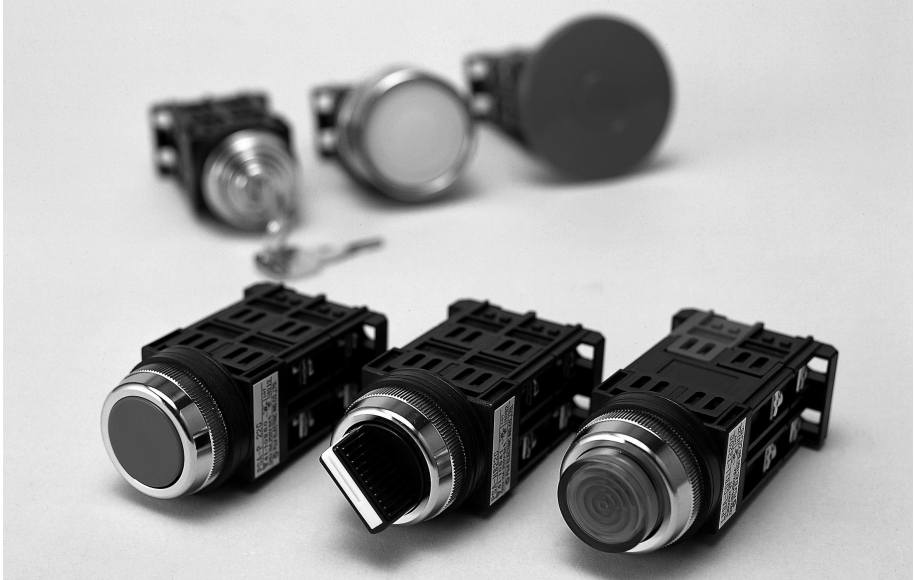




PUSHBUTTON SWITCH / SELECTOR SWITCH / ILLUMINATED PUSHBUTTON SWITCH

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
	Selector switch:	1,000,000 operations (3&20 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	Alternating current	Direct current	
	AC-15th grade (Inductive load)	DC-13th grade (Inductive load)	DC-12th grade (Resistive load)
24V	10	6	6
48V	10	2	3
110V	6	0.7	2
220V	4	0.3	1
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

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	
④	Contact arrangement	BG	Blue green	
		11	1a1b	
		22	2a2b	
		33	3a3b	
⑤	Surface ring color	44	4a4b	
		C	Chromium	* For "U" "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

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 Check⑥
		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	Black	
		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	
		44	4a4b	
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

No.	Item	Code	Detail	Note
①	Basic type	LPSA		—
②	Colored transparent convex button (lens)	D		—
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	Type/Voltage	Primary voltage Secondary voltage		
	Full voltage type	O24	Full-voltage	
	Transformer type (T)	T110	AC100/110V	* Not applicable to KTS type (center-removal).
		T220	AC200/220V	
	Resistor type (F)	F110	AC-DC100/110V	
		F125	AC-DC125V	
		F220	AC-DC200/220V	
⑦	Surface ring	C	Chromium	
		B	Black	—



PUSHBUTTON SWITCH / SELECTOR SWITCH / ILLUMINATED PUSHBUTTON SWITCH

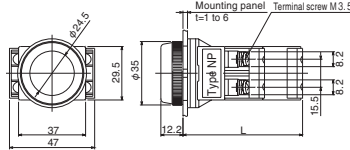
PSA TYPE, LPSA TYPE

STANDARD PRODUCTS Pushbutton switch Non-illuminated, momentary operation type

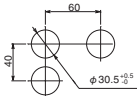
Flat pushbutton

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

PSA-P



● Mounting hole size (Minimum mounting pitch)

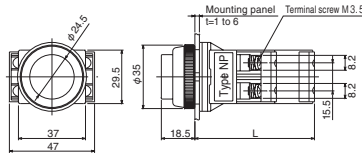


No. of units	1	2	3	4
L (mm)	48	69	90	111

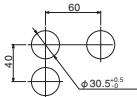
* The button set (R, G, B) is provided.

