NEW

Pushbutton Switches/Indicators A22R/M22R series

OMRON Robust and Graceful design **Pushbutton Switches**

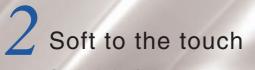
Push Button



realrzing

Responds with high grade illumination to various needs





• Gentle design for human.







Compact size

• The body length under a panel decreased by 15% compare with our former products.





* Refer to the Safety Components Series Catalog (Cat. No. Y106) for detail.

Operation Units Non-lighted Type Lighted Type Flat type Projection type Projection type A22R-F ----A22RL-T -A22R-T - -Selector Non-lighted Type Selector Lighted Type 3 notches 2 notches 2 notches 3 notches A22RS-3 🗆 A22RW-2 A22RS-2 A22RW-3 **Key Selector** Switch Unit Socket 2 notches 3 notches Switch with Lamp socket Socket A22RK-2 A22RK-3 A22RL- 🗆 M - 🗆 A22R-□M Switch Block Lamp Socket Mounting Plate LED Switch block Lamp socket Mounting plate LED A22R- 🗆 A22R- 🗆 A22R-3200 A22R-🗆 🗆

Assembled Models

Pushbutton Switches

Non-lighted/Lighted

Appearance	Pushbutton shape	Pushbutton color	Contact form	Part No.	Dimensions
A22R-F□-□□		\bigcirc	1a	A22R-FW-10	28°
			1a	A22R-FB-10	
			1a	A22R-FG-10	
			1a	A22R-FR-10	
			1a	A22R-FY-10	
100	Round/Flat		1a	A22R-FA-10	φ29.8 -
A COM			1b	A22R-FB-01	0.5
			1b	A22R-FR-01	
		Insert one of th M: Momentary A: Alternate	e following let	ters into the box \Box .	
A22R-T□-□□		\bigcirc	1a	A22R-TW-10	
			1a	A22R-TB-10	
	Projection		1a	A22R-TG-10	\$\phi_23.7
			1a	A22R-TR-01	
			1a	A22R-TY-10	
			1a	A22R-TA-10	
			1b	A22R-TB-01	
			1b	A22R-TR-01	
		Insert one of the M: Momentary A: Alternate	e following let		
A22RL-T□-□-□□		\bigcirc	1a	A22RL-TW-24A-10	
			1a	A22RL-TG-24A-10	
	Projection AC, DC 24V		1a	A22RL-TR-24A-10	Ø29.8
	,	•	1a	A22RL-TY-24A-10	Ø23.7
			1a	A22RL-TA-24A-10	
			1a	A22RL-TW-T2-10	
S.M.			1a	A22RL-TG-T2-10	
	Projection		1a	A22RL-TR-T2-10	
	AC 220V		1a	A22RL-TY-T2-10	
			1a	A22RL-TA-T2-10	
		Insert one of the M: Momentary A: Alternate	e following let	ters into the box \Box .	

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Assembled Models

Appearance	Number of notch	Knob position	Knob color	Contact form	Part No.	Dimensions
A22RS-2□-□				1a	A22RS-2M-10	28°
100				1a1b	A22RS-2M-11	
C C	2 notches	\bigcirc		1a	A22RS-2A-10	
		~		1a1b	A22RS-2A-11	
A22RS-3□-□		\checkmark		2a	A22RS-3M-20	29.8
		\bigcirc		2a	A22RS-3A-20	φ29.8
		* These No	on-lighted	d types provid	le black knobs.	
	3 notches					
A22RW-200-0-0		\sim		1a	A22RW-2MG-24A-10	φ29.8 -
	2 notches AC, DC 24V			1a1b	A22RW-2MR-24A-11	54.2
	AC, DC 24V	\bigcirc		1a	A22RW-2AY-24A-10	24
		Ť		1a1b	A22RW-2AA-24A-11	
A22RW-3				2a	A22RW-3MG-24A-20	
1 (C)	3 notches AC, DC 24V			2a	A22RW-3MR-24A-20	
	AU, DU 24V	$\langle \rangle$		2a	A22RW-3AY-24A-20	
		V		2a	A22RW-3AA-24A-20	

Selector Switches

Assembled Models

Selector Switches

Key Selector					
Appearance	Number of notch	Key position	Contact form	Part No.	Dimensions
A22RK-2□-□		٩ /	1a	A22RK-2ML-10	28°
		\checkmark	1a1b	A22RK-2ML-11	\$ (O))
-		٩ ,٥	1a	A22RK-2M-10	
	2 notches	\sim	1a1b	A22RK-2M-11	
- CD-	2 110101100	\sim	1a	A22RK-2AL-10	
			1a1b	A22RK-2AL-11	29.8
		O: key release	position		
A22RK-3□-□		°	2a	A22RK-3ML-20	
	3 notches	°°	2a	A22RK-3M-20	
		\checkmark	2a	A22RK-3MC-20	
		\diamondsuit	2a	A22RK-3AC-20	
		O: key release	position		

