CSM\_A3P\_DS\_E\_7\_2

## **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**

Model	Appearance
A3PJ (Rectangular)	52 max.
A3PA (Square)	6.7 52 max 25 25 25 25 25 25 25 25 25 25 25 25 25 2
A3PT (Round)	6.4 52 max.

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

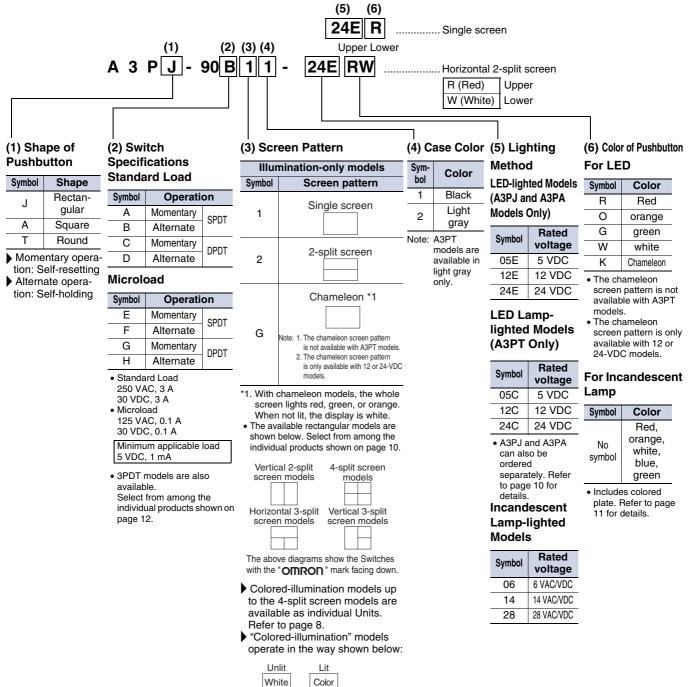
- Specifications: Refer to page 15. Panel cutout: Refer to page 21. Dimensions: Refer to page 18.
- Accessories, replacements, and tools: Refer to pages 13 to 15. Precautions for correct use: Refer to page 24.

**OMRON** 

#### **Model Number Structure**

**Model Number Legend** ..... The model numbers used to order sets of Units are illustrated below. One set comprises the Pushbutton, Lamp, and Switch.

For information on combinations, refer to Ordering Information on pages 3 to 7.



The built-in LED

#### **Number of LED Lamps**

Screen pattern	A3PJ	A3PA	A3PT
Single screen	Models with built-in LED		2
Horizontal 2-split screen	Widdels Willi		
Vertical 2-split screen			
Horizontal 3-split screen	4		
Vertical 3-split screen	*2		
4-split screen			

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

#### **Number of Incandescent Lamps**

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

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



the Pushbutton, Lamp, and Switch.

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

Rectangular Models

(Single Screen)



(Single Screen) A3PJ

(1)

#### **Standard Loads**

		Contact type		Standard load (250 V	AC, 3 A; 30 VDC, 4 A)		
Operation		Momentary operati	Momentary operation (Self-resetting)		on (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)	W
	O	12 VDC	A3PJ-90AG1-12EK		A3PJ-90BG1-12EK	A3PJ-90BG2-12EK	**
	Chameleon	24 VDC	A3PJ-90AG1-24EK	A3PJ-90AG2-24EK	A3PJ-90BG1-24EK	A3PJ-90BG2-24EK	*1
	Incandescent lamp	6 VDC/VAC	A3PJ-90A11-06	A3PJ-90A12-06	A3PJ-90B11-06	A3PJ-90B12-06	
		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	
		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	O	12 VDC	A3PJ-90CG1-12EK	A3PJ-90CG2-12EK	A3PJ-90DG1-12EK		**
וטרטו	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	

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	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
0. 5.	Cnameleon	24 VDC	A3PJ-90EG1-24EK	A3PJ-90EG2-24EK	'
	Incandescent lamp	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
D. D.	Chameleon	24 VDC	A3PJ-90GG1-24EK		'
		6 VDC/VAC	A3PJ-90G11-06	A3PJ-90G12-06	
	Incandescent lamp	14 VDC/VAC	A3PJ-90G11-14	A3PJ-90G12-14	*2
		28 VDC/VAC	A3PJ-90G11-28	A3PJ-90G12-28	

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.) ■ Specifications: Refer to page 15. ■ Dimensions: Refer to page 18.

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.)

Models

Rectangular (Horizontal 2-split Screen)



(Horizontal 2-split Screen) A3PJ

(1)	
(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	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 lamp	6 VDC/VAC	A3PJ-90A21-06	A3PJ-90A22-06	A3PJ-90B21-06	A3PJ-90B22-06	
SPDI		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	
וטייט	Incandescent lamp	14 VDC/VAC	A3PJ-90C21-14	A3PJ-90C22-14	A3PJ-90D21-14	A3PJ-90D22-14	*
	iup	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 White

Upper A3PJ-90D21-24ERW Red White

Rectangular Models

(Horizontal 2-split Screen)



(Horizontal 2-split Screen)

(1) (2)

#### **Microloads**

		Contact type	Microload (125 VAC,	0.1 A; 30 VDC, 0.1 A)	
		Operation	Momentary operat	tion (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	Incandescent lamp	6 VDC/VAC	A3PJ-90E21-06	A3PJ-90E22-06	
SPDI		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 lamp	14 VDC/VAC	A3PJ-90G21-14	A3PJ-90G22-14	*
	ia.i.p	28 VDC/VAC	A3PJ-90G21-28	A3PJ-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 White

Upper A3PJ-90D21-24ERW Red White

Individual models: Refer to pages 9 to 12.

