OMRON

Key-type Selector Switches

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

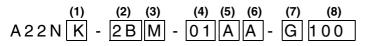




Model Number Structure

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)	Туре
(1)	Туре

(4) Key Number

Code	Туре
К	Key-type Selector Switch

• •	,
Code	No.
01	No.1

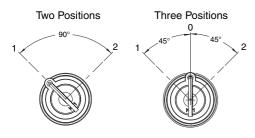
(2) Number of Positions and **Bezel Material**

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

(3) Reset Method

Code		Reset metho	d
м	Manual	Two- positions manual	\searrow
IVI	Manuai	Three- positions manual	
1	Automatic reset on	Two- positions automatic	\checkmark
L	left	Three- positions left automatic	\checkmark
R	Automatic reset on right	Three- positions right automatic	
В	Automatic reset on left and right	Three- positions left or right automatic	

Operation Angle



(5) Key Release Position

Code	Release position	Two positions	Three positions		
A	All positions	0	000		
в	Left	•	°•		
С	Right	••	•		
D	Center				
G	Left and right				

O: Release position Locked position

Code А

(6) Degree of Protection

Protection
IP66, NEMA13

(7) Contact Specification

Code	Description
G	General purpose

(8) Contact Configuration

Code		tact cks	Unit	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.



■ 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.

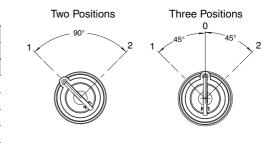
Structure

Contact Configuration Table

Two Positions

No. of	Code	Contact	Unit	Contacts	Pos	ition
outputs	Code	configuration	position	Contacts	1	2
			(1)	NO		ON
1	100	SPST-NO	(2)			
			(3)			
			(1)			
1	002	SPST-NC	(2)			
			(3)	NC	ON	
			(1)	NO		ON
2	102	SPST-NO/ SPST-NC	(2)			
		0.0.10	(3)	NC	ON	
			(1)	NO		ON
2	101	DPST-NO	(2)			
			(3)	NO		ON
			(1)	NC	ON	
2	202	DPST-NC	(2)			
			(3)	NC	ON	
			(1)	NO		ON
3	111	3PST-NO	(2)	NO		ON
			(3)	NO		ON
			(1)	NC	ON	
3	222	3PST-NC	(2)	NC	ON	
			(3)	NC	ON	
		ODOT NO	(1)	NO		ON
3	122	SPST-NO/ DPST-NC	(2)	NC	ON	
		DISTINO	(3)	NC	ON	
		DDOT NO	(1)	NO		ON
3	112	DPST-NO/ SPST-NC	(2)	NO		ON
		5. 0	(3)	NC	ON	

Operation Angle

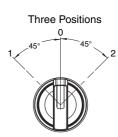


Three Positions

No. of	Quala	Contact	Unit	0		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	DPST-NC	(2)	NC		ON	
			(3)	NC	ON	ON	
			(1)	NC		ON	ON
2	202	DPST-NC	(2)				
			(3)	NC	ON	ON	
			(1)	NO	ON		
2	120	SPST-NO/ SPST-NC	(2)	NC		ON	
		5. 5. 115	(3)				

No. of	Code	Contact configuration	Unit	Contracto		Position	
outputs	Code		position	Contacts	1	0	2
2 102		(1)	NO	ON			
	SPST-NO/ SPST-NC	(2)					
		51 51-110	(3)	NC	ON	ON	
			(1)	NC		ON	ON
2	210	SPST-NO/ SPST-NC	(2)	NO	ON		ON
		51 51-110	(3)				
			(1)	NC		ON	ON
2	201	SPST-NO/ SPST-NC	(2)				
		51 51-110	(3)	NO			ON
			(1)				
2	012	SPST-NO/ SPST-NC	(2)	NO	ON		ON
		3F31-NC	(3)	NC	ON	ON	
			(1)				
2	021	SPST-NO/ SPST-NC	(2)	NC		ON	
		3531-110	(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)	NC	ON	ON	
			(1)	NO	ON		
3	122	SPST-NO/	(2)	NC		ON	
		DPST-NC	(3)	NC	ON	ON	
			(1)	NC		ON	ON
3	212	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	0	ON
			(1)	NC		ON	ON
3	211	DPST-NO/	(2)	NO	ON	2	ON
Ũ		SPST-NC	(3)	NO			ON
			(1)	NO	ON		
3	121	DPST-NO/	(1)	NC		ON	
0	121	SPST-NC	(3)	NO			ON
			(1)	NO	ON		
3	112	DPST-NO/	(1)	NO	ON		ON
0	112	SPST-NC	(3)	NC	ON	ON	





