



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

For the lamps, candescent lamps and LED lamps are standardized.

3

A terminal cover (cover for live parts) is provided as a standard accessory.

4

Sturdy color chips that maintain beautiful colors are available for buttons.

5

Two types of mounting rings (chromium-plating type, and Munsell N1.5 (black) type) are standardized.

SPECIFICATIONS (RATINGS, PERFORMANCE)

Specification	Type	PSA	LPSA
Rated insulation voltage (UI)		600V	600V (Illuminating part: 250V)
Rated operating voltage (Uth)		—	24V, 110V, 220V AC / DC (Illuminating part)
Rated current-carrying capacity (Ith)		10A (Contact part)	
Withstand voltage		2,200V AC / 1 min.	Contact part: 2,000V AC / 1 min., Illuminating part: 2,500V AC (Full-voltage type 2,000V AC) / 1 min.
Operating temperature		-20 to 55°C	
Storing temperature		-40 to 70°C	
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 or more (Contact configuration of 3a/b or more 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 loads)	DC-13th grade (inductive loads)	DC-12th grade (inductive loads)
24V	10	6	6
48V	10	2	3
110V	6	0.7	2
220V	4	0.3	1
440V	1.5	-	-

HOW TO ORDER

■ Pushbutton switch Non-illuminated, momentary operation type

PSA - P B 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	
		B	Black	* For "P", B, R, G button colors are supplied as a set. For "Z", only R and Y button colors are supplied.
		R	Red	
		G	Green	
		Y	Yellow	
		W	Milky white	
④	Contact arrangement	O	Orange	
		10	1a	* 10 to 02 are available for "P" only. * a = NO contact, b = NC contact
		01	1b	
		20	2a	
		02	2b	
		11	1a1b	
		22	2a2b	
		33	3a3b	
		44	4a4b	
⑤	Surface ring color	C	Chromium	
		B	N1.5	

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

PSA - C R B 11 T110 C

No.	Item	Code	Detail	Note
①	Basic type	PSA		—
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	B		—
⑤	Contact arrangement	11	1a1b	
		22	2a2b	
		33	3a3b	—
		44	4a4b	
⑥	Transformer	Primary voltage Secondary voltage		* Fill-voltage type has no transformer.
		024	Full-voltage	
		T110	100 / 110V AC	
		T220	200 / 220V AC	
⑦	Surface ring	C	Chromium	
		B	N1.5	—

■ Selector switch Non-illuminated type

PSA - H B 11 C A

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	
		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 A128).
		22	2a2b	
		33	3a3b	
⑤	Surface ring	44	4a4b	
		C	Chromium	—
		B	N1.5	
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 - C R B 11 110 C

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	B		—
⑤	Contact arrangement	11	1a1b	
		22	2a2b	
		33	3a3b	—
		44	4a4b	
⑥	Form	No code	Full-voltage	
		T	Transformer type	—
		F	Resistor type	
		Primary voltage Secondary voltage		
⑦	Voltage	024	Full-voltage	* Not applicable to KTS type (center-removal).
		T110	100 / 110V AC	
		T220	200 / 220V AC	
		F110	100 / 110V AC-DC	
		F220	200 / 220V AC-DC	
⑧	Surface ring	C	Chromium	
		B	N1.5	—



PUSHBUTTON SWITCH / SELECTOR SWITCH / ILLUMINATED PUSHBUTTON SWITCH

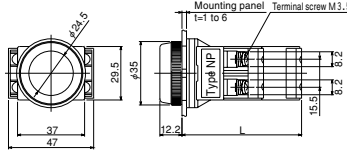
PSA TYPE, LPSA TYPE

STANDARD PRODUCTS Pushbutton switch Non-illuminated, momentary operation type

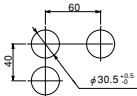
Flat pushbutton

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

PSA-P



● Mounting hole size (Minimum mounting pitch)

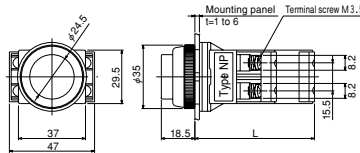


No. of units	1	2	3	4
L (mm)	48	69	90	111

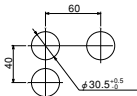
* The button set (R, G, B) is provided.

Convex pushbutton

PSA-C



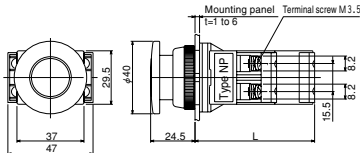
● Mounting hole size (Minimum mounting pitch)



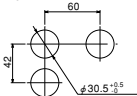
No. of units	1	2	3	4
L (mm)	48	69	90	111

Mushroom pushbutton

PSA-M



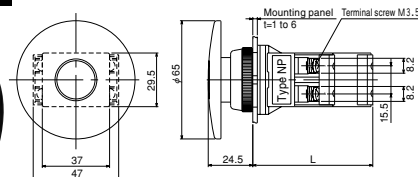
● Mounting hole size (Minimum mounting pitch)



