# Large Square-bodied Lighted Pushbutton Switches

- Excellent operating sensitivity.
- Excellent illumination with even surface brightness.
- Three-color models (green, orange, red; chameleon lighting) included in lineup.



Refer to Safety Precautions for All Pushbutton Switches/ Indicators and Safety Precautions on page 24.

### **List of Models**



Note: The A3PJ is shown in the figure above as an example.

Specifications: Refer to page 15. Panel cutout: Refer to page 21. Dimensions: Refer to page 18.
 Accessories, replacements, and tools: Refer to pages 13 to 15. Precautions for correct use: Refer to page 24.

### **Model Number Structure**



Screen pattern	A3PJ	A3PA	A3PT
Single screen	Models with	2	
Horizontal 2-split screen	Models with		
Vertical 2-split screen			
Horizontal 3-split screen	4		
Vertical 3-split screen	*2		
4-split screen			

\*2. These split screen models are available only as individual Units. They cannot be ordered as sets.

Screen pattern	A3PJ	A3PA	A3PT
Single screen	2	1	2
Horizontal 2-split screen	4(Low-pow-	2	
Vertical 2-split screen	er incan-		
Horizontal 3-split screen	descent		
4-split screen	lamp)		

Note: Lamp positions for single-screen A3PJ (rectangular model).



Ordering as a Set ...... The model numbers used to order sets of Units are given in the following tables. One set comprises the Pushbutton, Lamp, and Switch.

(Not all combinations are possible. Ask your OMRON representative for details.)



A3PJ

(Single Screen) (1)

#### Standard Loads

Contact type		Standard load (250 VAC, 3 A; 30 VDC, 4 A)					
		Operation	Momentary operation (Self-resetting)		Alternate operation (Self-holding)		Pushbutton color
Output	Lighting	Case color	Black	Light gray	Black	Light gray	symbol
		5 VDC	A3PJ-90A11-05E(1)	A3PJ-90A12-05E(1)	A3PJ-90B11-05E(1)	A3PJ-90B12-05E(1)	R
	LED	12 VDC	A3PJ-90A11-12E(1)	A3PJ-90A12-12E(1)	A3PJ-90B11-12E(1)	A3PJ-90B12-12E(1)	O G
		24 VDC	A3PJ-90A11-24E(1)	A3PJ-90A12-24E(1)	A3PJ-90B11-24E(1)	A3PJ-90B12-24E(1)	Ŵ
SPDT	Chamalaan	12 VDC	A3PJ-90AG1-12EK		A3PJ-90BG1-12EK	A3PJ-90BG2-12EK	*1
51 01	Chameleon	24 VDC	A3PJ-90AG1-24EK	A3PJ-90AG2-24EK	A3PJ-90BG1-24EK	A3PJ-90BG2-24EK	- "
		6 VDC/VAC	A3PJ-90A11-06	A3PJ-90A12-06	A3PJ-90B11-06	A3PJ-90B12-06	
	Incandescent Iamp	14 VDC/VAC	A3PJ-90A11-14	A3PJ-90A12-14	A3PJ-90B11-14	A3PJ-90B12-14	*2
		28 VDC/VAC	A3PJ-90A11-28	A3PJ-90A12-28	A3PJ-90B11-28	A3PJ-90B12-28	1
		5 VDC	A3PJ-90C11-05E(1)	A3PJ-90C12-05E(1)	A3PJ-90D11-05E(1)	A3PJ-90D12-05E(1)	R
	LED	12 VDC	A3PJ-90C11-12E(1)	A3PJ-90C12-12E(1)	A3PJ-90D11-12E(1)	A3PJ-90D12-12E(1)	] O G
		24 VDC	A3PJ-90C11-24E(1)	A3PJ-90C12-24E(1)	A3PJ-90D11-24E(1)	A3PJ-90D12-24E(1)	w
DPDT	Chamalaan	12 VDC	A3PJ-90CG1-12EK	A3PJ-90CG2-12EK	A3PJ-90DG1-12EK		*1
51 51	Chameleon	24 VDC	A3PJ-90CG1-24EK	A3PJ-90CG2-24EK	A3PJ-90DG1-24EK	A3PJ-90DG2-24EK	1
		6 VDC/VAC	A3PJ-90C11-06	A3PJ-90C12-06	A3PJ-90D11-06	A3PJ-90D12-06	
	Incandescent	14 VDC/VAC	A3PJ-90C11-14	A3PJ-90C12-14	A3PJ-90D11-14	A3PJ-90D12-14	*2
	lamp	28 VDC/VAC	A3PJ-90C11-28	A3PJ-90C12-28	A3PJ-90D11-28	A3PJ-90D12-28	1

Note: Enter the desired color symbol for the Pushbutton in (1). (R) = Red, (O) = Orange, (G) = Green, (W) = White.

Example: Red A3PJ-90A11-24ER

\*1. You can change the screen colors of chameleon models between red, green, and orange, by changing the terminal wiring. Refer to page 20 for details. \*2. Incandescent lamps are supplied with colored plates (white, red, green, blue, and orange) and legend plates (milk-white and transparent). Use the appropriate combination.

Microloads

		Contact type	Microload (125 VAC,	0.1 A; 30 VDC, 0.1 A)	
		Operation	Momentary operat	ion (Self-resetting)	Pushbutton
Output Lighting		Case color	Black	Light gray	color symbol
		5 VDC	A3PJ-90E11-05E(1)	A3PJ-90E12-05E(1)	R
	LED	12 VDC	A3PJ-90E11-12E(1)	A3PJ-90E12-12E(1)	O G
		24 VDC	A3PJ-90E11-24E(1)	A3PJ-90E12-24E(1)	w
SPDT	Chameleon	12 VDC	A3PJ-90EG1-12EK		*1
01 01	Chameleon	24 VDC	A3PJ-90EG1-24EK	A3PJ-90EG2-24EK	
	Incandescent Iamp	6 VDC/VAC	A3PJ-90E11-06	A3PJ-90E12-06	
		14 VDC/VAC	A3PJ-90E11-14		*2
		28 VDC/VAC	A3PJ-90E11-28	A3PJ-90E12-28	
		5 VDC	A3PJ-90G11-05E(1)		R
	LED	12 VDC	A3PJ-90G11-12E(1)	A3PJ-90G12-12E(1)	O G
		24 VDC	A3PJ-90G11-24E(1)	A3PJ-90G12-24E(1)	w
DPDT	Chameleon	12 VDC	A3PJ-90GG1-12EK		*1
5.5.	Chameleon	24 VDC	A3PJ-90GG1-24EK	1	'
		6 VDC/VAC	A3PJ-90G11-06	A3PJ-90G12-06	
	Incandescent Iamp	14 VDC/VAC	A3PJ-90G11-14	A3PJ-90G12-14	*2
	amp	28 VDC/VAC	A3PJ-90G11-28	A3PJ-90G12-28	1

Note: Enter the desired color symbol for the Pushbutton in (1). (R) = Red, (O) = Orange, (G) = Green, (W) = White.

Example: Red A3PJ-90E11-24ER

\*1. You can change the screen colors of chameleon models between red, green, and orange, by changing the terminal wiring. Refer to page 20 for details. \*2. Incandescent lamps are supplied with colored plates (white, red, green, blue, and orange) and legend plates (milk-white and transparent). Use the appropriate combination.

Individual models: Refer to pages 9 to 12.

(The Pushbutton, Lamp, and Switch can be ordered separately.)

the Pushbutton, Lamp, and Switch.

(Not all combinations are possible. Ask your OMRON representative for details.)