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
	2В	2	A22NK-2B(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
Brushed metal bezels		1				100 002
	2M	2	A22NK-2M(3)-01(5)A-G(8)(8)(8)			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

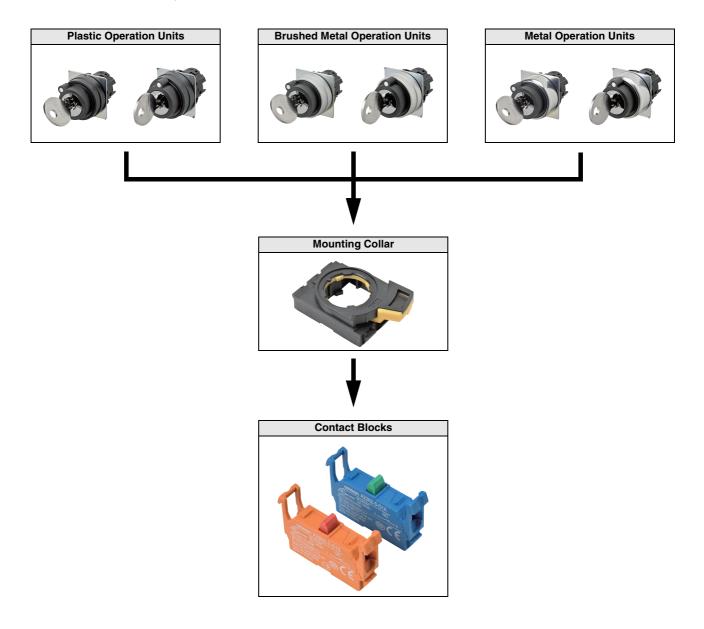
Appearance	Bezel material	No. of out- puts	Model	(3) Reset method	(5) Key release positions	(8)(8)(8) Contact configuration
Plastic bezels	3В	2	A22NK-3B(3)-01(5)A-G(8)(8)(8)	L: Automatic reset on left	A: All positions B: Left C: Right D: Center G: Left and right	110 011 101 220 022 202 120 102 210 201 012 021
		3				111 222 122 212 221 211 121 112
Brushed metal bezels	ЗМ	2	A22NK-3M(3)-01(5)A-G(8)(8)(8)			110 011 101 220 202 202 120 102 210 201 012 021
		3				111 222 122 212 221 211 121 112
Metal bezels	3R	2	A22NK-3R(3)-01(5)A-G(8)(8)(8)			110 011 101 220 202 202 120 102 210 201 012 021
		3				111 222 122 212 221 211 121 112

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

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

		Plastic	Brushed metal	Metal	
Bezel n	naterial and shape		I IIII	I IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	(1) Key release positions
No. of positions	Reset method	Model	Model	Model	
	Manual	A22NZ-2BM-01(1)A	A22NZ-2MM-01(1)A	A22NZ-2RM-01(1)A	A: All positions
2	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	
	Automatic reset on left	A22NZ-3BL-01(1)A	A22NZ-3ML-01(1)A	A22NZ-3RL-01(1)A	A: All positions B: Left
3	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
es es es	A22NZ-A-C01

Accessories

Appearance	Model
Key	
Near Near	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	
Delectric 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)	
Shock resistance	k 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.)	
Durability	Electrical	500,000 operations min. (Switches with 3 positions: 300,000 operations min.)	
Ambient operating temperature ^{*1}		–25 to 70°C	
Ambient operating hu	midity	35% to 85% RH	
Ambient storage temp	perature ^{*1}	-40 to 80°C	
Degree of protection*2	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)

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.		

