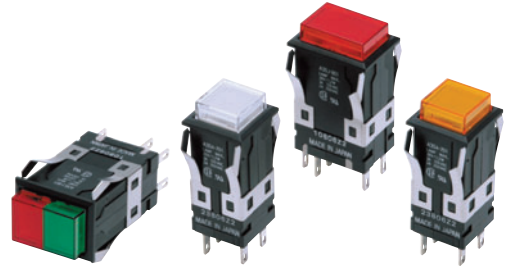


## Pushbutton Switch Series with Square 40-mm Body

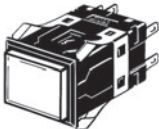
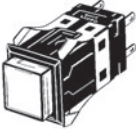
- Combines miniature design with distinct but soft sense of operation.
- Easy panel mounting from the front and simple lamp replacement without tools.



 Refer to *Safety Precautions for All Pushbutton Switches* and *Safety Precautions* on page 18.

## List of Models

### Lighted Pushbutton Switches

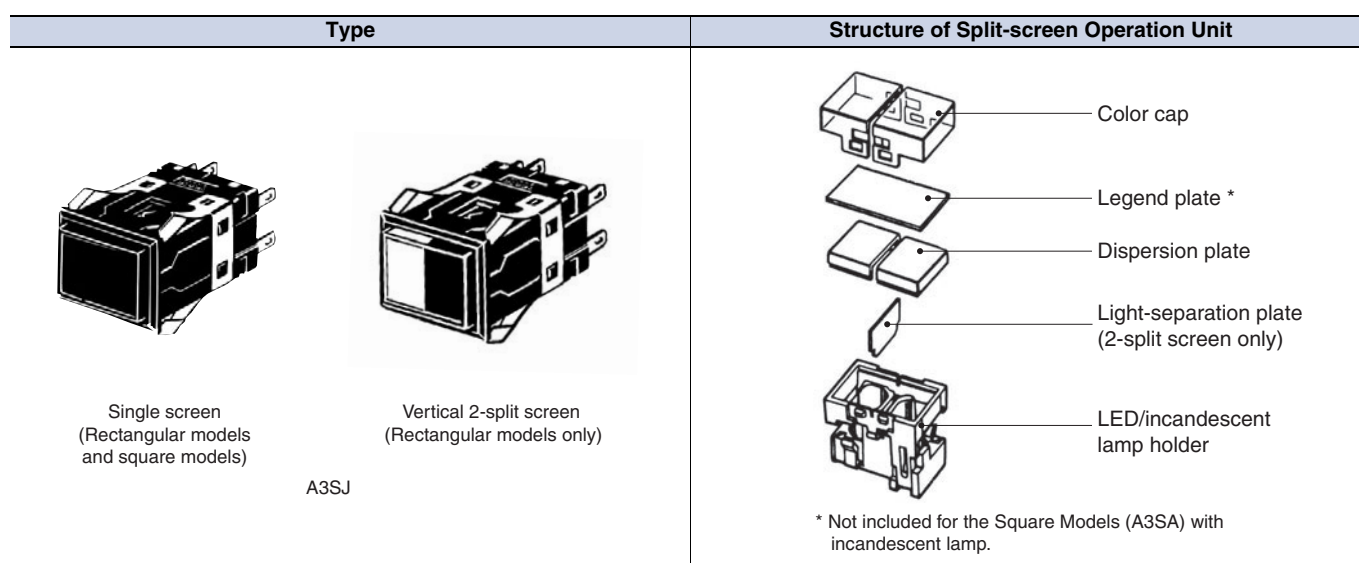
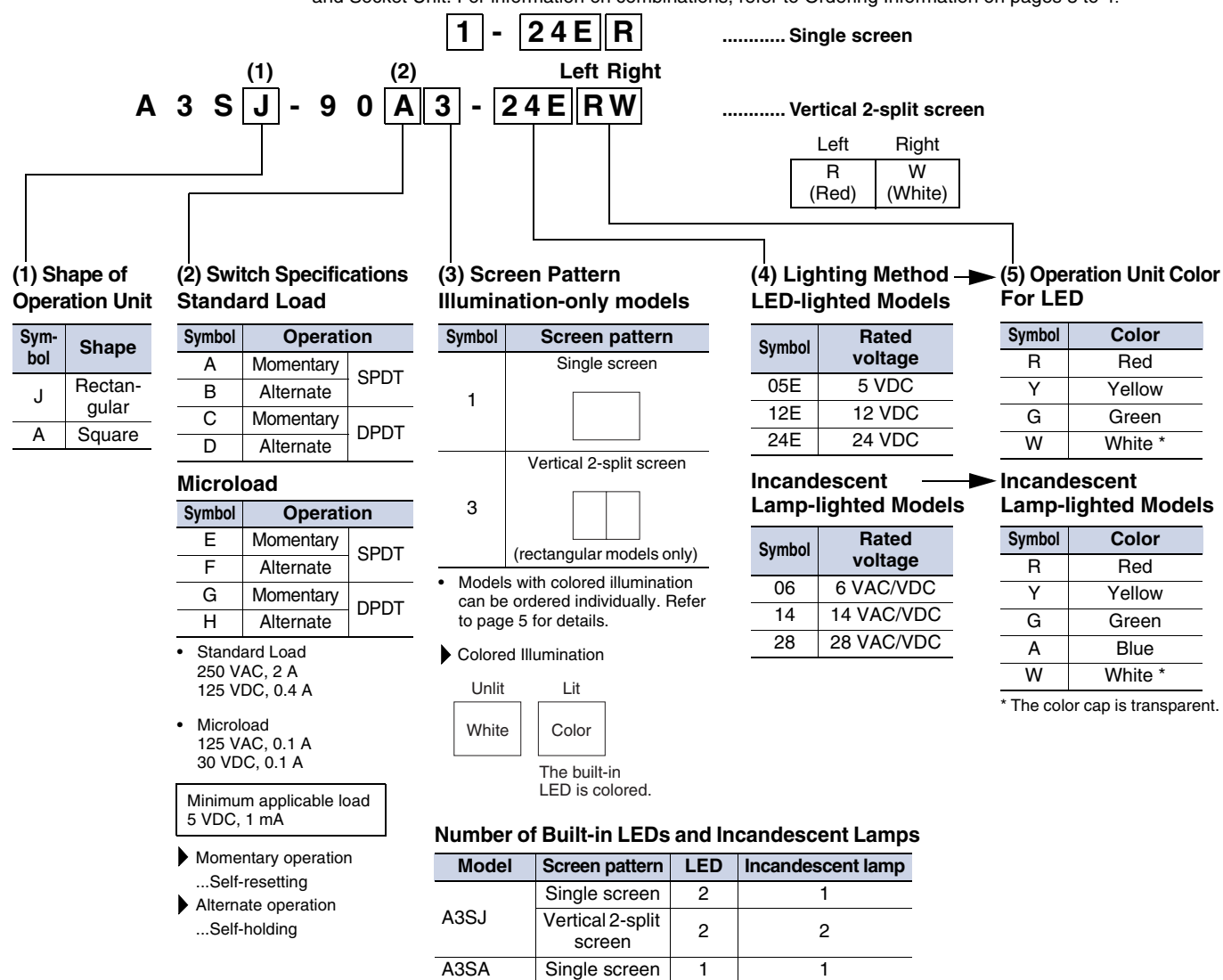
| Appearance                                                                                        | Model |
|---------------------------------------------------------------------------------------------------|-------|
| Rectangular<br> | A3SJ  |
| Square<br>     | A3SA  |

■ Specifications: Refer to page 12.  
 ■ Accessories: Refer to pages 10 to 11.

■ Dimensions: Refer to page 14.

## Model Number Structure

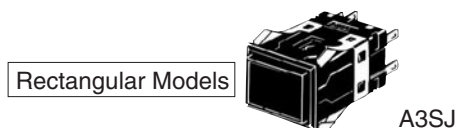
**Model Number Legend** ..... The model numbers used to order sets are illustrated below. One set comprises the Operation Unit, Lamp, and Socket Unit. For information on combinations, refer to Ordering Information on pages 3 to 4.



## Ordering Information

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

### Standard Loads



Single  
screen

1

Vertical 2-split  
screen

1

2

Single screen

| Output | Lighting             | Contact type<br>Operation | Standard load (250 VAC, 2 A; 125 VDC 0.4 A) |                                       | Operation Unit<br>color symbol                                                                                                     |
|--------|----------------------|---------------------------|---------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
|        |                      |                           | Momentary operation<br>(Self-resetting)     | Alternate operation<br>(Self-holding) |                                                                                                                                    |
| SPDT   | LED                  | 5 VDC                     | A3SJ-90A1-05E□                              | A3SJ-90B1-05E□                        | Enter the desired color<br>symbol for the Pushbutton<br>in □.<br><br>R (Red)<br>Y (Yellow)<br>G (Green)<br>A (Blue) *<br>W (White) |
|        |                      | 12 VDC                    | A3SJ-90A1-12E□                              | A3SJ-90B1-12E□                        |                                                                                                                                    |
|        |                      | 24 VDC                    | A3SJ-90A1-24E□                              | A3SJ-90B1-24E□                        |                                                                                                                                    |
|        | Incandescent<br>lamp | 6 VAC/VDC                 | A3SJ-90A1-06□                               | A3SJ-90B1-06□                         |                                                                                                                                    |
|        |                      | 14 VAC/VDC                | A3SJ-90A1-14□                               | A3SJ-90B1-14□                         |                                                                                                                                    |
|        |                      | 28 VAC/VDC                | A3SJ-90A1-28□                               | A3SJ-90B1-28□                         |                                                                                                                                    |
| DPDT   | LED                  | 5 VDC                     | A3SJ-90C1-05E□                              | A3SJ-90D1-05E□                        |                                                                                                                                    |
|        |                      | 12 VDC                    | A3SJ-90C1-12E□                              | A3SJ-90D1-12E□                        |                                                                                                                                    |
|        |                      | 24 VDC                    | A3SJ-90C1-24E□                              | A3SJ-90D1-24E□                        |                                                                                                                                    |
|        | Incandescent<br>lamp | 6 VAC/VDC                 | A3SJ-90C1-06□                               | A3SJ-90D1-06□                         |                                                                                                                                    |
|        |                      | 14 VAC/VDC                | A3SJ-90C1-14□                               | A3SJ-90D1-14□                         |                                                                                                                                    |
|        |                      | 28 VAC/VDC                | A3SJ-90C1-28□                               | A3SJ-90D1-28□                         |                                                                                                                                    |

\* Incandescent lamp only.

