

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 Contract 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



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

(1) Type

Code	Туре
K	Key-type Selector Switch

(4) Key Number

Code	No.
01	No.1

(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
Α	All positions		
В	Left	•	
С	Right	•	•
D	Center		
G	Left and right		
		·	

(3) Reset Method

Code	Reset method							
М	Manual	Two- positions manual	<u></u>					
	Ivianuai	Three- positions manual						
1	Automatic reset on	Two- positions automatic						
L	left	Three- positions left automatic						
R	Automatic reset on right	Three- positions right automatic						
В	Automatic reset on left and right	Three- positions left or right automatic						

O: Release position
•: Locked position

(6) Degree of Protection

Code	Protection
A	IP66, NEMA13

(7) Contact Specification

Code	Description
G	General purpose

(8) Contact Configuration

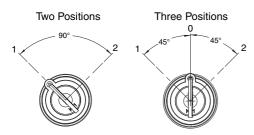
Code		tact cks	Unit	Unit positi		Unit position		Two posi-	Three posi-
	NO	NC	1	2	3	tions	tions		
100	1	0	NO			Yes			
002	0	1			NC	Yes			
101	2	0	NO		NO	Yes	Yes		
102	1	1	NO		NC	Yes	Yes		
201	1	1	NC		NO		Yes		
202	0	2	NC		NC	Yes	Yes		
110	2	0	NO	NO			Yes		
111	3	0	NO	NO	NO	Yes	Yes		
112	2	1	NO	NO	NC	Yes	Yes		
210	1	1	NC	NO			Yes		
211	2	1	NC	NO	NO		Yes		
212	1	2	NC	NO	NC		Yes		
011	2	0		NO	NO		Yes		
012	1	1		NO	NC		Yes		
120	1	1	NO	NC			Yes		
121	2	1	NO	NC	NO		Yes		
122	1	2	NO	NC	NC	Yes	Yes		
220	0	2	NC	NC			Yes		
221	1	2	NC	NC	NO		Yes		
222	0	3	NC	NC	NC	Yes	Yes		
021	1	1		NC	NO		Yes		
022	0	2		NC	NC		Yes		

Note: 1. NO (blue): Normally open, NC (orange): Normally closed.

2. Refer to the following figure for Unit positions.



Operation Angle



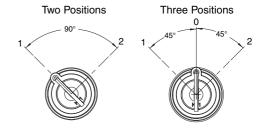
- Specifications: Refer to page 10 and refer to the A22NN/A22NL. Precautions for correct use: Refer to the A22NN/A22NL.
- Dimensions: Refer to page 11.

Structure

Contact Configuration Table Two Positions

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

Operation Angle

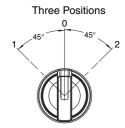


Three Positions

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

No. of		Contact	Unit			Position					
outputs	Code	configuration	position	Contacts	1	0	2				
			(1)	NO	ON						
2	102	SPST-NO/ SPST-NC	(2)								
		3P31-NC	(3)	NC	ON	ON					
			(1)	NC		ON	ON				
2	210	SPST-NO/	(2)	NO	ON		ON				
		SPST-NC	(3)								
			(1)	NC		ON	ON				
2	201	SPST-NO/	(2)								
		SPST-NC	(3)	NO			ON				
			(1)								
2	2 012	SPST-NO/	(2)	NO	ON		ON				
		SPST-NC	(3)	NC	ON	ON					
			(1)								
2	2 021	SPST-NO/	(2)	NC		ON					
		SPST-NC	(3)	NO			ON				
							(1)	NO	ON		
3	111	3PST-NO	(2)	NO	ON		ON				
			(3)	NO			ON				
			(1)	NC		ON	ON				
3	222	3PST-NC	(2)	NC		ON					
	3 222		(3)	NC	ON	ON					
			(1)	NO	ON						
3	122	SPST-NO/	(2)	NC		ON					
		DPST-NC	(3)	NC	ON	ON					
			(1)	NC		ON	ON				
3		SPST-NO/	(2)	NO	ON		ON				
			DPST-NC	(3)	NC	ON	ON				
			(1)	NC		ON	ON				
3	221	SPST-NO/	(2)	NC		ON					
		DPST-NC	(3)	NO	ON		ON				
			(1)	NC		ON	ON				
3	211	DPST-NO/	(2)	NO	ON		ON				
3		SPST-NC	(3)	NO			ON				
-			(1)	NO	ON						
3	121	DPST-NO/	(2)	NC		ON					
-		SPST-NC	(3)	NO			ON				
-			(1)	NO	ON						
3	112	DPST-NO/	(2)	NO	ON		ON				
-		SPST-NC	(3)	NC	ON	ON					

