311 SB2-EA3361 SB2-EA3341 SB2-EA3351 SB2-EA5331 SB2-EA5321	
 SB2-EL42	Convex button Spring return	N/O  N/C		White Green Red Yellow Blue Red	SB2-EL11 SB2-EL21 SB2-EL31 SB2-EL51 SB2-EL61 SB2-EL42	



# SB2 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Convex button Spring return Marked	N/O		① White ② Black	SB2-EL3341 SB2-EL3351	
<b>SB2-EL3341</b>						
	Convex button Spring return Marked	N/C		● Red ● Red Stop	SB2-EL4322 SB2-EL4342	
<b>SB2-EL4322</b>						
	Mushroom head Spring return	N/O		● Black $\phi 40$ ● Green $\phi 40$	SB2-EC21 SB2-EC31	
<b>SB2-EC42</b>		N/C		● Red $\phi 30$ ● Red $\phi 40$	SB2-EC442 SB2-EC42	
	Mushroom head Spring return	N/O		● Black $\phi 60$ ● Green $\phi 60$	SB2-ER21 SB2-ER31	
<b>SB2-ER42</b>		N/C		● Red $\phi 60$	SB2-ER42	
	Turn to release	N/C		● Red $\phi 30$ ● Red $\phi 40$ ● Red $\phi 60$	SB2-ES442 SB2-ES542 SB2-ES642	
<b>SB2-ES42</b>						
	Push -pull	N/C		● Red $\phi 40$	SB2-ET42	
<b>SB2-ET42</b>						



# SB2 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Push pull button	N/C		● Red $\phi 40$	SB2-ET42C	
<b>SB2-ET42C</b>						
	Turn to release by key (Key n° 445)	N/C		● Red $\phi 40$	SB2-ES142	
<b>SB2-ES142</b>						
	With protection spring return	N/O		① White ② Black	SB2-EU3341 SB2-EU3351	
<b>SB2-EU3341</b>		N/O		▽	SB2-ED21	
		N/O+N/C		▽	SB2-ED41	
	Standard handle 2 position	N/O+N/C		▽	SB2-ED25	
	Standard handle 3 position	N/O+N/O		▽	SB2-ED33	
		N/O+N/O		▽	SB2-ED53 SB2-ED73 SB2-ED83	
	Long handle 2 position	N/O		▽	SB2-EJ21	
		N/O+N/C		▽	SB2-EJ41 SB2-EJ25 SB2-EJ45	
<b>SB2-EJ21</b>						

Description : ▽ Locked ▽ Spring reset Ⓚ Key out



# SB2 Push button series



Push button	Description	Contact type	Circuit	Locality	Type	Dimensions
	Long handle 3 position	N/O+N/O		∇	SB2-EJ33	
		N/O+N/O		∇	SB2-EJ53	
		N/O+N/O		∇	SB2-EJ73	
		N/O+N/O		∇	SB2-EJ83	
	Key switches key n° 455 2 position	N/O		∇	SB2-EG21	
		N/O		∇	SB2-EG41	
		N/O+N/C		∇	SB2-EG25	
		N/O+N/C		∇	SB2-EG45	
	Key switches key n° 455 3 position	N/O+N/O		∇	SB2-EG33	
		N/O+N/O		∇	SB2-EG53	
		N/O+N/O		∇	SB2-EG03	
		N/O+N/O		∇	SB2-EG73	
	1 flush green button 1 flush red button Unmarked IP40 Without pilot light	N/O		∇	SB2-EL8325	
		NC		∇		
	1 flush green button 1 convex red button Marked IP40 Without pilot light	N/O		∇	SB2-EL8425	
		N/C		∇		
	Without pilot light 1 flush green button 1 flush red button (with water-proof cover) Unmarked IP65	N/O		∇	SB2-EL9325	
		N/C		∇		

Description : ∇ Locked ∇ Spring reset ∇ Key out



# SB2 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions	
	Without pilot light 1 flush green button 1 flush red button (with water-proof cover) Marked IP65	N/O		Green	SB2-EJ9425		
		N/C		Red			
	1 flush green button 1 flush red button Unmarked IP40 Without pilot light	N/O		Green	SB2-EB8325		
		NC		Red			
	1 flush green button 1 convex red button Marked IP40 Without pilot light	N/O		Green	SB2-EB8425		
		N/C		Red			
	Direct bulb included BA9S base fitting Neon LED (BA9S)	220-240V 50-60Hz		White	SB2-EV61		
				Green			SB2-EV63
				Red			SB2-EV64
				Yellow			SB2-EV65
				Blue			SB2-EV66
	Via integral resistance BA9S LED 24V bulb supplied	130V 220-240V 50-60Hz		White/PW	SB2-EV71		
				Green/PG			SB2-EV73
				Red			SB2-EV74
				Yellow			SB2-EV75
				Pure Blue			SB2-EV76
	Direct bulb supplied Neon LED (BA9S)	220-240V		White	SB2-EW3161		
				Green			SB2-EW3361
				Yellow			SB2-EW3561
				Blue			SB2-EW3661
				Red	SB2-EW3462		



