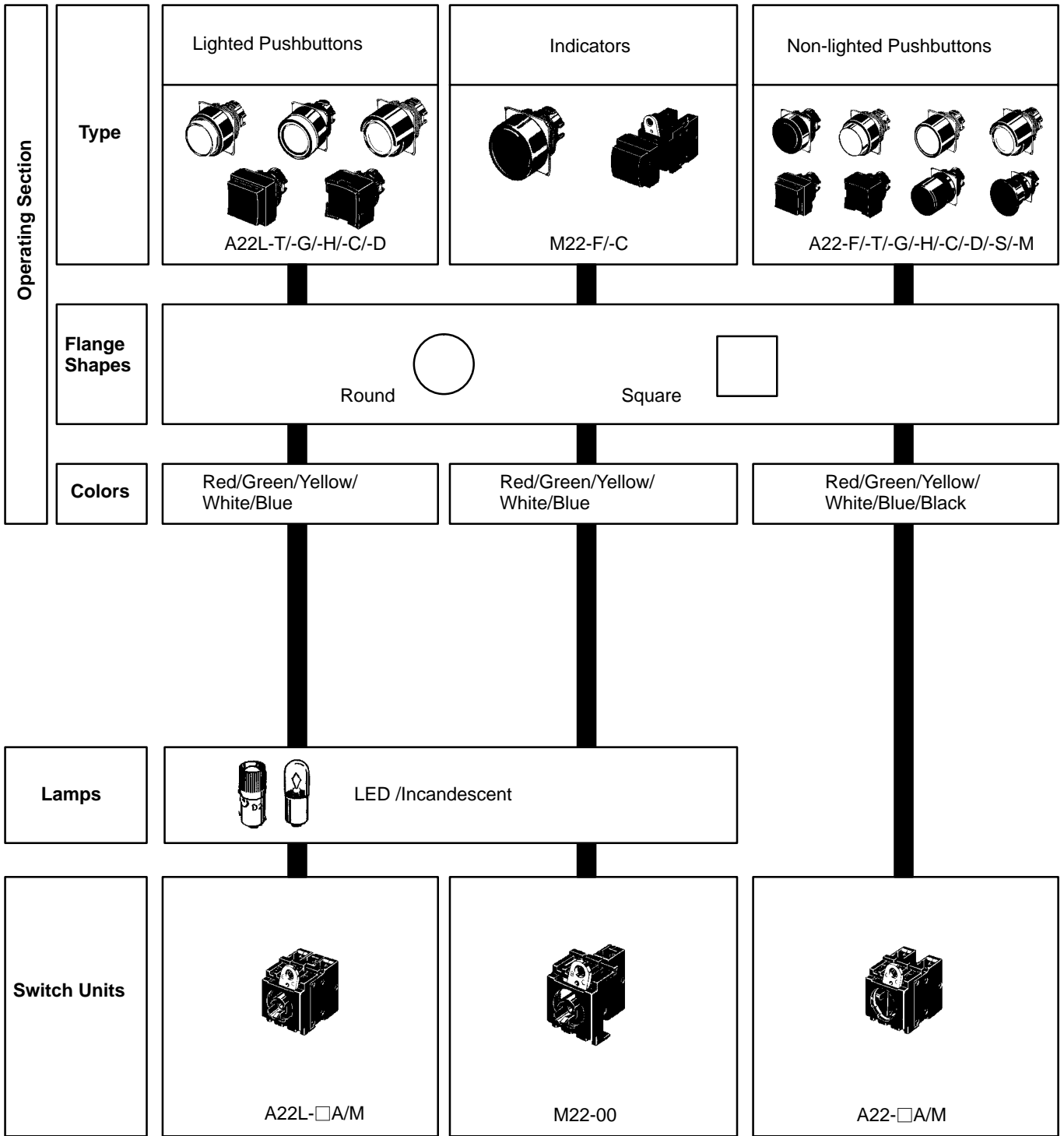
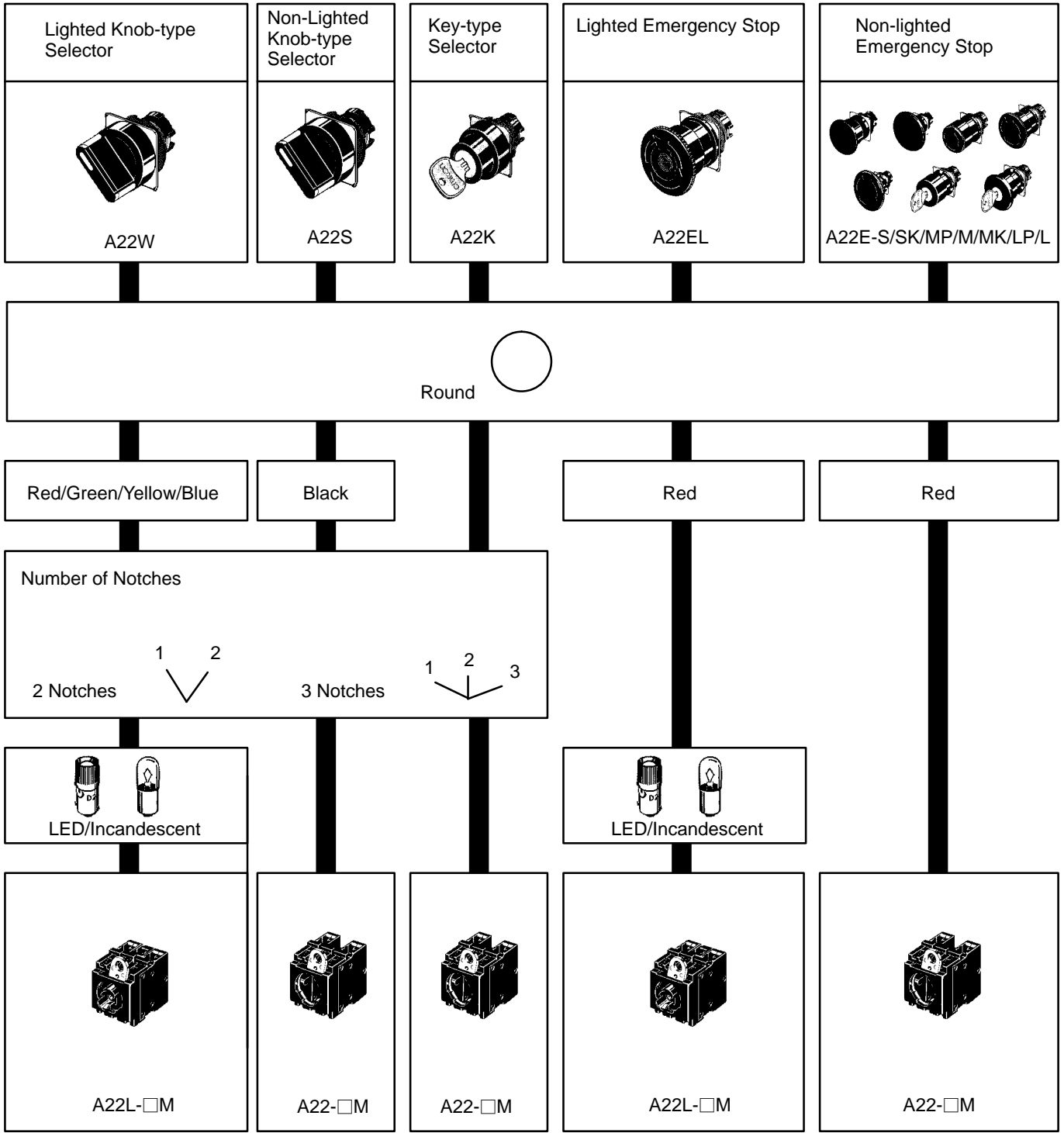


CONTENTS

Unit Combinations	.....
A22 Pushbutton Switch	.....
A22S/W Knob-type Selector Switch	.....
A22K Key-type Selector Switch	.....
A22E Emergency Stop Switch	.....
M22 Indicator	.....
Common to All Models	
Specifications	.....
Accessories	.....
Installation	.....
Precautions	.....

Unit Combinations





Pushbutton Switch

A22

Install in 22-dia. or 25-dia. Panel Cutout

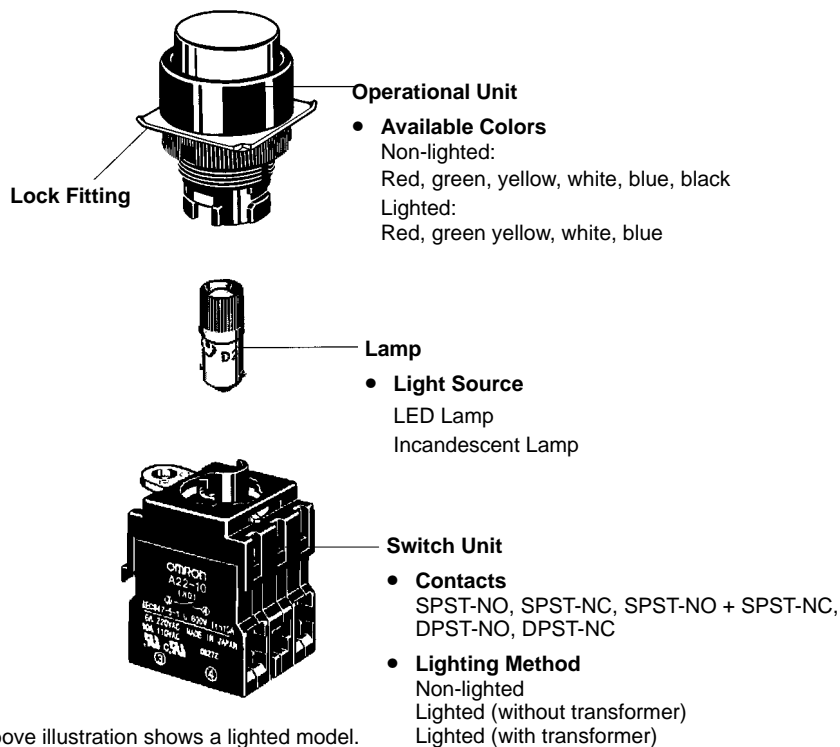
- Easy mounting and removal of Switch Unit.
- Increase wiring efficiency with three-row mounting of Switch Unit.
- Finger protection mechanism on Switch Unit provided as a standard feature.
- Use 25-dia. ring to install in 25-dia. panel cutouts.
- Install using either round, forked crimp terminals, or ferrules.
- Wide range of shapes and colors.
- IP65 oil resistance (Non-lighted models)
EN60947-5-1



This product was manufactured at OMRON Izumo. OMRON Izumo has obtained approvals from international certification bodies for its quality system and environmental control system.

Ordering Information

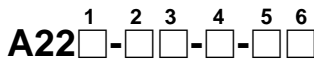
■ Construction



Refer to the pages 48 to 64 for specifications, accessories, installation, and precautions.

■ Model Number Legend (Completely Assembled)

Shipped as a set which includes the Operational Unit, LED (lighted type only), and Switch Unit.



1 Lighted/Non-lighted

Code	Description
None	Non-lighted
L	Lighted

2 Flange Shape

Non-lighted	
Code	Description
F	Round/Flat
T	Round/Projection
G	Round/Full-guard
H	Round/Half-guard
C	Square/Projection
D	Square/Full-guard
S	Round/Mushroom (30-dia. head)
M	Round/Mushroom (40-dia. head)
Lighted	
T	Round/Projection
G	Round/Full-guard
H	Round/Half-guard
C	Square/Projection
D	Square/Full-guard

3 Illumination Color

Code	Description
R	Red
G	Green
Y	Yellow
W	White
A	Blue
B	Black (for non-lighted type only)

4 Light Source

Without Transformer		
Code	LED	Rated Voltage
6D	LED	6 VDC
6A		6 VAC
12A		12 VAC/DC
24A		24 VAC/DC
With Transformer		
T1	LED	110 VAC*1
T2		220 VAC*2

Note: The LED lamp (24 VAC/DC) can be lit by directly applying 110 VAC/DC (220 VAC/DC) to the lamp terminal. LED incorporates the 24-VAC/DC type.

5 Contacts

Code	Description
10	SPST-NO
01	SPST-NC
11	SPST-NO + SPST-NC
20	DPST-NO
02	DPST-NC

Note: Refer to page 48 for contact ratings.