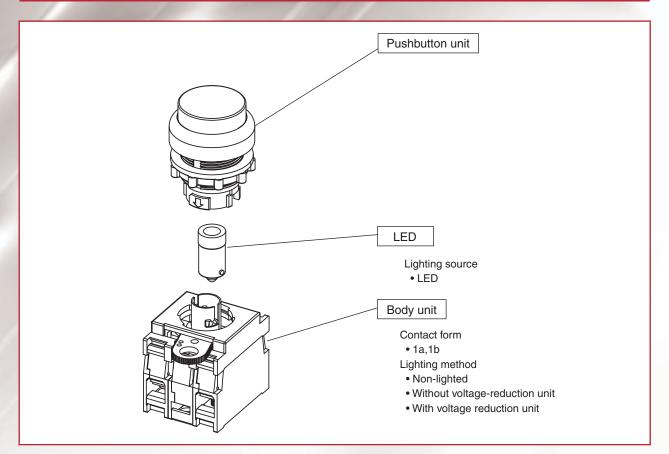
Indicator

All-in-one type

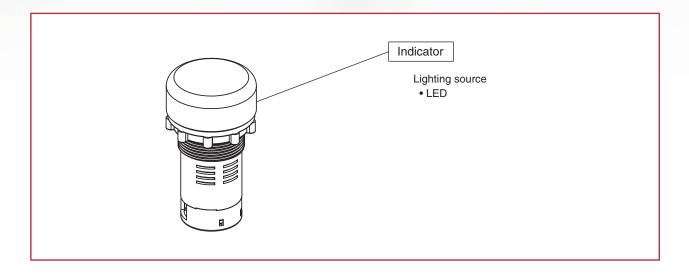
Appearance	LED rating	Indicator color	Part No.	Dimensions
M22R-E□-□		\bigcirc	M22R-EW-24A	Ø29.8
			M22R-EG-24A	
	AC, DC 24V		M22R-ER-24A	
			M22R-EY-24A	
			M22R-EA-24A	14.4
	AC 220V	\bigcirc	M22R-EW-T2	
			M22R-EG-T2	
			M22R-ER-T2	
			M22R-EY-T2	
			M22R-EA-T2	

Structure

A22R series



M22R series



Pushbutton unit

Appearance	Pushbutton shape	Pushbutton color	Part No.	Dimensions
A22R-F□-□		\bigcirc	A22R-FW-	Ø29.8
			A22R-FB-	
			A22R-FG-	
	Deved/Elet		A22R-FR-	
	Round/Flat		A22R-FY-	
1.			A22R-FA-	5 0.5 0.5
		Insert one of the M: Momentary A: Alternate	following letters into the box \Box .	
A22R-T□-□		\bigcirc	A22R-TW-	
			A22R-TB-	
			A22R-TG-	
	Projection		A22R-TR-	
	i rejection		A22R-TY-	
			A22R-TA-□	
		Insert one of the following letters into the box . M: Momentary A: Alternate		
A22RL-T□-□		\bigcirc	A22RL-TW-	
			A22RL-TG-	
	Projection		A22RL-TR-	
	Lighted type		A22RL-TY-	
			A22RL-TA-	
		Insert one of the following letters into the box . M: Momentary A: Alternate		

 Non-lighted/Lighted Knob Knob Number Part No. Dimensions Appearance of notch position color A22RS-2 A22RS-2M Ø**29.8** A22RS-2A 2 notches A22RS-3 A22RS-3M 24.2 A22RS-3A 0.5 2 3 notches * These Non-lighted types provide black knobs. 2 A22RW-2MG A22RW-2 A22RW-2MR A22RW-2MY 2 notches A22RW-2MA Lighted A22RW-2AG Туре 24.2 A22RW-2AR ç 0.5 A22RW-2AY 22 A22RW-2AA A22RW-3MG A22RW-3 A22RW-3MR 3 notches A22RW-3MY Lighted A22RW-3AA Туре \bigtriangledown A22RW-3AG A22RW-3AR

Selector unit

Selector unit

• Key Selector

Appearance	Number of notch	Key position	Part No.	Dimensions
A22RK-2		°	A22RK-2ML	¢29.8
170		°°	A22RK-2M	
	2 notches	\sim	A22RK-2AL	
		O: key release positio	n	
A22RK-3		\sim	A22RK-3ML	127 A229K
and the	3 notches	\sim	A22RK-3M	
		\checkmark	A22RK-3MC	
		\checkmark	A22RK-3AC	
		O: key release position	1	Y 11 1 11

Switch unit

For Lighted type				
Appearance	Туре	Contact form	Part No.	Dimensions
A22RL-DM-D		1a	A22RL-10M	
		1b	A22RL-01M	29.8
	Standard	2a	A22RL-20M	Ø10.3
A A A A A A A A A A A A A A A A A A A		2b	A22RL-02M	
		1a1b	A22RL-11M	
	AC 220V	1a	A22RL-10M-T2	
		1b	A22RL-01M-T2	
		2a	A22RL-20M-T2	
		2b	A22RL-02M-T2	
		1a1b	A22RL-11M-T2	

For Non-lighted type

Appearance	Туре	Contact form	Part No.	Dimensions
A22R-□M		1a	A22R-10M	29.8
		1b	A22R-01M	
	Socket	2a	A22R-20M	
		1a1b	A22R-11M	
		2b	A22R-02M	

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Switch / Lamp units

Appearance	Unit	Contact form	Part No.	Dimensions
A22R-🗆		1a	A22R-10	9.8
	1b	A22R-01		
	Contact block	* Additional one block can be 1a1b.	mountet to make 2a, 2b, or	

