

2006

BSE



PUSHBUTTONS & INDICATORS

ISO9001 

BLUESEA ELECTRIC CO., LTD.

Indicator



LAY5-EV163
(XB2-EV163)



LAY5-EV444
(XB2-EV444)



LAY5-EV64
(XB2-EV64)

Signalling Units Φ 22 Ip40

Description	Scheme	Supply Voltage	Color	Reference
Direct supply(1)				
For use with incandescent bulb (included) BA9s base fitting		130V 50/60Hz	Green	LAY5-EV133
			Red	LAY5-EV134
			Yellow	LAY5-EV135
			Blue	LAY5-EV136
For use with incandescent bulb (included) BA9s base fitting		$\leq 250V$ 50/60Hz	White	LAY5-EV161
			Green	LAY5-EV163
			Red	LAY5-EV164
			Yellow	LAY5-EV165
			Blue	LAY5-EV166
			Clear	LAY5-EV167
For use with incandescent bulb (included) E10/13 base fitting		$\leq 250V$ 50/60Hz	White	LAY5-EV661
			Green	LAY5-EV663
			Red	LAY5-EV664
			Yellow	LAY5-EV665
			Blue	LAY5-EV666
			Clear	LAY5-EV667

(1)Bulb types for use with direct supply: incandescent bulb $U \leq 250V$, max.power 3W, max.diameter length 28 mm.

For use with neon bulb(included) BA9s base fitting		240V~50/60Hz 220/240V bulb	Green	LAY5-EV443
			Red	LAY5-EV444
			Yellow	LAY5-EV445
		400V~50/60Hz 380/415v bulb	Blue	LAY5-EV446
			Clear	LAY5-EV447
		230V~50/60Hz 130V bulb	Green	LAY5-EV453
			Red	LAY5-EV454
			Yellow	LAY5-EV455
			Blue	LAY5-EV456
			Clear	LAY5-EV457

Supply direct through resistor

For use with incandescent bulb (included) BA9s base fitting			White	LAY5-EV171
			Green	LAY5-EV173
			Red	LAY5-EV174
			Yellow	LAY5-EV175
			Blue	LAY5-EV176
			Clear	LAY5-EV177
BA9s 6.3V/24V bulb supplied	Viaintegral transformer 1.2VA	220V~240V/6.3V 50/60Hz	Green	LAY5-EV1853
			Red	LAY5-EV1854
			Yellow	LAY5-EV1855
			Blue	LAY5-EV1856
BA9s 6.3V/24V bulb supplied	Viaintegral transformer 1.2VA	380V~440V/6.3V 50/60Hz	Green	LAY5-EV1873
			Red	LAY5-EV1874
			Yellow	LAY5-EV1875
			Blue	LAY5-EV1876
Direct BA9s		$\leq 380V$	White	LAY5-EV61
			Green	LAY5-EV63
			Red	LAY5-EV64
			Yellow	LAY5-EV65
			Blue	LAY5-EV66
BA9s, 130V. Direct through resistor		220V 250V	White	LAY5-EV71
BA9s, 130V bulb supplied			Green	LAY5-EV73
			Red	LAY5-EV74
			Yellow	LAY5-EV75
			Blue	LAY5-EV76

Pushbutton Switch

Circular head

Complete units with screw and captive calbe clamp connections

Pushbuttons, spring return

Description	Contact Type	Scheme	Color	Reference
Pushbtton spring return	N/O		Black	LAY5-EA121
			Green	LAY5-EA131
	N/C		Red	LAY5-EA142
	N/O+N/C		Black	LAY5-EA125
Pushbtton Latching	N/O		Green	LAY5-EA135
			Red	LAY5-EA145
	N/O+N/C		Black	LAY5-EH121
			Green	LAY5-EH131
Flush	N/O		Black	LAY5-EH125
			Green	LAY5-EH135
	N/C		Black	LAY5-EA21
			Green	LAY5-EA31
Mushroom head Φ 40mm	N/O		Yellow	LAY5-EA51
			Blue	LAY5-EA61
	N/C		Red	LAY5-EA42
Mushroom head	N/O		Black	LAY5-EC21
			Green	LAY5-EC31
	N/C		Yellow	LAY5-EC51
			Blue	LAY5-EC61
Flush	N/O		Red	LAY5-EC42
	N/C		Φ30	LAY5-ES442
			Φ40	LAY5-ES542
Mushroom head	N/O		Φ60	LAY5-ES642
	N/C		Green	LAY5-EA3311
Flush	N/O		White or	LAY5-EA3341
			Black or	LAY5-EA3351
	N/C		Red	LAY5-EA3322
			O	LAY5-EA4322
Mushroom head	N/O		Red stop	LAY5-EA4342

Pushbutton Switch


LAY5-ED21
(XB2-ED21)

LAY5-EJ33
(XB2-EJ33)

LAY5-EG33
(XB2-EG33)

LAY5-BE102
(ZB2-BE102)

LAY5-BE101
(ZB2-BE101)

LAY5-EZ102
(ZB2-EZ102)

LAY5-EZ101
(ZB2-EZ101)

LAY5-BZ102
(ZB2-BZ102)

LAY5-BZ101
(ZB2-BZ101)

Selector switches

Description	Contact Type	Scheme	Operator	Reference
2 Position stay put	N/O		Standard handle	LAY5-ED21
			Long handle	LAY5-EJ21
	N/O+N/C		Standard handle	LAY5-ED25
			Long handle	LAY5-EJ25
2 Position 1 spring return from right to left	N/O		Standard handle	LAY5-ED41
			Long handle	LAY5-EJ41
	N/O+N/C		Standard handle	LAY5-ED45
			Long handle	LAY5-EJ45
3 Position stay put	N/O+N/O		Standard handle	LAY5-ED33
			Long handle	LAY5-EJ33
	N/O+N/O		Standard handle	LAY5-ED53
			Long handle	LAY5-EJ53

Key switches (key n° 455)

Description	Contact Type	Scheme	Key removal	Reference
2 Position stay put	N/O		LH position	
			LH and RH position	LAY5-EG21
	N/O+N/C		LH position	LAY5-EG41
			LH and RH position	LAY5-EG25
2 Position 1 spring return from right to left	N/O			LAY5-EG45
			LH position	
	N/O+N/O			LAY5-EG61
			LH position	
3 Position stay put	N/O+N/O		Centre position	LAY5-EG65
			LH and RH position	LAY5-EG33
	N/O+N/O		All 3 position	LAY5-EG53
				LAY5-EG03
3 Position 2 spring return to centre position	N/O+N/O		Centre position	
				LAY5-EG73

Additional/replacement contact block, screw and captive calbe

			LAY5-BE101
	N/O	Clamp connection	LAY5-BE102
	N/C		LAY5-EZ/BZ101
For making up body assemblies with 3, 4, 5 or maximum of 6 contact blocks or replacing 1 st or 2nd contact	N/O		LAY5-EZ/BZ102
	N/C		LAY5-EZ/BZ103
	N/O+N/O		LAY5-EZ/BZ104
	N/C+N/C		LAY5-EZ/BZ105
	N/O+N/C		

Pushbutton Switch



LAY5-BV63
(XB2-BV63)



LAY5-BV65
(XB2-BV65)



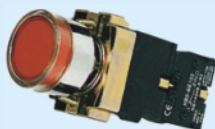
LAY5-BV74
(XB2-BV74)



LAY5-BV44
(XB2-BV44)



LAY5-BW3361
(XB2-BW3361)



LAY5-BW3471
(XB2-BW3471)



LAY5-BW3441
(XB2-BW3441)

Circular head, screw and captive cable clamp connections Complete units

Signalling Units Φ 22

Description	Scheme	Supply / Voltage	Color	Reference
Direct bulb included		$\leq 380V$	Green	LAY5-BV63
			Red	LAY5-BV64
			Yellow	LAY5-BV65
Via integral resistor BA9s, 130V bulb supplied		220V 250V	Green	LAY5-BV73
			Red	LAY5-BV74
			Yellow	LAY5-BV75
		110V/50Hz 110-120V/60Hz	Green	LAY5-BV33
			Red	LAY5-BV34
			Yellow	LAY5-BV35
		220V/50Hz	Green	LAY5-BV43
			Red	LAY5-BV44
			Yellow	LAY5-BV45
		240V/50Hz	Green	LAY5-BV943
			Red	LAY5-BV944
			Yellow	LAY5-BV945
Via integral transformer 1.2 VA BA9s, 6V bulb supplied		380V/50Hz	Green	LAY5-BV53
			Red	LAY5-BV54
			Yellow	LAY5-BV55
		415V/50Hz	Green	LAY5-BV933
			Red	LAY5-BV934
			Yellow	LAY5-BV935

Illuminated flush pushbuttons with 1N/O contact

Description	Scheme	Supply / Voltage	Color	Reference
Direct bulb supplied		$\leq 380V$	Green	LAY5-BW3361
			Red	LAY5-BW3461
			Yellow	LAY5-BW3561
Via integral resistor BA9s, 130V bulb supplied		220V 250V	Green	LAY5-BW3371
			Red	LAY5-BW3471
			Yellow	LAY5-BW3571
		110V/50Hz 110-120V/60Hz	Green	LAY5-BW3331
			Red	LAY5-BW3431
			Yellow	LAY5-BW3531
		220V/50Hz	Green	LAY5-BW3341
			Red	LAY5-BW3441
			Yellow	LAY5-BW3541
		240V/50Hz	Green	LAY5-BW33941
			Red	LAY5-BW34941
			Yellow	LAY5-BW35941
Via integral transformer 1.2 VA BA9s, 6V bulb supplied		380V/50Hz	Green	LAY5-BW3351
			Red	LAY5-BW3451
			Yellow	LAY5-BW3551
		415V/50Hz	Green	LAY5-BW33931
			Red	LAY5-BW34931
			Yellow	LAY5-BW35931

