

CSM_A3K_DS_E_4_1

Sense of Touch and Protection Ability Improved over OMRON's Previous Models. **Miniature Design Achieved with Body** Length of 23 mm.

- Combines miniature design with distinct but soft sense of operation.
- Five colors (red, yellow, green, white, and blue) with LEDs. (A green LED is used for blue.)
- Improved sense of touch with built-in Basic Switch.
- Built-in Basic Switch improves protection over OMRON's previous models.
- Chip LED produces even surface brightness.
- Easy panel mounting from the front.



Refer to Safety Precautions for All Pushbutton Switches/ Indicators and Safety Precautions on page 15.

List of Models

Lighted Pushbutton Switches

Appearance	Model
Rectangular	
	A3KJ
Square	
	АЗКА

■ Specifications: Refer to page 10.

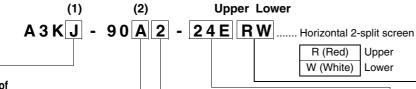
■ Accessories: Refer to pages 8 to 9.

■ Dimensions: Refer to page 12.

Model Number Structure

Model Number LegendThe model numbers used to order sets of Units are illustrated below. One set comprises the Operation Unit (LED built in) and Socket Unit.

For information on combinations, refer to Ordering Information on page 3.



(1) Shape of **Operation Unit**

Symbol	Shape
J	Rectangular
Α	Square

(2) Switch Specifications Standard Load

Symbol	Operation	Contacts
Α	Momentary	SPDT
В	Alternate	SPDI
С	Momentary	DPDT
D	Alternate	DEDI

Microload

Symbol	Operation	Contacts
Е	Momentary	SPDT
F	Alternate	SPDT
G	Momentary	DPDT
Н	Alternate	DEDT

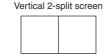
- Standard Load 250 VAC, 3 A 30 VDC, 3 A
- Microload 125 VAC, 0.1 A 30 VDC, 0.1 A
- Minimum applicable load 5 VDC, 1 mA
- Momentary operation: Self-resetting
- ▶ Alternate operation: Self-holding

(3) Screen Pattern Illumination-only models

Symbol Screen pattern

1	Single screen
2	Horizontal 2-split screen (rectangular models only)

The screen patterns listed below can be ordered individually. Refer to page 6 for details.



(rectangular models only)

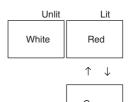
(4) Lighting Method (5) Color of Display

Symbol	Operating voltage
05E	5 VDC
12E	12 VDC
24E	24 VDC

Only for LED models.

Symbol	Color		
R	Red		
Υ	Yellow		
G	Green		
W	White		
Α	Blue		
К	Red/green 2-color lighting (rectangular models only)		

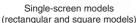
Red/green 2-color lighting:



Green

Type







Vertical 2-split screen models (See note 1.) (rectangular models only)



Horizontal 2-split screen models (rectangular models only)

Note: 1. Vertical 2-split screen models can be ordered only individually. Refer to page 6.

- 2. A legend plate and LED (with current-limiting resistor) are built into a standard Display.
- 3. Split-screen color configurations are given with the OMRON mark on the Switch facing down.
- 4. The following table lists the colors of the built-in legend plate.

Single screen

Operation Unit color Legend plate	White	Red	Green	Blue	Yellow	Two-color lighting (red/green)
Milk-white	0			0		0
Transparent		0	0		0	

2-split screen

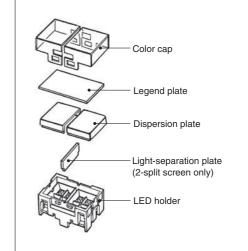
Color combination	White	Red	Green	Blue	Yellow
White	Milk-white	Milk-white	Milk-white	Milk-white	Milk-white
Red	Milk-white	Transparent	Transparent	Milk-white	Transparent
Green	Milk-white	Transparent	Transparent	Milk-white	Transparent
Blue	Milk-white	Milk-white	Milk-white	Milk-white	Milk-white
Yellow	Milk-white	Transparent	Milk-white	Milk-white	Transparent

