

Key-type Selector Switches

A22NK

Keyed 22-mm Selector Switches

Universal Design.

Emphasis on Color Coding, Workability, and Safety.



Easy to Use

- You can connect up to three Contact Blocks in one stage for multistage expansion.
- The terminals can be retightened when Contact Blocks are stacked.
- Contact Blocks can be attached in any direction for easy assembly.
- Screw terminal structure is compatible with round crimp terminals.

Safety

- Easy-to-operate lock lever for secure locking.
- Easy-mounting Contact Blocks provide finger protection.
- Different colors of Contact Blocks (NO: blue, NC: orange) help prevent wiring errors.

Product Lineup

- Meet global safety standards.
- Available with metal or plastic bezels.
- All models are keyed alike.
- Standard-feature degree of protection: IP66 and NEMA 13.



Refer to *Safety Precautions for All Pushbutton Switches/Indicators* and *Safety Precautions* in the A22NN/A22NL datasheet

A22NK

Model Number Structure

Model Number Legend

----- Shipped as a set that includes the Operation Unit, Mounting Collar, and Contact Block.
For information on combinations, refer to *Ordering Information* on pages 5 to 6.

Model Numbers for Sets

A 2 2 N ⁽¹⁾ **K** - ⁽²⁾ **2B** ⁽³⁾ **M** - ⁽⁴⁾ **01** ⁽⁵⁾ **A** ⁽⁶⁾ **A** - ⁽⁷⁾ **G** ⁽⁸⁾ **100**

(1) Type

Code	Type
K	Key-type Selector Switch

(4) Key Number

Code	No.
01	No.1

(7) Contact Specification

Code	Description
G	General purpose

(2) Number of Positions and Bezel Material

Code	No. of positions	Bezel material
2B	2	Plastic
2M	2	Brushed metal
2R	2	Metal
3B	3	Plastic
3M	3	Brushed metal
3R	3	Metal

(5) Key Release Position

Code	Release position	Two positions	Three positions
A	All positions		
B	Left		
D	Center	---	
G	Left and right	---	

(8) Contact Configuration

Code	Contact Blocks		Switch Position			Two positions	Three positions
	NO	NC	1	2	3		
100	1	0	NO	---	---	Yes	---
002	0	1	---	---	NC	Yes	---
101	2	0	NO	---	NO	Yes	Yes
102	1	1	NO	---	NC	Yes	Yes
201	1	1	NC	---	NO	---	Yes
202	0	2	NC	---	NC	Yes	Yes
110	2	0	NO	NO	---	---	Yes
112	2	1	NO	NO	NC	Yes	Yes
210	1	1	NC	NO	---	---	Yes
011	2	0	---	NO	NO	---	Yes
012	1	1	---	NO	NC	---	Yes
120	1	1	NO	NC	---	---	Yes
220	0	2	NC	NC	---	---	Yes
021	1	1	---	NC	NO	---	Yes
022	0	2	---	NC	NC	---	Yes

(3) Reset Method

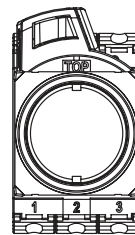
Code	Reset method		
M	Manual	Two-positions manual	
		Three-positions manual	
L	Automatic reset on left	Two-positions automatic	
		Three-positions left automatic	
B	Automatic reset on left and right	Three-positions left or right automatic	

○: Release position
●: Locked position

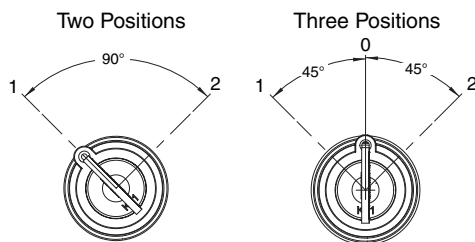
(6) Degree of Protection

Code	Protection
A	IP66, NEMA13

Note: 1. NO (blue): Normally open, NC (orange): Normally closed.
2. Refer to the following figure for Unit positions.



Operation Angle



Note: Not all assembled configurations are possible. Please refer to the subassemblies section for additional options. Please refer to the specifications section for examples of linked contact block options.

■ Specifications: Refer to page 10 and refer to the A22NN/A22NL. ■ Precautions for correct use: Refer to the A22NN/A22NL.
■ Dimensions: Refer to page 11.

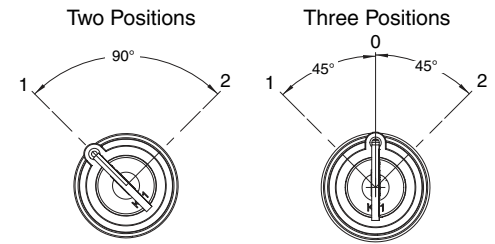
Structure

Contact Configuration Table

Two Positions

No. of outputs	Code	Contact configuration	Unit position	Contacts	Position	
					1	2
1	100	SPST-NO	(1)	NO		ON
			(2)	---	---	---
			(3)	---	---	---
1	002	SPST-NC	(1)	---	---	---
			(2)	---	---	---
			(3)	NC	ON	
2	102	SPST-NO/ SPST-NC	(1)	NO		ON
			(2)	---	---	---
			(3)	NC	ON	
2	101	DPST-NO	(1)	NO		ON
			(2)	---	---	---
			(3)	NO		ON
2	202	DPST-NC	(1)	NC	ON	
			(2)	---	---	---
			(3)	NC	ON	
3	111	3PST-NO	(1)	NO		ON
			(2)	NO		ON
			(3)	NO		ON
3	222	3PST-NC	(1)	NC	ON	
			(2)	NC	ON	
			(3)	NC	ON	
3	122	SPST-NO/ DPST-NC	(1)	NO		ON
			(2)	NC	ON	
			(3)	NC	ON	
3	112	DPST-NO/ SPST-NC	(1)	NO		ON
			(2)	NO		ON
			(3)	NC	ON	

Operation Angle



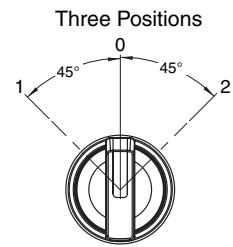
Note: Not all assembled configurations are possible. Please refer to the subassemblies section for additional options. Please refer to the specifications section for examples of linked contact block options.