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

■ Specifications: Refer to page 15. ■ Dimensions: Refer to page 18.

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

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

the Pushbutton, Lamp, and Switch.

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

Square Models

(Single Screen)



(Single Screen)



#### **Standard Loads**

		Contact type		Standard load (250 V	AC, 3 A; 30 VDC, 4 A)		
Operation		Momentary operat	ion (Self-resetting)	Alternate operati	on (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
	Ob and all and	12 VDC	A3PA-90AG1-12EK	A3PA-90AG2-12EK	A3PA-90BG1-12EK	A3PA-90BG2-12EK	*1
	Chameleon	24 VDC	A3PA-90AG1-24EK	A3PA-90AG2-24EK	A3PA-90BG1-24EK	A3PA-90BG2-24EK	- "1
	Incandescent lamp	6 VDC/VAC	A3PA-90A11-06	A3PA-90A12-06	A3PA-90B11-06	A3PA-90B12-06	
		14 VDC/VAC	A3PA-90A11-14	A3PA-90A12-14	A3PA-90B11-14	A3PA-90B12-14	*2
		28 VDC/VAC	A3PA-90A11-28	A3PA-90A12-28	A3PA-90B11-28	A3PA-90B12-28	
		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)	0 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
D. D.	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 lamp	14 VDC/VAC	A3PA-90C11-14	A3PA-90C12-14	A3PA-90D11-14	A3PA-90D12-14	*2
	iap	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

#### **Microloads**

		Contact type	Microload (125 VAC,		
		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
	Incandescent lamp	6 VDC/VAC	A3PA-90E11-06	A3PA-90E12-06	
		14 VDC/VAC		A3PA-90E12-14	*2
		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
DI D I	Chameleon	24 VDC	A3PA-90GG1-24EK	<del></del>	'
		6 VDC/VAC	A3PA-90G11-06	A3PA-90G12-06	
	Incandescent lamp	14 VDC/VAC			*2
	ia.i.p	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

Individual models: Refer to pages 9 to 12. (The Pushbutton, Lamp, and Switch can be ordered separately.) ■ Specifications: Refer to page 15. ■ Dimensions: Refer to page 18.

<sup>\*1.</sup> 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.

<sup>\*1.</sup> 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.

<sup>\*2.</sup> Incandescent lamps are supplied with colored plates (white, red, green, blue, and orange) and legend plates (milk-white and transparent). Use the appropriate combination.

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 Models (Horizontal 2-split Screen)



(Horizontal 2-split Screen)

#### Standard Loads

		Contact type		Standard load (250 VAC, 3 A; 30 VDC, 4 A)				
		Operation	Momentary operat	ion (Self-resetting)	Alternate operati	on (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		
		14 VDC/VAC	A3PA-90A21-14	A3PA-90A22-14	A3PA-90B21-14	A3PA-90B22-14	*	
		2		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		
	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.

Example:

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

Square Models



(Horizontal 2-split Screen)

#### 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	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	
SPUI		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	
וטייט	Incandescent lamp	14 VDC/VAC	A3PA-90G21-14	A3PA-90G22-14	*
		28 VDC/VAC	A3PA-90G21-28	A3PA-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 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.)

■ Specifications: Refer to page 15. ■ Dimensions: Refer to page 18.

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

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	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		
	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



#### **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
SPUI	Incandescent lamp	28 VDC/VAC	A3PT-90E12-28	*
DPDT	LED	24 VDC	A3PT-90G12-24C(1)	G W
וטאט	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

Individual models: Refer to pages 9 to 12.

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

■ Specifications: Refer to page 15. ■ Dimensions: Refer to page 18.

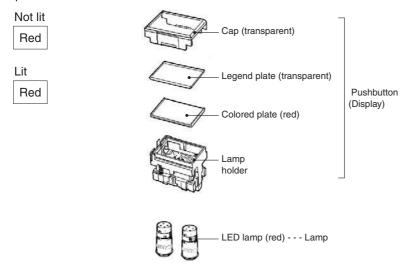
<sup>\*</sup> Incandescent lamps are supplied with a colored plates (white, red, green, blue, and orange). Use the appropriate combination. Models A3PT (round models), however, are not supplied with legend plates.

<sup>\*</sup> 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.

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

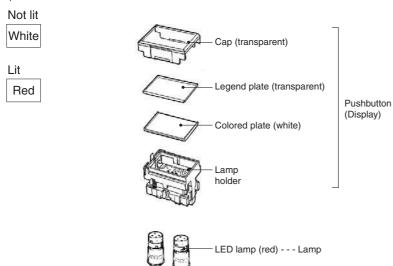
"Illumination only" describes LED models for which the screen color is the same whether the LED is lit or not. The screen simply becomes brighter when the LED lights.

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.

Example: Red LED

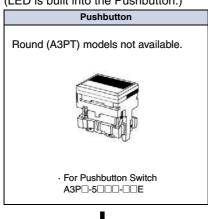


Ordering: With colored-illumination models, order the Pushbutton, Lamp, and Switch as shown in the following table.