Examples: White/red split colors: One milk-white legend plate Green/red split colors:

One transparent legend plate

Structure of Split-screen Operation Unit

(Example: Vertical 2-split screen)



itch
t

Standard Loads

Rectangular Models

Standard Loads



	Co	ontact type	Standard load (250 V															
Screen pattern	Operation Screen pattern Output		Momentary operation (Self-resetting) Alternate operation (Self-holding)		Operation Unit color symbol													
		5 VDC	A3KJ-90A1-05E ∆	A3KJ-90B1-05E∆														
	SPDT	SPDT	SPDT	SPDT	SPDT	SPDT	SPDT	12 VDC	A3KJ-90A1-12E∆	A3KJ-90B1-12E∆	Insert a color symbol in Δ at the end of the model							
Single screen								24 VDC	A3KJ-90A1-24E∆	A3KJ-90B1-24E∆	number.							
Siligle screen	DPDT	DPDT	DPDT	DPDT	5 VDC	A3KJ-90C1-05E∆	A3KJ-90D1-05E∆	R (red), W (white) * Y (yellow), A (blue) *										
					DPDT	DPDT	DPDT	DPDT	DPDT	DPDT	DPDT	DPDT	DPDT	DPDT	12 VDC	A3KJ-90C1-12E∆	A3KJ-90D1-12E∆	G (green), K (red/green)
					24 VDC	A3KJ-90C1-24E∆	A3KJ-90D1-24E∆											
Horizontal 2-	SPDT	24 VDC	A3KJ-90A2-24E∆□	A3KJ-90B2-24E∆□														
split screen	DPDT	24 VDC	A3KJ-90C2-24E∆□	A3KJ-90D2-24E∆□	model number. R (red), W (white) * Y (yellow), A (blue) * Green *													

^{*} Yellow and green LEDs are used.

Microloads

Contact type Operation			Microload (125 VAC, 0.1 A; 30 VDC, 0.1 A)	Operation Unit color symbol	
Screen pattern Output			Momentary operation (Self-resetting)	- ,	
		5 VDC	A3KJ-90E1-05E∆		
	SPDT	12 VDC	A3KJ-90E1-12E∆	Insert a color symbol in the A at the end of the model	
Single screen		24 VDC	A3KJ-90E1-24E∆	number.	
Single Screen	DPDT	5 VDC	A3KJ-90G1-05E∆	R (red), W (white) * Y (yellow), A (blue) *	
		12 VDC	A3KJ-90G1-12E∆	G (green), K (red/green)	
		24 VDC	A3KJ-90G1-24E∆		
Horizontal 2- split screen	SPDT	24 VDC	A3KJ-90E2-24E∆□		
	DPDT	24 VDC	A3KJ-90G2-24E∆□	model number. R (red), W (white) * Y (yellow), A (blue) * G (green)	

Note: Alternate operation models are also available. Refer to page 7 for model numbers. * Yellow and green LEDs are used.

Individual models: Refer to pages 5 to 7. (The Pushbutton and Switch can be ordered separately.)

■ Specifications: Refer to page 10. ■ Dimensions: Refer to page 12.

Sets Sets include an Operation Unit (LED built in) and a Socket Unit.

Square Models



Standard Loads

A3KA

	Contact type		Standard load (250 V	Operation Unit color	
Screen pattern	Output	Operation	Momentary operation (Self-resetting)	Alternate operation (Self-holding)	symbol
	5 VDC	A3KA-90A1-05E∆	A3KA-90B1-05E∆		
	SPDT	12 VDC	A3KA-90A1-12E∆	A3KA-90B1-12E∆	Insert a color symbol in Δ at the end of the model
Single screen		24 VDC	A3KA-90A1-24E∆	A3KA-90B1-24E∆	number.
Single screen		5 VDC	A3KA-90C1-05E∆	A3KA-90D1-05E∆	R (red), Y (yellow) G (green), W (white) *
	DPDT	12 VDC	A3KA-90C1-12E∆	A3KA-90D1-12E∆	A (blue) *
		24 VDC	A3KA-90C1-24E∆	A3KA-90D1-24E∆	

^{*} Yellow and green LEDs are used.