Pushbutton Switch

Circular head, with chromium plated metal bezel
Complete units with screw and captive cable clamp connections



LAY5-BD21
(XB2-BD21)



LAY5-BD33
(XB2-BD33)



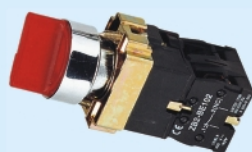
LAY5-BJ21
(XB2-BJ21)



LAY5-BJ33
(XB2-BJ33)



LAY5-BG21
(XB2-BG21)



LAY5-BK2465
(XB2-BK2465)

Selector switches

Description	Contact Type	Scheme	Operator	Reference
2 Position stay put	N/O		Standard handle	LAY5-BD21
			Long handle	LAY5-BJ21
	N/O+N/C		Standard handle	LAY5-BD25
			Long handle	LAY5-BJ25
2 Position 1 spring return from right to left	N/O		Standard handle	LAY5-BD41
			Long handle	LAY5-BJ41
	N/O+N/C		Standard handle	LAY5-BD45
			Long handle	LAY5-BJ45
3 Position stay put	N/O+N/O		Standard handle	LAY5-BD33
			Long handle	LAY5-BJ33
3 Position 2 spring return to centre	N/O+N/O		Standard handle	LAY5-BD53
			Long handle	LAY5-BJ53

Key switches (key n° 455)

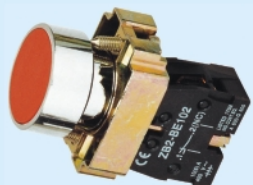
Description	Contact Type	Scheme	Key removal	Reference
2 Position stay put	N/O		LH position	LAY5-BG21
			LH and RH position	LAY5-BG41
	N/O+N/C		LH position	LAY5-BG25
			LH and RH position	LAY5-BG45
2 Position 1 spring return from right to left	N/O		LH position	LAY5-BG61
			LH position	LAY5-BG65
	N/O+N/C		LH position	LAY5-BG65
			Centre position	LAY5-BG33
3 Position stay put	N/O+N/O		LH and RH position	LAY5-BG53
			All 3 position	LAY5-BG03

Selector switches with pilot light

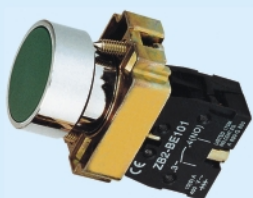
Description	Contact Type	Scheme	Reference
2 Position stay put	N/O+N/C		LAY5-BK2365
			LAY5-BK2465
			LAY5-BK2565
			LAY5-BK2665
			LAY5-BK2765
	N/O+N/C		LAY5-BK3365
			LAY5-BK3465
			LAY5-BK3565
			LAY5-BK3665
			LAY5-BK3765
	N/O+N/C		LAY5-BK5365
			LAY5-BK5465
			LAY5-BK5565
			LAY5-BK5665
			LAY5-BK5765

Pushbutton Switch

Circular head, with chromium plated metal bezel
Complete units with screw and captive cable clamp connections



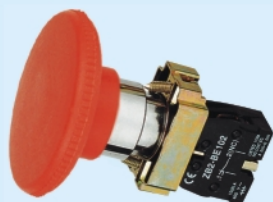
LAY5-BA42
(XB2-BA42)



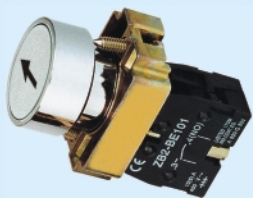
LAY5-BA31
(XB2-BA31)



LAY5-BC42
(XB2-BC42)



LAY5-BR42
(XB2-BR42)



LAY5-BA3341
(XB2-BA3341)

Pushbuttons, spring return

Description	Contact Type	Scheme	Color	Reference
Flush	N/O		Black	LAY5-BA21
			Green	LAY5-BA31
			Yellow	LAY5-BA51
			Blue	LAY5-BA61
Projecting	N/C		Red	LAY5-BA42
			Black	LAY5-BL21
			Green	LAY5-BL31
			Yellow	LAY5-BL51
Booted	N/O		Blue	LAY5-BL61
			Red	LAY5-BL42
			Black	LAY5-BP21
			Green	LAY5-BP31
Mushroom head 40mm	N/O		Yellow	LAY5-BP51
			Blue	LAY5-BP61
			Red	LAY5-BP42
			Black	LAY5-BC21
Mushroom head 60mm	N/O		Green	LAY5-BC31
			Yellow	LAY5-BC51
			Blue	LAY5-BC61
			Red	LAY5-BC42
Mushroom head 60mm	N/O		Black $\Phi 60$	LAY5-BR21
			Green $\Phi 60$	LAY5-BR31
			Yellow $\Phi 60$	LAY5-BR51
			Blue $\Phi 60$	LAY5-BR61
Mushroom head 60mm	N/C		Red $\Phi 60$	LAY5-BR42

Pushbuttons, spring return with function symbols on button

Description	Contact Type	Scheme	Color	Reference
Flush	N/O		Green	LAY5-BA3311
			White $\uparrow$ or $\rightarrow$	LAY5-BA3341
			Black $\downarrow$ or $\leftarrow$	LAY5-BA3351
			Red $\circ$	LAY5-BA4222
Projecting	N/C		Red stop	LAY5-BA4342
			Red $\circ$	LAY5-BA4322
			Red stop	LAY5-BA4342
			Red $\circ$	LAY5-BA4322

Pushbutton Switch

With chromium plated metal bezel

Complete units with screw and captive cable clamp connections

Double-headed pushbuttons, spring return

Description	Contact Type	Scheme	Scheme	Degree of protection	Reference
Without pilot light 1 flush green pushbutton 1 projecting red pushbutton	N/O		Unmarked	IP40	LAY5-BL8325
				IP65	LAY5-BL9325
	N/C		I O	IP40	LAY5-BL8425
				IP65	LAY5-BL9425
Without pilot light 1 flush green pushbutton 1 pilot light with Yellow lens Direct supply ≤380V 1 projecting red pushbutton	N/O		Unmarked	IP40	LAY5-BW8365
	N/C		I O	IP40	LAY5-BW8465
1 flush green pushbutton 1 pilot light with Yellow lens 220/250V supply direct through resistor BA9s, 130V bulb included 1 projecting red pushbutton	N/O		Unmarked	IP40	LAY5-BW8375
	N/C		I O	IP40	LAY5-BW8475
1 flush green pushbutton 1 pilot light with Yellow lens 1.2VA-220V direct supply via integral transformer BA9s, 6V bulb included 1 projecting red pushbutton	N/O		Unmarked	IP40	LAY5-BW8345
	N/C		I O	IP40	LAY5-BW8445

Latching mushroom head "emergency stop" pushbutton

Description	Contact Type	Scheme	Reference
Push-pull Red	N/C		Φ40 LAY5-BT42
			Φ60 LAY5-BX42
Turn to release Red	N/C		Φ30 LAY5-BS442
			Φ40 LAY5-BS542
	N/C		Φ60 LAY5-BS642
Key release (Key n° 445) Red	N/C		Φ30 LAY5-BS742
			Φ40 LAY5-BS142
			Φ60 LAY5-BS242

Latching mushroom head pushbutton with "Trigger action"

Turn to release Red release (Key n° 445) Red	N/O + N/C		Φ40 LAY5-BS8445
			LAY5-BS9445

Pushbutton Switch

Description	Reference
LAY5-B metals button switches	
	ZB2-BS42
Φ 30	ZB2-BS44
Push-Locked	
Mushroom	ZB2-BS52
Pushbutton	ZB2-BS54
Φ 40	
Push-Locked	ZB2-BS62
Mushroom	ZB2-BS64
Pushbutton	
Φ 60	
Direct	ZB2-BT2
Mushroom	ZB2-BT4
Pushbutton	
Φ 40	
Direct	ZB2-BX2
Mushroom	ZB2-BX4
Pushbutton	
Φ 60	
Key	ZB2-BS12
Mushroom	ZB2-BS14
Pushbutton	
Φ 40	
	ZB2-BV03
Head of	ZB2-BV04
indicator	ZB2-BV05
Smooth lens	ZB2-BV06
Attach	
diffusion	
function	
	ZB2-BW033
	ZB2-BW034
Head of	ZB2-BW035
indicator	ZB2-BW036
Lens with	
groove	
	ZB2-BW13
Button with	ZB2-BW14
lamp	ZB2-BW15
Smooth	
convex type	ZB2-BA2
	ZB2-BA3
	ZB2-BA4
	ZB2-BA5
Flush	ZB2-BA6
	ZB2-BA331
	ZB2-BA336
Sign	I
even	II
button	ZB2-BA334
	ZB2-BA335
	ZB2-BA432
	ZB2-BA434
Sign	O
	stop
	ZB2-BL2
	ZB2-BL3
	ZB2-BL4
Projecting	
	ZB2-BL432
	ZB2-BL434
Projecting	O
Sign	stop

Pushbutton Switch

Description	Reference
LAY5-B metals button switches	
	ZB2-BD2
Selector switch	ZB2-BJ2
2-positions	
	ZB2-BD3
Selector switch	ZB2-BJ3
3-positions	
	ZB2-BD4
Return to	ZB2-BJ4
centre	
2-positions	ZB2-BD5
Return to	ZB2-BJ5
centre	
3-positions	ZB2-BG2
	ZB2-BG4
Key switch	
2-positions	ZB2-BG6
	ZB2-BG3
Return to	
centre	ZB2-BG5
Key switch	ZB2-BG0
3-positions	ZB2-BG7
	ZB2-BP2
	ZB2-BP3
Even button	ZB2-BP4
preventing	ZB2-BP5
from	
pollution	ZB2-BW33
	ZB2-BW34
Button with	ZB2-BW35
lamp	ZB2-BW36
Even head	
with diffusion	ZB2-BV6
Function	
Smooth lens	ZB2-BV7
Direct Type	
Smooth lens	ZB2-BV3
Resistance	
Smooth lens	ZB2-BV4
Transformer	
Smooth lens	ZB2-BV5
Transformer	
Smooth lens	ZB2-BW061
Transformer	ZB2-BW062
	ZB2-BW063
Bottom seat	ZB2-BW064
of button	ZB2-BW065
with lamp	
Direct Type	ZB2-BW071
	ZB2-BW072
	ZB2-BW073
Button with	ZB2-BW074
lamp install	ZB2-BW075
base BA 9s	
Resistance	
≤250V	

