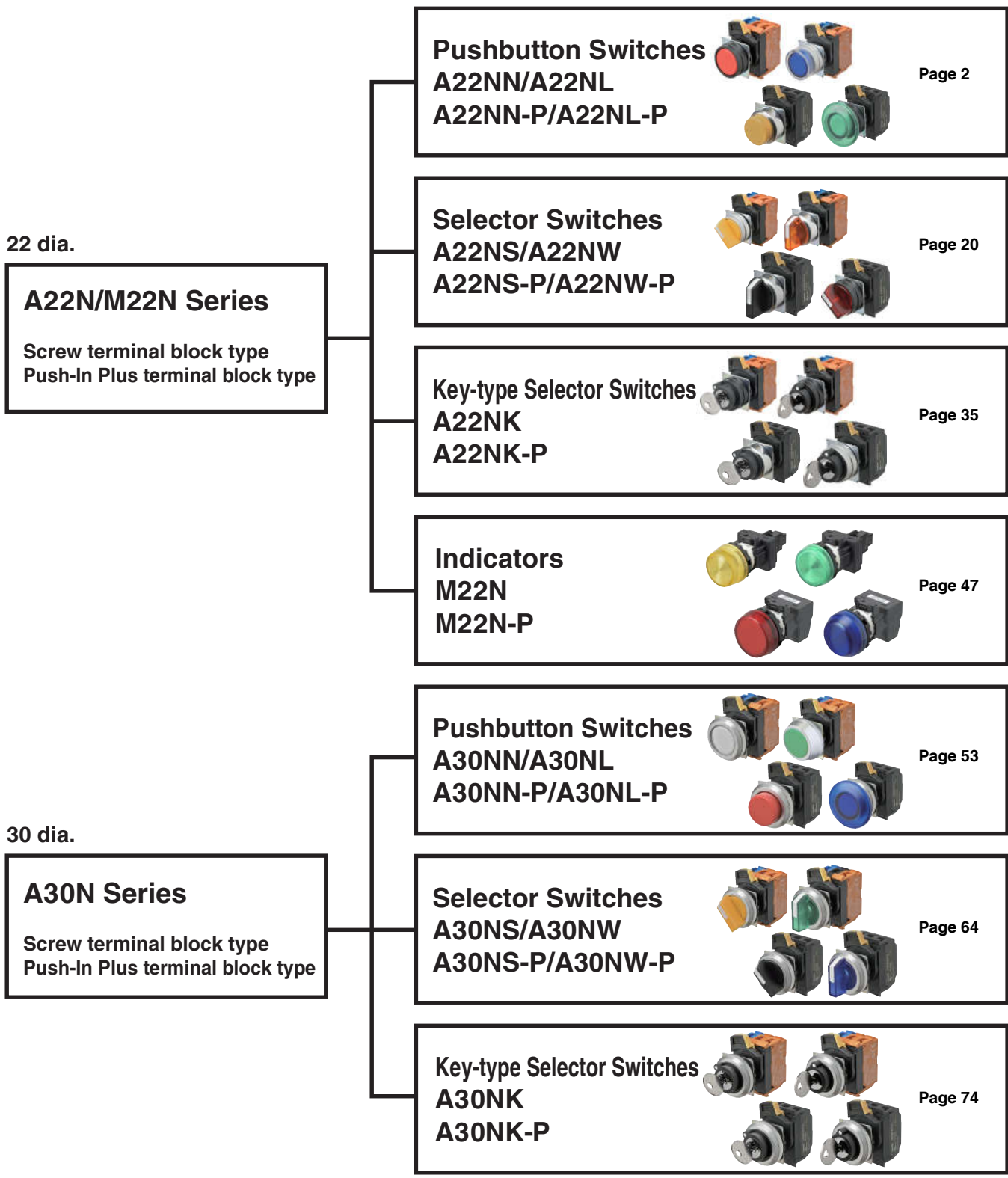


# Pushbutton Switches/Selector Switches/Indicators A22N/M22N/A30N

Control panel miniaturization through a more compact design and modified wiring direction  
 Addition of Push-In Plus terminal blocks for easy wiring  
 Workability and safety improvements



# A22NK

Pushbutton Switches  
A22N

Selector Switches  
A22N

Key-type Selector Switches  
A22N

Indicators  
M22N

Pushbutton Switches  
A30N

Selector Switches  
A30N

Key-type Selector Switches  
A30N

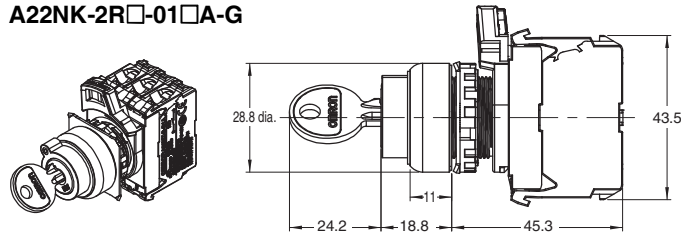
Subassemblies  
(Common)

Accessories  
and Tools

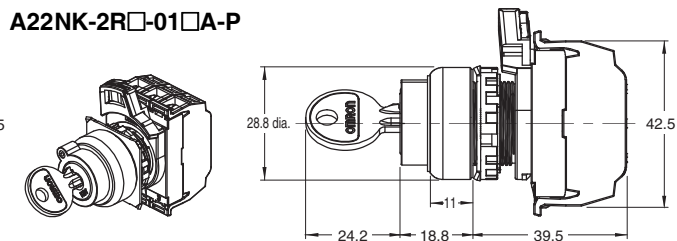
Safety  
Precautions

## Two-position Switches with Metal Bezels

A22NK-2R□-01□A-G

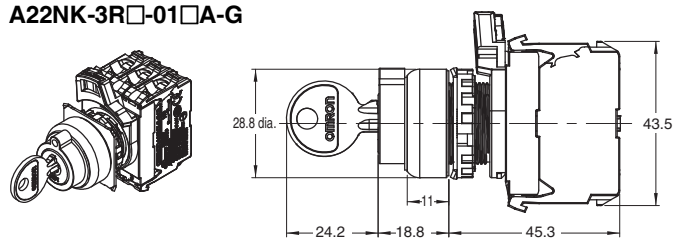


A22NK-2R□-01□A-P

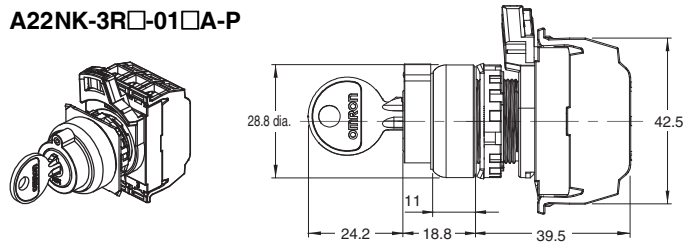


## Three-position Switches with Metal Bezels

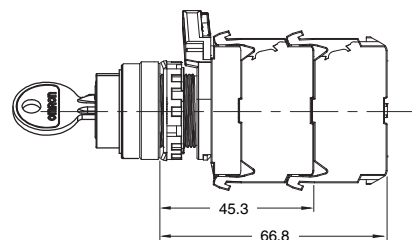
A22NK-3R□-01□A-G



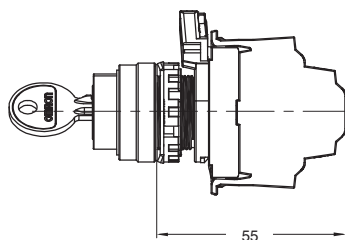
A22NK-3R□-01□A-P



## Depth with Linked Units (Screw terminal block type)



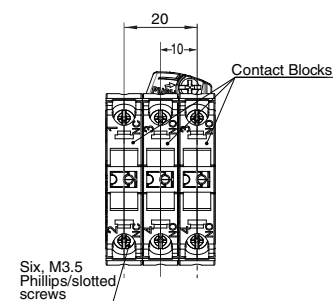
## Depth when a double-contact unit is mounted (Push-in Plus terminal block type)



## Terminal Arrangement

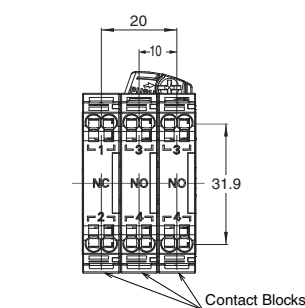
**BOTTOM VIEW**  
(Screw terminal block type)

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

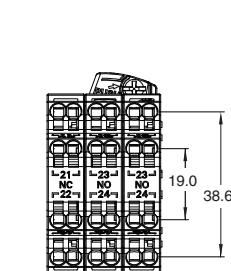


**BOTTOM VIEW**  
(Push-in Plus terminal block type)

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



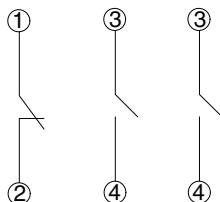
**Double-contact unit**  
(2NO/2NO/2NC)



## Terminal Connection Diagrams

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

Bottom View



**Note:** The above shows a terminal connection diagram for a screw terminal block type.

# Indicators M22N

**22-mm dia. Indicators**  
**Control panel miniaturization through a more compact design and modified wiring direction.**  
**Addition of Push-In Plus terminal blocks for easy wiring.**



**Easy to Use**

- Improved wiring visibility through to a modified wiring direction. (Push-In Plus terminal block type)
- Screw terminal structure is compatible with round crimp terminals. (Screw terminal block type)

**Miniaturization**

- No need for extra lateral space because of the modified wiring direction. (Push-In Plus terminal block type)
- Compact design.

**Product Lineup**

- Meet global safety standards.
- Can be installed in two types of panel hole dimensions: 22.3 and 25.5 dia.
- The indicators come in a wide variety of colors and shapes.
- Standard-feature degree of protection: IP66, NEMA 4X, and NEMA 13.

Refer to *Safety Precautions for All Pushbutton Switches/Indicators and Safety Precautions* on page 89.





## Indicator Unit Colors

	Red	Green	Yellow	White	Blue	Orange	White
When not lit							
When lit	Red	Green	Yellow	White	Blue	Orange	Opaque white*

\* The colors when the Switches are lit are for transparent white Indicator Units (code: TW) and yellow LED Lamps (code: Y).

# M22N

## List of Models

Screw Terminal Blocks/Push-In Plus Terminal Blocks	
Appearance	Model
Plastic flat 	M22N-BN
Plastic projected 	M22N-BP
Plastic semi-spherical 	M22N-BG
Plastic flat etched 	M22N-BC

Pushbutton Switches  
A22N

Selector Switches  
A22N

Key-type Selector Switches  
A22N

Indicators  
M22N

Pushbutton Switches  
A30N

Selector Switches  
A30N

Key-type Selector Switches  
A30N

Subassemblies  
(Common)

Accessories  
and Tools

Safety  
Precautions

## Model Number Structure

### Model Number Legend

-- Shipped as a set that includes the Indicator Unit, LED Lamp, and Socket Unit.  
For information on combinations, refer to *Ordering Information* on page 50.

#### Model Numbers for Sets

M22N - <sup>(1)</sup>BN - <sup>(2)</sup>TR <sup>(3)</sup>A - <sup>(4)</sup>R <sup>(5)</sup>A - <sup>(6)</sup>

#### (1) Indicator Unit Shape

Code	Shape
BN	Plastic flat
BP	Plastic projected
BG	Plastic semi-spherical
BC	Plastic flat etched

#### (2) Indicator Color and (4) LED Lamp Color

Code (2)	Code (4)	Indicator color	LED Lamp color
TR	R	Red	Red
TG	G	Green	Green
TY	Y	Yellow	Yellow
TW	W	White	White
TA	A	Blue	Blue
TO	O	Orange	Orange
TW	Y	White*	Yellow

\* The color is opaque white when the Indicator is lit.

#### (3) Degree of Protection

Code	Protection
A	Conforming to IP66, NEMA 4X, NEMA13

#### (5) LED Lamp Voltage

Code	LED Lamp voltage
A	6 VAC/DC
B	12 VAC/DC
C	24 VAC/DC
D	100/110/120 VAC
E	200/220/230/240 VAC

#### (6) Terminals Specifications

Code	Specification
No Code	Screw Terminal Block
P	Push-In Plus Terminal Block

■ Specifications: Refer to page 51.