Microloads

	Co	ontact type Operation	Microload (125 VAC, 0.1 A; 30 VDC, 0.1 A)	Operation Unit color symbol	
Screen pattern	Output		Momentary operation (Self-resetting)	- ,	
		5 VDC	A3KA-90E1-05E∆		
	SPDT	SPDT	12 VDC	A3KA-90E1-12E∆	Insert a color symbol in Δ
Single screen		24 VDC	A3KA-90E1-24E∆	at the end of the model number.	
Single screen		5 VDC	A3KA-90G1-05E∆	R (red), Y (yellow) G (green), W (white) *	
	DPDT	12 VDC	A3KA-90G1-12E∆	A (blue) *	
		24 VDC	A3KA-90G1-24E∆		

Note: Alternate operation models are also available. Refer to page 7 for model numbers.

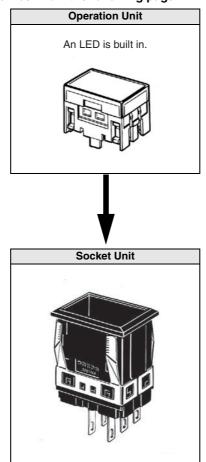
Individual models: Refer to pages 5 to 7. (The Pushbutton and Switch can be ordered separately.)

■ Specifications: Refer to page 10. ■ Dimensions: Refer to page 12.

^{*} Yellow and green LEDs are used.

Ordering Individually Operation Units (LED built in) and Socket Units can be ordered separately. Combinations that are not available as sets can be created using individual Units. Parts can also stored 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 10. ■ Dimensions: Refer to page 12.

Operation Units

LED-lighted Models (LED chip built in)

Appearance	Screen pattern	Color	White (W)	Red (R)	Green (G)	Blue (A)	Yellow (Y)	Selection precautions
	Single screen		A3KJ-51W -□□E	A3KJ-51R -□□E	A3KJ-51G -□□E	A3KJ-51A -□□E	A3KJ-51Y -□□E	
		White	A3KJ-52WW -□□E	A3KJ-52WR -□□E	A3KJ-52WG -□□E	A3KJ-52WA -□□E	A3KJ-52WY -□□E	
		Red	A3KJ-52RW -□□E	A3KJ-52RR -□□E	A3KJ-52RG -□□E	A3KJ-52RA -□□E	A3KJ-52RY -□□E	
	Horizontal 2-split screen	Green	A3KJ-52GW -□□E	A3KJ-52GR -□□E	A3KJ-52GG -□□E	A3KJ-52GA -□□E	A3KJ-52GY -□□E	
Rectangular	3010011	Blue	A3KJ-52AW -□□E	A3KJ-52AR -□□E	A3KJ-52AG -□□E	A3KJ-52AA -□□E	A3KJ-52AY -□□E	
Models (A3KJ)		Yellow	A3KJ-52YW -□□E	A3KJ-52YR -□□E	A3KJ-52YG -□□E	A3KJ-52YA -□□E	A3KJ-52YY -□□E	Enter the voltage to be used in the □□ at the end of the model number.
	Vertical 2- split screen	White	A3KJ-53WW -□□E	A3KJ-53WR -□□E	A3KJ-53WG -□□E	A3KJ-53WA -□□E	A3KJ-53WY -□□E	Examples of voltages used:
上選		Red	A3KJ-53RW -□□E	A3KJ-53RR -□□E	A3KJ-53RG -□□E	A3KJ-53RA -□□E	A3KJ-53RY -□□E	5V=0 5 E 12V=1 2 E
-		Green	A3KJ-53GW -□□E	A3KJ-53GR -□□E	A3KJ-53GG -□□E	A3KJ-53GA -□□E	A3KJ-53GY -□□E	24V=24 E Two-split screen models are available only for 24 V.
		Blue	A3KJ-53AW -□□E	A3KJ-53AR -□□E	A3KJ-53AG -□□E	A3KJ-53AA -□□E	A3KJ-53AY -□□E	For the color of the shaded part, select the model
		Yellow	A3KJ-53YW -□□E	A3KJ-53YR -□□E	A3KJ-53YG -□□E	A3KJ-53YA -□□E	A3KJ-53YY -□□E	according to the colors given at the top of the
	Two-color full illumination (red/green)	Red	A3KJ-57K -□□E					table.
Square Models (A3KA)								
	Single screen		A3KA-51W -□□E	A3KA-51R -□□E	A3KA-51G -□□E	A3KA-51A -□□E	A3KA-51Y -□□E	