(1) (Horizontal 2-split Screen) (2) A3PJ

Standard Loads

Models

		Contact type		Standard load (250 V	AC, 3 A; 30 VDC, 4 A)		
		Operation	Momentary operat	ion (Self-resetting)	Alternate operation (Self-holding)		Pushbutton
Output Lighting Case color			Black	Light gray	Black	Light gray	color symbol
	LED	5 VDC	A3PJ-90A21-24E(1)(2)	A3PJ-90A22-24E(1)(2)	A3PJ-90B21-24E(1)(2)	A3PJ-90B22-24E(1)(2)	ROGW
SPDT	Incandescent Iamp	6 VDC/VAC	A3PJ-90A21-06	A3PJ-90A22-06	A3PJ-90B21-06	A3PJ-90B22-06	*
		14 VDC/VAC	A3PJ-90A21-14	A3PJ-90A22-14	A3PJ-90B21-14	A3PJ-90B22-14	
		28 VDC/VAC	A3PJ-90A21-28	A3PJ-90A22-28	A3PJ-90B21-28	A3PJ-90B22-28	
	LED	24 VDC	A3PJ-90C21-24E(1)(2)	A3PJ-90C22-24E(1)(2)	A3PJ-90D21-24E(1)(2)	A3PJ-90D22-24E(1)(2)	ROGW
DPDT		6 VDC/VAC	A3PJ-90C21-06	A3PJ-90C22-06	A3PJ-90D21-06	A3PJ-90D22-06	
	Incandescent	14 VDC/VAC	A3PJ-90C21-14	A3PJ-90C22-14	A3PJ-90D21-14	A3PJ-90D22-14	*
	lamp	28 VDC/VAC	A3PJ-90C21-28	A3PJ-90C22-28	A3PJ-90D21-28	A3PJ-90D22-28	

Note: Enter the desired color symbols for the Pushbutton in (1) and (2). (R) = Red, (O) = Orange, (G) = Green, (W) = White.

Example: Red Upper A3PJ-90D21-24ERW

White Lower Red White

\* Incandescent lamps are supplied with colored plates (white, red, green, blue, and orange) and legend plates (milky white and transparent). Use the appropriate combination.



Microloads

		Contact type	Microload (125 VAC,	0.1 A; 30 VDC, 0.1 A)	
		Operation	Momentary operat	ion (Self-resetting)	Pushbutton
Output	Lighting	Case color	Black	Light gray	color symbol
	LED	5 VDC	A3PJ-90E21-24E(1)(2)	A3PJ-90E22-24E(1)(2)	ROGW
SPDT		6 VDC/VAC	A3PJ-90E21-06	A3PJ-90E22-06	
	Incandescent Iamp	14 VDC/VAC	A3PJ-90E21-14	A3PJ-90E22-14	*
		28 VDC/VAC	A3PJ-90E21-28	A3PJ-90E22-28	]
	LED	5 VDC	A3PJ-90G21-24E(1)(2)	A3PJ-90G22-24E(1)(2)	ROGW
DPDT		6 VDC/VAC	A3PJ-90G21-06	A3PJ-90G22-06	
	Incandescent Iamp	14 VDC/VAC	A3PJ-90G21-14	A3PJ-90G22-14	*
		28 VDC/VAC	A3PJ-90G21-28	A3PJ-90G22-28	]

Note: Enter the desired color symbols for the Pushbutton in (1) and (2). (R) = Red, (O) = Orange, (G) = Green, (W) = White.

Example: Red Upper A3PJ-90D21-24ERW White Lower Red White

\* Incandescent lamps are supplied with colored plates (white, red, green, blue, and orange) and legend plates (milky-white and transparent). Use the appropriate combination.

Individual models: Refer to pages 9 to 12.

(The Pushbutton, Lamp, and Switch can be ordered separately.)

Ordering as a Set ...... The model numbers used to order sets of Units are given in the following tables. One set comprises the Pushbutton, Lamp, and Switch.

(Not all combinations are possible. Ask your OMRON representative for details.)

Square	(Single Scr
Models	



A3PA

(Single Screen) (1)

#### Standard Loads

Contact type		Standard load (250 VAC, 3 A; 30 VDC, 4 A)					
		Operation	Momentary operation (Self-resetting)		Alternate operation (Self-holding)		Pushbutton
Output	Lighting	Case color	Black	Light gray	Black	Light gray	color symbol
		5 VDC	A3PA-90A11-05E(1)	A3PA-90A12-05E(1)	A3PA-90B11-05E(1)	A3PA-90B12-05E(1)	R
	LED	12 VDC	A3PA-90A11-12E(1)	A3PA-90A12-12E(1)	A3PA-90B11-12E(1)	A3PA-90B12-12E(1)	O G
		24 VDC	A3PA-90A11-24E(1)	A3PA-90A12-24E(1)	A3PA-90B11-24E(1)	A3PA-90B12-24E(1)	w
SPDT	Chamalaan	12 VDC	A3PA-90AG1-12EK	A3PA-90AG2-12EK	A3PA-90BG1-12EK	A3PA-90BG2-12EK	*1
0101	Chameleon	24 VDC	A3PA-90AG1-24EK	A3PA-90AG2-24EK	A3PA-90BG1-24EK	A3PA-90BG2-24EK	1 '
		6 VDC/VAC	A3PA-90A11-06	A3PA-90A12-06	A3PA-90B11-06	A3PA-90B12-06	
	Incandescent Iamp	14 VDC/VAC	A3PA-90A11-14	A3PA-90A12-14	A3PA-90B11-14	A3PA-90B12-14	*2
	lamp	28 VDC/VAC	A3PA-90A11-28	A3PA-90A12-28	A3PA-90B11-28	A3PA-90B12-28	1
		5 VDC	A3PA-90C11-05E(1)	A3PA-90C12-05E(1)	A3PA-90D11-05E(1)	A3PA-90D12-05E(1)	R
	LED	12 VDC	A3PA-90C11-12E(1)	A3PA-90C12-12E(1)	A3PA-90D11-12E(1)	A3PA-90D12-12E(1)	O G
		24 VDC	A3PA-90C11-24E(1)	A3PA-90C12-24E(1)	A3PA-90D11-24E(1)	A3PA-90D12-24E(1)	w
DPDT	Chameleon	12 VDC	A3PA-90CG1-12EK	A3PA-90CG2-12EK	A3PA-90DG1-12EK	A3PA-90DG2-12EK	*1
5151	Chameleon	24 VDC	A3PA-90CG1-24EK	A3PA-90CG2-24EK	A3PA-90DG1-24EK	A3PA-90DG2-24EK	
		6 VDC/VAC	A3PA-90C11-06	A3PA-90C12-06	A3PA-90D11-06	A3PA-90D12-06	
	Incandescent	14 VDC/VAC	A3PA-90C11-14	A3PA-90C12-14	A3PA-90D11-14	A3PA-90D12-14	*2
	lamp	28 VDC/VAC	A3PA-90C11-28	A3PA-90C12-28	A3PA-90D11-28	A3PA-90D12-28	1

Note: Enter the desired color symbol for the Pushbutton in (1). (R) = Red, (O) = Orange, (G) = Green, (W) = White.

Example: Red A3PA-90A11-24ER

\*1. You can change the screen colors of chameleon models between red, green, and orange, by changing the terminal wiring. Refer to page 20 for details.
\*2. Incandescent lamps are supplied with colored plates (white, red, green, blue, and orange) and legend plates (milk-white and transparent). Use the appropriate combination.