■ Accessories and tools: Refer to pages 84 to 85.

■ Dimensions: Refer to page 52.





■ Precautions for correct use: Refer to pages 89 to 100.

# M22N

## Ordering Information

**Model Numbers for Sets** - - - - Shipped as a set that includes the Indicator Unit, LED Lamp, and Socket Unit.

### Indicators

Appearance	Rated voltage	Model	(2)(2) Indicator color	(4) LED lamp color
Plastic flat 	6 VAC/DC	M22N-BN-(2)(2)A-(4)A		
		M22N-BN-(2)(2)A-(4)A-P		
	12 VAC/DC	M22N-BN-(2)(2)A-(4)B		
		M22N-BN-(2)(2)A-(4)B-P		
	24 VAC/DC	M22N-BN-(2)(2)A-(4)C		
		M22N-BN-(2)(2)A-(4)C-P		
	100, 110, or 120 VAC	M22N-BN-(2)(2)A-(4)D		
		M22N-BN-(2)(2)A-(4)D-P		
	200, 220, 230, or 240 VAC	M22N-BN-(2)(2)A-(4)E		
		M22N-BN-(2)(2)A-(4)E-P		
Plastic projected 	6 VAC/DC	M22N-BP-(2)(2)A-(4)A		
		M22N-BP-(2)(2)A-(4)A-P		
	12 VAC/DC	M22N-BP-(2)(2)A-(4)B		
		M22N-BP-(2)(2)A-(4)B-P		
	24 VAC/DC	M22N-BP-(2)(2)A-(4)C		
		M22N-BP-(2)(2)A-(4)C-P		
	100, 110, or 120 VAC	M22N-BP-(2)(2)A-(4)D		
		M22N-BP-(2)(2)A-(4)D-P		
	200, 220, 230, or 240 VAC	M22N-BP-(2)(2)A-(4)E		
		M22N-BP-(2)(2)A-(4)E-P		
Plastic semi-spherical 	6 VAC/DC	M22N-BG-(2)(2)A-(4)A	TR: Transparent red TG: Transparent green TY: Transparent yellow TW: Transparent white TA: Transparent blue TO: Transparent orange	R: Red G: Green Y: Yellow W: White A: Blue O: Orange
		M22N-BG-(2)(2)A-(4)A-P		
	12 VAC/DC	M22N-BG-(2)(2)A-(4)B		
		M22N-BG-(2)(2)A-(4)B-P		
	24 VAC/DC	M22N-BG-(2)(2)A-(4)C		
		M22N-BG-(2)(2)A-(4)C-P		
	100, 110, or 120 VAC	M22N-BG-(2)(2)A-(4)D		
		M22N-BG-(2)(2)A-(4)D-P		
	200, 220, 230, or 240 VAC	M22N-BG-(2)(2)A-(4)E		
		M22N-BG-(2)(2)A-(4)E-P		
Plastic flat etched 	6 VAC/DC	M22N-BC-(2)(2)A-(4)A		
		M22N-BC-(2)(2)A-(4)A-P		
	12 VAC/DC	M22N-BC-(2)(2)A-(4)B		
		M22N-BC-(2)(2)A-(4)B-P		
	24 VAC/DC	M22N-BC-(2)(2)A-(4)C		
		M22N-BC-(2)(2)A-(4)C-P		
	100, 110, or 120 VAC	M22N-BC-(2)(2)A-(4)D		
		M22N-BC-(2)(2)A-(4)D-P		
	200, 220, 230, or 240 VAC	M22N-BC-(2)(2)A-(4)E		
		M22N-BC-(2)(2)A-(4)E-P		

**Note:** Normally, the Indicator Unit and LED Lamp with the same color are combined.  
 However, opaque white is available by combining a white Indicator Unit and yellow LED. M22N-B□-TWA-Y□-□

- Specifications: Refer to page 51.
- Dimensions: Refer to page 52.
- Accessories and tools: Refer to pages 84 to 85.
- Precautions for correct use: Refer to pages 89 to 100.

Pushbutton Switches A22N  
 Selector Switches A22N  
 Key-type Selector Switches A22N  
 Indicators M22N  
 Pushbutton Switches A30N  
 Selector Switches A30N  
 Key-type Selector Switches A30N  
 Subassemblies (Common)  
 Accessories and Tools  
 Safety Precautions

## Ratings and Specifications

### Certified Standard Ratings

#### UL508 (File No.E76675), CSA C22.2 No.14

12 mA 6 VAC/DC  
12 mA 12 VAC/DC  
12 mA 24 VAC/DC  
12 mA 100-120 VAC  
12 mA 200-240 VAC

#### TÜV (EN60947-5-1)

80 mA 6 VAC/DC  
40 mA 12 VAC/DC  
20 mA 24 VAC/DC  
10 mA 100-120 VAC  
5 mA 200-240 VAC

#### CCC (GB14048.5)

6, 12, 24 VAC/DC  
100-120, 200-240 VAC

### Application Standards

UL1059 and UL486E (Push-In Plus terminal block type)

## Ratings

### LED Lamps

Rated voltage	Applied voltage	Current
6 VAC/DC	6 VAC/DC $\pm 10\%$	Approx. 11 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
12 VAC/DC	12 VAC/DC $\pm 10\%$	Approx. 12 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
24 VAC/DC	24 VAC/DC $\pm 10\%$	Approx. 12 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
100 VAC	100 VAC $\pm 10\%$	Approx. 12 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
110 VAC	110 VAC $\pm 10\%$	
120 VAC	100-130 VAC	
200 VAC	200 VAC $\pm 10\%$	
220 VAC	220 VAC $\pm 10\%$	Approx. 12 mA (red, orange, yellow, or blue) Approx. 5 mA (white or green)
230 VAC	230 VAC $\pm 10\%$	
240 VAC	220-250 VAC	

## Characteristics

Item	Type	Indicator
Allowable operating frequency	Mechanical	---
	Electrical	---
Insulation resistance		---
Contact resistance		---
Dielectric strength	Between terminals of same polarity	---
	Between each terminal and ground	2,500 VAC at 50/60 Hz for 1 min. (initial value)
Vibration resistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Malfunction	1,000 m/s <sup>2</sup> max.
Durability	Mechanical	---
	Electrical	---
Ambient operating temperature <sup>*1</sup>		-25 to 55°C
Ambient operating humidity		35% to 85% RH
Ambient storage temperature <sup>*1</sup>		-40 to 80°C
Degree of protection <sup>*2</sup>		Conforming to IP66, NEMA 4X, NEMA13
Electric shock protection class		Class II
PTI (tracking characteristic)		175
Degree of contamination (application environment)		3 (EN 60947-5-1)
Weight		Approx. 30 g

\*1. With no icing or condensation.

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



# M22N

## Dimensions

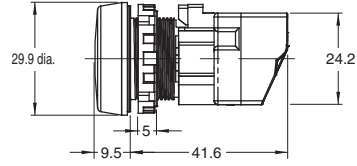
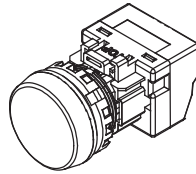
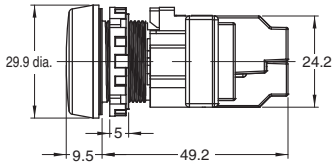
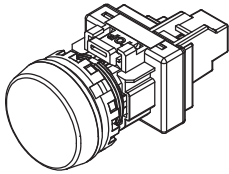
(Unit: mm)

### Indicators

#### Plastic Flat Indicators

M22N-BN-□□A-□□

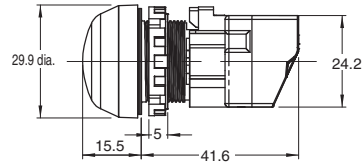
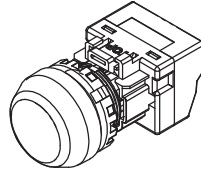
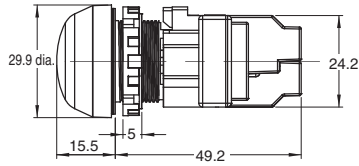
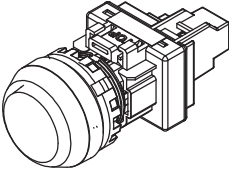
M22N-BN-□□A-□□-P



#### Plastic Semi-spherical Indicators

M22N-BG-□□A-□□

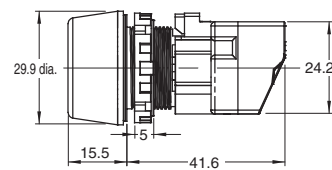
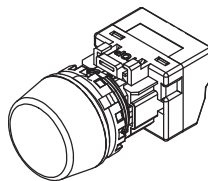
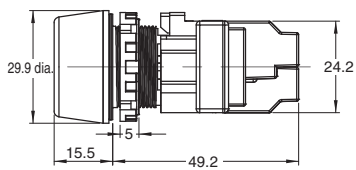
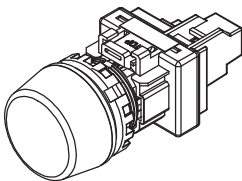
M22N-BG-□□A-□□-P



#### Plastic Projected Indicators

M22N-BP-□□A-□□

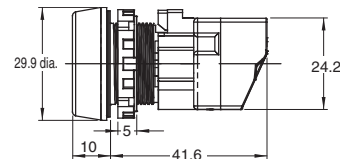
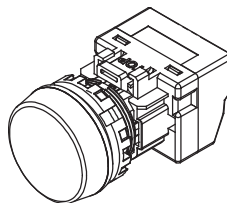
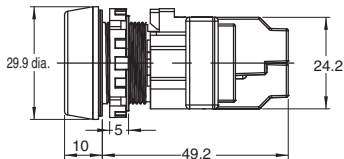
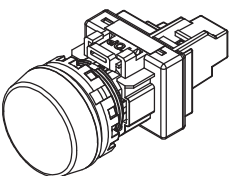
M22N-BP-□□A-□□-P



#### Plastic Flat Etched Indicators

M22N-BC-□□A-□□

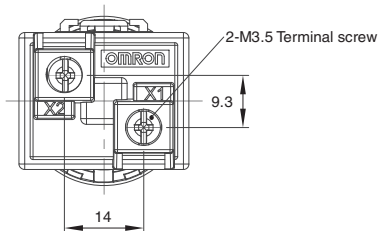
M22N-BC-□□A-□□-P



### Terminal Arrangement

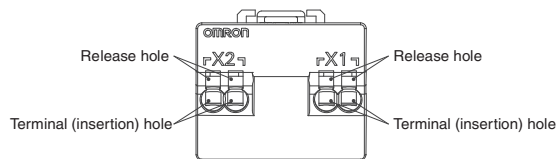
BOTTOM VIEW

Screw terminal block type



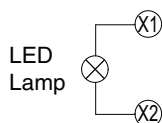
BOTTOM VIEW

Push-in Plus terminal block type



### Terminal Connection Diagrams

Screw terminal block type  
Push-in Plus terminal block type



Pushbutton Switches  
A22N

Selector Switches  
A22N

Key-type Selector Switches  
A22N

Indicators  
M22N

Pushbutton Switches  
A30N

Selector Switches  
A30N

Key-type Selector Switches  
A30N

Subassemblies  
(Common)

Accessories  
and Tools

Safety  
Precautions



# A22N/M22N/A30N

Pushbutton Switches  
A22N

## Subassemblies (Common)


## Ordering Information

Selector Switches  
A22N

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

### LED Lamps

Key-type Selector Switches  
A22N

Appearance	Rated voltage	Model				
	Color	6 VAC/DC	12 VAC/DC	24 VAC/DC	100/110/120 VAC	200/220/230/240 VAC
	Red	A22NZ-L-RA	A22NZ-L-RB	A22NZ-L-RC	A22NZ-L-RD	A22NZ-L-RE
	Green	A22NZ-L-GA	A22NZ-L-GB	A22NZ-L-GC	A22NZ-L-GD	A22NZ-L-GE
	Yellow	A22NZ-L-YA	A22NZ-L-YB	A22NZ-L-YC	A22NZ-L-YD	A22NZ-L-YE
	White	A22NZ-L-WA	A22NZ-L-WB	A22NZ-L-WC	A22NZ-L-WD	A22NZ-L-WE
	Blue	A22NZ-L-AA	A22NZ-L-AB	A22NZ-L-AC	A22NZ-L-AD	A22NZ-L-AE
	Orange	A22NZ-L-OA	A22NZ-L-OB	A22NZ-L-OC	A22NZ-L-OD	A22NZ-L-OE