Lamp socket

Appearance	Unit	Rating	Part No.	Dimensions
A22R-□	Lamp socket -	Without voltage reduction unit AC/DC6V, AC/DC12V, AC/DC24V		
E C		With voltage reduction unit AC220V	A22R-T2	

Mounting plate

Appearance	Unit	Part No.	Dimensions
A22R-3200	Mounting plate	A22R-3200	28°

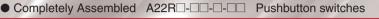
Lamp unit

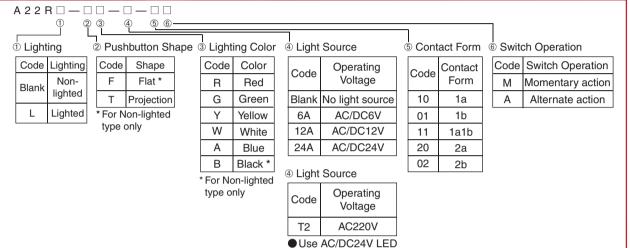
• LED

Appearance	LED operating voltage	Lighting color	Part No.	Dimensions
A22R-□□		\bigcirc	A22R-6AW	
			A22R-6AG	
	LED AC/DC6V		A22R-6AR	
		•	A22R-6AY	
			A22R-6AA	
	LED AC/DC12V	\bigcirc	A22R-12AW	<mark>-∅9.6</mark>
			A22R-12AG	BA9S/13
			A22R-12AR	1 50
		•	A22R-12AY	Ø9.3
			A22R-12AA	
		\bigcirc	A22R-24AW	
			A22R-24AG	
	LED AC/DC24V		A22R-24AR	
		•	A22R-24AY	
			A22R-24AA	

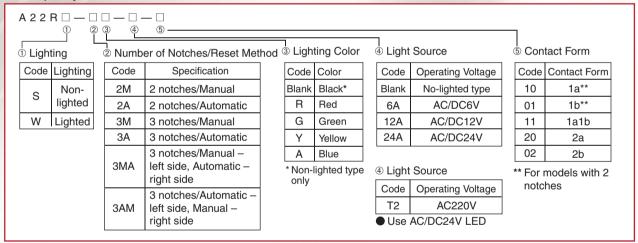
Nomenclature

Nomenclature

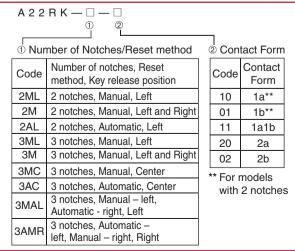




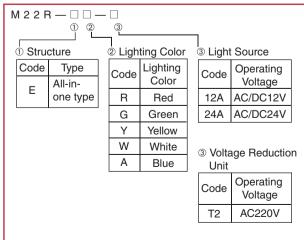
Completely Assembled A22R
 Selector switches



Completely Assembled A22RK —— Key selector switches



Completely Assembled M22RIndicator

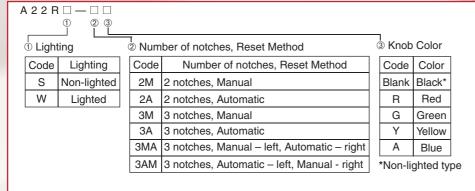


Nomenclature

● Individual unit (Pushbutton unit) A22R□-□□-□ Pushbutton switches

422F	ר □ □ − 1	- 🗆					
		4				_	
 Light 	ting	2 Push	button Shape	3 Pus	shbutton Color	④ Swit	ch Operation
Code	Lighting	Code	Pushbutton Shape	Code	Pushbutton Color	Code	Switch Operation
Blank	Non-lighted	F	Flat*	R	Red	М	Momentary action
L	Lighted	Т	Projection	G	Green	Α	Alternate action
		*For N	on-lighted type only	Y	Yellow		
				W	White		
				Α	Blue		
				В	Black*		
			*For N	Non-lighted type only	y		

● Individual unit (Selector unit) A22R□-□□ Selector switches



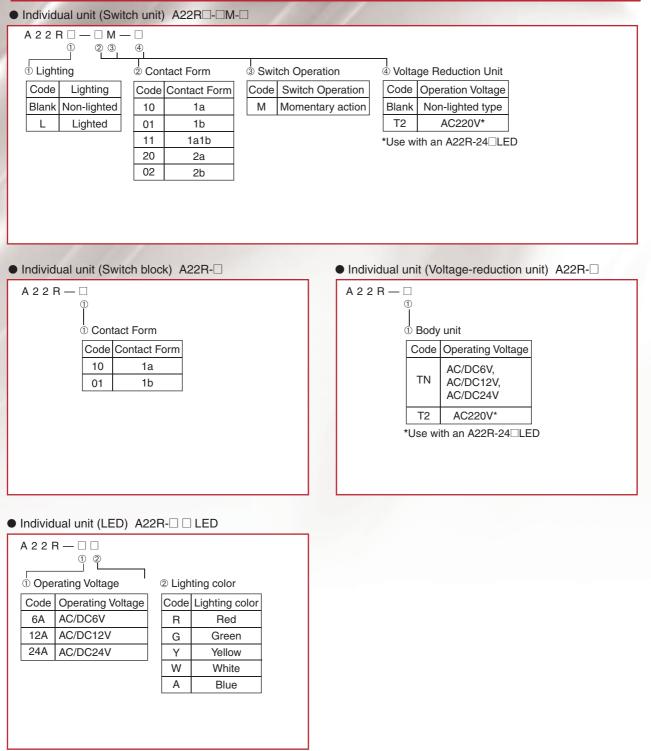
● Individual unit (Key selector unit) A22RK-□ Key selector switches