# SB2 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Via integral resistance BA9S LED 24V bulb supplied	N/O		White/PW Green/PG Yellow Pure Blue	SB2-EW3171 SB2-EW3371 SB2-EW3571 SB2-EW3671	
		130V 220~240V				
		N/C		Red	SB2-EW3472	
	Via integral resistance BA9S bulb supplied (with water-proof cover) LED 24V (BA9S) IP65	N/O		White/PW Green/PG Yellow Pure Blue	SB2-EPW3161 SB2-EPW3171 SB2-EPW3361 SB2-EPW3371 SB2-EPW3561 SB2-EPW3661 SB2-EPW3671	
		220~240V				
		N/C		Red	SB2-EPW3462 SB2-EPW3472	
	2 Position stay put Standard handle Direct supply 220/240V BA9S bulb Neon LED	N/O		Green Yellow Blue White Red	SB2-EK2361 SB2-EK2561 SB2-EK2661 SB2-EK2761 SB2-EK2461	
		+				
		N/C		Green Yellow Blue White Red	SB2-EK2375 SB2-EK2575 SB2-EK2675 SB2-EK2775 SB2-EK2475	

## Potentiometer

	Impedance(R)	1KΩ	2KΩ	5KΩ	10KΩ
	Rated power(P)	Lineer 1.5W(70°C)			
	Protection degree	IP65			
	Isolation resistance	min 10MΩ(500 DC)			
	Operating temperature	-5°C~+40°C			
	Resistive element	sermet			
	Turning range	270°±15°			
	Tolerance	±10%			
	Thermal coefficient	%100ppm/°C			
	Dielectric endurance	±1750Vrms			
Climatic category	55/125/56				
Maximum operation voltage(V)	38.70	38.70	86.60	122.50	
Maximum brush current(mA)	38.70	38.70	17.30	12.20	

5KΩ



# SB2 Push button series




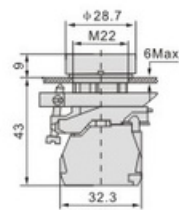
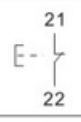
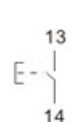
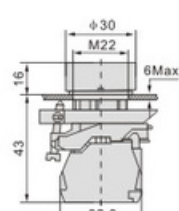
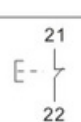
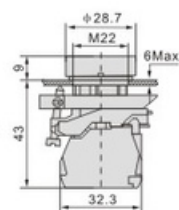
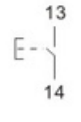
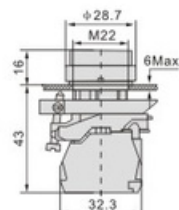

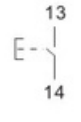
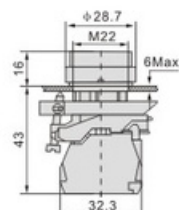
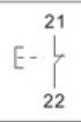

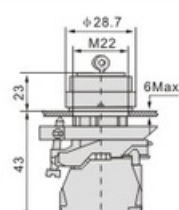


Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Unmarked IP40 1 flush green button 1 flush red button	N/O		Red Yellow/White Green	SB2-EW8365	
		+				
		N/C				
	1 pilot light with Yellow lens direct supply 220~240V BA9S bulb	N/O		Red Yellow/White Green	SB2-EW8465	
		+				
		N/C				
	Unmarked 1 flush green button 1 flush red button	N/O		Red Yellow/White Green	SB2-EW8375	
		+				
		N/C				
	1 pilot light with Yellow lens direct supply 220~240V BA9S bulb with resistance Marked IP40 24V (BA9S) LED	N/O		Red Yellow/White Green	SB2-EW8475	
		+				
		N/C				
	Unmarked IP40 1 flush green button 1 flush red button	N/O		Red Yellow/White Green	SB2-EWB8365	
		+				
		N/C				
	1 flush green button 1 convex red button Marked IP40 Neon (BA9S) LED	N/O		Red Yellow/White Green	SB2-EWB8465	
		+				
		N/C				