Pushbutton Switch

Description	Reference
LAY5-B metals button switches	
Button with lamp install base BA 9s	ZB2-BW031
Resistance $\leq 130V$	ZB2-BW032
	ZB2-BW033
	ZB2-BW034
	ZB2-BW035
Button with lamp install base BA 9s	ZB2-BW041
Resistance $\leq 250V$	ZB2-BW042
	ZB2-BW043
	ZB2-BW044
	ZB2-BW045
Button with lamp install base BA 9s	ZB2-BW051
Resistance $\leq 380V$	ZB2-BW052
	ZB2-BW053
	ZB2-BW054
	ZB2-BW055
Seat of contact terminal N/O	ZB2-BZ101
N/C	ZB2-BZ102
N/O+N/O	ZB2-BZ103
N/C+N/C	ZB2-BZ104
N/O+N/O	ZB2-BZ105
Contact terminals N/O N/C	ZB2-BE101
	ZB2-BE102
Selector Button with lamp 2-positions stay put	ZB2-BK123
	ZB2-BK124
	ZB2-BK125
	ZB2-BK126
Selector Button with lamp 2-positions Automatic return	ZB2-BK143
	ZB2-BK144
	ZB2-BK145
	ZB2-BK146
Selector Button with lamp 3-positions stay put	ZB2-BK133
	ZB2-BK134
	ZB2-BK135
	ZB2-BK136
Selector Button with lamp 3-positions Automatic return	ZB2-BK153
	ZB2-BK154
	ZB2-BK155
	ZB2-BK156
Selector Button with lamp 3-positions Left return	ZB2-BK173
	ZB2-BK172
	ZB2-BK175
	ZB2-BK176
Double-head button Two even buttons	ZB2-BA9124
	ZB2-BA9224
	ZB2-BA9134
	ZB2-BA9234
Double-head button Even button + convex button	ZB2-BL9324
	ZB2-BL9424

Pushbutton Switch

Description	Reference
LAY5-B(E) metals and plastics button switches	
Double-head button	ZB2-BL9334
Even button + convex button	ZB2-BL9434
Double-head with lamp button	ZB2-BW81254
Two even buttons	ZB2-BW81354
Double-head with lamp button	ZB2-BW82254
Two even buttons	ZB2-BW82354
Double-head button	ZB2-BW83254
Even button + convex button	ZB2-BW83354
Double-head button	ZB2-BW84254
Even button + convex button	ZB2-BW84354
Mushroom Head Pushbutton $\Phi 40$	ZB2-BC2
	ZB2-BC3
	ZB2-BC4
	ZB2-BR2
Mushroom Head Pushbutton $\Phi 60$	ZB2-BR3
	ZB2-BR4
	ZB2-EA2
	ZB2-EA3
	ZB2-EA4
Flush	ZB2-EA5
	ZB2-EA6
	ZB2-ED2
	ZB2-EJ2
Selector switch 2-positions	ZB2-ED3
	ZB2-EJ3
Selector switch 3-positions	ZB2-ED4
Return to centre 2-positions	ZB2-EJ4
Return to centre 3-positions	ZB2-ED5
	ZB2-EJ5
	ZB2-EG2
	ZB2-EG4
Key switch	ZB2-EG6
Return to centre	ZB2-EG3
Key switch 3-positions	ZB2-EG5
	ZB2-EG0
Return to centre	ZB2-EG7
	ZB2-EW33
	ZB2-EW34
Even button preventing from pollution	ZB2-EW35
	ZB2-EW36
	ZB2-ES42
	ZB2-ES44
	ZB2-ES52
$\Phi 30$	ZB2-ES54
Push-Locked	ZB2-ES62
Mushroom Pushbutton $\Phi 40$	ZB2-ES64
	ZB2-EC2
	ZB2-EC3
	ZB2-EC4
	ZB2-EC5
Mushroom Head Pushbutton $\Phi 40$	ZB2-EC6
	ZB2-ER2
	ZB2-ER3
	ZB2-ER4
Mushroom Head Pushbutton $\Phi 60$	ZB2-ER5

Control Station



LAY5-B101H29
(XAL-B101H29)



LAY5-B132H29
(XAL-B132H29)



LAY5-B142H29
(XAL-B142H29)



LAY5-B174H29
(XAL-B174H29)



LAY5-B188H29
(XAL-B188H29)

Double insulated, for control circuits Complete stations

"Start" or " Stop" function (grey lid with dark grey base)

Description	Scheme	Marking on legend	Marking on push button	Reference	Weight kg
	N/O	Start	—	LAY5-B101H29	0.120
1 green flush pushbutton spring return		—	I	LAY5-B102	0.120
		—	Start	LAY5-B103	0.120
				LAY5-B111H29	0.120
1 red flush pushbutton spring return	N/C	Stop	—	LAY5-B114	0.120
		—	Stop	LAY5-B112	0.120
		—	O		
1 red mushroom head pushbutton, $\Phi 40$ mm, spring return	N/C	Emergency Stop	—	LAY5-B164H29	0.120
1 red projecting pushbutton	N/C	—	Stop	LAY5-B116	0.120
1 selector switch 2-position stay put standard black handle	N/O	Stop Start	—	LAY5-B132H29	0.125
		O	—	LAY5-B134	0.125
		I	—		
1 selector switch key operated (Ronis Key n° 445) 2-position stay put Key withdraw from left position	N/C		—	LAY5-B142H29	0.150
		O	—	LAY5-B144	0.150
		I	—		

"Emergency stop" functions with frigger action mechanism (yellow lid with dark grey base)

Description	Scheme	Function marking	Reference	Weight kg
1 red mushroom head pushbutton, $\Phi 40$ mm, latching		● Red	SAL-B174	0.14
Turn to release		● Black	SAL-J178	0.14
1 red mushroom head pushbutton, $\Phi 40$ mm, latching		● Red	SAL-B188	0.17
Key release (Key n° 445)		● Black	SAL-J188	0.17

Control Station

Double insulated, for control circuits
Complete stations

"Start" or " Stop" function (Light grey lid with dark base)

Description	Scheme	Marking on legend	Marking on push button	Reference	Weight kg
		Start Stop	— —	LAY5-B211H29	0.165
2 spring return push button	N/O	—	—	LAY5-B213	0.165
1 flush green	+	—	!		
1 flush red	N/C	—	O		
		—	Start Stop	LAY5-B215	0.165
2 spring return pushbuttons	N/O	—	↑ ↓	LAY5-B222	0.165
1 flush withe (black arrow)	+	—		LAY5-B223	0.165
1 flush black (white arrow)	N/C	—	⇨ ⇩		

"Start" or "Stop" functions with pilot light(grey lid with dark grey base)

Description	Scheme	Marking on legend	Marking on button	Reference	Weight kg
1 red pilot light, Direct supplied ≤130V★	X1 ⊗ X2	Start Stop	— —	LAY5-B361H29	0.200
Bulb not supplied +		—	!	LAY5-B363	0.200
2 spring return pushbuttons	N/O	—	O		
1 flush green	+	—		LAY5-B366	0.200
1 flush red	N/C	—	Start Stop		
3 spring return pushbuttons	N/O	Forward Stop Reverse	! O 	LAY5-B311H29	0.200
1 flush green	+			LAY5-B339	0.200
1 flush red	N/C			LAY5-B321H29	0.200
1 flush green	+	Up Stop Down	— — —		
3 spring return pushbuttons	N/O	—	↑ ○ ↓	LAY5-B324	0.200
1 flush withe (black arrow)	+	—		LAY5-B334	0.200
1 flush red	N/C	—	⇨ ○ ⇩		
1 flush black (white arrow)	N/O	—			



LAY5-B213
(XAL-B213)



LAY5-B222
(XAL-B222)



LAY5-B334
(XAL-B334)



LAY5-B361H29
(XAL-B361H29)

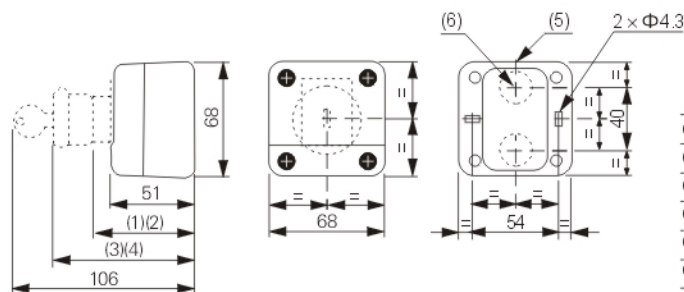


LAY5-B339
(XAL-B339)

