

CSM\_A3P\_DS\_E\_5\_1

# **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 and Safety Precautions on page 24.

# **List of Models**

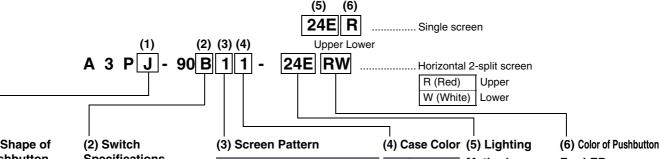
Model	Appearance
A3PJ (Rectangular)	6.7 52 max
A3PA (Square)	6.7 52 max.
A3PT (Round)	6.4 52 max. 32 dia.

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 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.



## (1) Shape of **Pushbutton**

Symbol	Shape
J	Rectan-
U	gular
Α	Square
Т	Round

Momentary operation: Self-resetting

Alternate operation: Self-holding

# **Specifications** Standard Load

Symbol	Operation		
Α	Momentary	SPDT	
В	Alternate	SEDI	
С	Momentary	DPDT	
D	Alternate	וטרטו	
	•		

#### Microload

Symbol	Operation		
E	E Momentary		
F	Alternate	SPDT	
G	Momentary	DPDT	
Н	Alternate	וטרטו	

- Standard Load 250 VAC, 3 A 30 VDC, 3 A
- Microload 125 VAC, 0.1 A 30 VDC, 0.1 A

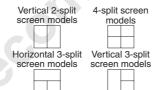
Minimum applicable load 5 VDC, 1 mA

• 3PDT models are also available. Select from among the individual products shown on page 12.

Illur	mination-only models	Sym-	Co
Symbol	Screen pattern	bol	
	0:	1	Bla
1	Single screen	2	Lig
			gra
		Note:	A3PT
2	2-split screen		model availal light g

Chameleon \*1 G Note: 1. The chameleon screen pattern is not available with A3PT models 2. The chameleon screen pattern is only available with 12 or 24-VDC

- \*1. With chameleon models, the whole screen lights red, green, or orange. When not lit, the display is white.
- The available rectangular models are shown below. Select from among the individual products shown on page 10.



The above diagrams show the Switches with the "OMRON" mark facing down.

- Colored-illumination models up to the 4-split screen models are available as individual Units. Refer to page 8.
- "Colored-illumination" models operate in the way shown below:

Unlit Lit White Color

The built-in LED

# Method

# **LED-lighted Models** (A3PJ and A3PA Models Only)

Color

Black

Light

gray

models are

available in

light gray

only.

Rated Symbol voltage 05F 5 VDC 12 VDC 12F 24 VDC 24E

## **LED Lamp**lighted Models (A3PT Only)

#### Rated Symbol voltage 05C 5 VDC 12C 12 VDC 24 VDC 24C

 A3PJ and A3PA can also be ordered separately. Refer to page 10 for details.

#### Incandescent Lamp-lighted Models

Symbol	Rated voltage
06	6 VAC/VDC
14	14 VAC/VDC
28	28 VAC/VDC

## For LED

Symbol	Color	
R Red		
O orange		
G	green	
W	white	
K	Chameleon	

- The chameleon screen pattern is not available with A3PT models.
- The chameleon screen pattern is only available with 12 or 24-VDC models.

# For Incandescent Lamp

Symbol	Color	
No symbol	Red,	
	orange,	
	white,	
	blue,	
	green	

• Includes colored plate. Refer to page 11 for details.

## **Number of LED Lamps**

Screen pattern	A3PJ	A3PA	A3PT
Single screen	Models with built-in LED		2
Horizontal 2-split screen			
Vertical 2-split screen	rtical 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- er incan- descent	2	
Vertical 2-split screen			
Horizontal 3-split screen			
4-split screen	lamp)		

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



#### onlinecomponents.com

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 VAC, 3 A; 30 VDC, 4 A)			
		Operation	Momentary operati	Momentary operation (Self-resetting)		Alternate operation (Self-holding)	
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
SPDT	01	12 VDC	A3PJ-90AG1-12EK		A3PJ-90BG1-12EK	A3PJ-90BG2-12EK	**
SPDI	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	*2
		14 VDC/VAC	A3PJ-90A11-14	A3PJ-90A12-14	A3PJ-90B11-14	A3PJ-90B12-14	
		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	01	12 VDC	A3PJ-90CG1-12EK	A3PJ-90CG2-12EK	A3PJ-90DG1-12EK		**
	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,	icroload (125 VAC, 0.1 A; 30 VDC, 0.1 A)	
	Operation		Momentary operation (Self-resetting)		Pushbutton
Output	Case color Output Lighting		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
		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	] '
		6 VDC/VAC	A3PJ-90E11-06	A3PJ-90E12-06	
	Incandescent lamp	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
		24 VDC	A3PJ-90G11-24E(1)	A3PJ-90G12-24E(1)	W
DPDT	Chameleon 12 VDC 24 VDC	12 VDC	A3PJ-90GG1-12EK		*1
5.5.		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.