#### Microloads

		Contact type	. ,		
Operation			Momentary operat	Pushbutton	
Output	Lighting	Case color	Black	Light gray	color symbol
		5 VDC	A3PA-90E11-05E(1)	A3PA-90E12-05E(1)	R
	LED	12 VDC	A3PA-90E11-12E(1)	A3PA-90E12-12E(1)	O G
		24 VDC	A3PA-90E11-24E(1)	A3PA-90E12-24E(1)	w
SPDT	Chameleon	12 VDC	A3PA-90EG1-12EK		*1
0. 5.	Chameleon	24 VDC	A3PA-90EG1-24EK	A3PA-90EG2-24EK	1
		6 VDC/VAC	A3PA-90E11-06	A3PA-90E12-06	
	Incandescent Iamp	14 VDC/VAC		A3PA-90E12-14	*2
	lamp	28 VDC/VAC	A3PA-90E11-28	A3PA-90E12-28	
		5 VDC			R
	LED	12 VDC	A3PA-90G11-12E(1)	A3PA-90G12-12E(1)	O G
		24 VDC	A3PA-90G11-24E(1)	A3PA-90G12-24E(1)	W
DPDT	Chameleon	12 VDC	A3PA-90GG1-12EK		*1
2. 01	Chameleon	24 VDC	A3PA-90GG1-24EK		1
		6 VDC/VAC	A3PA-90G11-06	A3PA-90G12-06	
	Incandescent Iamp	14 VDC/VAC			*2
	iamp.	28 VDC/VAC	A3PA-90G11-28	A3PA-90G12-28	

Note: Enter the desired color symbol for the Pushbutton in (1). (R) = Red, (O) = Orange, (G) = Green, (W) = White.

Example: Red A3PA-90E11-24ER

\*1. You can change the screen colors of chameleon models between red, green, and orange, by changing the terminal wiring. Refer to page 20 for details. \*2. Incandescent lamps are supplied with colored plates (white, red, green, blue, and orange) and legend plates (milk-white and transparent). Use the appropriate combination.

Individual models: Refer to pages 9 to 12.

(The Pushbutton, Lamp, and Switch can be ordered separately.)

the Pushbutton, Lamp, and Switch.

(Not all combinations are possible. Ask your OMRON representative for details.)





A3PA

(1) (Horizontal 2-split Screen) (2)

Standard Loads

		Contact type		Standard load (250 VAC, 3 A; 30 VDC, 4 A)			
		Operation	Momentary operat	ion (Self-resetting)	Alternate operation (Self-holding)		Pushbutton
Output Lighting Case color			Black	Light gray	Black	Light gray	color symbol
	LED	24 VDC	A3PA-90A21-24E(1)(2)	A3PA-90A22-24E(1)(2)	A3PA-90B21-24E(1)(2)	A3PA-90B22-24E(1)(2)	ROGW
SPDT	Incandescent lamp	6 VDC/VAC	A3PA-90A21-06	A3PA-90A22-06	A3PA-90B21-06	A3PA-90B22-06	*
3501		14 VDC/VAC	A3PA-90A21-14	A3PA-90A22-14	A3PA-90B21-14	A3PA-90B22-14	
		28 VDC/VAC	A3PA-90A21-28	A3PA-90A22-28	A3PA-90B21-28	A3PA-90B22-28	
	LED	24 VDC	A3PA-90C21-24E(1)(2)	A3PA-90C22-24E(1)(2)	A3PA-90D21-24E(1)(2)	A3PA-90D22-24E(1)(2)	ROGW
DPDT		6 VDC/VAC	A3PA-90C21-06	A3PA-90C22-06	A3PA-90D21-06	A3PA-90D22-06	
DFD1	Incandescent lamp	14 VDC/VAC	A3PA-90C21-14	A3PA-90C22-14	A3PA-90D21-14	A3PA-90D22-14	*
		28 VDC/VAC	A3PA-90C21-28	A3PA-90C22-28	A3PA-90D21-28	A3PA-90D22-28	

Note: Enter the desired color symbols for the Pushbutton in (1) and (2), (R) = Red, (O) = Orange, (G) = Green, (W) = White.

Red Upper A3PA-90D21-24ERW Example: White Lower

Red White

\* Incandescent lamps are supplied with colored plates (white, red, green, blue, and orange) and legend plates (milk-white and transparent). Use the appropriate combination.



		Contact type	Microload (125 VAC,	0.1 A; 30 VDC, 0.1 A)		
		Operation	Momentary operat	ion (Self-resetting)	Pushbutton	
Output	Lighting	Case color	Black	Light gray	color symbol	
	LED	24 VDC	A3PA-90E21-24E(1)(2)	A3PA-90E22-24E(1)(2)	ROGW	
SPDT	Incandescent lamp	6 VDC/VAC	A3PA-90E21-06	A3PA-90E22-06		
5PD1		14 VDC/VAC	A3PA-90E21-14	A3PA-90E22-14	*	
		28 VDC/VAC	A3PA-90E21-28	A3PA-90E22-28		
	LED	24 VDC	A3PA-90G21-24E(1)(2)	A3PA-90G22-24E(1)(2)	ROGW	
DPDT		6 VDC/VAC	A3PA-90G21-06	A3PA-90G22-06		
DPDT	Incandescent lamp	14 VDC/VAC	A3PA-90G21-14	A3PA-90G22-14	*	
		28 VDC/VAC	A3PA-90G21-28	A3PA-90G22-28	1	

Note: Enter the desired color symbols for the Pushbutton in (1) and (2). (R) = Red, (O) = Orange, (G) = Green, (W) = White.

Example: Red Upper A3PA-90D21-24ERW White Lower Red White

\* Incandescent lamps are supplied with colored plates (white, red, green, blue, and orange) and legend plates (milk-white and transparent). Use the appropriate combination.

Individual models: Refer to pages 9 to 12. (The Pushbutton, Lamp, and Switch can be ordered separately.)

the Pushbutton, Lamp, and Switch.







#### Standard Loads

Contact type				Standard load (250 V	AC, 3 A; 30 VDC, 4 A)		
			Operation	Momentary operation (Self-resetting)	Alternate operation (Self-holding)	Pushbutton color symbol	
	Output	Lighting	Case color	Light gray	Light gray	Color symbol	
		LED	24 VDC	A3PT-90A12-24C(1)	A3PT-90B12-24C(1)	ROGW	
	SPDT	Incandescent lamp	6 VDC/VAC	A3PT-90A12-06	A3PT-90B12-06		
			Incandescent lamp	14 VDC/VAC	A3PT-90A12-14		*
				28 VDC/VAC	A3PT-90A12-28	A3PT-90B12-28	
		LED	24 VDC	A3PT-90C12-24C(1)	A3PT-90D12-24C(1)	ROGW	
	DPDT		6 VDC/VAC	A3PT-90C12-06	A3PT-90D12-06		
	DFDT	DPDI	Incandescent lamp	14 VDC/VAC	A3PT-90C12-14	A3PT-90D12-14	*
			28 VDC/VAC	A3PT-90C12-28	A3PT-90D12-28	1	

Note: Enter the desired color symbols for the Pushbutton in (1) and (2). (R) = Red, (O) = Orange, (G) = Green, (W) = White.

### Example: (Red) A3PT-90A12-24CR

\* Incandescent lamps are supplied with a colored plates (white, red, green, blue, and orange). Use the appropriate combination. Models A3PT (round models), however, are not supplied with legend plates.