Three Positions

No. of outputs	Code	Contact configuration	Unit position	Contacts	Position		
					1	0	2
2	110	DPST-NO	(1)	NO	ON		
			(2)	NO	ON		ON
			(3)	---	---	---	---
2	011	DPST-NO	(1)	---	---	---	---
			(2)	NO	ON		ON
			(3)	NO			ON
2	101	DPST-NO	(1)	NO	ON		
			(2)	---	---	---	---
			(3)	NO			ON
2	220	DPST-NC	(1)	NC		ON	ON
			(2)	NC		ON	
			(3)	---	---	---	---
2	022	DPST-NC	(1)	---	---	---	---
			(2)	NC		ON	
			(3)	NC	ON	ON	
2	202	DPST-NC	(1)	NC		ON	ON
			(2)	---	---	---	---
			(3)	NC	ON	ON	
2	120	SPST-NO/ SPST-NC	(1)	NO	ON		
			(2)	NC		ON	
			(3)	---	---	---	---

No. of outputs	Code	Contact configuration	Unit position	Contacts	Position		
					1	0	2
2	102	SPST-NO/ SPST-NC	(1)	NO	ON		
			(2)	---	---	---	---
			(3)	NC	ON	ON	
2	210	SPST-NO/ SPST-NC	(1)	NC		ON	ON
			(2)	NO	ON		ON
			(3)	---	---	---	---
2	201	SPST-NO/ SPST-NC	(1)	NC		ON	ON
			(2)	---	---	---	---
			(3)	NO			ON
2	012	SPST-NO/ SPST-NC	(1)	---	---	---	---
			(2)	NO	ON		ON
			(3)	NC	ON	ON	
2	021	SPST-NO/ SPST-NC	(1)	---	---	---	---
			(2)	NC		ON	
			(3)	NO			ON
3	111	3PST-NO	(1)	NO	ON		
			(2)	NO	ON		ON
			(3)	NO			ON
3	222	3PST-NC	(1)	NC		ON	ON
			(2)	NC		ON	
			(3)	NC	ON	ON	
3	122	SPST-NO/ DPST-NC	(1)	NO	ON		
			(2)	NC		ON	
			(3)	NC	ON	ON	
3	212	SPST-NO/ DPST-NC	(1)	NC		ON	ON
			(2)	NO	ON		ON
			(3)	NC	ON	ON	
3	221	SPST-NO/ DPST-NC	(1)	NC		ON	ON
			(2)	NC		ON	
			(3)	NO	ON		ON
3	211	DPST-NO/ SPST-NC	(1)	NC		ON	ON
			(2)	NO	ON		ON
			(3)	NO			ON
3	121	DPST-NO/ SPST-NC	(1)	NO	ON		
			(2)	NC		ON	
			(3)	NO			ON
3	112	DPST-NO/ SPST-NC	(1)	NO	ON		
			(2)	NO	ON		ON
			(3)	NC	ON	ON	

Operation Angle






Note: Some combinations are only available through subassemblies.
Please refer to the specifications section for more information.




Ordering Information

Model Numbers for Sets - - - Shipped as a set that includes the Operation Unit, Mounting Collar, and Contact Block.

Two-position, Key-type Selector Switches

Appearance	Bezel material	No. of outputs	Model	(3) Reset method	(5) Key release positions	(8)(8)(8) Contact configuration				
Plastic bezels 	2B	1	A22NK-2B(3)-01(5)A-G(8)(8)(8)	M: Manual L: Automatic reset on left	A: All positions B: Left	100 002				
		2				102 101 202				
Brushed metal bezels 	2M	1	A22NK-2M(3)-01(5)A-G(8)(8)(8)			M: Manual L: Automatic reset on left	A: All positions B: Left	100 002		
		2						102 101 202		
Metal bezels 	2R	1	A22NK-2R(3)-01(5)A-G(8)(8)(8)					M: Manual L: Automatic reset on left	A: All positions B: Left	100 002
		2								102 101 202

Three-position, Key-type Selector Switches

Appearance	Bezel material	No. of outputs	Model	(3) Reset method	(5) Key release positions	(8)(8)(8) Contact configuration
Plastic bezels 	3B	2	A22NK-3B(3)-01(5)A-G(8)(8)(8)			110 011 101 220 022 202 120 102 210 201 012 021
Brushed metal bezels 	3M	2	A22NK-3M(3)-01(5)A-G(8)(8)(8)	M: Manual B: Automatic reset on left and right	B: Left D: Center G: Left and right	110 011 101 220 022 202 120 102 210 201 012 021
Metal bezels 	3R	2	A22NK-3R(3)-01(5)A-G(8)(8)(8)			110 011 101 220 022 202 120 102 210 201 012 021