#### onlinecomponents.com

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 operation (Self-resetting)		Alternate operati	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	*	
SFDI		14 VDC/VAC	A3PJ-90A21-14	A3PJ-90A22-14	A3PJ-90B21-14	A3PJ-90B22-14		
	lamp	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 lamp	14 VDC/VAC	A3PJ-90C21-14	A3PJ-90C22-14	A3PJ-90D21-14	A3PJ-90D22-14	*	
		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

Lower

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		6 VDC/VAC	A3PJ-90E21-06	A3PJ-90E22-06	
SPUI	Incandescent lamp	14 VDC/VAC	A3PJ-90E21-14	A3PJ-90E22-14	*
	lamp	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	*
		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

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.

#### onlinecomponents.com

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 VAC, 3 A; 30 VDC, 4 A)				
	Operation		Momentary operation (Self-resetting)		Alternate operat	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	01	12 VDC	A3PA-90AG1-12EK	A3PA-90AG2-12EK	A3PA-90BG1-12EK	A3PA-90BG2-12EK	*1	
SFDI	Chameleon	24 VDC	A3PA-90AG1-24EK	A3PA-90AG2-24EK	A3PA-90BG1-24EK	A3PA-90BG2-24EK	-	
	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)	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	
5.5.	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		

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			Microload (125 VAC,		
Operation		Momentary operati	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	ļ
	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
5.5.	Chameleon	24 VDC	A3PA-90GG1-24EK		ļ.
		6 VDC/VAC	A3PA-90G11-06	A3PA-90G12-06	
	Incandescent lamp	14 VDC/VAC			*2
		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.) ■ Specifications: Refer to page 15. ■ Dimensions: Refer to page 18.

#### onlinecomponents.com

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 operation (Self-resetting)		Alternate operati	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		6 VDC/VAC	A3PA-90A21-06	A3PA-90A22-06	A3PA-90B21-06	A3PA-90B22-06		
	Incandescent lamp	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		
וטרטו	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)

(1)

#### 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	
ЭРИ		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	
וטפט	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:

White Lower

Red Upper A3PA-90D21-24ERW 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.

#### onlinecomponents.com

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	t Lighting	Case color	Light gray	Light gray	Color Symbol
	LED	24 VDC	A3PT-90A12-24C(1)	A3PT-90B12-24C(1)	ROGW
SPDT		6 VDC/VAC	A3PT-90A12-06	A3PT-90B12-06	
SPDI		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	
וטיוט	Incandescent lamp	14 VDC/VAC	A3PT-90C12-14	A3PT-90D12-14	*
		28 VDC/VAC	A3PT-90C12-28	A3PT-90D12-28	

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
3F D I	Incandescent lamp	28 VDC/VAC	A3PT-90E12-28	*
DPDT	LED	24 VDC	A3PT-90G12-24C(1)	G W
DFDI	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.

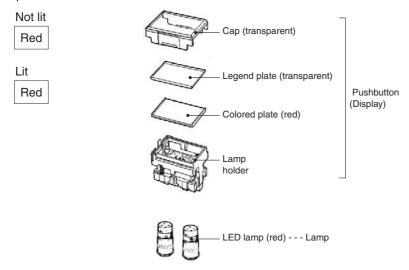
<sup>\*</sup> Incandescent lamps are supplied with a colored plates (white, red, green, blue, and orange). Use the appropriate combination. Models A3PT (round models), however, are not supplied with legend plates.

<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

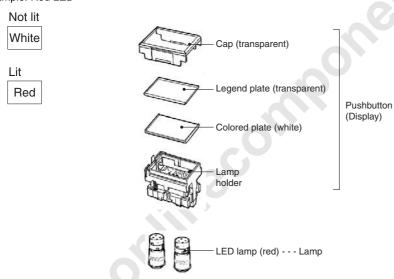
"Illumination only" describes LED models for which the screen color is the same whether the LED is lit or not. The screen simply becomes brighter when the LED lights.

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



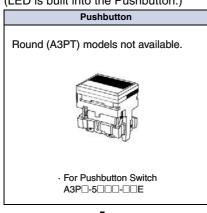
Ordering: With colored-illumination models, order the Pushbutton, Lamp, and Switch as shown in the following table.

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.

8

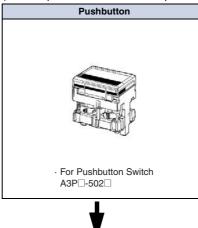
# **LED-lighted/Chameleon Models**

(LED is built into the Pushbutton.)

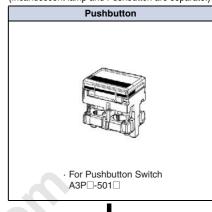


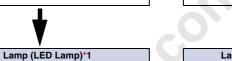
#### **LED Lamp-lighted Models**

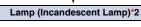
(LED lamp and Pushbutton are separate.)