	· ·		
A 2 2 R	К — 🗆		
	 ber of notches, Reset Method, Key Release Position		
Unum	bei of holdies, nesel Melhou, Rey nelease Fosilion		
Code	Number of notches, Reset Method, Key Release Position		
2ML	2 notches, Manual, Left		
2M	2 notches, Manual, Left and Right		
2AL	2 notches, Automatic, Left		
3ML	3 notches, Manual, Left		
ЗM	3 notches, Manual, Left and Right		
3MC	3 notches, Manual, Center		
3AC	3 notches, Automatic, Center		
3MAL	3 notches, Manual – left, Automatic – right, Left		
3AMR 3 notches, Automatic – left, Manual – right, Right			

Nomenclature

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Nomenclature



Accessories / Tools

ltems

Accessories

Item		Appearance	Classification		Part No.	Remarks	
			With Snap-in Legend Plate (without text)		White	A22Z-3321	
5	Standard			Red	A22Z-3322	On an in Lawred Dista is south	
	size				Black	A22Z-3323	Snap-in Legend Plate is acrylic.
Legend			Without Snap-in Legend Plate		A22Z-3320		
Plate Frames		~			White	A22Z-3331	
	Large		With Snap-i Plate (with		Red	A22Z-3332	Chan in Lorend plate is condia
	size				Black	A22Z-3333	Snap-in Legend plate is acrylic.
			Without Snap-in Legend Plate		Plate	A22Z-3330	
Lock	Ring	(N)	F	Round		A22Z-3360	The Lock Ring is used when more secure lock feature is required.
Sealin	ig Caps		For flat models		A22Z-3600F	Used to prevent dust or water from entering the Operation Unit (Pushbutton, etc.). Color: opaque Material: silicon	
ocum	ig Oupo		For projection models		A22Z-3600T		
Hole plug			F	Round		A22Z-3530	Can be plugged into pre-cut panel holes for future expansion. The color is black.
			One hole		A22Z-B101		
Contro	l Boxes		Two holes			A22Z-B102	Material: Polycarbonate resin.
			Thr	ee holes		A22Z-B103	
Corr	e etere	Applic		ø7~9)	A22Z-3500-1	Plastic connector used to extend
Conn	lectors		diameter (mm)	ø9~1	1	A22Z-3500-2	a cable from the Switch Box. (See page 30)

Remarks

Accessories / Tools

Item Classification Part No. Appearance A22Z-3443B Black Red A22Z-3443R Without text A22Z-3443W White A22Z-3443C Transparent White text A22Z-3443R-2 0 on red background STOP A22Z-3443R-4 A22Z-3443B-1 Attached to the Standard Standard Plate Frame. size Material: Acrylic. START A22Z-3443B-3 ON A22Z-3443B-5 Legend With text Plates White text OFF A22Z-3443B-6 on black background UP A22Z-3443B-7 A22Z-3443B-8 DOWN POWER ON A22Z-3443B-9 OFF-ON A22Z-3443B-10 Black A22Z-3453B Attached to the Large-size Red A22Z-3453R Large Without Legend Plate Frame. size text White Material: Acrylic. A22Z-3453W A22Z-3453C Transparent A22Z-3460 No print (Round) A22Z-3460-1 After printing on a film, affix to the indicator Plate of Character Films 0 the Lighted Pushbotton Switch. Character A22Z-3460-2 Print (The back is coated with (Round) START A22Z-3460-3 adhesive.)

Tools

Items

Accessories

Item	Appearance	Part No.	Remarks
Lamp Extractor		A22Z-3901	Rubber tool used to easily replace Lamps.
Tightening wrench		A22Z-3905	Tool used to tighten nuts from the back of the panel.

STOP

A22Z-3460-4

Specifications

Approved standards

 Switch unit 	
UL, cUL	UL 508/CSA C22.2 No.14 File No. E76675 6A 240VAC/10A 120VAC
EN	EN60947-5-1 (low voltage directive) 3A 240VAC (AC-15)
ссс	GB/14048.5-2001 3A 240VAC/1.5A 24VDC
Lamp unit	
UL, cUL	UL 508/CSA C22.2 No.14 File No. E76675 24VAC/DC MAX
 Voltage-reduction unit 	
UL, cUL	UL 508/CSA C22.2 No.14 File No. E76675 220VAC
ссс	GB/14048.5-2001 220VAC

Indicator

Indicator	
UL, cUL	UL 508/CSA C22.2 No.14 File No. E76675 12A: 12VAC/DC 24A: 24VAC/DC T2 : 220VAC
ссс	GB/14048.5-2001 T2 : 220VAC

Ratings

Contacts

Rated current	Rated voltage	Inductive load	
(A)	(V)	Rated current (A)	Power facfor
10	240	3	0.4

Rated current values are determined according to the testing conditions. The above ratings were obtained by conducting tests under the following conditions:

Ambient temperature: 20+/- 2°C Ambient humidity: 65+/-5%RH

Operating frequency: 30 operations/minute

• LED (For pushbutton unit)

Operating voltage	Current consumption
AC/DC 6V±5%	20mA
AC/DC 12V±5%	20mA
AC/DC 24V±5%	20mA

• LED (For indicator unit)

Operating voltage	Current consumption
AC/DC 12V±5%	20mA
AC/DC 24V±5%	20mA

• Voltage reduction unit (For pushbutton and indicator units)

Operating voltage	Current consumption	
AC 200V(190 to 230V)	20mA	

Characteristics

Characteristics

Environment				
Ambient temperature*1	Non-lighted type: -20 to +60°C Lighted type: -20 to +50°C			
Ambient humidity	-35 to 85%RH			
Storage temperature*1	-40 to +70°C			
Protective code*2	IP65			
Vibration resistance	10 to 55Hz, Double amplitude 1.5mm			
Shock resistance	Non-lighted type: 1,000m/s ² Lighted type: 600m/s ²			

*1: With no icing or condensation

*2: Protection against dust or water from the front of a mounting panel side

Operation

Operation		Slow action		
Operating	Mechanical	Momentary operation: 60 operations/minute max.		
frequency	Electrical	Knob-type and Key-type selector: 30 operations/minute max.		
Mechanical durability		Momentary switch :3,000,000 operations Alternate, Key/Knob Selector switches: 300,000 operations		

• Electrical Characteristics (Switch block)

Insulation resistance	100MΩ Minimum (At 500VDC)
Dielectric strength	Between terminals of same polarity: AC2,500V 50/60Hz for 1 minute Between terminals of different polarity: AC2,500V 50/60Hz for 1 minute
Rating	AC-15, A600, Ue=240V, Ie=3A
Rated insulation voltage	Ui=600V, Pollution degree: 3
Conditional short-circuit current	10A, IEC60209-1
Electrical durability	500,000 operations Minimum (at AC 240V, 3A, cosø=0.4)

Characteristics

Operating characteristics

Pushbutton switch (1a1b)		
	Total Travel Force (TTF)	29.4N Maximum
	Total Travel (TT)	5.5mm Maximum

Knob-type selector switch (1a1b)

Total Travel Force (TTF)	Manual reset: 0.34N·m Maximum * Auto-reset 2-notch: 0.25N·m * 3-notch: 0.34N·m *	
Total Travel (TT)	2-notch: approx. 90 degree (3-notch: approx.45 degree)	
Releasing Force (RF)	Manual reset: 0.34N·m Maximum *	

* Rotation torque for knob type/key type selector switches.

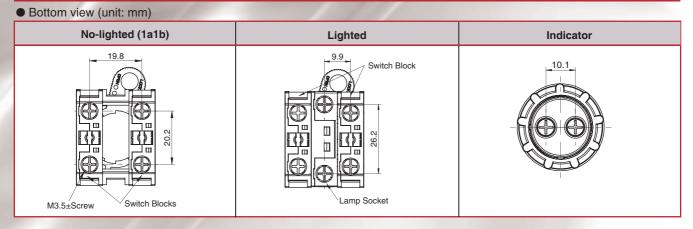
• Key-type selector switch (1a1b)

Total Travel Force (TTF)	Manual reset: 0.34N·m Maximum * Auto-reset 2-notch: 0.25N·m * 3-notch: 0.34N·m *	
Total Travel (TT)	2-notch: approx. 90 degree (3-notch: approx.45 degree)	
Releasing Force (RF)	Manual reset: 0.34N·m Maximum *	

* Rotation torque for knob type/key type selector switches.

Terminal

Terminal Arrangement

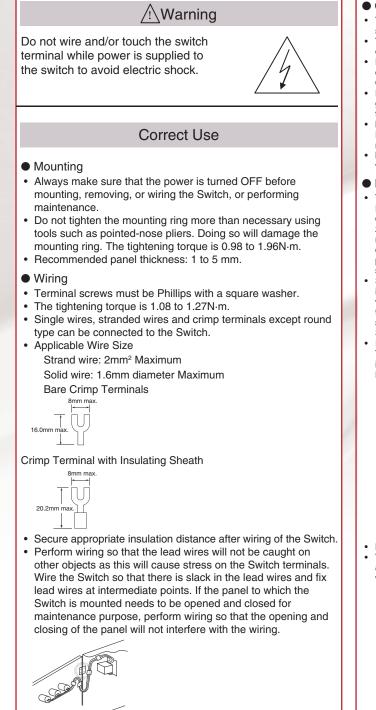


Terminal connection

Туре	Terminal connection
Non-lighted (1a1b)	BOTTOM VIEW 1 3 7 4 2 4
Lighted without voltage reduction unit (1a1b)	BOTTOM VIEW
Lighted with voltage reduction unit (1a1b)	BOTTOM VIEW

Precautions

Precautions

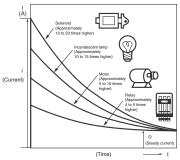


Operational Environment

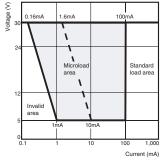
- The IP65 model is designed with a degree of protection so that it will not sustain damage if it is subject to water from any direction to front of the panel.
- This Switch is indoor use only. Outdoor use of the Switch will cause operation failure of the Switch.
 Do not use the Switch in the water, oil, or in locations where water, oils,
- Do not use the Switch in the water, oil, or in locations where water, oils, detergent, chemicals, or solvent is applied to the Switch always.
 Otherwise, switching failure will be happened.
- Do not use the Switch under the environmental condition where corrosive gas (ammonia, chlorine, dioxide sulfur...etc.) is generated. Otherwise, the Switch will corrode.
- Do not use the Switch in locations where dust, metal or plastic dust exists. Dust will accumulate o the Switch, and then the Switch wouldn't operate normally.
- Do not use the Switch under the environmental condition where excessive vibration or shock exists. Otherwise, incorrect switching would occur.

