OMRON

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

Pushbutton Switches
A30NN/A30NL

**30-mm dia. Pushbutton Switches
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.**

Easy to Use
- You can connect up to three Contact Blocks in one stage for multistage expansion. (Screw terminal block type)
- Screw terminal structure is compatible with round crimp terminals. (Screw terminal block type)
- The terminals can be secured even when a contact block is mounted. (Screw terminal block type)
- Contact Blocks can be attached in any direction for easy assembly.

Safety
- Easy-to-operate lock lever for secure locking.
- Easy-mounting Contact Blocks provide finger protection.
- No loose connections of wiring means maintenance-free use. (Push-In Plus terminal block type)

Product Lineup
- The buttons and bezels come in a wide variety of colors and shapes.

> ⚠ Refer to *Safety Precautions for All Pushbutton Switches/
> IIndicators* and *Safety Precautions* on page 88.

Button Colors

			Red	Green	Yellow	White	Blue	Black	
Non-lighted Switches	**A30NN-□□□-N□ Opaque**		Red	Green	Yellow	White	Blue	Black	
			●	●	●	●	●	●	
	A30NN-□□□-U□ Transparent		Red	Green	Yellow	White	Blue	Orange	
			●	●	●	●	●	●	
Lighted Switches	**A30NL-□□□-T□ Transparent**	**When not lit**	Red	Green	Yellow	White	Blue	Orange	White
			●	●	●	●	●	●	●
		When lit	Red	Green	Yellow	White	Blue	Orange	Opaque white*
			●	●	●	●	●	●	●

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

Screw Terminal Blocks/Push-In Plus Terminal Blocks

Brushed metal bezels

A30N☐-MN

Flat

A30N☐-MP

Projected

A30N☐-MG

Full guard

A30N☐-MM

Mushroom

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**

A30NN/A30NL

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Key-type Selector Switches
A30N

Subassemblies
(Common)

Accessories
and Tools

Safety
Precautions

Model Number Structure

Model Number Legend - - - - - Please order Operation Units, LED lamps (lighted models only), Mounting Collars, Contact Blocks, and Lighting Units (lighted models only) separately. LED lamps, Mounting Collars, Contact Blocks, and Lighting Units can also be used with the A22N series.

Model Numbers for Sets

A 3 0 N [L] - [MN][M] - [T R][A] - [G][1 0 0] - [R][B]
     (1)   (2) (3)   (4) (5)   (6)   (7)   (8) (9)

(1) Type

Code	Description
N	Non-lighted
L	Lighted

(2) Bezel Material and Button Shape

Code	Bezel material	Button shape
MN	Brushed metal	Flat
MP	Brushed metal	Projected
MG	Brushed metal	Full guard
MM	Brushed metal	Mushroom

(3) Switch Action

Code	Function
M	Momentary Action: Self-Resetting
A	Alternate Action: Self-Holding

(4) Button Transparency and Color and (8) LED Lamp Color

Lighted/non-lighted	Code (4)	Code (8)	Transparency	Button color	LED lamp color
Non-lighted	NR	N	Opaque	Red	---
	NG	N	Opaque	Green	
	NY	N	Opaque	Yellow	
	NW	N	Opaque	White	
	NA	N	Opaque	Blue	
	NB	N	Opaque	Black	
	UR	N	Transparent	Red	
	UG	N	Transparent	Green	
	UY	N	Transparent	Yellow	
	UW	N	Transparent	White	
	UA	N	Transparent	Blue	
	UO	N	Transparent	Orange	
Lighted	TR	R	Transparent	Red	Red
	TG	G	Transparent	Green	Green
	TY	Y	Transparent	Yellow	Yellow
	TW	W	Transparent	White	White
	TA	A	Transparent	Blue	Blue
	TO	O	Transparent	Orange	Orange
	TW	Y	Transparent	White *	Yellow

* The color is opaque white when the Switch is lit.

(5) Degree of Protection

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

(6) Contacts and Terminals Specifications

Code	Specification
G	General/Screw Terminal Block
P	General/Push-In Plus Terminal Block

(7) Contacts

Code	Contact Blocks NO	Contact Blocks NC	Non-lighted 1	Non-lighted 2	Non-lighted 3	Lighted 1	Lighted 2	Lighted 3
100	1	0	NO	---	---	NO	Lighting Unit	---
002	0	1	---	---	NC	---	Lighting Unit	NC
101	2	0	NO	---	NO	NO	Lighting Unit	NO
102	1	1	NO	---	NC	NO	Lighting Unit	NC
202	0	2	NC	---	NC	NC	Lighting Unit	NC
111	3	0	NO	NO	NO			
112	2	1	NO	NO	NC			
122	1	2	NO	NC	NC			
222	0	3	NC	NC	NC			

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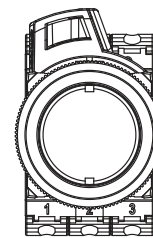
(9) LED Lamp Voltage

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

Pushbutton Switches A22N
Selector Switches A22N
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Subassemblies (Common)
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A30NN/A30NL

Ordering Information

Model Numbers for Sets
- - - - Shipped as a set that includes the Operation Unit, LED Lamp (lighted models only), Mounting Collar, Contact Block, and Lighting Unit (lighted models only).

Non-lighted, Flat Switches

Appearance	Contacts	Momentary action (self-resetting) Model	Alternate action (self-holding) Model	(4)(4) Button color	(7)(7)(7) Contacts
Brushed metal bezels	1	A30NN-MNM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MNA-(4)(4)A-G(7)(7)(7)-NN	**NR:** Opaque, red **NG:** Opaque, green **NY:** Opaque, yellow **NW:**Opaque, white **NA:** Opaque, blue **NB:** Opaque, black **UR:** Transparent, red **UG:** Transparent, green **UY:** Transparent, yellow **UW:**Transparent, white **UA:** Transparent, blue **UO:** Transparent, orange	100 002
		A30NN-MNM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MNA-(4)(4)A-P(7)(7)(7)-NN		
	2	A30NN-MNM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MNA-(4)(4)A-G(7)(7)(7)-NN		101 102 202
		A30NN-MNM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MNA-(4)(4)A-P(7)(7)(7)-NN		
	3	A30NN-MNM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MNA-(4)(4)A-G(7)(7)(7)-NN		111 112 122 222
		A30NN-MNM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MNA-(4)(4)A-P(7)(7)(7)-NN		

Lighted, Flat Switches

Appearance	Contacts	Momentary action (self-resetting) Model	Alternate action (self-holding) Model	(4)(4) Button color	(7)(7)(7) Contacts	(8) LED Lamp color	(9) LED Lamp voltage
Brushed metal bezels	1	A30NL-MNM-(4)(4)A-G(7)(7)(7)-(8)(9)	A30NL-MNA-(4)(4)A-G(7)(7)(7)-(8)(9)	**TR:** Transparent, red **TG:** Transparent, green **TY:** Transparent, yellow **TW:**Transparent, white **TA:** Transparent, blue **TO:** Transparent, orange	100 002	**R:** Red **G:** Green **Y:** Yellow **W:** White **A:** Blue **O:** Orange	**A:** 6 VAC/DC **B:** 12 VAC/DC **C:** 24 VAC/DC **D:** 100/110/120 VAC **E:** 200/220/230/240 VAC
		A30NL-MNM-(4)(4)A-P(7)(7)(7)-(8)(9)	A30NL-MNA-(4)(4)A-P(7)(7)(7)-(8)(9)				
	2	A30NL-MNM-(4)(4)A-G(7)(7)(7)-(8)(9)	A30NL-MNA-(4)(4)A-G(7)(7)(7)-(8)(9)		101 102 202		
		A30NL-MNM-(4)(4)A-P(7)(7)(7)-(8)(9)	A30NL-MNA-(4)(4)A-P(7)(7)(7)-(8)(9)				

Non-lighted, Projected Switches

Appearance	Contacts	Momentary action (self-resetting) Model	Alternate action (self-holding) Model	(4)(4) Button color	(7)(7)(7) Contacts
Brushed metal bezels	1	A30NN-MPM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MPA-(4)(4)A-G(7)(7)(7)-NN	**NR:** Opaque, red **NG:** Opaque, green **NY:** Opaque, yellow **NW:**Opaque, white **NA:** Opaque, blue **NB:** Opaque, black **UR:** Transparent, red **UG:** Transparent, green **UY:** Transparent, yellow **UW:**Transparent, white **UA:** Transparent, blue **UO:** Transparent, orange	100 002
		A30NN-MPM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MPA-(4)(4)A-P(7)(7)(7)-NN		
	2	A30NN-MPM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MPA-(4)(4)A-G(7)(7)(7)-NN		101 102 202
		A30NN-MPM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MPA-(4)(4)A-P(7)(7)(7)-NN		
	3	A30NN-MPM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MPA-(4)(4)A-G(7)(7)(7)-NN		111 112 122 222
		A30NN-MPM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MPA-(4)(4)A-P(7)(7)(7)-NN		

Lighted, Projected Switches

Appearance	Contacts	Momentary action (self-resetting) Model	Alternate action (self-holding) Model	(4)(4) Button color	(7)(7)(7) Contacts	(8) LED Lamp color	(9) LED Lamp voltage
Brushed metal bezels	1	A30NL-MPM-(4)(4)A-G(7)(7)(7)-(8)(9)	A30NL-MPA-(4)(4)A-G(7)(7)(7)-(8)(9)	**TR:** Transparent, red **TG:** Transparent, green **TY:** Transparent, yellow **TW:**Transparent, white **TA:** Transparent, blue **TO:** Transparent, orange	100 002	**R:** Red **G:** Green **Y:** Yellow **W:** White **A:** Blue **O:** Orange	**A:** 6 VAC/DC **B:** 12 VAC/DC **C:** 24 VAC/DC **D:** 100/110/120 VAC **E:** 200/220/230/240 VAC
		A30NL-MPM-(4)(4)A-P(7)(7)(7)-(8)(9)	A30NL-MPA-(4)(4)A-P(7)(7)(7)-(8)(9)				
	2	A30NL-MPM-(4)(4)A-G(7)(7)(7)-(8)(9)	A30NL-MPA-(4)(4)A-G(7)(7)(7)-(8)(9)		101 102 202		
		A30NL-MPM-(4)(4)A-P(7)(7)(7)-(8)(9)	A30NL-MPA-(4)(4)A-P(7)(7)(7)-(8)(9)				

Note: Normally, the Button and LED Lamp with the same color are combined.
However, opaque white is available by combining a white Button and yellow LED. A30N□-□□□-TWA-□□□□-Y□

■ Subassemblies: Refer to pages 59 and 82.
(You can order Operation Units, LED Lamps, Mounting Collars, and Contact Blocks individually.)

■ Specifications: Refer to page 60.■ Dimensions: Refer to page 62.
■ Accessories and tools: Refer to pages 84 to 85.

Ordering Information

Model Numbers for Sets
- - - - Shipped as a set that includes the Operation Unit, LED Lamp (lighted models only), Mounting Collar, Contact Block, and Lighting Unit (lighted models only).

Non-lighted, Full-guard Switches

Appearance	Contacts	Momentary action (self-resetting) Model	Alternate action (self-holding) Model	(4)(4) Button color	(7)(7)(7) Contacts
Brushed metal bezels	1	A30NN-MGM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MGA-(4)(4)A-G(7)(7)(7)-NN	**NR:** Opaque, red **NG:** Opaque, green **NY:** Opaque, yellow **NW:** Opaque, white **NA:** Opaque, blue **NB:** Opaque, black **UR:** Transparent, red **UG:** Transparent, green **UY:** Transparent, yellow **UW:** Transparent, white **UA:** Transparent, blue **UO:** Transparent, orange	**100** **002**
		A30NN-MGM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MGA-(4)(4)A-P(7)(7)(7)-NN		
	2	A30NN-MGM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MGA-(4)(4)A-G(7)(7)(7)-NN		**101** **102** **202**
		A30NN-MGM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MGA-(4)(4)A-P(7)(7)(7)-NN		
	3	A30NN-MGM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MGA-(4)(4)A-G(7)(7)(7)-NN		**111** **112** **122** **222**
		A30NN-MGM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MGA-(4)(4)A-P(7)(7)(7)-NN		

Lighted, Full-guard Switches

Appearance	Contacts	Momentary action (self-resetting) Model	Alternate action (self-holding) Model	(4)(4) Button color	(7)(7)(7) Contacts	(8) LED Lamp color	(9) LED Lamp voltage
Brushed metal bezels	1	A30NL-MGM-(4)(4)A-G(7)(7)(7)-(8)(9)	A30NL-MGA-(4)(4)A-G(7)(7)(7)-(8)(9)	**TR:** Transparent, red **TG:** Transparent, green **TY:** Transparent, yellow **TW:** Transparent, white **TA:** Transparent, blue **TO:** Transparent, orange	**100** **002**	**R:** Red **G:** Green **Y:** Yellow **W:** White **A:** Blue **O:** Orange	**A:** 6 VAC/DC **B:** 12 VAC/DC **C:** 24 VAC/DC **D:** 100/110/120 VAC **E:** 200/220/230/240 VAC
		A30NL-MGM-(4)(4)A-P(7)(7)(7)-(8)(9)	A30NL-MGA-(4)(4)A-P(7)(7)(7)-(8)(9)				
	2	A30NL-MGM-(4)(4)A-G(7)(7)(7)-(8)(9)	A30NL-MGA-(4)(4)A-G(7)(7)(7)-(8)(9)		**101** **102** **202**		
		A30NL-MGM-(4)(4)A-P(7)(7)(7)-(8)(9)	A30NL-MGA-(4)(4)A-P(7)(7)(7)-(8)(9)				