Note: 1. A legend plate and LED (with current-limiting resistor) are built into a standard Display.
2. Split-screen color configurations are given with the OMRON mark on the Switch facing down.
3. The following list gives the colors of the built-in legend plate.

Single Screen

Operation Unit color Legend plate	White	Red	Green	Blue	Yellow	Two-color full illumination (red/green)
Milk-white	0			0		0
Transparent		0	0		0	

2-split screen

Color combination	White	Red	Green	Blue	Yellow
White	Milk-	Milk-	Milk-	Milk-	Milk-
	white	white	white	white	white
Red	Milk-	Trans-	Trans-	Milk-	Trans-
	white	parent	parent	white	parent
Green	Milk-	Trans-	Trans-	Milk-	Trans-
	white	parent	parent	white	parent
Blue	Milk-	Milk-	Milk-	Milk-	Milk-
	white	white	white	white	white
Yellow	Milk-	Trans-	Milk-	Milk-	Trans-
	white	parent	white	white	parent

Examples:
White/red split colors: One milk-white legend plate
Green/red split colors: One transparent legend plate

Ordering set combinations: Refer to pages 3 to 4.

■ Specifications: Refer to page 10. ■ Dimensions: Refer to page 12.

Socket Units

	Appearance		Rectangular models	Square models	Selection precautions						
Contact typ	e	Number of Switch outputs	Operation	Model	Model						
			Momentary operation	A3KJ-7010	A3KA-7010						
Standard		itacts	Alternate operation	A3KJ-7020	A3KA-7020						
load			Momentary operation	A3KJ-7030	A3KA-7030	Use the Socket Unit in combination with the same shape Operation Unit					
					2	Alternate operation	A3KJ-7040	A3KA-7040	(rectangular or square). Example: For A3KJ-51W-24E Rectangular Op-		
							1	Momentary operation	A3KJ-7050	A3KA-7050	eration Unit, select the A3KJ-7□□0 Socket Unit.
Microload Gold alloy		Alternate operation	A3KJ-7060	A3KA-7060	Momentary operation is self-resetting, and alternate operation is self-holding (i.e., push-on, push-off).						
wiicioload	contacts	2	Momentary operation	A3KJ-7070	A3KA-7070						
		2	Alternate operation	A3KJ-7080	A3KA-7080						

Ordering set combinations: Refer to pages 3 to 4.

■ Specifications: Refer to page 10. ■ Dimensions: Refer to page 12.

Accessories, Replacements, and Tools (Order Separately) Accessories for Rectangular Models

Name	Appearance	Classification	Model	Application Precautions
		Short Edge Barriers (1 pair)	A3SA-4001	The purpose of a Barrier is to prevent mal- functioning and to improve design image of
Barrier	4444	Short Intermediate Barrier	A3SA-4002	the mounting panel. There is one Intermediate Barrier and one
Damei	MMMM	Long Edge Barriers (1 pair)	A3SJ-4003	pair of Edge Barriers (i.e., two Barriers).
		Long Intermediate Barrier	A3SJ-4004	Mount Short Barriers horizontally. Mount Long Barriers vertically.
Switch Guard		_	A3SJ-5050	Cannot be used with Barriers or Seal Cover.
Seal Cover		_	A3SJ-5060	Cannot be used with Barriers or Switch Guard. Cap material: Vinyl chloride
Long Mounting Plate		_	A3KJ-3002	Use when vertically mounting individual (with Barrier) or multiple Switches (in standard mounting style and with Barriers). A Short Mounting Plate is attached to the Switch, so replace it with a long one.
		Transparent	A3SJ-5600	
		White	A3SJ-5601	The color cap is normally mounted. Con-
Color cap		Red	A3SJ-5602	tact your OMRON representative for color changes or inscribing.
Color Cap		Green	A3SJ-5603	If LED colors are to be used, use a color
		Blue	A3SJ-5604	cap that matches the LED color.
		Yellow	A3SJ-5605	