Vertical 2-split screen

| Output | Lighting             | Contact type<br>Operation | Standard load (250 VAC, 2 A; 125 VDC 0.4 A) |                                       | Operation Unit<br>color symbol                                                                                                      |
|--------|----------------------|---------------------------|---------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|        |                      |                           | Momentary operation<br>(Self-resetting)     | Alternate operation<br>(Self-holding) |                                                                                                                                     |
| SPDT   | LED                  | 24 VDC                    | A3SJ-90A3-24E□□                             | A3SJ-90B3-24E□□                       | Enter the desired color<br>symbol for the Pushbutton<br>in □□.<br><br>R (Red)<br>Y (Yellow)<br>G (Green)<br>W (White)<br>A (Blue) * |
|        | Incandescent<br>lamp | 28 VDC                    | A3SJ-90A3-28□□                              | A3SJ-90B3-28□□                        |                                                                                                                                     |
| DPDT   | LED                  | 24 VDC                    | A3SJ-90C3-24E□□                             | A3SJ-90D3-24E□□                       |                                                                                                                                     |
|        | Incandescent<br>lamp | 28 VDC                    | A3SJ-90C3-28□□                              | A3SJ-90D3-28□□                        |                                                                                                                                     |

\* Incandescent lamp only.

### Microloads

Single screen

| Output | Lighting             | Contact type<br>Operation | Microload<br>(125 VAC, 0.1 A; 30 VDC 0.1 A) | Operation<br>Unit color<br>symbol                                                                                                             |
|--------|----------------------|---------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|        |                      |                           | Momentary operation<br>(Self-resetting)     |                                                                                                                                               |
| SPDT   | LED                  | 5 VDC                     | A3SJ-90E1-05E□                              | Enter the<br>desired col-<br>or symbol<br>for the<br>Pushbutton<br>in □.<br><br>R (Red)<br>Y (Yellow)<br>G (Green)<br>A (Blue) *<br>W (White) |
|        |                      | 12 VDC                    | A3SJ-90E1-12E□                              |                                                                                                                                               |
|        |                      | 24 VDC                    | A3SJ-90E1-24E□                              |                                                                                                                                               |
|        | Incandescent<br>lamp | 6 VAC/VDC                 | A3SJ-90E1-06□                               |                                                                                                                                               |
|        |                      | 14 VAC/VDC                | A3SJ-90E1-14□                               |                                                                                                                                               |
|        |                      | 28 VAC/VDC                | A3SJ-90E1-28□                               |                                                                                                                                               |
| DPDT   | LED                  | 5 VDC                     | A3SJ-90G1-05E□                              |                                                                                                                                               |
|        |                      | 12 VDC                    | A3SJ-90G1-12E□                              |                                                                                                                                               |
|        |                      | 24 VDC                    | A3SJ-90G1-24E□                              |                                                                                                                                               |
|        | Incandescent<br>lamp | 6 VAC/VDC                 | A3SJ-90G1-06□                               |                                                                                                                                               |
|        |                      | 14 VAC/VDC                | A3SJ-90G1-14□                               |                                                                                                                                               |
|        |                      | 28 VAC/VDC                | A3SJ-90G1-28□                               |                                                                                                                                               |

Vertical 2-split screen

| Output | Lighting             | Contact type<br>Operation | Microload<br>(125 VAC, 0.1 A; 30 VDC 0.1 A) | Operation<br>Unit color<br>symbol                                                                                                              |
|--------|----------------------|---------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
|        |                      |                           | Momentary operation<br>(Self-resetting)     |                                                                                                                                                |
| SPDT   | LED                  | 24 VDC                    | A3SJ-90E3-24E□□                             | Enter the<br>desired col-<br>or symbol<br>for the<br>Pushbutton<br>in □□.<br><br>R (Red)<br>Y (Yellow)<br>G (Green)<br>W (White)<br>A (Blue) * |
|        | Incandescent<br>lamp | 28 VDC                    | A3SJ-90E3-28□□                              |                                                                                                                                                |
| DPDT   | LED                  | 24 VDC                    | A3SJ-90G3-24E□□                             |                                                                                                                                                |
|        | Incandescent<br>lamp | 28 VDC                    | A3SJ-90G3-28□□                              |                                                                                                                                                |

\* Incandescent lamp only.

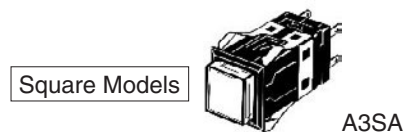
Individual models: Refer to pages 6 to 9.  
(The Pushbutton, Lamp, and Switch can be ordered separately.)

■ Specifications: Refer to page 12. ■ Dimensions: Refer to page 14.  
■ Accessories: Refer to pages 10 to 11.

## Ordering Information

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

### Standard Loads



Square Models

Single  
screen

Single screen

| Output |                      | Contact type<br>Operation | Standard load (250 VAC, 2 A; 125 VDC 0.4 A) |                                       | Operation Unit<br>color symbol                                                                                                     |
|--------|----------------------|---------------------------|---------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
|        |                      |                           | Momentary operation<br>(Self-resetting)     | Alternate operation<br>(Self-holding) |                                                                                                                                    |
| SPDT   | LED                  | 5 VDC                     | A3SA-90A1-05E□                              | A3SA-90B1-05E□                        | Enter the desired color<br>symbol for the Pushbutton<br>in □.<br><br>R (Red)<br>Y (Yellow)<br>G (Green)<br>A (Blue) *<br>W (White) |
|        |                      | 12 VDC                    | A3SA-90A1-12E□                              | A3SA-90B1-12E□                        |                                                                                                                                    |
|        |                      | 24 VDC                    | A3SA-90A1-24E□                              | A3SA-90B1-24E□                        |                                                                                                                                    |
|        | Incandescent<br>lamp | 6 VAC/VDC                 | A3SA-90A1-06□                               | A3SA-90B1-06□                         |                                                                                                                                    |
|        |                      | 14 VAC/VDC                | A3SA-90A1-14□                               | A3SA-90B1-14□                         |                                                                                                                                    |
|        |                      | 28 VAC/VDC                | A3SA-90A1-28□                               | A3SA-90B1-28□                         |                                                                                                                                    |
| DPDT   | LED                  | 5 VDC                     | A3SA-90C1-05E□                              | A3SA-90D1-05E□                        |                                                                                                                                    |
|        |                      | 12 VDC                    | A3SA-90C1-12E□                              | A3SA-90D1-12E□                        |                                                                                                                                    |
|        |                      | 24 VDC                    | A3SA-90C1-24E□                              | A3SA-90D1-24E□                        |                                                                                                                                    |
|        | Incandescent<br>lamp | 6 VAC/VDC                 | A3SA-90C1-06□                               | A3SA-90D1-06□                         |                                                                                                                                    |
|        |                      | 14 VAC/VDC                | A3SA-90C1-14□                               | A3SA-90D1-14□                         |                                                                                                                                    |
|        |                      | 28 VAC/VDC                | A3SA-90C1-28□                               | A3SA-90D1-28□                         |                                                                                                                                    |

\* Incandescent lamp only.

### Microloads

Single screen

| Output |                      | Contact type<br>Operation | Microload<br>(125 VAC, 0.1 A; 30 VDC 0.1 A) | Operation Unit<br>color symbol                                                                                                     |
|--------|----------------------|---------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
|        |                      |                           | Momentary operation<br>(Self-resetting)     |                                                                                                                                    |
| SPDT   | LED                  | 5 VDC                     | A3SA-90E1-05E□                              | Enter the desired color<br>symbol for the Pushbutton<br>in □.<br><br>R (Red)<br>Y (Yellow)<br>G (Green)<br>A (Blue) *<br>W (White) |
|        |                      | 12 VDC                    | A3SA-90E1-12E□                              |                                                                                                                                    |
|        |                      | 24 VDC                    | A3SA-90E1-24E□                              |                                                                                                                                    |
|        | Incandescent<br>lamp | 6 VAC/VDC                 | A3SA-90E1-06□                               |                                                                                                                                    |
|        |                      | 14 VAC/VDC                | A3SA-90E1-14□                               |                                                                                                                                    |
|        |                      | 28 VAC/VDC                | A3SA-90E1-28□                               |                                                                                                                                    |
| DPDT   | LED                  | 5 VDC                     | A3SA-90G1-05E□                              |                                                                                                                                    |
|        |                      | 12 VDC                    | A3SA-90G1-12E□                              |                                                                                                                                    |
|        |                      | 24 VDC                    | A3SA-90G1-24E□                              |                                                                                                                                    |
|        | Incandescent<br>lamp | 6 VAC/VDC                 | A3SA-90G1-06□                               |                                                                                                                                    |
|        |                      | 14 VAC/VDC                | A3SA-90G1-14□                               |                                                                                                                                    |
|        |                      | 28 VAC/VDC                | A3SA-90G1-28□                               |                                                                                                                                    |

\* Incandescent lamp only.

Individual models: Refer to pages 6 to 9.  
(The Pushbutton, Lamp, and Switch can be ordered separately.)