Control Station

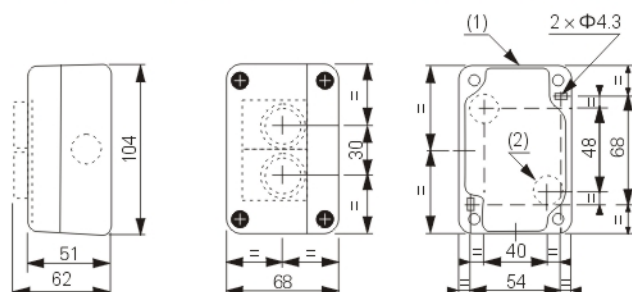
Control and signal units Φ 22mm

Button box for single button LAY5-XALBE01/LAY5-XALB01C/XALJ01C



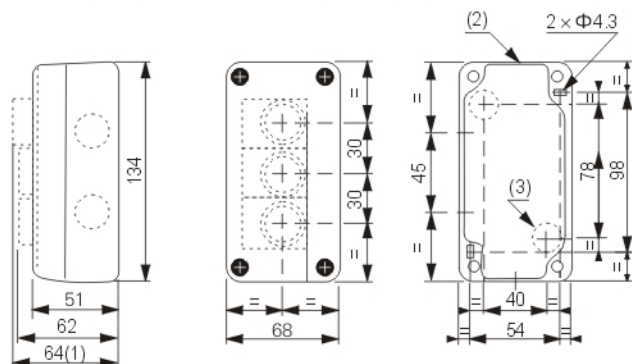
- (1) 62mm Attach button
- (2) 77mm Attach switch chosen
- (3) 82mm Attach mushroom-head button
- (4) 102mm Attach mushroom-head button touching off motion
- (5) 2 Φ 20mm Knock hole and longest line 12mm
- (6) 2 Φ 19mm Knock hole to install line in the bottom

Button box for the two buttons LAY5-XALBE02/LAY5-XALB02C



- (1) 4 Φ 20mm Knock hole and longest line 12mm
- (2) 2 Φ 19mm Knock hole to install line in the bottom

Button box for the three buttons LAY5-XALBE03/LAY5-XALB03C

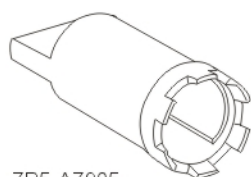


- (1) Indicator
- (2) 6 Φ 20mm Knock hole and longest line 12mm
- (3) 2 Φ 19mm Knock hole to install line in the bottom

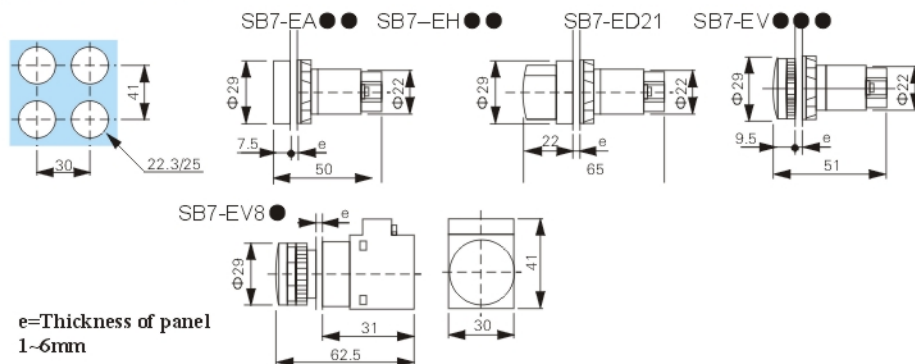
Picture opening hole on the panel



ZB5-AZ901



ZB5-AZ905



Pushbutton Switch

Control and signal units Φ 22mm

Specification

Stand	IEC 947-5-1(XB7-EV8●● exclusion)		
product papers	UL and CSA; CE(XB7-EV8●● exclusion)		
Surrounding temperature	Working: -25...+70℃ Put aside: -40...+70℃		
Anti-electron surge	Rate 2(Corform to IEC536)		
Degree of protection	IP 40(Corform to IEC529)		
Rocted non-conductive voltage	U _i =300V(Corform to IEC947-1)		
Rating operation power (Corform to IEC 947-5-4 AC-15 and DC-13)	50,000 operating 100,000 operating 500,000 operating	230V~(VA)	24V (W)
		100	12
		50	6
		20	3
Connection	Terminal of bolt		
Type of terminal	NO, NC, NO/NC. CENELEC EN 50013		

Button and selector switch -round head(ten pieces as a sale unit)

Description	Contact N/O	Type N/C	C/O	Color	Reference	Weight kg
Pushbttton spring return	1	-	-	Black	SB7-EA21	0.020
				Green	SB7-EA31	0.020
	-	1	-	Red	SB7-EA42	0.020
	-	-	1	Black	SB7-EA25	0.020
				Green	SB7-EA35	0.020
			Red	SB7-EA45	0.020	
Pushbutton Sstay put	1	-	-	Black	SB7-EH21	0.020
				Green	SB7-EH31	0.020
Press and press -release	-	-	1	Black	SB7-EH25	0.020
				Green	SB7-EH35	0.020
Selector switches handle 2 Positions stay put	1	-	-	Black	SB7-ED21	0.025

Illuminate (ten pieces as a sale unit)

Supply voltage	Description	Supply voltage	Color	Reference	Weight kg
Direct Type	Illumination (not supply) BA 9s install base	~250V	White	SB7-EV61	0.018
			Green	SB7-EV63	0.018
			Red	SB7-EV64	0.018
			Yellow	SB7-EV65	0.018
			Blue	SB7-EV66	0.018
	Neon bulb (supply) BA 9s install base	~230V	Glassy	SB7-EV67	0.018
			White	SB7-EV41	0.020
			Green	SB7-EV43	0.020
			Red	SB7-EV44	0.020
			Yellow	SB7-EV45	0.020
Resistor supplied	Illumination 130V-2.6W (not supply) BA 9s install base	~230V	Blue	SB7-EV46	0.020
			Glassy	SB7-EV47	0.020
			White	SB7-EV71	0.020
			Green	SB7-EV73	0.020
			Red	SB7-EV74	0.020
			Yellow	SB7-EV75	0.020
			Blue	SB7-EV76	0.020
Transformer	Illumination 6V-1.2W (supply) BA 9s install base	~230V ± 6%	Glassy	SB7-EV77	0.020
			White	SB7-EV81	0.100
			Green	SB7-EV83	0.100
			Red	SB7-EV84	0.100
			Yellow	SB7-EV85	0.100
			Blue	SB7-EV86	0.100
			Glassy	SB7-EV87	0.100
			White	SB7-EV03B	0.020
			Green	SB7-EV04B	0.020
			Yellow	SB7-EV05B	0.020
Integration LED		≡ 24V	White	SB7-EV03M	0.020
		~230V	Green	SB7-EV04M	0.020
			Yellow	SB7-EV05M	0.020

(1) bulb of indicator directly supplied electricity: max 230V, 2.5W.

Pushbutton Switch



LAY4-BA31
(XB4-BA31)



LAY4-BA42
(XB4-BA42)



LAY4-BA4322
(XB4-BA4322)



LAY4-BP51
(XB4-BP51)



LAY4-BC21
(XB4-BC21)

Pushbutton, spring return (Screw clamps terminals)

Pushbutton head aspect	Description	Contact type		Sign	Color	Reference	Weight
		N/O	N/C				
	Flush	1	-	-	Black	LAY4-BA21 (ZB4-BZ101+ZB4-BA2)	0.080
					Green	LAY4-BA31 (ZB4-BZ101+ZB4-BA3)	0.080
					Yellow	LAY4-BA51 (ZB4-BZ101+ZB4-BA5)	0.080
					Blue	LAY4-BA61 (ZB4-BZ101+ZB4-BA6)	0.080
		-	1	-	Red	LAY4-BA42 (ZB4-BZ102+ZB4-BA4)	0.080
	Flush	1	-	"I" (White)	Green	LAY4-BA3311 (ZB4-BZ101+ZB4-BA331)	0.080
	Flush	-	1	"O" (White)	Red	LAY4-BA4322 (ZB4-BZ102+ZB4-BA431)	0.080
	Flush (1)	1	-	↑ (White)	White	LAY4-BA3341 (ZB4-BZ101+ZB4-BA334)	0.080
	Flush (1)	1	-	↑ (White)	Black	LAY4-BA3351 (ZB4-BZ101+ZB4-BA335)	0.082
	Flush (Attach transparent silica gel cover)	1	-	-	Black	LAY4-BP21 (ZB4-BZ101+ZB4-BP2)	0.082
					Green	LAY4-BP31 (ZB4-BZ101+ZB4-BP3)	0.082
					Yellow	LAY4-BP51 (ZB4-BZ101+ZB4-BP5)	0.082
					Blue	LAY4-BP61 (ZB4-BZ101+ZB4-BP6)	0.082
		-	1	-	Red	LAY4-BP42 (ZB4-BZ102+ZB4-BP4)	0.081
	Projecting	-	1	-	Red	LAY4-BL42 (ZB4-BZ102+ZB4-BL4)	0.122
	Mushroom Φ40	1	-	-	Black	LAY4-BC21 (ZB4-BZ101+ZB4-BC2)	

Double-head button, spring return (Screw clamps terminals)

Pushbutton head aspect	Description	Contact type		Degree of protection	Reference	Weight
		N/O	N/C			
	1 Flush Green (Sign "I")	1	1	IP 40	LAY4-BL845 (ZB4-BZ105+ZB4-BL8434)	0.106
	1 Projecting Red (Sign "O")			IP 66	LAY4-BL945 (ZB4-BZ105+ZB4-BL9434)	0.111

Pushbutton Switch



LAY4-BT42
(XB4-BT42)



LAY4-BS9445
(XB4-BS9445)



LAY4-BS542
(XB4-BS542)



LAY4-BD33
(XB4-BD33)



LAY4-BJ33
(XB4-BJ33)



LAY4-BG33
(XB4-BG33)

Emergency Stop Red Mushroom Head Pushbutton, $\Phi 40$ (red)(Screw clamps terminals)

