



PUSHBUTTON SWITCH / SELECTOR SWITCH / ILLUMINATED PUSHBUTTON SWITCH

PSA TYPE, LPSA TYPE



FEATURES

- 1** Protective construction of the PSA type is IP65 and the oil-proof which applies to wide variety of applications.
* The PSA-U is IP40.
- 2** A terminal cover (cover for live parts) is provided as a standard accessory.
- 3** Sturdy color chips that maintain beautiful colors are available for buttons.
- 4** Two types of mounting rings (chromium-plating type, and Black type) are standardized.

SPECIFICATIONS (RATINGS, PERFORMANCE)

Specification	Type	PSA	LPSA
Rated insulation voltage (UI)		AC-DC600V	AC-DC600V (Illuminating part: 250V)
Rated operating voltage (Uth)		See *1	Contact part: See *1, Illuminating part: 24V, 110V, 220V AC / DC
Rated current-carrying capacity (Ith)		10A (Contact part)	
Withstand voltage		2,200V AC / 1 min.	Contact part: 2,200V AC / 1 min., Illuminating part: 2,500V AC (Full-voltage type: 2,000V AC) / 1 min.
Operating temperature		-20°C to 55°C (Indoor) -25°C to 40°C (Outdoor)	
Storing temperature		-25°C to 55°C (70°C within 24 hours)	
Panel thickness		1 to 6mm	
Shock resistance		Malfunction: 100m/s ² , Durability: 500m/s ²	
Terminal connection		Terminal screw M3.5	
Electrical life		1,000,000 operations or more	
Mechanical life	Pushbutton switch:	5,000,000 operations or more	5,000,000 operations or more
	Selecter switch:	1,000,000 operations (3&2 or more contacts: 250,000 operations)	—
Temperature rise		40K max.	
Switching frequency		1,800 operations / hour	
Heat resistance		70°C±2°C for 16 hours	

*1 Rated operating voltage and Rated operating current of contacts.

Voltage	Rated operating current	
	AC-15th grade (Inductive load)	DC-12th grade (Resistive load)
24V	10	6
48V	10	2
110V	6	0.7
220V	4	0.3
440V	1.5	-

Spacer for mounting
Recommended pieces of spacer (including name plate thickness)

Panel thickness (mm)	Pieces of spacer	
	Spacer thickness 1.5mm	Spacer thickness 3mm
1.0 - 2.3	2	1
2.3 - 4.0	1	1
4.0 - 5.5	0	1
5.5 - 6.0	1	0

HOW TO ORDER

■ Pushbutton switch **Non-illuminated, momentary operation type**

PSA - P Y 11 C

① ② ③ ④ ⑤

No.	Item	Code	Detail	Note
①	Basic type	PSA		—
②	Button shape	P	Flat pushbutton	
		C	Convex pushbutton	
		M	Mushroom pushbutton	
		E	Large mushroom pushbutton	
		J	Button with guard ring	—
		N	Mushroom pushbutton with guard ring	
		F	Large mushroom pushbutton with guard ring	
		U	Pull button	
③	Button color	Z	Push-lock turn-reset type	
		□ (Blank)	Black / Red / Green	* 1
		B	Black	* For "U", only R, B and BG button colors are supplied. For "Z", only R and Y button colors are supplied.
		R	Red	
		G	Green	
		Y	Yellow	
		W	Milky white	
		O	Orange	
BG	Blue green			
11	1a1b			
④	Contact arrangement	22	2a2b	
		33	3a3b	
		44	4a4b	
⑤	Surface ring color	C	Chromium	* For "J" "N" "F" button shape, only C surface ring color can use.
		B	Black	

* 1 For "P", B, R, G button colors are supplied as a set.
□: only P button shape

■ Selector switch **Non-illuminated type**

PSA - H B 11 C

① ② ③ ④ ⑤ ⑥

No.	Item	Code	Detail	Note
①	Basic type	PSA		—
②	Knob shape	H	2-notch manual return	
		HL	2-notch automatic return The knob automatically returns from left to right.	
		T	3-notch manual return	
		TS	3-notch automatic return The knob automatically returns from the right or left to the center position.	
		KH	Key-operated, 2-notch Manual return	* Please Check®
		KT	Key-operated, 3-notch Manual return	
		KTS	Key-operated, 3-notch The knob automatically returns from the right or left to the center position. (Center removal)	
		③	Knob color	B
R	Red			—
G	Green			
④	Contact configuration	11	1a1b	* For details (overlapping contact, etc.), see the contact configuration diagram (on page A126).
		22	2a2b	
		33	3a3b	
⑤	Surface ring	C	Chromium	
		B	Black	
⑥	Key removal position (For key-operated switch)	-A	A position	* Not applicable to KTS type (center-removal). 2 notches (KH)
		-B	B position	
		-T	T position	3 notches (KT)
		-BA	BA position	
		-BT	BT position	
		-AT	AT position	
		-BAT	BAT position	