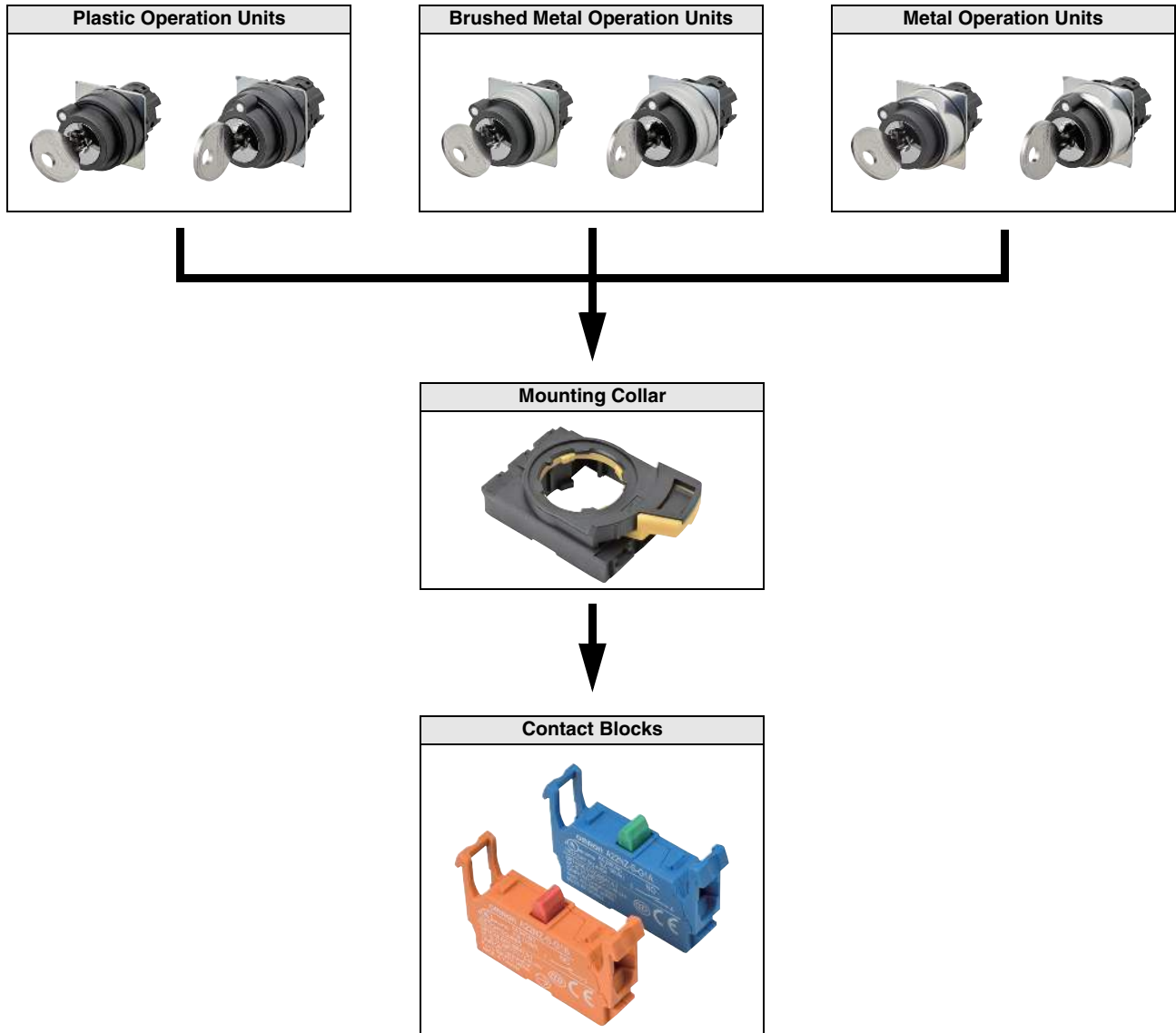
Note: Not all assembled configurations are possible.
Please refer to the subassemblies section for additional options.
Please refer to the specifications section for examples of linked contact block options.

■ Subassemblies: Refer to pages 7 to 9.
(You can order Operation Units, Mounting Collars, and Contact Blocks individually.)

■ Specifications: Refer to page 10 and refer to the A22NN/A22NL.
■ Dimensions: Refer to page 11.
■ Accessories and tools: Refer to the A22NN/A22NL.

Ordering Information

Subassemblies - - - - You can order Operation Units, Mounting Collars, and Contact Blocks individually. Use them in combination for models that are not available as assembled Switches. They can also be used as inventory for maintenance parts.



Note: Use a Reinforcement Plate for greater strength.



■ Model numbers of sets: Refer to page 5.




■ Specifications: Refer to page 10 and refer to the A22NN/A22NL.
 ■ Dimensions: Refer to page 11.
 ■ Accessories and tools: Refer to the A22NN/A22NL.

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Ordering Information

Subassemblies - - - - You can order Operation Units, Mounting Collars, and Contact Blocks individually. Use them in combination for models that are not available as assembled Switches. They can also be used as inventory for maintenance parts.

Operation Units

Bezel material and shape		Plastic	Brushed metal	Metal	(1) Key release positions
					
No. of positions	Reset method	Model	Model	Model	
2	Manual	A22NZ-2BM-01(1)A	A22NZ-2MM-01(1)A	A22NZ-2RM-01(1)A	A: All positions B: Left C: Right
	Automatic reset on left	A22NZ-2BL-01(1)A	A22NZ-2ML-01(1)A	A22NZ-2RL-01(1)A	
3	Manual	A22NZ-3BM-01(1)A	A22NZ-3MM-01(1)A	A22NZ-3RM-01(1)A	A: All positions B: Left C: Right D: Center G: Left and right
	Automatic reset on left	A22NZ-3BL-01(1)A	A22NZ-3ML-01(1)A	A22NZ-3RL-01(1)A	
	Automatic reset on right	A22NZ-3BR-01(1)A	A22NZ-3MR-01(1)A	A22NZ-3RR-01(1)A	
	Automatic reset on left and right	A22NZ-3BB-01(1)A	A22NZ-3MB-01(1)A	A22NZ-3RB-01(1)A	


■ Model numbers of sets: Refer to page 5.

■ Specifications: Refer to page 10 and refer to the A22NN/A22NL.
 ■ Dimensions: Refer to page 11.
 ■ Accessories and tools: Refer to the A22NN/A22NL.


Ordering Information

Subassemblies -- You can order Operation Units, Mounting Collars, and Contact Blocks individually. Use them in combination for models that are not available as assembled Switches. They can also be used as inventory for maintenance parts.


Mounting Collar

Appearance	Model
	A22NZ-H-01


Contact Blocks

Appearance	Contact Specification	Model
	SPST-NO (blue)	A22NZ-S-G1A
	SPST-NC (orange)	A22NZ-S-G1B

Reinforcement Plate

Appearance	Model
	A22NZ-A-C01

Accessories

Appearance	Model
Key 	A22NZ-K-01

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Specifications

Characteristics

Item	Type	Key-type Selector Switches
	Allowable operating frequency	Mechanical
Electrical		30 operations/minute max.
Insulation resistance		100 MΩ min. (at 500 VDC)
Contact resistance		100 mΩ max. (initial value)
Dielectric strength	Between terminals of same polarity	2,500 VAC at 50/60 Hz for 1 min
	Between each terminal and ground	2,500 VAC at 50/60 Hz for 1 min
Vibration resistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms)
Shock resistance	Malfunction	1,000 m/s ² max. (malfunction within 1 ms)
Durability	Mechanical	500,000 operations min. (Switches with 3 positions: 300,000 operations min.)
	Electrical	500,000 operations min. (Switches with 3 positions: 300,000 operations min.)
Ambient operating temperature* ¹		-25 to 70°C
Ambient operating humidity		35% to 85% RH
Ambient storage temperature* ¹		-40 to 80°C
Degree of protection* ²		IP66, NEMA13
Electric shock protection class		Class II
PTI (tracking characteristic)		175
Degree of contamination (application environment)		3 (IEC 60947-5-1)
Weight		Approx. 65 g (for 1NC/1NO)

*1. With no icing or condensation.