Pushbutton head aspect	Action way	Contact type		Reference	Weight kg
		N/O	N/C		
	Push - pull Motion touching off	1	1	LAY4-BT845 (ZB4-BZ105+ZB4-BT84)	0.136
	Selector Motion touching off	1	1	LAY4-BS8445 (ZB4-BZ105+ZB4-BS844)	0.130
	Key Motion touching off (n° 455)	1	1	LAY4-BS9445 (ZB4-BZ105+ZB4-BS944)	0.170
	Revolve	-	1	LAY4-BT42 (ZB4-BZ102+ZB4-BT4)	0.125
	Selector	-	1	LAY4-BS542 (ZB4-BZ102+ZB4-BS54)	0.118
	Key (n° 455)	-	1	LAY4-BS142 (ZB4-BZ102+ZB4-BS14)	0.133

Selector switches and Key switches (Screw clamps terminals)

Pushbutton head aspect	Action way	Contact type		Positions (1)	Reference	Weight kg
		N/O	N/C			
	Black Level Handle	1	-	2-Positions	LAY4-BD21 (ZB4-BZ101+ZB4-BD2)	0.095
		1	-	2-Positions	LAY4-BD25 (ZB4-BZ105+ZB4-BD2)	0.105
		2	-	3-Positions	LAY4-BD33 (ZB4-BZ103+ZB4-BD3)	0.105
				3-Positions Automatically replace	LAY4-BD53 (ZB4-BZ103+ZB4-BD5)	0.105
	Black Long Handle	1	-	2-Positions	LAY4-BJ21 (ZB4-BZ101+ZB4-BJ2)	0.096
		2	-	3-Positions	LAY4-BJ33 (ZB4-BZ103+ZB4-BJ3)	0.105
				3-Positions Automatically replace	LAY4-BJ333 (ZB4-BZ103+ZB4-BJ53)	0.105
	Key (n° 455)	1	-	2-Positions	LAY4-BG21 (ZB4-BZ101+ZB4-BG2)	0.117
					LAY4-BG41 (ZB4-BZ101+ZB4-BG4)	0.117
				2-Positions Automatically replace	LAY4-BG61 (ZB4-BZ101+ZB4-BG6)	0.117
					LAY4-BG03 (ZB4-BZ103+ZB4-BG0)	0.127
		2	-	3-Positions	LAY4-BG33 (ZB4-BZ103+ZB4-BG3)	0.127

(1) Symbol " " means the place key is pulled out

Pushbutton switch and indicator

SDL16 button switch with lamp SDL16 signal lamp saving energy

SDL 16 signal lamp

Illuminate Type Capacity	Color	Function	Work Voltage	Contact type	Reference
LED 24V				1NO+1NC	SDL16-11AD/□ □ 24
Neon 220V			24V AC/DC ±10%	2NO+2NC	SDL16-22AD/□ □ 24
Illumination		Instant			
6V AC/DC				1NO+1NC	SDL16-11AD/□ □ 220
Code C6			220V AC/DC ±10%	2NO+2NC	SDL16-22AD/□ □ 220
70mA					
12V AC/DC				1NO+1NC	SDL16-11ADL/□ □ 24
Code C12			24V AC/DC ±10%	2NO+2NC	SDL16-22ADL/□ □ 24
37mA					
24V AC/DC		Alternation		1NO+1NC	SDL16-11ADL/□ □ 220
Code C24			220V AC/DC ±10%	2NO+2NC	SDL16-22ADL/□ □ 220
24mA					
Neon bulb				-	SDL16-AXD/□ □ 24
220V AC			24V AC/DC	-	SDL16-AXD/□ □ 220
Code N220		Indicator	220V AC/DC		
N110				1NO+1NC	SDL16-11FD/□ □ 24
110V AC			24V AC/DC ±10%	2NO+2NC	SDL16-22FD/□ □ 24
Code N110				1NO+1NC	SDL16-11FD/□ □ 220
20mA		Instant	220V AC/DC ±10%	2NO+2NC	SDL16-22FD/□ □ 220
LED				1NO+1NC	SDL16-11FDL/□ □ 24
6V DC					
Code E6			24V AC/DC ±10%	2NO+2NC	SDL16-22FDL/□ □ 24
20mA				1NO+1NC	SDL16-11FDL/□ □ 220
12V DC					
Code E12		Alternation	24V AC/DC ±10%	2NO+2NC	SDL16-22FDL/□ □ 220
13mA				1NO+1NC	SDL16-11FDL/□ □ 220
24V DC			220V AC/DC ±10%	-	SDL16-FXD/□ □ 24
Code E24					
10mA		Indicator	24V AC/DC	-	SDL16-FXD/□ □ 220
			220V AC/DC		



SDL16-11AD 24V



SDL16-22AD 24V



SDL16-AXD 24V



SDL16-11FD 24V



SDL16-22FD 24V



SDL16-FXD 24V

Pushbutton switch and indicator



SDL16-11CFD 24V



SDL16-22CFD 24V



SDL16-CFXD 24V



SDL16-22MD 24V



SDL16-22A



SDL16-11A



SDL16-22F



SDL16-11F



SDL16-22CF



SD



SDL16-22M



SDL16-11M

SDL16 button switch with lamp SDL16 signal lamp

SDL16 button switch

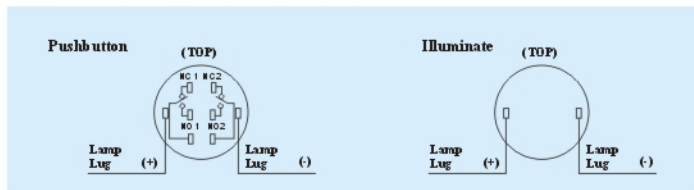
Color	Function	Voltage	Contact type	Reference
LED 24V Neon 220V	Instant	24V AC/DC ± 10%	1NO+1NC	SDL16-11CFD/□ □ 24
			2NO+2NC	SDL16-22CFD/□ □ 24
● Red ● Green ● Yellow ● Orange ● Blue ○ White (Note: Letter user needs color is filled in the first square frame on the left.)	Alternation	220V AC/DC ± 10%	1NO+1NC	SDL16-11CFD/□ □ 220
			2NO+2NC	SDL16-22CFD/□ □ 220
		24V AC/DC ± 10%	1NO+1NC	SDL16-11CFDL/□ □ 24
			2NO+2NC	SDL16-22CFDL/□ □ 24
	Indicator	220V AC/DC ± 10%	1NO+1NC	SDL16-11CFDL/□ □ 220
			2NO+2NC	SDL16-22CFDL/□ □ 220
		24V AC/DC	-	SDL16-CFXD/□ □ 24
			-	SDL16-CFXD/□ □ 220
	Instant	220V AC/DC	1NO+1NC	SDL16-22MD/□ □ 24
	Alternation		2NO+2NC	SDL16-22MDL/□ □ 24
	Instant		1NO+1NC	SDL16-11A/□ □
			2NO+2NC	SDL16-22A/□ □
	Alternation		1NO+1NC	SDL16-11AL/□ □
			2NO+2NC	SDL16-22AL/□ □
	Instant		1NO+1NC	SDL16-11F/□ □
			2NO+2NC	SDL16-22F/□ □
	Alternation		1NO+1NC	SDL16-11FL/□ □
			2NO+2NC	SDL16-22FL/□ □
	Instant		1NO+1NC	SDL16-11CF/□ □
			2NO+2NC	SDL16-22CF/□ □
	Alternation		1NO+1NC	SDL16-11CFL/□ □
			2NO+2NC	SDL16-22CFL/□ □
	Instant		1NO+1NC	SDL16-11M/
			2NO+2NC	SDL16-22M/
	Alternation		1NO+1NC	SDL16-11ML/
			2NO+2NC	SDL16-22ML/

- Red
- Green
- Yellow

SDL16 Letter Meaning

Letter	Meaning	Letter	Meaning	Letter	Meaning
AXD	Round indicator	AL	Round flat button of alternative type	XA	Round revolving handle button
FXD	Square indicator	FL	Square button of alternative type	XF	Square revolving handle button
CFXD	Rectangular indicator	CFL	Rectangular button of alternative type	XCF	Rectangular revolving handle button
MXD	Mushroom indicator	A	Round flat button (Instant moving type)	L	Alternative belt (In the type of self-lock and set free)
AD	Round light button	F	Square button (Instant moving type)	ML	Mushroom button
FD	Square light button	CF	Rectangular button (Instant moving type)	ADL	Round belt light button alternative
CFD	Rectangular light button	M	Mushroom button (Instant moving type)	FDL	Square belt light button alternative
MD	Mushroom light button	ZS	Mushroom button (alternative moving type)	CFDL	Rectangular belt light button alternative
YA	Round key button	YF	Square key button	YCF	Rectangular key button

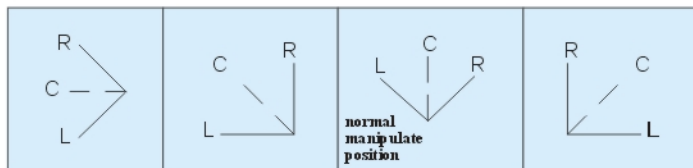
Permutation picture of terminals



SDL16 Selector switch

It is possible to change position of operating system.

It is possible to change position of operating system by running front cover and locker. Every other 450, front cover can be locked to avoid it automatically running when it is installed on the plate.



Change position of operating system.

Get rid of lock before pulling out, run front cover, push it in every other 450 and then lock front cover.