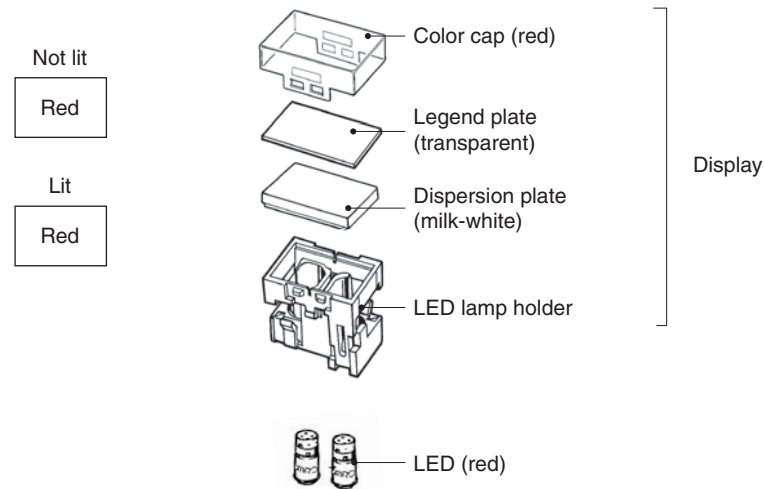
■ Specifications: Refer to page 12. ■ Dimensions: Refer to page 14.  
■ Accessories: Refer to pages 10 to 11.

# Ordering Information

## Illumination-only and Colored-illumination LED Models

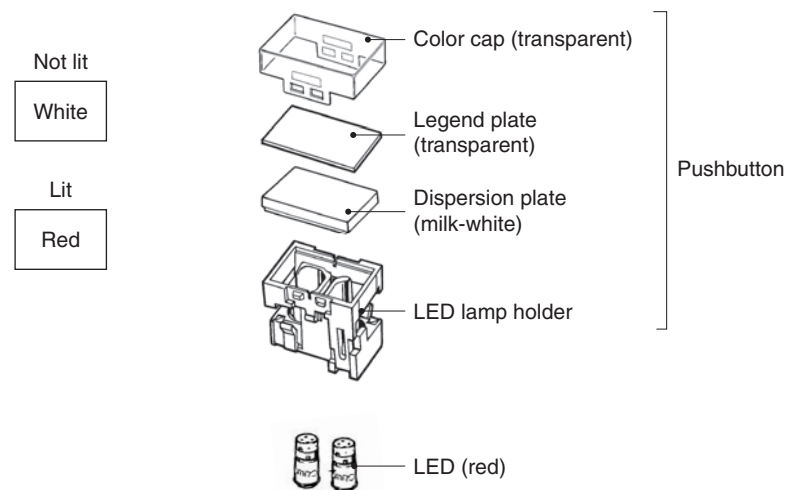
**Illumination only** describes LED models for which the screen color is the same whether the LED is lit or not. The screen simply becomes brighter when the LED lights.

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



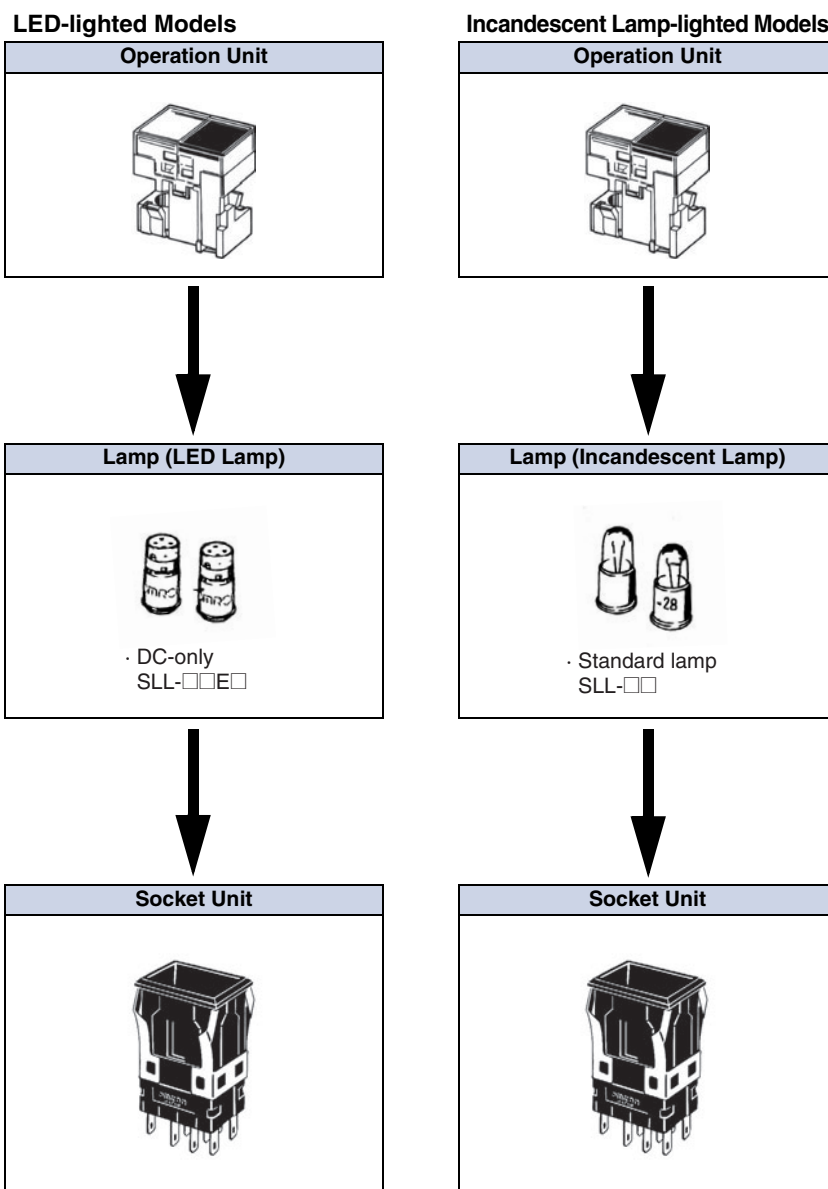
**Ordering** ..... With colored-illumination models, order the Display (Operation Unit), Lamp, and Socket Unit as shown in the following table.

| Display (Operation Unit)                                                                              |                         |                  | LED                                                                                | Socket Unit                         |
|-------------------------------------------------------------------------------------------------------|-------------------------|------------------|------------------------------------------------------------------------------------|-------------------------------------|
| Single screen<br>  | Rectangular models      | <b>A3SJ-5801</b> | Select the LED lamps to suit your desired coloration from the selection on page 9. | Select from the Switches on page 9. |
|                                                                                                       | Square models           | <b>A3SA-5801</b> |                                                                                    |                                     |
| 2-split screen<br> | Rectangular models only | <b>A3SJ-5921</b> |                                                                                    |                                     |

## Ordering Information

**Ordering Individually** ..... Operation Units, Lamps, and Socket Units 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.

**Ordering** ..... Specify a model number from the following page.



Ordering set combinations: Refer to pages 3 to 4.

■ Specifications: Refer to page 12. ■ Dimensions: Refer to page 14.  
 ■ Accessories: Refer to pages 10 to 11.

## Ordering Information

**Ordering Individually** ..... Operation Units, Lamps, and Socket Units 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.

### Operation Unit

#### LED-lighted Models

(LED is not built in.)

|                     |                                                                                   | Appearance    | Rectangular Models<br>(2 LEDs)         | Square Models<br>(1 LED)               |
|---------------------|-----------------------------------------------------------------------------------|---------------|----------------------------------------|----------------------------------------|
| Screen pattern      |                                                                                   | Display color | (transparent legend<br>plate built in) | (transparent legend<br>plate built in) |
| Single screen       |  | White         | A3SJ-5801                              | A3SA-5801                              |
|                     |                                                                                   | Red           | A3SJ-5802                              | A3SA-5802                              |
|                     |                                                                                   | Green         | A3SJ-5803                              | A3SA-5803                              |
|                     |                                                                                   | Yellow        | A3SJ-5805                              | A3SA-5805                              |
| 2-split<br>screen * | Standard<br>split<br>screen                                                       | White/red     | A3SJ-5901                              | —                                      |
|                     |                                                                                   | White/green   | A3SJ-5902                              |                                        |
|                     |                                                                                   | White/yellow  | A3SJ-5904                              |                                        |
|                     |                                                                                   | Red/green     | A3SJ-5905                              |                                        |
|                     |                                                                                   | Red/yellow    | A3SJ-5907                              |                                        |
|                     |                                                                                   | Green/yellow  | A3SJ-5909                              |                                        |
|                     | Reverse<br>split<br>screen                                                        | Red/white     | A3SJ-5911                              | —                                      |
|                     |                                                                                   | Green/white   | A3SJ-5912                              |                                        |
|                     |                                                                                   | Yellow/white  | A3SJ-5914                              |                                        |
|                     |                                                                                   | Green/red     | A3SJ-5915                              |                                        |
|                     |                                                                                   | Yellow/red    | A3SJ-5917                              |                                        |
|                     |                                                                                   | Yellow/green  | A3SJ-5919                              |                                        |
|                     | One-color<br>2-split<br>screen                                                    | White/white   | A3SJ-5921                              | —                                      |
|                     |                                                                                   | Red/red       | A3SJ-5922                              |                                        |
|                     |                                                                                   | Green/green   | A3SJ-5923                              |                                        |
|                     |                                                                                   | Yellow/yellow | A3SJ-5925                              |                                        |

Note: The color cap is transparent when the display color is white.

\* Two-split screen configurations are given with the OMRON surface of the case downward.

Ordering set combinations: Refer to pages 3 to 4.