Indicators  
M22N



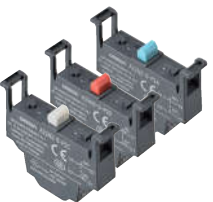
### Mounting Collar

Appearance	Model
	A22NZ-H-01

Pushbutton Switches  
A30N

### Contact Blocks

Selector Switches  
A30N

Appearance	Terminals Specifications	Contacts	Model
	Screw terminal block	SPST-NO (blue)	A22NZ-S-G1A
		SPST-NC (orange)	A22NZ-S-G1B
	Push-In Plus terminal block	SPST-NO (blue)	A22NZ-S-P1A
		SPST-NC (red)	A22NZ-S-P1B
	Push-In Plus terminal block	DPST-NO (blue)	A22NZ-S-P2A
		DPST-NC (red)	A22NZ-S-P2B
		SPST-NO/SPST-NC (white)	A22NZ-S-P2C



Key-type Selector Switches  
A30N

Subassemblies (Common)

Accessories and Tools

### Lighting Units

Safety Precautions

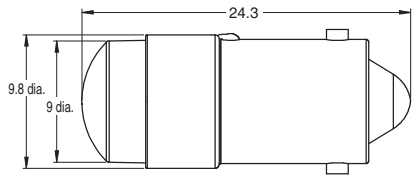
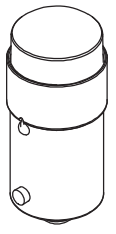
Appearance	Terminals Specifications	Rated voltage	Model
	Screw terminal block	6 VAC/DC	A22NZ-T-A
		12 VAC/DC	A22NZ-T-B
		24 VAC/DC	A22NZ-T-C
		100/110/120 VAC	A22NZ-T-D
		200/220/230/240 VAC	A22NZ-T-E
	Push-In Plus terminal block	6 VAC/DC	A22NZ-T-AP
		12 VAC/DC	A22NZ-T-BP
		24 VAC/DC	A22NZ-T-CP
		100/110/120 VAC	A22NZ-T-DP
		200/220/230/240 VAC	A22NZ-T-EP

**Subassemblies (Common)**

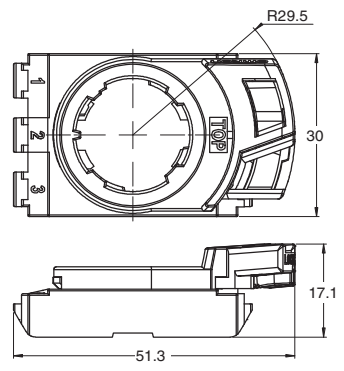
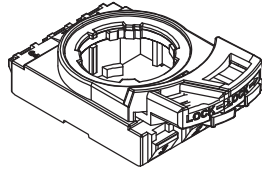
**Dimensions**

(Unit: mm)

**LED Lamps**  
A22NZ-L-□□

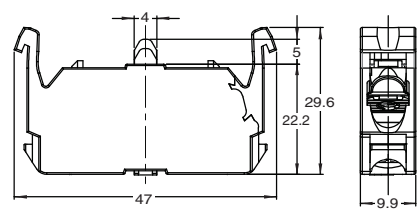
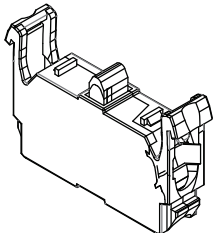


**Mounting Collar**  
A22NZ-H-01

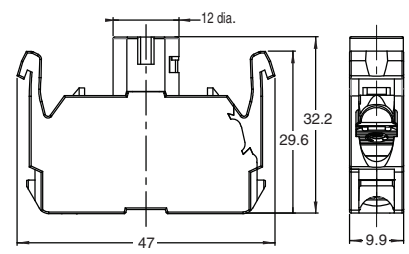
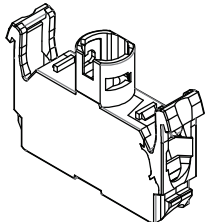


**Screw terminal block**

**Contact Blocks**  
A22NZ-S-G1□

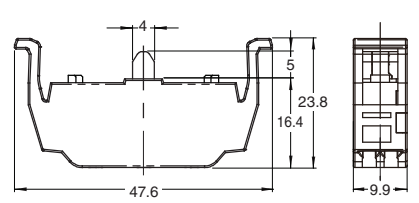
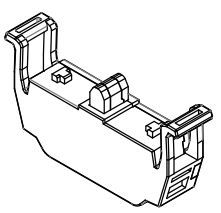


**Lighting Units**  
A22NZ-T-□

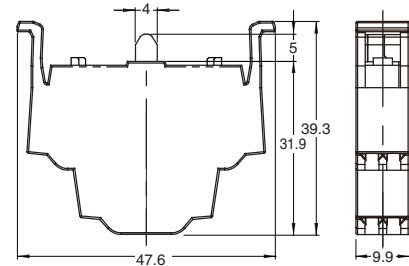
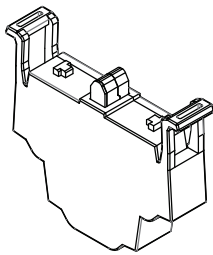


**Push-In Plus Terminal Blocks**

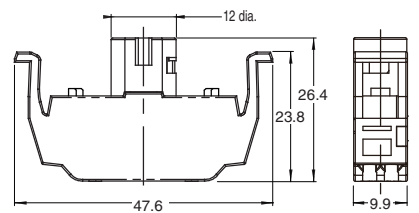
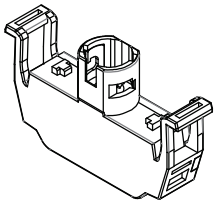
**Contact Blocks (Single Contact)**  
A22NZ-S-P1□



**Contact Blocks (Double Contact)**  
A22NZ-S-P2□



**Lighting Units**  
A22NZ-T-□P



# A22N/M22N/A30N

Pushbutton Switches  
A22N

## Accessories and Tools

### Ordering Information

Selector Switches  
A22N

### Accessories and Tools (Order Separately)

Key-type Selector Switches  
A22N

Indicators  
M22N

Pushbutton Switches  
A30N

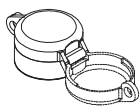



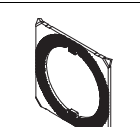


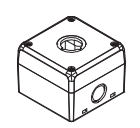



Selector Switches  
A30N

Key-type Selector Switches  
A30N

Subassemblies  
(Common)

Accessories  
and Tools

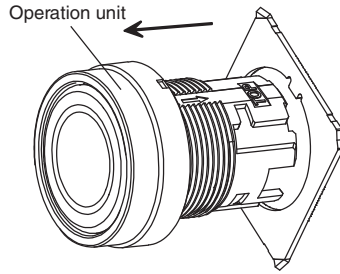
Safety  
Precautions

Item	Appearance	Classification	Model	Remarks
Protective Cover		---	<b>A22NZ-A-303</b>	A protector designed to prevent incorrect operation. Cannot be used together with other accessories. (Rubber seal included.) For 22.3 and 25.5-mm panel holes diameter. Key-type selector switches cannot be used.
Plastic Hole Plug		Round	<b>A22NZ-A-401</b>	Can be plugged into precut panel holes for future expansion. Applicable panel thickness: 0.8 to 3.0 mm For 22.3-mm panel hole diameter.
Metal Hole Plug		Round	<b>A22NZ-A-402</b>	Can be plugged into precut panel holes for future expansion. Applicable panel thickness: 0.8 to 6.0 mm (Rubber seal included.) For 22.3-mm panel hole diameter.
Lock Ring		Round	<b>A22NZ-A-403</b>	Used when a more secure lock is required to prevent rotation inside the Operation Unit. (Rubber seal included.) For 22.3-mm panel hole diameter. Can be used together with the A22NZ-A-50501 Lock Ring.
Lock Ring		---	<b>A22NZ-A-50501</b>	Used when a more secure lock is required to prevent rotation of the Operation Unit. Can be used together with the A22NZ-A-403 Lock Ring. Can be used with the A22N Series and the A30N Series.
Reinforcement Plate		---	<b>A22NZ-A-C01</b>	Used to reinforce Contact Blocks and Lighting Units, Refer to page 96 for mounting instructions.
Key		---	<b>A22NZ-K-01</b>	Used with a key-type selector switch.
Control Box		1 hole	<b>A22NZ-A-B101</b> <b>A22NZ-A-B201</b>	For 22.3-mm panel hole diameter, A30N□ cannot be used. Two switches for screw terminal block type cannot be linked. The A22NZ-A-B01Y and The A22NZ-A-B2□ model cannot be used for a double-contact unit of the Push-In Plus terminal block type.
		1 hole, yellow box	<b>A22NZ-A-B101Y</b> <b>A22NZ-A-B01Y</b>	
		2 holes	<b>A22NZ-A-B102</b> <b>A22NZ-A-B202</b>	
		3 holes	<b>A22NZ-A-B103</b> <b>A22NZ-A-B203</b>	
Connector		Suitable Cable Diameter (mm)	7 to 9 dia. <b>A22Z-3500-1</b> 9 to 11 dia. <b>A22Z-3500-2</b>	Plastic connector used to extend a cable from the switch box. Refer to page 99 for details.
Sealing Caps		For flat models	<b>A22Z-3600F</b>	Used to prevent dust or water from entering the Operation Unit. Color: opaque Material: silicon For 22.3 and 25.5-mm panel holes diameter. Knob-type and key-type selector switches cannot be used.
		For projection models	<b>A22Z-3600T</b>	
		For full-guard models	<b>A22Z-3600G</b>	
Resin Attachment for 30 dia.		Round	<b>A22Z-A30</b>	Use when mounting to a panel with a 30-dia. hole. Refer to page 100 for details. Purchase and mount a separate Lock Ring when using an indicator.

## Mounting the Lock Ring

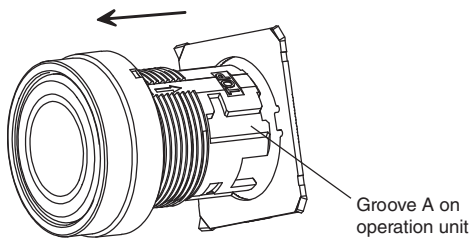
<A22N/A30N>

- Align the grooves on the Operation Unit with the protruding parts of the Lock Ring and mount.

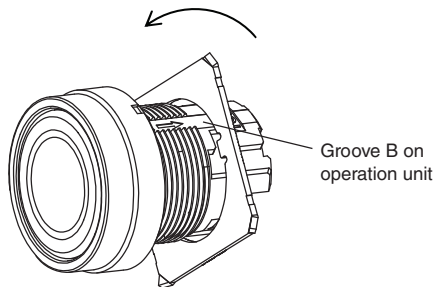


- When experiencing difficulties when mounting a Lock Ring, use the following procedure.

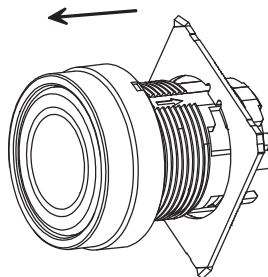
1. Insert the Lock Ring into groove A on the Operation Unit.



2. When the Lock Ring is in the position shown in the figure below, rotate it to insert the protruding part of the Lock Ring into groove B on the Operation Unit.



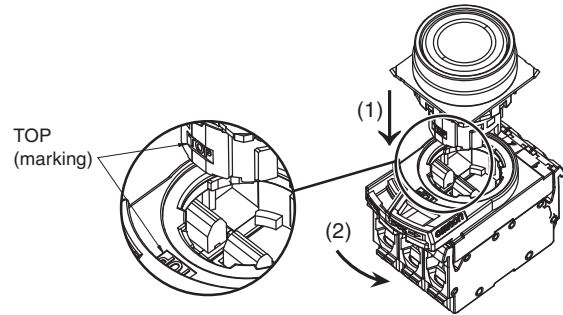
3. When the Lock Ring is in the position shown in the figure below, move it in the direction indicated by the arrow.