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 required 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 coloration 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.

### **LED-lighted/Chameleon Models**

(LED is built into the Pushbutton.)



Switch \*

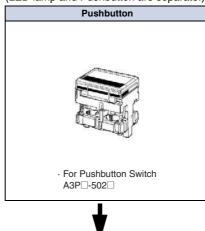
· For Pushbutton Switch

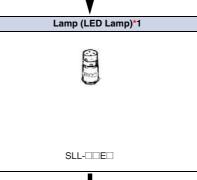
A3P -7 ----

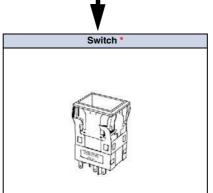
Round (A3PT) models not available.

#### **LED Lamp-lighted Models**

(LED lamp and Pushbutton are separate.)



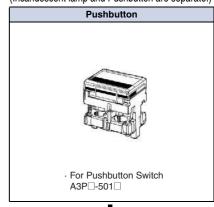




· For Pushbutton Switch

A3P□-7□□□-□

# Incandescent Lamp-lighted Models (Incandescent lamp and Pushbutton are separate.)



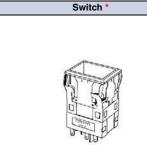


## Lamp (Incandescent Lamp)\*2



- Standard lamp SLL-□□
- · Low-power lamp SLL-□□H





· For Pushbutton Switch A3P□-7□□□-□

### \*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		
4-split screen			

\*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- cent lamp)		
4-split screen	17		

Ordering set combinations: Refer to page 3 to 7.

■ Specifications: Refer to page 15. ■ Dimensions: Refer to page 18.

<sup>\*</sup> The Switch is compatible with LED-lighted models, LED lamp-lighted models, and incandescent lamp-lighted models.

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-screen color (color symbol)						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 voltages 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 screen models sup-				
Square models		White	A3PA-5711 -□□E	A3PA-5712 -□□E	A3PA-5713 -□□E	A3PA-5716 -□□E	port only 24V. • For the color of the				
	Horizontal 2-split screen	Red	A3PA-5721 -□□E	A3PA-5722 -□□E	A3PA-5723 -□□E	A3PA-5726 -□□E	shaded part, select the model accord-				
		Green	A3PA-5731 -□□E	A3PA-5732 -□□E	A3PA-5733 -□□E	A3PA-5736 -□□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.

#### 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	A3PT-5021		Parts included:     Colored plates (white, red, green, and orange), a legend plate (transparent), and a light baffle (split-screen models only) are in-						
Horizontal 2- split screen		A3PJ-5022		the LED coloring required  The number of white colo to enable colored illumina									
Vertical 2-split screen		A3PJ-5023					ed. (For exampl include 4 white  The number of c model are shown	e, 4-spl colored olored p	it scree plates lates in	en mod ). cluded	els for each		
Horizontal 3-split							Screen pattern	White	Red	Green	Orange		
screen		A3PJ-5024					Single screen	1	1	1	1		
Vertical 3-split screen		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
	A01 0-3020						4-split screen	4	1	1	1		

<sup>\*</sup> 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.	

<sup>3.</sup> The LED is built-in and cannot be replaced individually.

<sup>■</sup> Specifications: Refer to page 15. ■ Dimensions: Refer to page 18.

<sup>■</sup> Accessories: Refer to pages 13 to 15.

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.)

Appearance	Rectange	ular models	Square n	equare models  Round models		Selection precautions						
Screen pattern	Screen	Model	Screen	Model	Screen	Model						
Single screen		A3PJ-5011		A3PA-5011 A3PT-5011 *		Parts included Colored plates blue), legend p	(white	transpa	arent ar	nd milk	white),	
Horizontal 2- split screen		A3PJ-5012		A3PA-5012			and a light baff supplied. * A3PT (round) mo	dels do	not cont	tain a leç	gend pla	te.
Vertical 2-split screen		A3PJ-5013					The number of the following ta      Screen pattern		d plate	Green	Orange	Blue
Horizontal 3-split screen		A3PJ-5014					Single screen Horizontal 2- split screens Vertical 2-split	1	1	1	1	1
Vertical 3-split screen		A3PJ-5015					screens Horizontal 3- split screens					
4-split screen		A3PJ-5016					Vertical 3-split screens *  4-split screen	2	2	2	2	2

<sup>\*</sup> 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
1300	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

Ordering set combinations: Refer to page 3 to 7.

■ Specifications: Refer to page 15. ■ Dimensions: Refer to page 18.

<sup>(</sup>i.e., red and green simultaneously).

2. A cap, legend plate (transparent), white colored plate, and LED (with a current-limiting resistor) are built into the Pushbutton.

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

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)	ociccion 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	SLL-05EG	SLL-12EG	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 single screen models, and 4 lamps are used with split-screen models.
12 VAC/VDC	SLL-14	SLL-14H	If 3 or 4 lamps are lit continuously, use low-power lamps.  In the standard setup for A3PA models, 1 lamp is used with single
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				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
þ		•	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.
ş			Momentary operation	A3PJ-7150-1			Use the Switch in combi- nation with the same
			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-
oload	Gold alloy	2	Momentary operation	A3PJ-7070-1	A3PA-7070-1	A3PT-7070-2	ever, only 3 digits are shown, as follows:
Microload	contact	ontact -	Alternate operation	A3PJ-7080-1	A3PA-7080-1	A3PT-7080-2	A3PJ-7□□. • Momentary operation is
		3	Momentary operation	A3PJ-7170-1			self-resetting, and alter- nate operation is self-
			Alternate operation	A3PJ-7180-1			holding (i.e., push-on, push-off).