Contact type work diagram

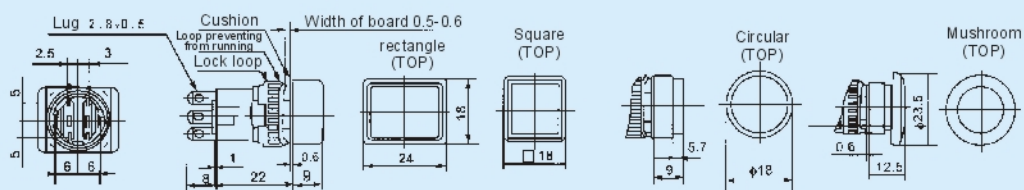
Position	Contact type	Working type		
		Left	Midst	Right
 90° 2 Position	Single-knife double throws	NO NC		NO NC
	Double-knife double throws	Left Contact type: NO NC, Right Contact type: NO NC		Left Contact type: NO NC, Right Contact type: NO NC
 45° 3 Position	Double-knife double throws	Left Contact type: NO NC, Right Contact type: NO NC	Left Contact type: NO NC, Right Contact type: NO NC	Left Contact type: NO NC, Right Contact type: NO NC

Note: Running "connection point" working picture is accordant with one with key.



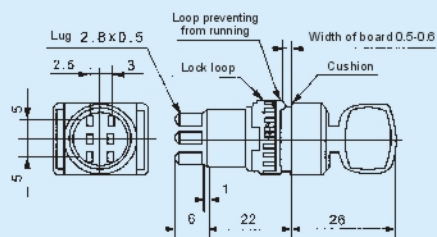
Position	Contact type	Reference	Remark
 90° 2 Position	1NO+1NC	SDL16-11XA-2	-2 be taken 2 position -3 be taken 3 position
	2NO+2NC	SDL16-22XA-2	
 45° 3 Position	2NO+2NC	SDL16-22XA-3	
 90° 2 Position	1NO+1NC	SDL16-11XF-2	
	2NO+2NC	SDL16-22XF-2	
 45° 3 Position	2NO+2NC	SDL16-22XF-3	
 90° 2 Position	1NO+1NC	SDL16-11XCF-2	
	2NO+2NC	SDL16-22XCF-2	
 45° 3 Position	2NO+2NC	SDL16-22XCF-3	

Size



Position	Contact type	Reference	Remark
90° 2 Position L R	1NO+1NC	SDL16-11YA-2	-2 be taken 2 position -3 be taken 3 position
	2NO+2NC	SDL16-22YA-2	
45° 3 Position L C R	2NO+2NC	SDL16-22YA-3	
	1NO+1NC	SDL16-11YF-2	
90° 2 Position L R	2NO+2NC	SDL16-22YF-2	
	2NO+2NC	SDL16-22YF-3	
45° 3 Position L C R	1NO+1NC	SDL16-11YCF-2	
	2NO+2NC	SDL16-22YCF-2	
45° 3 Position L C R	2NO+2NC	SDL16-22YCF-3	

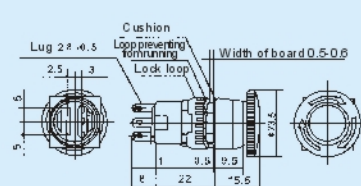
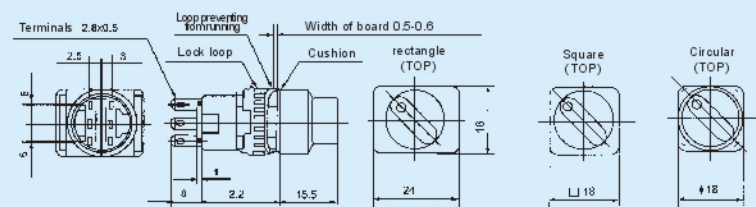
Size



SDL16-ZS Latching

Working type	Contact type	Reference	Remark
Press lock to replace	1NO+1NC	SDL16-11ZS	Red
	2NO+2NC	SDL16-22ZS	

Size



Indicator

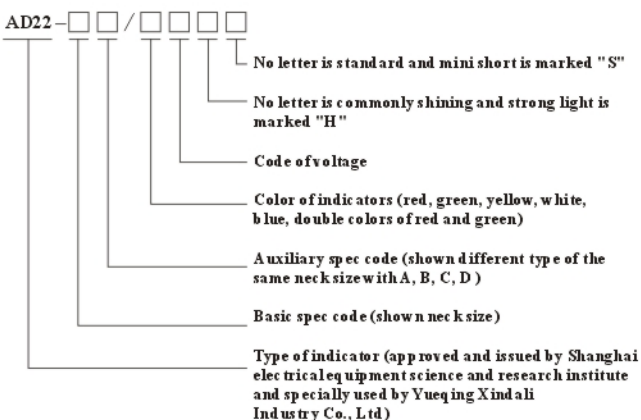
Brief Introduction

AD22-22-25-16 (CED) and AD22-22-25-16-12 (NEON) series of indicator is equally used LED shining chip as light source. Because of long life, low consumption, small volume and light weight, it is a product replaced the older generations XD all kinds of incandescent lamp and indicator of neon lamp by new ones. AD22-25, AD22-22 and AD22-16 indicators produced by our factory have following character: high brightness, good reliability, beautiful shape and careful manufacture. Products are well praised by lots of clients. In order to fit in with quality and aesthetic demand of user, we develop AD22-22B, C, D, E, G, H, double-color lamp, position indicator, shining buzzer and mini short indicator again and use LA 102 series button style to design shape, and it is possible to seal all kinds of international standard symbols or make to order ones in lampshade. Lampshade is made of polycarbonate with high intension and has better anti-surge performance, set up bolt-type connector in it, which will be safer and more convenient. All improvement will be provided convenience and perfection for you.

Use

AD22 series of indicators are used as indicating, foretelling, accident and other signals in the lines of equipment (such as electrical power, telecommunication, machine tool, watercraft, textile, printing, mine machinery, etc).

Type and meaning



Applicable environment

- (1) Environmental temperature: $-25^{\circ}\text{C} \sim +55^{\circ}\text{C}$.
- (2) Relative humidity: $\leq 98\%$.
- (3) It can normally work under following condition: vibration frequency is 2-80Hz and accelerated speed is 0.7g.
- (4) Pollution grade is 3 and installed sort is III.
- (5) There is a "TH" sign, and it is possible to work under the moist tropical environment.

Main technical target

- (1) Voltage of working frequency: 2.5kV (AC valid value), 1min.
- (2) Insulated resistance $\geq 2\text{M}\Omega$
- (3) Voltage wave allowed by AC indicator $\pm 20\%$
- (4) Continual working life $\geq 30000\text{h}$
- (5) Brightness $\geq 60\text{cd/m}^2$
- (6) Index of leakage CT1 ≥ 100
- (7) Protection grade IP65, and it is possible to be made to order IP67
- (8) Using frequency AC50 ~ 60 Hz

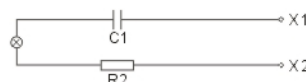
Circuit direction

- (1) AC and DC indicator (DC, AC6V ~ DC, AC 220V)



Note: When DC is 110V, 220V and 380V, there is amount of heat, and it should be considered radiating condition.

- (2) AC indicator (AC 220V, AC380V)



- (3) Return of double-color indicator (DC, AC110V ~ DC, AC 220V)



Note: When put through X0 and X1, lamp gives out a green light, when done X0 and X2, lamp does a red one.

Contrast list of voltage current and code

Voltage Code	21	22	23	24	25	26	27	28	29	30	31	32
Supply Voltage	AC/DC							DC	FD		AC	
Voltage	6V	12V	24V	36V	48V	110V	127V	220V	380V	500V	220V	380V
Current	140	72	18-72	18	18	16	16	12	12	12	16	17

Note: "FD" in the list means a discharging lamp can be installed on the cupboard of capacitor.

Indicator



AD22-22B



AD22-22C



AD22-22D



AD22-22E



AD22-22F



AD22-22G



AD22-22H

Reference	Color	Supply Voltage	Size
 AD22-22B	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 29-FD380V 31-AC220V 32-AC380V	
 AD22-22C	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 29-FD380V 31-AC220V 32-AC380V	
 AD22-22D	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 29-FD380V 31-AC220V 32-AC380V	
 AD22-22E	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 29-FD380V 31-AC220V 32-AC380V	
 AD22-22F	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
 AD22-22G	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
 AD22-22H	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	

Indicator



AD22-22GS



AD22-22A/41



AD22-22A/40



AD22-16AS



AD22-16A



AD22-16BS



AD22-16B

Reference	Color	Supply Voltage	Size
Protected LED AD22-22GS	- Red - Green - Yellow - Blue - White	LED 23-DC.AC24V Illumination 11-DC.AC6V 12-DC.AC12V 13-DC.AC24V Neon 16-DC.AC110V 18-DC.AC220V 19-DC.AC380V	
Protected LED AD22-22A/41	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
Protected LED AD22-22A/40	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
Protected LED AD22-16AS	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V	
Protected LED AD22-16A	- Red - Green - Yellow - Blue - White	26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
Protected LED AD22-16BS	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
Protected LED AD22-16B	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	

Indicator



AD22-16D



AD22-22AF/41



AD22-25AF/41



AD22-25AB/40



AD22-25AK/40



AD22-25AN/21



AD22-30A/40

Reference	Color	Supply Voltage	Size
 AD22-16D	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
 AD22-22AF/41	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
 AD22-25AF/41	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
 AD22-25AB/40	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
 AD22-25AK/40	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
 AD22-25AN/21	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	
 AD22-30A/40	- Red - Green - Yellow - Blue - White	21-DC.AC6V 22-DC.AC12V 23-DC.AC24V 24-DC.AC36V 25-DC.AC48V 26-DC.AC110V 27-DC.AC127V 28-DC220V 31-AC220V 32-AC380V	

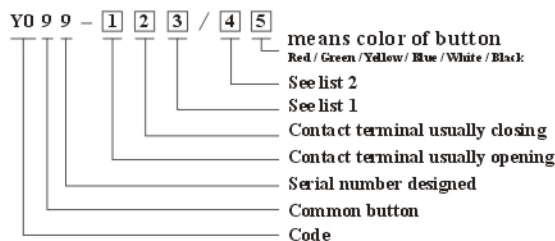
Pushbutton Switch

Y090(PBC.LAY7) series of button switches

Applicable range

The series of button is used as remote control and signal in control circuits below AC 50Hz or 60Hz, voltage 660 V and DC voltage 440V.