Non-lighted, Mushroom Switches

Appearance	Contacts	Momentary action (self-resetting) Model	Alternate action (self-holding) Model	(4)(4) Button color	(7)(7)(7) Contacts
Brushed metal bezels	1	A30NN-MMM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MMA-(4)(4)A-G(7)(7)(7)-NN	**NR:** Opaque, red **NG:** Opaque, green **NY:** Opaque, yellow **NW:** Opaque, white **NA:** Opaque, blue **NB:** Opaque, black **UR:** Transparent, red **UG:** Transparent, green **UY:** Transparent, yellow **UW:** Transparent, white **UA:** Transparent, blue **UO:** Transparent, orange	**100** **002**
		A30NN-MMM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MMA-(4)(4)A-P(7)(7)(7)-NN		
	2	A30NN-MMM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MMA-(4)(4)A-G(7)(7)(7)-NN		**101** **102** **202**
		A30NN-MMM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MMA-(4)(4)A-P(7)(7)(7)-NN		
	3	A30NN-MMM-(4)(4)A-G(7)(7)(7)-NN	A30NN-MMA-(4)(4)A-G(7)(7)(7)-NN		**111** **112** **122** **222**
		A30NN-MMM-(4)(4)A-P(7)(7)(7)-NN	A30NN-MMA-(4)(4)A-P(7)(7)(7)-NN		

Lighted, Mushroom Switches

Appearance	Contacts	Momentary action (self-resetting) Model	Alternate action (self-holding) Model	(4)(4) Button color	(7)(7)(7) Contacts	(8) LED Lamp color	(9) LED Lamp voltage
Brushed metal bezels	1	A30NL-MMM-(4)(4)A-G(7)(7)(7)-(8)(9)	A30NL-MMA-(4)(4)A-G(7)(7)(7)-(8)(9)	**TR:** Transparent, red **TG:** Transparent, green **TY:** Transparent, yellow **TW:** Transparent, white **TA:** Transparent, blue **TO:** Transparent, orange	**100** **002**	**R:** Red **G:** Green **Y:** Yellow **W:** White **A:** Blue **O:** Orange	**A:** 6 VAC/DC **B:** 12 VAC/DC **C:** 24 VAC/DC **D:** 100/110/120 VAC **E:** 200/220/230/240 VAC
		A30NL-MMM-(4)(4)A-P(7)(7)(7)-(8)(9)	A30NL-MMA-(4)(4)A-P(7)(7)(7)-(8)(9)				
	2	A30NL-MMM-(4)(4)A-G(7)(7)(7)-(8)(9)	A30NL-MMA-(4)(4)A-G(7)(7)(7)-(8)(9)		**101** **102** **202**		
		A30NL-MMM-(4)(4)A-P(7)(7)(7)-(8)(9)	A30NL-MMA-(4)(4)A-P(7)(7)(7)-(8)(9)				

Note: Normally, the Button and LED Lamp with the same color are combined.
However, opaque white is available by combining a white Button and yellow LED. A30N□-□□□-<u>TW</u>A-□□□□-<u>Y</u>□

■ Subassemblies: Refer to pages 59 and 82.
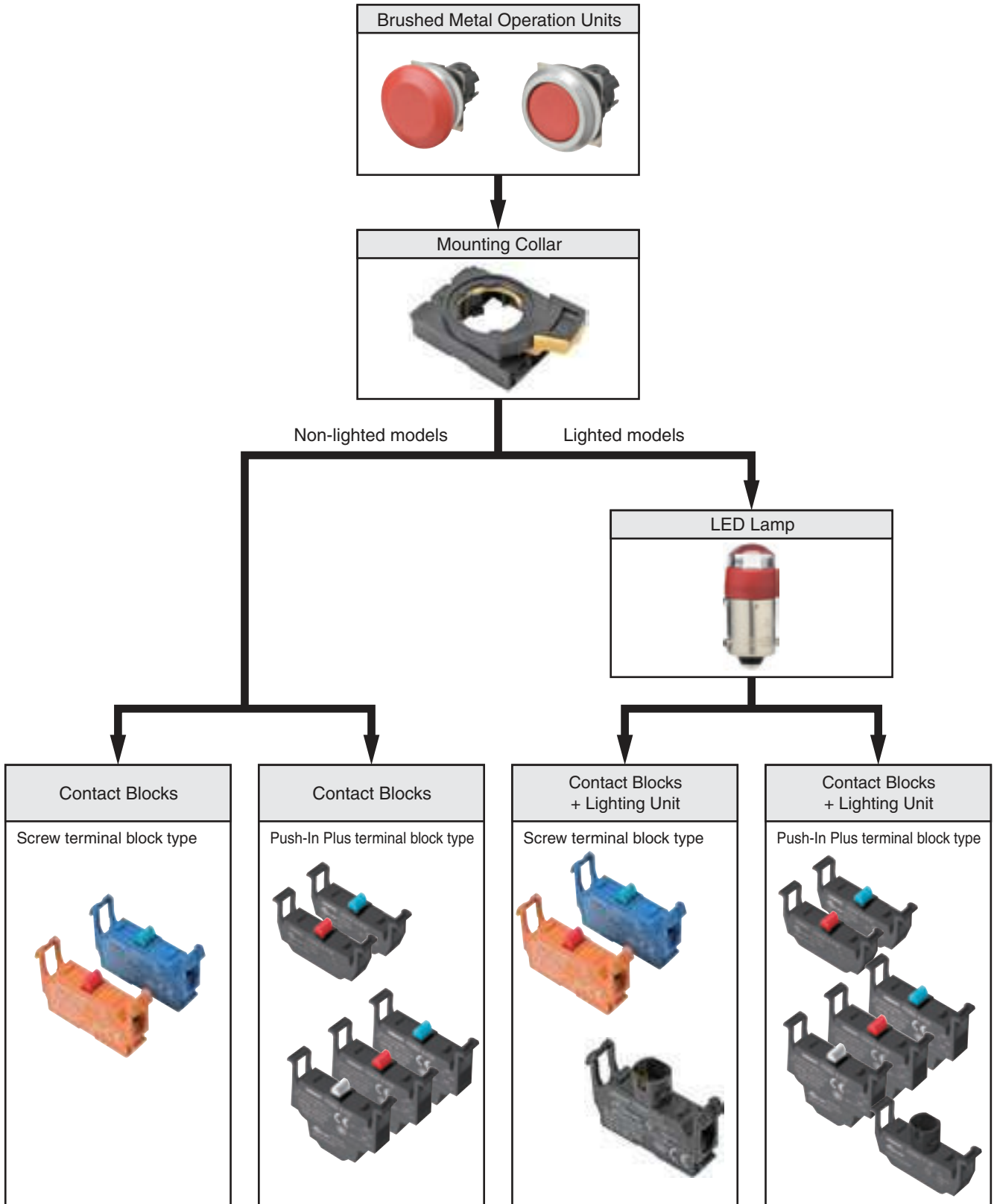(You can order Operation Units, LED Lamps, Mounting Collars, and Contact Blocks individually.)

■ Specifications: Refer to page 60. ■ Dimensions: Refer to page 62.
■ Accessories and tools: Refer to pages 84 to 85.

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

A30NN/A30NL

Ordering Information

Switch Structure - - - - You can order Operation Units, LED Lamps (lighted models only), Mounting Collars, Contact Blocks, and Lighting Units (lighted models only) separately. The same LED Lamps, Mounting Collars, and Contact Blocks are also used for the A22N Series.

Brushed Metal Operation Units

Mounting Collar

Non-lighted models   Lighted models

LED Lamp

Contact Blocks	Contact Blocks	Contact Blocks + Lighting Unit	Contact Blocks + Lighting Unit
Screw terminal block type	Push-In Plus terminal block type	Screw terminal block type	Push-In Plus terminal block type

■ Specifications: Refer to page 60.
■ Subassemblies (Common): Refer to page 82.
■ Precautions for correct use: Refer to pages 88 to 99.
■ Dimensions: Refer to page 62.
■ Accessories and tools: Refer to pages 84 to 85.

Ordering Information

Subassemblies - - - - - - - - - - Please order Operation Units, LED lamps (lighted models only), Mounting Collars, Contact Blocks, and Lighting Units (lighted models only) separately. LED lamps, Mounting Collars, Contact Blocks, and Lighting Units can also be used with the A22N series.

Operation Units

Bezel material and button shape			Brushed metal, flat		Brushed metal, projected	
	Switch Action		Momentary	Alternate	Momentary	Alternate
Lighted/ non-lighted	Transparency	Color	Model	Model	Model	Model
Non-lighted	Opaque	Red	A30NZ-MNM-NRA	A30NZ-MNA-NRA	A30NZ-MPM-NRA	A30NZ-MPA-NRA
	Opaque	Green	A30NZ-MNM-NGA	A30NZ-MNA-NGA	A30NZ-MPM-NGA	A30NZ-MPA-NGA
	Opaque	Yellow	A30NZ-MNM-NYA	A30NZ-MNA-NYA	A30NZ-MPM-NYA	A30NZ-MPA-NYA
	Opaque	White	A30NZ-MNM-NWA	A30NZ-MNA-NWA	A30NZ-MPM-NWA	A30NZ-MPA-NWA
	Opaque	Blue	A30NZ-MNM-NAA	A30NZ-MNA-NAA	A30NZ-MPM-NAA	A30NZ-MPA-NAA
	Opaque	Black	A30NZ-MNM-NBA	A30NZ-MNA-NBA	A30NZ-MPM-NBA	A30NZ-MPA-NBA
	Transparent	Red	A30NZ-MNM-URA	A30NZ-MNA-URA	A30NZ-MPM-URA	A30NZ-MPA-URA
	Transparent	Green	A30NZ-MNM-UGA	A30NZ-MNA-UGA	A30NZ-MPM-UGA	A30NZ-MPA-UGA
	Transparent	Yellow	A30NZ-MNM-UYA	A30NZ-MNA-UYA	A30NZ-MPM-UYA	A30NZ-MPA-UYA
	Transparent	White	A30NZ-MNM-UWA	A30NZ-MNA-UWA	A30NZ-MPM-UWA	A30NZ-MPA-UWA
	Transparent	Blue	A30NZ-MNM-UAA	A30NZ-MNA-UAA	A30NZ-MPM-UAA	A30NZ-MPA-UAA
	Transparent	Orange	A30NZ-MNM-UOA	A30NZ-MNA-UOA	A30NZ-MPM-UOA	A30NZ-MPA-UOA
Lighted	Transparent	Red	A30NZ-MNM-TRA	A30NZ-MNA-TRA	A30NZ-MPM-TRA	A30NZ-MPA-TRA
	Transparent	Green	A30NZ-MNM-TGA	A30NZ-MNA-TGA	A30NZ-MPM-TGA	A30NZ-MPA-TGA
	Transparent	Yellow	A30NZ-MNM-TYA	A30NZ-MNA-TYA	A30NZ-MPM-TYA	A30NZ-MPA-TYA
	Transparent	White	A30NZ-MNM-TWA	A30NZ-MNA-TWA	A30NZ-MPM-TWA	A30NZ-MPA-TWA
	Transparent	Blue	A30NZ-MNM-TAA	A30NZ-MNA-TAA	A30NZ-MPM-TAA	A30NZ-MPA-TAA
	Transparent	Orange	A30NZ-MNM-TOA	A30NZ-MNA-TOA	A30NZ-MPM-TOA	A30NZ-MPA-TOA