■ Illuminated pushbutton switch (Full-voltage type, Transformer type, Resistor type) **LED lamp, momentary operation type**

LPSA - D R W 11 110 C

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

No.	Item	Code	Detail	Note	
①	Basic type	LPSA		—	
②	Colored transparent convex button (lens)	C		—	
③	Button color	R	Red		
		G	Green		
		O	Orange		
		W	Milky white		
		Y	Yellow		
		C	Clear		
④	BA9S lamp	W		—	
⑤	Contact arrangement	11	1a1b		
		22	2a2b		
		33	3a3b		
		44	4a4b		
⑥	Form	No code	Full-voltage		
		T	Transformer type	—	
		F	Resistor type		
⑦	Voltage		Primary voltage	Secondary voltage	* Not applicable to KTS type (center-removal).
		O24	Full-voltage		
		T110	AC100/110V	24V	
		T220	AC200/220V		
		F110	AC-DC100/110V		
		F220	AC-DC200/220V		
⑧	Surface ring	C	Chromium		
		B	Black	—	



PUSHBUTTON SWITCH / SELECTOR SWITCH / ILLUMINATED PUSHBUTTON SWITCH

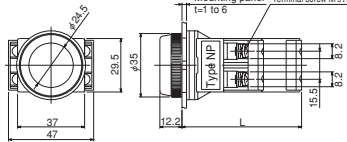
PSA TYPE, LPSA TYPE

STANDARD PRODUCTS Pushbutton switch **Non-illuminated, momentary operation type**

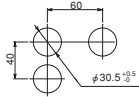
Flat pushbutton

P to F, Z
NO contact (a-contact): Black
NC contact (b-contact): Red

PSA-P



● Mounting hole size
(Minimum mounting pitch)

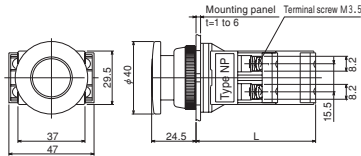


No. of units	1	2	3	4
L (mm)	48	69	90	111

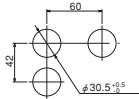
* The button set (R, G, B) is provided.

Mushroom pushbutton

PSA-M



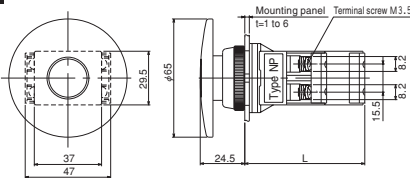
● Mounting hole size
(Minimum mounting pitch)



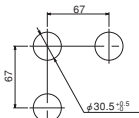
No. of units	1	2	3	4
L (mm)	48	69	90	111

Large mushroom pushbutton

PSA-E



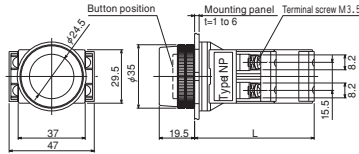
● Mounting hole size
(Minimum mounting pitch)



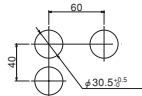
No. of units	1	2	3	4
L (mm)	48	69	90	111

Pushbutton with guard ring

PSA-J



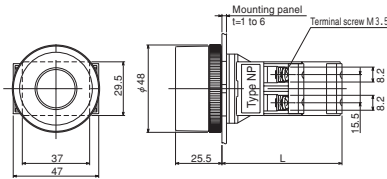
● Mounting hole size (Minimum mounting pitch)



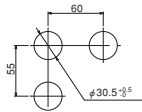
No. of units	1	2	3	4
L (mm)	48	69	90	111

Mushroom Pushbutton with guard ring

PSA-N



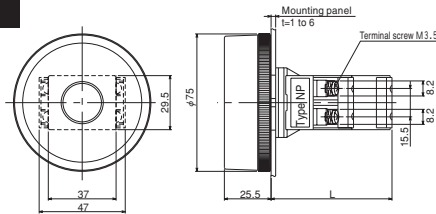
● Mounting hole size (Minimum mounting pitch)