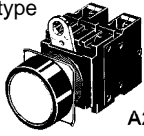

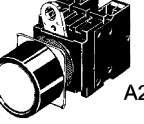
6 Switch Action

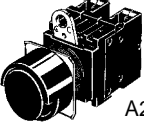

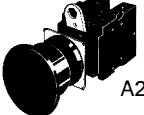
Code	Description
M	Momentary
A	Latching

*1) Operational voltage: 95 to 115 VAC
*2) Operational voltage: 190 to 230 VAC


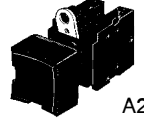
■ Pushbutton Switch (Completely Assembled)

Non-lighted (Round Type)

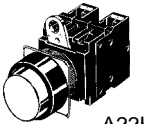
Appearance	Output	Momentary operation (self-resetting)	Latching operation (self-holding)	Illumination color
 A22-F	SPST-NO	A22-F□-10M	A22-F□-10A	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) W (white) A (blue) B (black)
	SPST-NC	A22-F□-01M	A22-F□-01A	
	SPST-NO + SPST-NC	A22-F□-11M	A22-F□-11A	
	DPST-NO	A22-F□-20M	A22-F□-20A	
	DPST-NC	A22-F□-02M	A22-F□-02A	
 A22-T	SPST-NO	A22-T□-10M	A22-T□-10A	
	SPST-NC	A22-T□-01M	A22-T□-01A	
	SPST-NO + SPST-NC	A22-T□-11M	A22-T□-11A	
	DPST-NO	A22-T□-20M	A22-T□-20A	
	DPST-NC	A22-T□-02M	A22-T□-02A	
 A22-G	SPST-NO	A22-G□-10M	A22-G□-10A	
	SPST-NC	A22-G□-01M	A22-G□-01A	
	SPST-NO + SPST-NC	A22-G□-11M	A22-G□-11A	
	DPST-NO	A22-G□-20M	A22-G□-20A	
	DPST-NC	A22-G□-02M	A22-G□-02A	

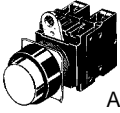
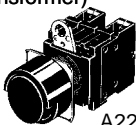
Appearance	Output	Momentary operation (self-resetting)	Latching operation (self-holding)	Illumination color
Round/Half-guard type  A22-H	SPST-NO	A22-H□-10M	A22-H□-10A	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) W (white) A (blue) B (black)
	SPST-NC	A22-H□-01M	A22-H□-01A	
	SPST-NO + SPST-NC	A22-H□-11M	A22-H□-11A	
	DPST-NO	A22-H□-20M	A22-H□-20A	
	DPST-NC	A22-H□-02M	A22-H□-02A	
Small-size Mushroom type (30-dia. head)  A22-S	SPST-NO	A22-S□-10M	A22-S□-10A	
	SPST-NC	A22-S□-01M	A22-S□-01A	
	SPST-NO + SPST-NC	A22-S□-11M	A22-S□-11A	
	DPST-NO	A22-S□-20M	A22-S□-20A	
	DPST-NC	A22-S□-02M	A22-S□-02A	
Medium-size Mushroom type (40-dia head)  A22-M	SPST-NO	A22-M□-10M	A22-M□-10A	
	SPST-NC	A22-M□-01M	A22-M□-01A	
	SPST-NO + SPST-NC	A22-M□-11M	A22-M□-11A	
	DPST-NO	A22-M□-20M	A22-M□-20A	
	DPST-NC	A22-M□-02M	A22-M□-02A	


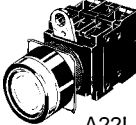
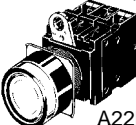
Non-lighted (Square Type)

Appearance	Output	Momentary operation (self-reset)	Latching operation (self-holding)	Illumination color
Square/Projection type  A22-C	SPST-NO	A22-C□-10M	A22-C□-10A	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) W (white) A (blue) B (black)
	SPST-NC	A22-C□-01M	A22-C□-01A	
	SPST-NO + SPST-NC	A22-C□-11M	A22-C□-11A	
	DPST-NO	A22-C□-20M	A22-C□-20A	
	DPST-NC	A22-C□-02M	A22-C□-02A	
Square/Guard type  A22-D	SPST-NO	A22-D□-10M	A22-D□-10A	
	SPST-NC	A22-D□-01M	A22-D□-01A	
	SPST-NO + SPST-NC	A22-D□-11M	A22-D□-11A	
	DPST-NO	A22-D□-20M	A22-D□-20A	
	DPST-NC	A22-D□-02M	A22-D□-02A	



Lighted (Round Type)

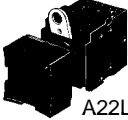
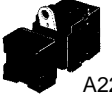
Appearance	Output	Lighting	Rated voltage	Momentary operation (self-resetting)	Latching operation (self-holding)	Illumination color
Round/Projection type LED lighting (Without transformer)  A22L-T	SPST-NO	LED	6 VDC	A22L-T□-6D-10M	A22L-T□-6D-10A	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) W (white) A (blue)
			6 VAC	A22L-T□-6A-10M	A22L-T□-6A-10A	
			12 VAC/DC	A22L-T□-12A-10M	A22L-T□-12A-10A	
			24 VAC/DC	A22L-T□-24A-10M	A22L-T□-24A-10A	
	SPST-NC		6 VDC	A22L-T□-6D-01M	A22L-T□-6D-01A	
			6 VAC	A22L-T□-6A-01M	A22L-T□-6A-01A	
			12 VAC/DC	A22L-T□-12A-01M	A22L-T□-12A-01A	
			24 VAC/DC	A22L-T□-24A-01M	A22L-T□-24A-01A	
	SPST-NO + SPST-NC		6 VDC	A22L-T□-6D-11M	A22L-T□-6D-11A	
			6 VAC	A22L-T□-6A-11M	A22L-T□-6A-11A	
			12 VAC/DC	A22L-T□-12A-11M	A22L-T□-12A-11A	
			24 VAC/DC	A22L-T□-24A-11M	A22L-T□-24A-11A	
	DPST-NO		6 VDC	A22L-T□-6D-20M	A22L-T□-6D-20A	
			6 VAC	A22L-T□-6A-20M	A22L-T□-6A-20A	
			12 VAC/DC	A22L-T□-12A-20M	A22L-T□-12A-20A	
			24 VAC/DC	A22L-T□-24A-20M	A22L-T□-24A-20A	
DPST-NC	6 VDC	A22L-T□-6D-02M	A22L-T□-6D-02A			
	6 VAC	A22L-T□-6A-02M	A22L-T□-6A-02A			
	12 VAC/DC	A22L-T□-12A-02M	A22L-T□-12A-02A			
	24 VAC/DC	A22L-T□-24A-02M	A22L-T□-24A-02A			

Appearance	Output	Lighting	Rated voltage	Momentary operation (self-resetting)	Latching operation (self-holding)	Illumination color	
Round/Projection type LED transformer lighting (With transformer)  A22L-T	SPST-NO	LED	110 VAC	A22L-T□-T1-10M	A22L-T□-T1-10A	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) W (white) A (blue)	
			220 VAC	A22L-T□-T2-10M	A22L-T□-T2-10A		
	SPST-NC		110 VAC	A22L-T□-T1-01M	A22L-T□-T1-01A		
			220 VAC	A22L-T□-T2-01M	A22L-T□-T2-01A		
	SPST-NO + SPST-NC		110 VAC	A22L-T□-T1-11M	A22L-T□-T1-11A		
			220 VAC	A22L-T□-T2-11M	A22L-T□-T2-11A		
	DPST-NO		110 VAC	A22L-T□-T1-20M	A22L-T□-T1-20A		
			220 VAC	A22L-T□-T2-20M	A22L-T□-T2-20A		
	DPST-NC		110 VAC	A22L-T□-T1-02M	A22L-T□-T1-02A		
			220 VAC	A22L-T□-T2-02M	A22L-T□-T2-02A		
				220 VAC	A22L-T□-T2-02M		A22L-T□-T2-02A
	Round/Half-guard type LED lighting (Without transformer)  A22L-H		SPST-NO	6 VDC	A22L-H□-6D-10M		A22L-H□-6D-10A
6 VAC		A22L-H□-6A-10M		A22L-H□-6A-10A			
12 VAC/DC		A22L-H□-12A-10M		A22L-H□-12A-10A			
24 VAC/DC		A22L-H□-24A-10M		A22L-H□-24A-10A			
SPST-NC		6 VDC	A22L-H□-6D-01M	A22L-H□-6D-01A			
		6 VAC	A22L-H□-6A-01M	A22L-H□-6A-01A			
		12 VAC/DC	A22L-H□-12A-01M	A22L-H□-12A-01A			
		24 VAC/DC	A22L-H□-24A-01M	A22L-H□-24A-01A			
SPST-NO + SPST-NC		6 VDC	A22L-H□-6D-11M	A22L-H□-6D-11A			
		6 VAC	A22L-H□-6A-11M	A22L-H□-6A-11A			
		12 VAC/DC	A22L-H□-12A-11M	A22L-H□-12A-11A			
		24 VAC/DC	A22L-H□-24A-11M	A22L-H□-24A-11A			
DPST-NO		6 VDC	A22L-H□-6D-20M	A22L-H□-6D-20A			
		6 VAC	A22L-H□-6A-20M	A22L-H□-6A-20A			
		12 VAC/DC	A22L-H□-12A-20M	A22L-H□-12A-20A			
		24 VAC/DC	A22L-H□-24A-20M	A22L-H□-24A-20A			
DPST-NC		6 VDC	A22L-H□-6D-02M	A22L-H□-6D-02A			
		6 VAC	A22L-H□-6A-02M	A22L-H□-6A-02A			
		12 VAC/DC	A22L-H□-12A-02M	A22L-H□-12A-02A			
		24 VAC/DC	A22L-H□-24A-02M	A22L-H□-24A-02A			

Appearance	Output	Lighting	Rated voltage	Momentary operation (self-resetting)	Latching operation (self-holding)	Illumination color
Round/Half-guard type LED transformer lighting (With transformer)  A22L-H	SPST-NO	LED	110 VAC	A22L-H□-T1-10M	A22L-H□-T1-10A	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) W (white) A (blue)
			220 VAC	A22L-H□-T2-10M	A22L-H□-T2-10A	
	SPST-NC		110 VAC	A22L-H□-T1-01M	A22L-H□-T1-01A	
			220 VAC	A22L-H□-T2-01M	A22L-H□-T2-01A	
	SPST-NO + SPST-NC		110 VAC	A22L-H□-T1-11M	A22L-H□-T1-11A	
			220 VAC	A22L-H□-T2-11M	A22L-H□-T2-11A	
	DPST-NO		110 VAC	A22L-H□-T1-20M	A22L-H□-T1-20A	
			220 VAC	A22L-H□-T2-20M	A22L-H□-T2-20A	
	DPST-NC		110 VAC	A22L-H□-T1-02M	A22L-H□-T1-02A	
			220 VAC	A22L-H□-T2-02M	A22L-H□-T2-02A	
Round/Full-guard type LED lighting (Without transformer)  A22L-G	SPST-NO		6 VDC	A22L-G□-6D-10M	A22L-G□-6D-10A	
			6 VAC	A22L-G□-6A-10M	A22L-G□-6A-10A	
			12 VAC/DC	A22L-G□-12A-10M	A22L-G□-12A-10A	
			24 VAC/DC	A22L-G□-24A-10M	A22L-G□-24A-10A	
	SPST-NC		6 VDC	A22L-G□-6D-01M	A22L-G□-6D-01A	
			6 VAC	A22L-G□-6A-01M	A22L-G□-6A-01A	
			12 VAC/DC	A22L-G□-12A-01M	A22L-G□-12A-01A	
			24 VAC/DC	A22L-G□-24A-01M	A22L-G□-24A-01A	
	SPST-NO + SPST-NC		6 VDC	A22L-G□-6D-11M	A22L-G□-6D-11A	
			6 VAC	A22L-G□-6A-11M	A22L-G□-6A-11A	
		12 VAC/DC	A22L-G□-12A-11M	A22L-G□-12A-11A		
		24 VAC/DC	A22L-G□-24A-11M	A22L-G□-24A-11A		
	DPST-NO	6 VDC	A22L-G□-6D-20M	A22L-G□-6D-20A		
		6 VAC	A22L-G□-6A-20M	A22L-G□-6A-20A		
		12 VAC/DC	A22L-G□-12A-20M	A22L-G□-12A-20A		
		24 VAC/DC	A22L-G□-24A-20M	A22L-G□-24A-20A		
	DPST-NC	6 VDC	A22L-G□-6D-02M	A22L-G□-6D-02A		
		6 VAC	A22L-G□-6A-02M	A22L-G□-6A-02A		
		12 VAC/DC	A22L-G□-12A-02M	A22L-G□-12A-02A		
		24 VAC/DC	A22L-G□-24A-02M	A22L-G□-24A-02A		
Round/Full-guard type LED transformer lighting (With transformer)  A22L-G	SPST-NO	110 VAC	A22L-G□-T1-10M	A22L-G□-T1-10A		
		220 VAC	A22L-G□-T2-10M	A22L-G□-T2-10A		
	SPST-NC	110 VAC	A22L-G□-T1-01M	A22L-G□-T1-01A		
		220 VAC	A22L-G□-T2-01M	A22L-G□-T2-01A		
	SPST-NO + SPST-NC	110 VAC	A22L-G□-T1-11M	A22L-G□-T1-11A		
		220 VAC	A22L-G□-T2-11M	A22L-G□-T2-11A		
	DPST-NO	110 VAC	A22L-G□-T1-20M	A22L-G□-T1-20A		
		220 VAC	A22L-G□-T2-20M	A22L-G□-T2-20A		
	DPST-NC	110 VAC	A22L-G□-T1-02M	A22L-G□-T1-02A		
		220 VAC	A22L-G□-T2-02M	A22L-G□-T2-02A		