### Microloads

		Contact type	Microload (125 VAC, 0.1 A; 30 VDC, 0.1 A)	
		Operation	Momentary operation	Pushbutton color symbol
Output	Lighting	Case color	Light gray	
SPDT	LED	24 VDC	A3PT-90E12-24C(1)	ROGW
SFDT	Incandescent lamp	28 VDC/VAC	A3PT-90E12-28	*
DPDT	LED	24 VDC	A3PT-90G12-24C(1)	G W
DFDT	Incandescent lamp	28 VDC/VAC	A3PT-90G12-28	*

Note: Enter the desired color symbols for the Pushbutton in (1). (R) = Red, (O) = Orange, (G) = Green, (W) = White.

Example: (Red) A3PT-90E12-24CR

\* Incandescent lamps are supplied with a colored plates (white, red, green, blue, and orange). Use the appropriate combination. Models A3PT (round models), however, are not supplied with legend plates.

Individual models: Refer to pages 9 to 12. (The Pushbutton, Lamp, and Switch can be ordered separately.)

### Illumination-only and Colored-illumination LED Models

"Illumination only" describes LED models for which the screen color is the same whether the LED is lit or not. The screen simply becomes brighter when the LED lights.

Example: Red LED



"Colored illumination" describes LED models for which the screen color is white when the LED is not lit and changes to the color of the LED lamp when the LED is lit.



Ordering: With colored-illumination models, order the Pushbutton, Lamp, and Switch as shown in the following table.

Pushbutton	Lamp	Switch
Select the LED lamp-lighted model required from the selection on page 10. Each assembly includes the number of white colored plates re- quired to enable colored illumination for the corresponding screen-split configuration. For example, 4-split screen models include 4 white colored plates.	Select the LED lamps to suit your desired col- oration from the selection on page 12. Number of necessary LED lamps (standard) A3PJ (rectangular): 4 A3PA (square): 2 A3PT (round): 2	Select from the Switches on page 12.

Ordering Individually ...... Pushbuttons, Lamps, and Switches can be ordered separately. Combinations that are not available as sets can be created using individual Units. Also, store the parts as spares for maintenance and repairs.



#### \*1. Number of necessary LED lamps.

Screen pattern	A3PJ	A3PA	A3PT		
Single screen		2	2		
Horizontal 2-split screen		2			
Vertical 2-split screen	4				
Vertical 3-split screen Horizontal 3-split screen					
4-split screen	1				

\*2. Number of necessary incandescent lamps.

Screen pattern	A3PJ	A3PA	A3PT
Single screen	2	1	2
Horizontal 2-split screen		2	
Vertical 2-split screen	4 (low-power		
Vertical 3-split screen Horizontal 3-split screen	incandes-		
4-split screen	]		

Ordering set combinations: Refer to page 3 to 7.

### Ordering Individually .....Pushbuttons, Lamps, and Switches can be ordered separately. Combinations that are not available as

sets can be created using individual Units. Also, store the parts as spares for maintenance and repairs.

Pushbutton

### LED-lighted Models (LED is built-in.)

Appearance	Split-scree (color sy		White (W)	Red (R)	Green (G)	Orange (O)	Selection precau- tions
	Single screen		A3PJ-5701 -□□E	A3PJ-5702 -□□E	A3PJ-5703 -□□E	A3PJ-5706 -□□E	Enter the voltage to
Rectangular models		White	A3PJ-5711 -□□E	A3PJ-5712 -□□E	A3PJ-5713 -□□E	A3PJ-5716 -□□E	be used in the at the end of the mod-
	Horizontal	Red	A3PJ-5721 -□□E	A3PJ-5722 -□□E	A3PJ-5723 -□□E	A3PJ-5726 -□□E	el number.
	2-split screen	Green	A3PJ-5731 -□□E	A3PJ-5732 -□□E	A3PJ-5733 -□□E	A3PJ-5736 -□□E	Examples of voltag- es used:
		Orange	A3PJ-5741 -□□E	A3PJ-5742 -□□E	A3PJ-5743 -□□E	A3PJ-5746 -□□E	5V=05E 12V=12E 24V=24E
	Single screen		A3PA-5701 -□□E	A3PA-5702 -□□E	A3PA-5703 -□□E	A3PA-5706 -□□E	Horizontal 2-split
Square models		White	A3PA-5711 -□□E	A3PA-5712 -□□E	A3PA-5713 -□□E	A3PA-5716 -□□E	<ul><li>port only 24V.</li><li>For the color of the</li></ul>
NP2	Horizontal	Red	A3PA-5721 -□□E	A3PA-5722 -□□E	A3PA-5723 -□□E	A3PA-5726 -□□E	shaded part, select the model accord-
Leso.	2-split screen	Green	A3PA-5731 -□□E	A3PA-5732 A3PA-5733 A3PA-5736 - E - E - E	ing to the colors given at the top of		
		Orange	A3PA-5741 -□□E	A3PA-5742 -□□E	A3PA-5743 -□□E	A3PA-5746 -□□E	the table.

Note: 1. A cap, legend plate (transparent), colored plate, white plunger case, and LED (with a current-limiting resistor) are built into the standard lighting unit. 2. Split-screen coloring configurations are given with the OMRON mark on the Switch facing down.

3. The LED is built-in and cannot be replaced individually.

### LED Lamp-lighted Models (LED is not built-in.)

	Rectangular models		Square models		Round mo	dels									
Appearance							Selection precautions								
Screen pattern	Screen	Model	Screen	Model	Screen	Model									
Single screen		A3PJ-5021		A3PA-5021	$\bigcirc$	A3PT-5021	<ul> <li>Parts included: Colored plates (white, red, green, and or- ange), a legend plate (transparent), and a light baffle (split-screen models only) are in-</li> </ul>								
Horizontal 2- split screen		A3PJ-5022	A3PA-5022 cluded. Use the appropriate of the LED coloring required. • The number of white colored illumination sponding screen-split configu						ed. olored p nation t	plates required for the corre-					
Vertical 2-split screen		A3PJ-5023					<ul> <li>ed. (For example, 4-split screen models include 4 white colored plates).</li> <li>The number of colored plates included for each model are shown in the following table.</li> </ul>								
Horizontal3-split							Screen pattern	White	Red	Green	Orange				
screen						A3PJ-5024					Single screen	1	1	1	1
Vertical 3-split		A3PJ-5025					Horizontal 2- split screens Vertical 2-split screens	2	1	1	1				
4-split screen		A3PJ-5026					Horizontal 3- split screens Vertical 3-split screens *	3	2	2	2				
						4-split screen	4	1	1	1					

\* The following types of colored plates are included with Horizontal and Vertical 3-splitScreen Switches. White: One colored plate for a 2-split screen and two colored plates for a 4-split screen.

Red, green, or orange: One colored plate for a 2-split screen and one colored plates for a 4-split screen.

Ordering set combinations: Refer to page 3 to 7.

Ordering Individually ...... Pushbuttons, Lamps, and Switches can be ordered separately. Combinations that are not available as sets can be created using individual Units. Also, store the parts as spares for maintenance and repairs.

Pushbutton
------------

Incandescent Lamp-lighted Models (Incandescent lamp is not built-in.)