SB2-EWB8465



# SB4 Push button series


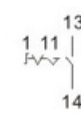
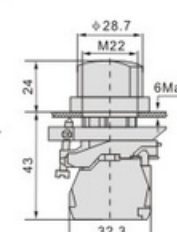
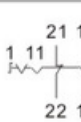

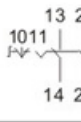
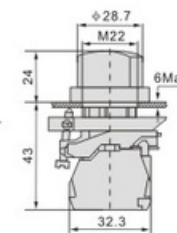
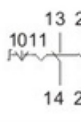

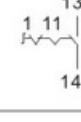
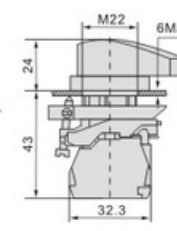
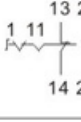


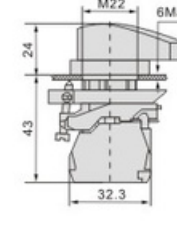

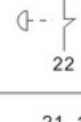
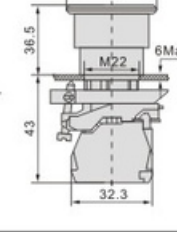
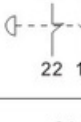

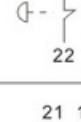
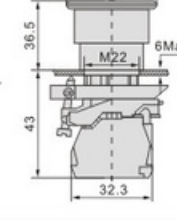



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Flush button Spring return	N/O		● Black ● Green ● Blue ● Yellow	SB4-BA21 SB4-BA31 SB4-BA61 SB4-BA51	
		N/C		● Red	SB4-BA42	
	Flush button (with water-proof cover) Unmarked IP65	N/O		○ White ● Black ● Green ● Blue ● Yellow	SB4-BP11 SB4-BP21 SB4-BP31 SB4-BP61 SB4-BP51	
		N/C		● Red	SB4-BP42	
	Flush button Spring return Marked	N/O		● Green ● Green ⊕ White ⊖ Black	SB4-BA3311 SB4-BA3361 SB4-BA3341 SB4-BA3351	
		N/C		● Red ● Red	SB4-BA4322 SB4-BA4342	
	Convex button Spring return Marked	N/O		● Green ● Green ⊕ White ⊖ Black	SB4-BL3311 SB4-BL3361 SB4-BL3341 SB4-BL3351	
		N/C		● Red ● Red	SB4-BL4322 SB4-BL4342	
	Convex button Spring return Unmarked	N/O		● Black ● Green ● Blue ● Yellow	SB4-BL21 SB4-BL31 SB4-BL61 SB4-BL51	
		N/C		● Red	SB4-BL42	
	LH Position	N/O			SB4-BG21	
	LH and RH Position	N/O+N/C			SB4-BG41 SB4-BG25 SB4-BG45	
	Center Position	N/O+N/O			SB4-BG33 SB4-BG73	



# SB4 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Standard handle	N/O			SB4-BD21	
		N/O+N/C			SB4-BD41 SB4-BD25 SB4-BD45	
	Standard handle	N/O+N/O			SB4-BD33	
		N/O+N/O			SB4-BD53	
	Long handle	N/O			SB4-BJ21 SB4-BJ41	
		N/O+N/C			SB4-BJ25 SB4-BJ45	
	Long handle	N/O+N/O			SB4-BJ33 SB4-BJ53	
	Push-pull	N/C		● Red	SB4-BT42	
		N/O+N/C		● Red	SB4-BT45	
	Turn to release by key (Key n° 445)	N/C		● Red	SB4-BS142	
		N/O+N/C		● Red	SB4-BS145	





# SB4 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Turn to release	N/O		Red $\phi 40$	SB4-BS542	
		N/O+N/C		Red $\phi 40$	SB4-BS545	
	Mushroom head Spring return	N/C		Red $\phi 40$	SB4-BC42	
		N/O		Black $\phi 40$ Green $\phi 40$	SB4-BC21 SB4-BC31	
	Direct bulb included BA9S base fitting Neon LED (BA9S)	130V		White Green Red Yellow Blue	SB4-BV61 SB4-BV63 SB4-BV64 SB4-BV65 SB4-BV66	
		220-240V				
		50Hz				
	Direct bulb included BA9S base fitting Neon LED (BA9S)	N/O		White [7] Green [3] Red [4] Yellow [5] Blue [6]	SB4-BVB□ SB4-BVB□ SB4-BVB□ SB4-BVG□ SB4-BVG□ SB4-BVG□	
		+ N/C				
	Direct bulb supplied Neon LED (BA9S)	N/O		White Green Yellow Blue	SB4-BW3161 SB4-BW3361 SB4-BW3561 SB4-BW3661	
		130V				
		220-240V				
	1 Flush green button 1 Flush red button unmarked Without pilot light IP40	N/O+N/C		Green Red	SB4-BL8325	
				Green Red	SB4-BL8425	