Lighted (Square Type)

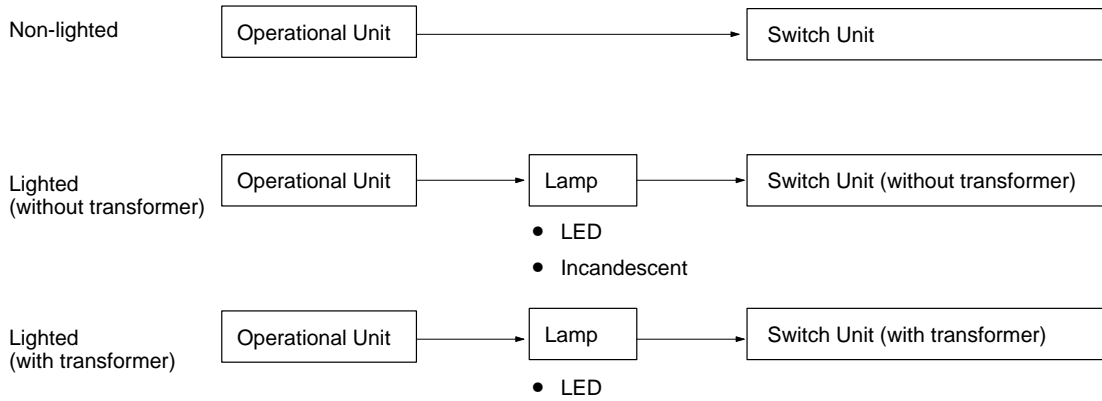
Appearance	Output	Lighting	Rated voltage	Momentary operation (self-resetting)	Latching operation (self-holding)	Illumination color
Square/Projection type LED lighting (Without transformer)  A22L-C	SPST-NO	LED	6 VDC	A22L-C□-6D-10M	A22L-C□-6D-10A	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) W (white) A (blue)
			6 VAC	A22L-C□-6A-10M	A22L-C□-6A-10A	
			12 VAC/DC	A22L-C□-12A-10M	A22L-C□-12A-10A	
			24 VAC/DC	A22L-C□-24A-10M	A22L-C□-24A-10A	
	SPST-NC		6 VDC	A22L-C□-6D-01M	A22L-C□-6D-01A	
			6 VAC	A22L-C□-6A-01M	A22L-C□-6A-01A	
			12 VAC/DC	A22L-C□-12A-01M	A22L-C□-12A-01A	
			24 VAC/DC	A22L-C□-24A-01M	A22L-C□-24A-01A	
	SPST-NO + SPST-NC		6 VDC	A22L-C□-6D-11M	A22L-C□-6D-11A	
			6 VAC	A22L-C□-6A-11M	A22L-C□-6A-11A	
			12 VAC/DC	A22L-C□-12A-11M	A22L-C□-12A-11A	
			24 VAC/DC	A22L-C□-24A-11M	A22L-C□-24A-11A	
	DPST-NO		6 VDC	A22L-C□-6D-20M	A22L-C□-6D-20A	
			6 VAC	A22L-C□-6A-20M	A22L-C□-6A-20A	
			12 VAC/DC	A22L-C□-12A-20M	A22L-C□-12A-20A	
			24 VAC/DC	A22L-C□-24A-20M	A22L-C□-24A-20A	
	DPST-NC		6 VDC	A22L-C□-6D-02M	A22L-C□-6D-02A	
			6 VAC	A22L-C□-6A-02M	A22L-C□-6A-02A	
			12 VAC/DC	A22L-C□-12A-02M	A22L-C□-12A-02A	
			24 VAC/DC	A22L-C□-24A-02M	A22L-C□-24A-02A	
Square/Projection type LED transformer lighting (With transformer)  A22L-C	SPST-NO	110 VAC	A22L-C□-T1-10M	A22L-C□-T1-10A		
		220 VAC	A22L-C□-T2-10M	A22L-C□-T2-10A		
	SPST-NC	110 VAC	A22L-C□-T1-01M	A22L-C□-T1-01A		
		220 VAC	A22L-C□-T2-01M	A22L-C□-T2-01A		
	SPST-NO + SPST-NC	110 VAC	A22L-C□-T1-11M	A22L-C□-T1-11A		
		220 VAC	A22L-C□-T2-11M	A22L-C□-T2-11A		
	DPST-NO	110 VAC	A22L-C□-T1-20M	A22L-C□-T1-20A		
		220 VAC	A22L-C□-T2-20M	A22L-C□-T2-20A		
	DPST-NC	110 VAC	A22L-C□-T1-02M	A22L-C□-T1-02A		
		220 VAC	A22L-C□-T2-02M	A22L-C□-T2-02A		

Appearance	Output	Lighting	Rated voltage	Momentary operation (self-resetting)	Latching operation (self-holding)	Illumination color
Square/Full-guard type LED lighting (Without transformer)  A22L-D	SPST-NO	LED	6 VDC	A22L-D□-6D-10M	A22L-D□-6D-10A	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) W (white) A (blue)
			6 VAC	A22L-D□-6A-10M	A22L-D□-6A-10A	
			12 VAC/DC	A22L-D□-12A-10M	A22L-D□-12A-10A	
			24 VAC/DC	A22L-D□-24A-10M	A22L-D□-24A-10A	
	SPST-NC		6 VDC	A22L-D□-6D-01M	A22L-D□-6D-01A	
			6 VAC	A22L-D□-6A-01M	A22L-D□-6A-01A	
			12 VAC/DC	A22L-D□-12A-01M	A22L-D□-12A-01A	
			24 VAC/DC	A22L-D□-24A-01M	A22L-D□-24A-01A	
	SPST-NO + SPST-NC		6 VDC	A22L-D□-6D-11M	A22L-D□-6D-11A	
			6 VAC	A22L-D□-6A-11M	A22L-D□-6A-11A	
			12 VAC/DC	A22L-D□-12A-11M	A22L-D□-12A-11A	
			24 VAC/DC	A22L-D□-24A-11M	A22L-D□-24A-11A	
	DPST-NO		6 VDC	A22L-D□-6D-20M	A22L-D□-6D-20A	
			6 VAC	A22L-D□-6A-20M	A22L-D□-6A-20A	
			12 VAC/DC	A22L-D□-12A-20M	A22L-D□-12A-20A	
			24 VAC/DC	A22L-D□-24A-20M	A22L-D□-24A-20A	
DPST-NC	6 VDC	A22L-D□-6D-02M	A22L-D□-6D-02A			
	6 VAC	A22L-D□-6A-02M	A22L-D□-6A-02A			
	12 VAC/DC	A22L-D□-12A-02M	A22L-D□-12A-02A			
	24 VAC/DC	A22L-D□-24A-02M	A22L-D□-24A-02A			
Square/Full-guard type LED transformer lighting (With transformer)  A22L-D	SPST-NO	110 VAC	A22L-D□-T1-10M	A22L-D□-T1-10A		
		220 VAC	A22L-D□-T2-10M	A22L-D□-T2-10A		
	SPST-NC	110 VAC	A22L-D□-T1-01M	A22L-D□-T1-01A		
		220 VAC	A22L-D□-T2-01M	A22L-D□-T2-01A		
	SPST-NO + SPST-NC	110 VAC	A22L-D□-T1-11M	A22L-D□-T1-11A		
		220 VAC	A22L-D□-T2-11M	A22L-D□-T2-11A		
	DPST-NO	110 VAC	A22L-D□-T1-20M	A22L-D□-T1-20A		
		220 VAC	A22L-D□-T2-20M	A22L-D□-T2-20A		
	DPST-NC	110 VAC	A22L-D□-T1-02M	A22L-D□-T1-02A		
		220 VAC	A22L-D□-T2-02M	A22L-D□-T2-02A		

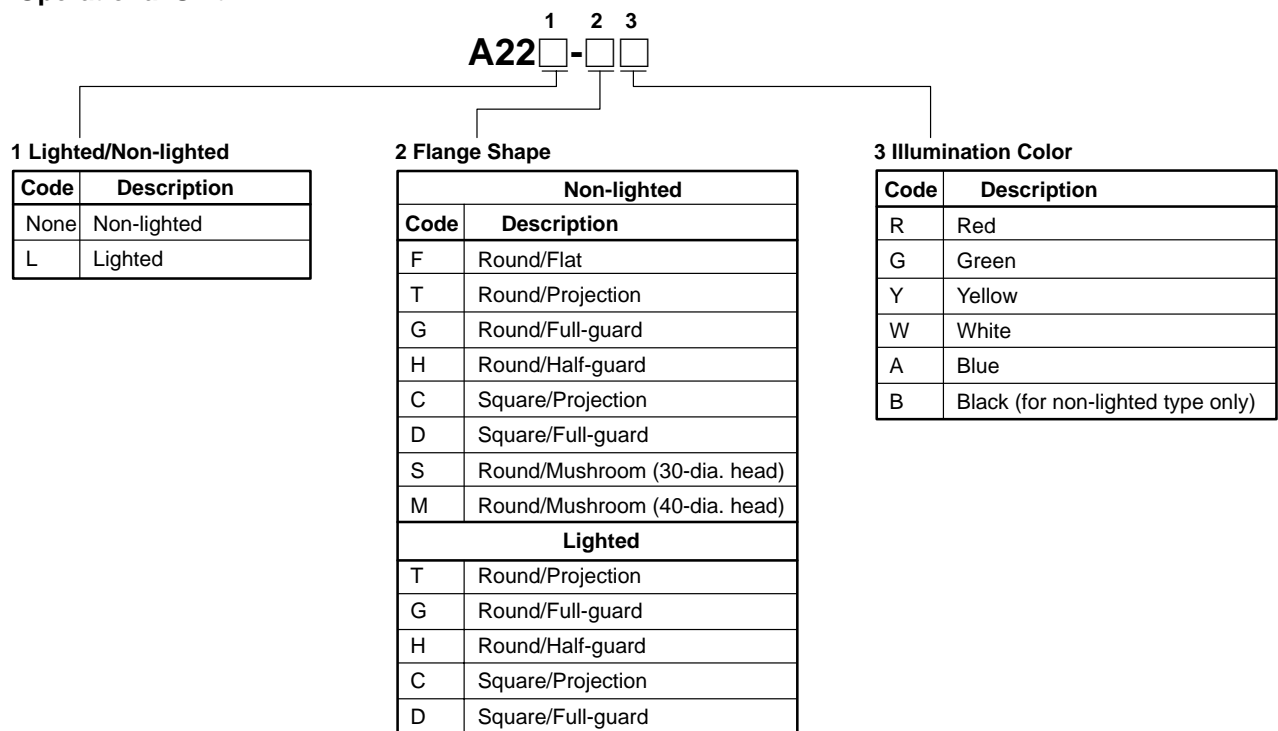
■ Model Number Legend (Subassembly)

The Operational Unit, Lamp, or Switch Unit can be ordered separately. Use them in combination for models that are not available as assembled units. These can also be used as inventory for maintenance parts.