	Rectangular models		Square models Ro		Round models							
Appearance							Selection precautions					
Screen pattern	Screen	Model	Screen	Model	Screen	Model						
Single screen		A3PJ-5011		A3PA-5011	$\bigcirc$	A3PT-5011 *	Parts included: Colored plates (white, red, green, orange, and blue), legend plates (transparent and milk white),				white),	
Horizontal 2- split screen		A3PJ-5012		A3PA-5012			<ul> <li>and a light baffle (split-screen models only) are supplied.</li> <li>* A3PT (round) models do not contain a legend plate.</li> <li>The number of colored plates included is shown in</li> </ul>			te.		
Vertical 2-split screen		A3PJ-5013					the following table.					Blue
							Single screen	1	1	1	1	1
Horizontal 3-split screen		A3PJ-5014					Horizontal 2- split screens Vertical 2-split	1	1	1	1	1
Vertical 3-split screen		A3PJ-5015					screens Horizontal 3-					
4-split screen		A3PJ-5016					split screens Vertical 3-split screens *	2	2	2	2	2
,						4-split screen	2	2	2	2	2	

\* The following types of colored plates are included with Horizontal and Vertical 3-splitScreen Switches. All colors: One colored plate for a 2-split screen and one colored plate for a 4-split screen.

### Chameleon Models (with Built-in LED)

Appearance	Rated voltage	Chameleon pushbutton switch
Rectangular	12 VDC	A3PJ-5800-12E
	24 VDC	A3PJ-5800-24E
Square	12 VDC	A3PA-5800-12E
	24 VDC	A3PA-5800-24E

Note: 1. With chameleon models the whole screen lights red, green, or orange (i.e., red and green simultaneously).
 A cap, legend plate (transparent), white colored plate, and LED (with a

current-limiting resistor) are built into the Pushbutton.

Ordering set combinations: Refer to page 3 to 7.

Ordering Individually......Pushbuttons, Lamps, and Switches can be ordered separately. Combinations that are not available as sets can be created using individual Units. Also, store the parts as spares for maintenance and repairs.

Pushbutton (For information on mounting, refer to page 25.)

LED Lamp

Voltage	5 VDC	12 VDC	24 VDC	Applicable cap (color)	Selection precautions
Color	Model (DC only)	Model (DC only)	Model (DC only)	(colored plate)	Selection precautions
Red	SLL-05ER	SLL-12ER	SLL-24ER	Red	
Yellow	SLL-05EY	SLL-12EY	SLL-24EY	Orange	In the standard setup, 4 LED lamps are used with A3PJ models and 2 LED lamps are
Green	Green SLL-05EG		SLL-24EG	Green	used with A3PA and A3PT models.
White	SLL-05EW	SLL-12EW	SLL-24EW	White	

### Incandescent Lamp

Lamp type Voltage	Standard lamp	Low-power lamp	Selection precautions
5 VAC/VDC	SLL-06	SLL-06H	• In the standard setup for A3PJ models, 2 lamps are used with sin- gle screen models, and 4 lamps are used with split-screen models.
12 VAC/VDC	SLL-14	SLL-14H	<ul><li>If 3 or 4 lamps are lit continuously, use low-power lamps.</li><li>In the standard setup for A3PA models, 1 lamp is used with single</li></ul>
24 VAC/VDC	SLL-28	SLL-28H	<ul><li>screen models, and 2 lamps are used with split-screen models.</li><li>In the standard setup for A3PT models, 2 lamps are used.</li></ul>

Switch (common to both incandescent lamp-lighted models and LED models)

					Rectangular models	Square models	Round models	
				Appearance	A start			Selection precautions
		Contact type	Switch Number of outputs	Operation	Model	Model	Model	
			1	Momentary operation	A3PJ-7010-1	A3PA-7010-1	A3PT-7010-2	• The end digit denotes the color of the flange: -1
-	ad		•	Alternate operation	A3PJ-7020-1	A3PA-7020-1	A3PT-7020-2	denotes a black flange, and -2 denotes a light
	standard load	Silver alloy contact		Momentary operation	A3PJ-7030-1	A3PA-7030-1	A3PT-7030-2	gray flange. Round switches are available
	anda			Alternate operation	A3PJ-7040-1	A3PA-7040-1	A3PT-7040-2	only in light gray, and not in black.
č	กี			Momentary operation	A3PJ-7150-1			Use the Switch in combi- nation with the same
			Ŭ	Alternate operation	A3PJ-7160-1			shape Lamp (rectangu- lar, square or round).
			1	Momentary operation	A3PJ-7050-1	A3PA-7050-1	A3PT-7050-2	Example: For rectangular Lamp A3PJ-5011, select
			•	Alternate operation	A3PJ-7060-1	A3PA-7060-1	A3PT-7060-2	Switch A3PJ-7□□0-□ On the Switch itself, how-
Microload		Gold alloy	y 2 Momentary opera	Momentary operation	A3PJ-7070-1	A3PA-7070-1	A3PT-7070-2	ever, only 3 digits are shown, as follows:
		contact	-	Alternate operation	A3PJ-7080-1	A3PA-7080-1	A3PT-7080-2	A3PJ-7
			Momentary operation		A3PJ-7170-1			self-resetting, and alter- nate operation is self-
			Ŭ	Alternate operation	A3PJ-7180-1			holding (i.e., push-on, push-off).

Ordering set combinations: Refer to page 3 to 7.

## Accessories, Replacements, and Tools Accessories

Name	Appearance	Classifica	tion	Rectangular	Square	Application precautions	
	R-1	Wire-wrap terminal		A3PJ-4101	A3PA-4101	• The Socket cannot be used with when mounting multiple Switch-	
Socket		PCB terminal		A3PJ-4102	A3PA-4102	es or with 3C models. • You can use the same Sockets	
	11 martin	Solder terminal		A3PJ-4103	A3PA-4103	for the A3P Ultra Bright Lighted Pushbutton Switches.	
		Short edge barrier (Horizontal mount-	Black	A3PJ-4001	A3PA-4001		
	TA	ing) (1 pair)	Light gray	A3PJ-4002	A3PA-4002	• The purpose of the barrier is to	
		Long edge barrier	Black	A3PJ-4004		<ul> <li>prevent malfunctioning and to improve design image of the mounting panel.</li> </ul>	
Barrier	TEA	(Vertical mounting) (1 pair)	Light gray	A3PJ-4005		<ul> <li>Intermediate barrier × 1.</li> <li>Edge barriers × 1 pair (2 Units).</li> <li>Mount short barriers horizontally.</li> </ul>	
Damei		Short intermediate barrier (Horizontal	Black	A3PJ-4007	A3PA-4007	<ul> <li>Mount long barriers vertically.</li> <li>For details on mounting, refer to</li> </ul>	
	T	mounting)	Light gray	A3PJ-4008	A3PA-4008	<ul> <li>page 25.</li> <li>You can use the same Sockets for the A3P Ultra Bright Lighted</li> </ul>	
		Long intermediate	Black	A3PJ-4010		Pushbutton Switches.	
		barrier (Vertical mounting)	Light gray	A3PJ-4011			
Switch guard	For horizontal moun OMRON logo facing			A3PJN-5050	A3PAN-5050	<ul> <li>Can be used by exchanging with the cap.</li> <li>Cannot be used with seal cover.</li> <li>Can be used with barrier.</li> <li>Use horizontal mounting guard for consecutive horizontal</li> </ul>	
			or vertical mounting (with OM- ON logo facing to the right)		A3PAN-5055	<ul> <li>mounting, and use vertical mounting guard for consecutive vertical mounting.</li> <li>You can use the same Sockets for the A3P Ultra Bright Lighted Pushbutton Switches.</li> </ul>	
Seal cover	Ŵ	_		A3PJ-5060	A3PA-5060	<ul> <li>Cannot be used with barrier and/ or switch guard.</li> <li>For details on mounting, refer to page 25.</li> <li>Cap is manufactured from vinyl chloride.</li> <li>You can use the same Sockets for the A3P Ultra Bright Lighted Pushbutton Switches.</li> </ul>	
Long mounting plate	a ba			A3PJ-3002		<ul> <li>Use when vertically mounting individual (with barrier) or multiple Switches (in standard mounting style and with barrier). Since a short mounting plate is attached to the Switch, replace it with the long one.</li> <li>You can use the same Sockets for the A3P Ultra Bright Lighted Pushbutton Switches.</li> </ul>	