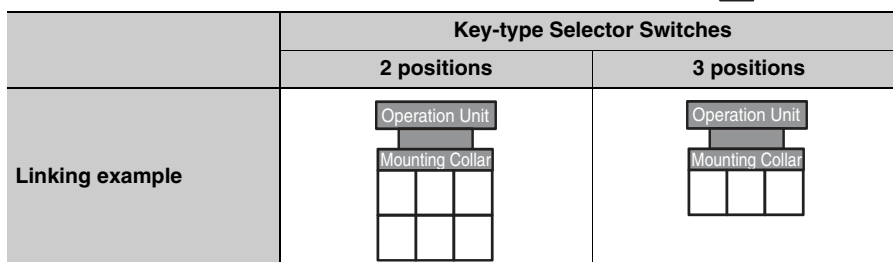
*2. Degree of protection from the front of the panel.

Operating Characteristics (for SPST-NO/SPST-NC)

Item	Type	Key-type Selector Switches	
		Manual reset	Automatic reset
Total travel force (torque) (maximum TTF)		0.6 N·m	0.6 N·m
Total travel (TT)		2 positions: Approx. 90°, 3 positions: Approx. 45°	
Resetting force (torque) (RF)		0.5 N·m max.	---

Examples of Linked Contact Blocks

 Contact Blocks



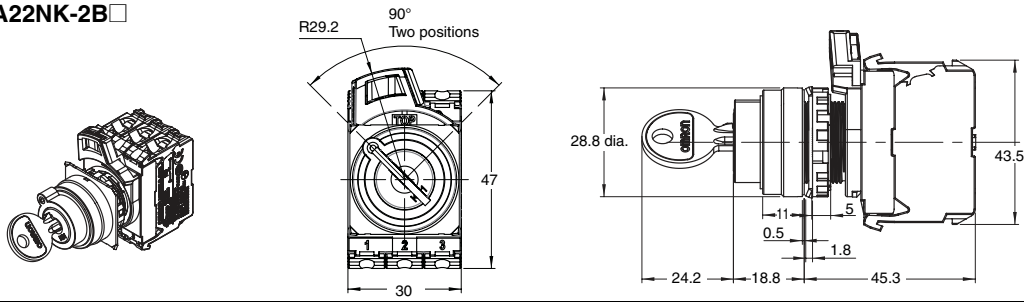
Note: If you increase the number of Contact Blocks, evaluate the Switch under actual working conditions before permanent installation and use the Switch within a number of switching operations that will not adversely affect the Switch's performance.

Dimensions

Lighted and Non-lighted Key-type Selection Switches

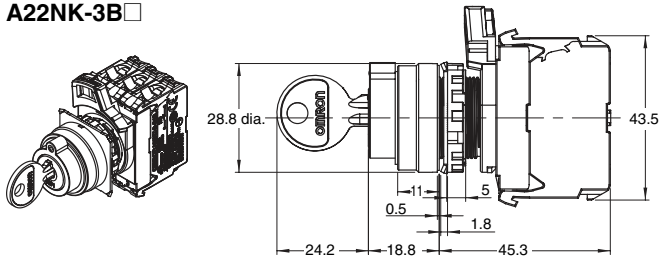
Two-position Switches with Plastic Bezels

A22NK-2B□



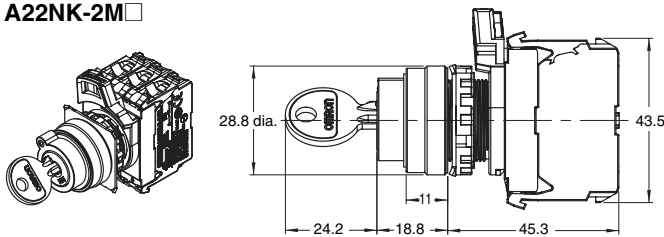
Three-position Switches with Plastic Bezels

A22NK-3B□



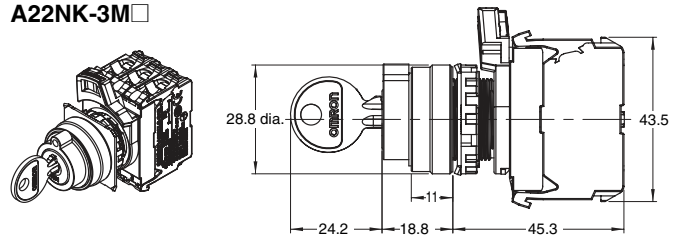
Two-position Switches with Brushed Metal Bezels

A22NK-2M□



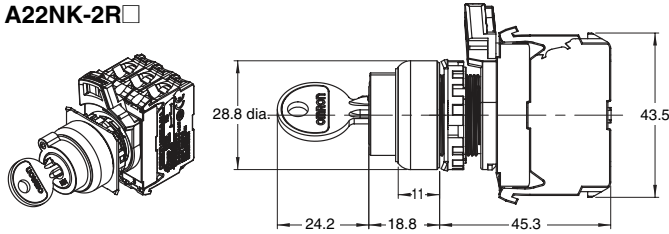
Three-position Switches with Brushed Metal Bezels