Ordering set combinations: Refer to page 3 to 7.

- Specifications: Refer to page 15. Dimensions: Refer to page 18.
- Accessories: Refer to pages 13 to 15.

# Accessories, Replacements, and Tools Accessories

Name	Appearance	Classifica	tion	Rectangular	Square	Application precautions	
		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	
Socket	11/11/11	Solder terminal	Solder terminal		A3PA-4103	for the A3P Ultra Bright Lighted Pushbutton Switches.	
		Short edge barrier (Horizontal mount-	Black	A3PJ-4001	A3PA-4001		
		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>	
Damian		(Vertical mounting) (1 pair)	Light gray	A3PJ-4005		<ul> <li>Intermediate barrier × 1.</li> <li>Edge barriers × 1 pair (2 Units).</li> </ul>	
Barrier		Short intermediate barrier (Horizontal	Black	A3PJ-4007	A3PA-4007	<ul> <li>Mount short barriers horizontally.</li> <li>Mount long barriers vertically.</li> <li>For details on mounting, refer to</li> </ul>	
		mounting)	Light gray	A3PJ-4008	A3PA-4008	page 25. • You can use the same Sockets for the A3P Ultra Bright Lighted	
		Long intermediate	Black	A3PJ-4010		Pushbutton Switches.	
		barrier (Vertical mounting)	Light gray	A3PJ-4011			
		For horizontal mounting (with OMRON logo facing down)		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>	
Switch guard		For vertical mounting (with OM-RON logo facing to the right)		A3PJN-5055	A3PAN-5055	mounting, and use vertical mounting guard for consecutive vertical mounting.  • You can use the same Sockets for the A3P Ultra Bright Lighted Pushbutton Switches.	
Seal cover					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				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>	

OMRON 13

### **Accessories**

Name	Appearances	Classific		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-5106		
		Horizontal 2-	White	A3PJ-5121	A3PA-5121		
		split screen	Red	A3PJ-5122	A3PA-5122	. Kaan mauntad at all times	
		Split Scieen	Green	A3PJ-5123	A3PA-5123	<ul> <li>Keep mounted at all times.</li> <li>Contact your OMRON representa-</li> </ul>	
			Blue	A3PJ-5124	A3PA-5124	tive for color changes or other	
0			Yellow	A3PJ-5125	A3PA-5125	specifications.	
Colored plate		ii	Orange	A3PJ-5126	A3PA-5126	For details on mounting, refer to	
for incandes- cent lamp		Mantinal O andit	White	A3PJ-5131		page 25.	
Cerit lamp		Vertical 2-split	Red	A3PJ-5132		You cannot use the same Colored	
		screen	Green	A3PJ-5133		Plates for Incandescent Lamps for	
		;	Blue	A3PJ-5134		the A3P Ultra Bright Lighted Push-	
			Yellow			button Switches.	
		Li	Orange	A3PJ-5136			
			White	A3PJ-5161		_	
		4-split screen	Red	A3PJ-5162		_	
		1 opin corcori	Green	A3PJ-5163			
			Blue				
			Yellow	A3PJ-5165		_	
		Li	Orange	A3PJ-5166		_	
			White	A3PJ-5301	A3PA-5301		
		Single screen	Red	A3PJ-5301	A3PA-5301 A3PA-5302	_	
			Green	A3PJ-5302 A3PJ-5303	A3PA-5302 A3PA-5303		
			Yellow	A3PJ-5305	A3PA-5305		
	<u> </u>		Orange	A3PJ-5306	A3PA-5306		
		Horizontal 2-	White	A3PJ-5321	A3PA-5321	Keep mounted at all times.  If the application leads an element of the second sec	
		split screen	Red	A3PJ-5322	A3PA-5322	If the colored plate is lost or dam-	
			Green	A3PJ-5323	A3PA-5323	<ul><li>aged, contact OMRON.</li><li>Use in accordance with coloring of</li></ul>	
			Yellow	A3PJ-5325	A3PA-5325	the built-in LED.	
Colored plate		Vertical 2-split	Orange	A3PJ-5326	A3PA-5326	• For details on mounting, refer to	
for LED			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 Push-	
			Orange	A3PJ-5336		button Switches.	
		4-split screen	White	A3PJ-5361			
		4-Spiit Screen	Red	A3PJ-5362			
		[	Green	A3PJ-5363			
			Yellow	A3PJ-5365			
		ii	Orange	A3PJ-5366			
		Horizontal 2-spli	t screen	A3PJ-4302	A3PA-4302	Keep mounted at all times.	
		Vertical 2-split se		A3PJ-4303		If the light baffle is lost, contact	
				A3PJ-4304		OMRON.	
		Horizontal 3-	Long axis			<ul> <li>Used in LED lamp-lighted models.</li> </ul>	
Light baffle	M	split screen	Short axis	A3PJ-4305		Cannot be used in LED-lighted	
Ligiti bamo	W	Vertical 3-split	Long axis	A3PJ-4306		models.	
		screen	Short axis	A3PJ-4307		You cannot use the same Colored	
			Long axis	A3PJ-4304		<ul> <li>Plates for Incandescent Lamps for the A3P Ultra Bright Lighted Push-</li> </ul>	
		4-split screen	Short axis	A3PJ-4308		button Switches.	
			SHOIT AXIS	A3F0-4300			
		Transparent lege	and plate	A3PJ-5202	A3PA-5202	A transparent legend plate is     mounted on the Pushbutten	
Legend plate		Transparent legi	oria piate	AUI U ULUL	AOI A OZOZ	mounted on the Pushbutton.  • You cannot use the same Colored	
						Plates for Incandescent Lamps for	
		Milk-white legen	d plate	A3PJ-5201	A3PA-5201	the A3P Ultra Bright Lighted Push-	
			F	:·		button Switches.	
						You can use the same Sockets for	
		Transparent cap	)	A3PJ-5600	A3PA-5600	the A3P Ultra Bright Lighted Push-	
		,				button Switches.	
Can						• The surface is crimp-processed, so	
Cap		Crimp-processed	d transpar-			there is no reflection.	
	931	ent cap	a transpar-	A3PJ-5600-A	A3PA-5600-A	You can use the same Sockets for	
		Jin Jup				the A3P Ultra Bright Lighted Push-	
	t and the second	1			f .	button Switches.	