### Accessories

Name	Appearances	Classific	ation	A3PJ	A3PA	Application precautions		
			White	A3PJ-5101	A3PA-5101			
		Single screen	Red	A3PJ-5102	A3PA-5102	-		
			Green	A3PJ-5103	A3PA-5103	-		
			Blue	A3PJ-5104	A3PA-5104	-		
			Yellow	A3PJ-5105	A3PA-5105	-		
			Orange	A3PJ-5106	A3PA-5105	-		
	-		White	A3PJ-5121	A3PA-5121	-		
		Horizontal 2-				-		
		split screen	Red	A3PJ-5122	A3PA-5122	Keep mounted at all times.		
			Green	A3PJ-5123	A3PA-5123	<ul> <li>Contact your OMRON representation</li> </ul>		
			Blue	A3PJ-5124	A3PA-5124	tive for color changes or other		
Colored plate	8		Yellow	A3PJ-5125	A3PA-5125	specifications.		
for incandes-	$\wedge$		Orange	A3PJ-5126	A3PA-5126	• For details on mounting, refer to		
cent lamp		Vertical 2-split	White	A3PJ-5131		page 25.		
		screen	Red	A3PJ-5132		<ul> <li>You cannot use the same Colored Plates for Incandescent Lamps for</li> </ul>		
			Green	A3PJ-5133		- the A3P Ultra Bright Lighted Pusl		
			Blue	A3PJ-5134		– button Switches.		
			Yellow			Button Ownonee.		
		L	Orange	A3PJ-5136				
			White	A3PJ-5161		7		
		4-split screen	Red	A3PJ-5162				
			Green	A3PJ-5163		_		
			Blue			1		
			Yellow	A3PJ-5165		-		
		······	Orange	A3PJ-5166		-		
			White	A3PJ-5301	A3PA-5301			
				Single screen	Red	A3PJ-5302	A3PA-5302	-
				Green	A3PJ-5303	A3PA-5303	-	
			Yellow	A3PJ-5305	A3PA-5305	-		
						_		
			Orange	A3PJ-5306	A3PA-5306	-		
	$\diamond$	Horizontal 2-	White	A3PJ-5321	A3PA-5321	• Keep mounted at all times.		
		split screen	Red	A3PJ-5322	A3PA-5322	If the colored plate is lost or dam		
			Green	A3PJ-5323	A3PA-5323	aged, contact OMRON.		
			Yellow	A3PJ-5325	A3PA-5325	<ul> <li>Use in accordance with coloring c</li> <li>the built-in LED.</li> </ul>		
Colored plate			Orange	A3PJ-5326	A3PA-5326	• For details on mounting, refer to		
for LED		Vertical 2-split	White	A3PJ-5331		page 25.		
		screen	Red	A3PJ-5332		• You cannot use the same Colored		
			Green	A3PJ-5333		Plates for Incandescent Lamps for		
			Yellow	A3PJ-5335		the A3P Ultra Bright Lighted Pusl		
			Orange	A3PJ-5336		button Switches.		
		4-solit screen	White	A3PJ-5361				
		4-split screen	Red	A3PJ-5362				
			Green	A3PJ-5363		-		
			Yellow	A3PJ-5365		-		
			Orange	A3PJ-5366		-		
		Harizontal 2 onli		A3PJ-4302	A3PA-4302	Keep mounted at all times.		
		Horizontal 2-spli			A3FA-4302	If the light baffle is lost, contact		
		Vertical 2-split s	creen	A3PJ-4303		- OMRON.		
		Horizontal 3-	Long axis	A3PJ-4304		• Used in LED lamp-lighted models		
	$\sim$	split screen	Short axis	A3PJ-4305		Cannot be used in LED-lighted		
_ight baff <b>l</b> e	5	Vertical 3-split	Long axis	A3PJ-4306		models.		
	$\sim$	screen	Short axis	A3PJ-4307		• You cannot use the same Colored		
						<ul> <li>Plates for Incandescent Lamps for</li> </ul>		
		4-split screen	Long axis	A3PJ-4304		the A3P Ultra Bright Lighted Pusl		
			Short axis	A3PJ-4308		button Switches.		
		Transparent legend plate		A3PJ-5202	A3PA-5202	A transparent legend plate is mounted on the Pushbutton.		
Legend p <b>l</b> ate				A3PJ-5201	A3PA-5201	• You cannot use the same Colo Plates for Incandescent Lamps the A3P Ultra Bright Lighted Pu		
		Transparent cap	,	A3PJ-5600	A3PA-5600	<ul> <li>button Switches.</li> <li>You can use the same Sockets for the A3P Ultra Bright Lighted Push</li> </ul>		
Сар			Transparent cap Crimp-processed transparent cap		АЗРА-5600-А	<ul> <li>button Switches.</li> <li>The surface is crimp-processed, s there is no reflection.</li> <li>You can use the same Sockets for the A3P Ultra Bright Lighted Push button Switches.</li> </ul>		

Name	Appearance	Classification	Model	Application precautions
Extractor			A3PJ-5080	<ul> <li>Use to extract components when replacing the Pushbutton.</li> <li>You can use the same Sockets for the A3P Ultra Bright Lighted Push button Switches.</li> </ul>

### Specifications

Approved Standard Ratings UL (File No. E41515), CSA (File No. LR45258)					
Standard Load:	5 A at 125 VAC				
	0 4 -+ 050 1/40				

	3 A at 250 VAC
Microload:	0.1 A at 125 VAC
	0.1 A at 30 VDC

Note: Certification has been obtained for the Switch Unit. For detailed information on individual products that have received certification, consult your supplier.

#### CCC (GB14048.5)

Standard Load:	3 A at 250 VAC
	4 A at 30 VDC
Microload:	0.1 A at 125 VAC
	0.1 A at 30 VDC

### LED and Incandescent Lamp Ratings LED for LED-lighted Models

	Model	A3PJ/	/M2PJ	A3PA/M2PA		
		Rated	current	Rated	current	
Applied voltage	Rated voltage	Single screen	2-split screen	Single screen	2-split screen	
5 VDC±5%	5 VDC	80 mA		80 mA		
12 VDC±5%	12 VDC	40 mA		40 mA		
24 VDC±5%	24 VDC	20 mA	15 mA × 2	20 mA	$13 \text{ mA} \times 2$	

#### LED for Chameleon Models

Applied voltage	Rated voltage	Rated current		
Applied voltage	naleu voltage	Green	Red	
12 VDC±5%	12 VDC	26 mA	20 mA	
24 VDC±5%	24 VDC	13 mA	10 mA	

#### Incandescent Lamp

	ltem	Standard	l lamp	Low-powe	er lamp
Applied voltage	Rated voltage	Rated current	Model	Rated current	Model
5 VDC	6 V	200 mA	SLL-06	100 mA	SLL-06H
12 VDC	14 V	80 mA	SLL-14	40 mA	SLL-14H
24 VDC	28 V	40 mA	SLL-28	25 mA	SLL-28H

### LED Lamp (for LED Lamp-lighted Models)

Туре	Applied voltage	Rated voltage	Rated current	Model
	5 VDC±5%	5 VDC	30 mA	SLL-05E
DC only	12 VDC±5%	12 VDC	15 mA	SLL-12E
	24 VDC±5%	24 VDC	12.5 mA	SLL-24E

### Ratings **Contact Ratings**

### Silver Alloy Contacts (for Standard Loads)

Rated	No	n-induct	ve load (A)		Inductive load (A)			
voltage	Resisti	ve load Lamp load		Inductive load		Motor load		
(V)	NC NO		NC	NO	NC	NO	NC	NO
125 VAC 250 VAC	5 3		0.7 0.5		3 2		1.3 0.8	
8 VDC 14 VDC 30 VDC 125 VDC 250 VDC	5 5 4 0.4 0.2		2 2 2 0.05 0.03		4 4 3 0.4 0.2		3 3 0.0 0.0	

Note: 1. The above values are for steady-state currents. 2. Inductive load: Power factor = 0.4; time constant = 7 ms.