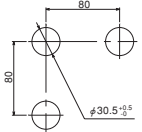
No. of units	1	2	3	4
L (mm)	48	69	90	111

Large mushroom pushbutton with guard ring

PSA-F



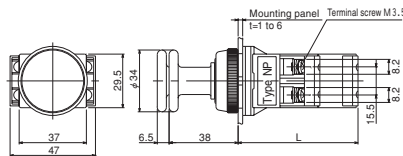
● Mounting hole size (Minimum mounting pitch)



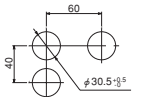
No. of units	1	2	3	4
L (mm)	48	69	90	111

Pull button

PSA-U



● Mounting hole size (Minimum mounting pitch)

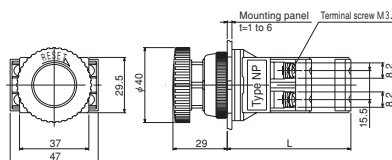


No. of units	1	2	3	4
L (mm)	48	69	90	111

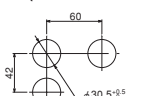
NC contact (b-contact): Black (Contact open after pulling)
NO contact (a-contact): Red (Contact close after pulling)

Push-lock turn-reset pushbutton

PSA-Z



● Mounting hole size (Minimum mounting pitch)



No. of units	1	2	3	4
L (mm)	48	69	90	111



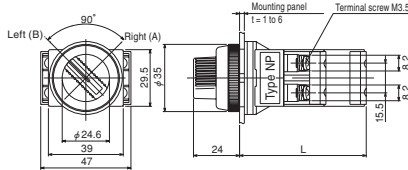
PUSHBUTTON SWITCH / SELECTOR SWITCH / ILLUMINATED PUSHBUTTON SWITCH

PSA TYPE, LPSA TYPE

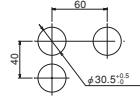
STANDARD PRODUCTS Selector switch **Non-illuminated type**

Selector switch

PSA-H,HL,T,TS



● Mounting hole size (Minimum mounting pitch)

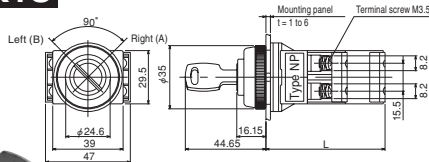
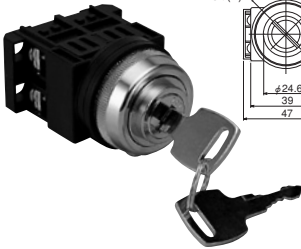


No. of units	1	2	3	4
L (mm)	48	69	90	111

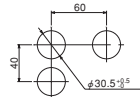
* See the contact configuration table (on A126).

Key-operated selector switch

PSA-KH,KT,KTS



● Mounting hole size (Minimum mounting pitch)



No. of units	1	2	3	4
L (mm)	48	69	90	111

* See the contact arrangement table (on A126).
With two No. 701 keys (standard)



PUSHBUTTON SWITCH / SELECTOR SWITCH / ILLUMINATED PUSHBUTTON SWITCH

PSA TYPE, LPSA TYPE

ACCESSORIES

Button

(Order unit: 5)

● PSA-P-BT-Color



Code	Color
B	Black
R	Red
G	Green
O	Orange
Y	Yellow
W	White

● PSA-C-BT-Color



Code	Color
B	Black
R	Red
G	Green
O	Orange
Y	Yellow
W	White

● PSA-M-BT-Color



Code	Color
B	Black
R	Red
G	Green
O	Orange
Y	Yellow
W	White

● PSA-E-BT-Color



Code	Color
B	Black
R	Red
G	Green
O	Orange
Y	Yellow
W	White

● PSA-U-BT-Color



Code	Color
B	Black
BG	Blue green
R	Red

Lens (Button)

(Order unit: 10)

● PSA-LENS-Color

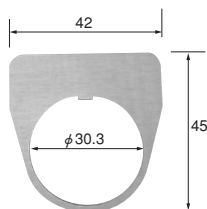


Code	Color
RD	Red
GD	Green
OD	Orange
Y	Yellow
W	Milky white
C	Clear

Plain nameplate (selling separately)

(Order unit: 10)