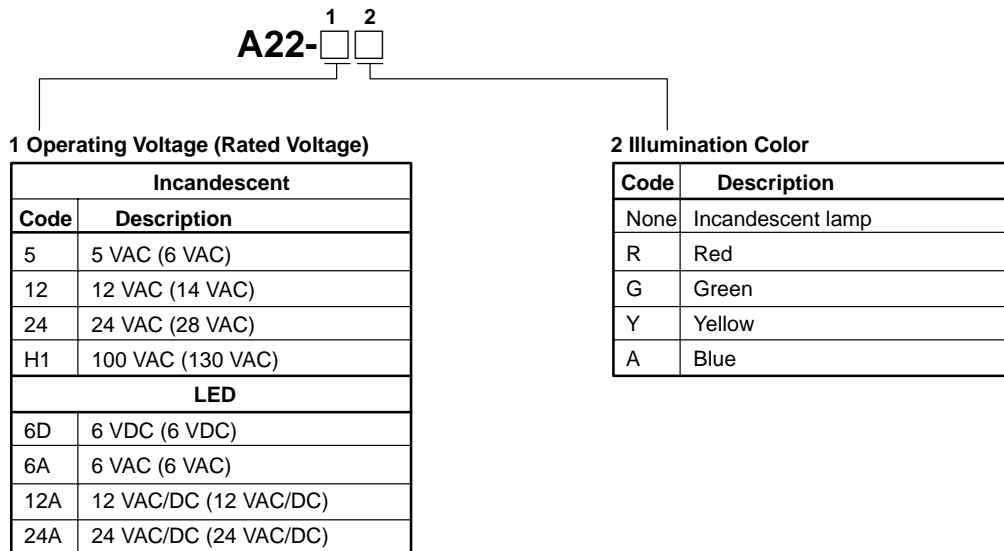
Unit Combinations



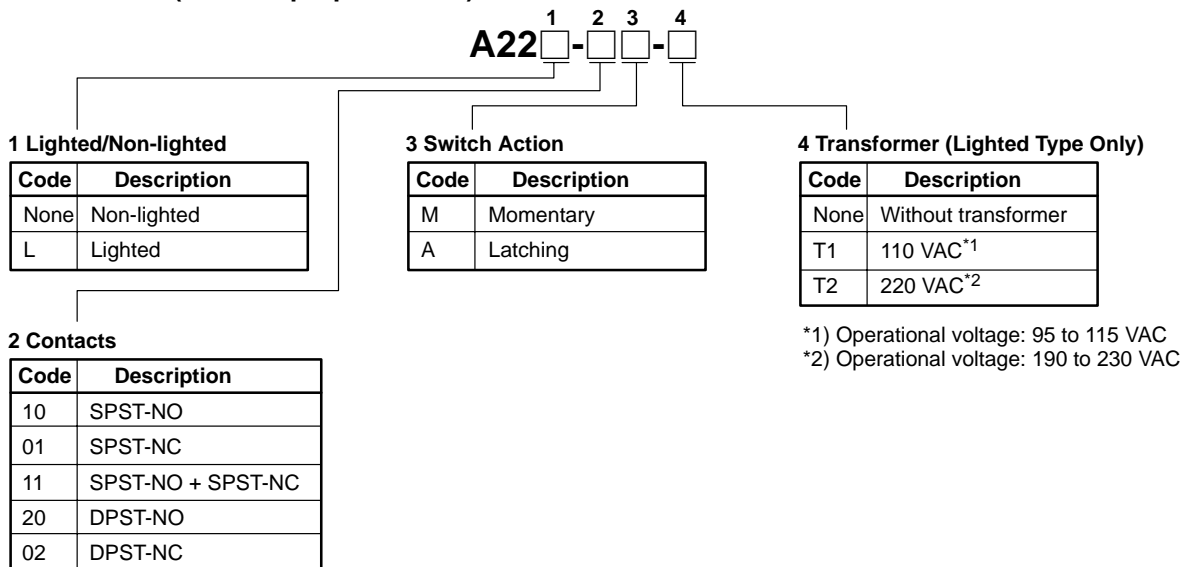
1. Operational Unit



2. Lamp (Common Use)






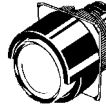
3. Switch Unit (General-purpose Load)







■ Pushbutton Switches (Subassembly)




Operational Unit

Non-lighted


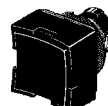
Color of Operational Unit	IP65 oil-resistant models			
	Flat type 	Projection type 	Full-guard type 	Half-guard type 
Red	A22-FR	A22-TR	A22-GR	A22-HR
Green	A22-FG	A22-TG	A22-GG	A22-HG
Yellow	A22-FY	A22-TY	A22-GY	A22-HY
White	A22-FW	A22-TW	A22-GW	A22-HW
Blue	A22-FA	A22-TA	A22-GA	A22-HA
Black	A22-FB	A22-TB	A22-GB	A22-HB

Color of Operational Unit	IP65 oil-resistant models			
	Square/Projection type 	Square/Full-guard type 	Round/Mushroom type (30-dia. head) 	Round/Mushroom type (40-dia. head) 
Red	A22-CR	A22-DR	A22-SR	A22-MR
Green	A22-CG	A22-DG	A22-SG	A22-MG
Yellow	A22-CY	A22-DY	A22-SY	A22-MY
White	A22-CW	A22-DW	A22-SW	A22-MW
Blue	A22-CA	A22-DA	A22-SA	A22-MA
Black	A22-CB	A22-DB	A22-SB	A22-MB

Lighted


Color of Operational Unit	IP65		
	Projection type 	Full-guard type 	Half-guard type 
Red	A22L-TR	A22L-GR	A22L-HR
Green	A22L-TG	A22L-GG	A22L-HG
Yellow	A22L-TY	A22L-GY	A22L-HY
White	A22L-TW	A22L-GW	A22L-HW
Blue	A22L-TA	A22L-GA	A22L-HA

Note: Common to incandescent lamps and LEDs.

Color of Operational Unit	IP65	
	Square/Projection 	Square/Full-guard type 
Red	A22L-CR	A22L-DR
Green	A22L-CG	A22L-DG
Yellow	A22L-CY	A22L-DY
White	A22L-CW	A22L-DW
Blue	A22L-CA	A22L-DA


Lamps

LED

Rated voltage 	6 VDC	6 VAC	12 VAC/DC	24 VAC/DC
Red	A22-6DR	A22-6AR	A22-12AR	A22-24AR
Green	A22-6DG	A22-6AG	A22-12AG	A22-24AG
Yellow (see note 2)	A22-6DY	A22-6AY	A22-12AY	A22-24AY
Blue	A22-6DA	A22-6AA	A22-12AA	A22-24AA

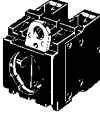
- Note:** 1. For transformer lighting, use the A22-24A□.
2. Used when the Operational Unit color is yellow or white.

Incandescent



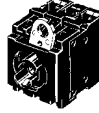
Rated voltage 	6 VAC	14 VAC	28 VAC	130 VAC
	A22-5	A22-12	A22-24	A22-H1

Switch Unit (General-purpose Load)

Non-lighted

Switch action 	Contacts	Model
Momentary	SPST-NO	A22-10M
	SPST-NC	A22-01M
	SPST-NO + SPST-NC	A22-11M
	DPST-NO	A22-20M
	DPST-NC	A22-02M
Latching	SPST-NO	A22-10A
	SPST-NC	A22-01A
	SPST-NO + SPST-NC	A22-11A
	DPST-NO	A22-20A
	DPST-NC	A22-02A

Lighted

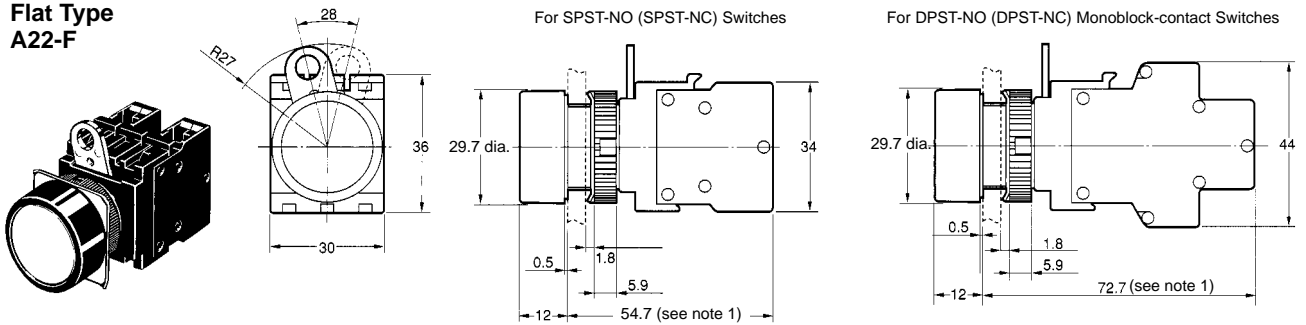
Switch Action	Contacts	Transformer circuits		
		Without transformer 	With transformer	
			110 VAC 	220 VAC 
Momentary	SPST-NO	A22L-10M	A22L-10M-T1	A22L-10M-T2
	SPST-NC	A22L-01M	A22L-01M-T1	A22L-01M-T2
	SPST-NO + SPST-NC	A22L-11M	A22L-11M-T1	A22L-11M-T2
	DPST-NO	A22L-20M	A22L-20M-T1	A22L-20M-T2
	DPST-NC	A22L-02M	A22L-02M-T1	A22L-02M-T2
Latching	SPST-NO	A22L-10A	A22L-10A-T1	A22L-10A-T2
	SPST-NC	A22L-01A	A22L-01A-T1	A22L-01A-T2
	SPST-NO + SPST-NC	A22L-11A	A22L-11A-T1	A22L-11A-T2
	DPST-NO	A22L-20A	A22L-20A-T1	A22L-20A-T2
	DPST-NC	A22L-02A	A22L-02A-T1	A22L-02A-T2

Dimensions

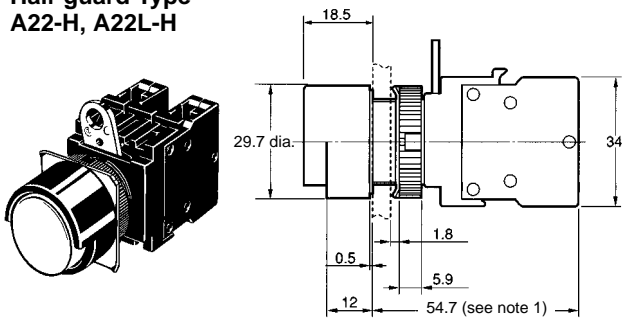
Note: 1. All units are in millimeters unless otherwise indicated.
 2. The following illustrations are for momentary operation.

■ Lighted/Non-lighted Pushbutton Switches

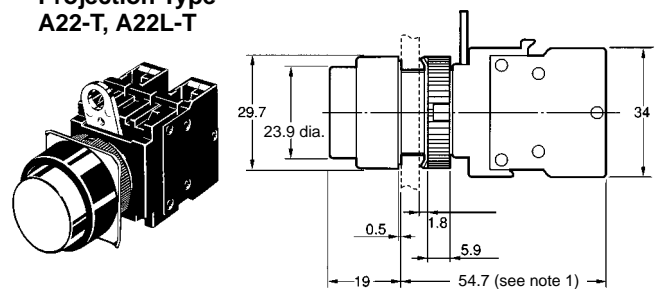
**Flat Type
A22-F**



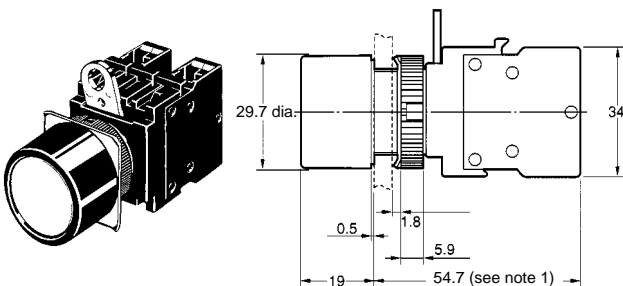
**Half-guard Type
A22-H, A22L-H**



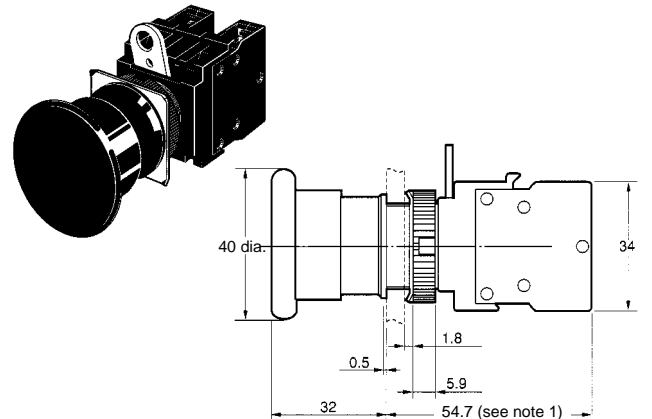
**Projection Type
A22-T, A22L-T**



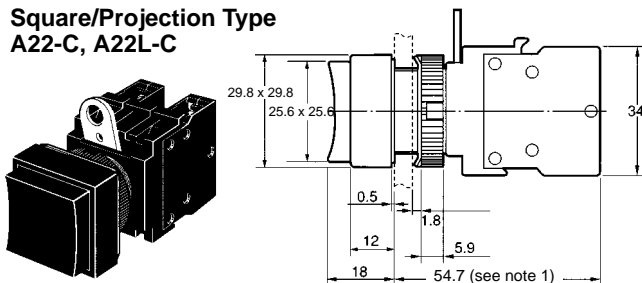
**Full-guard Type
A22-G, A22L-G**



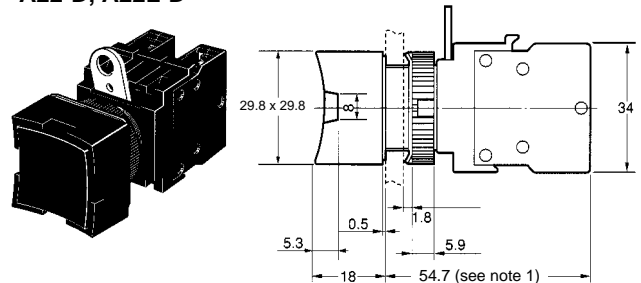
**40-dia. Mushroom Type
A22-M**



**Square/Projection Type
A22-C, A22L-C**



**Square Full-guard Type
A22-D, A22L-D**



Note: 1. Latching operation models are 9.2 mm longer.
 2. Lighted models have the same dimensions as shown above, whether they are with transformers or without transformers.