## Mounting the Contact Block to the Operation Unit

<A22N/A30N>

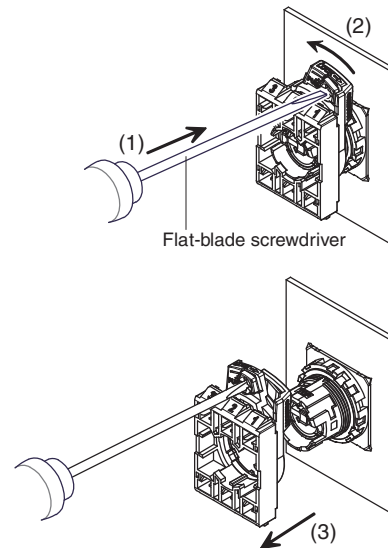
- Insert the Operation Unit into the Mounting Collar, aligning the TOP mark inscribed on the Operation Unit with the lever on the Mounting Collar, and then turn the lever in the direction indicated by the arrow in the following figure all of the way until it clicks into place.



## Removing the Mounting Collar

<A22N/A30N>

- 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.



# A22N/M22N/A30N

Pushbutton Switches  
A22N

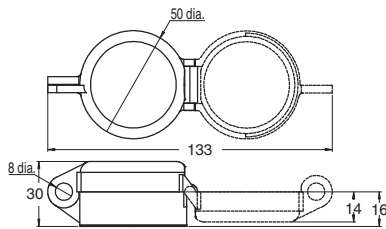
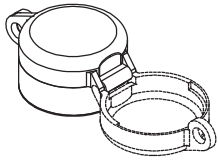
## Accessories and Tools

### Dimensions

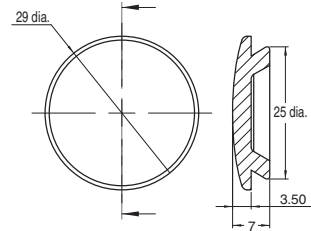
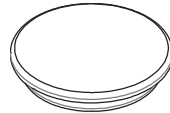
(Unit: mm)

Selector Switches  
A22N

#### Protective Cover A22NZ-A-303

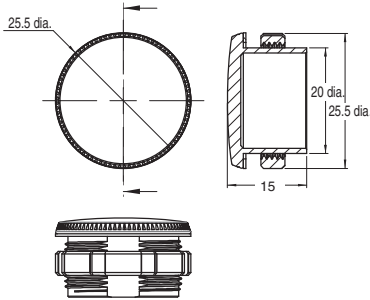


#### Plastic Hole Plug A22NZ-A-401

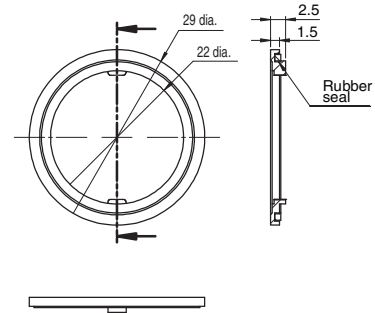
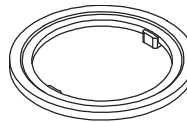


Key-type Selector Switches  
A22N

#### Metal Hole Plug A22NZ-A-402

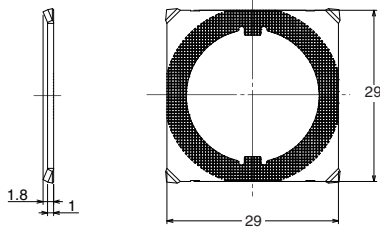
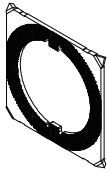


#### Lock Ring A22NZ-A-403

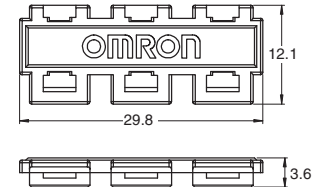
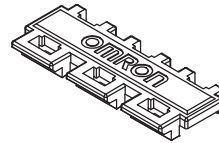


Indicators  
M22N

#### Lock Ring A22NZ-A-50501

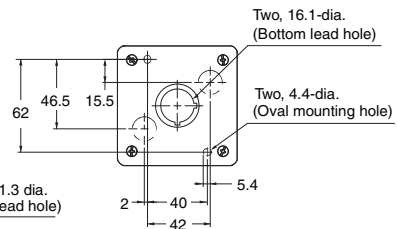
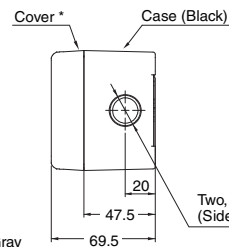
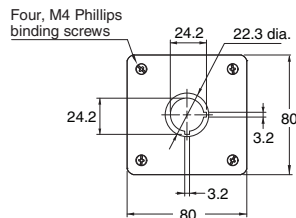
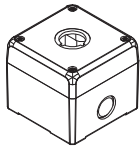


#### Reinforcement Plate A22NZ-A-C01



Pushbutton Switches  
A30N

#### Control Box A22NZ-A-B101 A22NZ-A-B101Y

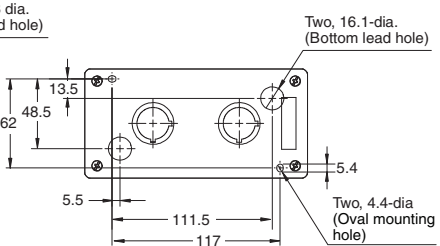
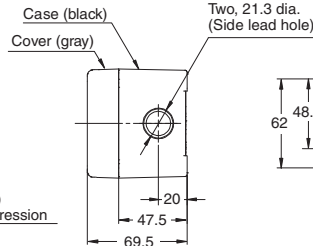
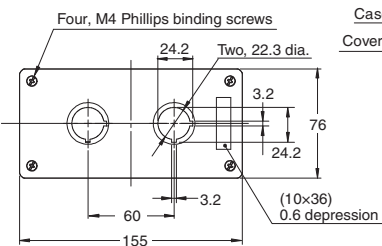
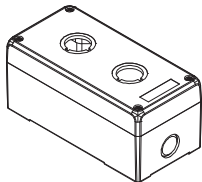


\* A22NZ-A-B101 : Gray  
A22NZ-A-B101Y : Yellow

Selector Switches  
A30N

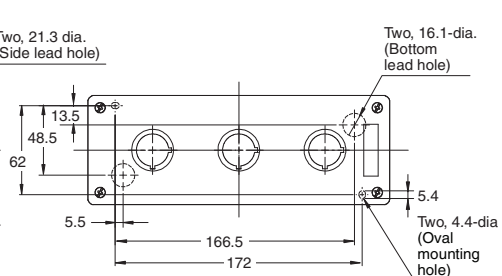
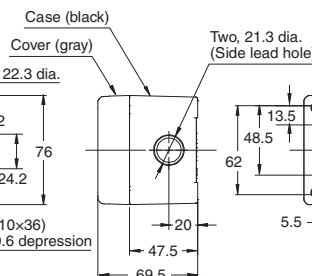
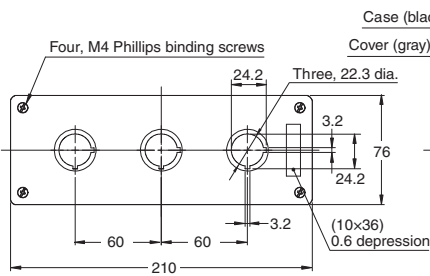
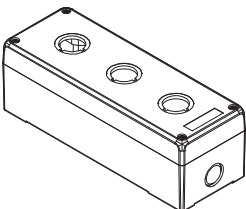
Subassemblies  
(Common)

#### Control Box (2 holes) A22NZ-A-B102



Accessories  
and Tools

#### Control Box (3 holes) A22NZ-A-B103



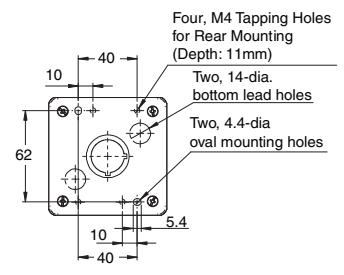
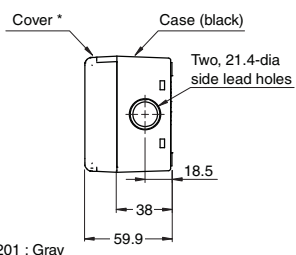
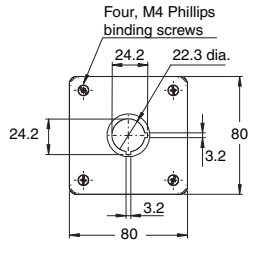
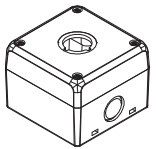
Safety  
Precautions

Accessories and Tools

Dimensions

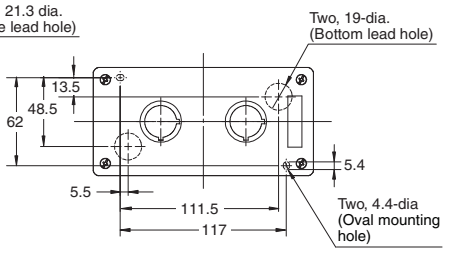
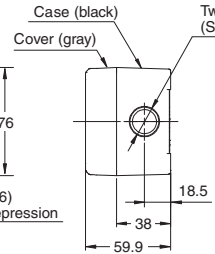
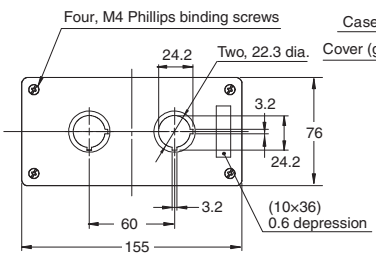
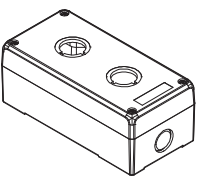
(Unit: mm)

Control Box  
A22NZ-A-B201  
A22NZ-A-B01Y

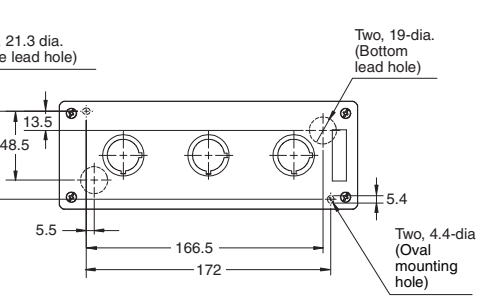
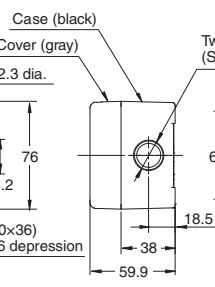
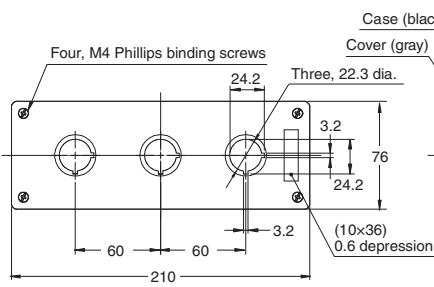
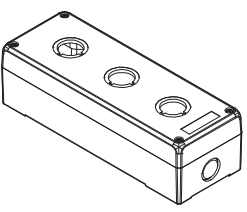