Operation Angle



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		1				100 002
	2B	2	A22NK-2B(3)-01(5)A-G(8)(8)(8)			102 101 202
		3				111 222 122 112
Brushed metal bezels		1				100 002
	2М	2	A22NK-2M(3)-01(5)A-G(8)(8)(8)	M: Manual L: Automatic reset on left	A: All positions B: Left C: Right	102 101 202
		3				111 222 122 112
Metal bezels		1				100 002
	2R	2	A22NK-2R(3)-01(5)A-G(8)(8)(8)		_	102 101 202
		3				111 222 122 112

Three-position, Key-type Selector Switches

Appearance	Bezel material	No. of out-	Model	(3) Reset method	(5) Key release positions	(8)(8)(8) Contact configuration
Plastic bezels	3В	2	A22NK-3B(3)-01(5)A-G(8)(8)(8)	L: Automatic reset on left R: Automatic reset on right	A: All positions B: Left C: Right D: Center G: Left and right	110 011 101 220 022 202 120 102 210 201 012 021
		3				111 222 122 212 221 211 121
Brushed metal bezels	3М	2	A22NK-3M(3)-01(5)A-G(8)(8)(8)			110 011 101 220 022 202 120 102 210 201 012
		3				111 222 122 212 221 211 121
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
	3	3				111 222 122 212 221 221 211 121

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

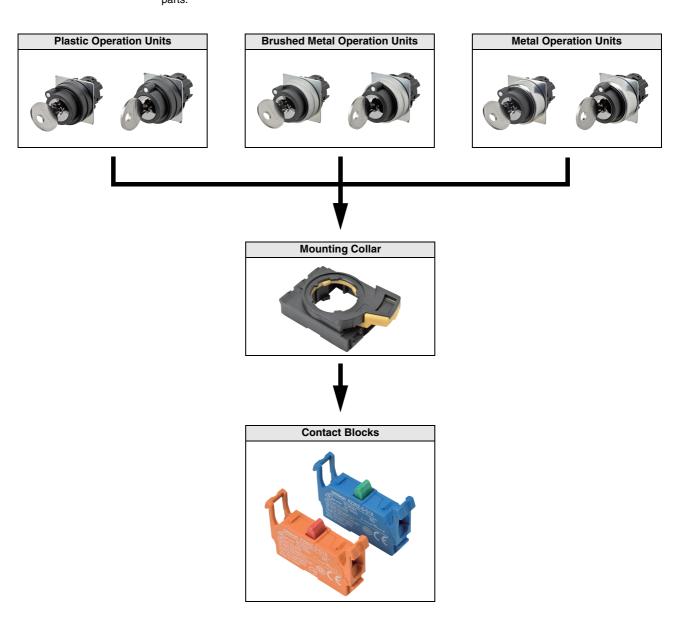
 $[\]blacksquare$ Specifications: Refer to page 10 and refer to the A22NN/A22NL.

[■] 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

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
	Automatic reset on left	A22NZ-2BL-01(1)A	A22NZ-2ML-01(1)A	A22NZ-2RL-01(1)A	B: Left C: Right
	Manual	A22NZ-3BM-01(1)A	A22NZ-3MM-01(1)A	A22NZ-3RM-01(1)A	
3	Automatic reset on left	A22NZ-3BL-01(1)A	A22NZ-3ML-01(1)A	A22NZ-3RL-01(1)A	A: All positions B: Left
	Automatic reset on right	A22NZ-3BR-01(1)A	A22NZ-3MR-01(1)A	A22NZ-3RR-01(1)A	C: Right D: Center
	Automatic reset on left and right	A22NZ-3BB-01(1)A	A22NZ-3MB-01(1)A	A22NZ-3RB-01(1)A	G: Left and right

■ 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
1	SPST-NO (blue)	A22NZ-S-G1A
	SPST-NC (orange)	A22NZ-S-G1B

Reinforcement Plate

Appearance	Model
WALL TO SERVICE OF THE PARTY OF	A22NZ-A-C01

Accessories

Appearance	Model
Key	
No. of the second secon	A22NZ-K-01

Specifications

Characteristics

Туре		Key-type Selector Switches	
Item			
Allowable operating	Mechanical	30 operations/minute max.	
frequency	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	
Dielectric Strength	Between each termi- nal 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)		10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms)	
Shock resistance Malfunction		1,000 m/s² max. (malfunction within 1 ms)	
Durability	Mechanical	500,000 operations min. (Switches with 3 positions: 300,000 operations min.)	
Durability	Electrical	500,000 operations min. (Switches with 3 positions: 300,000 operations min.)	
Ambient operating te	mperature*1	-25 to 70°C	
Ambient operating hu	ımidity	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.

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

Туре	Key-type Selector Switches	
Item	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

	Key-type Selector Switches		
	2 positions	3 positions	
Linking example	Operation Unit Mounting Collar	Operation Unit Mounting Collar	

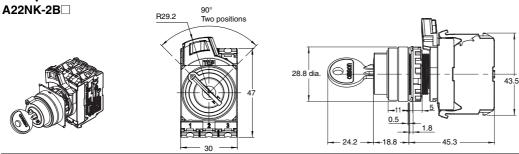
Note: If you increase the number of Contact Blocks, evaluate the Switch under actual working conditions before permanent installation and use the Switch within a number of switching operations that will not adversely affect the Switch's performance.