■ Specifications: Refer to page 12. ■ Dimensions: Refer to page 14.  
■ Accessories: Refer to pages 10 to 11.

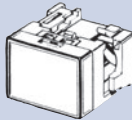
## Ordering Information

**Ordering Individually** ..... Operation Units, Lamps, and Socket Units 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.

### Operation Unit

#### Incandescent Lamp-lighted Models

(Incandescent lamp is not built in.)

|                  |                                                                                                                   |               | Appearance                          | Rectangular                                                                       | Square                                                                             |
|------------------|-------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|                  |                                                                                                                   |               |                                     |  |  |
| Screen pattern   |                                                                                                                   | Display color | (transparent legend plate built in) | (Legend plate not included)                                                       |                                                                                    |
| Single screen    | <div>One lamp</div> <div></div>  | White         | A3SJ-5301                           | A3SA-5301                                                                         |                                                                                    |
|                  |                                                                                                                   | Red           | A3SJ-5302                           | A3SA-5302                                                                         |                                                                                    |
|                  |                                                                                                                   | Green         | A3SJ-5303                           | A3SA-5303                                                                         |                                                                                    |
|                  |                                                                                                                   | Blue          | A3SJ-5304                           | A3SA-5304                                                                         |                                                                                    |
|                  |                                                                                                                   | Yellow        | A3SJ-5305                           | A3SA-5305                                                                         |                                                                                    |
|                  | <div>Two lamps</div> <div></div> | White         | A3SJ-5321                           | —                                                                                 |                                                                                    |
|                  |                                                                                                                   | Red           | A3SJ-5322                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Green         | A3SJ-5323                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Blue          | A3SJ-5324                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Yellow        | A3SJ-5325                           |                                                                                   |                                                                                    |
| 2-split screen * | Standard split screen                                                                                             | White/red     | A3SJ-5201                           | —                                                                                 |                                                                                    |
|                  |                                                                                                                   | White/green   | A3SJ-5202                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | White/blue    | A3SJ-5203                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | White/yellow  | A3SJ-5204                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Red/green     | A3SJ-5205                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Red/blue      | A3SJ-5206                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Red/yellow    | A3SJ-5207                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Green/blue    | A3SJ-5208                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Green/yellow  | A3SJ-5209                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Blue/yellow   | A3SJ-5210                           |                                                                                   |                                                                                    |
|                  | <div></div>                    | Red/white     | A3SJ-5211                           | —                                                                                 |                                                                                    |
|                  |                                                                                                                   | Green/white   | A3SJ-5212                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Blue/white    | A3SJ-5213                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Yellow/white  | A3SJ-5214                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Green/red     | A3SJ-5215                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Blue/red      | A3SJ-5216                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Yellow/red    | A3SJ-5217                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Blue/green    | A3SJ-5218                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Yellow/green  | A3SJ-5219                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Yellow/blue   | A3SJ-5220                           |                                                                                   |                                                                                    |
|                  | One-color 2-split screen                                                                                          | White/white   | A3SJ-5221                           | —                                                                                 |                                                                                    |
|                  |                                                                                                                   | Red/red       | A3SJ-5222                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Green/green   | A3SJ-5223                           |                                                                                   |                                                                                    |
|                  |                                                                                                                   | Blue/blue     | A3SJ-5224                           |                                                                                   |                                                                                    |
| Yellow/yellow    |                                                                                                                   | A3SJ-5225     |                                     |                                                                                   |                                                                                    |

Note: The color cap is transparent when the display color is white.

\* Two-split screen configurations are given with the OMRON surface of the case downward.

Ordering set combinations: Refer to pages 3 to 4.

■ Specifications: Refer to page 12. ■ Dimensions: Refer to page 14.  
■ Accessories: Refer to pages 10 to 11.

## Ordering Information

**Ordering Individually** ..... Operation Units, Lamps, and Socket Units 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.

### Lamp

#### LED Lamp

| Operating voltage | 5 VDC           | 12 VDC          | 24 VDC          |
|-------------------|-----------------|-----------------|-----------------|
| Color             | Model (DC only) | Model (DC only) | Model (DC only) |
| Red               | SLL-05ER        | SLL-12ER        | SLL-24ER        |
| Yellow            | SLL-05EY        | SLL-12EY        | SLL-24EY        |
| Green             | SLL-05EG        | SLL-12EG        | SLL-24EG        |
| White             | SLL-05EW        | SLL-12EW        | SLL-24EW        |

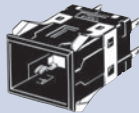
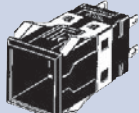
Note: The A3SJ (M2SJ) requires two LEDs for each Switch. The A3SA (M2SA) requires one LED.

#### Incandescent Lamp

| Operating voltage | Lamp type | Standard lamp | Low-voltage lamp |
|-------------------|-----------|---------------|------------------|
| 5 VAC/VDC         |           | SLL-06        | SLL-06H          |
| 12 VAC/VDC        |           | SLL-14        | SLL-14H          |
| 24 VAC/VDC        |           | SLL-28        | SLL-28H          |

Note: The low-voltage lamp has an advantage in that it generates less heat.

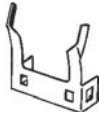
**Switch** (common to both LED models and incandescent lamp-lighted models)

| Appearance            |                           |           |                     | Rectan-<br>gular<br>models                                                        | Square<br>models                                                                    | Selection precautions                                                                                                                                                                                                                                                                                                                                        |
|-----------------------|---------------------------|-----------|---------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact type          | Number<br>of<br>outputs   | Operation |                     |  |  |                                                                                                                                                                                                                                                                                                                                                              |
| Stand-<br>ard<br>load | Silver<br>contacts        | 1         | Momentary operation | A3SJ-8010                                                                         | A3SA-7010                                                                           | <ul style="list-style-type: none"> <li>Use the Socket Unit in combination with the same shape Operation Unit (rectangular or square). Example: For the A3SJ-5801 Rectangular Operation Unit, select the A3SJ-8□□0 Socket Unit.</li> <li>Momentary operation is self-resetting, and alternate operation is self-holding (i.e., push-on, push-off).</li> </ul> |
|                       |                           |           | Alternate operation | A3SJ-8020                                                                         | A3SA-7020                                                                           |                                                                                                                                                                                                                                                                                                                                                              |
|                       |                           | 2         | Momentary operation | A3SJ-8030                                                                         | A3SA-7030                                                                           |                                                                                                                                                                                                                                                                                                                                                              |
|                       |                           |           | Alternate operation | A3SJ-8040                                                                         | A3SA-7040                                                                           |                                                                                                                                                                                                                                                                                                                                                              |
| Micro-<br>load        | Gold<br>alloy<br>contacts | 1         | Momentary operation | A3SJ-8050                                                                         | A3SA-7050                                                                           |                                                                                                                                                                                                                                                                                                                                                              |
|                       |                           |           | Alternate operation | A3SJ-8060                                                                         | A3SA-7060                                                                           |                                                                                                                                                                                                                                                                                                                                                              |
|                       |                           | 2         | Momentary operation | A3SJ-8070                                                                         | A3SA-7070                                                                           |                                                                                                                                                                                                                                                                                                                                                              |
|                       |                           |           | Alternate operation | A3SJ-8080                                                                         | A3SA-7080                                                                           |                                                                                                                                                                                                                                                                                                                                                              |

## Ordering Information

### Accessories, Replacements, and Tools

#### Accessories for Rectangular Models

| Name                | Appearance                                                                        | Classification               | Model            | Application precautions                                                                                                                                                                                                                                   |
|---------------------|-----------------------------------------------------------------------------------|------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Barrier             |  | Short edge Barriers (1 pair) | <b>A3SA-4001</b> | The purpose of a Barrier is to prevent malfunctioning and to improve design image of the mounting panel. There is one intermediate Barrier and one pair of edge Barriers (2 Barriers). Mount Short Barriers horizontally. Mount Long Barriers vertically. |
|                     |                                                                                   | Short intermediate Barriers  | <b>A3SA-4002</b> |                                                                                                                                                                                                                                                           |
|                     |                                                                                   | Long edge Barriers (1 pair)  | <b>A3SJ-4003</b> |                                                                                                                                                                                                                                                           |
|                     |                                                                                   | Long intermediate Barriers   | <b>A3SJ-4004</b> |                                                                                                                                                                                                                                                           |
| Switch Guard        |  | —                            | <b>A3SJ-5050</b> | Cannot be used with Barrier or Seal Cover.                                                                                                                                                                                                                |
| Seal Cover          |  | —                            | <b>A3SJ-5060</b> | <ul style="list-style-type: none"> <li>Cannot be used with Barrier or Switch Guard.</li> <li>Cap material: Vinyl chloride</li> </ul>                                                                                                                      |
| Long Mounting Plate |  | 1 pair                       | <b>A3SJ-3002</b> | Use when vertically mounting individual (with Barrier) or multiple Switches (in standard mounting style and with Barrier). A Short Mounting Plate is attached to the Switch; replace it with the long one.                                                |

#### Accessories for Square Models

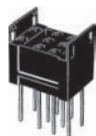
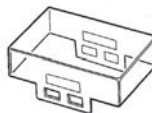
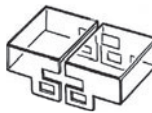
| Name         | Appearance                                                                          | Classification               | Model            | Application precautions                                                                                                              |
|--------------|-------------------------------------------------------------------------------------|------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Barrier      |   | Short Edge Barriers (1 pair) | <b>A3SA-4001</b> | The purpose of the Barrier is to prevent malfunctioning and to improve design image of the mounting panel.                           |
|              |                                                                                     | Short Intermediate Barrier   | <b>A3SA-4002</b> |                                                                                                                                      |
| Switch Guard |  | —                            | <b>A3SA-5050</b> | Cannot be used with Barrier or Seal Cover.                                                                                           |
| Seal Cover   |  | —                            | <b>A3SA-5060</b> | <ul style="list-style-type: none"> <li>Cannot be used with Barrier or Switch Guard.</li> <li>Cap material: Vinyl chloride</li> </ul> |

■ Accessory mounting: Refer to page 19.