\* A22NZ-A-B201 : Gray  
A22NZ-A-B01Y : Yellow

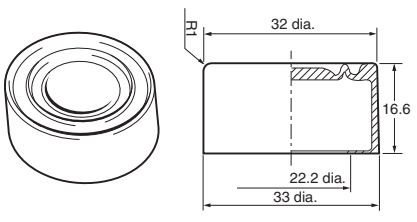
Control Box (2 holes)  
A22NZ-A-B202



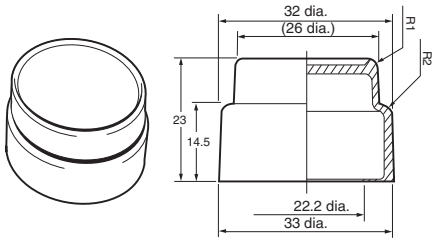
Control Box (3 holes)  
A22NZ-A-B203



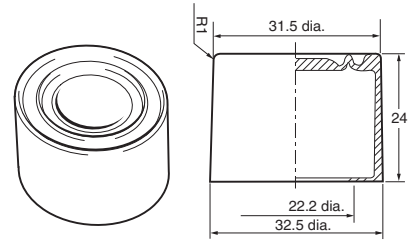
Sealing cap  
For Flat Models A22Z-3600F



For projection models A22Z-3600T



For full-guard models A22Z-3600G





# A22N/M22N/A30N

Pushbutton Switches  
A22N

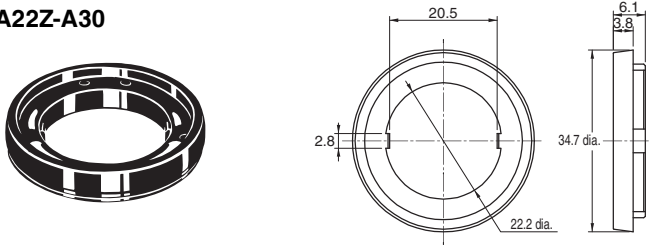
## Accessories and Tools

### Dimensions

(Unit: mm)

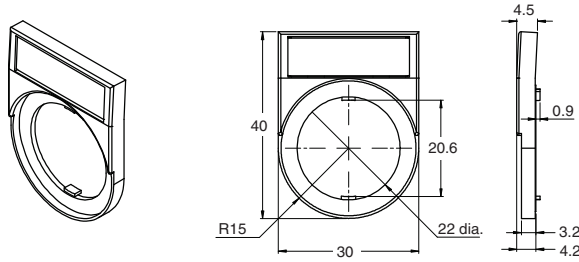
Selector Switches  
A22N

#### Resin Attachment for 30 dia. A22Z-A30



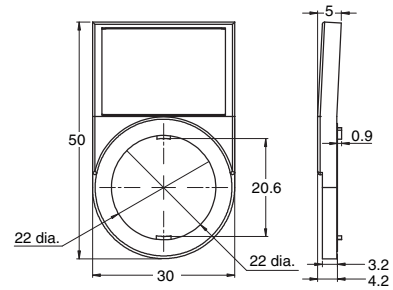
Key-type Selector Switches  
A22N

#### Legend Plate Frames General A22NZ-A-50103



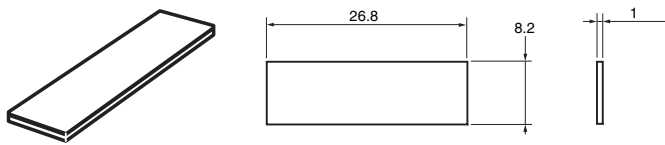
Indicators  
M22N

#### Large A22NZ-A-51103



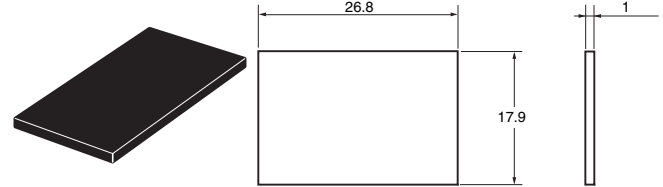
Pushbutton Switches  
A30N

#### Legend Plates General A22Z-3443□-□



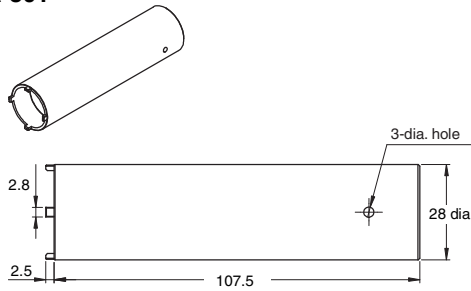
Selector Switches  
A30N

#### Large A22Z-3453□



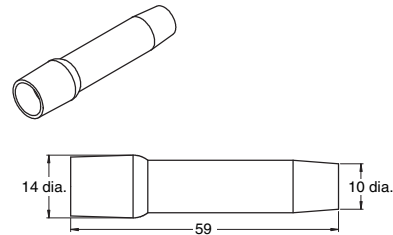
Key-type Selector Switches  
A30N

#### Tightening Wrench A22NZ-A-301



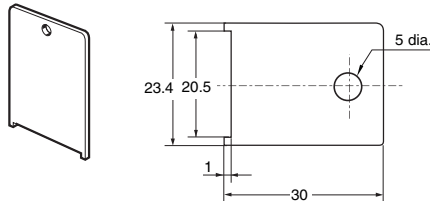
Subassemblies  
(Common)

#### LED Lamp Extractor A22NZ-A-302



Accessories  
and Tools

#### Cap Tightening Wrench A22Z-3908



Safety  
Precautions



## Safety Precautions

Refer to Safety Precautions for All Pushbutton Switches/Indicators.

### Signal Word Definitions

<b>Precautions for Safe Use</b>	Supplementary comments on what to do or avoid doing, to use the product safely.
<b>Precautions for Correct Use</b>	Supplementary comments on what to do or avoid doing, to prevent failure to operate, malfunction, or undesirable effects on product performance.

### Precautions for Safe Use

#### For both the Screw terminal block type and the Push-In Plus terminal block type

- Do not perform wiring with power supplied to the Switch/Indicator. Do not touch the terminals or other charged parts while power is being supplied. Doing so may result in electric shock.
- Do not disassemble or modify the Switch/Indicator under any circumstances.
- Doing so may prevent the Switch/Indicator from functioning to its full capability. Do not drop the Switch/Indicator. Do not apply pressure that may deform or alter the Switch/Indicator.
- The durability of the Switch varies considerably depending on the switching conditions. Always test the Switch/Indicator under actual working conditions before application and use the Switch/Indicator only for the number of switching operations allowed.
- Do not allow the load voltage and current to exceed the rated value. This may damage or burn out the Switch/Indicator.
- Do not use the Switch/Indicator in locations where explosive or flammable gases or liquid may be present or scattered. The electric arc or the heat caused by switching contacts may cause a fire or explosion.
- Do not use the Switch/Indicator in locations where toxic gases, such as H<sub>2</sub>S, SO<sub>2</sub>, NH<sub>3</sub>, HNO<sub>3</sub>, and Cl<sub>2</sub>, may be present, or in locations subject to high temperature or humidity. Doing so may damage the Switch/Indicator due to contact failure or corrosion.
- Do not use the Switch/Indicator submerged in oil or water, or in locations continuously subject to splashes of oil or water. Doing so may result in oil or water entering and damaging the Switch/Indicator.
- Do not use or keep the Switch/Indicator under the following conditions:
  - Subject to severe temperature changes.
  - Subject to high humidity or condensation.
  - Subject to severe vibration or shock.
  - Where direct rays of the sun strike.
  - Where sea breeze may be present.
- Make sure that a rubber washer is present between the Operation Unit and the panel. Otherwise, the specifications of the protective structure may not be satisfied.
- Do not apply excessive force to the Switch or wiring. A damaged or deformed contact block may cause contact failure.
- Use an appropriate wire and ferrule.
- Exercise caution to avoid wiring errors when connecting the terminals.

- To prevent wiring materials from smoking or igniting, confirm wire ratings and use the wiring materials given in the following table.

Model	Wire Type	Wire	Recommended Wires	Stripped length
A22N, M22N (Screw terminal block)	Solid wire/ stranded wire	Copper	1.25 to 2.5 mm <sup>2</sup> / AWG 16 to 14	8 mm
A22N-P, M22N-P (Push-In Plus terminal block)			0.25 to 1.5 mm <sup>2</sup> / AWG 24 to 16	Ferrules not used : 8 mm

Use wiring crimp terminals and ferrule terminals of the specified size.

- For Push-In Plus terminal blocks, use only one wire per terminal. For screw terminal blocks, use no more than two wires of the same size and type with no more than two crimp terminals per terminal.
- After storing the product for a long time exceeding 1 year, perform, at a minimum, inspections of the operating characteristics, contact resistance, insulation resistance, and dielectric strength as well as evaluate the product under the working conditions.
- This Switch/Indicator is intended for indoor use only. Using the Switch/Indicator outdoors may result in failure.

#### Push-In Plus Terminal Blocks

- Do not wire anything to the release holes.
- Do not tilt or twist a flat-blade screwdriver while it is inserted into a release hole on the terminal block. The terminal block may be damaged.
- Insert a flat-blade screwdriver into the release holes at an angle. The terminal block may be damaged if you insert the screwdriver straight in.
- Do not allow the flat-blade screwdriver to fall out while it is inserted into a release hole.
- Do not bend a wire past its natural bending radius or pull on it with excessive force. Doing so may cause the wire disconnection.
- Do not insert more than one wire into each terminal insertion hole.
- Do not mount A22N-P Push-In Plus terminal contact blocks on A22N screw terminal blocks. Doing so may result in unsatisfactory performance.

## Precautions for Correct Use

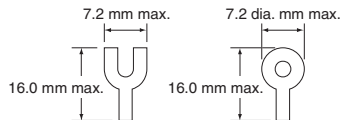
### Mounting

- 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.)

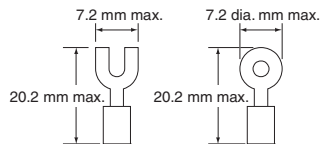
### Wiring (Screw terminal block)

- 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/Indicator.

#### Bare Crimp Terminals



#### Crimp Terminals with Insulating Sheathes

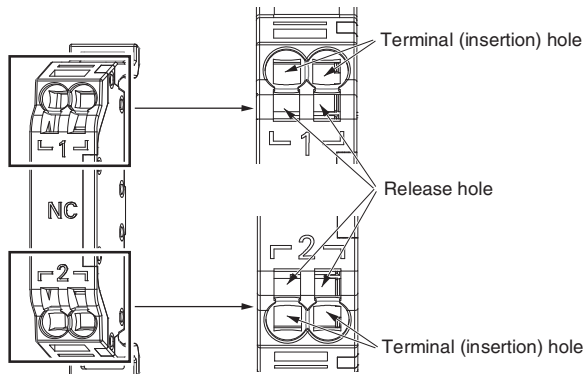


### Wiring (Push-in Plus terminal block)

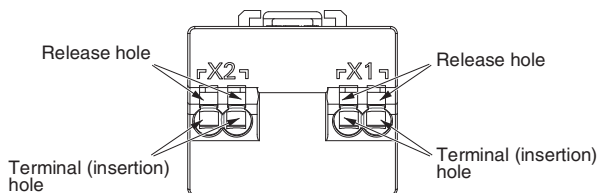
#### 1. Connecting Wires to the Push-In Plus Terminal Block

#### Part Names of the Terminal Block

<A22N>



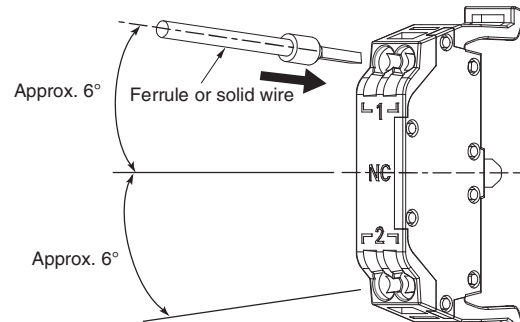
<M22N>



### Connecting Wires with Ferrules and Solid Wires

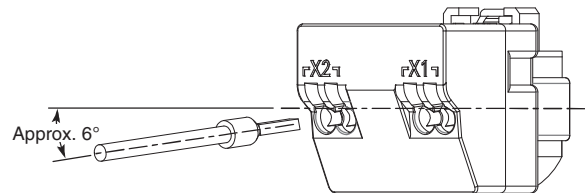
- Insert the solid wire or ferrule straight into the terminal block until the end strikes the terminal block. The angle should be approximately 6°.
- If a wire is difficult to connect because it is too thin, use a flat-blade screwdriver in the same way as when connecting stranded wires.