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









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



Switch

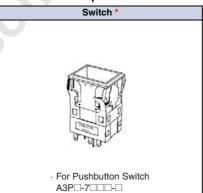


# Switch \*

Round (A3PT) models not available.



· For Pushbutton Switch A3P□-7□□□-□



SLL-DDED





· 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-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- 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.
- Accessories: Refer to pages 13 to 15.

<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-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 voltages used:
		Orange	A3PJ-5741 -□□E	A3PJ-5742 -□□E	A3PJ-5743 -□□E	A3PJ-5746 -□□E	5V=05E 12V=12E
	Single screen		A3PA-5701 -□□E	A3PA-5702 -□□E	A3PA-5703 -□□E	A3PA-5706 -□□E	24V=24E 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.

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

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

	Rectangul	ar models	Square me	odels	Round mo	odels									
Appearance			Ć								Selec	tion pr	ecautio	ons	
Screen pattern	Screen	Model	Screen	Model	Screen	Model									
Single screen		A3PJ-5021		A3PA-5021		A3PT-5021	Parts included: Colored plates ange), a legend light baffle (splii	l plate (t t-screen	ranspa mode	rent), a ls only)	and a are in-				
Horizontal 2- split screen		A3PJ-5022		A3PA-5022			cluded. Use the the LED colorin  The number of to enable colore sponding scree	g requir white co ed illumi	ed. olored p nation	olates re	equired 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>								
Horizontal 3-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				
Ordering set com	binations: R	efer to page 3	3 to 7.		■ Specific	ations: Refer	to page 15. ■ Dim	ensions	: Refe	r to pag	e 18.				

OMRON

# onlinecomponents.com

Pushbutton

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

	Rectange	ular models	Square n	nodels	Round m	nodels						
Appearance			Ć			Selection precautions						
Screen pattern	Screen	Model	Screen	Model	Screen Model							
Single screen		A3PJ-5011		A3PA-5011		blue), legend plates (transparent and milk					nd milk	white),
Horizontal 2- split screen		A3PJ-5012		A3PA-5012			and a light baf supplied. * A3PT (round) mo	dels do	not cont	tain a le	gend pla	te.
Vertical 2-split screen		A3PJ-5013					The number of the following to Screen pattern		Red	Green	Orange	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

#### **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: F	Refer to page 3 to 7.

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

# onlinecomponents.com

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)	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	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	screen models, and 2 lamps are used with split-screen models.  • In the standard setup for A3PT models, 2 lamps are used.

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		
ad		by 2			Alternate operation	A3PJ-7020-1	A3PA-7020-1	A3PT-7020-2	denotes a black flange, and -2 denotes a light
Standard load	Silver alloy		Momentary operation	A3PJ-7030-1	A3PA-7030-1	A3PT-7030-2	gray flange. Round switches are available		
anda	contact		_	Alternate operation	A3PJ-7040-1	A3PA-7040-1	A3PT-7040-2	only in light gray, and not in black.	
S		3	Momentary operation	A3PJ-7150-1			Use the Switch in combination 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-		
Microload	Gold alloy	2	Momentary operation	A3PJ-7070-1	A3PA-7070-1	A3PT-7070-2	ever, only 3 digits are shown, as follows:		
Micro	contact	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-		
		, and the second	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	Classif	ication	Rectangular	Square	Application precautions		
		Wire-wrap term	ninal	A3PJ-4101	A3PA-4101	• The Socket cannot be used		
Socket		PCB terminal		A3PJ-4102	A3PA-4102	with when mounting multi- ple Switches or with 3C		
	I Property		ı	A3PJ-4103	A3PA-4103	models.		
		Short edge barrier (Hori-	Black	A3PJ-4001	A3PA-4001			
		zontal mount- ing) (1 pair)	Light gray	A3PJ-4002	A3PA-4002	The purpose of the barrier is to prevent malfunction-		
		Long edge barrier (Verti-	Black	A3PJ-4004		ing and to improve design image of the mounting		
Barrier		cal mounting) (1 pair)	Light gray	A3PJ-4005	-	panel.  • Intermediate barrier × 1.  • Edge barriers × 1 pair (2  Units).		
		Short inter- mediate barri-	Black	A3PJ-4007	A3PA-4007	Mount short barriers horizontally.		
	e	er (Horizontal mounting)	Light gray	A3PJ-4008	A3PA-4008	Mount long barriers vertically.		
		Long interme- diate barrier	Black	A3PJ-4010	G	For details on mounting, refer to page 25.		
		(Vertical mounting)	Light gray	A3PJ-4011				
		For horizontal r OMRON logo f		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> </ul>		
Switch guard	Switch guard  For vertical moun OMRON logo faci right)			A3PJN-5055	A3PAN-5055	Use horizontal mounting guard for consecutive hori- zontal mounting, and use vertical mounting guard for consecutive vertical mounting.		
Seal cover		<u> </u>	- P	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> </ul>		
Long mounting plate		_	-	A3PJ-3002		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.		