A22NK-3M□



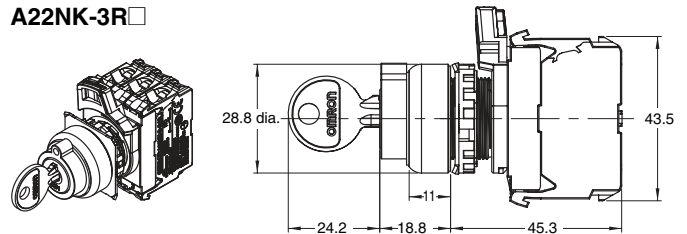
Two-position Switches with Metal Bezels

A22NK-2R□

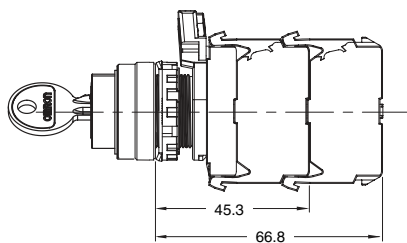


Three-position Switches with Metal Bezels

A22NK-3R□

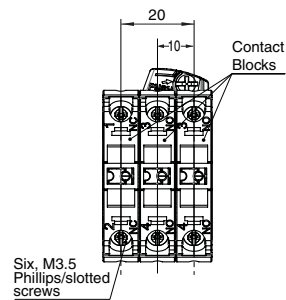


Depth with Linked Units



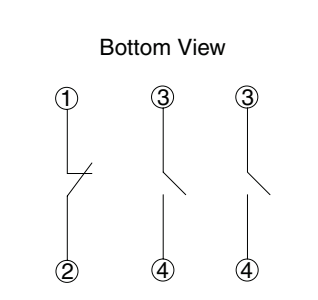
Terminal Wiring Diagrams Bottom View

2NO/1NC
Contact configuration
code:112



Terminal Connection Diagrams

2NO/1NC
Contact configuration
code:112



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Safety Precautions

Refer to *Safety Precautions for All Pushbutton Switches/Indicators* for common precautions.
Read the *Safety Precautions* in the A22NN/A22NL datasheet.

Precautions for Correct Use

Insert the key all of the way to the back of the cylinder before you turn it.

Safety Precautions

Refer to Safety Precautions for All Pushbutton Switches/Indicators.

Precautions for Safe Use

- Never perform wiring work on a Switch while power is being supplied. Never touch terminals and other charged parts while power is being supplied. Doing so may result in electrical shock.
- Never attempt to disassemble or modify the Switch in any way. Doing so may prevent correct operation.
- Switch functionality may be inhibited. Do not drop the Switch. Never apply a force that would deform or alter the nature of the Switch.
- The durability of the Switch is greatly affected by operating conditions. Evaluate the Switch under actual working conditions before permanent installation and use the Switch within a number of switching operations that will not adversely affect the Switch's performance.
- Do not use a load voltage or current that exceeds the rating. Doing so may damage or cause burning in the Switch.
- Do not use the Switch in a location with inflammable or explosive gases, or where the Switch would be subjected to inflammable solvents. The arcs and heat generated when the Switch is operated can cause ignition or explosions.
- Do not use the Switch where sulfur gas (H₂S, SO₂), ammonia gas (NH₃), nitric acid gas (HNO₃), chlorine gas (Cl₂), or other harmful gases are present or where high humidity is present. Contact faults and damage due to corrosion may interfere with the functionality of the Switch.
- Do not use the Switch in oil or water or in an environment subject to constant contact with oil or water. The oil or water may enter the Switch, causing failure.
- Do not use or store the Switch in the following locations.
 - Locations subject to rapid temperature changes
 - Locations subject to condensation due to high humidity
 - Locations subject to vibration
 - Locations subject to direct sunlight
 - Locations subject to salty air
- Make sure that the rubber washer is in place between the Operation Unit and the panel. Otherwise, the specifications of the protective structure may not be satisfied.
- Do not subject the Contact Block or wiring to excessive force. The Contact Block may be damaged or deformed and faulty contact may occur.

Precautions for Correct Use

Mounting

- Do not tighten the Mounting Nut more than necessary using tools such as pointed-nose pliers. Doing so will damage the Mounting Nut. (The tightening torque of the Mounting Nut is 1.0 to 2.0 N·m.)

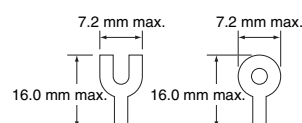
Wiring

- Terminal screws must be M3.5 Phillips or slotted screws with a square washer.
- The terminal screw tightening torque is 1.0 to 1.3 N·m.
- Solid wires, stranded wires, and crimp terminals can be connected to the Switch.

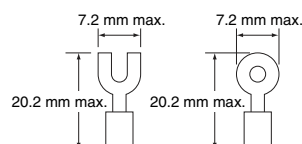
Stranded wires: AWG14 to AWG16

Solid wire: 1.6 dia. max.

Bare Crimp Terminals



Crimp Terminals with Insulating Sheaths



- After wiring the Switch, maintain appropriate clearance and creepage distances.

Operating Environment

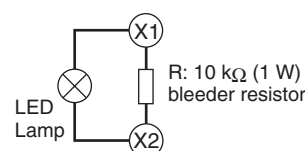
- The Switch is intended for indoor use only. Using the Switch outdoors will result in failure.

LED Lamps

- A current-limiting resistor is built into the LED Lamp, so external resistance is not required.
- False Lighting of the LED Lamp
The LED Lamp will light with a microcurrent of approx. 0.1 mA or less. Take countermeasures, such as adding a resistor in parallel to the LED Lamp, to prevent false lighting.
The micro-current varies with the machine (due to leakage current, stray capacity between cables, etc.). Select a resistance value and allowable power consumption according to the actual current.

Example of Circuit to Prevent False Lighting

For 24 VAC/VDC Lighting Unit



Application

Mounting to the Panel

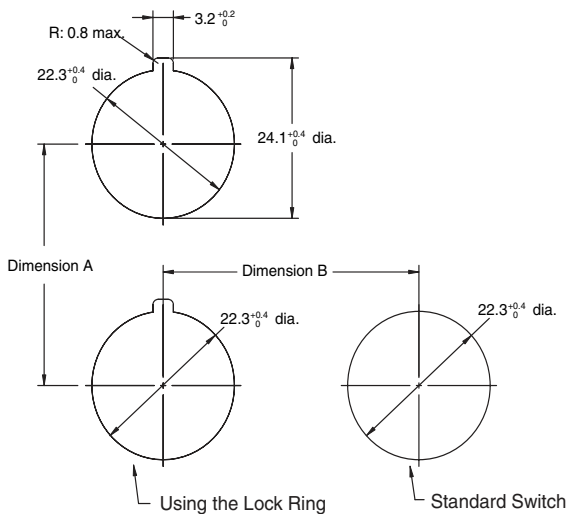
Panel Hole Dimensions

- Panel hole dimensions are given below.
- The recommended panel thicknesses are given below.