<A22N>



The wiring for the Lighting Unit and Contact Block (2 contacts) are the same as for the Contact Block (1 contact) shown in the above illustration.

<M22N>

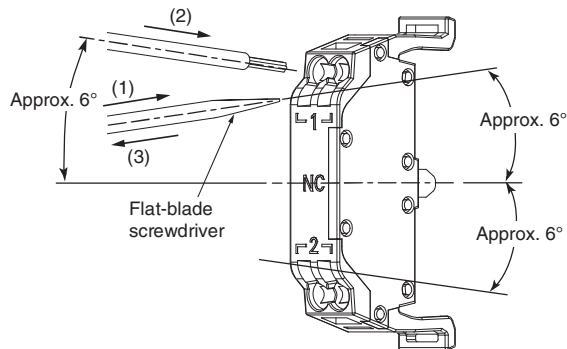


## Connecting Stranded Wires

Use the following procedure to connect the wires to the terminal block.

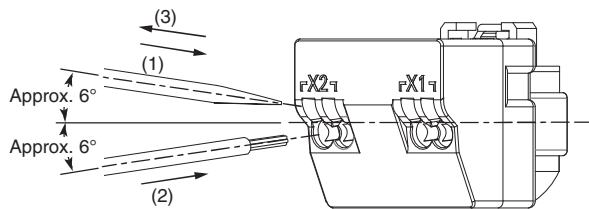
1. Hold a flat-blade screwdriver at an angle and insert it into the release hole.  
The angle should be approximately 6°. If the flat-blade screwdriver is inserted correctly, you will feel the spring in the release hole.
2. With the flat-blade screwdriver still inserted into the release hole, insert the wire into the terminal hole until the end strikes the terminal block.
3. Remove the flat-blade screwdriver from the release hole.

### <A22N>



The wiring and screwdriver angles for the Lighting Unit and Contact Block (2 contacts) are the same as for the Contact Block (1 contact) shown in the above illustration.

### <M22N>



## Checking Connections

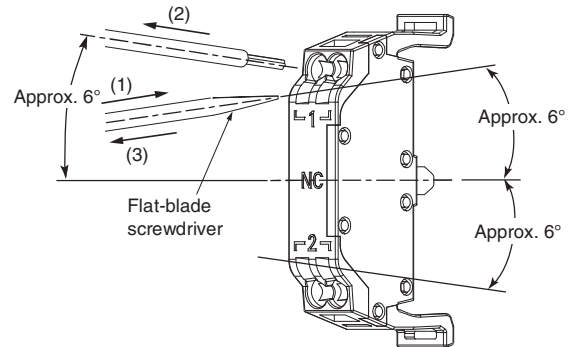
- After the insertion, pull gently on the wire to make sure that it will not come off and it is securely fastened to the terminal block.
- If you use a ferrule with a conductor length of 10 mm, part of the conductor may be visible after the ferrule is inserted into the terminal block, but the product insulation distance will still be satisfied.

## 2. Removing Wires from the Push-In Plus Terminal Block

Use the following procedure to remove wires from the terminal block. The same method is used to remove stranded wires, solid wires, and ferrules.

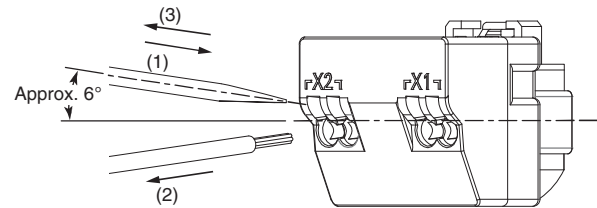
1. Hold a flat-blade screwdriver at an angle and insert it into the release hole. The angle should be approximately 6°.
2. With the flat-blade screwdriver still inserted into the release hole, remove the wire from the terminal insertion hole.
3. Remove the flat-blade screwdriver from the release hole.

### <A22N>



The wiring and screwdriver angles for the Lighting Unit and Contact Block (2 contacts) are the same as for the Contact Block (1 contact) shown in the above illustration.

### <M22N>

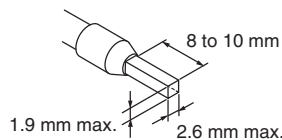


### 3. Recommended Ferrules and Crimp Tools

#### Recommended ferrules

Applicable wire		Ferrule Conductor Length (mm)	Stripped length (mm) (Ferrules used)	Recommended ferrules		
(mm <sup>2</sup> )	(AWG)			Phoenix Contact product	Weidmuller product	Wago product
0.25	24	8	10	AI 0,25-8	H0.25/12	216-301
		10	12	AI 0,25-10	---	---
0.34	22	8	10	AI 0,34-8	H0.34/12	216-302
		10	12	AI 0,34-10	---	---
0.5	20	8	10	AI 0,5-8	H0.5/14	216-201
		10	12	AI 0,5-10	H0.5/16	216-241
0.75	18	8	10	AI 0,75-8	H0.75/14	216-202
		10	12	AI 0,75-10	H0.75/16	216-242
1/1.25	18/17	8	10	AI 1-8	H1.0/14	216-203
		10	12	AI 1-10	H1.0/16	216-243
1.25/1.5	17/16	8	10	AI 1,5-8	H1.5/14	216-204
		10	12	AI 1,5-10	H1.5/16	216-244
Recommended Crimp Tools				CRIMPFOX6 CRIMPFOX6T-F CRIMPFOX10S	PZ6 roto	Variocrimp4

- Note: 1.** Make sure that the outer diameter of the wire coating is smaller than the inner diameter of the insulation sleeve of the recommended ferrule.
- 2.** Make sure that the ferrule processing dimensions conform to the following figures.

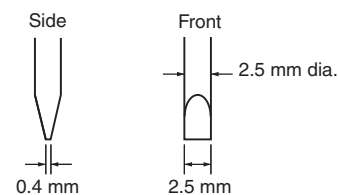


#### Recommended Flat-Blade Screwdrivers

Use a flat-blade screwdriver to connect and remove wires.

Use one of the following flat-blade screwdrivers.

The following table shows manufacturers and models as of 2015/Dec.



Model	Manufacturer
ESD 0,40 x 2,5	Wera
SZS 0,4 x 2,5 SZF 0-0,4 x 2,5 *	Phoenix Contact
0.4 x 2.5 x 75 302	Wiha
AEF.2,5 x 75	Facom
210-719	Wago
SDI 0.4 x 2.5 x 75	Weidmuller

\* OMRON's exclusive purchase model XW4Z-00B is available to order as SZF 0-0,4 x 2,5 (manufactured by Phoenix Contact).

- After wiring the Switch/Indicator, provide a sufficient insulation distance.

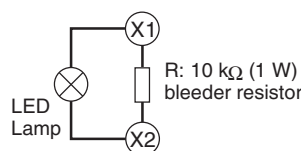
The following information applies to both screw terminal blocks and Push-In Plus terminal blocks.

### LED Lamps

- A current-limiting resistor is built in the LED lamp, so the installation of an external resistance is not required. A diode bridge is equipped in 6, 12, and 24 V specifications. As such, there is no specific polarity. Use only AC power for 100 and 200 V specifications.
- Lighting malfunction of the LED lamp  
A micro-current of approximately 0.1 mA or less is sufficient to turn on the LED lamps. Take a countermeasure like adding a resistor to prevent mis-lighting in parallel to the LED lamp. The micro-current varies with the machine (leak current or stray capacity between cables, etc.). Select resistance value and allowable power consumption that meet the actual current.

#### (Example of lighting malfunction prevention circuit)

When using a 24-VAC/VDC lighted unit



### Key-Type Selector Switches

- Make sure to insert the key to the bottom of the cylinder before turning it.

### Button Operation

- Do not rotate or pull on the button on a Mushroom Switch. The button may come off, preventing operation.

## Application

### Mounting to the Panel

#### Panel Hole Dimensions

<A22N>

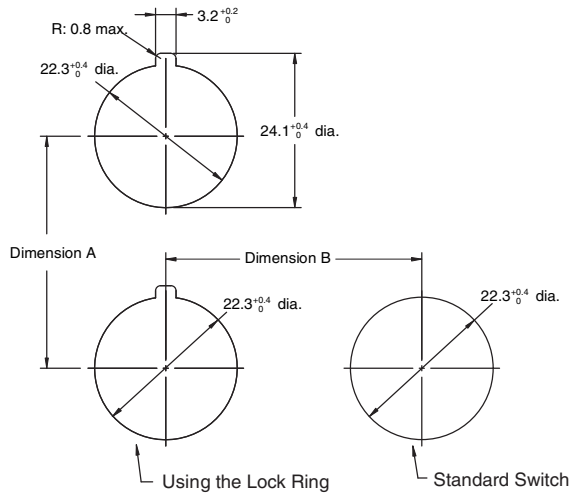
- Panel hole dimensions are given below.
- The recommended panel thicknesses are given below.

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

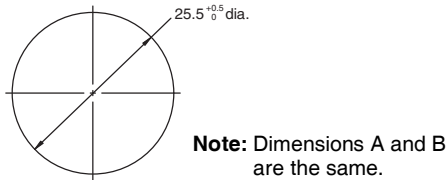
\* Panel thickness without accessories (Lock Ring, etc.)

- 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 (stranded wire / 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 the Mounting Collar lock levers all face the same direction at the minimum mounting pitch, be sure to note the order the mounting collars are attached to the Operation Unit. 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.

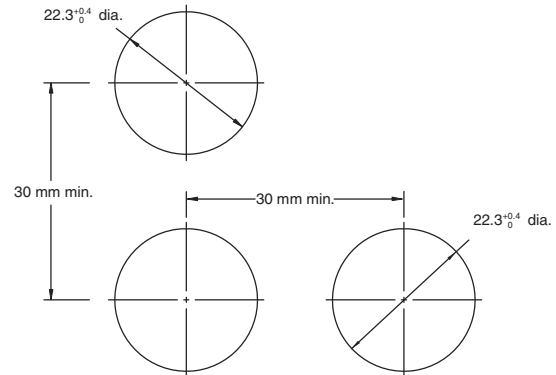
#### Dimension B

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

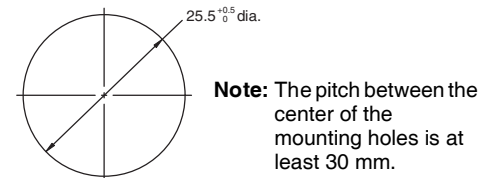
<M22N>

- Panel hole dimensions are given below.
- Acceptable panel thickness is between 0.8 and 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.

#### Panel Hole Dimensions for 22.3 Diameter



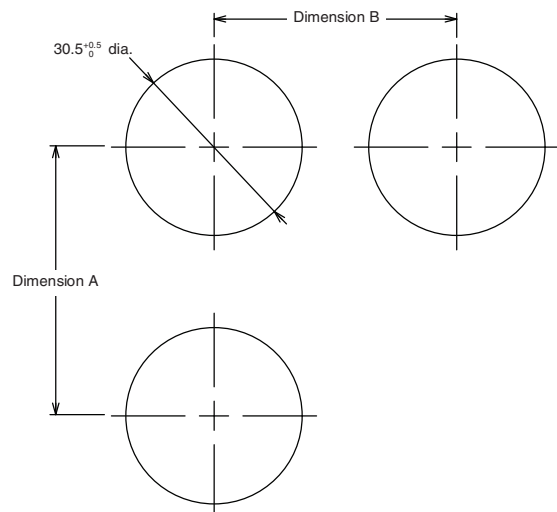
#### Panel Hole Dimensions for 25.5 Diameter



<A30N>

- Panel hole dimensions are given below.
- Acceptable panel thickness is between 0.8 and 7 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



# A22N/M22N/A30N

Pushbutton Switches  
A22N

Selector Switches  
A22N

Key-type Selector Switches  
A22N

Indicators  
M22N

Pushbutton Switches  
A30N

Selector Switches  
A30N

Key-type Selector Switches  
A30N

Subassemblies  
(Common)

Accessories  
and Tools

Safety  
Precautions

## Dimension A

Wire type	Number of linked Contact Blocks	Number of wires per terminal	Minimum allowable pitch Dimension A (mm) or larger
Leads (stranded wire / 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 the Mounting Collar lock levers all face the same direction at the minimum mounting pitch, be sure to note the order the mounting collars are attached to the Operation Unit. If you attach two wires or link Units, determine the mounting pitch based on the dimensions diagrams and ease of operation and wiring.