3. The lamp load has an inrush current of 10 times the steady-state current. The motor load has an inrush current of 6 times the steady-state current. Standard testing condition

(1) Ambient temperature:  $20 \pm 2^{\circ}C$ (2) Ambient humidity:  $65 \pm 5\%$ RH (3) Operating frequency: 20 times/min.

### **Gold Alloy Contacts (for Microloads)**

	0.1 A at 30 VDC (resistive load); 0.1 A at 125 VAC (resistive load)
Minimum applicable load	1 mA at 5 VDC

### Characteristics

Mechanic		Mechanical	120 operations/minute max. *1	
Operating frequency		Electrical	30 operations/minute max.	
Insulation resistance		100 MΩ min. (at 500 VDC)		
Contact Standard load resistance Microload			40 m $\Omega$ max. (initial value)	
			40 mΩ max. (initial value)	
	Between terminals	of same polarity	1,000 VAC, 50/60 Hz for 1 minute *2	
	Between terminals	of different polarity	2,000 VAC, 50/60 Hz for 1 minute	
Dielectric strength	Between current part and ground	carrying metal	2,000 VAC, 50/60 Hz for 1 minute	
Suengui	Between each te non-current-carr		2,000 VAC, 50/60 Hz for 1 minute	
	Between lamp te	rminals	1,000 VAC, 50/60 Hz for 1 minute *3	
Vibration	resistance	Malfunction	10 to 55 Hz, 1.5 mm double am- plitude (1 ms max.)	
Shock re	eietance	Destruction	500 m/s² max.	
SHOCK IE	Sistance	Malfunction	200 m/s <sup>2</sup> max. (1 ms max.)	
Life expectancy		Mechanical	Momentary operation models: 1,000,000 operations min. Alternate operation models: 200,000 operations min. (One operation consists of set and reset operations.)	
		Electrical	100,000 operations min.	
Weight			Approx. 30 g	
Inrush cu	rropt	NC	Silver contact: 10 A max.	
musnicu	ment	NO	Silver contact: 10 A max.	
Ambient operating temperature			LED-lighted models: -10°C to 40°C (with no icing or condensation) Incandescent lamp-lighted models: -10°C to 50°C (with no icing or condensation)	
Ambient operating humidity			35% to 85%RH	
Ambient storage temperature			-25°C to 65°C	
Degree of protection			IP40	
Electric shock protection class			Class II	
PTI (proof tracking index)			175	
Pollution degree			3 (IEC947-5-1)	
1 Mith alternate anaration models. CO anarat				

\*1. With alternate operation models, 60 operations/minute max. One operation cycle consists of set and reset operations.
\*2. 600 VAC for microloads.
\*3. With no incandescent lamp or LED lamp mounted.

### Specifications

### **Operating Characteristics**

	Model	A3PJ series		A3PA series		A3PT series	
Operating Characteristics		Momentary operation models	Alternate operation models	Momentary operation models	Alternate operation models	Momentary operation models	Alternate operation models
Operating force	OF max.	5.88 N	6.86 N	5.88 N	6.86 N	3.92 N	4.90 N
Releasing force	RF min.	0.39 N	0.29 N	0.39 N	0.29 N	0.39 N	0.29 N
Total travel	TT	Approx. 3.5 mm	Approx. 3.5 mm	Approx. 3.5 mm	Approx. 3.5 mm	Approx. 3.5 mm	Approx. 3.5 mm
Pretravel	PT max.	3 mm	3 mm	3 mm	3 mm	3 mm	3 mm
Lock travel alternate	LTA min.		0.5 mm		0.5 mm		0.5 mm

### Nomenclature

### **Model Structure**



### Nomenclature

### A3P Lighting Method Diagram



(Unit: mm)

## Dimensions The Dimension shows 2-switch outputs.

### A3PJ (Rectangular) Models

25





Note: The thickness of tab terminals #110 and solder terminals is 0.5 mm.

### Dimensions

### Terminal connections LED-lighted Models

(The terminal arrangement diagram shows a 1-switch output. Connections to terminals from the lighting block are the same for 2 outputs.)

Model	Rated voltage Screen pattern	5 VDC	12 VDC	24 VDC	
A3PJ	Single screen	Bottom view Top view	Bottom view Top view $1   12^{-1}$ $12^{-1}$	Bottom view Top view	
	Horizontal 2-split screen	Bottom view Top view	Bottom view	Top view	
АЗРА	Single screen	Bottom view Top view	Bottom view Top view	Bottom view Top view	
	2-split screen	Bottom view Top view	Bottom view Top view		

(Unit: mm)

### Dimensions

### Incandescent Lamp-lighted/LED Lamp-lighted Models

(All are shown with the OMRON logo facing down. The terminal arrangements are the same as for the LED-lighted models.)

Model Output	Rectangular A3PJ models	Square A3PA models	Round A3PT models
SPDT	Bottom view Top view	Bottom view Top view	Bottom view Top view
PPDT	Bottom view Top view	Bottom view Top view	Bottom view Top view
3PDT	Bottom view Top view		

### **LED Chameleon Models**

(The terminal arrangement diagram shows a 1-switch output. Connections to terminals from the lighting block are the same for 2 outputs.)



### Terminal Arrangement and Coloring Chameleon Models

	LC+	LC+	LC+
Wiring	L1–	L2-	L1– and L2– shorted
Coloring	Green	Red	Orange

(Unit: mm)

### **Dimensions**

Panel Cutout (If using a Switch Guard or Seal Cover, refer to the panel cutout diagrams on page 23.) A3PJ (Rectangular) Models

Cl	assification	Mounting design	Panel cutout	Remarks
Flange mount models	Individual mounting (Horizontal)	25 <sup>10,1</sup>	30.5±0.3 23.5±0.3	
	Multiple mounting (Horizontal)	25±0.1 1 2 n 1	32n-1.5±0.3	Panel cutout spacing between rows of Units:
	Individual mounting (Vertical)	32 <sup>10,1</sup> Mount to long mounting plate (A3PJ-3002)       25 <sup>20,1</sup> before use.		6 min.
	Multiple mounting (Vertical)	32 <sup>±0,1</sup> 1 2 n -25n <sup>±0,5</sup> Mount to long mounting plate (A3PJ-3002) before use.	30.5 <sup>±0.3</sup>	
Barrier mount models	Individual mounting (Horizontal)	27	23.5±0.3	
	Multiple mounting (Horizontal)	27 1 2 n 	23.5±0.3	For barrier mount models, refer to Accessories on page 13. Panel cutout spacing between rows of Units: (Dotted line indicates the position of each mounting barrier.)
	Individual mounting (Horizontal)	34     Mount to long       34     mounting plate       (A3PJ-3002)       32±0.1	29,440,3 30.5 <sup>1</sup> 0.3 <u>j</u>	1.3
	Multiple mounting (Vertical)	34     1     2     n       34     1     2     n       26n+6:1     26n+6:1     before use.	30.5 <sup>10.3</sup>	

Note: 1. n: Number of Units

Recommended panel thickness: 1 to 5 mm
 Mount the panel before mounting the Switch Guard.
 If the panel is to be finished (e.g., coated), make sure that the panel meets the specified dimensions after the coating.