# **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		
			White	A3PJ-5121	A3PA-5121	7	
		Horizontal 2-	Red	A3PJ-5122	A3PA-5122		
		split screen	Green	A3PJ-5123	A3PA-5123		
			Blue	A3PJ-5124	A3PA-5124		
			Yellow	A3PJ-5125	A3PA-5125	Keep mounted at all times.     Contact your OMPON representations.	
Colored plate	^	ļi	Orange	A3PJ-5126	A3PA-5126	<ul> <li>Contact your OMRON representative for color changes</li> </ul>	
for incandes-			White	A3PJ-5131	A01 A 0120	or other specifications.	
cent lamp		Vertical 2-split	Red	A3PJ-5132		For details on mounting, refer	
		screen	Green	A3PJ-5132		to page 25.	
			Blue	A3PJ-5134	_		
					_	4	
			Yellow		_		
			Orange	A3PJ-5136	- 0		
			White	A3PJ-5161		<u> </u>	
		4-split screen	Red	A3PJ-5162			
			Green	A3PJ-5163			
			Blue		-		
			Yellow	A3PJ-5165	_		
		Orange	A3PJ-5166	-			
		Cinalo coroon	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	7	
		Horizontal 2-	White	A3PJ-5321	A3PA-5321		
		split screen	Red	A3PJ-5322	A3PA-5322		
		'	Green	A3PJ-5323	A3PA-5323	Keep mounted at all times.	
			Yellow	A3PJ-5325	A3PA-5325	If the colored plate is lost or	
Colored plate	^		Orange	A3PJ-5326	A3PA-5326	damaged, contact OMRON.	
for LED		Vertical 2-split	White	A3PJ-5331		Use in accordance with color	
		screen	Red	A3PJ-5332		ing of the built-in LED.	
		3010011	Green	A3PJ-5333		• For details on mounting, refer	
			Yellow	A3PJ-5335		to page 25.	
			Orange	A3PJ-5336		_	
		;	White	A3PJ-5361	-	_	
		4-split screen			_	_	
			Red	A3PJ-5362	_	_	
			Green	A3PJ-5363	-	_	
			Yellow	A3PJ-5365			
			Orange	A3PJ-5366			
		Horizontal 2-spli		A3PJ-4302	A3PA-4302		
		Vertical 2-split se		A3PJ-4303	-	Keep mounted at all times.	
		Horizontal 3-	Long axis	A3PJ-4304		If the light baffle is lost, con-	
Light baffle	A	split screen	Short axis	A3PJ-4305		tact OMRON.	
g 2a0	W	Vertical 3-split	Long axis	A3PJ-4306	-	Used in LED lamp-lighted	
		screen	Short axis	A3PJ-4307	-	models. Cannot be used in LED-lighted models.	
		4-split screen	Long axis	A3PJ-4304	_	LED-lighted models.	
		. opin ooreen	Short axis	A3PJ-4308	_		
<del></del>		Transparent lege	end plate	A3PJ-5202	A3PA-5202	• A transparent legand plate is	
Legend plate		Milk-white legen		A3PJ-5201	A3PA-5201	A transparent legend plate is mounted on the Pushbutton.	
		Transparent cap	)	A3PJ-5600	A3PA-5600		
Cap Crimp-processe ent cap		d transpar-	A3PJ-5600-A	A3PA-5600-A	The surface is crimp-processed, so there is no reflection.		

#### **Tools**

Name	Appearance	Classification	Model	Application precautions
Extractor			A3PJ-5080	Use to extract components when replacing the Pushbutton.

# **Specifications**

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

Standard Load: 5 A at 125 VAC 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

# **Ratings Contact Ratings**

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

Rated	No	n-induct	ive load	(A)	Inductive load (A)				
voltage	Resistive load		Lamp load		Inductive load		Motor load		
(V)	NC	NO	NC	NO	NC	NO	NC	NO	
125 VAC	5		0.7		3		1.3		
250 VAC	3		0.5		2		0.8		
8 VDC	5		2		4		3		
14 VDC	5		2		4		3		
30 VDC	4		2		3		3		
125 VDC	0.4		0.05		0.4		0.05		
250 VDC	0.	0.2		0.03		0.2		3	

Note: 1. The above values are for steady-state currents.