Accessories for Square Models

Name	Appearance	Classification	Model	Application Precautions	
Damian	a a	Short Edge Barriers (1 pair)	A3SA-4001	The purpose of a Barrier is to prevent mal-	
Barrier		Short Intermediate Barrier	A3SA-4002	functioning and to improve design image of the mounting panel.	
Switch Guard		_	A3SA-5050	Cannot be used with Barriers or Seal Cover.	
Seal Cover		_	A3SA-5060	Cannot be used with Barriers or Switch Guard. Cap material: Vinyl chloride	
	20.11	Transparent	A3SA-5600		
		White	A3SA-5601	The color cap is normally mounted. Con-	
Color cap	/III	Red	A3SA-5602	tact your OMRON representative for color changes or inscribing.	
		Green	A3SA-5603	If LED colors are to be used, use a color	
		Blue	A3SA-5604	cap that matches the LED color.	
		Yellow	A3SA-5605		

■ Specifications: Refer to page 10.

■ Dimensions: Refer to page 12.

■ Accessory mounting: Refer to page 16.

Tools for Rectangular Models

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

Replacements for Rectangular Models

Name	Appearance	Classification		Model	Application precautions
Legend plate		Transparent	LED	A3SJ-4204	For models with a red, green, or yellow Display, a transparent legend plate is built in.
Legend plate		Milk-white	LLD	A3SJ-4203	For models with a white or blue Display, a milk-white legend plate is built in.

Replacements for Square Models

Name	Appearance	Classification		Model	Application precautions
Legend plate		Transparent	- LED	A3SA-4204	For models with a red, green, or yellow Display, a transparent legend plate is built in.
		Milk-white		A3SA-4203	For models with a white or blue Display, a milk-white legend plate is built in.

■ Specifications: Refer to page 10.

■ Accessory mounting: Refer to page 16.

■ Dimensions: Refer to page 12.

Specifications

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

3 A at 250 VAC Standard Load:

5 A at 125 VAC

3 A at 30 VDC 0.1 A at 125 VAC

0.1 A at 30 VDC

Note: Certification has been obtained for the Switch Unit.

For detailed information on individual products that have received

certification, consult your supplier.

CCC (GB14048.5)

Standard Load: 3 A at 250 VAC

4 A at 30 VDC

3 A at 30 VDC

Microload: 0.1 A at 125 VAC

0.1 A at 30 VDC

Ratings

Microload:

Standard Load

AC resistive load	DC resistive load
3 A at 250 VAC	3 A at 30 VDC
5 A at 125 VAC	3 A at 30 VDC

Note: The above ratings are from testing under the following conditions:

- 1) Ambient temperature: $20 \pm 2^{\circ}$ C
- 2) Ambient humidity: 65% ± 5%RH
 3) Operation frequency: 20 operations/min

Microload

Rating	0.1 A, 30 VDC (resistive load) 0.1 A, 125 VAC (resistive load)
Minimum applicable load	1 mA, 5 VDC

LED-lighted Models Rectangular Models (A3KJ)

Operating voltage	Rated voltage	Rated current
5 VDC ± 5%	5 VDC	44 mA
12 VDC ± 5%	12 VDC	22 mA
24 VDC ± 5%	24 VDC	11 mA

Square Models (A3KA)

Operating voltage	Rated voltage	Rated current
5 VDC ± 5%	5 VDC	27 mA
12 VDC ± 5%	12 VDC	18 mA
24 VDC ± 5%	24 VDC	9 mA