■ Terminal Arrangement

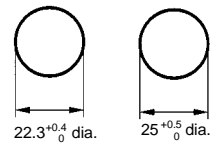
Terminal Arrangement (Bottom View)

Non-lighted (SPST-NO + SPST-NC)	Lighted (SPST-NO + SPST-NC)	Non-lighted (DPST-NO + DPST-NC)

Terminal Connection

Type	Terminal connection
Non-lighted (SPST-NO + SPST-NC)	<p>Bottom view</p>
Non-lighted (DPST-NO + DPST-NC)	<p>Bottom view</p>
Lighted without transformer (SPST-NO + SPST-NC)	<p>Bottom view</p>
Lighted with transformer (SPST-NO + SPST-NC)	<p>Bottom view</p>

Panel Cutout Dimensions



Note: When applying coating such as paint to the panel, the dimensions should be those after the application of coating. Lock fitting is provided as a standard item.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Install in 22-dia. or 25-dia. Panel Cutout

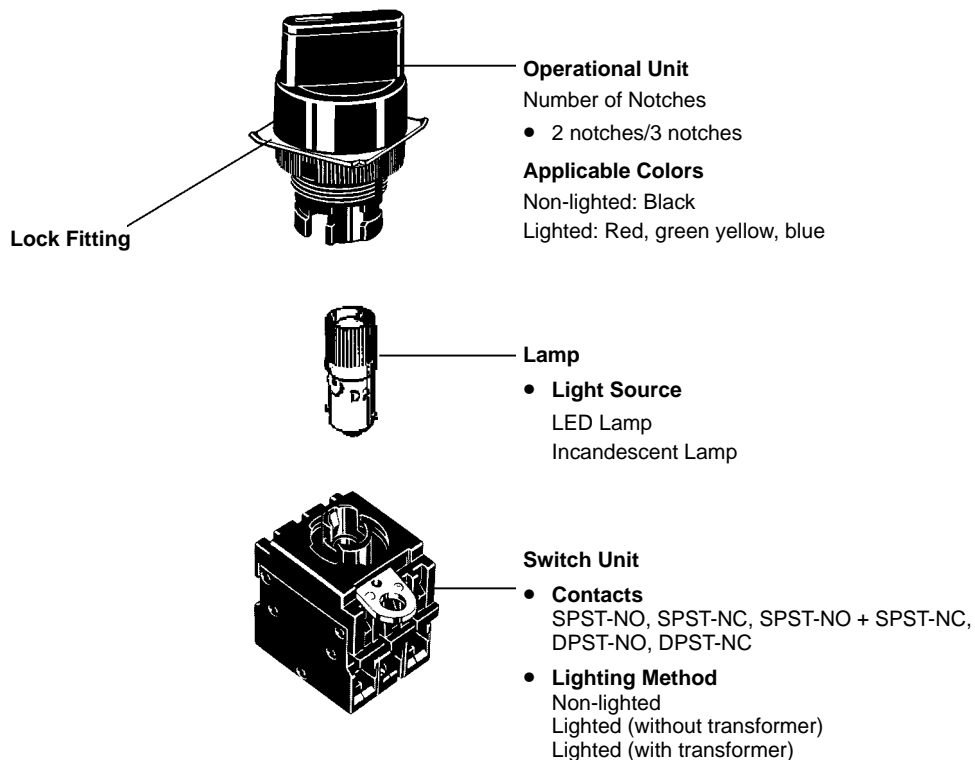
- Easy mounting and removal of Switch Unit.
- Increase wiring efficiency with three-row mounting of Switch Unit.
- Finger protection mechanism on Switch Unit provided as a standard feature.
- Use 25-dia. ring to install in 25-dia. panel cutouts.
- Install using either round, forked crimp terminals, or ferrules.
- IP65 oil resistance (Non-lighted models)
EN60947-5-1



This product was manufactured at OMRON Izumo. OMRON Izumo has obtained approvals from international certification bodies for its quality system and environmental control system.

Ordering Information

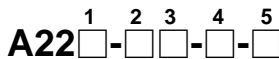
■ Construction



Refer to the pages 48 to 64 for specifications, accessories, installation, and precautions.

■ Model Number Legend (Completely Assembled)

Shipped as a set which includes the Operational Unit, LED (lighted type only), and Switch Unit.



1 Lighted/Non-lighted

Code	Description
S	Non-lighted
W	Lighted

2 Number of Notches/Reset Method

Code	Description
2M	2 notches/Maintained
2A	2 notches/Spring return
3M	3 notches/Maintained
3A	3 notches/Spring return

3 Illumination Color

Code	Description
None	Non-lighted
R	Red
G	Green
Y	Yellow
A	Blue

4 Light Source

Without Transformer		
Code	Rated Voltage	
None	Non-lighted	
6D	LED	6 VDC
6A		6 VAC
12A		12 VAC/DC
24A		24 VAC/DC
With Transformer		
None	Non-lighted	
T1	LED	110 VAC*1
T2		220 VAC*2

5 Contacts

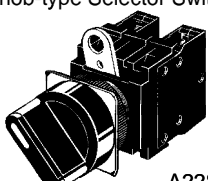




Code	Description
10	SPST-NO (*)
01	SPST-NC (*)
11	SPST-NO + SPST-NC
20	DPST-NO
02	DPST-NC

Note: *: for models with 2 notches

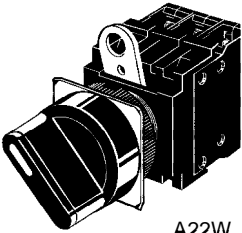



Note: The LED lamp (24 VAC/DC) can be lit by directly applying 110 VAC/DC (220 VAC/DC) to the lamp terminal. LED incorporates the 24-VAC/DC type.
 *1) Operational voltage: 95 to 115 VAC
 *2) Operational voltage: 190 to 230 VAC

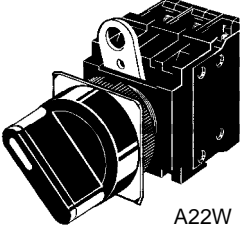

■ Knob-type Selector Switch (Completely Assembled)

Non-lighted

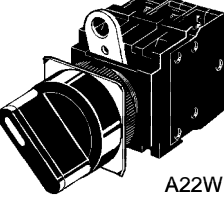





Appearance	Number of notches	Resetting method	Output	Model	Color of Operational Unit
 <p>A22S</p>	2 notches	Maintained 	SPST-NO	A22S-2M-10	Black
			SPST-NC	A22S-2M-01	
			SPST-NO + SPST-NC	A22S-2M-11	
		Spring return 	DPST-NO	A22S-2M-20	
			DPST-NC	A22S-2M-02	
			SPST-NO	A22S-2A-10	
	3 notches	Maintained 	SPST-NO + SPST-NC	A22S-3M-11	
			DPST-NO	A22S-3M-20	
			DPST-NC	A22S-3M-02	
		Spring return 	SPST-NO + SPST-NC	A22S-3A-11	
			DPST-NO	A22S-3A-20	
			DPST-NC	A22S-3A-02	

Lighted (Without Transformer)

Appearance	Number of notches	Resetting method	Output	Rated voltage	Model	Illumination color	
Knob-type Selector Switch LED lighting (Without transformer)  A22W	2 notches	Maintained 	SPST-NO	6 VDC	A22W-2M□-6D-10	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) A (blue)	
				6 VAC	A22W-2M□-6A-10		
				12 VAC/DC	A22W-2M□-12A-10		
				24 VAC/DC	A22W-2M□-24A-10		
			SPST-NC	6 VDC	A22W-2M□-6D-01		
				6 VAC	A22W-2M□-6A-01		
				12 VAC/DC	A22W-2M□-12A-01		
				24 VAC/DC	A22W-2M□-24A-01		
			SPST-NO + SPST-NC	6 VDC	A22W-2M□-6D-11		
				6 VAC	A22W-2M□-6A-11		
				12 VAC/DC	A22W-2M□-12A-11		
			24 VAC/DC	A22W-2M□-24A-11			
				DPST-NO	6 VDC		A22W-2M□-6D-20
					6 VAC		A22W-2M□-6A-20
			12 VAC/DC		A22W-2M□-12A-20		
			24 VAC/DC	A22W-2M□-24A-20			
				DPST-NC	6 VDC		A22W-2M□-6D-02
					6 VAC		A22W-2M□-6A-02
	12 VAC/DC	A22W-2M□-12A-02					
	24 VAC/DC	A22W-2M□-24A-02					
		Spring return 	SPST-NO	6 VDC	A22W-2A□-6D-10		
				6 VAC	A22W-2A□-6A-10		
	12 VAC/DC			A22W-2A□-12A-10			
	24 VAC/DC			A22W-2A□-24A-10			
	SPST-NC		6 VDC	A22W-2A□-6D-01			
			6 VAC	A22W-2A□-6A-01			
			12 VAC/DC	A22W-2A□-12A-01			
			24 VAC/DC	A22W-2A□-24A-01			
	SPST-NO + SPST-NC		6 VDC	A22W-2A□-6D-11			
			6 VAC	A22W-2A□-6A-11			
			12 VAC/DC	A22W-2A□-12A-11			
	24 VAC/DC		A22W-2A□-24A-11				
			DPST-NO	6 VDC	A22W-2A□-6D-20		
				6 VAC	A22W-2A□-6A-20		
	12 VAC/DC			A22W-2A□-12A-20			
	24 VAC/DC		A22W-2A□-24A-20				
DPST-NC			6 VDC	A22W-2A□-6D-02			
			6 VAC	A22W-2A□-6A-02			
	12 VAC/DC	A22W-2A□-12A-02					
24 VAC/DC	A22W-2A□-24A-02						
	3 notches	Maintained 	SPST-NO + SPST-NC	6 VDC	A22W-3M□-6D-11		
				6 VAC	A22W-3M□-6A-11		
12 VAC/DC				A22W-3M□-12A-11			
24 VAC/DC				A22W-3M□-24A-11			
DPST-NO			6 VDC	A22W-3M□-6D-20			
			6 VAC	A22W-3M□-6A-20			
			12 VAC/DC	A22W-3M□-12A-20			
			24 VAC/DC	A22W-3M□-24A-20			
DPST-NC			6 VDC	A22W-3M□-6D-02			
			6 VAC	A22W-3M□-6A-02			
			12 VAC/DC	A22W-3M□-12A-02			
			24 VAC/DC	A22W-3M□-24A-02			

Appearance	Number of notches	Resetting method	Output	Rated voltage	Model	Illumination color
Knob-type Selector Switch LED lighting (Without transformer)  A22W	3 notches	Spring return 	SPST-NO + SPST-NC	6 VDC	A22W-3A□-6D-11	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) A (blue)
				6 VAC	A22W-3A□-6A-11	
				12 VAC/DC	A22W-3A□-12A-11	
				24 VAC/DC	A22W-3A□-24A-11	
			DPST-NO	6 VDC	A22W-3A□-6D-20	
				6 VAC	A22W-3A□-6A-20	
				12 VAC/DC	A22W-3A□-12A-20	
				24 VAC/DC	A22W-3A□-24A-20	
			DPST-NC	6 VDC	A22W-3A□-6D-02	
				6 VAC	A22W-3A□-6A-02	
				12 VAC/DC	A22W-3A□-12A-02	
				24 VAC/DC	A22W-3A□-24A-02	

Lighted (With Transformer)