Convex pushbutton

PSA-C



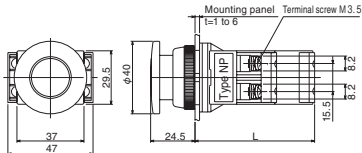
● Mounting hole size (Minimum mounting pitch)



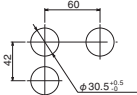
No. of units	1	2	3	4
L (mm)	48	69	90	111

Mushroom pushbutton

PSA-M



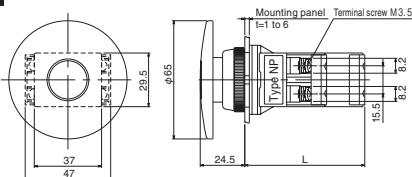
● Mounting hole size (Minimum mounting pitch)



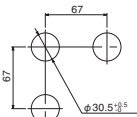
No. of units	1	2	3	4
L (mm)	48	69	90	111

Large mushroom pushbutton

PSA-E



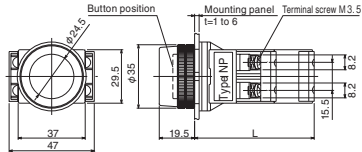
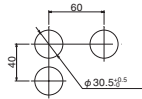
● Mounting hole size (Minimum mounting pitch)



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

Pushbutton with guard ring

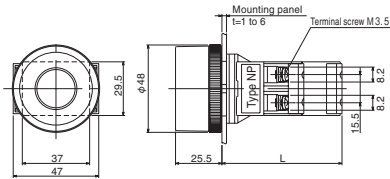
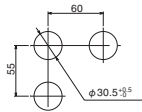
PSA-J


● Mounting hole size
(Minimum mounting pitch)


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

Mushroom Pushbutton with guard ring

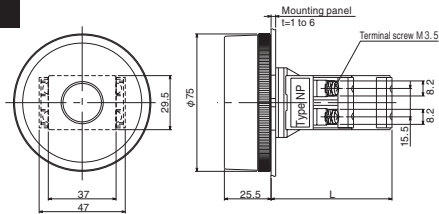
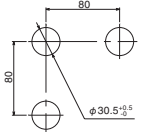
PSA-N


● 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

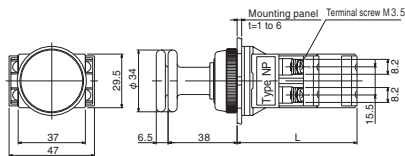
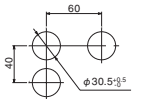
PSA-F


● Mounting hole size
(Minimum mounting pitch)


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

Pull button

PSA-U

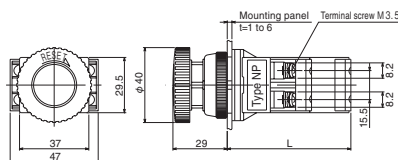
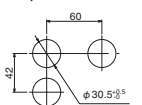

● Mounting hole size
(Minimum mounting pitch)


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



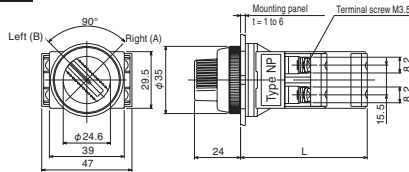
PUSHBUTTON SWITCH / SELECTOR SWITCH / ILLUMINATED PUSHBUTTON SWITCH

PSA TYPE, LPSA TYPE

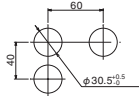
STANDARD PRODUCTS Selector switch **Non-illuminated type**

Selector switch

PSA-H,HL,T,TS



● Mounting hole size (Minimum mounting pitch)

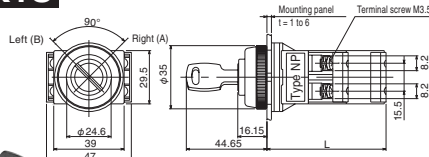
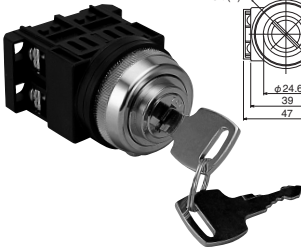


No. of units	1	2	3	4
L (mm)	48	69	90	111

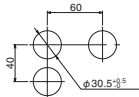
* See the contact configuration table (on A126).