Characteristics

Operating frequency	Mechanical	Momentary-action models: 120 operations/min max. *1	
rrequericy	Electrical	20 operations/min max.	
Insulation resistance		100 MΩ min. (at 500 VDC)	
Contact	Standard load	50 m Ω max. (initial value)	
resistance	Microload	50 mΩ max. (initial value)	
	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	
Dielectric strength	Between current- carrying metal part and ground	2,000 VAC, 50/60 Hz for 1 minute	
	Between each terminal and non-current-car- rying 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 *3	
Shock	Destruction	500 m/s ² max.	
resistance	Malfunction	200 m/s² max. *3	
Durability	Mechanical	Momentary operation models: 2,000,000 operations min. Alternate operation models: 200,000 operations min. One operation cycle consists of set and reset operations.	
	Electrical	100,000 operations min. (rated load)	
Weight		Approx. 10 g	
Ambient operating temperature		-10 to 50 °C (with no icing or condensation)	
Ambient operating humidity		35% to 85%RH	
Ambient storage temperature		−25 to 65 °C (with no icing or condensation)	
Degree of protection		IP00	
Electric shock protection class		Class II	
PTI (proof tracking index)		175	
Pollution d	egree	3 (IEC 60947-5-1)	

^{*1.} Alternate-action models: 60 operations/min max.

Operating Characteristics

Operation	Momentary	Alternate	
Operating Characteristics	operation	operation	
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.	2.5 mm	2.5 mm	
Lock travel alternate (LTA) min. *	_	0.5 mm	

^{*} Alternate operation models only.

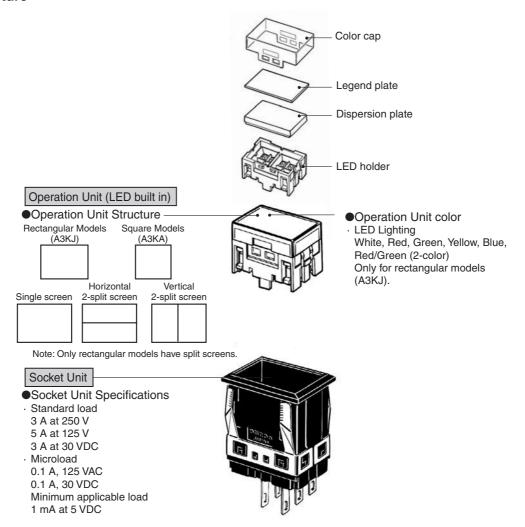
Contact Form

Contact name	Contact form
Double-throw contacts	COM NO

⁽One operation cycle consists of set and reset operations.)

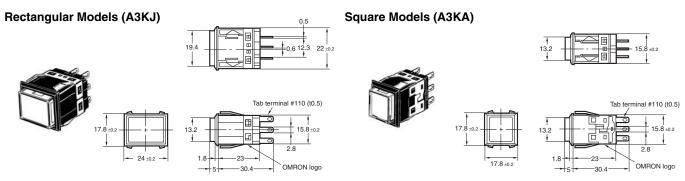
^{*2.} The figure is for when no LED is mounted. *3. Malfunction: 1 ms max.

Model Structure



Note: The A3KJ is shown here as an example.

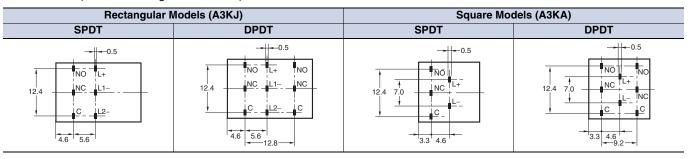
OMRON 1



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

Terminal Arrangement

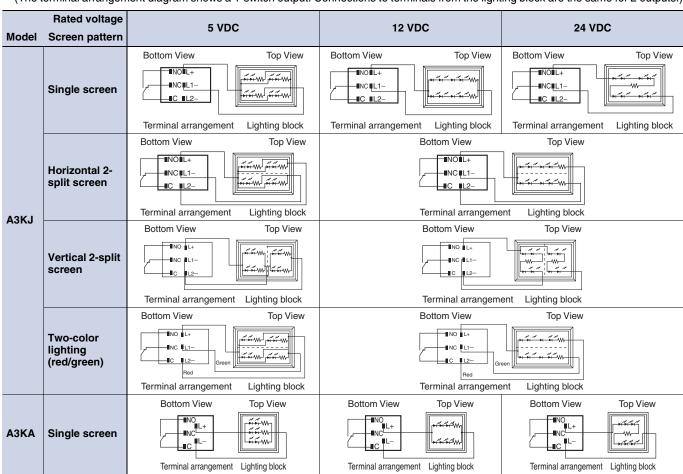
Bottom View (All OMRON logos face down.)