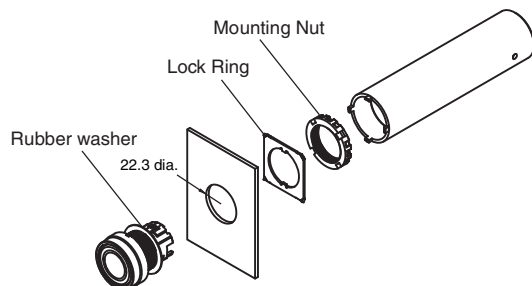
## Dimension B

Operation Unit shape	Dimension B
Mushroom	40 mm min.
Other than the above	35 mm min.

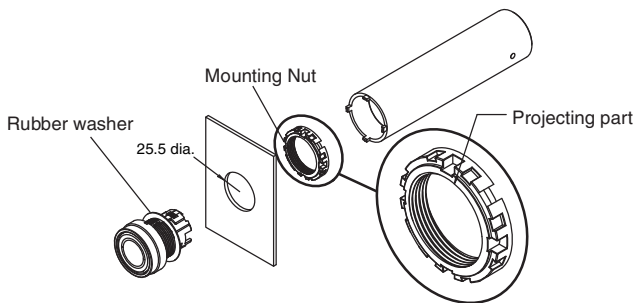
## Mounting the Operation Unit

### <A22N>

- 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.



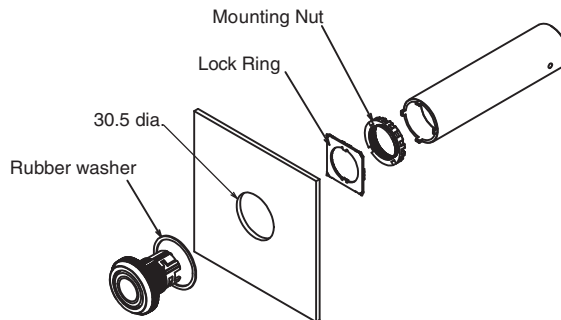
- Panel Hole of 25.5-mm Diameter  
Do not use the Lock Ring, and tighten the Mounting Nut while confirming that the projecting part (see following figure) on the Mounting Nut is aligned with mounting hole. Before tightening, verify that the rubber washer is present between the Operation Unit and the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



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

### <A30N>

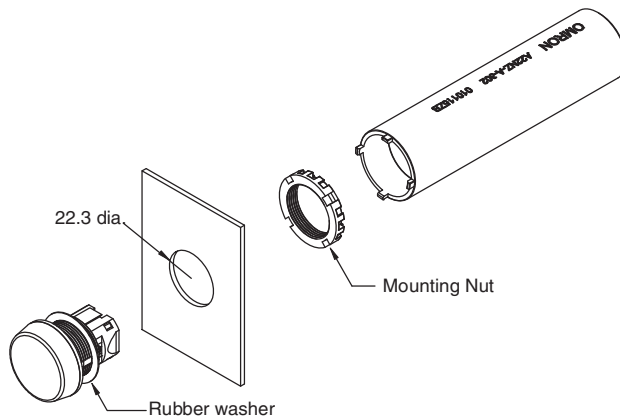
- Insert the Operation Unit from the front of the panel, insert the Lock Ring and Mounting Nut from the back of the panel, and tighten the Mounting Nut. Before tightening, check that the rubber washer is present between the Operation Unit and the panel.



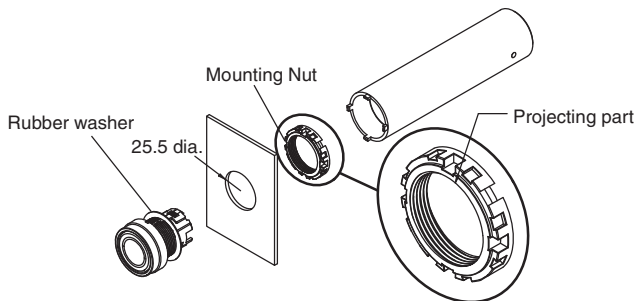
## Mounting the Indicator Unit

### <M22N>

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



- Panel Hole of 25.5-mm Diameter  
Tighten the Mounting Nut while confirming that the projecting part (see following figure) on the Mounting Nut is aligned with mounting hole. Before tightening, verify that the rubber washer is present between the Operation Unit and the panel.

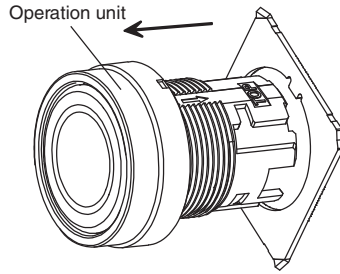




## Mounting the Lock Ring

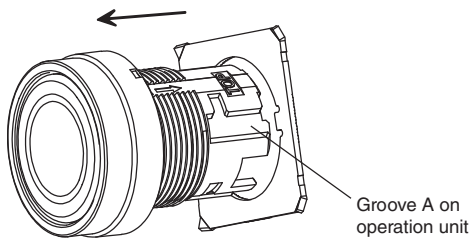
<A22N/A30N>

- Align the grooves on the Operation Unit with the protruding parts of the Lock Ring and mount.

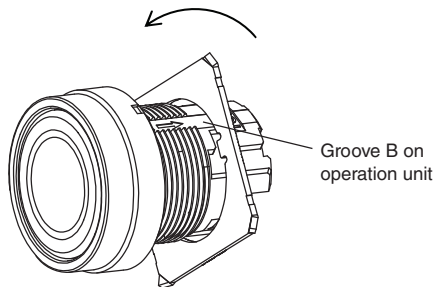


- When experiencing difficulties when mounting a Lock Ring, use the following procedure.

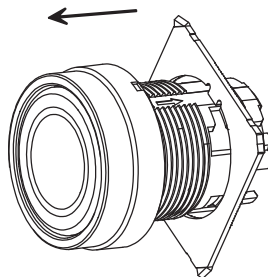
1. Insert the Lock Ring into groove A on the Operation Unit.



2. When the Lock Ring is in the position shown in the figure below, rotate it to insert the protruding part of the Lock Ring into groove B on the Operation Unit.



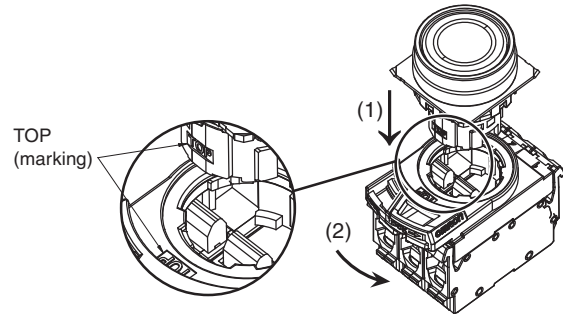
3. When the Lock Ring is in the position shown in the figure below, move it in the direction indicated by the arrow.



## Mounting the Contact Block to the Operation Unit

<A22N/A30N>

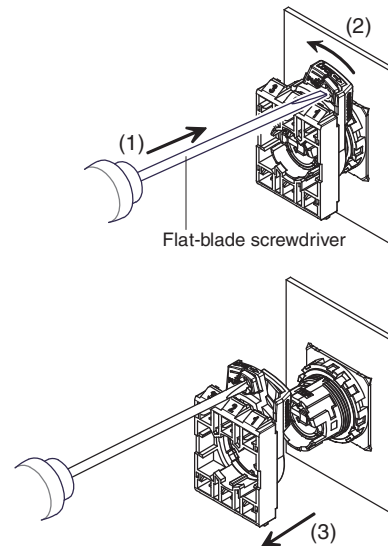
- Insert the Operation Unit into the Mounting Collar, aligning the TOP mark inscribed on the Operation Unit with the lever on the Mounting Collar, and then turn the lever in the direction indicated by the arrow in the following figure all of the way until it clicks into place.



## Removing the Mounting Collar

<A22N/A30N>

- 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.

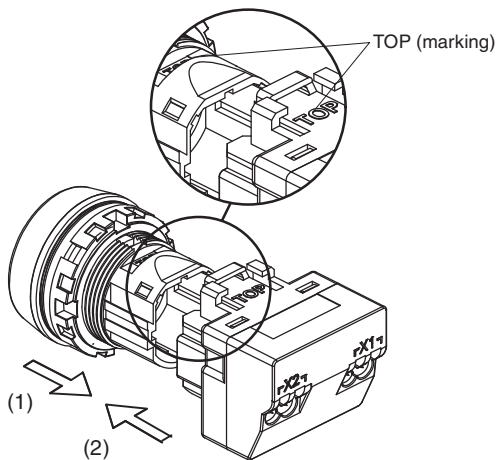




## Attaching the Switch Unit to the Indicator Unit

<M22N>

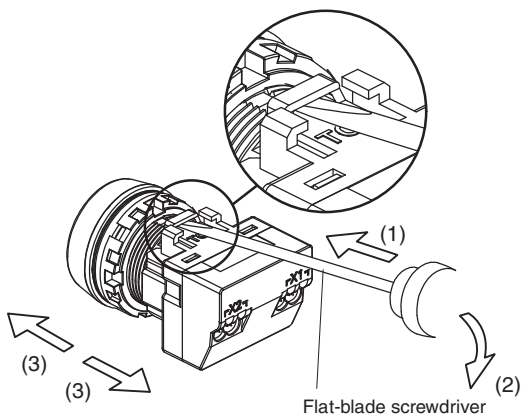
- Align the "TOP" marks on the Indicator Unit and Switch Unit and insert the Indicator Unit into the Switch Unit. Insert it all the way until it clicks into place.



## Removing the Switch Unit

<M22N>

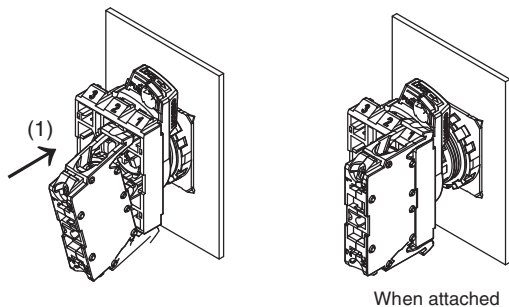
- Insert a screwdriver into the tab on the Switch Unit. Move the screwdriver in direction (2) to remove the Switch Unit.



## Contact Block and Lighting Unit

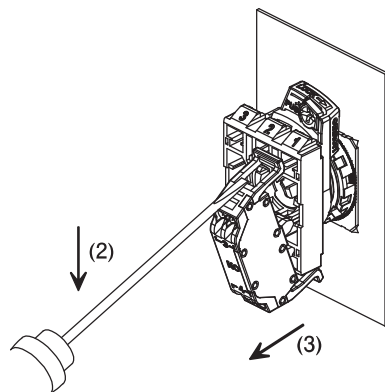
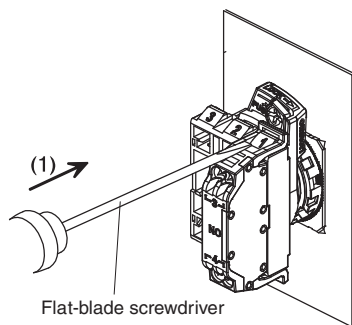
### Attaching the Contact Block and Lighting Unit

- 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). Attach the Lighting Unit at Unit position 2 on the Mounting Collar.



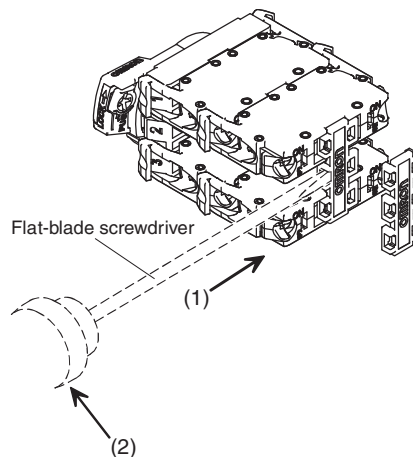
## Removing the Contact Block and Lighting Unit

- Insert a screwdriver into the gap between the Mounting Collar and Contact Block and press it inward in the direction shown at (2). A Lighting Unit can be removed at Unit position 2 on the Mounting Collar.