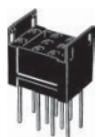
## Ordering Information

### Accessories, Replacements, and Tools

#### Replacements for Rectangular Models

| Name             | Appearance                                                                        | Classification      |                | Model     | Application precautions                                                                                                                                                                               |
|------------------|-----------------------------------------------------------------------------------|---------------------|----------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Socket           |  | Wire-wrap terminals |                | A3SJ-4104 | • Sockets cannot be used for multiple mounting.                                                                                                                                                       |
|                  |                                                                                   | PCB terminals       |                | A3SJ-4105 |                                                                                                                                                                                                       |
|                  |                                                                                   | Solder terminals    |                | A3SJ-4106 |                                                                                                                                                                                                       |
| Dispersion plate |  | Milk-white          | Single screen  | A3SJ-5107 | —                                                                                                                                                                                                     |
| Color cap        |  | Transparent         | Single screen  | A3SJ-5600 | • Contact your OMRON representative for color changes or inscribing.<br>• If LEDs are to be used, use a color cap that matches the LED color.<br>• The blue color cap is only for incandescent lamps. |
|                  |                                                                                   | White               |                | A3SJ-5601 |                                                                                                                                                                                                       |
|                  |                                                                                   | Red                 |                | A3SJ-5602 |                                                                                                                                                                                                       |
|                  |                                                                                   | Green               |                | A3SJ-5603 |                                                                                                                                                                                                       |
|                  |                                                                                   | Blue                |                | A3SJ-5604 |                                                                                                                                                                                                       |
|                  |                                                                                   | Yellow              |                | A3SJ-5605 |                                                                                                                                                                                                       |
|                  |  | Transparent         | 2-split screen | A3SJ-5630 |                                                                                                                                                                                                       |
|                  |                                                                                   | White               |                | A3SJ-5631 |                                                                                                                                                                                                       |
|                  |                                                                                   | Red                 |                | A3SJ-5632 |                                                                                                                                                                                                       |
|                  |                                                                                   | Green               |                | A3SJ-5633 |                                                                                                                                                                                                       |
|                  |                                                                                   | Blue                |                | A3SJ-5634 |                                                                                                                                                                                                       |
|                  |                                                                                   | Yellow              |                | A3SJ-5635 |                                                                                                                                                                                                       |
| Legend plate     |  | Transparent         |                | A3SJ-4204 | A transparent legend plate is mounted on the Operation Unit.                                                                                                                                          |
|                  |                                                                                   | Milk-white          |                | A3SJ-4203 |                                                                                                                                                                                                       |

#### Replacements for Square Models

| Name             | Appearance                                                                          | Classification      |  | Model     | Application precautions                                                                                                                                                                                     |
|------------------|-------------------------------------------------------------------------------------|---------------------|--|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Socket           |  | Wire-wrap terminals |  | A3SA-4101 | • Sockets cannot be used for multiple mounting.                                                                                                                                                             |
|                  |                                                                                     | PCB terminals       |  | A3SA-4102 |                                                                                                                                                                                                             |
|                  |                                                                                     | Solder terminals    |  | A3SA-4103 |                                                                                                                                                                                                             |
| Dispersion plate |  | Milk-white          |  | A3SA-5107 | –                                                                                                                                                                                                           |
| Color cap        |  | Transparent         |  | A3SA-5600 | <ul style="list-style-type: none"> <li>• Contact your OMRON representative for color changes or inscribing.</li> <li>• If LED colors are to be used, use a color cap that matches the LED color.</li> </ul> |
|                  |                                                                                     | White               |  | A3SA-5601 |                                                                                                                                                                                                             |
|                  |                                                                                     | Red                 |  | A3SA-5602 |                                                                                                                                                                                                             |
|                  |                                                                                     | Green               |  | A3SA-5603 |                                                                                                                                                                                                             |
|                  |                                                                                     | Blue                |  | A3SA-5604 |                                                                                                                                                                                                             |
|                  |                                                                                     | Yellow              |  | A3SA-5605 |                                                                                                                                                                                                             |
| Legend plate     |  | Transparent         |  | A3SA-4204 | A transparent color cap is mounted to a standard Display. Legend plates cannot be used, however, with Displays for incandescent lamps.                                                                      |
|                  |                                                                                     | Milk-white          |  | A3SA-4203 |                                                                                                                                                                                                             |

#### Tools

| Name      | Appearance                                                                          | Classification | Model     | Application precautions                       |
|-----------|-------------------------------------------------------------------------------------|----------------|-----------|-----------------------------------------------|
| Extractor |  | –              | A3PJ-5080 | Convenient for extracting the Operation Unit. |

■ Accessory mounting: Refer to page 19.

## Specifications

### Approved Standard Ratings

UL (File No. E41515), CSA (File No. LR45258)

Standard Load: 3 A at 125 VAC

2 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.

### Ratings

#### For Standard Loads

| Rated voltage | Non-inductive load (A) |    |           |     | Inductive load (A) |    |            |     |
|---------------|------------------------|----|-----------|-----|--------------------|----|------------|-----|
|               | Resistive load         |    | Lamp load |     | Inductive load     |    | Motor load |     |
|               | NC                     | NO | NC        | NO  | NC                 | NO | NC         | NO  |
| 125 VAC       | 3                      |    | 1         | 0.7 | 2                  |    | 1.5        | 1   |
| 250 VAC       | 2                      |    | 0.7       | 0.5 | 1.5                |    | 1          | 0.7 |
| 8 VDC         | 3                      |    | 1         |     | 2                  |    | 1.5        |     |
| 14 VDC        | 3                      |    | 1         |     | 1.5                |    | 1.5        |     |
| 30 VDC        | 2                      |    | 1         |     | 1.5                |    | 1          |     |
| 125 VDC       | 0.4                    |    | 0.05      |     | 0.4                |    | 0.05       |     |
| 250 VDC       | 0.2                    |    | 0.03      |     | 0.2                |    | 0.03       |     |

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.

The rated values are for testing conducted under the following conditions.

(1) Ambient temperature: 20±2°C

(2) Ambient humidity: 65% ±5%RH

(3) Operating frequency: 20 times/min

#### For Microloads

|                         |                                                                        |
|-------------------------|------------------------------------------------------------------------|
| Rating                  | 0.1 A at 30 VDC (resistive load);<br>0.1 A at 125 VAC (resistive load) |
| Minimum applicable load | 1 mA at 5 VDC                                                          |

### LED Lamp

| Type    | Applied voltage | Rated voltage | Rated current | Built-in limiting resistance |
|---------|-----------------|---------------|---------------|------------------------------|
| DC only | 5 VDC±5%        | 5 VDC         | 30 mA         | 39 Ω                         |
|         | 12 VDC±5%       | 12 VDC        | 15 mA         | 270 Ω                        |
|         | 24 VDC±5%       | 24 VDC        | 12.5 mA       | 1300 Ω                       |

### Incandescent Lamp

| Applied voltage | Rated voltage | Standard lamp | Low-power lamp |
|-----------------|---------------|---------------|----------------|
|                 |               | Rated current | Rated current  |
| 5 VAC/VDC       | 6 VAC/VDC     | 200 mA        | 100 mA         |
| 12 VAC/VDC      | 14 VAC/VDC    | 80 mA         | 40 mA          |
| 24 VAC/VDC      | 28 VAC/VDC    | 40 mA         | 25 mA          |

## Characteristics

|                                 |                                                           |                                                                                                                                                                       |
|---------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating frequency             | Mechanical                                                | Momentary operation models: 120 operations/min max. *1                                                                                                                |
|                                 | Electrical                                                | 20 operations/min max.                                                                                                                                                |
| Insulation resistance           |                                                           | 100 MΩ min. (at 500 VDC)                                                                                                                                              |
| Dielectric strength             | Between terminals of same polarity                        | 1,000 VAC, 50/60 Hz for 1 minute                                                                                                                                      |
|                                 | Between terminals of different polarity                   | 2,000 VAC, 50/60 Hz for 1 minute                                                                                                                                      |
|                                 | Between current-carrying metal part and ground            | 2,000 VAC, 50/60 Hz for 1 minute                                                                                                                                      |
|                                 | Between each terminal and non-current-carrying metal part | 2,000 VAC, 50/60 Hz for 1 minute                                                                                                                                      |
|                                 | Between lamp terminals                                    | 1,000 VAC, 50/60 Hz for 1 minute *2                                                                                                                                   |
| Vibration resistance            | Malfunction                                               | 10 to 55 Hz, 1.5-mm double amplitude (1 ms max.)                                                                                                                      |
| Shock resistance                | Destruction                                               | 500 m/s <sup>2</sup> max.                                                                                                                                             |
|                                 | Malfunction                                               | 200 m/s <sup>2</sup> max. (1 ms max.)                                                                                                                                 |
| Life expectancy                 | Mechanical                                                | Momentary operation models: 1,000,000 operations min.<br>Alternate operation models: 100,000 operations min.<br>(One operation consists of set and reset operations.) |
|                                 | Electrical                                                | 100,000 operations min. (rated load)                                                                                                                                  |
| Weight                          |                                                           | Approx. 10 g                                                                                                                                                          |
| Inrush current                  | NC                                                        | Standard load: 10 A max.                                                                                                                                              |
|                                 | NO                                                        | Standard load: 10 A max.                                                                                                                                              |
| Ambient operating temperature   |                                                           | -10 to 50°C<br>(with no icing or condensation)                                                                                                                        |
| Ambient operating humidity      |                                                           | 35% to 85% RH                                                                                                                                                         |
| Ambient storage temperature     |                                                           | -25 to 65°C<br>(with no icing or condensation)                                                                                                                        |
| Degree of protection            |                                                           | IP00                                                                                                                                                                  |
| Electric shock protection class |                                                           | Class II                                                                                                                                                              |
| PTI (proof tracking index)      |                                                           | 175                                                                                                                                                                   |
| Pollution degree                |                                                           | 3 (IEC 60947-5-1)                                                                                                                                                     |

\*1. With alternate operation models, 60 operations/min max. One operation cycle consists of set and reset operations.