Electrical Conditions

- The switching load capacity of the Switch greatly varies between AC and DC. Always be sure to apply the rated load. The control capacity will drastically drop if it is a DC load. This is because a DC load has no current zero-cross point, unlike an AC load. Therefore, if an arc is generated, it may continue for a comparatively long time. Furthermore, the current direction is always the same, which results in a contact relocation phenomena whereby the contacts easily stick to each other and do not separate when the surfaces of the contacts are uneven.
- Some types of load have a great difference between normal current and inrush current. Make sure that the inrush current is within the permissible value. The greater the inrush current in the closed circuit is, the greater the contact abrasion or shift will be. Consequently, contact weld, contact separation failures, or insulation failures may result. Furthermore, the Switch may be broken or damaged.
- If the load is inductive, counter-electromotive voltage will be generated. The higher the voltage is, the higher the generated energy will be, which increase the abrasion of the contacts and contact relocation phenomena. Be sure to use the Switch within the rated conditions.



 Before using the Switch, be sure to test the Switch under actual conditions.
 This product is a standard load type Switch. Using the Switch for opening and closing a microload circuit may cause contact failure. Use the Switch within the operating range as shown in below chart.



• When use the Switch for opening and closing a microload or large-load, use the Switch with an appropriate relay.

Precautions

Precautions

Switching

- Do not use the Switch for loads that exceed the rated switching capacity or other contact ratings. Doing so may result in contact weld, separation failure, or insulation failures. Furthermore, the Switch may be broken or damaged.
- Do not touch the charged switch terminals while power is supplied, otherwise an electric shock may be received.
- The life of the Switch varies greatly with switching conditions. Before using the Switch, be sure to test the Switch under actual conditions. Make sure that the number of switching operations is within the permissible range. If a deteriorated Switch is used continuously, insulation failures, contact weld, contact failures, switch damage, or switch burnout may result.
- Do not apply excessive or incorrect voltages to the Switch or incorrectly wire the terminals. Otherwise, the Switch may not function properly and have an adverse effect on external circuitry.
- Furthermore, the Switch itself may become damaged or burnt.Do not use the Switch in locations where flammable or
- explosive gasses are present. Otherwise switching arcs or heat radiation may cause a fire or explosion.
- Do not drop or disassemble the Switch, otherwise it may not be capable of full performance. Furthermore, it may be broken or burnt.

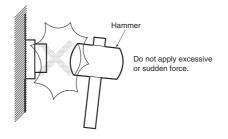
LED

- The LED current-limiting resistor is built-in, so internal resistance is not required.
- If commercially available LEDs are used, select the ones that meet the following conditions:
- Base: BA9S/13
- Overall length: 26mm Maximum
- Power consumption: 2.6 W Maximum

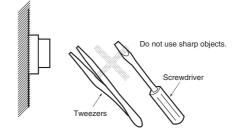
Storage

- When the Switch is left unused or stored for long periods, the ambient conditions can have a great effect on the condition of the Switch. In certain environments, leaving the Switch exposed may result I deterioration (i.e., oxidation, or the creation of an oxide film) of the contacts and terminals, causing the contact resistance to increase, and making it difficult to solder the lead wires. Therefore, store in a well-ventilated room, inside, for example, a non-hygroscopic case, in a location where no corrosive gasses are present.
- If the Switch is stored in a location where it will be exposed to direct light, colored resin in the colored plate may fade.
 Therefore, do not store the Switch I locations where it will be exposed to direct light.

- Mechanical Conditions
- Operating the Switch using a hard object (e.g., metal), or with a large or sudden force, may deform or damage the Switch, resulting in faulty or rough operation, or shortening of the Switch life.



 The pushbutton surface is composed of resin. Therefore, do not attempt to operate the pushbutton using a sharp object, such as a screwdriver or a pair of tweezers. Also, do not drop, throw, or knock the Switch. Doing so may damage or deform the pushbutton surface and result in faulty operation.

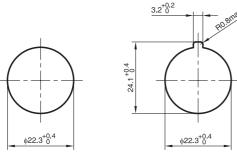


• Periodic maintenance is required to use the Switch stably.

Mounting to the Panel

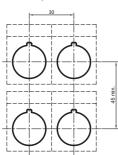
① Panel Hole Dimensions

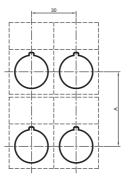
· The cutout dimensions are as shown in below:



When Lock Ring is not used. When Lock Ring is used.