Bezel material and button shape			Brushed metal, full-guard		Brushed metal, mushroom	
	Switch Action		Momentary	Alternate	Momentary	Alternate
Lighted/ non-lighted	Transparency	Color	Model	Model	Model	Model
Non-lighted	Opaque	Red	A30NZ-MGM-NRA	A30NZ-MGA-NRA	A30NZ-MMM-NRA	A30NZ-MMA-NRA
	Opaque	Green	A30NZ-MGM-NGA	A30NZ-MGA-NGA	A30NZ-MMM-NGA	A30NZ-MMA-NGA
	Opaque	Yellow	A30NZ-MGM-NYA	A30NZ-MGA-NYA	A30NZ-MMM-NYA	A30NZ-MMA-NYA
	Opaque	White	A30NZ-MGM-NWA	A30NZ-MGA-NWA	A30NZ-MMM-NWA	A30NZ-MMA-NWA
	Opaque	Blue	A30NZ-MGM-NAA	A30NZ-MGA-NAA	A30NZ-MMM-NAA	A30NZ-MMA-NAA
	Opaque	Black	A30NZ-MGM-NBA	A30NZ-MGA-NBA	A30NZ-MMM-NBA	A30NZ-MMA-NBA
	Transparent	Red	A30NZ-MGM-URA	A30NZ-MGA-URA	A30NZ-MMM-URA	A30NZ-MMA-URA
	Transparent	Green	A30NZ-MGM-UGA	A30NZ-MGA-UGA	A30NZ-MMM-UGA	A30NZ-MMA-UGA
	Transparent	Yellow	A30NZ-MGM-UYA	A30NZ-MGA-UYA	A30NZ-MMM-UYA	A30NZ-MMA-UYA
	Transparent	White	A30NZ-MGM-UWA	A30NZ-MGA-UWA	A30NZ-MMM-UWA	A30NZ-MMA-UWA
	Transparent	Blue	A30NZ-MGM-UAA	A30NZ-MGA-UAA	A30NZ-MMM-UAA	A30NZ-MMA-UAA
	Transparent	Orange	A30NZ-MGM-UOA	A30NZ-MGA-UOA	A30NZ-MMM-UOA	A30NZ-MMA-UOA
Lighted	Transparent	Red	A30NZ-MGM-TRA	A30NZ-MGA-TRA	A30NZ-MMM-TRA	A30NZ-MMA-TRA
	Transparent	Green	A30NZ-MGM-TGA	A30NZ-MGA-TGA	A30NZ-MMM-TGA	A30NZ-MMA-TGA
	Transparent	Yellow	A30NZ-MGM-TYA	A30NZ-MGA-TYA	A30NZ-MMM-TYA	A30NZ-MMA-TYA
	Transparent	White	A30NZ-MGM-TWA	A30NZ-MGA-TWA	A30NZ-MMM-TWA	A30NZ-MMA-TWA
	Transparent	Blue	A30NZ-MGM-TAA	A30NZ-MGA-TAA	A30NZ-MMM-TAA	A30NZ-MMA-TAA
	Transparent	Orange	A30NZ-MGM-TOA	A30NZ-MGA-TOA	A30NZ-MMM-TOA	A30NZ-MMA-TOA

■ Specifications: Refer to page 60.
■ Subassemblies (Common): Refer to page 82.
■ Precautions for correct use: Refer to pages 88 to 99.
■ Dimensions: Refer to page 62.
■ Accessories and tools: Refer to pages 84 to 85.

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

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

A30NN/A30NL

Specifications (When the Operation Unit, LED Lamp, Mounting Collar, Contact Blocks, and Lighting Unit Are Combined)

Certified Safety Standard Ratings

UL 508 (File No. E76675), CSA C22.2 No.14
6 A 240 VAC, 10 A 120 VAC
TÜV (EN60947-5-1)
AC-15 3 A 240 VAC
DC-13 4 A 24 VDC
CCC (GB14048.5)
AC-15 3 A 240 VAC
DC-13 4 A 24 VDC

Application Standards

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

Ratings
Contacts (Standard Load)

Rated insulation voltage		600 V				
Rated carry current		10 A				
Rated voltage		24 V	120 V	240 V	380 V	440 V
AC at 50/60 Hz	Resistive load (AC-12)	10 A	10 A	6 A	2A	2 A
	Inductive load (AC-15)	10 A	6 A	3 A	1.9 A	1.6 A
DC	Resistive load (DC-12)	8 A	2.2 A	1.1 A	---	---
	Inductive load (DC-13)	4 A	1.1 A	0.55 A	---	---

Note: 1. The above ratings were obtained by conducting tests under the following conditions.
(1) Ambient temperature: 20 ±2°C
(2) Ambient humidity: 65% ±5% RH
(3) Operating frequency: 30 operations/minute
2. Minimum applicable load: 10 mA at 5 VDC.

LED Lamps

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

Specifications (When the Operation Unit, LED Lamp, Mounting Collar, Contact Blocks, and Lighting Unit Are Combined)

Characteristics

Item	Type	Pushbutton Switches	
		Non-lighted models	Lighted models
Allowable operating frequency	Mechanical	60 operations/minute max.	
	Electrical	30 operations/minute max.	
Insulation resistance		100 MΩ min. (at 500 VDC)	Not available for lighting units
Contact resistance		100 mΩ max. (initial value)	
Dielectric strength	Between terminals of same polarity[1]	2,500 VAC at 50/60 Hz for 1 min	Not available for lighting units
	Between each terminal and ground	2,500 VAC at 50/60 Hz for 1 min	
Vibration resistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms)	
Shock resistance	Malfunction	1,000 m/s^2 max. (malfunction within 1 ms)	
Durability	Mechanical	Momentary action: 5,000,000 operations min. Alternate action: 500,000 operations min.	
	Electrical	500,000 operations min. (250 VAC, 3 A, with an inductive load having power factor cos θ = 0.4)	
Ambient operating temperature[2]		−25 to 70°C	−25 to 55°C
Ambient operating humidity		35% to 85% RH	
Ambient storage temperature[2]		−40 to 80°C	
Degree of protection[3]		Conforming to IP66	
Electric shock protection class		Class II	
PTI (tracking characteristic)		175	
Degree of contamination (application environment)		3 (EN 60947-5-1)	
Weight		Approx. 60 g (for 1NC/1NO)	Approx. 75 g (for 1NC/1NO)

*1. Push-In Plus terminal block type: 1,000 VAC at 50/60 Hz for 1 min.
*2. With no icing or condensation.
*3. Degree of protection from the front of the panel.

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

Item	Type	Pushbutton Switches
		Lighted/non-lighted
Total travel force (torque) (maximum TTF)		18 N
Total travel (TT)		6 mm max.
Resetting force (torque) (RF)		---

Examples of Linked Contact Blocks (Screw terminal block type) ☐ Contact Blocks ◼ Lighting Units

	Pushbutton Switches			
	Momentary		Alternate	
	Lighted	Non-lighted	Lighted	Non-lighted
Linking example				
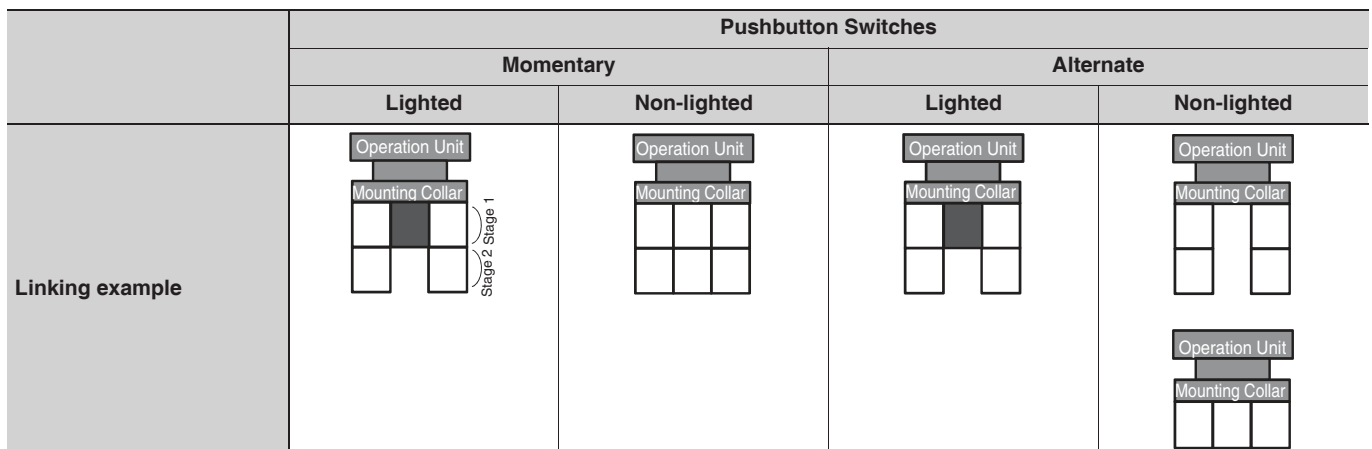
Note: If you increase the number of Contact Blocks, evaluate the Switch under actual working conditions before permanent installation and use the Switch within a number of switching operations that will not adversely affect the Switch's performance.

Sidebar navigation:
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

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

A30NN/A30NL

Dimensions

(Unit: mm)

Lighted and Non-lighted Pushbutton Switches
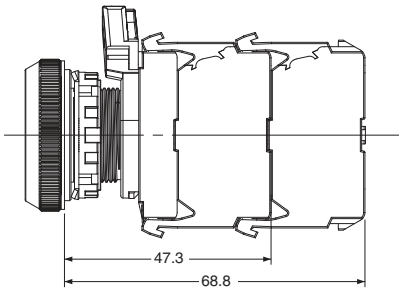
Flat Switches with Brushed Metal Bezels

A30N☐-MN☐-N☐A-G☐-☐☐

R29.5
47
34.7 dia.
43.5
0.8
5
1.8
9
47.3
30

A30N☐-MN☐-N☐A-P☐-☐☐

R29.5
47.6
34.7 dia.
42.5
0.8
5
1.8
9
41.5
30
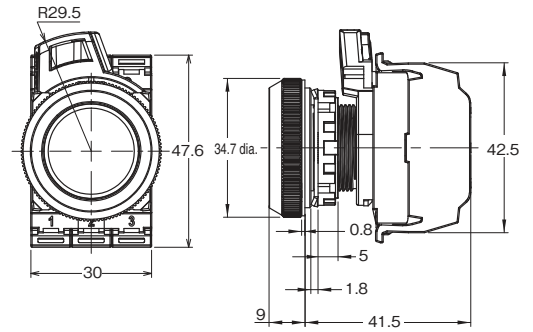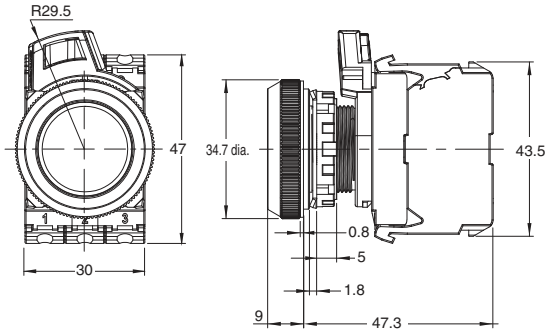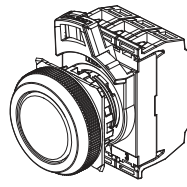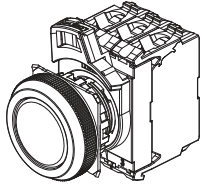
A30N☐-MN☐-T☐A-G☐-☐☐
A30N☐-MN☐-U☐A-G☐-☐☐

34.7 dia.
43.5
11.4
47.3

A30N☐-MN☐-T☐A-P☐-☐☐
A30N☐-MN☐-U☐A-P☐-☐☐

34.7 dia.
42.5
11.4
41.5
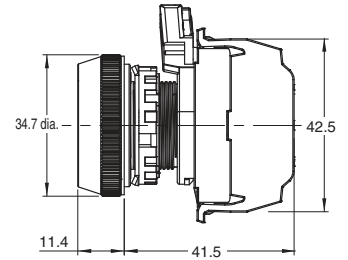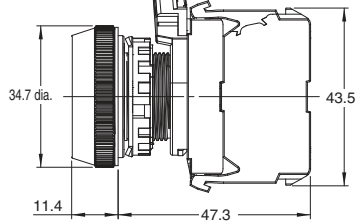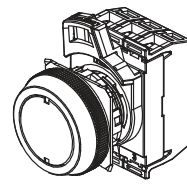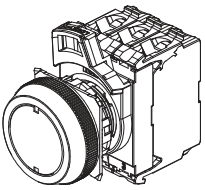
Projected Switches with Brushed Metal Bezels

A30N☐-MP☐-☐☐A-G☐-☐☐

34.7 dia.
23.3 dia.
43.5
9
17.1
47.3

A30N☐-MP☐-☐☐A-P☐-☐☐

34.7 dia.
23.3 dia.
42.5
9
17.1
41.5
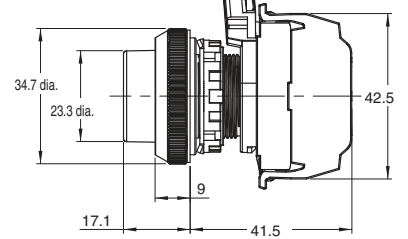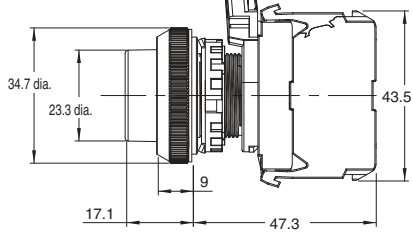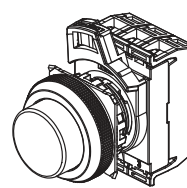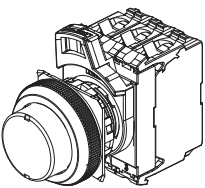
Full-guard Switches with Brushed Metal Bezels