14

#### **Tools**

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 Pushbutton Switches.</li> </ul>

### **Specifications**

### **Approved Standard Ratings** UL (File No. E41515), CSA (File No. LR45258)

Standard Load: 5 A at 125 VAC

3 A at 250 VAC

0.1 A at 125 VAC Microload:

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)

3 A at 250 VAC Standard Load:

4 A at 30 VDC

Microload: 0.1 A at 125 VAC

0.1 A at 30 VDC

### **Ratings Contact Ratings**

#### **Silver Alloy Contacts (for Standard Loads)**

Rated	No	n-induct	ive load	ve load (A)		Inductive load (A)			
voltage (V)	Resisti	ve load	Lamp	load	Inducti	ve load	Motor	r load	
	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 3	4 4 3 0.		3 3 0.09 0.00		

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.
- 4. The motor load has an inrush current of 6 times the steady-state current.
- Standard testing condition
- (1) Ambient temperature: 20 ± 2°C
- (2) Ambient humidity: 65 ± 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

### **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 mA × 2	

#### **LED for Chameleon Models**

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

#### **Incandescent Lamp**

	Item	Standard	l lamp	Low-power 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)**

Type	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□

#### **Characteristics**

Operating frequency Insulation resistance		Mechanical	120 operations/minute max. *1	
		Electrical	30 operations/minute max.	
Insulation	n resistance		100 MΩ min. (at 500 VDC)	
Contact Standard load			40 mΩ max. (initial value)	
resistance	Microload		40 mΩ max. (initial value)	
	Between terminals of	of same polarity	1,000 VAC, 50/60 Hz for 1 minute *2	
	Between terminals of	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	
onong	Between each ter non-current-carry	ying metal part	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 amplitude (1 ms max.)	
Shock re	eietanca	Destruction	500 m/s <sup>2</sup> max.	
SHOCKIE	Sistance	Malfunction	200 m/s <sup>2</sup> max. (1 ms max.)	
Life expe	ectancy	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	ırrant	NC	Silver contact: 10 A max.	
iiii usii cc	inent	NO	Silver contact: 10 A max.	
Ambient	operating tempera	iture	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 humidit	у	35% to 85%RH	
Ambient	Ambient storage temperature		-25°C to 65°C	
Degree of protection Electric shock protection c			IP40	
		lass	Class II	
	of tracking index)		175	
Pollution	degree		3 (IEC947-5-1)	
*1. With a	Iternate operation	models, 60 operation	tions/minute max. One operation	

erations/minute max. One operation cycle consists of set and reset operations.

<sup>\*2. 600</sup> VAC for microloads.
\*3. With no incandescent lamp or LED lamp mounted.

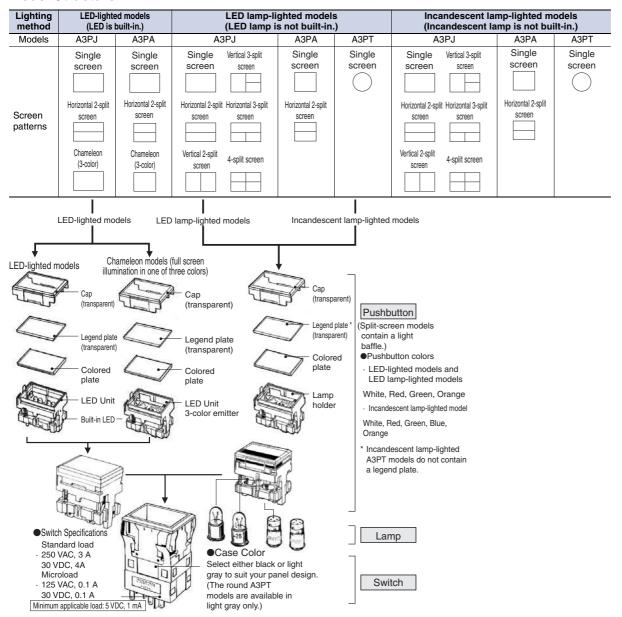
### **Specifications**

### **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					
Pretravel	PT max.	3 mm					
Lock travel alternate	LTA min.		0.5 mm		0.5 mm		0.5 mm