Type and meaning



Using condition

- (1) Air temperature $-25^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- (2) Relative humidity: $\leq 85\%$
- (3) Altitude height: $\leq 2,000\text{m}$
- (4) Pollution grade: 3
- (5) Installation type: III
- (6) Protection grade: IP55
- (7) Environmental condition: It isn't allowed medium caused explosion, gas and dust of electric conduction

Derivative code and its meaning

List 1

Letter	Meaning	Letter	Meaning
BN	Even button (instant motion)	MZS	Mushroom button alternation
GN	High even button (instant motion)	X	Short-handle button
JN	Whole protection cover button (instant motion)	XB	Long-handle button
BNZS	Even button alternation	XD	Knob with lamp
GNZS	High even button alternation	YM	Key mushroom button
DZS	Alternation with lamp	Y	Key button
M	Mushroom button	ZS	Button automatically locking (automatic replacement according to lock and clockwise running)
DM	Mushroom button with lamp	D	Button with lamp

Place function Code of running button

List 2

2 or 3	Two or three positions keeping	31	Automatic replacement of three positions (on the right)
21	Automatic replacement of two positions (on the right)	32	Automatic replacement of three positions (on the left)
22	Automatic replacement of two positions (on the left)	33	Automatic replacement of three positions (on the left and right)

Main technical parameter

List 4

Rating isolated voltage	AC、660V、50Hz			Operation frequency	1,200 times/h						
Voltage of working frequency	AC、2500V、50Hz										
Heating current (Ith)	10A			Using type	AC-15			DC-13			
Resistance of contact terminal	Min. 50mΩ			Rating working voltage	220	380	660	48	110	220	440
Life	Common	Knob	Latching								
Life of machine	3000000 times	300000 times	50000 times	Rating working current	3.3	2	1.1	2.7	1.1	0.5	0.25
Life of electricity	500000 times	300000 times	50000 times								

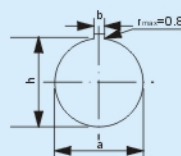
Installation of product

Single-hole button and indicator should be installed in round hole of control board. There's a rectangular key groove in the round hole. See each size of installed hole in list 5, picture 1 and 2, and standard place of key groove is up (i.e., place above 12 clock), thickness of place board is 1-6mm. When installing several or tens of products in a line, a center distance installed in same line product and b one of each line one can't be less than the value in list 5.

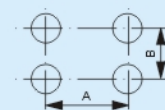
Diameter of installed hole a, size of key groove and least distance between central lines of installed hole (mm)

List 5

Size of neck	Diameter of installed hole a	A	B	Key groove	
				Height	Width
Φ30	30.5 ^{+0.5} ₀	50	65	33.0 ^{+0.5} ₀	4.8 ^{+0.5} ₀
Φ25	25.5 ^{+0.5} ₀	40	55	27.5 ^{+0.5} ₀	4.0 ^{+0.5} ₀
Φ22	22.3 ^{+0.5} ₀	30	50	24.1 ^{+0.5} ₀	3.2 ^{+0.5} ₀



Picture 1. Diameter of installed hole and size of key groove



Picture 2. Space installed several products in a line

Pushbutton Switch



**Y090-XD
(APW16)**



**Y090-11BN
(ABW111)**



**Y090-11BNZS
(AOW111)**



**Y090-11GN
(ABW211)**



**Y090-11DN
(ALW2-611)**



**Y090-11DM
(ALW4-611)**



**Y090-11DMZS
(AOLW4-611)**

Description	Color	Contact type	Supply Voltage	Reference
BA 9s (LED.Neon)	● Red ● Green ● Blue ● Yellow ○ White			Y090-XD(APW16) 24V
				Y090-XD(APW16) 220V
		N/O		Y090-10BN(ABW110)
	● Red ● Green ● Black ● Yellow ○ White	N/O+N/C		Y090-11BN(ABW111)
		N/O		Y090-10BNZS(AOW110)
		N/O+N/C		Y090-11BNZS(AOW111)
		N/C		Y090-01GN(ABW201)
	● Red ● Green ● Black ● Yellow ○ White	N/C		Y090-10GN(ABW210)
				Y090-11GN(ABW211)
		N/O+N/C		Y090-11GNZS(AOW211)
				Y090-11DN(ALW2-611) 24V
BA 9s (LED.Neon)	● Red ● Green ● Blue ● Yellow ○ White	N/O+N/C		Y090-CDN(ALW2-611) 220V
				Y090-11DZS(AOLW211) 24V
		N/O+N/C		Y090-11DZS(AOLW211) 220V
	● Red ● Green ● Blue ● Yellow ○ White			Y090-11DM(ALW4-611)
		N/O+N/C		Y090-11DMZS(AOLW4-611)

Pushbutton Switch



Y090-11M/40
(ABW411)



Y090-11ZS/40
(AVW411)



Y090-11Y/21
(AKW211)



Y090-11MY/21
(AXW411-2P)



Y090-11X/21
(ASW211)



Y090-11X/31
(ASW33-243)



Y090-11XB/21
(ASW211L)



Y090-11XB/31
(ASW33L)



Y090-11XD/21
(ASLW211)

Description	Color	Contact type	Supply Voltage	Reference
		N/O+N/C		Y090-11M/40(ABW411)
				Y090-11MZS(AOW411)
		N/O+N/C		Y090-11ZS/40(AVW411)
		N/O+N/C		Y090-11ZS/60(AVW611)
		N/O+N/C		Y090-11Y/21(AKW211)
		N/O+N/C		Y090-11Y/31(AKW311)
		N/O+N/O		Y090-20Y/33(AKW304)
		N/O+N/C		Y090-11MY/21(AXW411-2P)
		N/O+N/C		Y090-11MY/31(AXW411-3P)
				Y090-11X/21(ASW211)
		N/O+N/C		Y090-11X/31(ASW33-243)
		N/O+N/C		Y090-11X/22(ASW302)
		N/O+N/C		Y090-11XB/21(ASW211L)
		N/O+N/C		Y090-11XB/31(ASW33L)
		N/O+N/C		Y090-11XB/32(ASW322)
		N/O+N/C		Y090-20XB/33(ASW304L)
		N/O+N/O		Y090-11XD/21(ASLW211)
BA 9s (LED.Neon)		N/O+N/C		Y090-11XD/31(ASLW33-243)
		N/O+N/C		Y090-20XD/33(ASLW304)
		N/O+N/C		

● Red
● Green
● Black

● Red
● Green
● Black

● Red
● Green
● Black

● Red
● Green
● Blue
● Yellow
○ White

Pushbutton Switch

LA 102 (LA39) series of button switches

Character

(1) The series of button is designed and produced by means of introducing Swiss EAO button with high reliability. Its structure is lever super-critical running type, if travel pressed isn't enough, it can also run quickly when exceeding to the critical position, and reliably contact or break. It can be ensured necessary terminal pressure by pulling spring, and it has the automatic cleaning function, makes contact reliable and performance killing arc good. When breaking, metal spring piece will jump and give out a clear noise, which will give user a signal and make him know whether instruction has been carried out or not.

(2) Combined card package: load or unload flexibly, conveniently and reliably, it is possible to install two-pole switch part. There is 1~4 couples of contact terminals, which can combine 1~14 specs.

(3) The type usually opening and closing is isolated and can work by conducting pole.

(4) There is partition board in the wiring place to combine bolt to press wire, with bolt coming out or going in, tile-like washer lifts or falls. It is convenient to wire.

(5) Installation is fixed with leaning bolt, which will be convenient, safe and reliable.

Applicable range

The series of product is used as remote control device in electromagnetic starter, contactor, relay and other electrical lines below AC 50Hz (60Hz) voltage 660 V and DC voltage 440V.

Main technical parameter

Rating isolated voltage	AC, 660V, 50Hz							
Voltage of working frequency	AC, 2500V, 50Hz 1min							
Heating current	10A							
Resistance of contact terminal	$\leq 50m\Omega$							
Protection grade	IP65							
Using type	AC-15				DC-13			
Rating voltage (Ue)	220V	380V	660V	24V	48V	110V	220V	440V
Rating working current (Ie)	6A	4A	2A	6A	3A	1A	0.5A	0.25A

Using condition

- (1) Environmental temperature: $-25^{\circ}\text{C} \sim +55^{\circ}\text{C}$
- (2) Altitude height: $\leq 2,000\text{m}$
- (3) Anti-vibration performance: 10~2,000Hz 1mm 10g
- (4) Installation type: II
- (5) Pollution grade: 3

Using Life

Appellation	Item	Life of machine	Life of electricity
Common button and button with lamp		300 Ten thousand times	60 Ten thousand times
Knob		30 Ten thousand times	30 Ten thousand times
Key button and button automatically locking		5 Ten thousand times	5 Ten thousand times

Type and meaning

LA102 - 1 2 3 4 / 5 6 7

Serial number designed

Common button switch

Pushbutton Switch

LA 102 (LA39) series of button switches

- (1) Means quantity of contact terminal usually opening
 (2) Means quantity of contact terminal usually closing
 (3) Means auxiliary spec code and meaning and see following list

Letter	Meaning	Letter	Meaning
no letter	Common	ZS	Urgent stop button
※	Symbol button (see right picture)	Y	Two-position key button
S	Waterproof button	YS	Three-position key button
T	Button automatically locking	X	Short handle two-position knob
M	Mushroom button	XS	Short handle three-position knob
MT	Mushroom button automatically locking	CX	Long handle two-position knob
D	Button with lamp	CXS	Long handle three-position knob

(4) means the shape on the head, no letter means round, and "F" is square.