^{*2.} Degree of protection from the front of the panel.

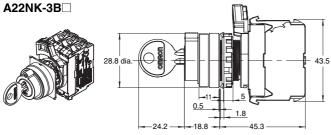
Dimensions (Unit: mm)

Lighted and Non-lighted Key-type Selection Switches

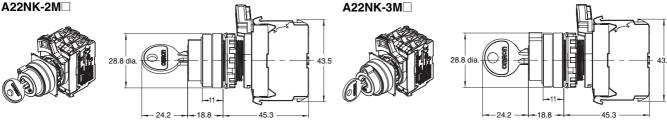
Two-position Switches with Plastic Bezels



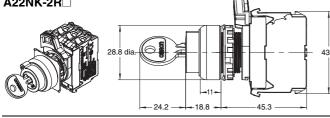
Three-position Switches with Plastic Bezels



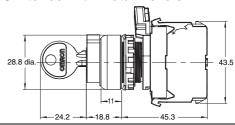
Two-position Switches with Brushed Metal Bezels Three-position Switches with Brushed Metal Bezels



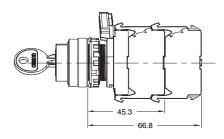
Two-position Switches with Metal Bezels A22NK-2R



Three-position Switches with Metal Bezels A22NK-3R

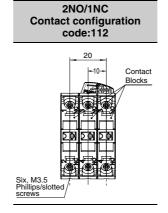


Depth with Linked Units

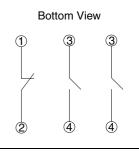


Terminal Wiring Diagrams Bottom View

Terminal Connection Diagrams



2NO/1NC **Contact configuration** code:112



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.

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A22NK-2RM-01BA-G102 A22NK-2RM-01BA-G100 A22NK-2BL-01BA-G002 A22NK-2BL-01BA-G100 A22NK-2BL-01BA-G101 A22NK-2BL-01BA-G102 A22NK-2BL-01BA-G202 A22NK-2BM-01AA-G002 A22NK-3RM-01DA-G102 A22NK-3RM-01DA-G202 A22NK-3RM-01GA-G101 A22NK-3RM-01GA-G102 A22NK-3RM-01GA-G202 A22NK-3RB-01DA-G101 A22NK-3RB-01DA-G102 A22NK-3RB-01DA-G202 A22NK-3RM-01BA-G101 A22NK-3RM-01BA-G102 A22NK-3RM-01DA-G101 A22NK-3MM-01DA-G101 A22NK-3MM-01DA-G102 A22NK-3MM-01DA-G202 A22NK-01GA-G101 A22NK-3MM-01GA-G102 A22NK-3MM-01GA-G202 A22NK-3BM-01GA-G202 A22NK-3MB-01DA-G101 A22NK-3MB-01DA-G102 A22NK-3MB-01DA-G202 A22NK-3MM-01BA-G101 A22NK-3MM-01BA-G102 A22NK-3BM-01BA-G102 A22NK-3BM-01DA-G101 A22NK-3BM-01DA-G102 A22NK-3BM-01DA-G202 A22NK-3BM-01GA-G101 A22NK-3BM-01GA-G102 A22NK-2RM-01BA-G111 A22NK-2RM-01BA-G202 A22NK-3BB-01DA-G101 A22NK-3BB-01DA-G102 A22NK-3BB-01DA-G202 A22NK-3BM-01BA-G101 A22NK-2RM-01AA-G100 A22NK-2RM-01AA-G101 A22NK-2RM-01AA-G102 A22NK-2RM-01AA-G202 A22NK-2RM-01BA-G002 A22NK-2RM-01BA-G101 A22NK-2RL-01BA-G002 A22NK-2RL-01BA-G100 A22NK-2RL-01BA-G101 A22NK-2RL-01BA-G102 A22NK-2RL-01BA-G202 A22NK-2RM-01AA-G002 A22NK-2MM-01AA-G202 A22NK-2MM-01BA-G002 A22NK-2MM-01BA-G100 A22NK-2MM-01BA-G101 A22NK-2MM-01BA-G102 A22NK-2MM-01BA-G202 A22NK-2ML-01BA-G102 A22NK-2ML-01BA-G202 A22NK-2MM-01AA-G002 A22NK-2MM-01AA-G100 A22NK-2MM-01AA-G101 A22NK-2MM-01AA-G102 A22NK-2BM-01BA-G101 A22NK-2BM-01BA-G102 A22NK-2BM-01BA-G202 A22NK-2ML-01BA-G002 A22NK-2ML-01BA-G100 A22NK-2ML-01BA-G101 A22NK-2BM-01AA-G100 A22NK-2BM-01AA-G101 A22NK-2BM-01AA-G102 A22NK-2BM-01AA-G202 A22NK-2BM-01BA-G002 A22NK-2BM-01BA-G100