A30N☐-MG☐-☐☐A-G☐-☐☐
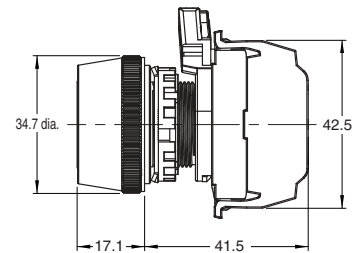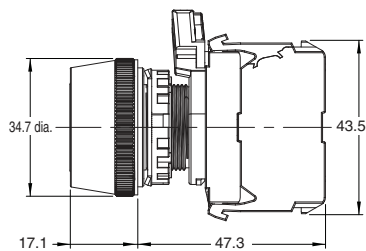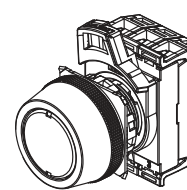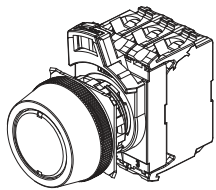
34.7 dia.
43.5
17.1
47.3

A30N☐-MG☐-☐☐A-P☐-☐☐

34.7 dia.
42.5
17.1
41.5

A30NN/A30NL

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

Mushroom Switches with Brushed Metal Bezels

A30N□-MM□-□□A-G□-□□

40 dia.
43.5
0.8
5
1.8
9
18.7
47.3

A30N□-MM□-□□A-P□-□□

40 dia.
34.7 dia.
42.5
0.8
5
1.8
9
18.7
41.5
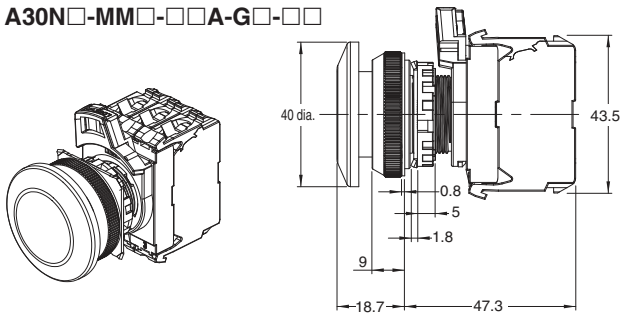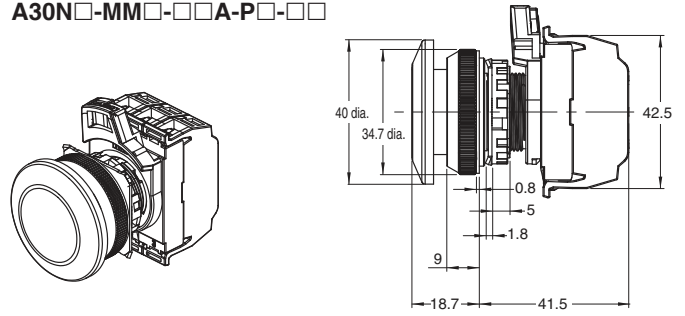
Depth with Linked Units
(Screw terminal block type)

47.3
68.8

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

57
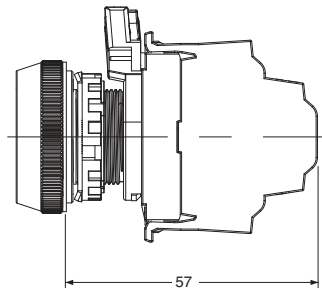
Terminal Arrangement
BOTTOM VIEW (Screw terminal block type)

Non-lighted Switches (2NO/1NC) Contact configuration code:112	Lighted Switches (1NO/1NC) Contact configuration code:102
20, 10, Contact Blocks, Six, M3.5 Phillips/slotted screws	20, 10, Lighting Unit, Six, M3.5 Phillips/slotted screws, Contact Blocks
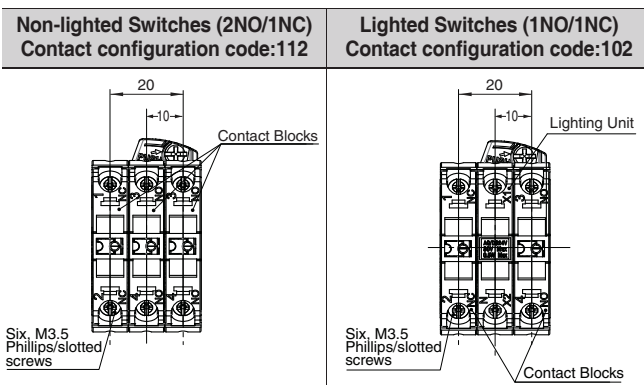
Terminal Connection Diagrams

Non-lighted Switches (2NO/1NC) Contact configuration code:112	Lighted Switches (1NO/1NC) Contact configuration code:102
Bottom View ① ③ ③ ② ④ ④	Bottom View ① X1 ③ X LED Lamp ② X2 ④
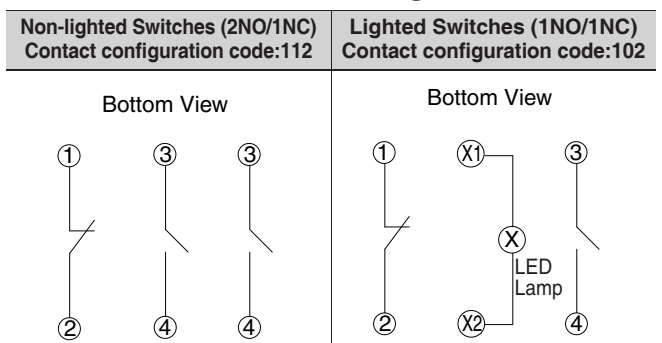
BOTTOM VIEW (Push-In Plus terminal block type)
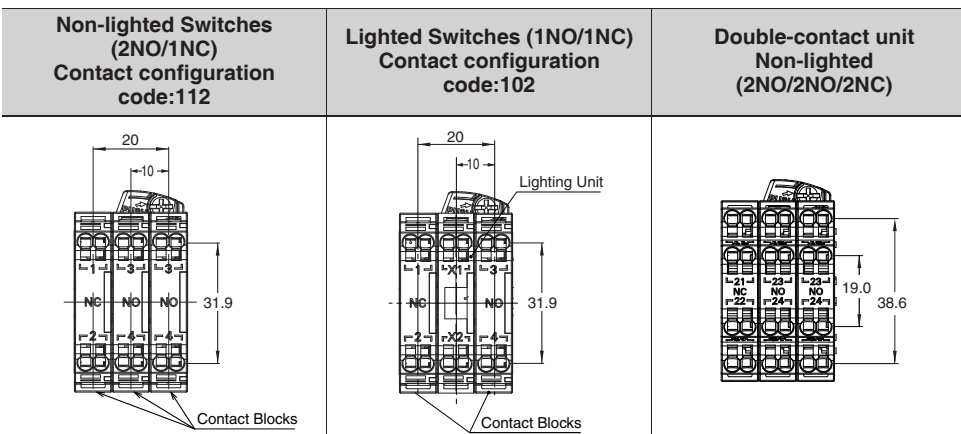
Non-lighted Switches (2NO/1NC) Contact configuration code:112	Lighted Switches (1NO/1NC) Contact configuration code:102	Double-contact unit Non-lighted (2NO/2NO/2NC)
20, 10, 1, 3, 3, NC, NO, NO, 31.9, 2, 4, 4, Contact Blocks	20, 10, Lighting Unit, 1, X1, 3, NC, NO, 31.9, 2, X2, 4, Contact Blocks	21 NC, 23 NO, 23 NO, 22, 24, 24, 19.0, 38.6

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

Subassemblies (Common)

Ordering Information

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.
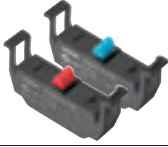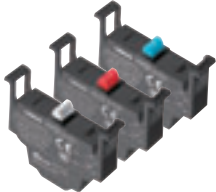
LED Lamps

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

Mounting Collar

Appearance	Model
	A22NZ-H-01

Contact Blocks

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

Lighting Units

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

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
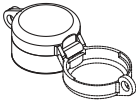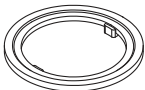
Subassemblies (Common)

Accessories and Tools

Safety Precautions

Subassemblies (Common)

Dimensions

(Unit: mm)

LED Lamps
A22NZ-L-□□

24.3
9.8 dia.
9 dia.
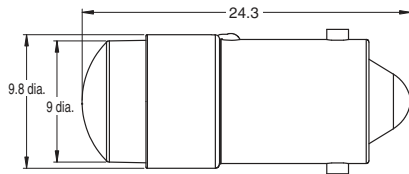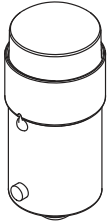
Mounting Collar
A22NZ-H-01

R29.5
30
17.1
51.3
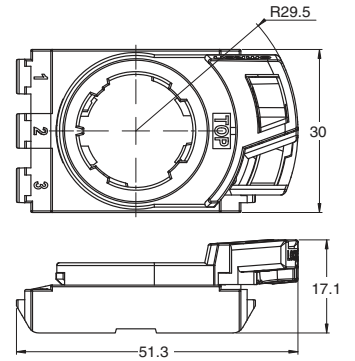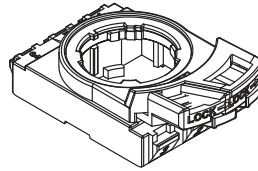
Screw terminal block

Contact Blocks
A22NZ-S-G1□

4
5
29.6
22.2
47
9.9

Lighting Units
A22NZ-T-□

12 dia.
32.2
29.6
47
9.9
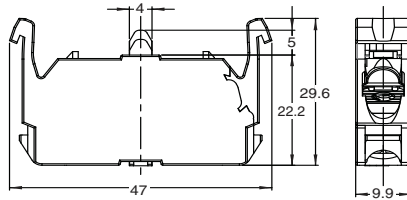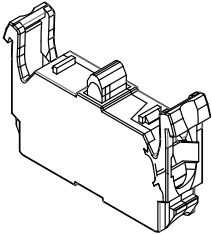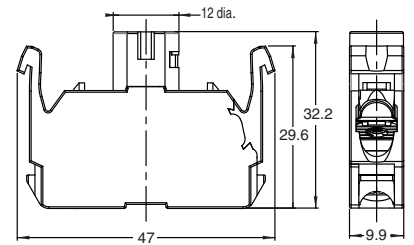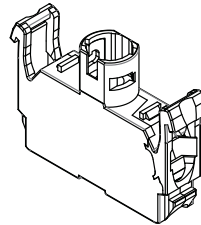
Push-In Plus Terminal Blocks

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

4
5
23.8
16.4
47.6
9.9
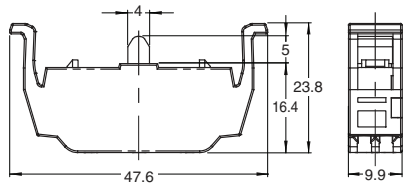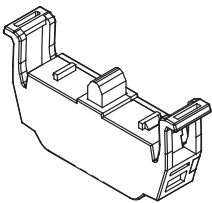
Contact Blocks (Double Contact)
A22NZ-S-P2□

4
5
39.3
31.9
47.6
9.9
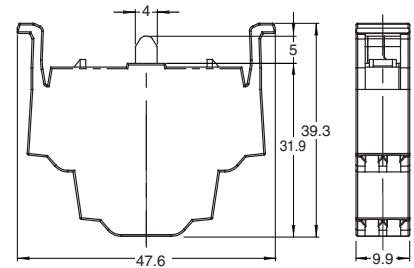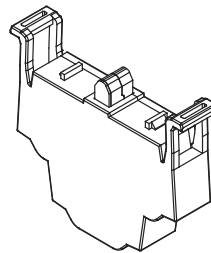
Lighting Units
A22NZ-T-□P
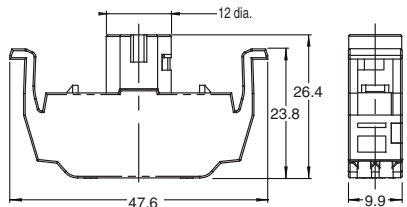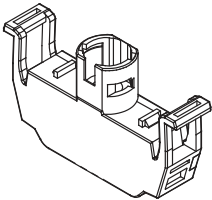
12 dia.
26.4
23.8
47.6
9.9

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
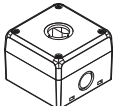
Safety Precautions

A22N/M22N/A30N

Accessories and Tools

Ordering Information

Accessories and Tools (Order Separately)

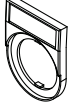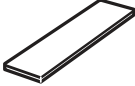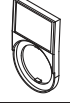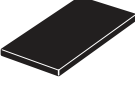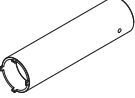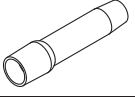| Item	Appearance	Classification	Model	Remarks
Protective Cover		---	A22NZ-A-303	A protector designed to prevent incorrect operation. Cannot be used together with other accessories. (Rubber seal included.) For exclusive use with panel cutouts of 22.3 and 25.5 mm dia. Key-type selector switches cannot be used.
Plastic Hole Plug *		Round	A22NZ-A-401	Can be plugged into precut panel holes for future expansion. Applicable panel thickness: 0.8 to 3.0 mm
Metal Hole Plug *		Round	A22NZ-A-402	Can be plugged into precut panel holes for future expansion. Applicable panel thickness: 0.8 to 6.0 mm (Rubber seal included.)
Lock Ring *		Round	A22NZ-A-403	Used when a more secure lock is required to prevent rotation inside the Operation Unit. (Rubber seal included.)
Lock Ring		---	A22NZ-A-50501	Used when a more secure lock is required to prevent rotation of the Operation Unit.
Reinforcement Plate		---	A22NZ-A-C01	Used to reinforce Contact Blocks and Lighting Units, Refer to page 95 for mounting instructions.
Key		---	A22NZ-K-01	Used with a key-type selector switch.
Control Box *		1 hole	A22NZ-A-B01Y	
Connector		Suitable Cable Diameter (mm) 7 to 9 dia.	A22Z-3500-1	Plastic connector used to extend a cable from the switch box. Refer to page 98 for details.
		9 to 11 dia.	A22Z-3500-2	
Sealing Caps		For flat models	A22Z-3600F	Used to prevent dust or water from entering the Operation Unit. Color: opaque Material: silicon For exclusive use with panel cutouts of 22.3 and 25.5 mm dia. Knob-type and key-type selector switches cannot be used.
		For projection models	A22Z-3600T	
		For full-guard models	A22Z-3600G	
Resin Attachment for 30 dia. *		Round	A22Z-A30	Use when mounting to a panel with a 30-dia. hole. Refer to page 99 for details. Purchase and mount a separate Lock Ring when using an indicator.