- Inductive load: Power factor = 0.4; time constant = 7 ms.
   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:  $20 \pm 2^{\circ}$ C (2) Ambient humidity:  $65 \pm 5^{\circ}$ 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 2-split screen 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	Tiated Voltage	Green	Red	
12 VDC±5%	12 VDC	26 mA	20 mA	
24 VDC±5%	24 VDC	13 mA	10 mA	

#### **Incandescent Lamp**

	Item	Standard 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□

#### **Characteristics**

Mechanical		120 operations/minute max. *1		
Operating	g frequency	Electrical	30 operations/minute max.	
Insulation resistance			100 MΩ min. (at 500 VDC)	
Between terminals of same polarity		1,000 VAC, 50/60 Hz for 1 minute *2		
	Between terminals of	f different polarity	2,000 VAC, 50/60 Hz for 1 minute	
Dielectric strength	Between current-car ground	rying metal part and	2,000 VAC, 50/60 Hz for 1 minute	
Suengui	Between each term non-current-carrying		2,000 VAC, 50/60 Hz for 1 minute	
	Between lamp to	erminals	1,000 VAC, 50/60 Hz for 1 minute *3	
Vibration	resistance	Malfunction	10 to 55 Hz, 1.5 mm double amplitude	
Shock re	alatanaa	Destruction	500 m/s <sup>2</sup>	
SHOCK TE	sistance	Malfunction	200 m/s <sup>2</sup>	
Life expectancy Mechan		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		l .	Approx. 30 g	
Inrush cu	want	NC	Silver contact: 10 A max.	
ilirusii cu	irrent	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 (proo	f tracking index)	175		
Pollution	degree		3 (IEC947-5-1)	
*1. With alternate operation models, 60 operations/minute max. One operation				

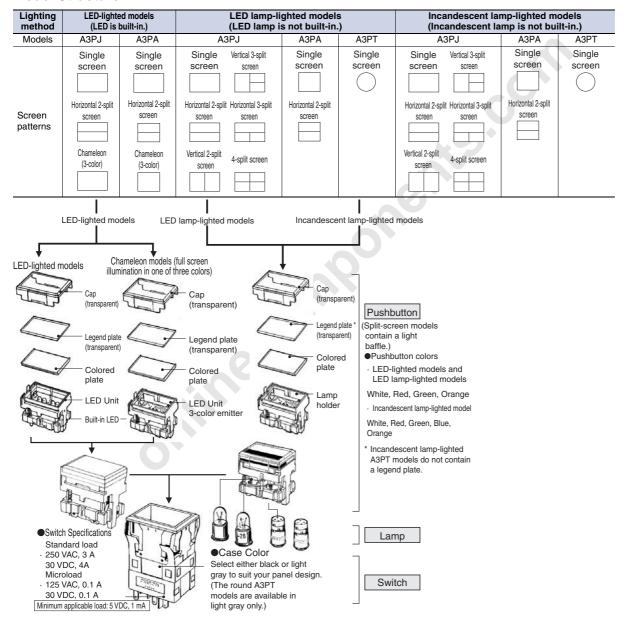
<sup>\*1.</sup> With alternate operation models, 60 operations/mir cycle consists of set and reset operations.\*2. 600 VAC for microloads.\*3. With no incandescent lamp or LED lamp mounted.

# **Operating Characteristics**

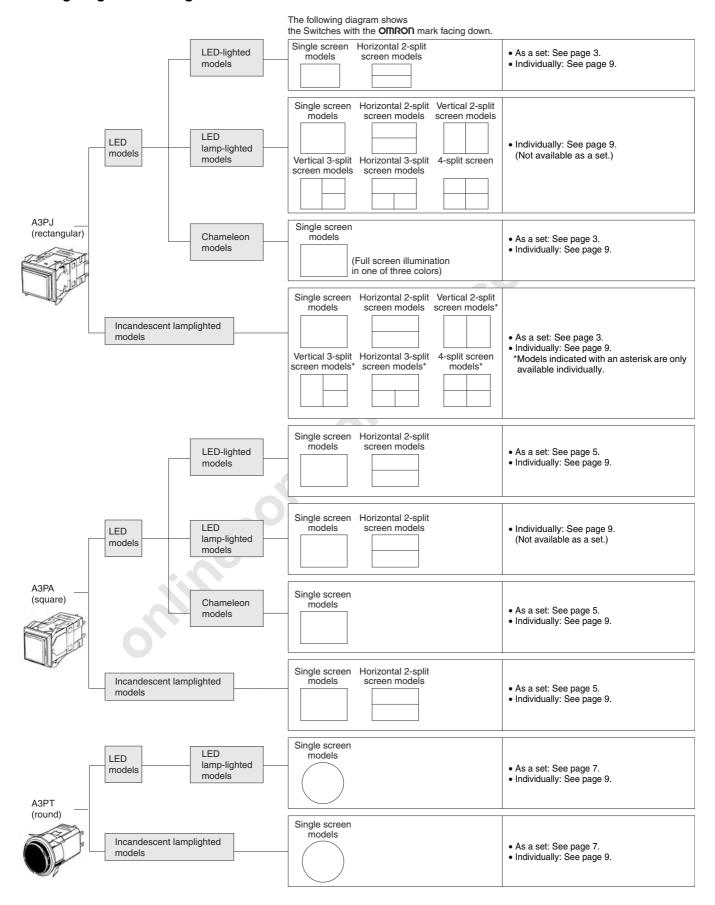
	Model	A3PJ series		A3PA series		A3PT series	
Operating Characteristics		Momentary operation models	Alternate operation models	Momentary operation models	Alternate operation models	Momentary operation models	Alternate operation models
Operating force	OF max.	5.88 N	6.86 N	5.88 N	6.86 N	3.92 N	4.90 N
Releasing 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**