## Attaching the Reinforcement Plate (Screw terminal block type)

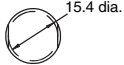

- To link Contact Blocks together, attach a Reinforcement Plate in the direction shown in the following figure. To remove the Plate, insert a screwdriver in the direction indicated at (1) and rotate it in the direction indicated at (2).



## Engraving (Except for Non-Lighted / Opaque Types)

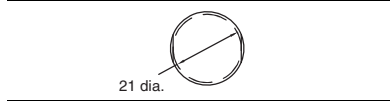
- Engrave legends on the Legend Plates.  
Do so with the straight part of the Legend Plate positioned on the right and left.
- The characters must be engraved no deeper than 0.5 mm. Use an alcohol-based paint, such as a melamine, phthalic acid, or acrylic resin based paint.

### <A22N/A30N>

Projected, Full-guard, or Mushroom Switches	Flat Switches
 15.4 dia.	 17.7 dia.

### <M22N>

#### Flat Resin Legend Plate Type Switches

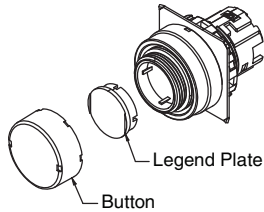


## Attaching Character Films (Except for Non-Lighted / Opaque Types)

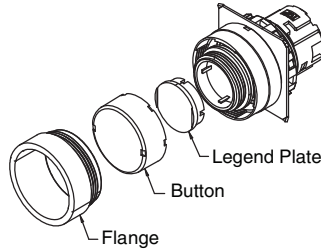
### <A22N/A30N>

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

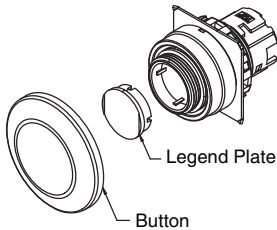
#### Projected Switches



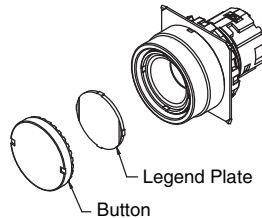
#### Full-guard Switches



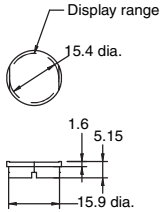
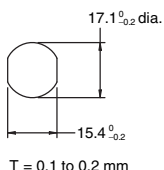
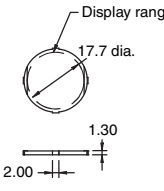
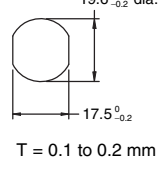
#### Mushroom Switches



#### Flat Switches



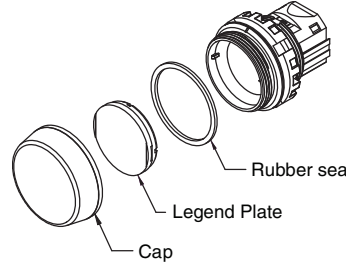
- Prepare films of the following sizes depending on the type of Legend Plate.
- The films must be provided by the user.

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

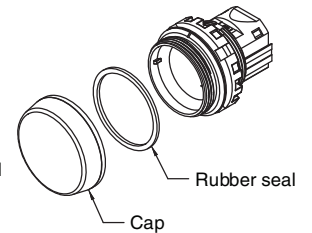
### <M22N>

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

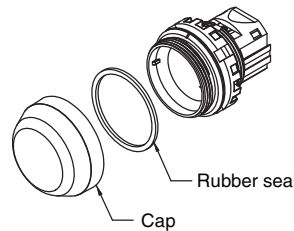
#### Flat Etched Switches



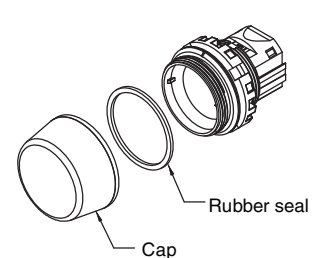
#### Flat Switches



#### Semi-spherical Switches



#### Projected Switches



# A22N/M22N/A30N

Pushbutton Switches  
A22N

Selector Switches  
A22N

Key-type Selector Switches  
A22N

Indicators  
M22N

Pushbutton Switches  
A30N

Selector Switches  
A30N

Key-type Selector Switches  
A30N

Subassemblies  
(Common)

Accessories  
and Tools

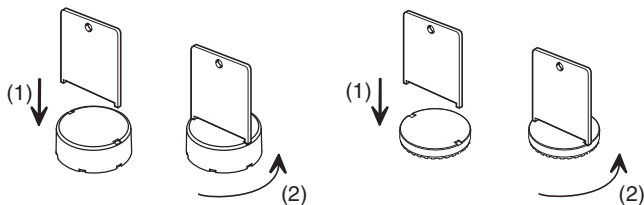
Safety  
Precautions

- Film processing dimensions should be as per the indications below.

<b>Legend Plate dimensions</b>	
<b>Film dimensions</b>	

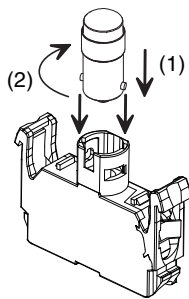
## Removing and Tightening the Cap

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.

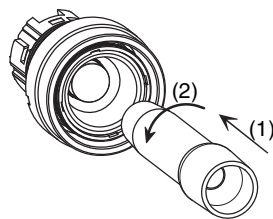


## Attaching and Replacing LED Lamps

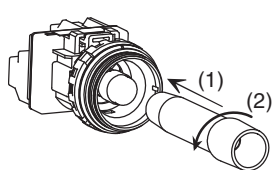
### Removing the LED Lamp from the Panel Surface

- 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.

<A22N>



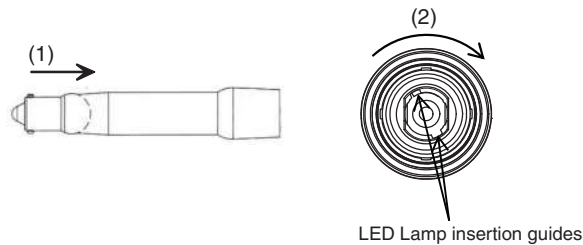
<M22N>



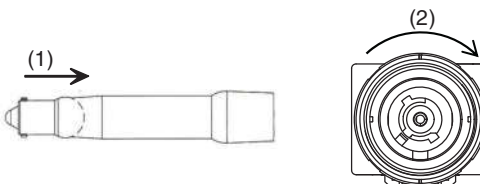
## Attaching the LED Lamp from the Panel Surface

- 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).

<A22N>

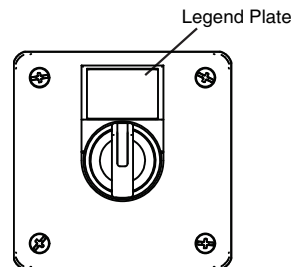


<M22N>



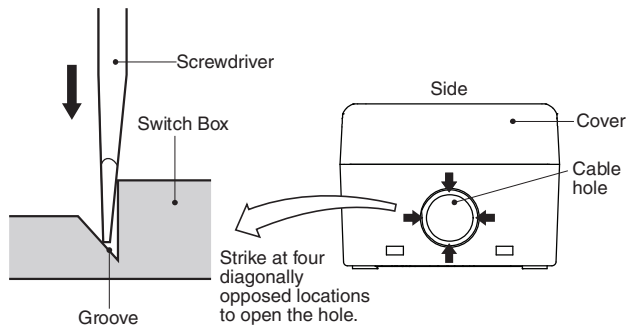
## Control Box

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

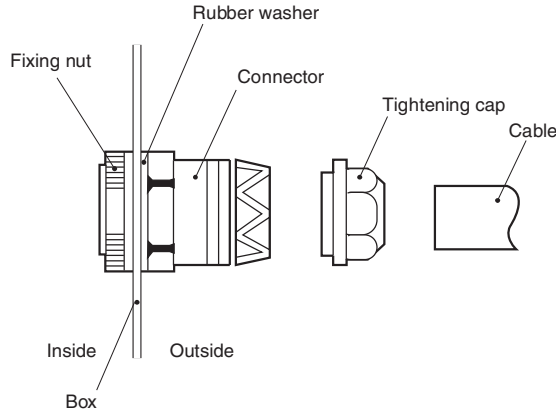
To open a cable hole, leave the cover attached, place the tip of a screwdriver in the grooves at four locations around the cable hole, strike the screwdriver with a hammer in order at the four locations to open the hole, and remove the part from the cable hole.



## Attaching the Connector and Cable

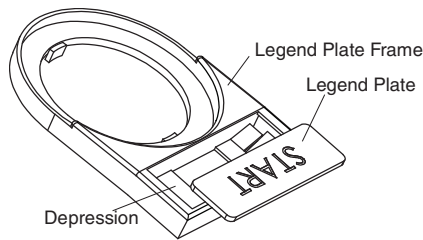
1. Insert the connector into the cable port hole in the Box and secure with the fixing nut inside the box.
2. Run the cable through the tightening cap, insert the cable into the connector, and then tighten the hexagonal nut to secure the cable.

Cable diameter (mm)	Connector
7 to 9 dia.	A22Z-3500-1
9 to 11 dia.	A22Z-3500-2

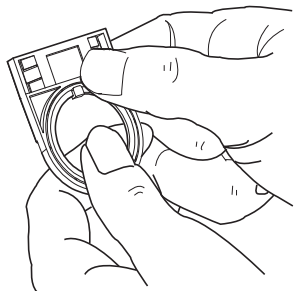


## Attaching and Removing Legend Plates

- 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.



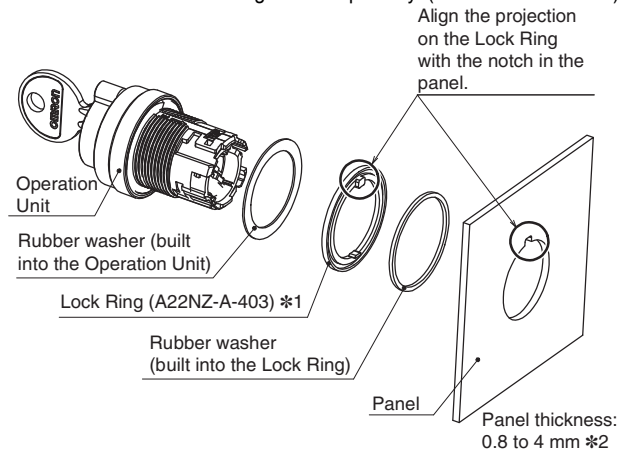
- You can easily remove the Legend Plate by pressing it forwards from the back of the Legend Plate Frame.
- The acrylic plastic Legend Plate is easily damaged by shock. Handle it with care.



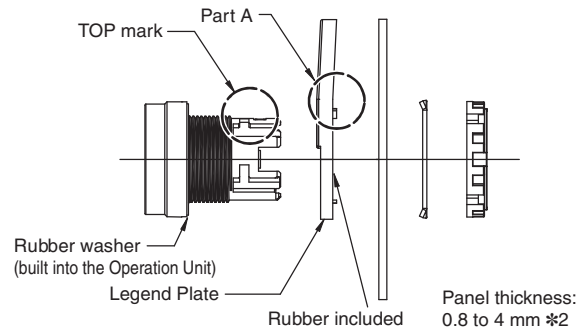
## Attaching the Lock Ring

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

\*1. Lock Ring is sold separately. (Model: A22NZ-A-403)

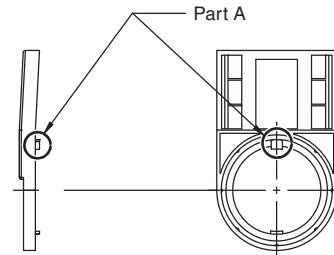


- Align the TOP mark on the Operation Unit, part A on the Legend Plate, and the notch in the panel, and insert the Operation Unit.



\*2. This is the panel thickness when using Lock Ring.

- 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.