(5) means color of button Red / Green / Yellow / Blue / White / Black

(6) Position of knob f: Left automatic replacement; fu: Right automatic replacement; ffu: Left and right automatic replacement

(7) Voltage code of indicator with lamp button

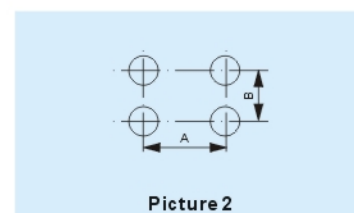
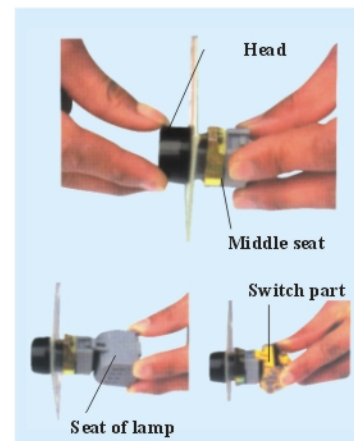
Light source	Shining diode LED									
Code	21	22	23	24	25	26	27	28	31	32
Supply Voltage category	AC/DC								AC	
Voltage (V)	6	12	24	36	48	110	127	220	220	380

Install

(1) Insert head of button in installed hole from front of panel, screw on middle seat behind panel, and tighten the bolt (Note: don't use too much strength, max strength 25N.cm), at last, install switch parts or lamp seat directly without needing other tools. See operation course on picture 1. After finishing installing, press button, if it is blocked, you should adjust the two bolts loosening or clamping and check whether switch parts are completely installed.

(2) When several buttons are installed on controlled board in a line, a center distance installed button in same line and b one of each line button (see picture 2) can't be less than the value listed in F list.

Appellation	Size	a	b
Common button, lamp button, knob and key button		30	50
Mushroom button, long-handle button, button of urgent stop		45	50



1 start



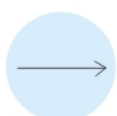
2 stop



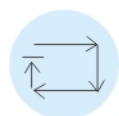
Start up and stop



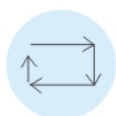
Touch



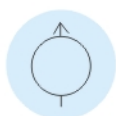
Continual linear motion direction



Single circle



Automatic circle



Pump



Hydraulic pump

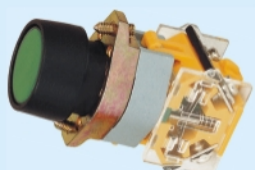


Cooling pump

Pushbutton Switch



LA102-Q
(LA39-Q)



LA102-11
(LA39-11)



LA102-11D
(LA39-11D)



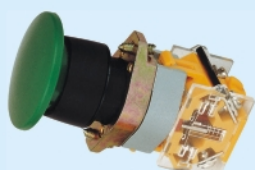
LA102-11X
(LA39-11X)



LA102-11CX
(LA39-11CX)



LA102-11Y/2
(LA39-11Y/2)



LA102-11M
(LA39-11M)

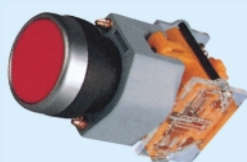
LA102-A Reference

Description	Color	Contact type	Supply Voltage	Reference
LED 24V~380V	● Red			LA102-Q 24V
	● Green ● Blue ● Yellow ○ White			LA102-Q 220V
	● Red ● Green ● Black ● Yellow ○ White	N/O+N/C		LA102-11
				LA102-11D
	● Red ● Green ● Blue ● Yellow ○ White	N/O+N/C		LA102-11TD
				LA102-11X
	● Red ● Green ● Black ● Yellow ○ White	N/O+N/O		LA102-11CX
				LA102-11X/f
		N/O+N/C		LA102-11CX/f
				LA102-11XS/
	● Red ● Green ● Black	N/O+N/C		LA102-11CXS/
				LA102-20XS/ffu
		N/O+N/O		LA102-20CXs/ffu
				LA102-11XS/f
	● Red ● Green ● Black	N/O+N/C		LA102-11CXs/f
				LA102-11Y/2
				LA102-11YS/3
		N/O+N/C		LA102-11M/
				LA102-11MT/
				LA102-11ZS/
	● Red ● Green ● Black	N/O+N/O		LA102-11ZSY/2-3
		N/O+N/O		LA102-11ZSY/2-3

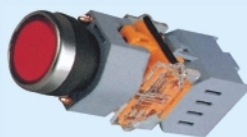
Pushbutton Switch



LA102-Q
(LA39-Q)



LA102-11
(LA39-11)



LA102-11D
(LA39-11D)



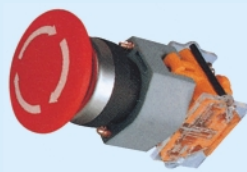
LA102-11X
(LA39-11X)



LA102-11CX
(LA39-11CX)



LA102-11M/
(LA39-11M)



LA102-11ZS
(LA39-11ZS)

LA102-B Reference

Description	Color	Contact type	Supply Voltage	Reference
LED 24V~380V	● Red ● Green ● Blue ● Yellow ○ White		X1 ⊗ X2	LA102-Q 24V
				LA102-Q 220V
LED 24V~380V	● Red ● Green ● Black ● Yellow ○ White	N/O+N/C	21 13 22 14	LA102-11
				LA102-11D
LED 24V~380V	● Red ● Green ● Blue ● Yellow ○ White	N/O+N/C	21 23 11 22 24 1	LA102-11TD
		N/O+N/C	21 23 11 22 24 1	LA102-11X
	● Red ● Green ● Black ● Yellow ○ White	N/O+N/O	13 23 11 14 24 1	LA102-11CX
				LA102-11X/f
		N/O+N/C	21 13 11 22 14	LA102-11CX/f
				LA102-11XS/
	● Red ● Green ● Black	N/O+N/C	21 13 11 22 14	LA102-11CXs/
				LA102-20XS/ffu
		N/O+N/O	13 23 11 14 24 1	LA102-20CXs/ffu
				LA102-11XS/f
	● Red ● Green ● Black	N/O+N/C	21 13 11 22 14	LA102-11CXs/f
				LA102-11Y/2
		N/O+N/C	21 13 11 22 14	LA102-11YS/3
				LA102-11M/40
		N/O+N/C	13 23 14 24	LA102-11MT/40
				LA102-11ZS/40
	● Red ● Green ● Black	N/O+N/O	13 23 14 24	LA102-11ZSY/2-3
		N/O+N/O	13 23 11 14 24 1	

Pushbutton Switch



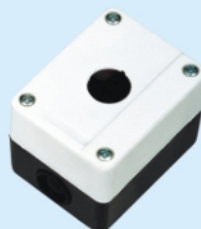
XAL-BE01



XAL-BE02



XAL-BE03



BX1-22



BX2-22



BS211B



BS216B



BS230B



BX4-22



BX5-22



COB-61



COB-62



COB-63



COB-64



COB-61A



COB-62A



COB-63A

Monolever Switch

XMR-301



XMR-302



XMR-303



XMR-304



Pushbutton Switch



AL-22TE



AL-22TE



AL-22TE



PBF-22&25



AEA-22&25R



AEA-22&25G



AC-22&25-2P-3P



ALC-22&25-2P-3P



AKS-22&25-2P-3P



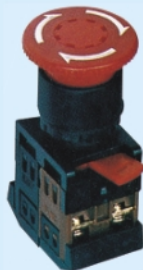
ABLF-22&25



ABLF-22&25



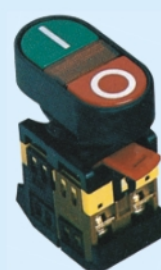
AELA-22&25



AE-22&25



PPBB-30N



APBB-22&25N


KH-5022-TL
(APW199E)

KH-5022-T
(APW299E)

KH-5022-TL
(APW199E)

KH-5022-TL
(APW199E)


AL-22TE



AL-22TE

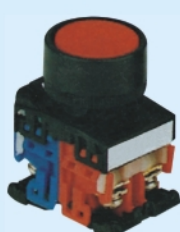
Pushbutton Switch



AR22MOR/R



AR22MOR/Y



AR22FOR/R



AR22FOR/G



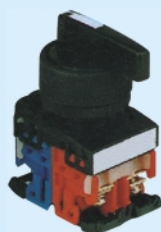
AR22EOR/Y



AR22EOR/G



AR22PR-2



AR22WR-2



AR22WR-3



PBC-11



PBC-11



ASW2K11EP



ABW111EP



ABW111EP



ABW211EP



AVW411ERP



ALW29911EP



ASW2K11EP



E-ON



E-OFF



E-11



E-X/3



E-STOP/Z



E-11D



E-XD

Indicator



ENA-22Y



ENA-22R



ENA-22G



ENA-22B



NHC-220V



SDL-001



SDL-002



SDL-003



SDL-004



SDL-007



PL-220V



SDL-005



SDL-006



AD22-12D/G



AD22-12D/Y



AD22-12D/R



AD22-16D/Y



AD22-16D/R



AD22-16D/G



AD22-16F/G



AD22-16F/R



AD22-16F/Y

Indicator and Pushbutton Switch



PL-25N
(RN-25)



PL-30N
(RN-30)



PL-30N
(RN-30)



PL-30N
(RN-30)



CA-30
(PR-30)



CA-25
(PR-25)



LAY3-11M



LAY3-11ZS



LAY3-11D



PB-30N



KH-3022-3
PB2220-X/3



KH-5122-TL
PB2211D



KH-2022
PB2201



KH-2022EB
PB2201M



KH-2022
PB210



PB2511
PB3011



SS2511/3
SS3011/3



MB2511
MB3011



NPBL2511
NPBL3011



OB2511
OB3011



RE2511
RE3011



SS2511/2
SS3011/2

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