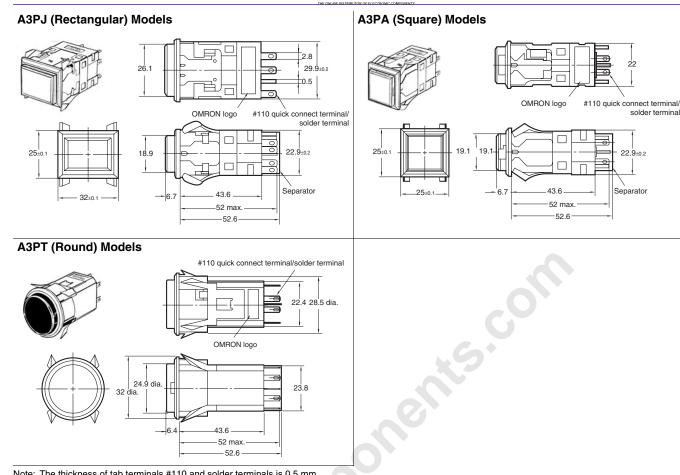


# **A3P Lighting Method Diagram**



22.9±0.2

Separator



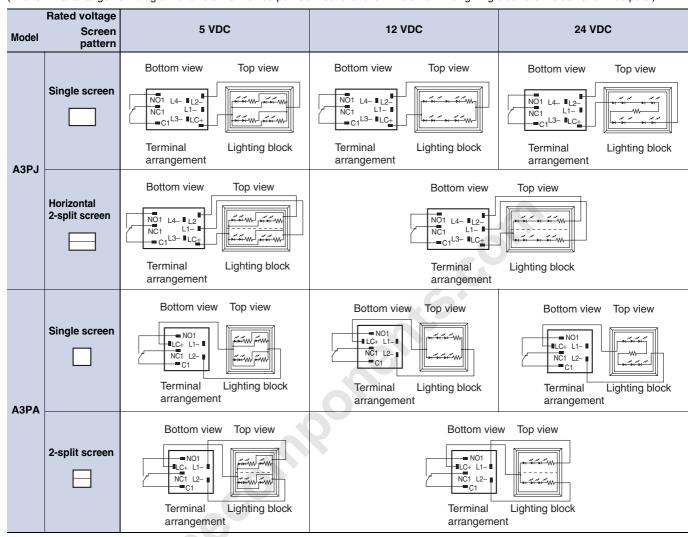
20.5 mm. Note: The thickness of tab terminals #110 and solder terminals is 0.5 mm.

-52 max

## **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** online components.com (Unit: mm)

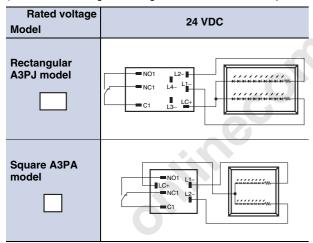
# Incandescent Lamp-lighted/LED Lamp-lighted Models

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

Model Type	Rectangular A3PJ models	Square A3PA models	Round A3PT models
Silver/gold alloy contacts (1 output)	Bottom view Top view  Terminal Lighting block	Bottom view Top view  Terminal Lighting block	Bottom view Top view  Terminal Lighting block
Silver/gold alloy contacts (2 outputs)	Bottom view Top view  Terminal Lighting block arrangement	Bottom view Top view  Terminal Lighting block arrangement	Bottom view Top view  Terminal Lighting block arrangement
Silver/gold alloy contacts (3 outputs)	Bottom view Top view  Terminal Lighting block arrangement	- 15.	-

#### **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

20

**Dimensions** onlinecomponents.com (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 desi	ign	Panel cutout	Remarks
	Individual mounting (Horizontal)	25±0.1		30.5±0.3	
Flange mount models	Multiple mounting (Horizontal)	25±0.1 1 2 n		32n-1.5±0.3	Panel cutout spacing between rows of Units:
	Individual mounting (Vertical)	32±0.1	Mount to long mounting plate (A3PJ-3002) before use.	23.5±0.3	6 min.
	Multiple mounting (Vertical)	32±0.1 1 2 n	Mount to long mounting plate (A3PJ-3002) before use.	25n-1.5±0.3 30.5±0.3	
	Individual mounting (Horizontal)	27		36.4±0.3 23.5±0.3	
Barrier	Multiple mounting (Horizontal)	27 1 2 33n+6±1	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.)
mount models	Individual mounting (Horizontal)	34	Mount to long mounting plate (A3PJ-3002) before use.	29.4±0.3 30.5±0.3	1.3 — — — 6 min. 6 min.
	Multiple mounting (Vertical)	34 1 2 n	Mount to long mounting plate (A3PJ-3002) before use.	25.9n+3.5±0.3 30.5±0.3 1	

Note: 1. n: Number of Units

- 1. It Number of ording
   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.