### **Nomenclature**

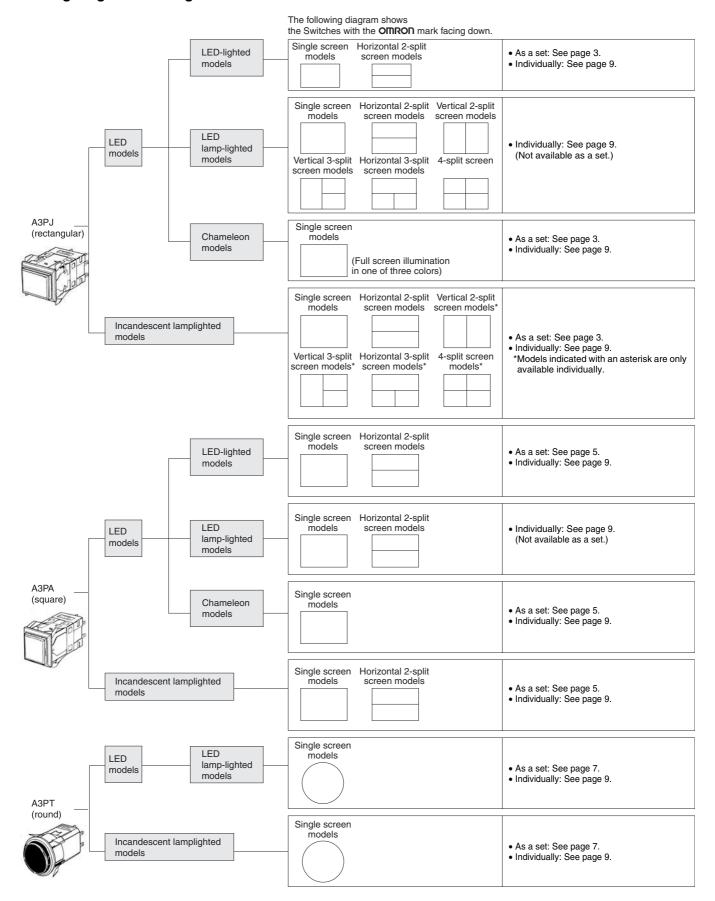
#### **Model Structure**



OMRON

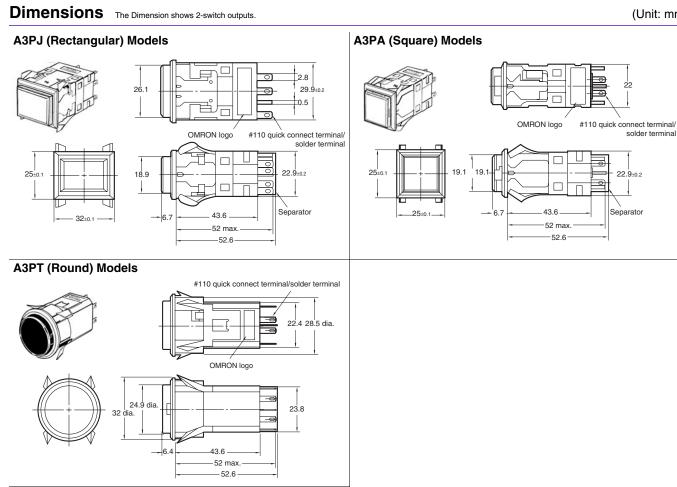
#### **Nomenclature**

### **A3P Lighting Method Diagram**



OMRON 17

(Unit: mm)



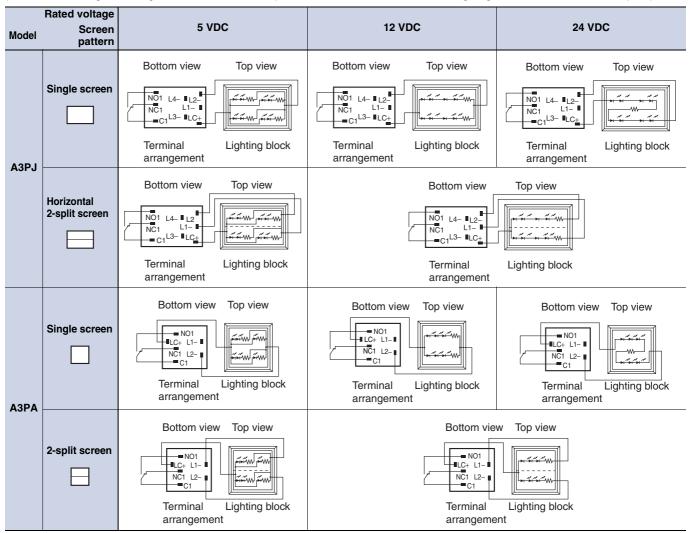
Note: The thickness of tab terminals #110 and solder terminals is 0.5 mm.