# SB4 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Without pilot light 1 flush green button 1 flush red button (with water-proof cover) Marked IP66	N/O		White Green Red	SB4-BL9325	
		N/C		White Green Red	SB4-BL9425	
	Pilot light with yellow lens direct supply 220-240V BA9S bulb marked IP40 Neon LED (BA9S)	1 Flush green button 1 Flush red button		Red Yellow Green	SB4-BW8365 SB4-BW83B5 SB4-BW83G5 SB4-BW83M5	
		N/O X1 X1				
		N/C X2 X2				
	Push button with lamp	1 Flush green button 1 Convex red button		White Green Red Yellow Blue	SB4-BW33B5 SB4-BW34B5 SB4-BW35B5 SB4-BW33G5 SB4-BW34G5 SB4-BW35G5	
		N/O X1 X1				
		N/C X2 X2				
	2 Position stay put 3 Position stay put 3 Position stay put	N/O		Green Red Yellow	SB4-BK123B5 SB4-BK124B5 SB4-BK125B5	
		+ N/C				
	2 Position	N/O			SB4-PA12 SB4-PA22	
	4 Position	N/O			SB4-PA14 SB4-PA24	

SB4-PA12



# SB5 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Flush button Spring return	N/O		Black	SB5-AA21	
				Green	SB5-AA21	
		Blue	SB5-AA61			
		Yellow	SB5-AA51			
SB5-AA42		N/C		Red	SB5-AA42	
				Red	SB5-AA42	
	Flush button (with water-proof cover) Unmarked IP65	N/O		White	SB5-AP11	
				Black	SB5-AP21	
				Green	SB5-AP31	
		Blue	SB5-AP61			
		Yellow	SB5-AP51			
SB5-AP31		N/C		Red	SB5-AP42	
	Flush button Spring return Marked	N/O		Green	SB5-AA3311	
				Green	SB5-AA3361	
		White	SB5-AA3341			
		Black	SB5-AA3351			
SB5-AA4322		N/C		Red	SB5-AA4322	
				Red	SB5-AA4342	
	Convex button Spring return Marked	N/O		Green	SB5-AL3311	
				Green	SB5-AL3361	
		White	SB5-AL3341			
		Black	SB5-AL3351			
SB5-AL4322		N/C		Red	SB5-AL4322	
				Red	SB5-AL4342	
	Convex button Spring return Unmarked	N/O		Black	SB5-AL21	
				Green	SB5-AL31	
		Blue	SB5-AL61			
		Yellow	SB5-AL51			
SB5-AL42		N/C		Red	SB5-AL42	
	LH Position	N/O		2 Position stay put	SB5-AG21	
				2 Position spring return	SB5-AG41	
	LH and RH Position	N/O+N/C		2 Position stay put	SB5-AG25	
				2 Position spring return	SB5-AG45	
	Center Position	N/O+N/O		3 Position stay put	SB5-AG33	
				3 Position spring return	SB5-AG73	



# SB5 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Standard handle	N/O		2 Position stay put	SB5-AD21	
				2 Position spring return	SB5-AD41	
SB5-AD21		N/O+N/C		2 Position stay put	SB5-AD25	
				2 Position spring return	SB5-AD45	
	Standard handle	N/O+N/O		3 Position stay put	SB5-AD33	
				3 Position spring return	SB5-AD53	
SB5-AD33		N/O+N/O		3 Position stay put	SB5-AD33	
				3 Position spring return	SB5-AD53	
	Long handle	N/O		2 Position stay put	SB5-AJ21	
				2 Position spring return	SB5-AJ41	
SB5-AJ41		N/O+N/C		2 Position stay put	SB5-AJ25	
				2 Position spring return	SB5-AJ45	
	Long handle	N/O+N/O		3 Position stay put	SB5-AJ33	
				3 Position spring return	SB5-AJ53	
SB5-AJ53		N/O+N/O		3 Position stay put	SB5-AJ33	
				3 Position spring return	SB5-AJ53	
	Push-pull	N/C		Red	SB5-AT42	
				Red	SB5-AT42	
SB5-AT42		N/O+N/C		Red	SB5-AT45	
				Red	SB5-AT45	
	Turn to release by key (Key n° 445)	N/C		Red	SB5-AS142	
				Red	SB5-AS142	
				Red	SB5-AS142	
SB5-AS142		N/O+N/C		Red	SB5-AS145	
				Red	SB5-AS145	