Contact Blocks

Examples of Linked Contact Blocks

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

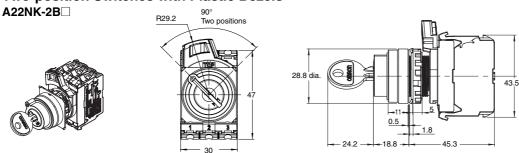
Note: If you increase the number of Contact Blocks, evaluate the Switch under actual working conditions before permanent installation and use the Switch within a number of switching operations that will not adversely affect the Switch's performance.

(Unit: mm)

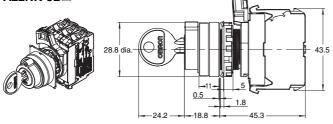
Dimensions

Lighted and Non-lighted Key-type Selection Switches

Two-position Switches with Plastic Bezels

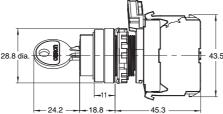


Three-position Switches with Plastic Bezels A22NK-3B

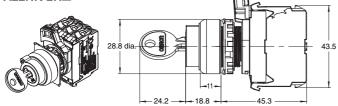


Two-position Switches with Brushed Metal Bezels

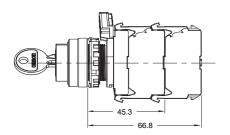




Two-position Switches with Metal Bezels

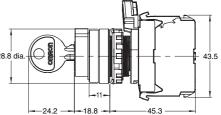


Depth with Linked Units

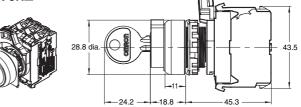


Three-position Switches with Brushed Metal Bezels A22NK-3M

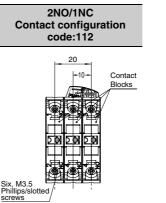




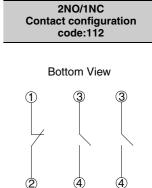
Three-position Switches with Metal Bezels A22NK-3R



Terminal Wiring Diagrams Bottom View



Terminal Connection Diagrams



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.

Terms and Conditions Agreement

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.

Warranties.

(a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.

(b) Limitations. OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses 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. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See http://www.omron.com/global/ or contact your Omron representative for published information.

Limitation on Liability; Etc.

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

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

Suitability of Use.

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

Performance Data.

Data presented in Omron Company websites, catalogs and other materials 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 user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

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 part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions.

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

Industrial Automation Company **OMRON** Corporation Tokyo, JAPAN

Contact: www.ia.omron.com

Regional Headquarters OMRON EUROPE B.V. Wegalaan 67-69, 2132 JD Hoofddorp The Netherlands Tel: (31)2356-81-300/Fax: (31)2356-81-388

OMRON ASIA PACIFIC PTE. LTD. OMFON ASIA PACIFIC PTE. LTD. No. 438A Alexandra Road # 05-05/08 (Lobby 2), Alexandra Technopark, Singapore 119967 Tel: (65) 6835-3011/Fax: (65) 6835-2711

OMRON ELECTRONICS LLC 2895 Greenspoint Parkway, Suite 200 Hoffman Estates, IL 60169 U.S.A Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

OMRON (CHINA) CO., LTD. Room 2211, Bank of China Tower, 200 Yin Cheng Zhong Road, PuDong New Area, Shanghai, 200120, China Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

Authorized Distributor:

© OMRON Corporation 2015 All Rights Reserved. In the interest of product improvement, specifications are subject to change without notice.

CSM_1_1_0415 Cat. No. A241-E1-01

0415 (0415)