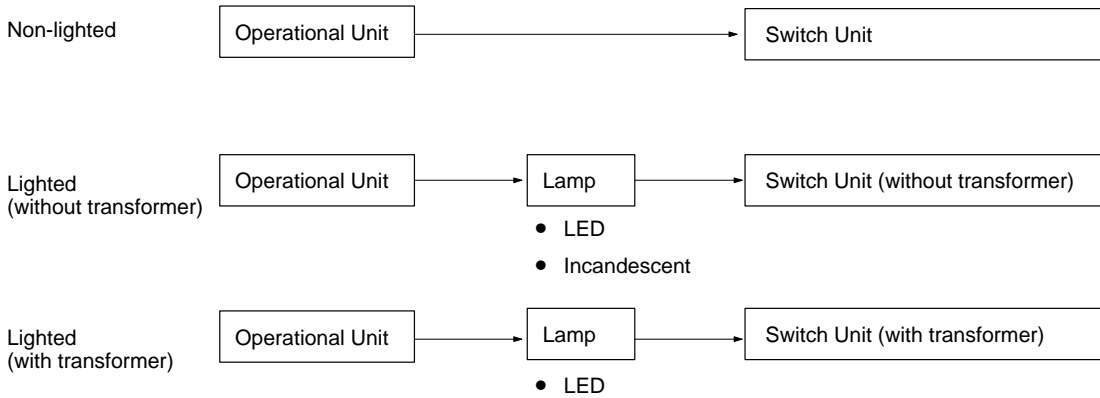
Appearance	Number of notches	Resetting method	Output	Rated voltage	Model	Operational Unit symbol (color)			
Knob-type Selector Switch LED transformer lighting (With transformer)  A22W	2 notches	Maintained 	SPST-NO	110 VAC	A22W-2M□-T1-10	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) A (blue)			
				220 VAC	A22W-2M□-T2-10				
			SPST-NC	110 VAC	A22W-2M□-T1-01				
				220 VAC	A22W-2M□-T2-01				
			SPST-NO + SPST-NC	110 VAC	A22W-2M□-T1-11				
				220 VAC	A22W-2M□-T2-11				
			DPST-NO	110 VAC	A22W-2M□-T1-20				
				220 VAC	A22W-2M□-T2-20				
			DPST-NC	110 VAC	A22W-2M□-T1-02				
				220 VAC	A22W-2M□-T2-02				
			3 notches	Maintained 	Spring return 		SPST-NO	110 VAC	A22W-2A□-T1-10
								220 VAC	A22W-2A□-T2-10
	SPST-NC	110 VAC				A22W-2A□-T1-01			
		220 VAC				A22W-2A□-T2-01			
	SPST-NO + SPST-NC	110 VAC				A22W-2A□-T1-11			
		220 VAC				A22W-2A□-T2-11			
	DPST-NO	110 VAC			A22W-2A□-T1-20				
		220 VAC			A22W-2A□-T2-20				
	DPST-NC	110 VAC			A22W-2A□-T1-02				
		220 VAC			A22W-2A□-T2-02				
	Maintained 	SPST-NO + SPST-NC			110 VAC	A22W-3M□-T1-11			
					220 VAC	A22W-3M□-T2-11			
		DPST-NO	110 VAC	A22W-3M□-T1-20					
			220 VAC	A22W-3M□-T2-20					
DPST-NC		110 VAC	A22W-3M□-T1-02						
		220 VAC	A22W-3M□-T2-02						
Spring return 	SPST-NO + SPST-NC	110 VAC	A22W-3A□-T1-11						
		220 VAC	A22W-3A□-T2-11						
	DPST-NO	110 VAC	A22W-3A□-T1-20						
		220 VAC	A22W-3A□-T2-20						
	DPST-NC	110 VAC	A22W-3A□-T1-02						
		220 VAC	A22W-3A□-T2-02						

Note: When ordering, specify the symbol that indicates color of the Operational Unit in the □ of the model number.

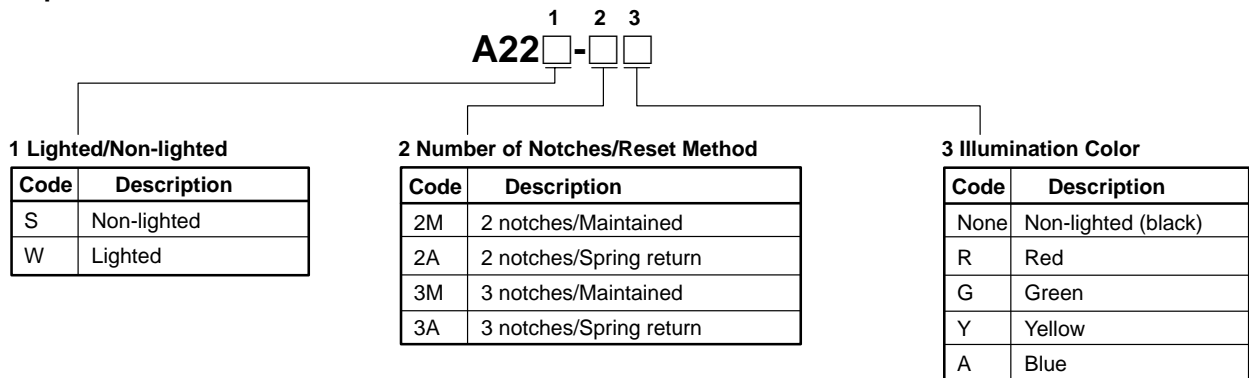
■ Model Number Legend (Subassembly)

The Operational Unit, Lamp, or Switch Unit can be ordered separately. Use them in combination for models that are not available as assembled units. These can also be used as inventory for maintenance parts.

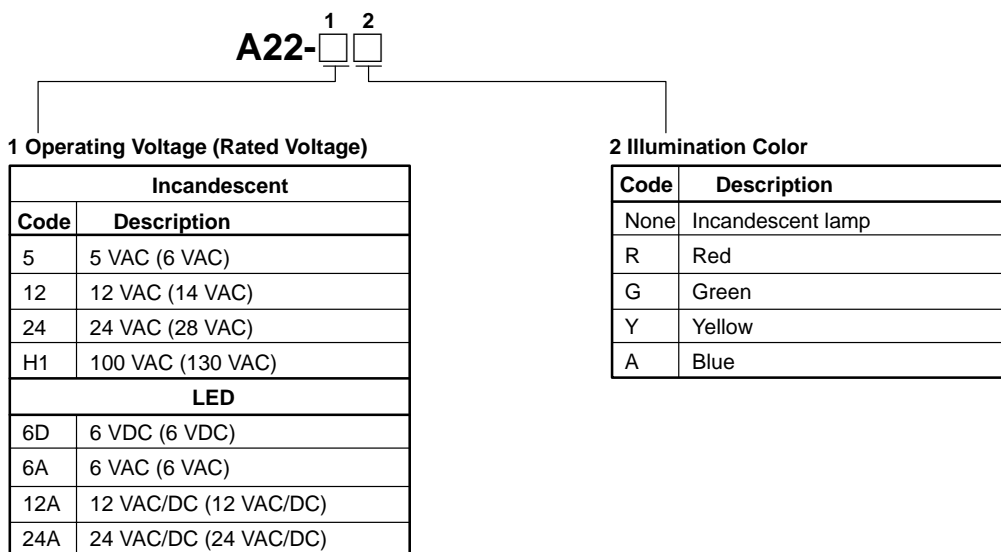
Unit Combinations



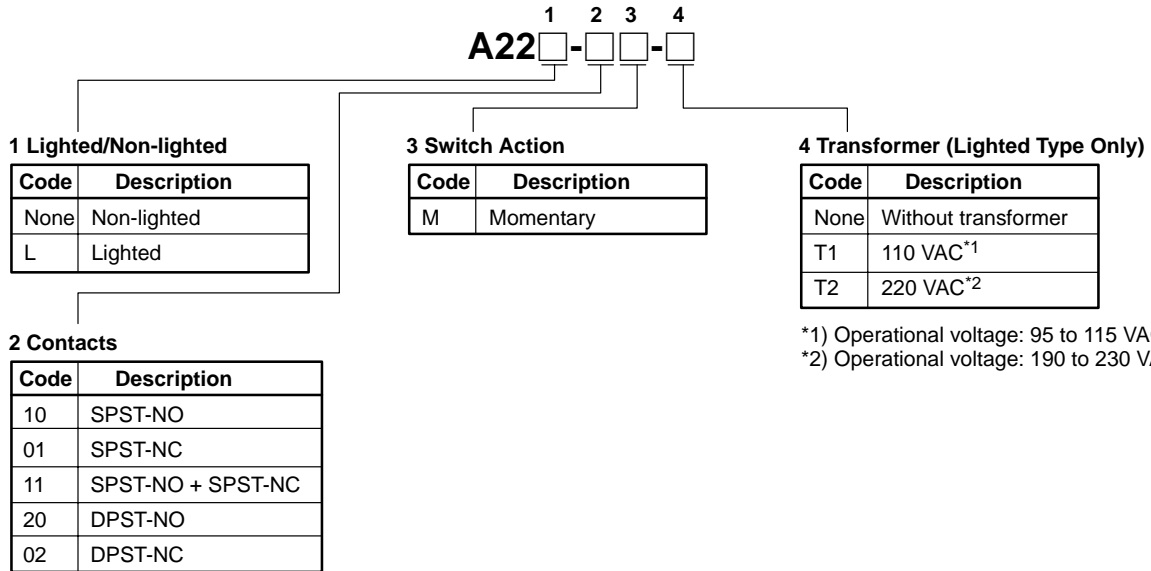
1. Operational Unit



2. Lamp



3. Switch Unit



■ Knob-type Selector Switch (Subassembly)

Operational Units

Non-lighted (Color: Only Black is Available)


Notches	Reset method	Standard lever IP65 (oil-resistant)
2 notches	Maintained	A22S-2M
	Spring return	A22S-2A
3 notches	Maintained	A22S-3M
	Spring return	A22S-3A

Lighted

Notches	Reset method	Operational Unit color	Standard lever IP65
2 notches	Maintained	Red	A22W-2MR
		Green	A22W-2MG
		Yellow	A22W-2MY
	Spring return	Blue	A22W-2MA
		Red	A22W-2AR
		Green	A22W-2AG
3 notches	Maintained	Yellow	A22W-2AY
		Blue	A22W-2AA
		Blue	A22W-3MA
	Spring return	Red	A22W-3MR
		Green	A22W-3MG
		Yellow	A22W-3MY
		Blue	A22W-3MA
		Red	A22W-3AR
		Green	A22W-3AG
	Yellow	A22W-3AY	
	Blue	A22W-3AA	


Lamps

LED

Rated voltage 	6 VDC	6 VAC	12 VAC	24 VAC
LED light				
Red	A22-6DR	A22-6AR	A22-12AR	A22-24AR
Green	A22-6DG	A22-6AG	A22-12AG	A22-24AG
Yellow (see note 2)	A22-6DY	A22-6AY	A22-12AY	A22-24AY
White	A22-6DW	A22-6AW	A22-12AW	A22-24AW
Blue	A22-6DA	A22-6AA	A22-12AA	A22-24AA


Note: 1. For transformer lighting, use the A22-24A□.
 2. Used when the Operational Unit color is yellow or white.

Incandescent

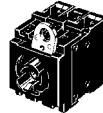
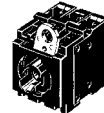
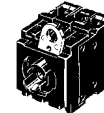
Rated voltage	6 VAC	14 VAC	28 VAC	130 VAC
	A22-5	A22-12	A22-24	A22-H1

Switch Unit

Non-lighted

Switch Action 	Contacts	Model
Spring return	SPST-NO	A22-10M
	SPST-NC	A22-01M
	SPST-NO + SPST-NC	A22-11M
	DPST-NO	A22-20M
	DPST-NC	A22-02M

Lighted

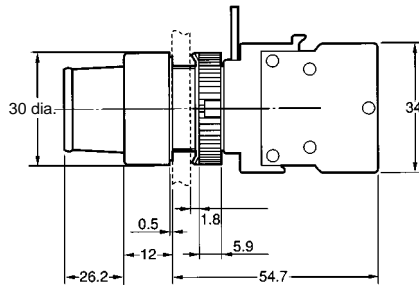
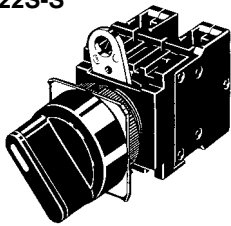
Switch Action	Contacts	Transformer circuit		
		Without transformer 	With transformer	
			110 VAC 	220 VAC 
Spring return	SPST-NO	A22L-10M	A22L-10M-T1	A22L-10M-T2
	SPST-NC	A22L-01M	A22L-01M-T1	A22L-01M-T2
	SPST-NO + SPST-NC	A22L-11M	A22L-11M-T1	A22L-11M-T2
	DPST-NO	A22L-20M	A22L-20M-T1	A22L-20M-T2
	DPST-NC	A22L-02M	A22L-02M-T1	A22L-02M-T2

Dimensions

Note: All units are in millimeters unless otherwise indicated.