# SB5 Push button series



Push button	Description	Contact type	Circuit	Color	Type	Dimensions
	Turn to release	N/O		Red $\phi 40$	SB5-AS542	
<b>SB5-AS542</b>		N/O+N/C		Red $\phi 40$	SB5-AS545	
	Mushroom head Spring return	N/C		Red $\phi 40$	SB5-AC42	
<b>SB5-AC31</b>		N/O		Black $\phi 40$	SB5-AC21	
				Green $\phi 40$	SB5-AC31	
	Direct bulb included BA9S base fitting Neon LED (BA9S)	130V 220-240V 50Hz		<ul style="list-style-type: none"> <li>○ White</li> <li>● Green</li> <li>● Red</li> <li>● Yellow</li> <li>● Blue</li> </ul>	SB5-AV61 SB5-AV63 SB5-AV64 SB5-AV65 SB5-AV66	
<b>SB5-AV64</b>						
	Direct bulb included BA9S base fitting Neon LED (BA9S)	N/O + N/C		<ul style="list-style-type: none"> <li>○ White 7 □</li> <li>● Green 3 □</li> <li>● Red 4 □</li> <li>● Yellow 5 □</li> <li>● Blue 6 □</li> </ul>	SB5-AVB□ SB5-AVB□ SB5-AVB□ SB5-AVG□ SB5-AVG□ SB5-AVG□ SB5-AVM□ SB5-AVM□ SB5-AVM□	
<b>SB5-AVM□</b>						
	Direct bulb supplied Neon LED (BA9S)	N/O 130V 220-240V N/C		<ul style="list-style-type: none"> <li>○ White</li> <li>● Green</li> <li>● Yellow</li> <li>● Blue</li> </ul>	SB5-AW3161 SB5-AW3361 SB5-AW3561 SB5-AW3661	
<b>SB5-AW3661</b>						
	1 Flush green button 1 Flush red button unmarked Without pilot light IP40	N/O+N/C		<ul style="list-style-type: none"> <li>■ Green</li> <li>■ Red</li> </ul>	SB5-AL8325	
<b>SB5-AL8325</b>	1 Flush green button 1 Convex red button marked Without pilot light IP40			<ul style="list-style-type: none"> <li>■ Green</li> <li>■ Red</li> </ul>	SB5-AL8425	



# SB5 Push button series



Accessories	Description	Contact	Type	Accessories	Description	Contact	Type
	Contact element	N/O	SB4-BE101		Contact element	N/C	SB4-BE102
<b>SB4-BE101</b>				<b>SB4-BE102</b>			
	Metal bracket		SB4-B		Plastic bracket		SB5-A
<b>SB4-B</b>				<b>SB5-A</b>			
	Contact element with lamp Direct type LED		SB5-AV6L		Contact element with lamp Direct type Neon LED (BA9S)		SB5-AV06L
<b>ZBV-M4</b>				<b>ZBV-6</b>			
	Plastic bracket+ contact element	N/O	SB5-AZ101		Plastic bracket+ contact element	N/C	SB5-AZ102
<b>SB5-AZ101</b>				<b>SB5-AZ102</b>			
	Plastic bracket+ 2 contact element	N/O+N/C	SB5-AZ103		Plastic bracket+ 2 contact element	N/O+N/C	SB5-AZ105
<b>SB5-AZ103</b>				<b>SB5-AZ105</b>			
	Metal bracket+ contact element	N/O	SB4-BZ101		Metal bracket+ contact element	N/C	SB4-BZ102
<b>SB4-BZ101</b>				<b>SB4-BZ102</b>			
	Metal bracket+ 2 contact element	N/O+N/C	SB4-BZ103		Metal bracket+ 2 contact element	N/O+N/C	SB4-BZ105
<b>SB4-BZ103</b>				<b>SB4-BZ105</b>			



# AD22 Series indicator lamp



## General

AD22 Series signal lamp only use LED lamp as the light source. The advantage have: long life, gentle weight, small cubage, save energy. The cover of the lamp is made of PC material, and have good shock resistance. It can be used as indication pilot light, accident signal and other signals in the circuits of such equipment as telecommunication.

## Specification

- Working life:  $\geq 30000$ h;
- The voltage fluctuation:  $\pm 20\%$  (above 110V);
- Dielectric strength: 2.5kV (ACRMS), 1min;
- usage frequency: AC50~60Hz;
- Rated operating current:  $\leq 20$ mA;
- Brightness:  $\geq 100$ cd/m<sup>2</sup>;
- Comparative tracking index CT1, flame retardant;
- Insulation resistance:  $U_i \leq 60$ V,  $5M\Omega$ ;  $60V < U_i \leq 660$ V,  $50M\Omega$ ;
- Light color: red, green, yellow, white, blue.