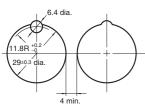
# A3PA (Square) Models

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	6 min.
Barrier	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.
mount models	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

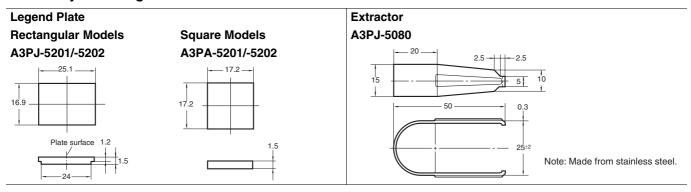


Note: 1. Recommended panel thickness: 1 to 5 mm

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

**Dimensions** onlinecomponents.com (Unit: mm)

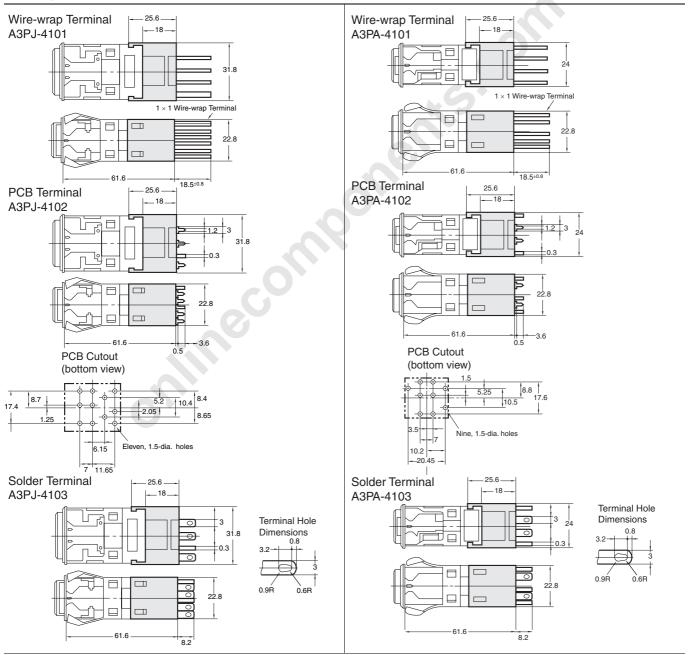
# **Accessory Mounting Dimensions**



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

# Rectangular Models A3PJ (M2PJ)

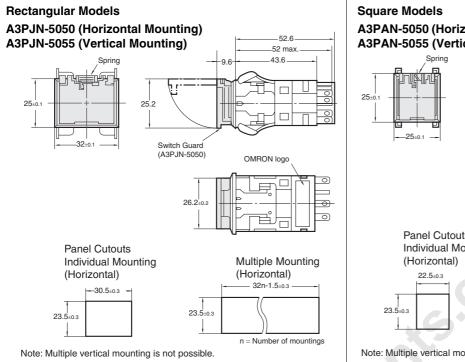
# Square Models A3PA (M2PA)

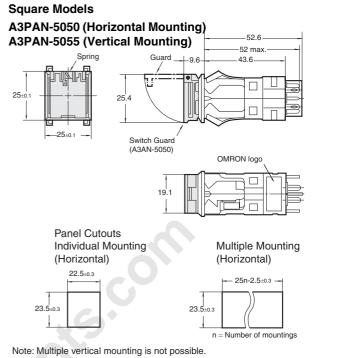


 ${\it Note: PCB cutout dimensions show the switch mounted to the socket with the OMRON logo facing down.}$ 

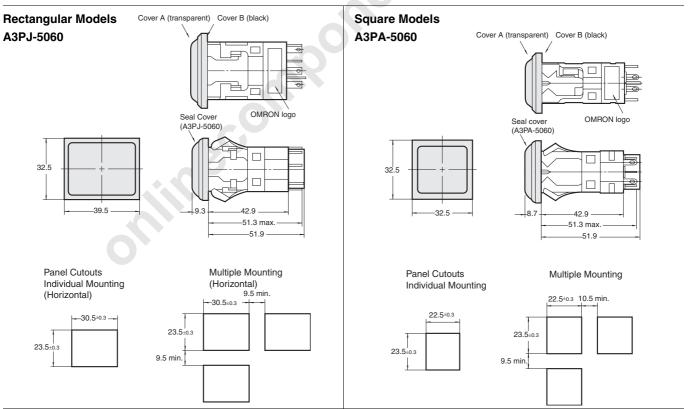
**Dimensions** onlinecomponents.com (Unit: mm)

# **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.

## Refer to Safety Precautions for all Pushbutton Switches.

# 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**

- 1. 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.
- 2. 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)

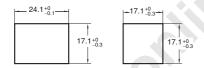
- Check the terminal polarity when wiring.
- The rated voltage is shown on the plate on the back of the lighting unit, so be sure to use within the voltage shown.
- An LED current-limiting resistor is built in, so there is no need to mount an external resistor.