**Dimensions** (Unit: mm)

#### **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.)



**Dimensions** (Unit: mm)

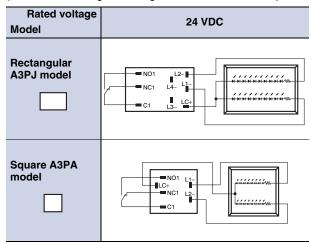
### Incandescent Lamp-lighted/LED Lamp-lighted Models

(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  Terminal Lighting block	Bottom view Top view  Top view  Top view  Lighting block	Bottom view Top view  Top view  Terminal Lighting block
PPDT	Bottom view Top view  Terminal Lighting block	Bottom view Top view  Terminal Lighting block	Bottom view Top view  Top view  Terminal Lighting block
3PDT	arrangement  Bottom view Top view  Terminal Lighting block arrangement	arrangement	arrangement

#### **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

**Dimensions** (Unit: mm)

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

Cla	assification	Mounting design	Panel cutout	Remarks
Flange mount models	Individual mounting (Horizontal)	25±0.1	30.5±0.3	Panel cutout spacing between rows of Units:
	Multiple mounting (Horizontal)	25=0.1 1 2 n = 32n=0.5	32n-1.5±0.3	
	Individual mounting (Vertical)	Mount to long mounting plate (A3PJ-3002) before use.	23.5±0.3 1 30.5±0.3 1	
	Multiple mounting (Vertical)	Mount to long mounting plate (A3PJ-3002) before use.	30.5 0.3	
Barrier mount models	Individual mounting (Horizontal)	27 39 39	36.4±0.3	
	Multiple mounting (Horizontal)	27 1 2 n	32.9n+3.5±0.3 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)	Mount to long mounting plate (A3PJ-3002) before use.	30.5±0.3 1	
	Multiple mounting (Vertical)	Mount to long mounting plate (A3PJ-3002) before use.	30.5 <sup>±0.3</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.

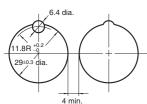
### A3PA (Square) Models

Clas	ssification	Mounting design	Panel cutout	Remarks
Flange mount models	Individual mounting	25±0.1	23.5±0.3	Panel cutout spacing between rows of Units:
	Multiple mounting	25±0.1 1 2 n	23.5±0.3 25n-2.5±0.3	
Barrier mount models	Individual mounting	27	23.5±0.3	Panel cutout spacing between rows of Units: (Dotted line indicates the position of each mounting barrier.)  1.3 — — — 6 min.
	Multiple mounting	27 1 2 n	23.5±0.3 ——26n+2.5±0.3 ——	6 min.

Note: 1. n: Number of Units

- 2. Recommended panel thickness: 1 to 5 mm
  3. Mount the panel before mounting the Switch Guard.
  4. 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

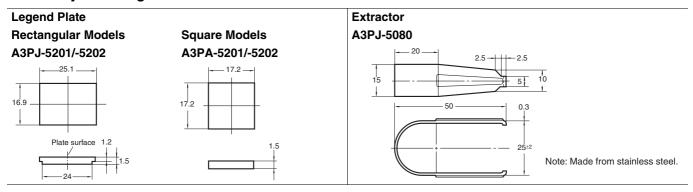


Note: 1. Recommended panel thickness: 1 to 5 mm

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

**Dimensions** (Unit: mm)

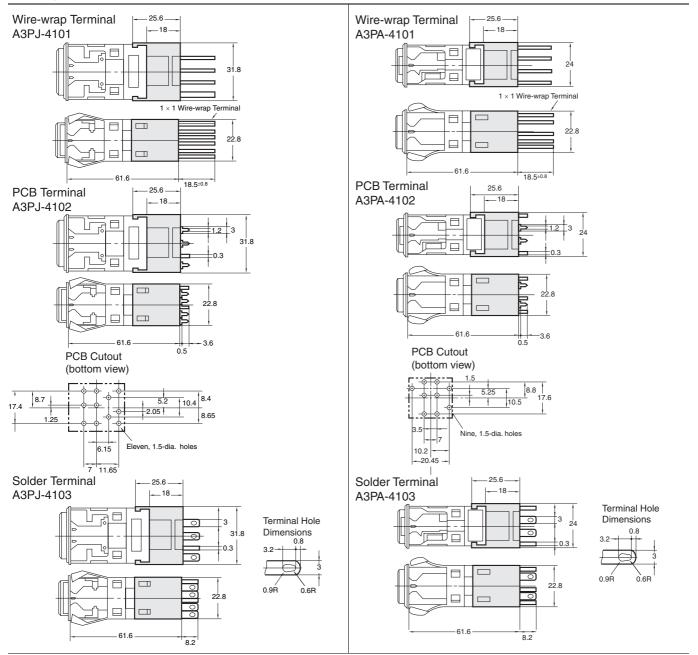
### **Accessory Mounting Dimensions**



#### **Socket-mounting Dimensions**

#### **Rectangular Models A3PJ (M2PJ)**

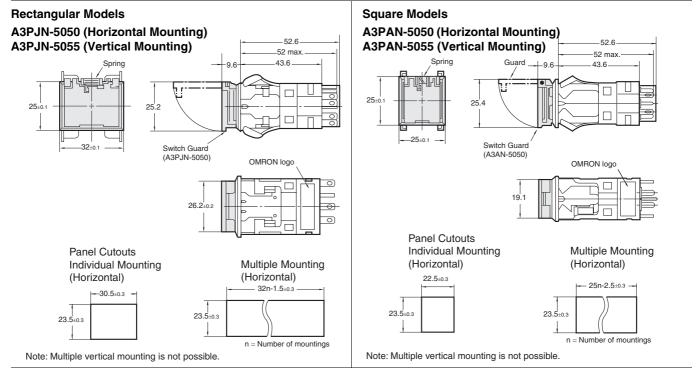
### Square Models A3PA (M2PA)