## Attentions

- The frequency of AC type pilot lamp is 50~60Hz. If work in other frequency ranges, it will be broken.
- The common threshold value of anti-interference pilot lamp is below 40V; and if you need higher threshold value please tell us. We suggest that the threshold value shouldn't be too high. Please check the routing if the interference voltage is too high.
- Connection error is not allowable to AC type dual-color light, other wise pilot lamp will be broken.
- Avoid using mode to connect lines as possible and you should using general plug (2.5x0.8mm) to connect and wear the protective sleeve. If you need to weld, please finish it in 3 seconds by the electric iron which is below 30W and don't exert external force on terminals.

## Diagram of interior connection

Type	AC/DC signal lamp	AC signal lamp	AC/DC dual-color lamp	AC dual-color lamp
Norinal type				
Anti-interfer type				

Note: 1. AC/DC type signal lamp is resistor step-down form; AC type signal lamp is capacitor step-down form.  
2. When voltage is 110V or above it, the temperature of outer shell of AC/DC type signal lamp is higher than AC type pilot lamp.



# AD22 Series indicator lamp



Indicator	Type	Voltage	Color	Dimesions
	AD22-16DS	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	● Red ● Green/PG ● Yellow ● Pure Blue ○ White/PW	
	AD22-16M Buzzer  AD22-16SM Flicker Buzzer	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	● Red ● Green/PG ● Yellow	
	AD22-22DS Super short type	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	● Red ● Green/PG ● Yellow ● Pure Blue ○ White/PW	
	AD22-22DS/F Leak electric lamp	DC 220V DC 380V	● Red ● Green/PG ● Yellow ● Pure Blue ○ White/PW	
	AD16-22D/K Anti-interferenc type	Anti-interferene voltage 24V 48V Can be customized	● Red ● Green/PG ● Yellow ● Pure Blue ○ White/PW	
	AD22-22MK Buzzer  AD22-22SM Flicker  AD22-22MR Flicker Buzzer	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	● Red ● Green/PG ● Yellow	



# AD22 Series indicator lamp



Indicator	Type	Voltage	Color	Dimensions
	AD22-22DRG Double-color lamp LED	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	<ul style="list-style-type: none"> <li>Red</li> <li>Green/PG</li> </ul>	
<b>AD22-22DRG</b>				
	AD22-22W/N Ground position indicator	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	<ul style="list-style-type: none"> <li>Red</li> <li>Green/PG</li> </ul>	
<b>AD22-22W/N</b>				
	AD22-22W/G Breaker position indicator	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	<ul style="list-style-type: none"> <li>Red</li> <li>Green/PG</li> </ul>	
<b>AD22-22W/D</b>				
	AD22-22W/G Isolating switch Position indicator	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	<ul style="list-style-type: none"> <li>Red</li> <li>Green/PG</li> </ul>	
<b>AD22-22W/G</b>				
	AD22-30DS AD22-30DSL AD22-30DSC	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	<ul style="list-style-type: none"> <li>Red</li> <li>Green/PG</li> <li>Yellow</li> <li>Pure Blue</li> <li>White/PW</li> </ul>	
<b>AD22-30DS</b>				
	Buzzer	AC/DC 6V AC/DC 12V AC/DC 24V AC/DC 36V AC/DC 48V AC/DC 110V AC/DC 220V AC/DC 380V AC 220V AC 380V	<ul style="list-style-type: none"> <li>Red</li> <li>Green/PG</li> <li>Yellow</li> </ul>	
<b>AD22-30MR</b>				