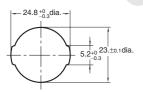
#### **Incandescent Lamp**

• 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.

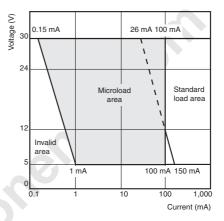




#### **Using Microloads**

onlinecomponents.com

• 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 Nlevel 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>-4</sup>/time indicates that the estimated malfunction rate is less than 1/2,000,000 with a reliability level of 60%.



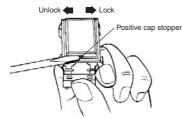
#### **Others**

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

#### Assembly/Disassembly

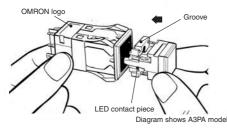
## A3PJ/M2PJ (Rectangular Models), A3PA/M2PA (Square Models)

Locking/Unlocking Positive Cap Lock Mechanism



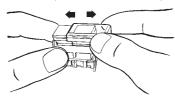
#### **Mounting Pushbutton**

- 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

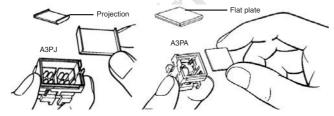
Insert the A3PA from the open side into the theft-prevention stopper.



# **Mounting Colored Plate**

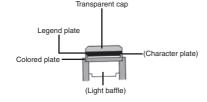
Place the colored plate on the plunger case with the dull side of the colored plate facing downward.

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.



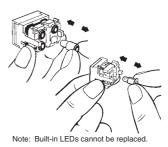
# Mounting Character Plate (Character Frame) and Legend Plate

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



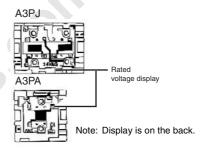
#### Mounting and Replacing LED and Incandescent Lamps

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



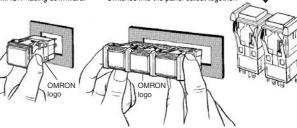
#### LED Rated Voltage Display (LED Models Only)

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.

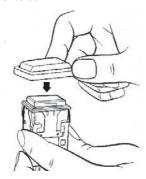


25

Ments.com

#### **Mounting Seal Cover**

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

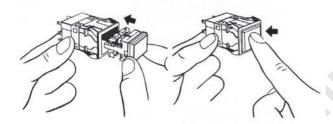


#### Inscribing the Legend Plate

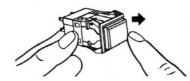
- Inscribe the legend plate to a depth of 0.5 mm max.
- The legend plate is made from polycarbonate resin. To coat the legend plate, use an alcohol-based coating such as melamine, phthalic acid, or acrylic.

#### **Maintenance Lock**

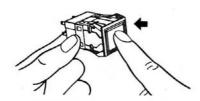
 First, when you insert the transparent lens while pressing the center, the maintenance lock mechanism will be activated, and the Switch will not operate. Lamp replacement and other maintenance can be performed without turning OFF the power supply to devices and equipment. Use an insertion force of 4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



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.

#### Warranty and Limitations of Liability

#### WARRANTY

OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, REGARDING NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR PARTICULAR PURPOSE OF THE PRODUCTS. ANY BUYER OR USER ACKNOWLEDGES THAT THE BUYER OR USER ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. OMRON DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

#### LIMITATIONS OF LIABILITY

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

In no event shall the responsibility of OMRON for any act exceed the individual price of the product on which liability is asserted.

IN NO EVENT SHALL OMRON BE RESPONSIBLE FOR WARRANTY, REPAIR, OR OTHER CLAIMS 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 OR REPAIR.

#### **Application Considerations**

#### SUITABILITY FOR USE

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of products in the customer's application or use of the products.

At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use that apply to the products. This information by itself is not sufficient for a complete determination of the suitability of the products in combination with the end product, machine, system, or other application or use.

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of the products, nor is it intended to imply that the uses listed may be suitable for the products:

- · Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

#### PROGRAMMABLE PRODUCTS

OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

#### **Disclaimers**

#### **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 model numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special model numbers may be assigned to fix or establish key specifications for your application on your request. Please consult with your OMRON representative at any time to confirm actual specifications of purchased products.

#### **DIMENSIONS AND WEIGHTS**

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

#### PERFORMANCE DATA

Performance data given in this catalog 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 users must correlate it to actual application requirements. Actual performance is subject to the OMRON Warranty and Limitations of Liability.

#### **ERRORS AND OMISSIONS**

The information in this document has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical, or proofreading errors, or omissions.

2011.5

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