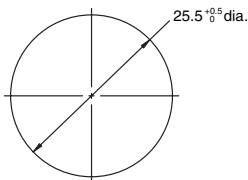
Panel hole dimension	Panel thickness
22.3 dia.	0.8 to 5 mm
25.5 dia.	0.8 to 6 mm

- If outer surface treatment such as coating is performed for the panel, the panel dimensions after outer surface treatment must meet the specified panel dimensions.
- The following figure gives pitch dimension A and pitch dimension B between the centers of the mounting holes.

Panel Hole Dimensions for 22.3 Diameter



Panel Hole Dimensions for 25.5 Diameter



Dimension A

Wire type	Number of linked Contact Blocks	Number of wires per terminal	Minimum allowable pitch Dimension A (mm) or larger
Leads (twisted wires or solid wire)	1	1	50
Bare crimp terminals	1	1	50
Crimp terminals with insulating sheathes	1	1	60

Note: The minimum mounting pitch is based on three Contact Blocks in stage 1 with one wire attached to each terminal. If you attach two wires or link Units, determine the mounting pitch based on the dimensions diagrams and ease of operation and wiring.

Dimension A When Using Accessory

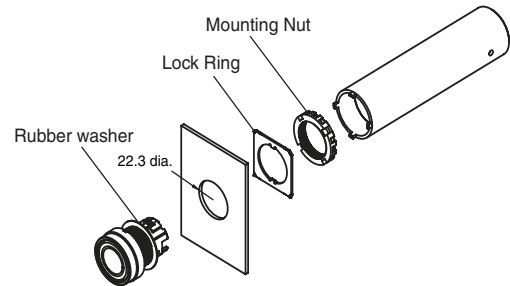
- Dimension A is 50 mm minimum when a Standard Legend Plate Frame is attached.
- Dimension A is 51 mm minimum when a Large Legend Plate Frame is attached.
- Dimension A is 75 mm minimum when a Protective Cover is attached.

Dimension B

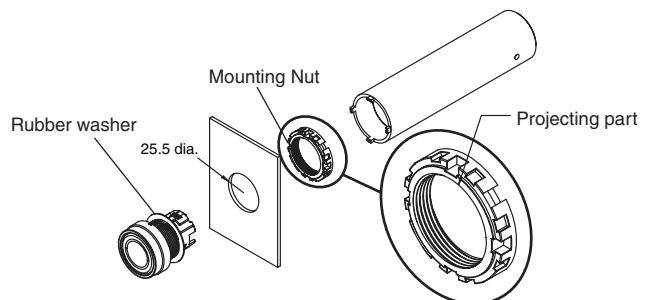
Operation Unit shape	Dimension B
Mushroom	40 mm min.
Other than the above	30 mm min.

Mounting the Operation Unit

- **Panel Hole of 22.3-mm Diameter**
Insert the Operation Unit from the front of the panel, insert the Lock Ring and Mounting Nut from the back of the panel, and tighten the Mounting Nut. Before tightening, check that the rubber washer is present between the Operation Unit and the panel.



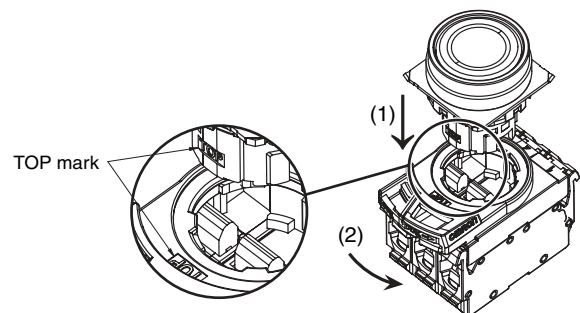
- **Panel Hole of 25.5-mm Diameter**
Do not use the Lock Ring, and tighten the Mounting Nut while confirming that the projecting part (see following figure) on the Mounting Nut is aligned with mounting hole. Before tightening, check that the rubber washer is present between the Operation Unit and the panel.



- Align the Lock Ring with the slot on the case and insert it so that the edge is flush with the panel.

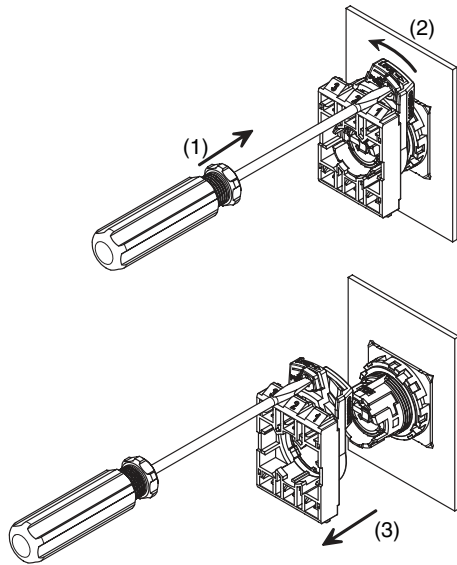
Mounting the Contact Block to the Operation Unit

- Insert the Operation Unit into the Mounting Collar, aligning the TOP mark inscribed on the Operation Unit with the lever on the Mounting Collar, and then turn the lever in the direction indicated by the arrow in the following figure all of the way until it clicks into place.



Removing the Mounting Collar

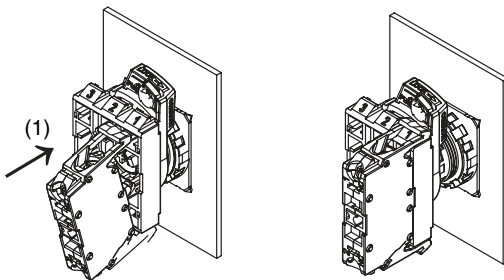
- Press the lock lever in from the back side to release the lock, and then hook the Mounting Collar with a screwdriver, move it in the direction indicated at (2), and remove it. Turn the lever all of the way until it clicks into place.