# AD22 Series indicator lamp



Indicator	Type	Instructions	Color	Dimensions
	Indicator Voltmeter	AC50~500V	<ul style="list-style-type: none"> <li>White</li> <li>Green</li> <li>Red</li> <li>Yellow</li> <li>Blue</li> </ul>	
<b>AD22-22VM</b>				
	Indicator Ammeter	0~100A Max AC380V	<ul style="list-style-type: none"> <li>White</li> <li>Green</li> <li>Red</li> <li>Yellow</li> <li>Blue</li> </ul>	
<b>AD22-22AM</b>				
	Indicator Frequency meter	0~99Hz	<ul style="list-style-type: none"> <li>White</li> <li>Green</li> <li>Red</li> <li>Yellow</li> <li>Blue</li> </ul>	
<b>AD22-22Hz</b>				
	Indicator Temperature meter	-22~+199°C	<ul style="list-style-type: none"> <li>White</li> <li>Green</li> <li>Red</li> <li>Yellow</li> <li>Blue</li> </ul>	
<b>AD22-22TM</b>				
	Indicator Voltmeter Ammeter	AC50~500V 0~100A	<ul style="list-style-type: none"> <li>White</li> <li>Green</li> <li>Red</li> <li>Yellow</li> <li>Blue</li> </ul>	
<b>AD22-22VAM</b>				
	Indicator Voltmeter Frequency	AC50~500V 0~99A	<ul style="list-style-type: none"> <li>White</li> <li>Green</li> <li>Red</li> <li>Yellow</li> <li>Blue</li> </ul>	
<b>AD22-22VHzM</b>				
	Indicator Counter	0~999999	<ul style="list-style-type: none"> <li>White</li> <li>Green</li> <li>Red</li> <li>Yellow</li> <li>Blue</li> </ul>	
<b>AD22-22Gt</b>				
	Indicator hours	0~999H	<ul style="list-style-type: none"> <li>White</li> <li>Green</li> <li>Red</li> <li>Yellow</li> <li>Blue</li> </ul>	
<b>AD22-22HRS</b>				



# XAL Control box series



Push button	Description	Contact type	Circuit	Marking on legend	Type	Marking on pushbutton
	1 green flush pushbutton spring return	N/O	13 E- 14	Start - -	XAL-B101H29 XAL-B102 XAL-B103	
	1 red flush pushbutton spring return	N/C	21 E- 22	Stop - -	XAL-B111H29 XAL-B114 XAL-B112	
				Emergency Stop		
	1 red mushroom head pushbutton φ40 mm spring return	N/C	21 E- 22	Stop -	XAL-B164H29	spring return
	1 red mushroom head pushbutton φ40 mm latching key release (key n°445)	N/C	21 E- 22	Emergency Stop	XAL-B184H29	key release
	1 selector switch 2-position stay put standard black handle	N/O	13 1 11 14	Start Stop I O	XAL-B132H29 XAL-B134H29	standard black handle
	1 selector switch with key operated (key n° 445) 2-position stay put	N/O	13 1 11 14	Start Stop I O	XAL-B142H29 XAL-B144H29	key release
	2 spring return push button 1 flush green 1 flush red	N/O+N/C	13 E- 14  21 E- 22	Open close Start Stop - -	XAL-B241H29 XAL-B211H29 XAL-B213 XAL-B215	   