- Recommended panel thickness is 1 to 5mm.
- In outer surface treatment such as coating is performed for the panel, the panel dimensions after outer surface treatment must meet the specified panel dimensions.
- ② Matrix Installation
- The following panel hole dimensions apply when Switch Unit and the Standard-size Legend Plate Frame and Lock Ring are mounted, and lead wires are connected directly to the Switch Block.
- (2) The following panel hole dimensions apply when the Large-size Legend Plate Frame is mounted, and when crimp terminals are connected to the Switch Block terminals.

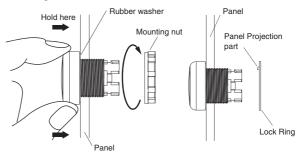




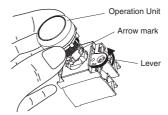
Type of crimp terminal	Dimension A
Bare crimp terminals	51 mm Minimum
Crimp terminals with insulating sheat	h 60 mm Minimum

Note: The above dimensions are the minimum dimensions for when the wires described under "Applicable Wire Size". If a different wires are used, the wiring dimensions may be different so determine an appropriate pitch before setup.

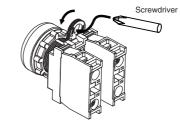
- ③ Mounting the Operation Unit on the Panel
- Insert the Operation Unit (Pushbutton, etc.) from the front surface of the panel, insert the Lock Ring and the mounting nut from the terminal side, then tighten the nut. Before tightening, check that the rubber washer is present between the Pushbutton Unit and the panel.
- When using a Legend Plate Frame, put one rubber washer each between the Legend Plate Frame and the panel and between the Operation Unit and the Legend Plate Frame. (One rubber washer will be provided when one Legend Plate Frame is ordered.)
- Align the Lock Ring with the groove in the casing, then insert the Lock Ring so that its edge is located on the panel side.
- Tighten the mounting nut at a torque of 0.98 to 1.96 N·m.
- When using a Lock Ring, replace with the supplied Lock Ring, insert the projecting part into the lock slot, and then tighten the mounting nut.



- ④ Mounting the Switch on the Pushbutton Unit
- Insert the Pushbutton Unit into the Switch Unit, aligning the arrow mark inscribed on the Case with the lever on the Switch Blocks, then move the lever in the direction indicated by the arrow in the following figure.

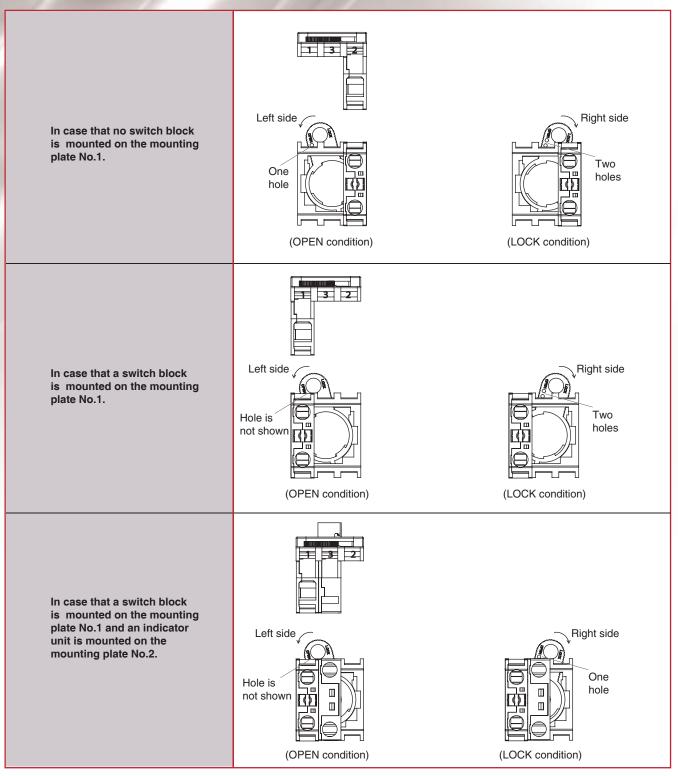


- ⑤ Removing the Switch
- Move the lever in the direction indicated by the arrow in the following figure, then pull the Pushbutton Unit or the Switch Blocks.
- Since the lever has a hole with an inside diameter of 6.5mm, the lever can be moved in the specified direction by inserting a screwdriver into the hole and then moving the screwdriver.

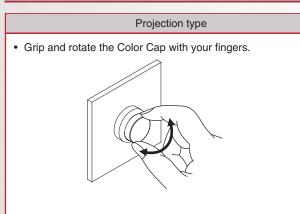


How to confirm the Lever Position, OPEN or LOCK

• The Lever Position, OPEN (Operation unit is not fixed)/LOCK (Operation unit is fixed), can be confirmed from the Switch terminal side.