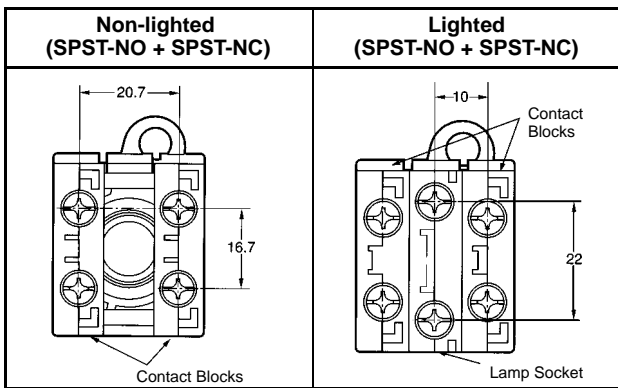
■ Knob-type Selector Switch (Lighted/Non-lighted)

A22S-S

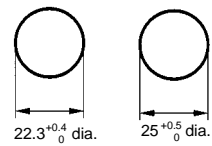


■ Terminal Arrangement

Terminal Arrangement (Bottom View)



Panel Cutout Dimensions



Note: When applying coating such as paint to the panel, the dimensions should be those after the application of coating. Lock fitting is provided as a standard item.




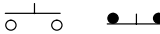








Terminal Connection

Type	Connection diagram
Non-lighted	<p>Bottom view</p>
Lighted without transformer	<p>Bottom view</p>
Lighted with transformer	<p>Bottom view</p>













Note: The above terminal connection diagrams are examples for SPST-NO + SPST-NC.

■ Contact Configuration

2-notch Type

Knob position	SPST-NO	SPST-NC	SPST-NO + SPST-NC	DPST-NO	DPST-NC
					
					

3-notch Type

Knob position	SPST-NO + SPST-NC	DPST-NO	DPST-NC
			
			
			

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Key-type Selector Switch

A22K

Install in 22-dia. or 25-dia. Panel Cutout

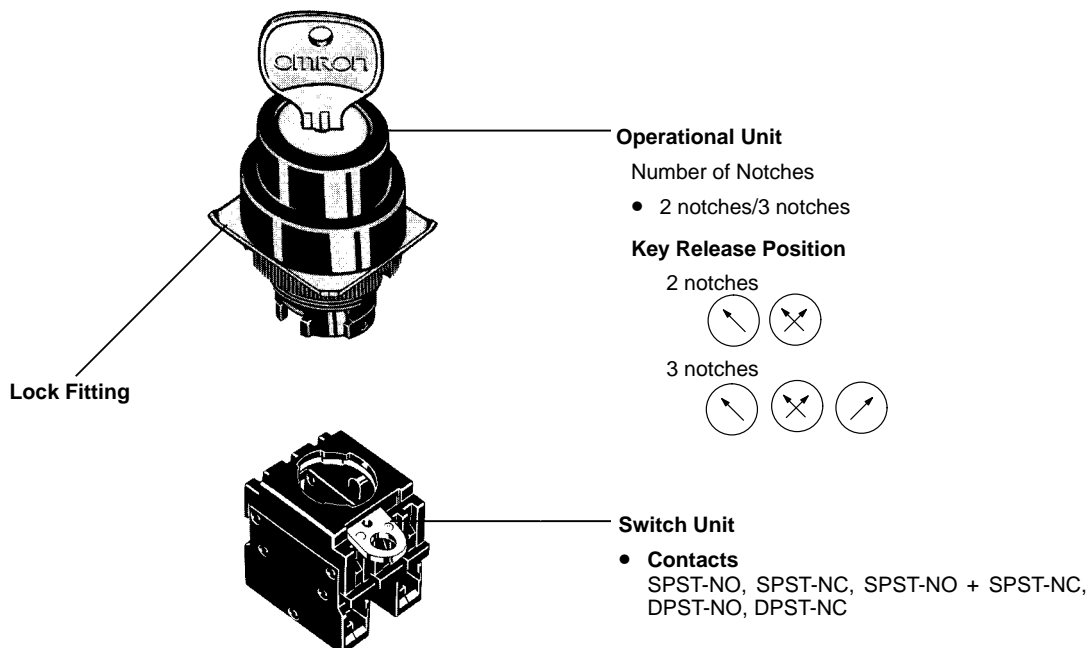
- Easy mounting and removal of Switch Unit.
- Increase wiring efficiency with three-row mounting of Switch Unit.
- Finger protection mechanism on Switch Unit provided as a standard feature.
- Use 25-dia. ring to install in 25-dia. panel cutouts.
- Install using either round, forked crimp terminals, or ferrules.
- IP65 oil resistance
EN60947-5-1



This product was manufactured at OMRON Izumo. OMRON Izumo has obtained approvals from international certification bodies for its quality system and environmental control system.

Ordering Information

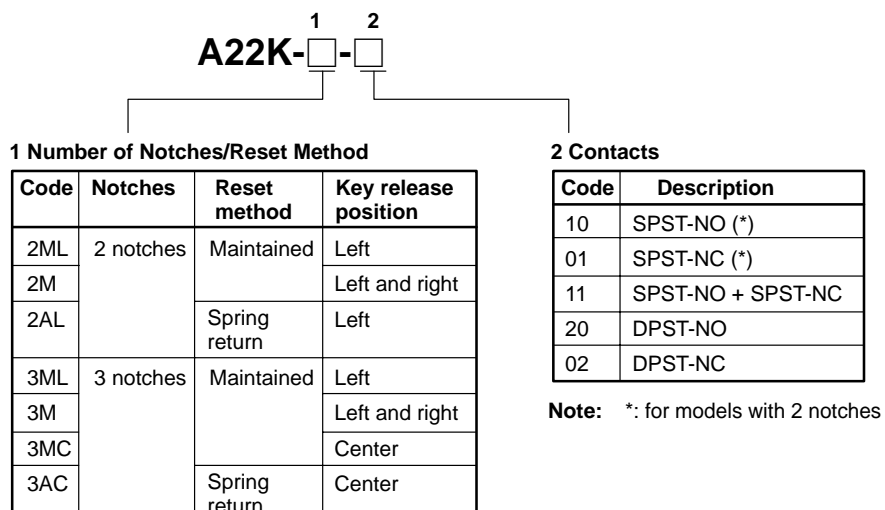
■ Construction



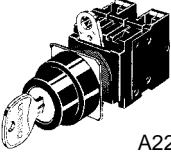

























Refer to the pages 48 to 64 for specifications, accessories, installation, and precautions.

■ Model Number Legend (Completely Assembled)

Shipped as a set which includes the Operational Unit and Switch Unit.



■ Key-type Selector Switch (Completely Assembled)

Appearance	Number of notches	Reset method	Output	Key release position	Model	Color of Operational Unit			
Key-type Selector Switch  A22K	2 notches	Maintained 	SPST-NO		A22K-2ML-10	Black			
					A22K-2M-10				
			SPST-NC		A22K-2ML-01				
					A22K-2M-01				
			SPST-NO + SPST-NC		A22K-2ML-11				
					A22K-2M-11				
			DPST-NO		A22K-2ML-20				
					A22K-2M-20				
			DPST-NC		A22K-2ML-02				
					A22K-2M-02				
			Spring return 				SPST-NO		A22K-2AL-10
									SPST-NC	A22K-2AL-01
							SPST-NO + SPST-NC		A22K-2AL-11
							DPST-NO		A22K-2AL-20
	DPST-NC	A22K-2AL-02							
	3 notches	Maintained 	SPST-NO + SPST-NC		A22K-3ML-11				
					A22K-3M-11				
					A22K-3MC-11				
			DPST-NO		A22K-3ML-20				
					A22K-3M-20				
					A22K-3MC-20				
			DPST-NC		A22K-3ML-02				
					A22K-3M-02				
				A22K-3MC-02					
Spring return 						A22K-3AC-11			
						DPST-NO	A22K-3AC-20		
						DPST-NC	A22K-3AC-02		

■ Model Number Legend (Subassembly)

The Operational Unit, Lamp, or Switch Unit can be ordered separately. Use them in combination for models that are not available as assembled units. These can also be used as inventory for maintenance parts.



1. Operational Unit

A22K-

1 Number of Notches/Reset Method

Code	Notches	Reset method	Key release position
2ML	2 notches	Maintained	Left
2M			Left and right
2AL		Spring return	Left
3ML	3 notches	Maintained	Left
3M			Left and right
3MC			Center
3AC		Spring return	Center

**2. Switch Unit
Non-lighted**

A22-

1 Contacts













Code	Description
10	SPST-NO
01	SPST-NC
11	SPST-NO + SPST-NC
20	DPST-NO
02	DPST-NC

2 Switch Action

Code	Description
M	Momentary

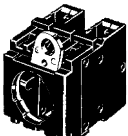
■ Key-type Selector Switch (Subassembly)

Operational Unit (Color: Only Black is available)

Appearance	Number of notches	Reset method	Key release position	Model
	2 notches	Maintained 		A22K-2ML
				A22K-2M
	3 notches	Spring return 		A22K-2AL
			Maintained		A22K-3ML
		Spring return			A22K-3M
				A22K-3MC
	A22K-3AC			

Note: Two keys are provided.

Switch Units

Appearance		Classification	Model	
	Lighted	Socket (without transformer circuit)	SPST-NO	A22-10M
			SPST-NC	A22-01M
			SPST-NO + SPST-NC	A22-11M
			DPST-NO	A22-20M
			DPST-NC	A22-02M

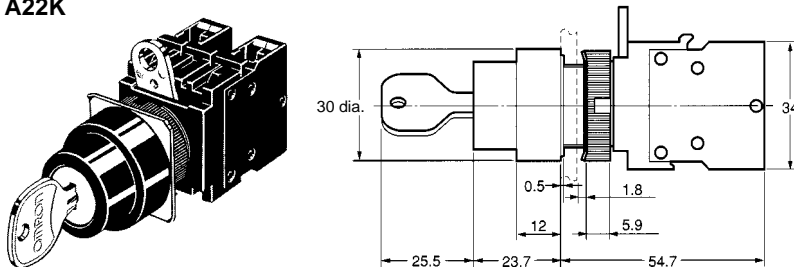
Note: DPST-NO + DPST-NC combination is also possible. Add the Switch Units on page 51 to the combination.

Dimensions

Note: All units are in millimeters unless otherwise indicated.

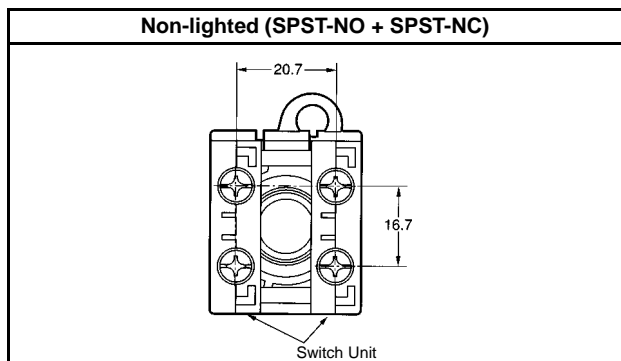
■ Key-type Selector Switch

A22K

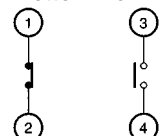


■ Terminal Arrangement

Terminal Arrangement (Bottom View)

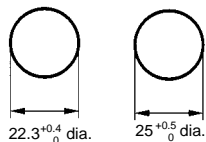


Terminal Connection

Type	Terminal connection
Non-lighted	<p>Bottom view</p> 

Note: The above terminal connection diagrams are examples for SPST-NO + SPST-NC.

Panel Cutout Dimensions



Note: When applying coating such as paint to the panel, the dimensions should be those after the application of coating. Lock fitting is provided as a standard item.

■ Contact Configuration

2-notch Type

Knob position	SPST-NO	SPST-NC	SPST-NO + SPST-NC	DPST-NO	DPST-NC

3-notch Type

Knob position	SPST-NO + SPST-NC	DPST-NO	DPST-NC

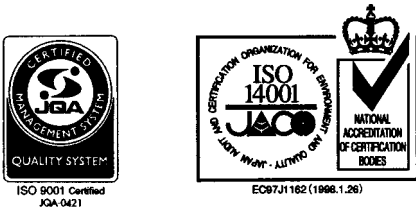
ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
 To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Emergency Stop Switch

A22E

Install in 22-dia. or 25-dia. Panel Cutout

- Positive opening mechanism with minimum contact separation of 3 mm in accordance with EN60947-5-1, (→).
- Safety Lock Mechanism prevents misuse. (No tampering – in accordance with EN 418)
- Easy mounting and removal of Switch Unit using an incorporated lever.
- Increase wiring efficiency with three-row mounting for the Switch Unit.
- Finger protection mechanism on Switch Unit provided as a standard feature.
- Install using either round, forked crimp terminals, or ferrules.