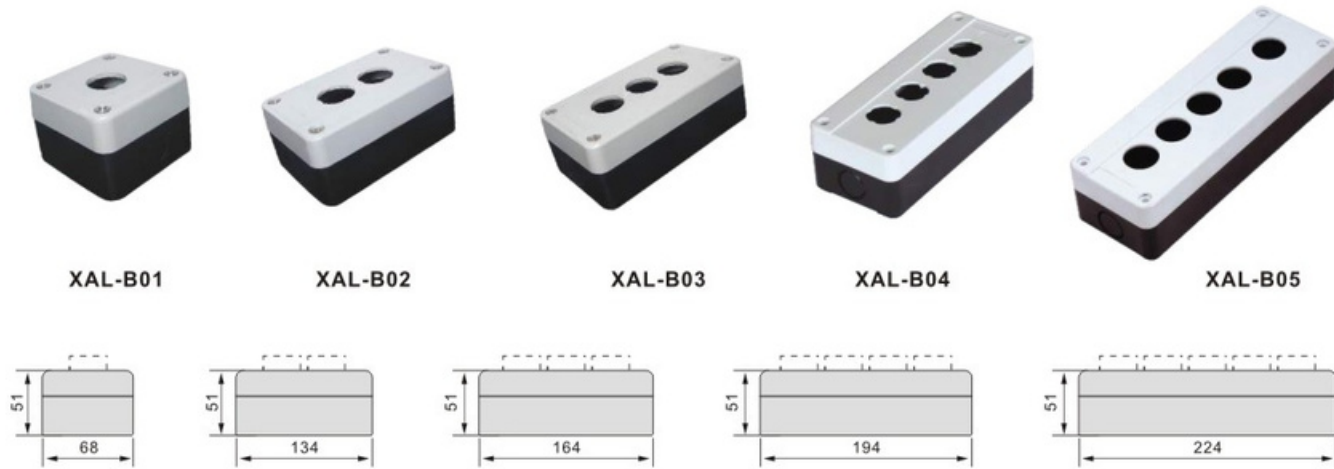
# XAL Control box series



Push button	Description	Contact type	Circuit	Marking on legend	Type	Marking on pushbutton
	1 red mushroom head pushbutton φ40 mm spring return	N/O	13 E- 14		XAL-M174	latching turn to release
	1 red mushroom head pushbutton φ40 mm spring return	N/O	13 E- 14		XAL-J174	latching turn to release
	1 red mushroom head pushbutton φ40 mm spring return	N/O	13 E- 14		XAL-J174-S	latching turn to release
	1 red mushroom head pushbutton φ40 mm spring return	N/O	13 E- 14		XAL-J174H29P	latching turn to release
	2 spring return push button 1 flush white 1 flush black	N/O+N/O	13 E- 14  13 E- 14		XAL-B22M	 
	1 selector switch 2-position stay put 2 spring return push button 1 flush white 1 flush black	N/O  N/O+N/O	13 1 11 14 E- 13 E- 14 21 E- 22	Start Stop	XAL-B32X	standard black handle    













Push button	Description	Contact type	Circuit	Marking on legend	Type	Marking on pushbutton
	2 spring return push button 1 flush white 1 flush black	N/O+N/O			XAL-B222	
<b>XAL-B222</b>					XAL-B223	
	3 spring return push button 1 flush white 1 flush red 1 flush black	N/O + N/C +			XAL-B324 XAL-B334 XAL-B339 XAL-B311H29 XAL-B321H29 XAL-B341H29	
<b>XAL-B324</b>				forward stop reverse up stop down open stop close		
	1 red pilot light directly supplied 2 spring return push button 1 flush red 1 flush green	N/O +			XAL-B361H29 XAL-B363 XAL-B37H29 XAL-B373 XAL-B376	
<b>XAL-B373</b>		N/C		start stop		
	4 spring return push button 1 flush red 1 flush green 1 flush white 1 flush black	N/O + N/O + N/O +			XAL-B4111	
<b>XAL-B4111</b>		N/C				



Push button	Description	Contact type	Circuit	Marking on legend	Type	Marking on pushbutton
	1 green flush pushbutton spring return	N/O		Start - -	XAL-D101H29 XAL-D102 XAL-D103	
<b>XAL-D101</b>					XAL-D111H29 XAL-D114 XAL-D112	
	1 red mushroom head pushbutton φ40 mm spring return	N/C		Emergency Stop Stop -	XAL-D164H29 XAL-D174H29 XAL-D174	spring return latching turn to release
<b>XAL-D164</b>						
	1 red mushroom head pushbutton φ40 mm latching key release (key n°445)	N/C		Emergency Stop	XAL-D184H29	key release
<b>XAL-D184H29</b>						
	1 selector switch 2-position stay put standard black handle	N/O		Start Stop I O	XAL-D132H29 XAL-D134H29	standard black handle
<b>XAL-D134H29</b>						
	1 selector switch with key operated (key n° 445) 2-position stay put	N/O		Start Stop I O	XAL-D142H29 XAL-D144H29	key release
<b>XAL-D142H29</b>						
	2 spring return push button 1 flush green 1 flush red	N/O+N/C		Open close Start Stop - -	XAL-D241H29 XAL-D211H29 XAL-D213 XAL-D215	
<b>XAL-D213</b>						

# HJ9 Control box series

Buttons box	Description	Type	Buttons box	Description	Type
	Button box for single hole IP40 φ22 φ25 φ30	HJ9-1Y HJ9-1W		Button box for four holes IP40 φ22 φ25 φ30	HJ9-4Y HJ9-4W
HJ9-1W/Y	76×71×60 76×71×70		HJ9-4W/Y	188×71×60	
	Button box for two holes IP40 φ22 φ25 φ30	HJ9-2Y HJ9-2W		Button box for five holes IP40 φ22 φ25 φ30	HJ9-5Y HJ9-5W
HJ9-2W/Y	108×71×60 108×71×70		HJ9-5W/Y	256×71×65	
	Button box for three holes IP40 φ22 φ25 φ30	HJ9-3Y HJ9-3W		Button box for six holes IP40 φ22 φ25 φ30	HJ9-6Y HJ9-6W
HJ9-3W/Y	148×71×60		HJ9-6W/Y	256×71×65	
	Button box for single hole IP40 φ22 φ25 φ30	HJ9-1H		Button box for three holes IP40 φ22 φ25 φ30	HJ9-3H
HJ9-1H	83×74×85		HJ9-3H	173×74×85	
	Button box for two holes IP40 φ22 φ25 φ30	HJ9-2H		Button box for four holes IP40 φ22 φ25 φ30	HJ9-4H
HJ9-2H	128×74×85		HJ9-4H	218×74×85	