### A3PA (Square) Models

Clas	sification	Mounting design	Panel cutout	Remarks	
Flange mount models	Individual mounting	25 <sup>±0,1</sup>	23.5±0.3 22.5±0.3	Panel cutout spacing between rows of Units:	
	Multiple mounting	25 <sup>±0,1</sup> 1 2 n 25 <sup>n<sup>t0,1</sup></sup>	23.5±0.3		
Barrier mount models	Individual mounting	27	23.5±0.3 27.8±0.3	Panel cutout spacing between rows of Units: (Dotted line indicates the position of each mounting barrier.) 1.3 1	
	Multiple mounting	27 <u>1 2 n</u> 26n+6.5±1	23.5±0.3	6 min	

Note: 1. n: Number of Units

Recommended panel thickness: 1 to 5 mm
 Mount the panel before mounting the Switch Guard.
 If the panel is to be finished (e.g., coated), make sure that the panel meets the specified dimensions after the coating.

### A3PT (Round) Models



Note: 1. Recommended panel thickness: 1 to 5 mm

2. If the panel is to be finished (e.g., coated), make sure that the panel meets the specified dimensions after the coating.

### **Dimensions**

### **Accessory Mounting Dimensions**



### **Socket-mounting Dimensions**



Ē

0.5

3.6

8.4

8 65

10.4

0

0

S

00

9

8.2

2.05

Eleven, 1.5-dia. holes

25.6 -

L-18\_

PCB Cutout

8.7

Solder Terminal

A3PJ-4103

17.4

(bottom view)

61.6

-0

6.15

11.65

F 

61.6

### Square Models A3PA (M2PA)



Note: PCB cutout dimensions show the switch mounted to the socket with the OMRON logo facing down.

22.8

3

31.8

0.9Ŕ

### Dimensions

### Switch and Guard Mounting Dimensions

(Unit: mm)





Note: 1. Recommended panel thickness: 1 to 5 mm

2. Unless otherwise specified, a tolerance of  $\pm$  0.4 mm applies to all dimensions.

## **Safety Precautions**

### Refer to Safety Precautions for all Pushbutton Switches/Indicators.

### Caution

Do not apply a voltage higher than the maximum rated operating voltage between the lamp terminals, as there is a risk that the incandescent lamp or LED will be damaged, and the Pushbutton will be ejected.



When replacing the incandescent lamp, first turn OFF the power supply, and then wait 10 minutes before performing replacement, as the lamp is still hot immediately after the power is turned OFF, so there is a risk of burns.



### **Precautions for Correct Use**

- Always make sure that the power is turned OFF before mounting, removing, or wiring the Switch, or performing maintenance. Electric shock or fire may occur.
- After wiring the Switch, make sure that there is a suitable isolation distance.

### Wiring

• Solder quickly and correctly at 350°C max and for 3 s or less. Wait for one minute after soldering before exerting any external force on the solder.

### **Operating Environment**

 Do not use in locations that are subject to dust, oil, or metal filings as these may penetrate the interior of the Switch and cause malfunction.

### LED (for VDC)

- Check the terminal polarity when wiring.
- The rated voltage is shown on the plate on the back of the lighting unit, so be sure to use within the voltage shown.
- An LED current-limiting resistor is built in, so there is no need to mount an external resistor.

### Incandescent Lamp

 Apply 80% of the rated voltage (operating voltage) to the incandescent lamp to improve life expectancy and incandescence.

### Character Plate (Character Film)

• If preparing the character plate separately, use a heat-resistant film with a thickness of 0.1 to 0.3 mm.





### **Using Microloads**

• Using a standard load switch when a microload circuit is opened or closed may cause contact failure on the contacts. Use the switch within the operating range. (Refer to the diagram below.) Even when using microload models within the operating range shown below, if inrush current occurs when the contact is opened or closed, it may cause the contact surface to become rough, and so decrease life expectancy. Therefore, insert a contact protection circuit where necessary. The minimum applicable load is the N-level reference value. This value indicates the malfunction reference level for the reliability level of 60% ( $\lambda$ . 60) (conforming to JIS C5003). The equation,  $\lambda$   $60 = 0.5 \times 10^{-6}$ /time indicates that the estimated malfunction rate is less than 1/2,000,000 with a reliability level of 60%.



### Others

• If the panel is to be finished (e.g., coated), make sure that the panel meets the specified dimensions after the coating.

### Assembly/Disassembly A3PJ/M2PJ (Rectangular Models), A3PA/M2PA (Square Models)



#### **Mounting Pushbutton**

- Be sure to mount the Pushbutton with the correct orientation. Align the groove on the Pushbutton, the projections in the Switch, and the LED contact piece before pushing the Pushbutton into the Switch.
- When dismounting the Pushbutton, use the Extractor (A3PJ-5080) for easy dismounting.



#### **Removing/Mounting Cap**

Insert the A3PA from the open side into the theft-prevention stopper.



#### Mounting Colored Plate

Place the colored plate on the plunger case with the dull side of the colored plate facing downward.

With A3PJ split-screen models, be sure that the projections on the upper surface of the colored plate face outward. For the A3PA, make sure that the flat plate is facing upwards.



## Mounting Character Plate (Character Frame) and Legend Plate

Mount the legend plate for the A3PJ under the layered surfaces and mount the cap, as shown below.



Mounting and Replacing LED and Incandescent Lamps

If using an A3PA (square) model with one incandescent lamp, insert the lamp in the center hole.



#### LED Rated Voltage Display (LED Models Only)

The LED rated voltage is shown between the built-in resistors on the back of the lighting unit. Use within a range of  $\pm$  5%.



#### Mounting Switch onto Panel

 Individual Mounting and Barrier Mounting When mounting the Switch, push it into the panel cutout from the front of the mounting panel by holding it with the logo mark "OMRON" facing downward.  Multiple Barrier Mounting (A3PJ) When mounting a number of Switches in line on the panel, link the Switches with spacing barriers in between, attach mounting barriers at both sides of this block of Switches and, pushing in on the mounting barriers at the side, insert the Switches into the panel cutout together.



#### **Mounting Barriers**

Mount each part by pushing it in the direction of the arrow shown in the corresponding illustration below.



### **Mounting Seal Cover**

After mounting the seal cover onto the flange of the Switch, push the Switch into the panel cutout.



#### Inscribing the Legend Plate

- Inscribe the legend plate to a depth of 0.5 mm max.
- The legend plate is made from polycarbonate resin. To coat the legend plate, use an alcohol-based coating such as melamine, phthalic acid, or acrylic.

### Maintenance Lock

 First, when you insert the transparent lens while pressing the center, the maintenance lock mechanism will be activated, and the Switch will not operate. Lamp replacement and other maintenance can be performed without turning OFF the power supply to devices and equipment. Use an insertion force of 4 kg.



2. Next, when you remove your finger from the Switch, the lock will be released.



3. The Switch will start to operate when the lighting unit is pressed the second time.



#### Read and understand this catalog.

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

Warranties.

(a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.

(b) Limitations, OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE

PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments, Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See http://www.omron.com/global/ or contact your Omron representative for published information.

#### Limitation on Liability; Etc.

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS. WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

### Suitability of Use.

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product, At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS. AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

#### Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

#### Performance Data.

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

#### Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions. Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.