* For 22.3-mm panel hole diameter.

Accessories and Tools

Ordering Information

Item	Appearance	Classification	Model	Remarks
Small Legend Plate Frame *		Black	**A22NZ-A-50103**	Legend Plate with no text on black background included.
Small Legend Plates (Standard Size) *		Without text	**A22Z-3443B**	Black
			A22Z-3443R	Red
			A22Z-3443W	White
			A22Z-3443C	Transparent
		◯	**A22Z-3443R-2**	White text on red background
		STOP	**A22Z-3443R-4**	
		|	**A22Z-3443B-1**	White text on black background
		START	**A22Z-3443B-3**	
		ON	**A22Z-3443B-5**	
		OFF	**A22Z-3443B-6**	
		UP	**A22Z-3443B-7**	
		DOWN	**A22Z-3443B-8**	
		POWER ON	**A22Z-3443B-9**	
		OFF-ON	**A22Z-3443B-10**	
Large Legend Plate Frame *		Black	**A22NZ-A-51103**	Legend Plate with no text on black background included.
Large Legend Plates *		Without text	**A22Z-3453B**	Black
			A22Z-3453R	Red
			A22Z-3453W	White
			A22Z-3453C	Transparent
Tightening Wrench		---	**A22NZ-A-301**	Used to tighten Mounting Nuts from the back of the panel.
LED Lamp Extractor		---	**A22NZ-A-302**	Made of rubber and used to easily remove and attach LED Lamps.
Cap Tightening Wrench		---	**A22Z-3908**	Used to replace the Caps on Flat, Projected, and Full-guard Pushbutton Switches.

* For 22.3-mm panel hole diameter.

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)

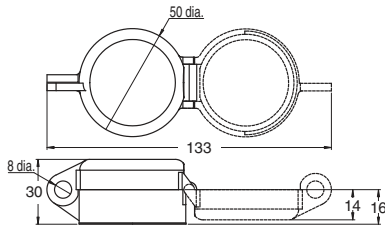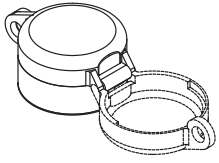Accessories and Tools

Safety Precautions

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

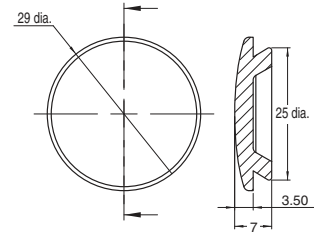Safety Precautions
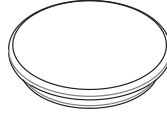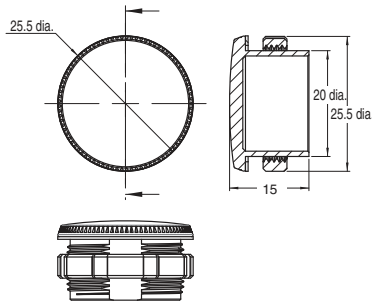
A22N/M22N/A30N

Accessories and Tools

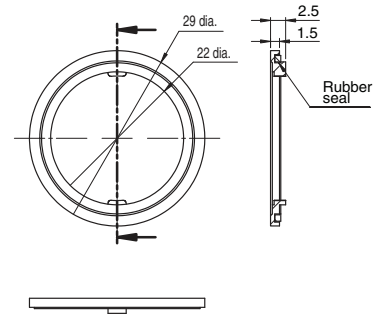## Dimensions

(Unit: mm)

Protective Cover
A22NZ-A303

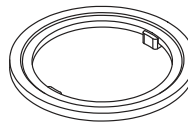50 dia.
133
8 dia.
30
14 16

Plastic Hole Plug
A22NZ-A-401

29 dia.
25 dia.
3.50
7

Metal Hole Plug
A22NZ-A-402

25.5 dia.
20 dia.
25.5 dia.
15

Lock Ring
A22NZ-A-403

2.5
1.5
29 dia.
22 dia.
Rubber seal

Lock Ring
A22NZ-A-50501

1.8   1
29
29

Reinforcement Plate
A22NZ-A-C01

OMRON
12.1
29.8
3.6

Control Box
A22NZ-A-B01Y

Four, M4 Phillips binding screws
24.2   22.3 dia.
24.2
80
3.2
3.2
80

Cover (yellow)   Case (black)
Two, 21.4-dia side lead holes
18.5
38
59.9

Four, 3.7-dia, M4-tapped holes
40
10
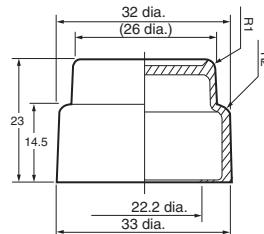Two, 14-dia. bottom lead holes
Two, 4.4-dia oval mounting holes
62
5.4
10
40
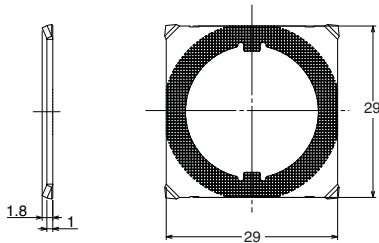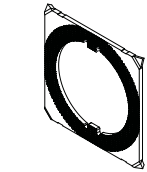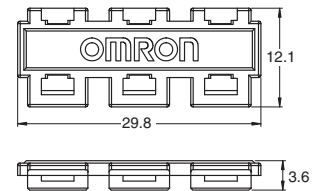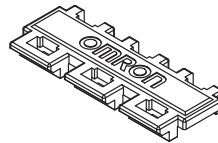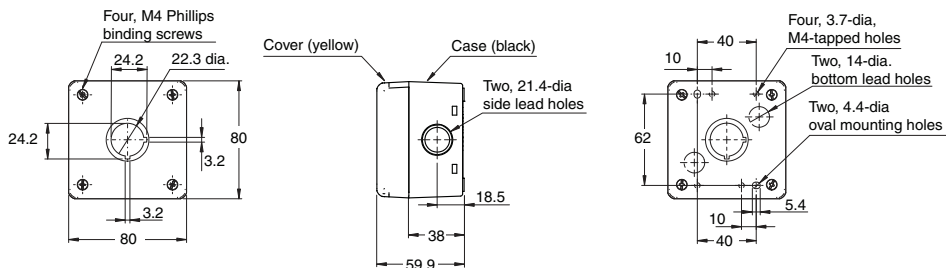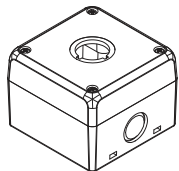
Sealing cap

For Flat Models A22Z-3600F

R1
32 dia.
16.6
22.2 dia.
33 dia.

For projection models A22Z-3600T

32 dia.
(26 dia.)
R1
R2
23
14.5
22.2 dia.
33 dia.

For full-guard models A22Z-3600G

R1
31.5 dia.
24
22.2 dia.
32.5 dia.
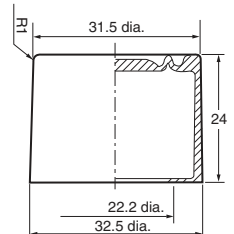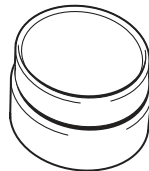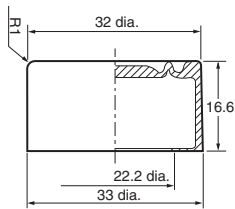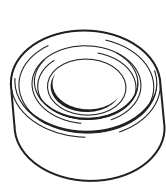
Resin Attachment for 30 dia.
A22Z-A30

20.5
6.1
3.8
2.8
34.7 dia.
22.2 dia.

Accessories and Tools

Dimensions

(Unit: mm)

Legend Plate Frames
General A22NZ-A-50103

Large A22NZ-A-51103
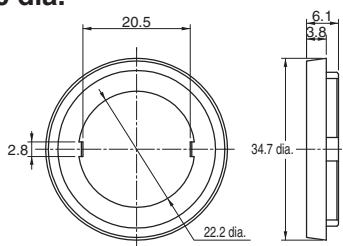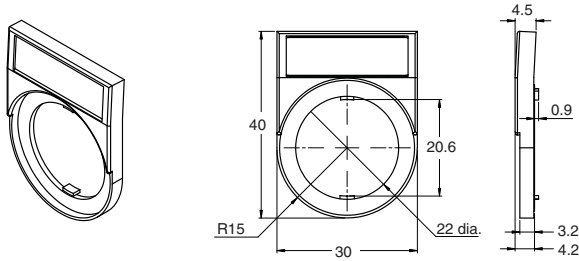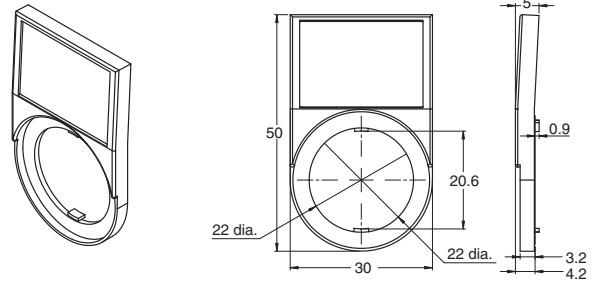
4.5
40
20.6
0.9
R15
30
22 dia.
3.2
4.2

5
50
20.6
0.9
22 dia.
30
22 dia.
3.2
4.2

Legend Plates
General A22Z-3443□-□
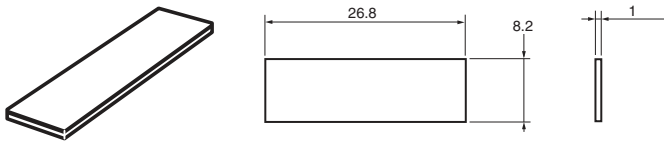
Large A22Z-3453□
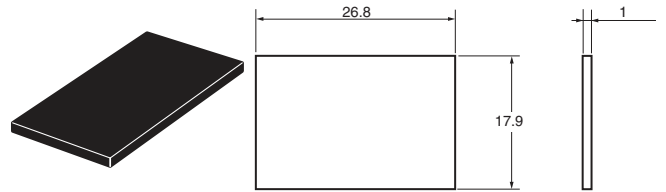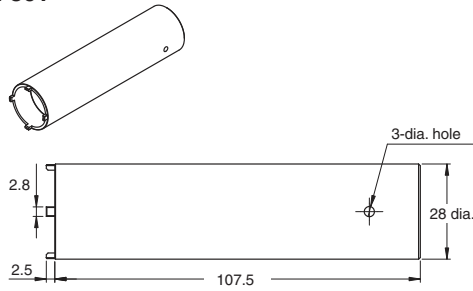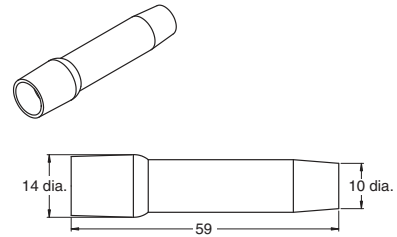
26.8
8.2
1

26.8
17.9
1

Tightening Wrench
A22NZ-A-301

3-dia. hole
2.8
28 dia.
2.5
107.5

LED Lamp Extractor
A22NZ-A-302

14 dia.
10 dia.
59

Cap Tightening Wrench
A22Z-3908

5 dia.
23.4 20.5
1
30

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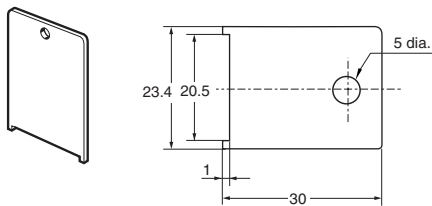
Pushbutton Switches A22N
Selector Switches A22N
Key-Type Selector Switches A22N
Indicators M22N
Pushbutton Switches A30N
Selector Switches A30N
Key-type Selector Switches A30N
Subassemblies (Common)
Accessories and Tools
Safety Precautions

A22N/M22N/A30N

Safety Precautions

Refer to Safety Precautions for All Pushbutton Switches/Indicators.