\*2. With no incandescent lamp or LED lamp mounted.

## Operating Characteristics

| Operation                 |          | Momentary operation models | Alternate operation models |
|---------------------------|----------|----------------------------|----------------------------|
| Operating characteristics |          |                            |                            |
| Operating force           | OF max.  | 3.92 N                     | 4.90 N                     |
| Releasing force           | RF min.  | 0.49 N                     | 0.294 N                    |
| Total travel              | TT       | Approx. 3 mm               | Approx. 3 mm               |
| Pretravel                 | PT max.  | 2.2 mm                     | 2.2 mm                     |
| Lock travel alternate     | LTA min. | —                          | 0.5 mm                     |

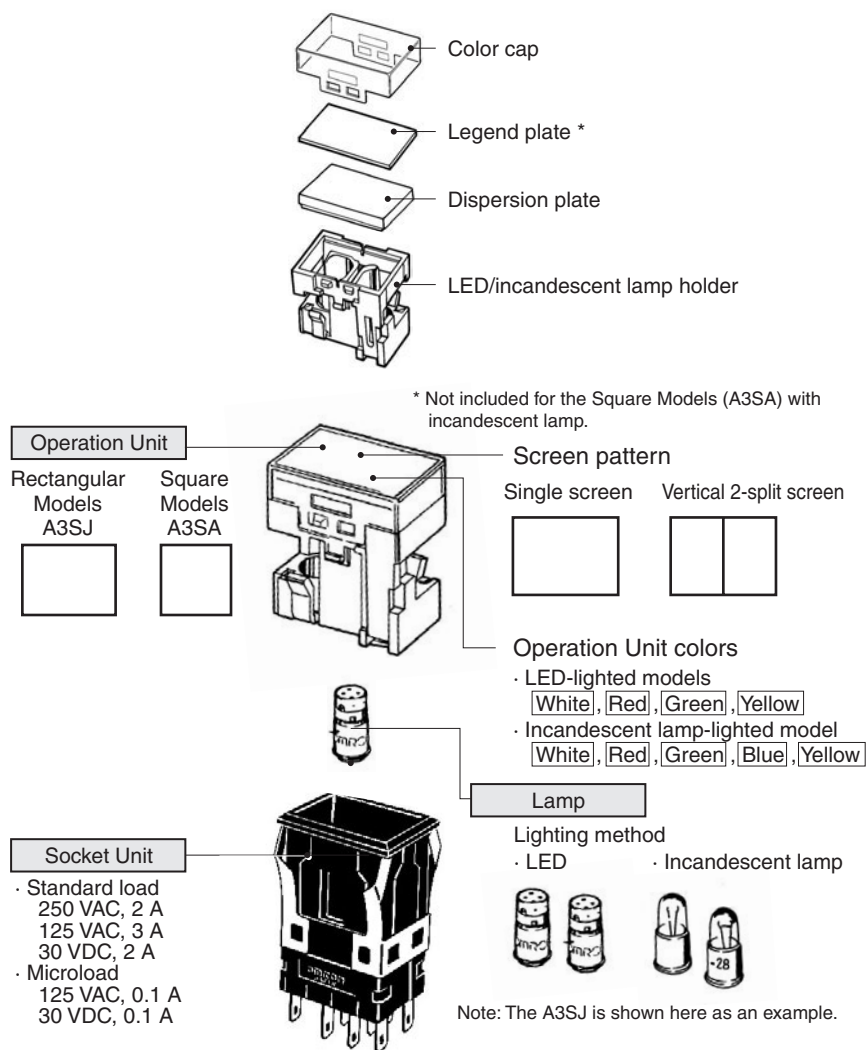
## Contact Form

| Name                  | Contact Form                                                       |
|-----------------------|--------------------------------------------------------------------|
| Double-throw contacts | <p>COM ——— F ——— NC<br/>                                  — NO</p> |

## Nomenclature

### Model Structure

#### Operation Unit Structure

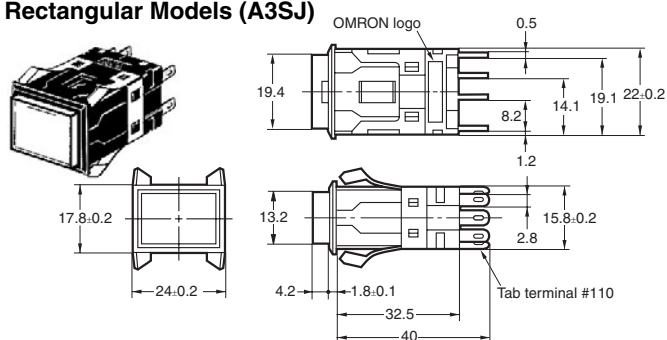


## Dimensions

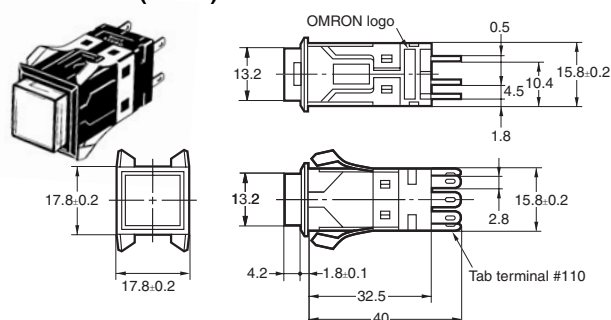
The Dimension shows 2-switch outputs.

(Unit: mm)

## Rectangular Models (A3SJ)



## Square Models (A3SA)

Note: Unless specified, a tolerance of  $\pm 0.4$  mm applies for all dimensions. Use a mounting panel thickness of 1 to 4 mm.

## Terminal Arrangement

Bottom View (All are shown with the OMRON logo facing down.)

| Rectangular Models (A3SJ)                                                           |                                                                                              | Square Models (A3SA)                                               |                                                                        |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------|
| SPDT                                                                                | DPDT                                                                                         | SPDT                                                               | DPDT                                                                   |
| <p>Terminal arrangement for Rectangular SPDT: NC1, LA+, NO1, LA-, C1, LB-, LB+.</p> | <p>Terminal arrangement for Rectangular DPDT: NC1, NC2, LA+, NO1, NO2, LB-, LB+, C1, C2.</p> | <p>Terminal arrangement for Square SPDT: NC1, L+, NO1, L-, C1.</p> | <p>Terminal arrangement for Square DPDT: NC1, NC2, L+, L-, C1, C2.</p> |

Note: The arrangements given above are not indicated on the Socket Unit.

## Contact Type

Incandescent Lamp-lighted Models (The terminal arrangements are the same as for the LED-lighted models.)

| Type | Model | Rectangular Models (A3SJ)   | Square Models (A3SA)  |
|------|-------|-----------------------------|-----------------------|
| SPDT | SPDT  | <p>Terminal arrangement</p> | <p>Lighting block</p> |
|      |       | <p>Terminal arrangement</p> | <p>Lighting block</p> |
| DPDT | DPDT  | <p>Terminal arrangement</p> | <p>Lighting block</p> |
|      |       | <p>Terminal arrangement</p> | <p>Lighting block</p> |

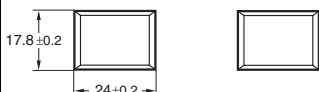
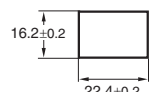
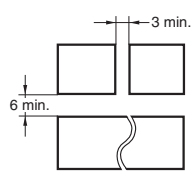
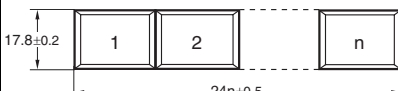
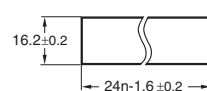
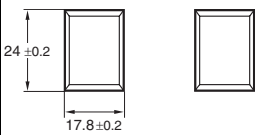
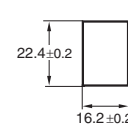
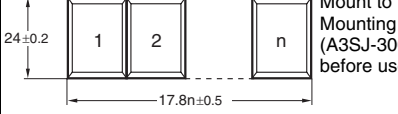
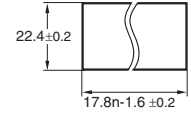
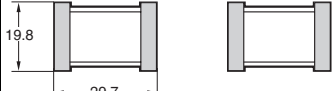
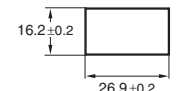
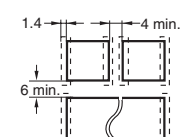
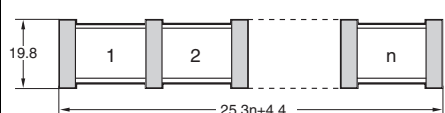
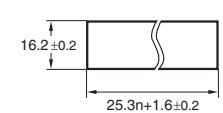
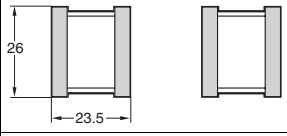
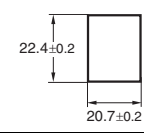
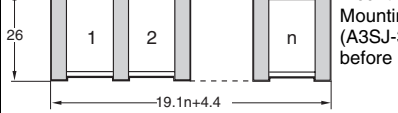
## LED Lamp-lighted Models

| Type | Model | Rectangular Models (A3SJ)   | Square Models (A3SA)  |
|------|-------|-----------------------------|-----------------------|
| SPDT | SPDT  | <p>Terminal arrangement</p> | <p>Lighting block</p> |
|      |       | <p>Terminal arrangement</p> | <p>Lighting block</p> |
| DPDT | DPDT  | <p>Terminal arrangement</p> | <p>Lighting block</p> |
|      |       | <p>Terminal arrangement</p> | <p>Lighting block</p> |