Terminal Connections

LED-lighted Models

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



Dimensions (Unit: mm)

Panel Cutouts (If a Switch Guard or Seal Cover is to be used, refer to the panel cutout diagrams on the following page.) Rectangular Models (A3KJ)

Note: Use a mounting panel thickness of 1 to 4 mm.

CI	assification	Mounting design	Panel cutout	Remarks
Flange	Individual mounting, horizontal	17.8±0.2 + 24±0.2 +	16.2±0.2	Panel cutout spacing between rows of Units:
	Multiple mounting, horizontal	17.8±0.2 1 2 n	16.2±0.2	
mount models	Individual mounting, vertical	Mount to Long Mounting Plate (A3KJ-3002) before use.	22.4±0.2	6 min.
	Multiple mounting, vertical	Mount to Long Mounting Plate (A3KJ-3002) before use.	22.4 ±0.2 17.8n-1.6 ±0.2	
Barrier mount models	Individual mounting, horizontal	19.8	16.2 ±0.2 ±0.9 ±0.2 ±	Panel cutout spacing be-
	Multiple mounting, horizontal	19.8 1 2 n	16.2 ±0.2 ± 25.3n+1.6 ±0.2	tween rows of Units: 1.4 4 min. 6 min. 1.4 4 min. 6 min. 1.4 1 4 min. 6 min. 7 1 4 min. 7 1 1 4 min. 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Individual mounting, vertical	Mount to Long Mounting Plate (A3KJ-3002) before use.	22.4 ±0.2 20.7 ±0.2	
	Multiple mounting, vertical	Mount to Long Mounting Plate (A3KJ-3002) before use.	22.4 ±0.2 19.1n+1.6 ±0.2	

Square Models (A3KA)

Note: Use a mounting panel thickness of 1 to 4 mm.

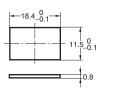
Cla	ssification	Mounting design	Panel cutout	Remarks
Flange mount models Handwidte Multiple mount models		17.8 ±0.2	16.2 ±0.2	Panel cutout spacing between rows of Units:
	Multiple mounting	17.8 ±0.2 1 2 3 n	16.2 ±0.2 17.8n-1.6 ±0.2	6 min.
Barrier mount models	Individual mounting	19.8±0.2	16.2 ±0.2	Panel cutout spacing between rows of Units:
	Multiple mounting	19.8 ±0.2 1 2 3 n	16.2 ±0.2 19.1n+1.6 ±0.2	(Dotted line indicates the position of each mounting Barrier.)

Dimensions (Unit: mm)

Accessories Dimensions When Mounted

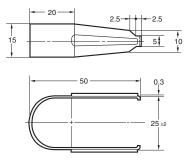
Legend Plate Rectangular Models A3SJ-4203, A3SJ-4204

Square Models A3SA-4203, A3SA-4204



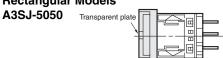


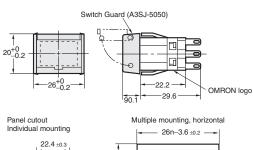
Extractor A3PJ-5080

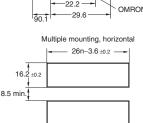


Note: The material is stainless steel.