Signal Word Definitions

Precautions for Safe Use	Supplementary comments on what to do or avoid doing, to use the product safely.
Precautions for Correct Use	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 ark 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_2S, SO_2, NH_3, HNO_3, and Cl_2, 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 submersed 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 wire from smoking or igniting, use the wire indicated 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^2 / AWG 16 to 14 Solid wire: 1.6 mm max.	8 mm
A22N-P, M22N-P (Push-In Plus terminal block)			0.25 to 1.5 mm^2/ AWG 24 to 16	Ferrules used : 10 mm 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.

OMRON

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
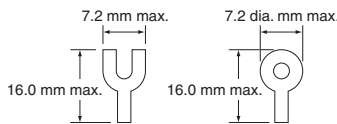and Tools

Safety
Precautions

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.)
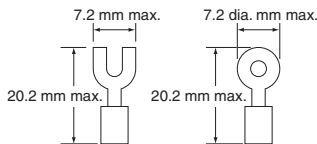
Wiring (Screw terminal block)

- 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

7.2 mm max.   7.2 dia. mm max.
16.0 mm max.   16.0 mm max.

Crimp Terminals with Insulating Sheathes

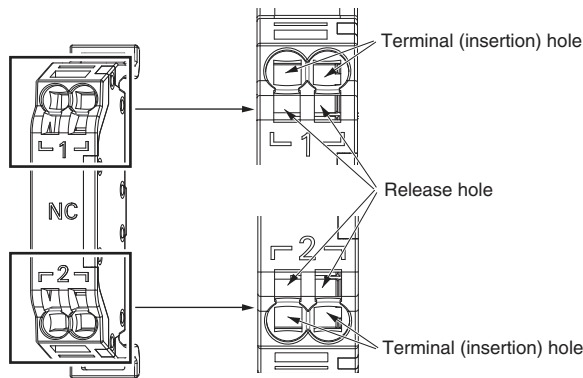7.2 mm max.   7.2 dia. mm max.
20.2 mm max.   20.2 mm max.

Wiring (Push-in Plus terminal block)
1. Connecting Wires to the Push-In Plus Terminal Block

Part Names of the Terminal Block
<A22N>

Terminal (insertion) hole

Release hole

Terminal (insertion) hole

<M22N>

Release hole

Release hole

Terminal (insertion) hole

Terminal (insertion) hole
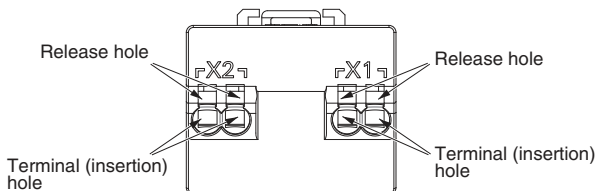
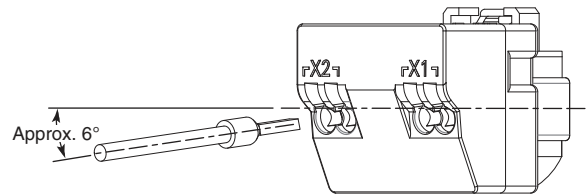**Connecting Wires with Ferrules and Solid Wires**

- 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>

Approx. 6°   Ferrule or solid wire

Approx. 6°

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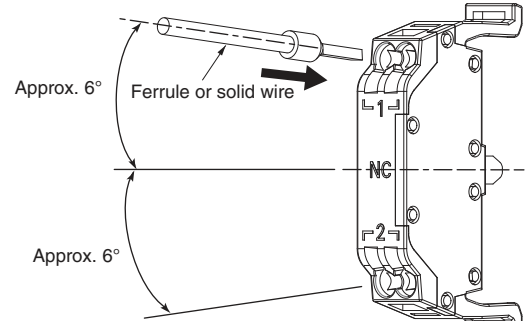
The wiring for the Lighting Unit and Contact Block (2 contacts) are the same as for the Contact Block (1 contact) shown in the above illustration.

<M22N>

Approx. 6°

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

Connecting Stranded Wires

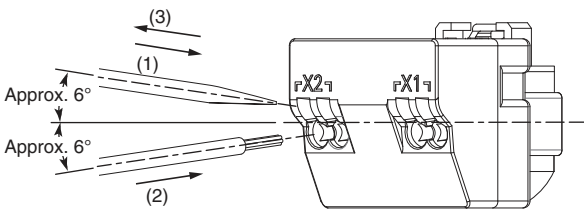Use the following procedure to connect the wires to the terminal block.

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.
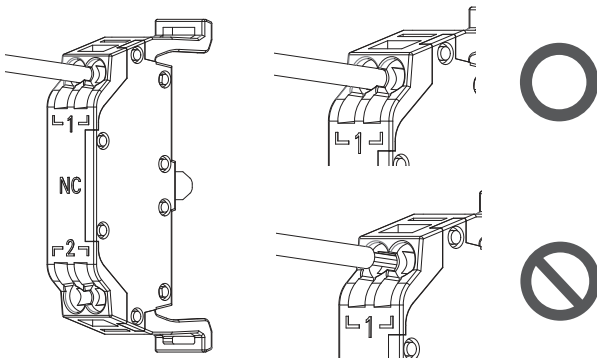
<A22N>
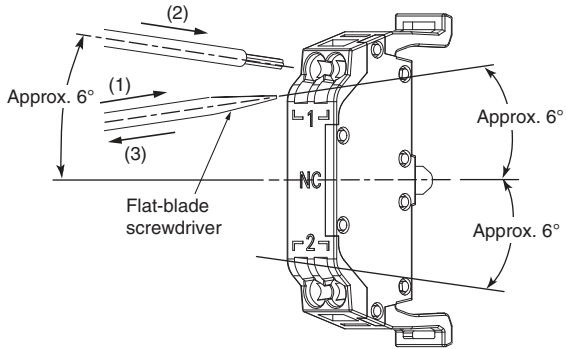
The wiring and screwdriver angles for the Lighting Unit and Contact Block (2 contacts) are the same as for the Contact Block (1 contact) shown in the above illustration.

<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.
- To prevent short circuits, insert the stripped part of a stranded or solid wire, or the conductor part of a ferrule until it is hidden inside the terminal insertion hole. (See the following diagram.)


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.
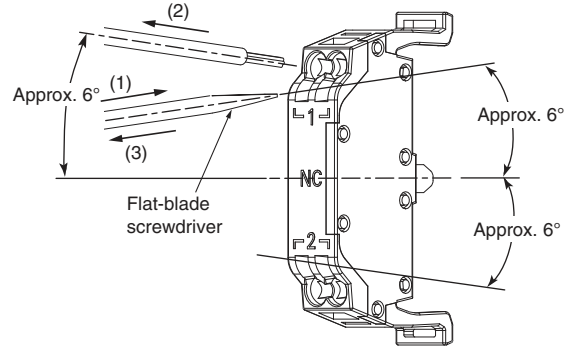
<A22N>

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>

OMRON
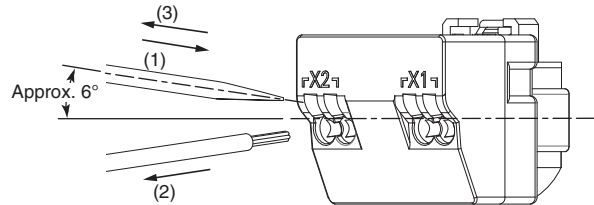
## 3. Recommended Ferrules and Crimp Tools
Recommended ferrules

Applicable wire		Ferrule Conductor Length (mm)	Recommended ferrules		
(mm²)	(AWG)		Phoenix Contact product	Weidmuller product	Wago product
0.25	24	8	AI0.25-8	H0.25/12	FE-0.25-8N-YE
0.34	22	8	AI0.34-8	H0.34/12	FE-0.34-8N-TQ
0.5	20	8	AI0.5-8	H0.5/14	FE-0.5-8N-WH
0.75	18	8	AI0.75-8	H0.75/14	FE-0.75-8N-GY
1	18	8	AI1-8	H1.0/14	FE-1.0-8N-RD
1.5	16	8	AI1.5-8	H1.5/14	FE-1.5-8N-BK
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.

8 mm
2.1 mm max.
2.7 mm max.
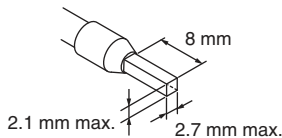
Recommended Flat-Blade Screwdrivers
Use a flat-blade screwdriver to connect and remove wires.
Use one of the following flat-blade screwdrivers.
The following table shows manufacturers and models as of 2015/Dec.

Side   Front
2.5 mm dia.
0.4 mm   2.5 mm
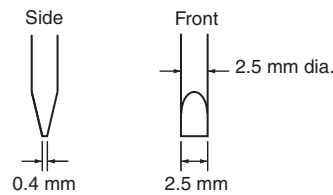
| Model	Manufacturer
ESD0.40 x 2.5	Wera
SZS 0.4 x 2.5 SZF 0-0.4 x 2.5 *	Phoenix Contact
0.4 x 2.5 x 75 302	Wiha
AEF.2.5 x 75	Facom
210-719	Wago
SDI 0.4 x 2.5 x 75	Weidmuller

* 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.

• 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

X1
LED Lamp
R: 10 kΩ (1 W) bleeder resistor
X2
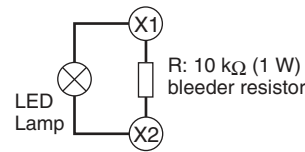
Key-Type Selector Switches
• Make sure to insert the key to the bottom of the cylinder before turning it.

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

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

Application

### Mounting to the Panel

Panel Hole Dimensions

<A22N>

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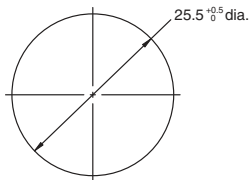- The recommended panel thicknesses are given below.

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

- 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
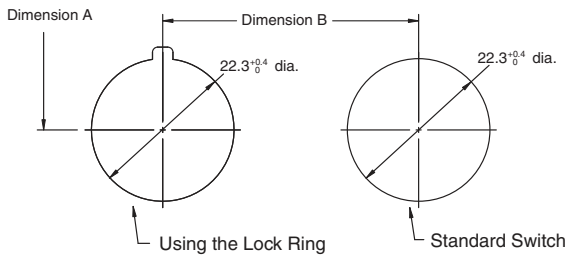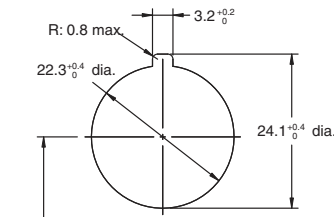
Panel Hole Dimensions for 25.5 Diameter

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 sheaths	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.
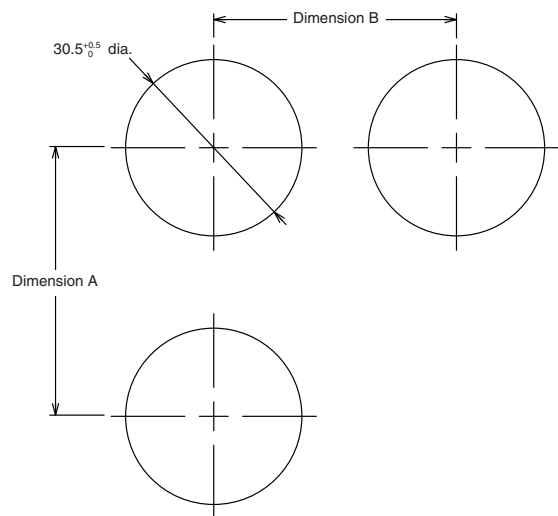
Panel Hole Dimensions for 22.3 Diameter
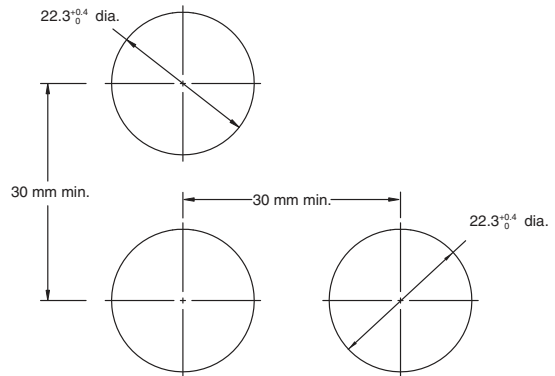
Panel Hole Dimensions for 25.5 Diameter

<A30N>
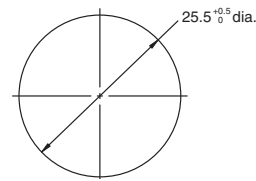
- Panel hole dimensions are given below.
- Acceptable panel thickness is between 0.8 and 7 mm.
- If outer surface treatment such as coating is performed for the panel, the panel dimensions after outer surface treatment must meet the specified panel dimensions.
- The following figure gives pitch dimension A and pitch dimension B between the centers of the mounting holes.