## Dimensions

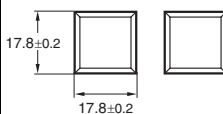
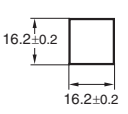
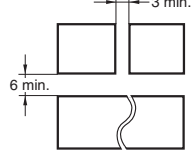
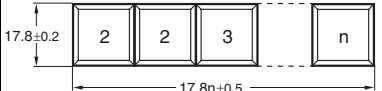
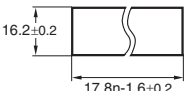
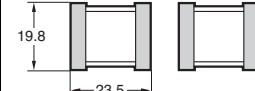
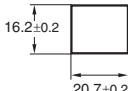
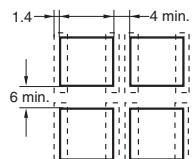
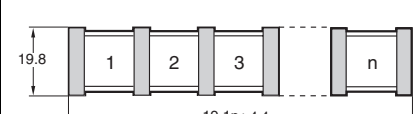
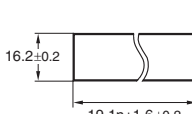
**Panel Cutout** (If using a Switch Guard or Seal Cover, refer to the panel cutout diagrams on page 17.)

### Rectangular Models (A3SJ)

| Classification       | Mounting design                                                                                                      | Panel cutout                                                                         | Remarks                                                                                                                             |
|----------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Flange mount models  | Individual mounting, horizontal<br> |    | Panel cutout spacing between rows of Units:<br>  |
|                      | Multiple mounting, horizontal<br>   |    |                                                                                                                                     |
|                      | Individual mounting, vertical<br>   |    |                                                                                                                                     |
|                      | Multiple mounting, vertical<br>     |    |                                                                                                                                     |
| Barrier mount models | Individual mounting, horizontal<br> |    | Panel cutout spacing between rows of Units:<br> |
|                      | Multiple mounting, horizontal<br>  |   |                                                                                                                                     |
|                      | Individual mounting, vertical<br> |  |                                                                                                                                     |
|                      | Multiple mounting, vertical<br>   |  |                                                                                                                                     |

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

### Square Models (A3SA)

| Classification       | Mounting design                                                                                            | Panel cutout                                                                         | Remarks                                                                                                                              |
|----------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Flange mount models  | Individual mounting<br> |   | Panel cutout spacing between rows of Units:<br> |
|                      | Multiple mounting<br>   |  |                                                                                                                                      |
| Barrier mount models | Individual mounting<br> |   | Panel cutout spacing between rows of Units:<br> |
|                      | Multiple mounting<br>   |  |                                                                                                                                      |

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

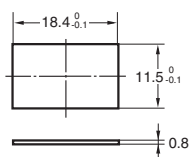
## Dimensions

### Accessory Mounting Dimensions

#### Legend Plate

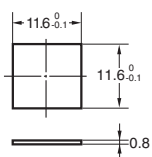
##### Rectangular Models

##### A3SJ-4203/-4204

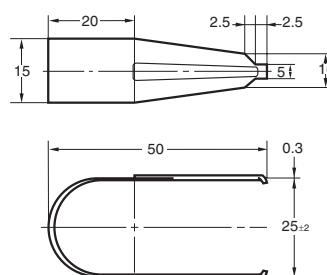


##### Square Models

##### A3SA-4203/-4204



#### Extractor A3PJ-5080



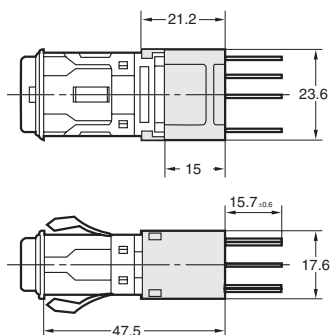
Note: Made from stainless steel.

### Socket-mounting Dimensions

#### Rectangular Models

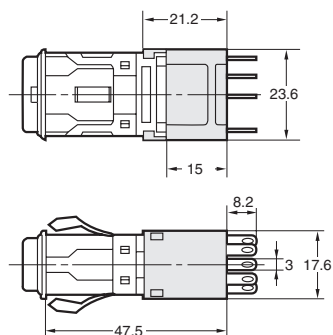
##### Wire-wrap Terminals

##### A3SJ-4104



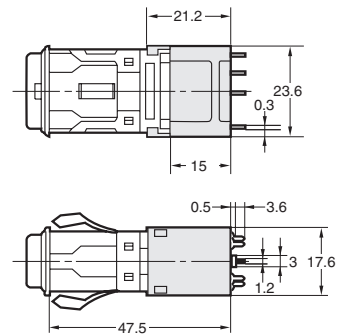
##### Solder Terminals

##### A3SJ-4106

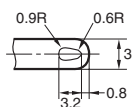


##### PCB Terminals

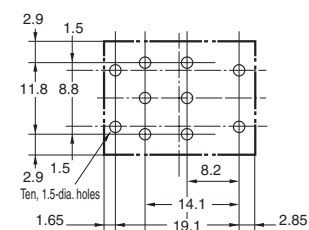
##### A3SJ-4105



#### Terminal Hole Dimensions



#### PCB Cutout (Bottom View)

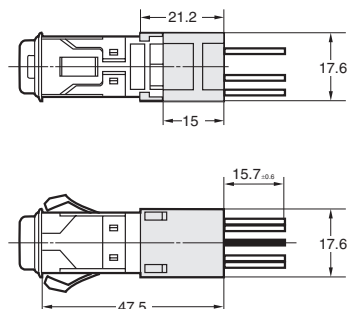


## Dimensions

### Square Models

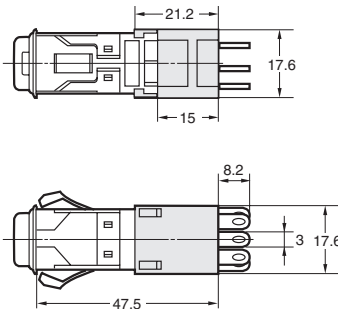
#### Wire-wrap Terminals

##### A3SA-4101



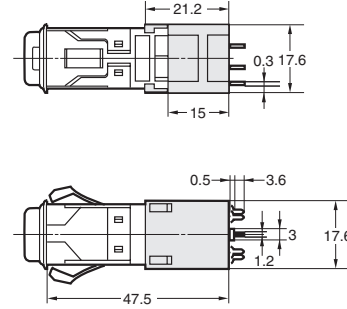
#### Solder Terminals

##### A3SA-4103

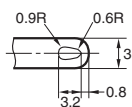


#### PCB Terminals

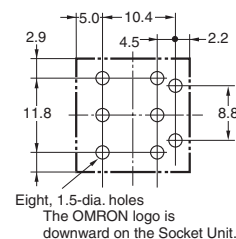
##### A3SA-4102



#### Terminal Hole Dimensions



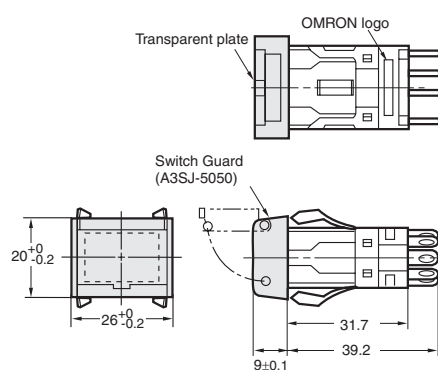
#### PCB Cutout (bottom view)



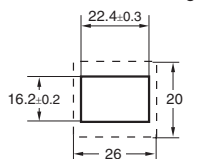
### Switch and Guard Mounting Dimensions

#### Rectangular Models

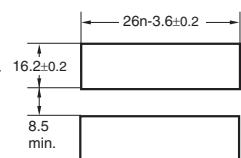
##### A3SJ-5050



#### Panel Cutouts Individual Mounting

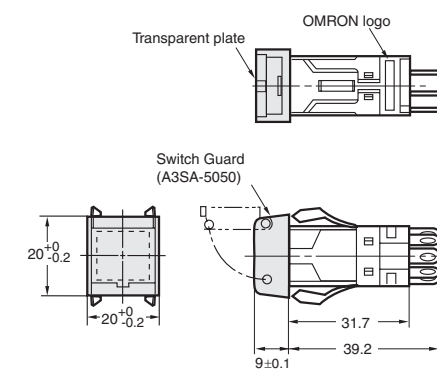


#### Multiple Mounting, horizontal

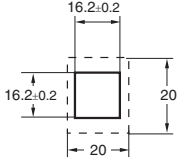


#### Square Models

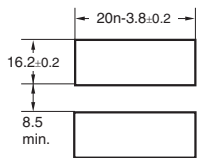
##### A3SA-5050



#### Panel Cutouts Individual Mounting



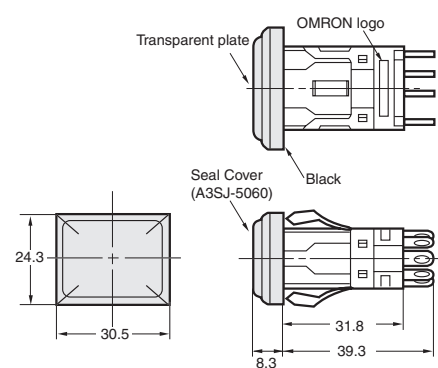
#### Multiple Mounting, horizontal



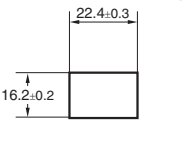
### Seal Cover Mounting Dimensions

#### Rectangular Models

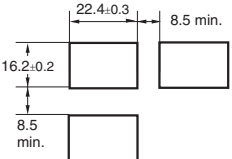
##### ASJ-5060



#### Panel Cutouts Individual Mounting

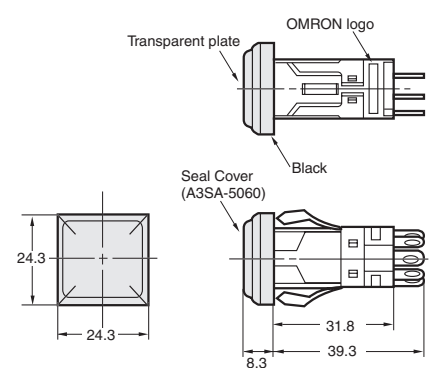


#### Multiple Mounting, horizontal

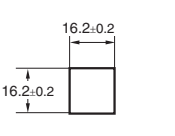


#### Square Models

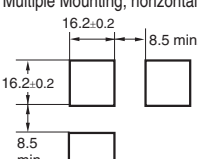
##### A3SA-5060



#### Panel Cutouts Individual Mounting



#### Multiple Mounting, horizontal



Note: 1. Recommended panel thickness: 1.0 to 3.3 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**.