Contact Block

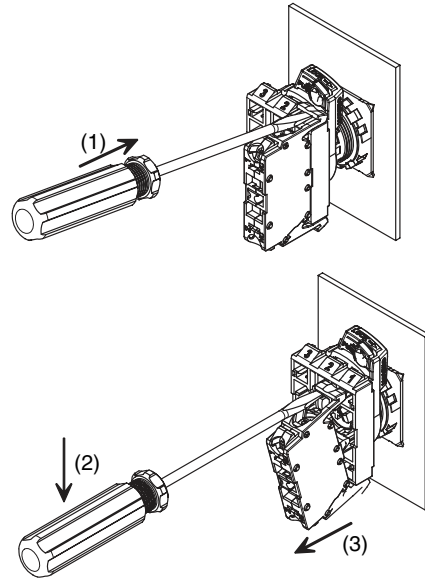
Attaching the Contact Block

- Catch the projection on the opposite side of the Mounting Collar from the lever side and press the Contact Block in the direction indicated at (1).



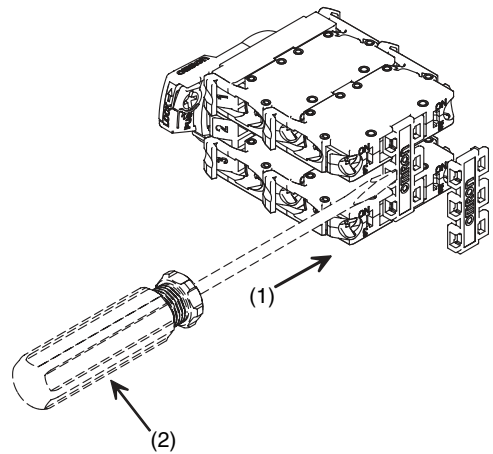
Removing the Contact Block

- Insert a screwdriver into the gap between the Mounting Collar and Contact Block and press it inward in the direction shown at (2).



Attaching the Reinforcement Plate

- To link Contact Blocks together, attach a Reinforcement Plate in the direction shown in the following figure. To remove the Plate, insert a screwdriver in the direction indicated at (1) and rotate it in the direction indicated at (2).



Engraving

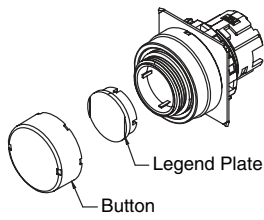
- Engrave legends on the Legend Plates. Do so with the straight part of the Legend Plate positioned on the right and left.
- The characters must be engraved no deeper than 0.5 mm. Use an alcohol-based paint, such as a melamine, phthalic acid, or acrylic resin based paint.

Projected, Full-guard, or Mushroom Switches	Flat Switches
<p>15.4 dia.</p>	<p>17.7 dia.</p>

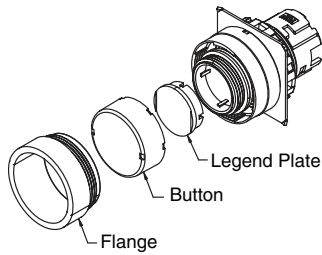
Attaching Character Films

- To attach a character film, remove the Button and attach the film, aligning it with the straight portions of the Legend Plate.

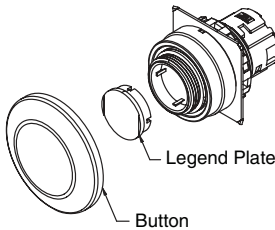
Projected Switches



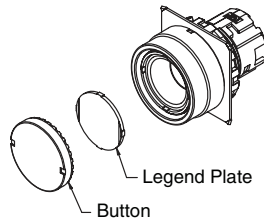
Full-guard Switches



Mushroom Switches



Flat Switches

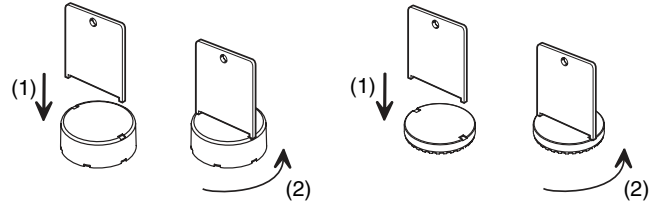


- Prepare films of the following sizes depending on the type of Legend Plate.

Projected, Full-guard, or Mushroom Switches	Legend Plate dimensions	
	Film dimensions	
Flat Switches	Legend Plate dimensions	
	Film dimensions	

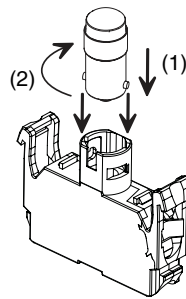
Removing and Tightening the Cap

For all Switches except for Mushroom Switches, use the A22Z-3908 Cap Tightening Tool to loosen the cap. When you tighten the cap, make sure that the Legend Plate is in the correct position and then turn the cap in the direction opposite of the direction shown in the following figure. Tighten it to a torque of 0.5 to 1.0 N·m so that it will not become loose.



Attaching the LED Lamp to the Lighting Unit

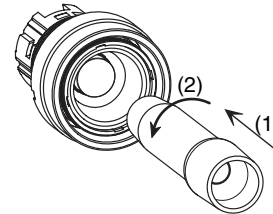
- Insert the protrusions on the LED Lamp into the guides on the Lighting Unit and then turn the LED Lamp in direction (2) to lock it in place.



Attaching and Replacing LED Lamps

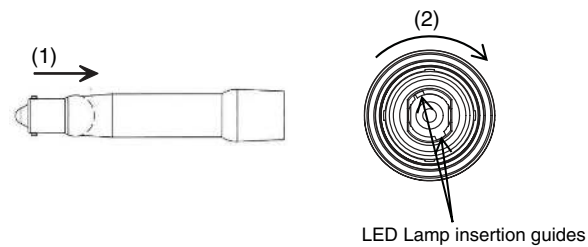
Removing the LED Lamp from the Panel Surface

- Insert the LED Lamp Extractor as shown in the following figure and then rotate the Extractor in the direction shown at (2) while pressing it inward.