Panel Hole Dimensions

OMRON

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	30 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.
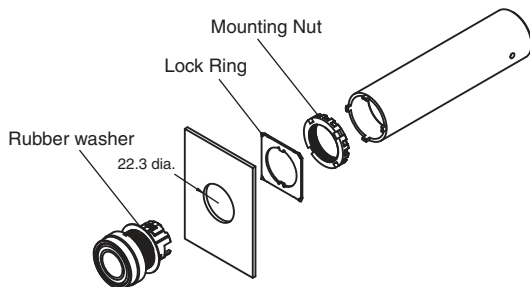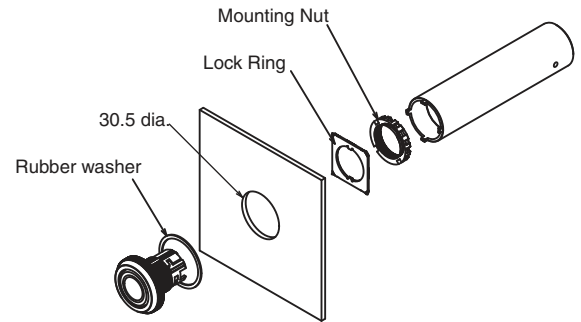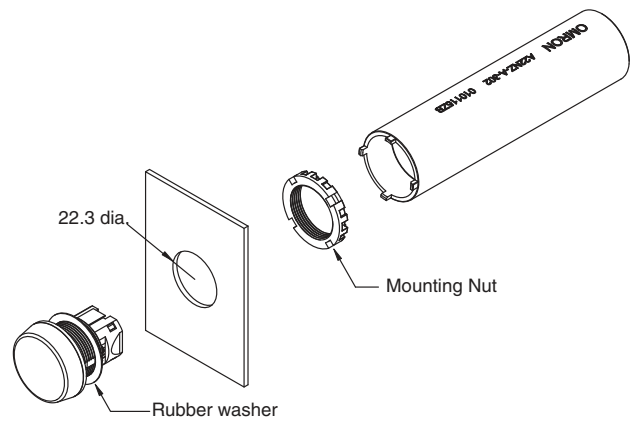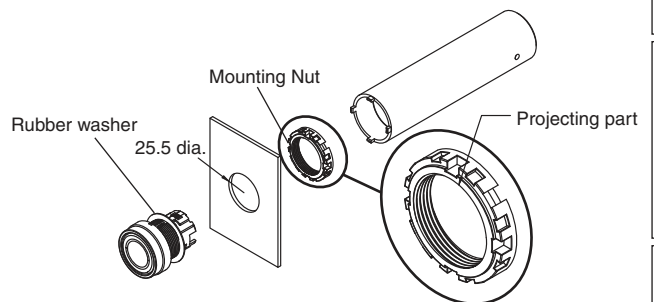

- Panel Hole of 25.5-mm Diameter
  Do not use the Lock Ring, and tighten the Mounting Nut while confirming that the projecting part (see following figure) on the Mounting Nut is aligned with mounting hole. Before tightening, check that the rubber washer is present between the Operation Unit and the panel.
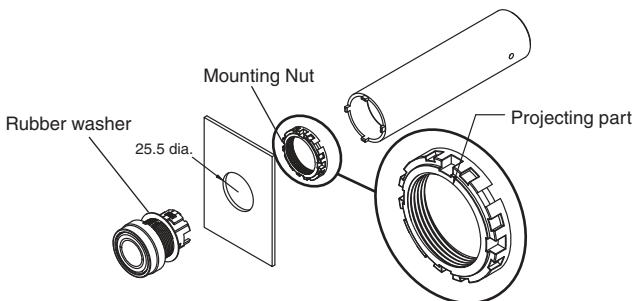

- Align the Lock Ring with the slot on the case and insert it so that the edge is flush with the panel.

<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.

Attaching the Switch Unit to 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.

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

Mounting the Lock Ring

<A22N/A30N>

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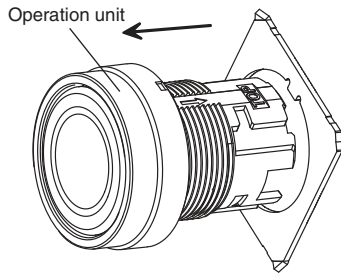
Operation unit

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

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

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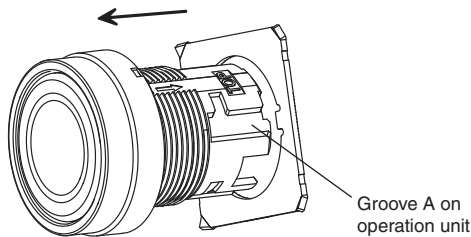
2. When the Lock Ring is in the position shown in the figure below, rotate it to insert the protruding part of the Lock Ring into groove B on the Operation Unit.

Groove B on operation unit
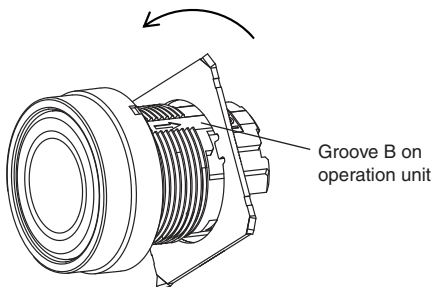
3. When the Lock Ring is in the position shown in the figure below, move it in the direction indicated by the arrow.
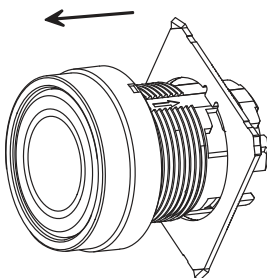
Mounting the Contact Block to the Operation Unit

<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.

TOP (marking)

(1)

(2)
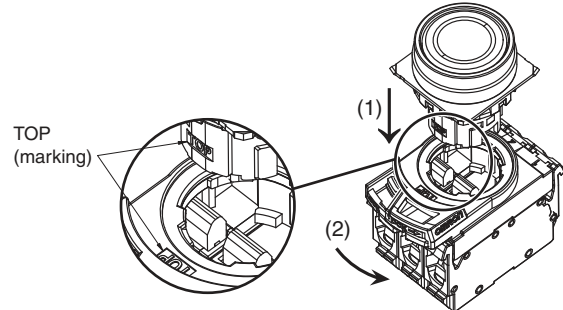
Removing the Mounting Collar

<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.

(2)

(1)

Flat-blade screwdriver

(3)

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
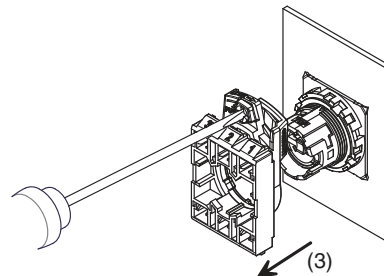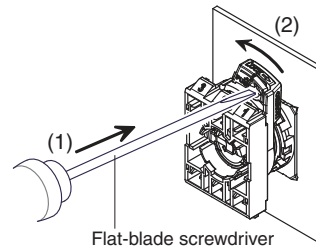
**Attaching the Switch Unit to the Indicator Unit
<M22N>**

- 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.
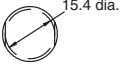
TOP (marking)

(1)

(2)
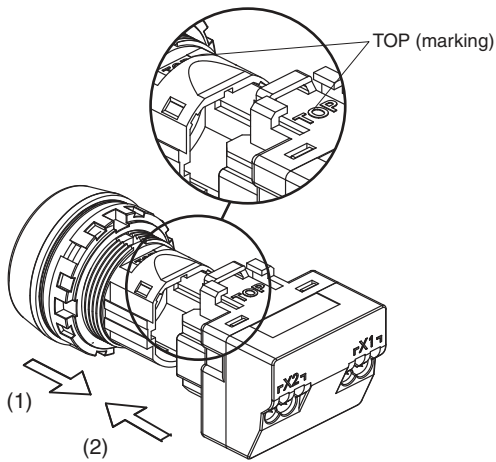
**Removing the Switch Unit
<M22N>**

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

(1)

(3)

(3)

(2)

Flat-blade screwdriver
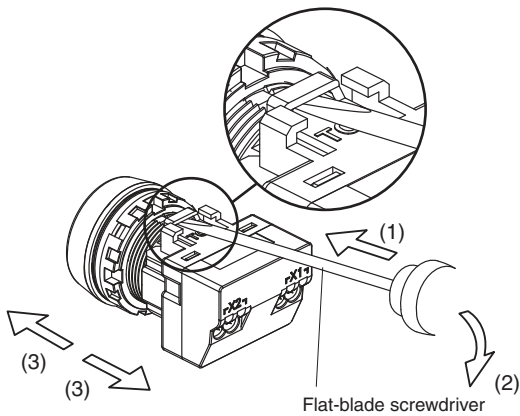
Contact Block and Lighting Unit
Attaching the Contact Block and Lighting Unit

- 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).

(1)

When attached
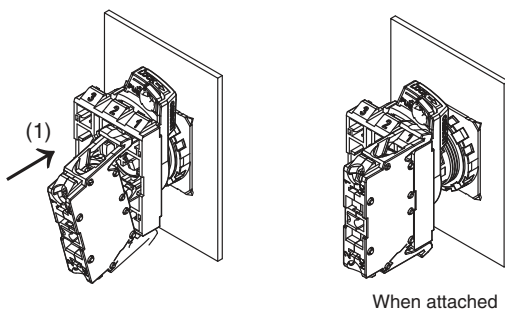
Removing the Contact Block

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

(1)

Flat-blade screwdriver

(2)

(3)
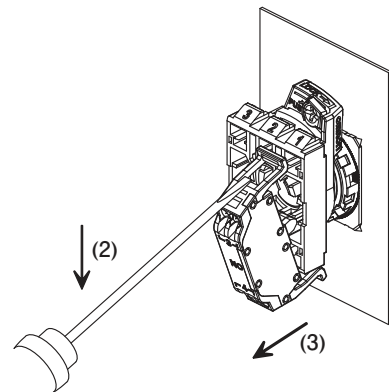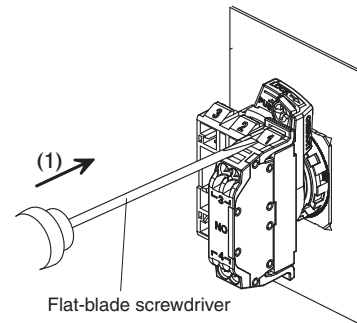
Attaching the Reinforcement Plate
(Screw terminal block type)

- 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).
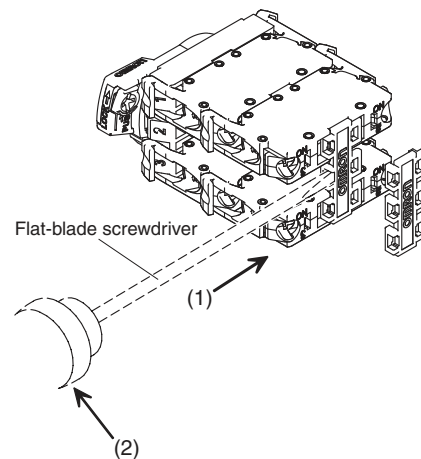
Flat-blade screwdriver

(1)

(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>

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

<M22N>

Flat Resin Legend Plate Type Switches
21 dia.