Switch Guard Dimensions When Mounted Rectangular Models

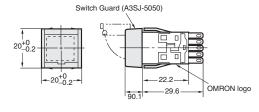


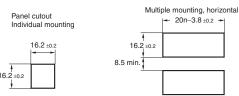




Square Models

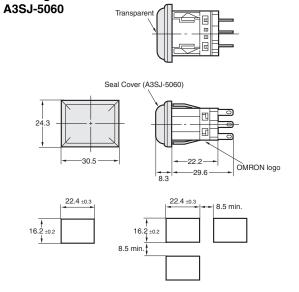


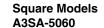


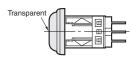


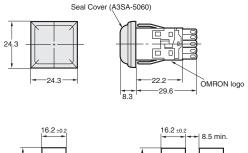
Seal Cover Dimensions When Mounted Rectangular Models

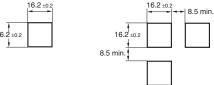
16.2 ±0.2











Note: 1. Use a mounting panel thickness of t = 1 to 3.3 mm.
2. Unless specified, a tolerance of ±0.4 mm applies for all dimensions.

Safety Precautions

Refer to Safety Precautions for All Pushbutton Switches/Indicators.

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.
- 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 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.

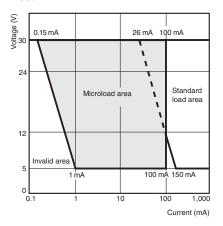
Operating Environment

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

Using Microloads

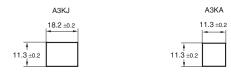
• Using a standard load switch when a microload circuit is opened or closed may cause wear on the contacts. Use the switch within the operating range. (Refer to the diagram below.) Even when using microload models within the operating range shown below, if inrush current occurs when the contacts are 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% (λ60) (conforming to JIS C5003).

The equation $\lambda60=0.5\times10^{-6}$ /time indicates that the estimated malfunction rate is less than 1/2,000,000 with a reliability level of 60%.



Character Film

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



LEDs

- A current-limiting resistor for the LED is built in, so no external resistor is required.
- Do not apply more than the rated current to the LED. Doing so may damage the LED.

Two-color Lighting

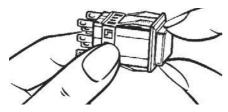
- With two-color lighting, changing the terminal connections enables two-color (red/green) full-surface colored illumination. (Only for models with the Display color symbol K.)
- To light two colors at the same time, connect an external resistors as described in the following table.

-			
Connection Voltage	Green: L1	Red: L2	
5 V	9 Ω (1/2 W)	70 Ω (1/2 W)	
12 V	40 Ω (1/2 W)	200 Ω (1/2 W)	
24 V	200 Ω (1/2 W)	1.2K Ω (1/2 W)	

Application

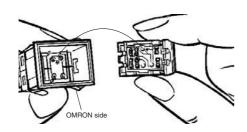
Removing the Operation Unit

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



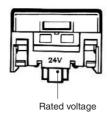
Inserting the Operation Unit into the Socket Unit

• Insert the Operation Unit in the proper direction. Insert the Operation Unit so that the "+" indication on the back (PCB) is lined up with the "O+" indication inside the Socket Unit.



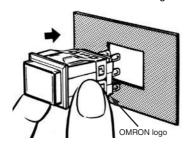
LED Rating

• The LED voltage rating is indicated on the side of the Operation Unit. Use within a range of \pm 5%.



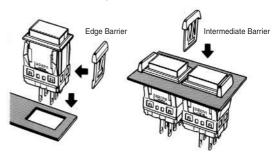
Mounting to the Switch Panel

- 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 at the bottom.



Barrier Mounting

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



Inscribing Legend Plate Characters

Inscribing

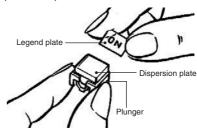
- Inscription depth: 0.5 mm max.
- The legend plate is made of polycarbonate, so apply an alcohol-based paint coating, such as melamine, phthalate, or acrylic resin paint when marking the legend.



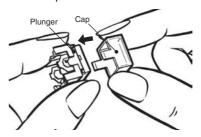
Assembling the Legend Plate (Plunger)

A3KA/M2KA

1. Assemble the dispersion plate to the plunger, and then assemble the legend plate on top.



2. Assemble the color cap.



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