### Precautions for Correct Use

#### Mounting

- 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.

#### Wiring

- For wiring, use a wire size that is appropriate for the applied voltage and the supplied current. Be sure to perform soldering according to the following conditions. Using the Switch with incomplete soldering may result in errors and heat, which may cause fire.
  - Manual soldering: Use a soldering iron with a tip temperature of 350°C maximum and complete soldering within 3 seconds.
  - Dip soldering: Solder at 350°C for 3 s or less. Wait for one minute after soldering before exerting any external force on the solder.
- Use non-corrosive liquid rosin as the flux.
- If screw-tightened terminals are used, hold the Socket Unit Set or Socket Unit and install the lead wiring applying a torque of less than 0.98 N·m to the Socket Unit. Applying a torque of more than 0.98 N·m may result in damage. The tightening torque is 0.59 to 0.78 N·m.
- Make sure that the insulating sheath of the wires does not come in contact with the Unit. If wiring is performed with the insulating sheath of the wires coming in contact with the Unit, use wire with a minimum heat resistance of 100°C.
- After wiring the Switch, make sure that there is a suitable isolation distance.

#### Operating Environment

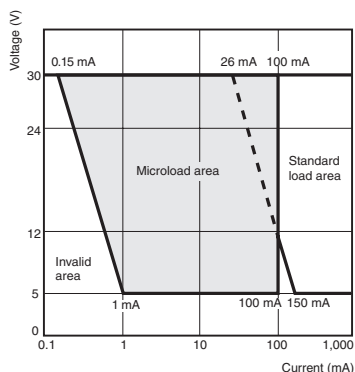
- Do not use in locations that are subject to dust, oil, or metal fillings, because these may penetrate the interior the Switch and cause malfunction.

#### Using Microloads

- Using a standard load switch when a microload circuit is opened or closed may cause wear 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 contacts are opened or closed, it may cause the contact surface to become rough, and so decrease life expectancy. Therefore, insert a contact protection circuit where necessary.

The minimum applicable load is the N-level reference value. This value indicates the malfunction reference level for the reliability level of 60% ( $\lambda 60$ ) (conforming to JIS C5003).

The equation  $\lambda 60 = 0.5 \times 10^{-4}/\text{time}$  indicates that the estimated malfunction rate is less than 1/2,000,000 with a reliability level of 60%.



#### LED Lamp

- A current-limiting resistor for the LED lamp is built in, so no external resistor is required.

| Rated voltage | Built-in limiting resistance |
|---------------|------------------------------|
| 5 VDC         | 39 $\Omega$                  |
| 12 VDC        | 270 $\Omega$                 |
| 24 VDC        | 1300 $\Omega$                |

#### Incandescent Lamp

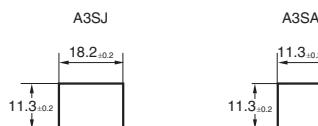
- It is advantageous in terms of service life and heat generation to apply 80% of the rated voltage (operating voltage) to the incandescent lamp.

#### Operation

- Always mount the Operation Unit before operating the Switch. (Using your fingers or tweezers to operate moving parts of the Switch may deform internal parts and cause malfunctions.)

#### Character Film

- If the character film is to be specially prepared, use heat-resistant film with a maximum thickness of 0.2 mm.



#### Others

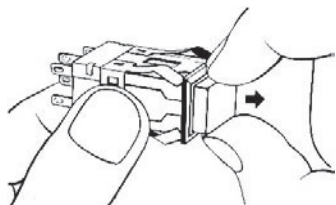
- If the panel is to be finished (e.g., coated), make sure that the panel meets the specified dimensions after the coating.

## Application

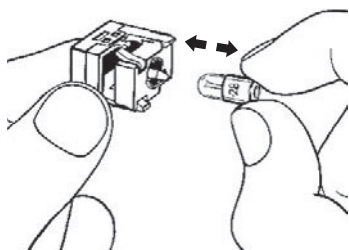
### Replacing Incandescent and LED Lamps and Panel Mounting

#### Removing the Display

- Grasp the groove on the color cap surface, and pull it firmly toward you to remove the Display.
- An Extractor (A3PJ-5080) is available to conveniently remove the Display.

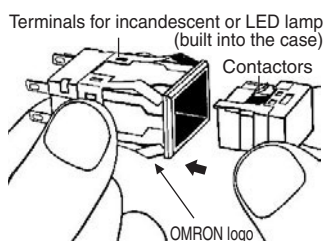


#### Mounting and Replacing Incandescent and LED Lamps



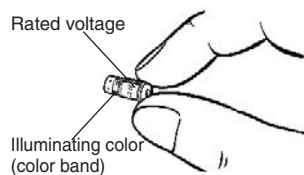
#### Inserting the Display into the Socket Unit

Insert the Operation Unit in the proper direction. With the OMRON logo downward, insert the Operation Unit so that the lamp/LED terminals on the inside surface of the Unit case and the contactors of the Display.



#### Rated Voltage and Color of LED

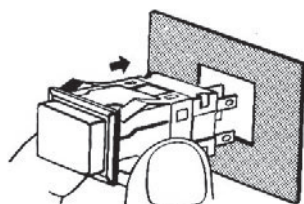
The LED voltage rating is indicated on the base. Use the LED within  $\pm 5\%$  of voltage range.



#### Mounting to the Switch Panel

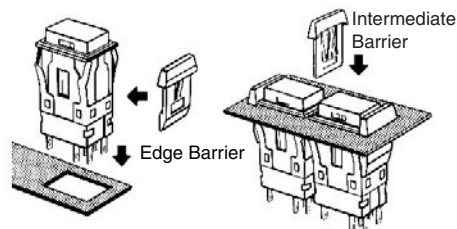
Mount the Socket Unit to the panel by inserting it from the front of the panel.

Mount the Socket Unit so that the OMRON logo is downward.



#### Barrier Mounting

- Place the Edge Barrier on the side of the Socket Unit, and then insert it into the panel.
- Insert the Intermediate Barrier between the Switches after inserting the Socket Units into the panel.



#### Inscribing Legend Plate Characters

##### Inscribing

A3SJ (M2SJ)

- Inscription depth: 0.5 mm max.
- The legend plate is made of polycarbonate, so apply an alcohol-based paint coating, such as melamine, phthalate, or acrylic resin paint when marking the legend.



Legend plate

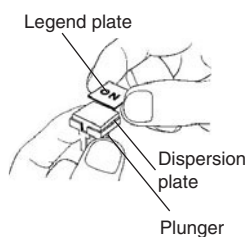
- When replacing the legend plate, be careful that the coil spring in the Display does not become removed.

## Assembling the Legend Plate (Plunger)

### A3SA (M2SA)

(LED Lamp)

- (1) Assemble the color plate to the plunger, and then assemble the legend plate on top.

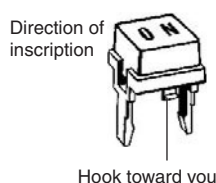


(Incandescent Lamp)

- (2) Inscribe the surface of the plunger, and then coat the surface.

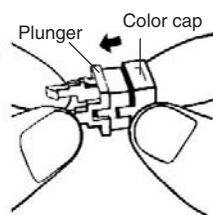
### Lighted Square Pushbutton Switches

Assemble models A3SA-5301 to A3SA-5305 so that the hook is toward you.



Note: Legend plates cannot be used with A3SA Displays for incandescent lamps.

- (3) Assemble the color cap to the inscribed plunger.

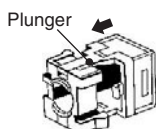


- (4) Push in the color in the direction of the arrow to assemble the plunger and the lamp holder.

### Lighted Square Pushbutton Switches

A3SA

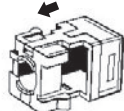
Perform the assembly so that the wide groove and the hook on the plunger are in the same direction.



### Indicator

M2SA

Perform the assembly so that the wide groove and the hook on the plunger are in the same direction.



## 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.

2010.10

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

**OMRON Corporation**  
Industrial Automation Company

<http://www.ia.omron.com/>

(c)Copyright OMRON Corporation 2010 All Right Reserved.

# Mouser Electronics

Authorized Distributor

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

Omron:

[A3SA-90D1-05EG](#) [A3SA-4502](#) [A3SA-5802](#) [A3SA-5803](#) [A3SJ-5801](#) [A3SJ-5802](#) [A3SJ-5805](#)

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)

[www.lifeelectronics.ru](http://www.lifeelectronics.ru)