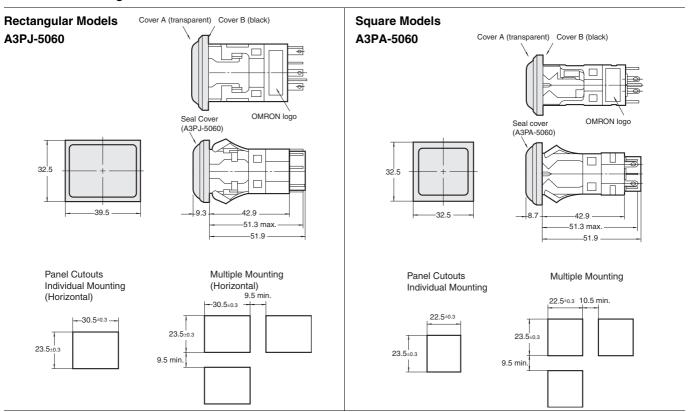
 ${\it Note: PCB cutout dimensions show the switch mounted to the socket with the OMRON logo facing down.}$ 

**Dimensions** (Unit: mm)

### **Switch and Guard Mounting Dimensions**



#### **Seal Cover Mounting Dimensions**



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.

#### 

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)

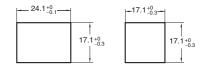
- Check the terminal polarity when wiring.
- The rated voltage is shown on the plate on the back of the lighting unit, so be sure to use within the voltage shown.
- An LED current-limiting resistor is built in, so there is no need to mount an external resistor.

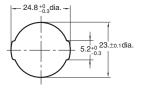
#### Incandescent Lamp

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

#### Character Plate (Character Film)

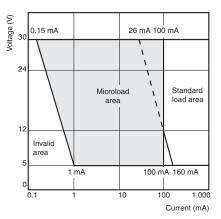
• If preparing the character plate separately, use a heat-resistant film with a thickness of 0.1 to 0.3 mm.





### **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 x 10<sup>-6</sup>/time indicates that the estimated malfunction rate is less than 1/2,000,000 with a reliability level of 60%.



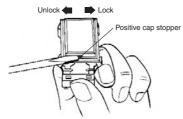
#### **Others**

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

#### Assembly/Disassembly

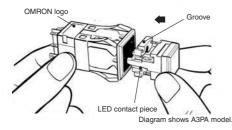
#### A3PJ/M2PJ (Rectangular Models), A3PA/M2PA (Square Models)

Locking/Unlocking Positive Cap Lock Mechanism



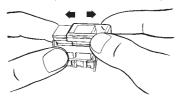
#### **Mounting Pushbutton**

- 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

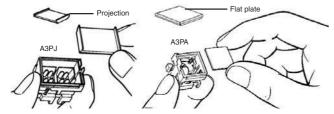
Insert the A3PA from the open side into the theft-prevention stopper.



### **Mounting Colored Plate**

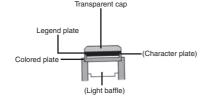
Place the colored plate on the plunger case with the dull side of the colored plate facing downward.

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.



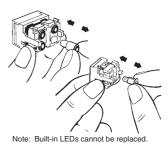
## Mounting Character Plate (Character Frame) and Legend Plate

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



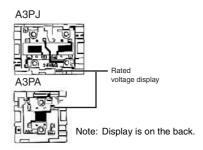
#### Mounting and Replacing LED and Incandescent Lamps

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



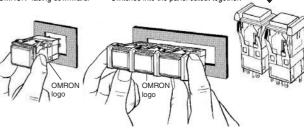
#### LED Rated Voltage Display (LED Models Only)

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%.



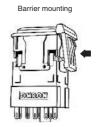
### **Mounting Switch onto Panel**

 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.



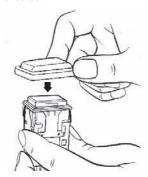
#### **Mounting Barriers**

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.

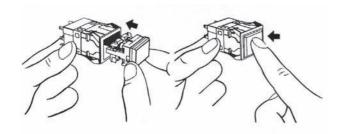


#### Inscribing the Legend Plate

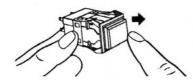
- Inscribe the legend plate to a depth of 0.5 mm max.
- The legend plate is made from polycarbonate resin. To coat the legend plate, use an alcohol-based coating such as melamine, phthalic acid, or acrylic.

#### **Maintenance Lock**

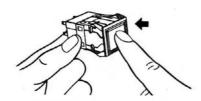
 First, when you insert the transparent lens while pressing the center, the maintenance lock mechanism will be activated, and the Switch will not operate. Lamp replacement and other maintenance can be performed without turning OFF the power supply to devices and equipment. Use an insertion force of 4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



#### Terms and Conditions Agreement

#### 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.

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

2015.9

In the interest of product improvement, specifications are subject to change without notice.



## **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Omron:

<u>A3PJ-5080</u> <u>A3PA-4001</u> <u>A3PA-5011</u> <u>A3PA-5050</u> <u>A3PA-7010-1</u> <u>A3PA-7040-1</u> <u>A3PJ-4001</u> <u>A3PJ-4002</u> <u>A3PJ-4007</u> A3PJ-5103 A3PJ-5161 A3PJ-5201 A3PJ-5202 A3PJ-5207