● PSA-NP



Waterproof cap (selling separately)

(Order unit: 5)

● PSA-WCV-Color



Code	Color
B	Black
R	Red
G	Green

Compatible type: PSA-C

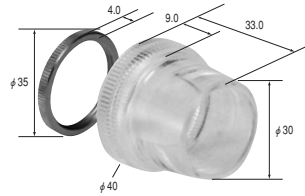
Protective guard (selling separately)

●PSA-OP-1

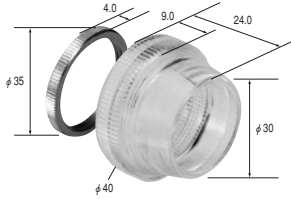


Compatible type: PSA-P

●PSA-OP-3



●PSA-OP-5



Guard ring

(Order unit: 5)

●PSA-RG-J-C



Compatible type: PSA-J

●PSA-RG-F-C



Compatible type: PSA-F

●PSA-RG-N-C



Compatible type: PSA-N

Ring

(Order unit: 5)

●PSA-RG-P-C



●PSA-RG-P-B





PUSHBUTTON SWITCH / SELECTOR SWITCH / ILLUMINATED PUSHBUTTON SWITCH

PSA TYPE, LPSA TYPE

ACCESSORIES

LED lamp (Rating: 24V) (Order unit: 10)

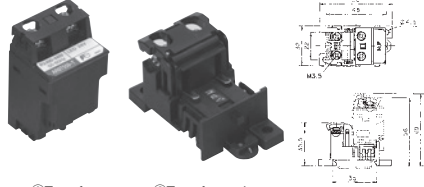
●LPSA-LED024-WW



Code	Lens (button) color
WW	Red, Green, Orange, Yellow, Milky white, Clear

- * All colors shared.
- * The marking on the lamp is LBA9-24.
- * The socket is BA9S.

Separate transformer (Made by Fuji Electric) (selling separately)



①Transformer ②Transformer base

The transformer ① and transformer base ② should be separately ordered.

①Transformer			②Transformer base
Type	Rated primary voltage	Rated secondary voltage	Type
AR9T559-H	100 / 110V	24V	AR9T003
AR9T559-M	200 / 220V		
AR9T559-T	400 / 440V		

Terminal cover for end unit (Order unit: 10)

●PSA-CV



Ring tightening tool (selling separately)

●PSA-JQ



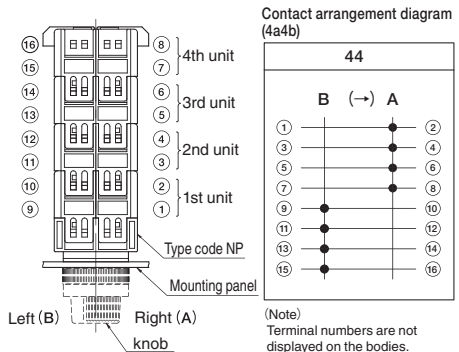
Lamp replacement tool (selling separately)

●PSA-LN

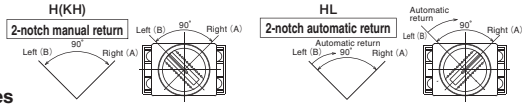


HOW TO SEE CONTACT ARRANGEMENT DIAGRAM

Relation for contact arrangement (page A126) and terminal arrangement is shown as the following diagram.



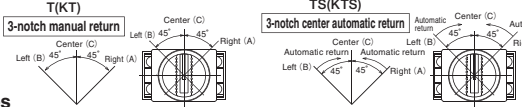
Selector switch contact arrangement diagram



H(KH)
 The contact that makes at B position is b contact : red
 The contact that makes at A position is a contact : black
HL
 The contact that makes at B position is a contact : black
 The contact that makes at A position is b contact : red

2 notches

Code	11	22	33	44	0011	0022	0033	0044
Contact arrangement	B (→) A	B (→) A	B (→) A	B (→) A	B (→) A	B (→) A	B (→) A	B (→) A



T(KT)
 The contact that makes at B position is a contact: ①
 The contact that makes at A position is a contact: ②
TS(KTS)
 The contact that makes at B position is a contact: ①
 The contact that makes at A position is a contact: ②

3 notches

Code	11	22	33	44
Contact arrangement	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A
Code	0011	0022	0033	0044
Contact arrangement	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A

LPSA Type Circuit Diagram (LED)