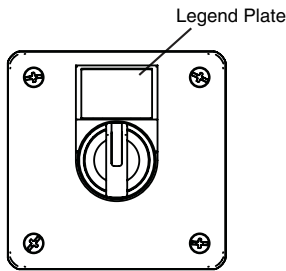
Attaching the LED Lamp from the Panel Surface

- Insert the LED Lamp into the LED Lamp Extractor as shown in the following figure. Align the projections on the LED Lamp with the LED Lamp insertion guides, insert the LED Lamp, and turn it in the direction indicated at (2).



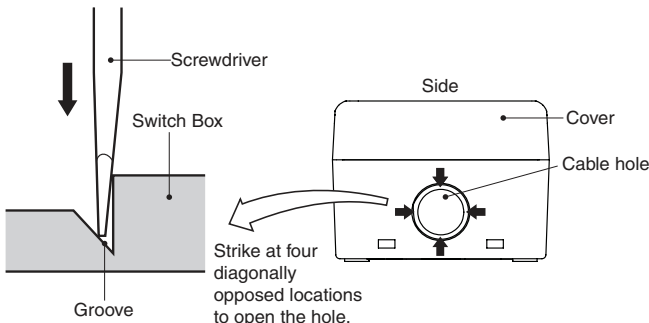
Control Box

You can attach a Legend Plate Frame.
 Attach it in the direction shown in the following figure.
 Mount the Switch in the same way as for a standard panel. The tightening torque of the Box screws is 1.4 to 2.0 N·m.



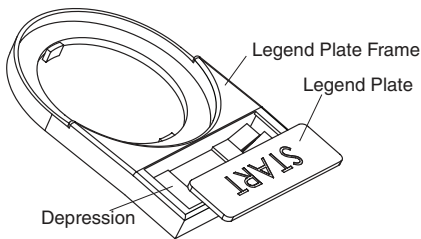
Creating a Cable Hole

To open a cable hole, leave the cover attached, place the tip of a screwdriver in the grooves at four locations around the cable hole, and strike the screwdriver with a hammer to open the hole.

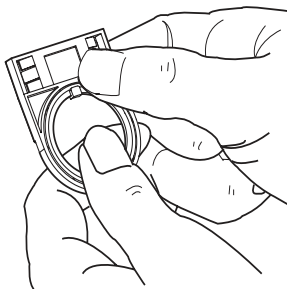


Attaching and Removing Legend Plates

- Press the Legend Plate into the depression in the Legend Plate Frame. The Legend Plate Frame can be separate or it can be mounted on the panel when you attach the Legend Plate.
- The direction of the characters will depend on the mounting direction of the Operation Unit if the Switch is a Selector Switch or Key Selector Switch.

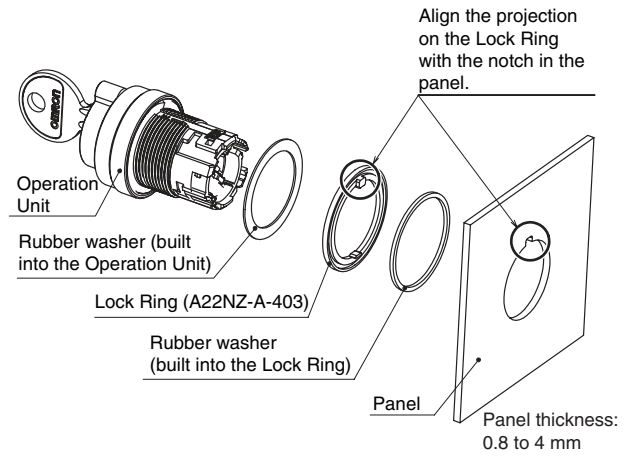


- You can easily remove the Legend Plate by pressing it forwards from the back of the Legend Plate Frame.
- The acrylic plastic Legend Plate is easily damaged by shock. Handle it with care.

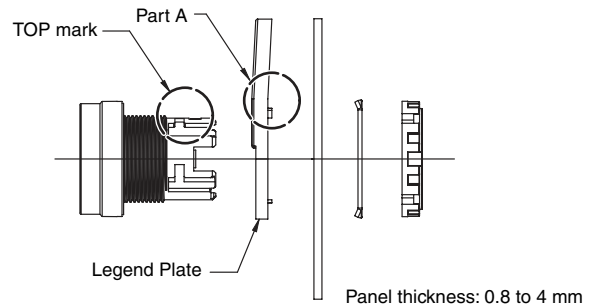


Attaching the Lock Ring

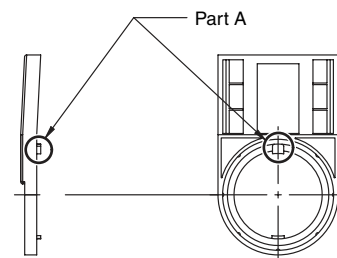
Attach the Lock Ring as shown in the following figure.
 To ensure water resistance, attach the rubber washer in the specified location.



- Align the TOP mark on the Operation Unit, part A on the Legend Plate, and the notch in the panel, and insert the Operation Unit.

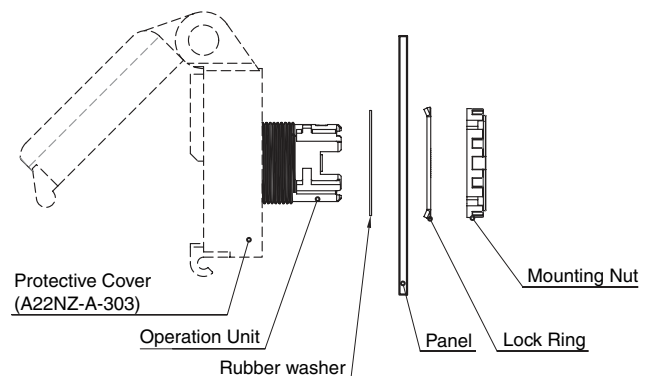


- If there is no notch in the panel, remove part A from the Legend Plate with pliers.



Attaching the Protective Cover

Attach the Protective Cover (A22NZ-A-303) to a panel that is 0.8 to 1.0 mm thick. To ensure water resistance, attach the rubber washer in the specified location.



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