Attaching Character Films
(Except for Non-Lighted / Opaque Types)
<A22N>

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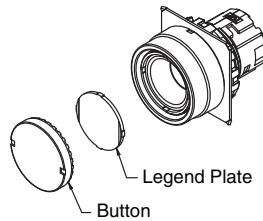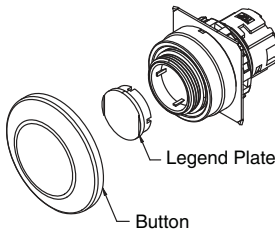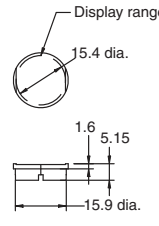
Projected Switches

Legend Plate
Button

Full-guard Switches

Legend Plate
Button
Flange

Mushroom Switches

Legend Plate
Button

Flat Switches

Legend Plate
Button

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

Projected, Full-guard, or Mushroom Switches	**Legend Plate dimensions**	Display range, 15.4 dia., 1.6, 5.15, 15.9 dia.
	Film dimensions	$17.1^{0}_{-0.2}$ dia., $15.4^{0}_{-0.2}$, T = 0.1 to 0.2 mm
Flat Switches	**Legend Plate dimensions**	Display range, 17.7 dia., 1.30, 2.00
	Film dimensions	$19.6^{0}_{-0.2}$ dia., $17.5^{0}_{-0.2}$, T = 0.1 to 0.2 mm

<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
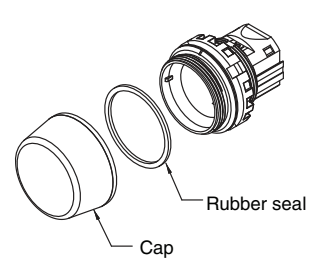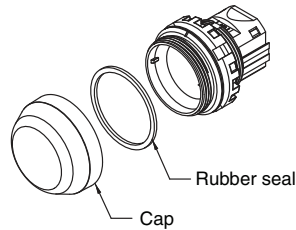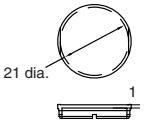

Rubber seal
Legend Plate
Cap

Flat Switches

Rubber seal
Cap
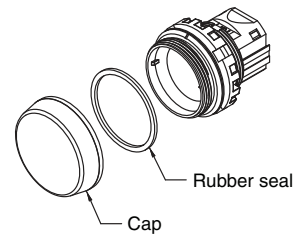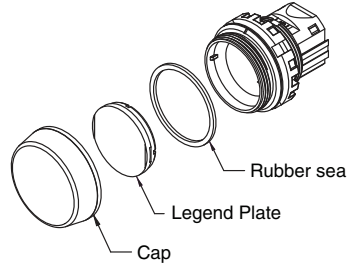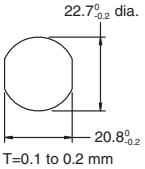
Semi-spherical Switches

Rubber seal
Cap

Projected Switches

Rubber seal
Cap

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.

| Legend Plate dimensions	21 dia. 1
Film dimensions	$22.7^{0}_{-0.2}$ dia. $20.8^{0}_{-0.2}$ T=0.1 to 0.2 mm

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.
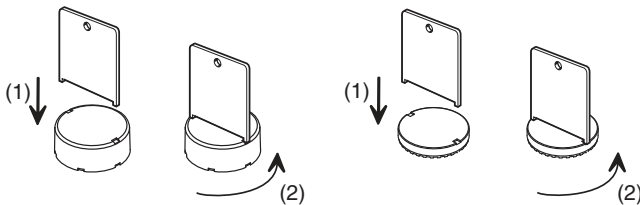
Attaching the LED Lamp to the Lighting Unit

- 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.
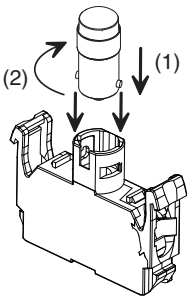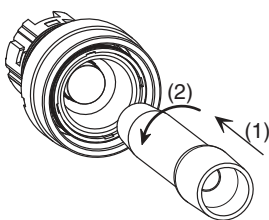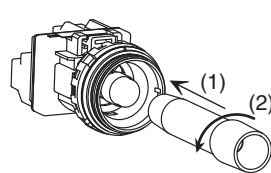

Attaching and Replacing LED Lamps
Removing the LED Lamp from the Panel Surface

- 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.
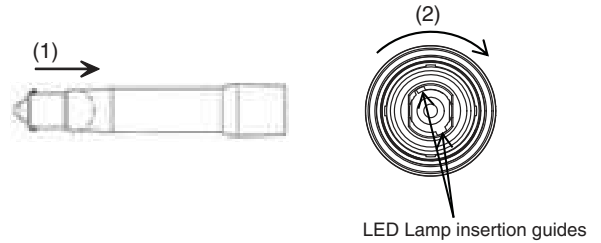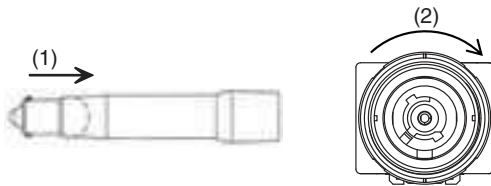
<A22N>　　　　　　**<M22N>**

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 indicted at (2).

<A22N>

LED Lamp insertion guides

<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.

Legend Plate
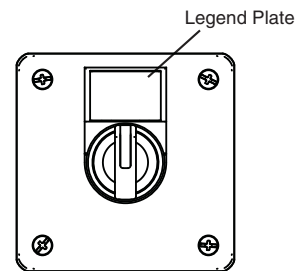
Creating a Cable Hole

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

Screwdriver

Switch Box

Side

Cover

Cable hole

Strike at four diagonally opposed locations to open the hole.

Groove

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

Securing the Connector Cable

1. Insert the connector into the cable port hole in the Box and secure with the fixing nut inside the box.
2. Open a hole in the thin rubber section of the rubber ring.
3. Pass the tightening cap through the cable, insert the cable into the connector, and 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
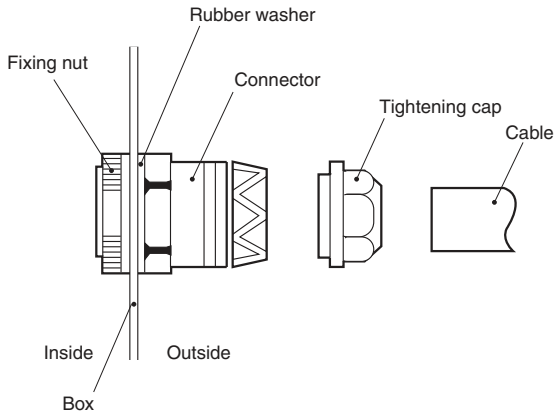
Attaching and Removing Legend Plates

- 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.
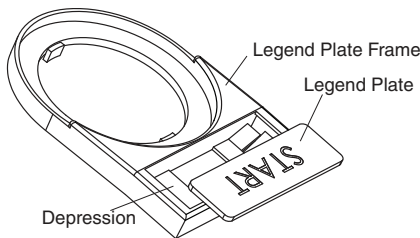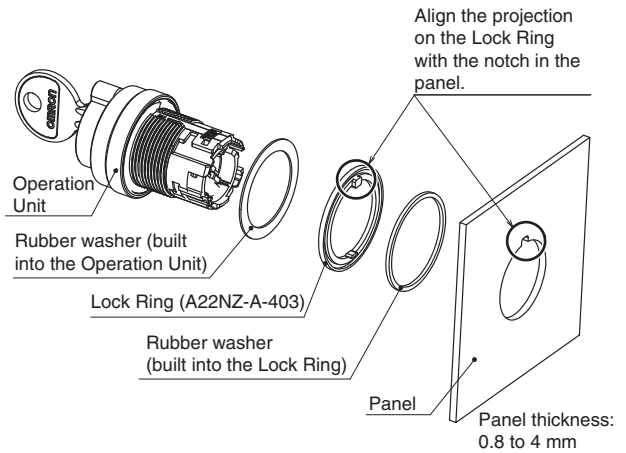

- You can easily remove the Legend Plate by pressing it forwards from the back of the Legend Plate Frame.
- The acrylic plastic Legend Plate is easily damaged by shock. Handle it with care.
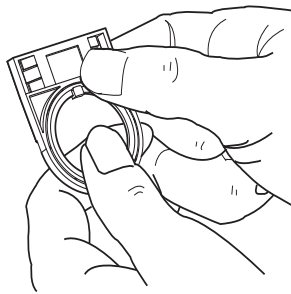
Attaching the Lock Ring

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

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

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

Attaching the Protective Cover

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

Attaching the Sealing Cap

<A22N/M22N>
- Panel acceptable thickness is given below.

Panel hole dimension	Panel thickness
22.3 dia.	0.8 to 4.2 mm
25.5 dia.	0.8 to 5.2 mm

Panel Hole of 22.3-mm Diameter
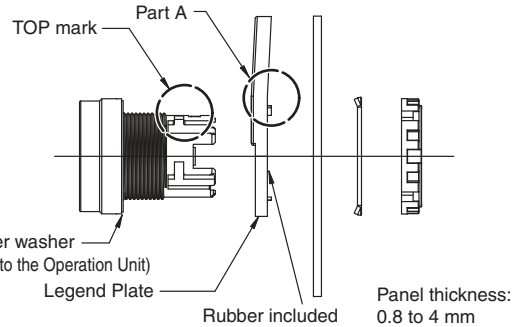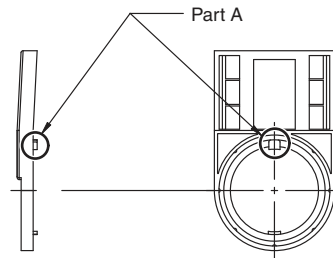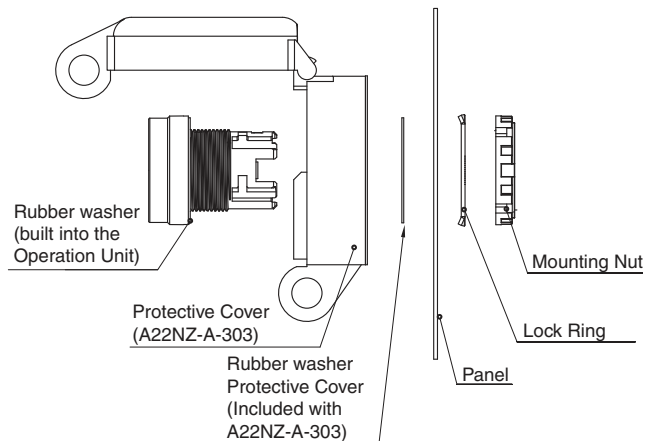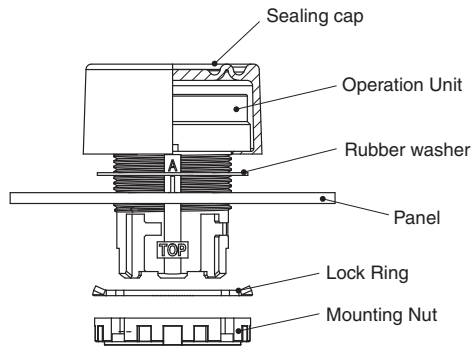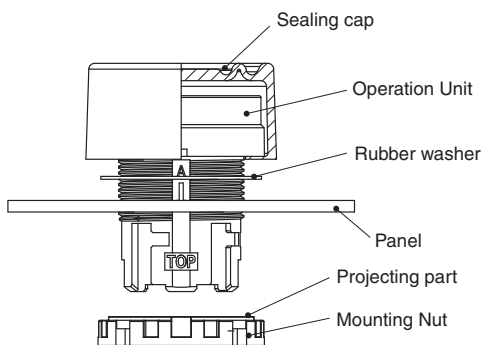Attach the Sealing cap as shown in the following figure. To ensure water resistance, attach the rubber washer in the specified location.

- Sealing cap
- Operation Unit
- Rubber washer
- Panel
- Lock Ring
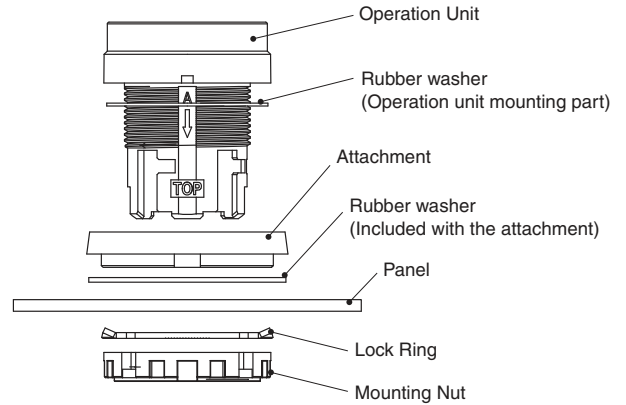- Mounting Nut

Panel Hole of 25.5-mm Diameter
Attach the Sealing cap as shown in the following figure.
Do not use the Lock Ring, and tighten the Mounting Nut while confirming that the projecting part on the Mounting Nut is aligned with mounting hole. To ensure water resistance, attach the rubber washer in the specified location.

- Sealing cap
- Operation Unit
- Rubber washer
- Panel
- Projecting part
- Mounting Nut

Mounting the 30-dia. Resin Attachments

<A22N>
- Acceptable panel thickness is between 1.8 and 2.2 mm.
- Mount the attachment as shown in the following figure.
- To ensure water resistance, attach the rubber washer in the specified location.

- Operation Unit
- Rubber washer (Operation unit mounting part)
- Attachment
- Rubber washer (Included with the attachment)
- Panel
- Lock Ring
- Mounting Nut

<M22N>
- Acceptable panel thickness is between 1.8 and 2.2 mm.
- Mount the attachment as shown in the following figure.
- Purchase and mount a separate lock ring (A22NZ-A-50501).
- To ensure water resistance, attach the rubber washer in the specified location.

- Indicator
- Rubber washer (Indicator mounting part)
- Attachment
- Rubber washer (Included with the attachment)
- Panel
- Lock Ring (A22NZ-A-50501)
- Mounting Nut

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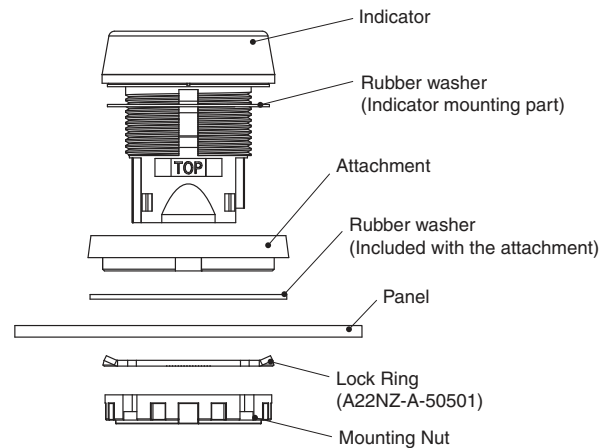
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