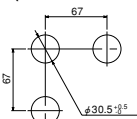
No. of units	1	2	3	4
L (mm)	48	69	90	111

Large mushroom pushbutton

PSA-E



● Mounting hole size (Minimum mounting pitch)

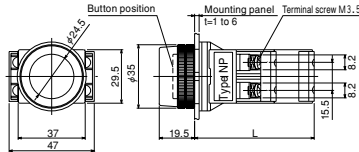


No. of units	1	2	3	4
L (mm)	48	69	90	111

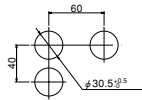
U
NC contact (b-contact): Black
NO contact (a-contact): Red

Pushbutton with guard ring

PSA-J



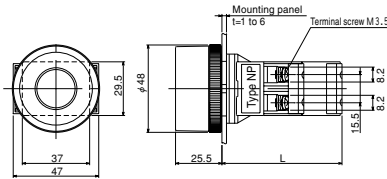
● Mounting hole size
(Minimum mounting pitch)



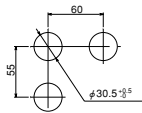
No. of units	1	2	3	4
L (mm)	48	69	90	111

Mushroom Pushbutton with guard ring

PSA-N



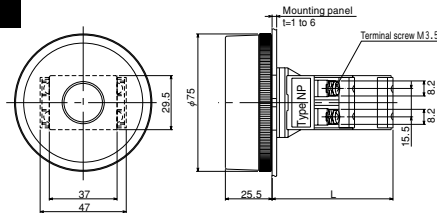
● Mounting hole size
(Minimum mounting pitch)



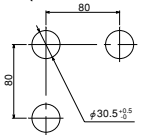
No. of units	1	2	3	4
L (mm)	48	69	90	111

Large mushroom pushbutton with guard ring

PSA-F



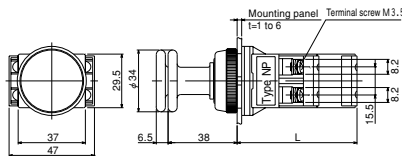
● Mounting hole size
(Minimum mounting pitch)



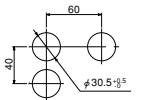
No. of units	1	2	3	4
L (mm)	48	69	90	111

Pull button

PSA-U



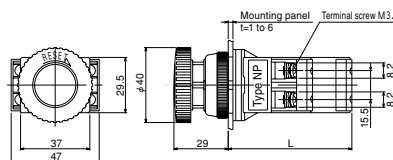
● Mounting hole size
(Minimum mounting pitch)



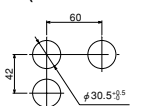
No. of units	1	2	3	4
L (mm)	48	69	90	111

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

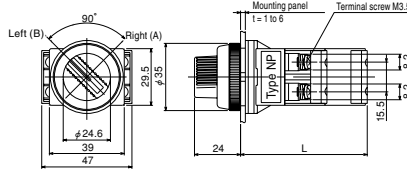
STANDARD PRODUCTS Selector switch **Non-illuminated type**

Selector switch

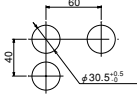
H, HL, TS / KH, KT, KTS

Please see page A138 for selector switch contact arrangement diagram.

PSA-H,HL,T,TS



● Mounting hole size (Minimum mounting pitch)

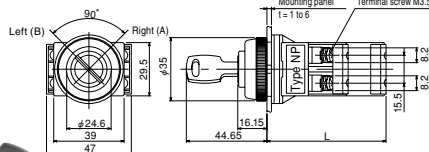
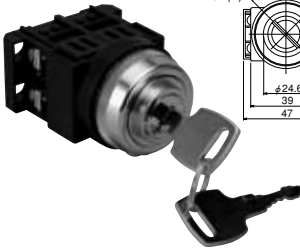


No. of units	1	2	3	4
L (mm)	48	69	90	111

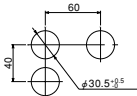
* See the contact configuration table (on A138).

Key-operated selector switch

PSA-KH,KT,KTS



● Mounting hole size (Minimum mounting pitch)



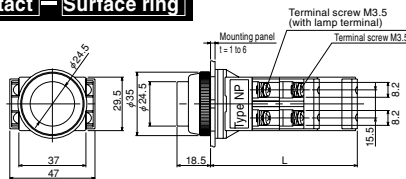
No. of units	1	2	3	4
L (mm)	48	69	90	111

* See the contact arrangement table (on A138).
With two No. 701 keys (standard)

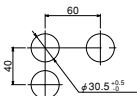
STANDARD PRODUCTS Illuminated pushbutton switch (Full-voltage, Transformer type) **Candescant lamp, momentary operation type**

Full-voltage type

PSA-C **Color** **B** **Contact** — **Surface ring**



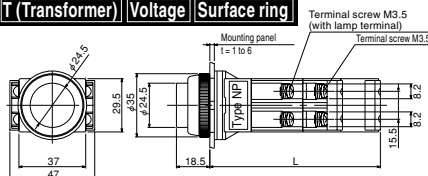
● Mounting hole size (Minimum mounting pitch)