Key-operated selector switch

PSA-KH,KT,KTS



● Mounting hole size (Minimum mounting pitch)



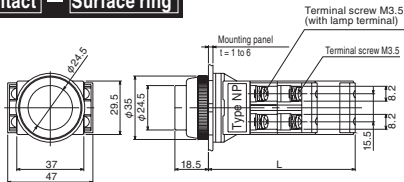
No. of units	1	2	3	4
L (mm)	48	69	90	111

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

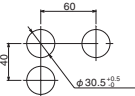
STANDARD PRODUCTS Illuminated pushbutton switch (Full-voltage, Transformer and Resistance types) LED, momentary operation type

Full-voltage type

LPSA-D Color W Contact - Surface ring



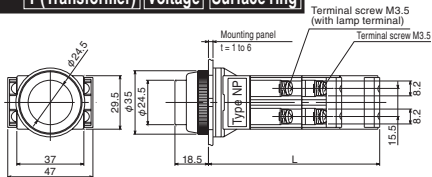
● Mounting hole size (Minimum mounting pitch)



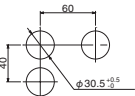
No. of units	1	2	3	4
L (mm)	63	84	105	126

Transformer type

LPSA-D Color W Contact - T (Transformer) Voltage Surface ring



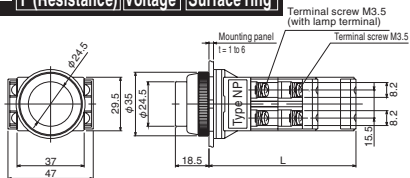
● Mounting hole size (Minimum mounting pitch)



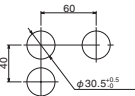
No. of units	1	2	3	4
L (mm)	76.5	97.5	118.5	139.5

Resistor type

LPSA-D Color W Contact - F (Resistance) Voltage Surface ring



● Mounting hole size (Minimum mounting pitch)



No. of units	1	2	3	4
L (mm)	63	84	105	126



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

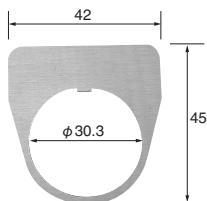


Code	Color
RD	Red
GD	Green
OD	Orange
Y	Yellow
W	Milky white
C	Clear

Plain nameplate (selling separately)

(Order unit: 10)

●PSA-NP



Waterproof cap (selling separately)

(Order unit: 5)

●PSA-WCV-Color

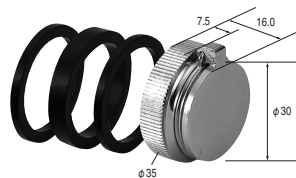


Code	Color
B	Black
R	Red
G	Green

Compatible type: PSA-C

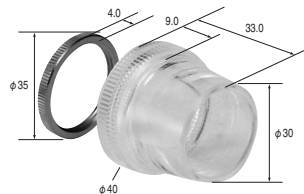
Protective guard (selling separately)

●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)



① Transformer ② Transformer base

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

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



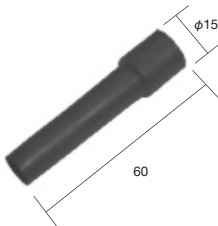
Ring tightening tool (selling separately)

●PSA-JQ



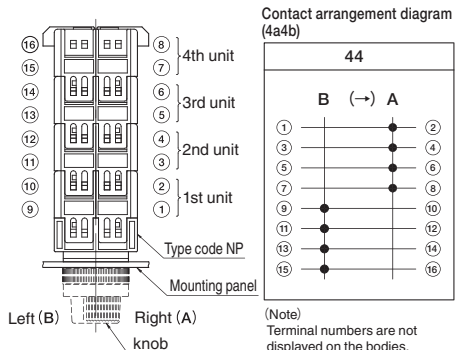
Lamp replacement tool (selling separately)

●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)
2-notch manual return

HL
2-notch automatic return

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 (→) means automatic return.	B (→) A	B (→) A	B (→) A	B (→) A	B (→) A	B (→) A	B (→) A	B (→) A

T(KT)
3-notch manual return

TS(KTS)
3-notch center automatic return

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 (→) (←) means automatic return.	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A

Code	0011	0022	0033	0044
Contact arrangement (→) (←) means automatic return.	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A

■ LPSA Type Circuit Diagram (LED)

Full-voltage type

Resistor type (AC · DC 100 / 110V, 125V)

Resistor type (AC · DC 200 / 220V)

Transformer type