Mounting/Replacing the Color Cap



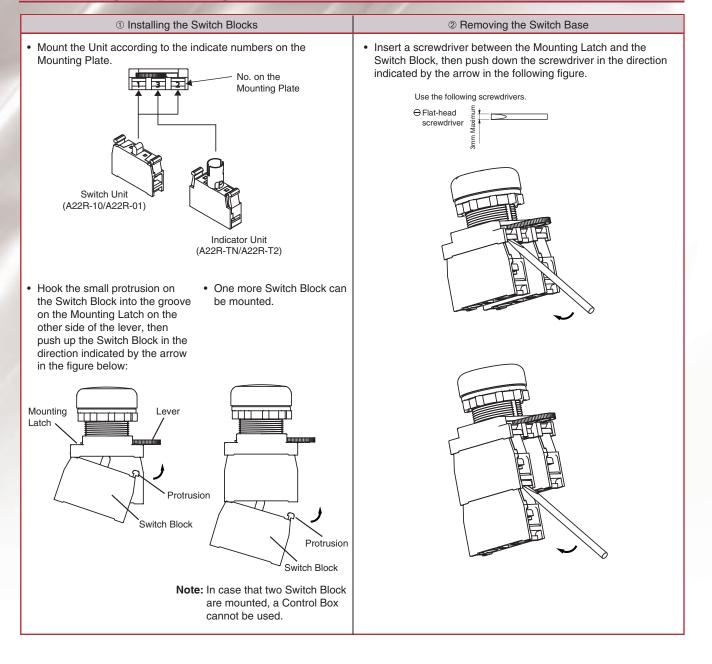
Assembling the Cap

Projection type Lighted Pushbutton Switch	© Indicator
 Mount the Color Cap so that the protrusions inside the cap fit into the grooves in the Pushbutton Unit. 	 Mount the Color Cap so that the protrusions inside the Pushbutton Unit fit into the grooves in the cap.
Protrusion parts on the Cap Color Cap	Protrusion part Grooves Reflector Color Cap

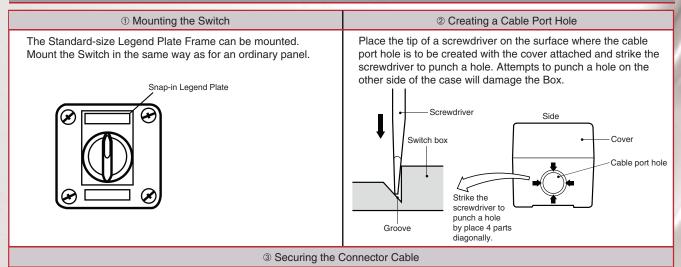
Installing/Replacing the LED

① Installing/Replacing from the Panel Surface	2 Installing/Replacing on the Switch
 Insert the Lamp Extractor(A22Z-3901) into the lamp, then rotate the Extractor while pressing it. 	 Grip the lamp with your fingers, then rotate the lamp while pressing it against the Switch.

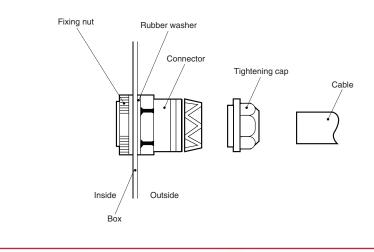
Mounting/Replacing the Switch Unit and Indicator Unit



Control Box



- ① Insert the connector into the cable port 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 mm dia.	A22Z-3500-1
9 to 11 mm dia.	A22Z-3500-2

Engraving

- Engrave the characters on the surface on the Cap. Make sure that the characters are aligned parallel to the imaginary lie connecting the two protruding portions to the left and right of the Cap.
- The characters must not be engraved deeper than 0.5mm. Apply an alcohol-based paint coating, such as melamine, alkyd, or acrylic resin paint coating, to the engraved characters.

Protruding portions of the Cap

STOP

Material: Acrylic

- Engrave the characters directly on the matted side of the Snap-in Legend Plate.
- The characters must be engraved no deeper than 0.5mm.
- Apply alcohol-based paint coating to the engraved characters.
- If the Snap-in Legend Plate is transparent, engrave the mirror-written characters on the back of the Snap-in Legend Plate and apply paint coating of a different color to the remaining part of the Snap-in Legend Plate.

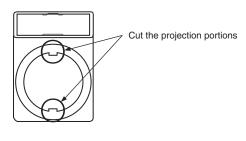
Affixing Character Film

 Hold the Cap, remove the cardboard o the Film, and attach the Film to the Cap. Make sure that the protruding portions of the Cap engage the cutout portions of the Film and that the characters are aligned parallel to the imaginary line connecting the two protruding portions to the left and right of the Cap.

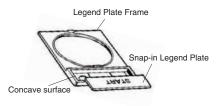


Precautions when use the Indicators

- Lock Ring (A22Z-3360) cannot be used.
 When use the Legend Plate Frames (A22Z-332⁻, A22Z-333⁻) cut the projection
 - portions shown in the below fig.



- Mounting and Dismounting Snap-in Legend
- Press and secure the Snap-in Legend Plate onto the Legend Plate Frame.
- The direction of the characters will vary with the mounting direction of the control panel if the Switch is a knob or key selector model.



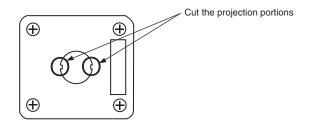
• To easily remove the Snap-in Legend Plate from the Legend Plate Frame mounted to the panel. Insert a Tool with a thin tip into the space between the Snap-in Legend Plate and the Legend Plate Frame.



- The Snap-in Legend Plate is easily removed by pressing the Snap-I Legend Plate from the back of the Legend Plate Frame.
- The Legend Plate Frame is made of acrylic resin, which is easily damaged by shock. Be sure to handle the Legend Plate Frame with care.



• When use the Control Box (A22Z-B10⁻), cut the projection portions shown in the below fig.



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