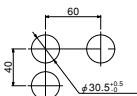
No. of units	1	2	3	4
L (mm)	63	84	105	126

Transformer type

PSA-C **Color** **B** **Contact** — **T (Transformer)** **Voltage** **Surface ring**



● Mounting hole size (Minimum mounting pitch)

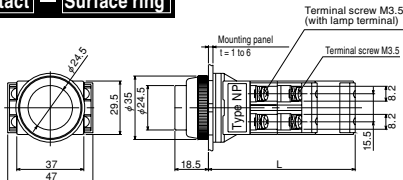


No. of units	1	2	3	4
L (mm)	76.5	97.5	118.5	139.5

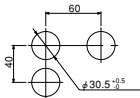
STANDARD PRODUCTS Illuminated pushbutton switch (Full-voltage, Transformer and Resistance types) LED, momentary operation type

Full-voltage type

LPSA-C Color B Contact — Surface ring



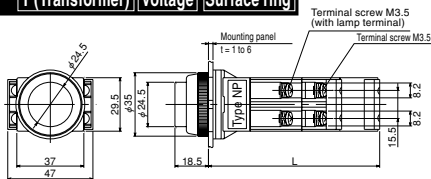
● Mounting hole size (Minimum mounting pitch)



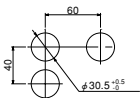
No. of units	1	2	3	4
L (mm)	63	84	105	126

Transformer type

LPSA-C Color B Contact — T (Transformer) Voltage Surface ring



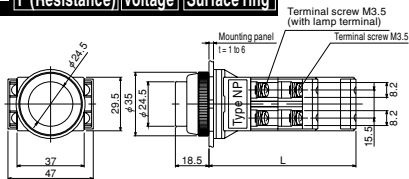
● Mounting hole size (Minimum mounting pitch)



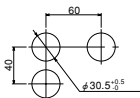
No. of units	1	2	3	4
L (mm)	76.5	97.5	118.5	139.5

Resistor type

LPSA-C Color B 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

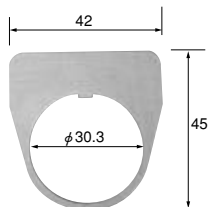


Code	Color
R	Red
G	Green
O	Orange
Y	Yellow
W	Milky white
C	Clear

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

Panel plug (selling separately)

(Order unit: 5)

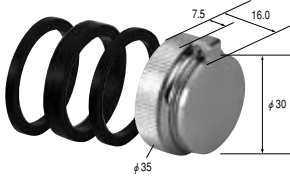
●PSA-CP-Color



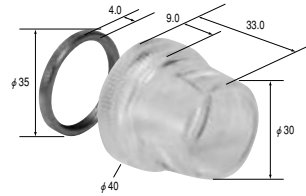
Code	Color
B	Black
N6.5	Gray

Protective guard (selling separately)

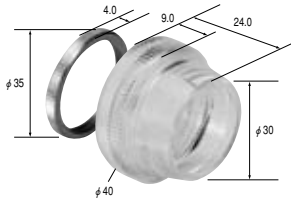
●PSA-OP-1



●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-Color



Code	Lens (button) color
R	Red
G	Green
O	Orange
	Yellow
Y	Milky white
	Clear

* The lamp base is BA9S.

* The marking on the lamp is LBA9-24.

Candescant lamp (Rating: 30V) (Order unit: 10)

●PSA-LAMP030



* The lamp base is BA9S.

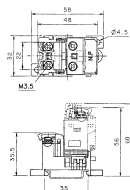
* The marking on the lamp is 30V / 1W.

Terminal cover for end unit (Order unit: 10)

●PSA-CV



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
AR9T559-H	100 / 110V	24V
AR9T559-M	200 / 220V	
AR9T559-T	400 / 440V	

Type
AR9T003

Ring tightening tool (selling separately)

●PSA-JQ

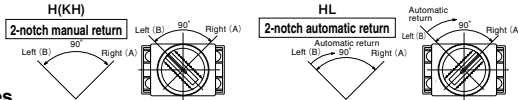


Lamp replacement tool (selling separately)

●PSA-LN



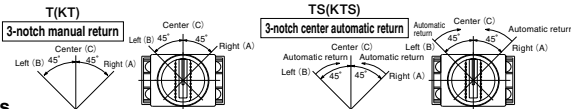
■ Selector switch contact arrangement diagram



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 a 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)
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

Contact arrangement (→) (←) means automatic return.	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A
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Contact arrangement (→) (←) means automatic return.	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A	B (→) C (←) A
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■ LPSA Type Circuit Diagram (LED)

Full-voltage type		Resistor type (100 / 110V)	
(Illumination color) R · O · Y · W · C	(Illumination color) G	(Illumination color) R · O · Y · W · C	(Illumination color) G
Resistor type (200 / 220V)		Transformer type	
(Illumination color) R · O · Y · W · C	(Illumination color) G	(Illumination color) R · O · Y · W · C	(Illumination color) G