This product was manufactured at OMRON Izumo. OMRON Izumo has obtained approvals from international certification bodies for its quality system and environmental control system.

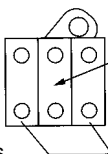
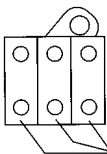
Ordering Information

■ Construction

Switch Unit

Non-lighted Models

Lighted Models



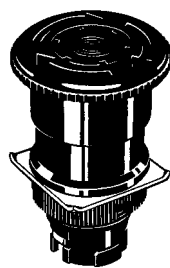
Contact Blocks

Contact Blocks

Lamp Socket

SPST-NC, SPST-NO/SPST-NC, DPST-NC

Note: For non-lighted models, up to three Switch Units can be mounted. When adding other contacts such as SPST-NO/DPST-NC, order Switch Units separately.



Operational Unit

Push-lock Turn-reset System

Available Color: Red

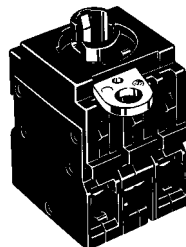
Non-lighted
Lighted



Lamp

• **Light source**

LED Lamp
Incandescent Lamp



• **Contact Ratings**

110 VAC, 10 A (resistive load)
24 VDC, 10 A (resistive load)

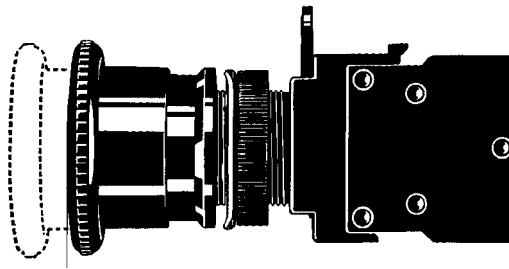
• **Lighting Method**

Non-lighted
Lighted (Without transformer)
Lighted (With transformer)

(The above figures are examples of the lighted model.)

Refer to the pages 48 to 64 for specifications, accessories, installation, and precautions.

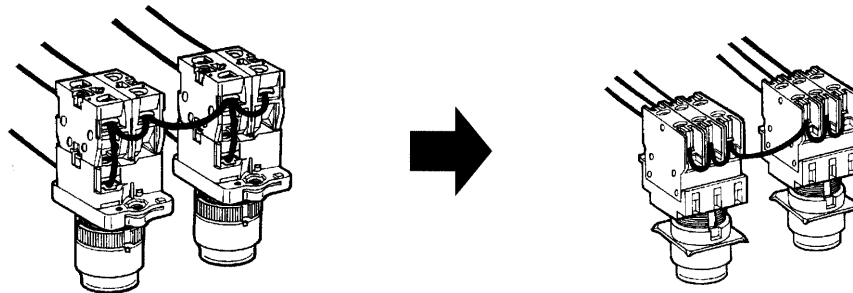
Safety Lock Mechanism to Prevent Misuse



Lock position

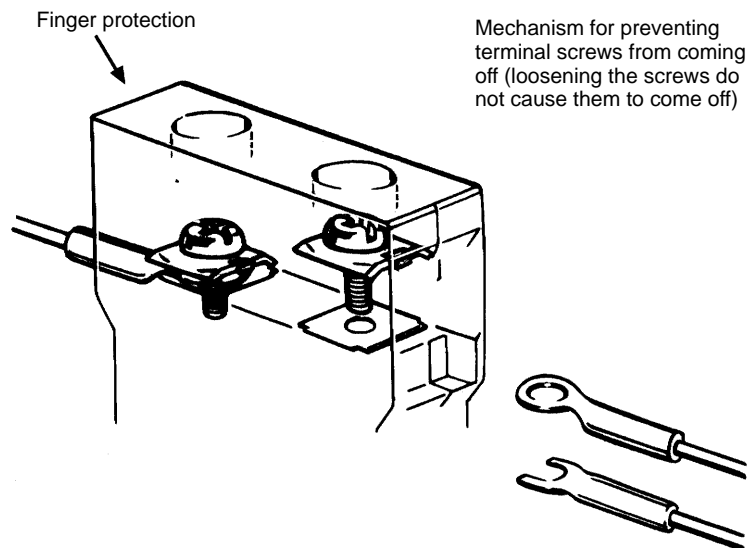
This Switch can be intentionally used to stop equipment in an emergency. Even if an object or person touches the Pushbutton by mistake, the contact will not be released unless the Pushbutton reaches the lock position.

Contacts are arranged in a row to provide more space depthwise for multi-contact applications.



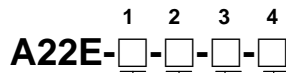
DPST-NO monoblock and DPST-NC monoblock models are available as options. See page 51. (With non-lighted models, combination with 4PST-NC/DPST-NC or 6PST-NC is possible.)

This Switch uses a finger protection mechanism to prevent electrical shocks. Moreover, it is provided with a mechanism to prevent terminal screws from coming off and also allows connection to either round or forked crimp terminals.



■ Model Number Legend (Completely Assembled)

Shipped as a set which includes the Operational Unit and Switch Unit.



1 Lighted/Non-lighted

Code	Description
None	Non-lighted
L	Lighted (see note)

Note: Lighted Emergency Stop Switches are available only for the 40-dia. push-lock turn-reset models.

2 Head Size

Code	Description	
MP	40 dia.	Push-pull
LP	60 dia.	
S	30 dia.	Push-lock, turn-reset
M	40 dia.	
L	60 dia.	
SK	30 dia.	
MK	40 dia.	Push-lock key reset

3 Light Source

Without Transformer		
Code	Operating Voltage	
None	Non-lighted	
6D	LED	6 VDC
6A		6 VAC
12A		12 VAC/DC
24A		24 VAC/DC
With Transformer		
None	Non-lighted	
T1	LED	110 VAC*1
T2		220 VAC*2

Note: The LED lamp (24 VAC/DC) can be lit by directly applying 110 VAC/DC (220 VAC/DC) to the lamp terminal. LED incorporates the 24-VAC/DC type.

*1) Operational voltage: 95 to 110 VAC



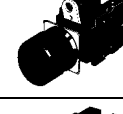
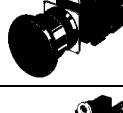



*2) Operational voltage: 190 to 230 VAC

4 Contacts

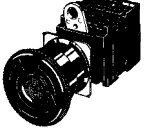

Code	Description
01	SPST-NC
11	SPST-NO + SPST-NC
02	DPST-NC

■ Emergency Stop Switch (Completely Assembled)

Non-lighted Models

Appearance	Output	Push-lock turn-reset system	Color of cap
40-dia. head Push-pull  A22E-MP	SPST-NC	A22E-MP-01	Red
	SPST-NO/SPST-NC	A22E-MP-11	
	DPST-NC	A22E-MP-02	
60-dia. head Push-pull  A22E-LP	SPST-NC	A22E-LP-01	
	SPST-NO/SPST-NC	A22E-LP-11	
	DPST-NC	A22E-LP-02	
30-dia. head Push-lock Turn-reset  A22E-S	SPST-NC	A22E-S-01	
	SPST-NO/SPST-NC	A22E-S-11	
	DPST-NC	A22E-S-02	
40-dia. head Push-lock Turn-reset  A22E-M	SPST-NC	A22E-M-01	
	SPST-NO/SPST-NC	A22E-M-11	
	DPST-NC	A22E-M-02	
60-dia. head Push-lock Turn-reset  A22E-L	SPST-NC	A22E-L-01	
	SPST-NO/SPST-NC	A22E-L-11	
	DPST-NC	A22E-L-02	
30-dia. head Push-lock Key-reset  A22E-SK	SPST-NC	A22E-SK-01	
	SPST-NO/SPST-NC	A22E-SK-11	
	DPST-NC	A22E-SK-02	
40-dia. head Push-lock Key-reset  A22E-MK	SPST-NC	A22E-MK-01	
	SPST-NO/SPST-NC	A22E-MK-11	
	DPST-NC	A22E-MK-02	

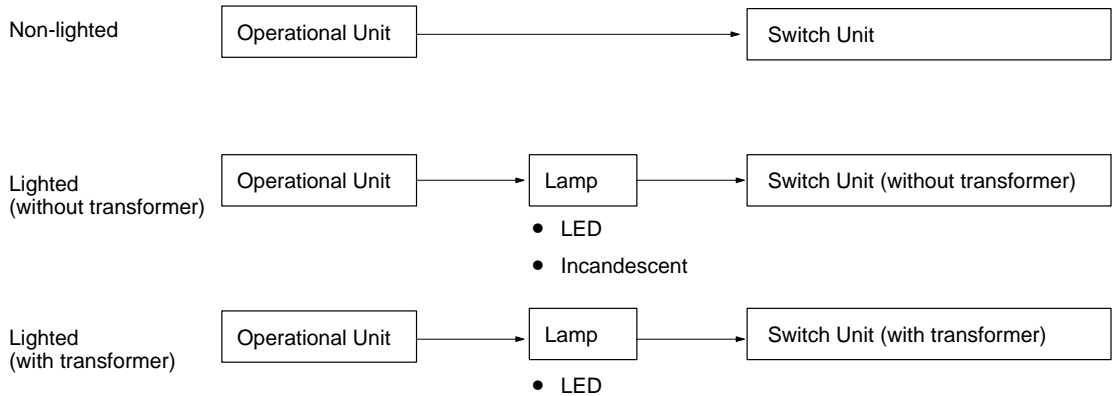
Lighted Models

Appearance	Output	Lighting	Rated voltage	Push-lock turn-reset system	Color of cap
40-dia. head Push-lock Turn-reset 	SPST-NC	LED	6 VDC	A22EL-M-6D-01	Red
			6 VAC/DC	A22EL-M-6A-01	
			12 VAC/DC	A22EL-M-12A-01	
			24 VAC/DC	A22EL-M-24A-01	
	SPST-NO/SPST-NC		6 VDC	A22EL-M-6D-11	
			6 VAC/DC	A22EL-M-6A-11	
			12 VAC/DC	A22EL-M-12A-11	
			24 VAC/DC	A22EL-M-24A-11	
	DPST-NC		6 VDC	A22EL-M-6D-02	
			6 VAC/DC	A22EL-M-6A-02	
			12 VAC/DC	A22EL-M-12A-02	
			24 VAC/DC	A22EL-M-24A-02	
40-dia. head Push-lock Turn-reset with transformer 	SPST-NC	110 VAC	A22EL-M-T1-01		
		220 VAC	A22EL-M-T2-01		
	SPST-NO/SPST-NC	110 VAC	A22EL-M-T1-11		
		220 VAC	A22EL-M-T2-11		
	DPST-NC	110 VAC	A22EL-M-T1-02		
		220 VAC	A22EL-M-T2-02		

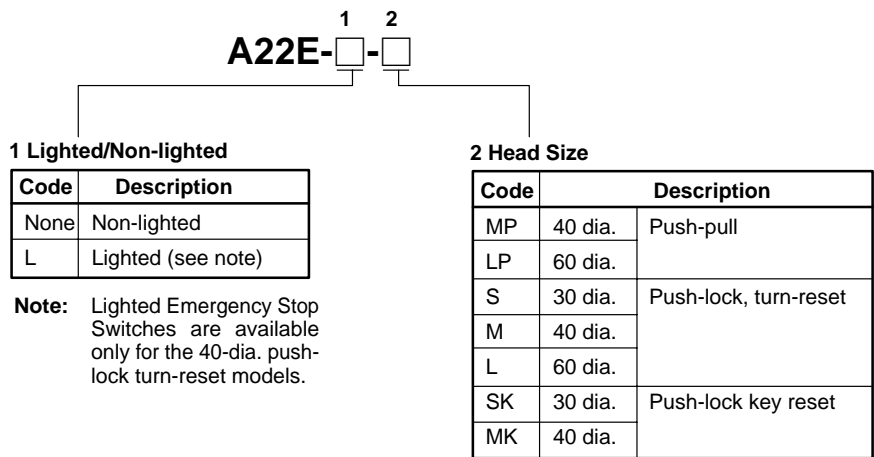
Model Number Legend (Subassembly)

The Operational Unit, Lamp, or Switch Unit can be ordered separately. Use them in combination for models that are not available as assembled units. These can also be used as inventory for maintenance parts.

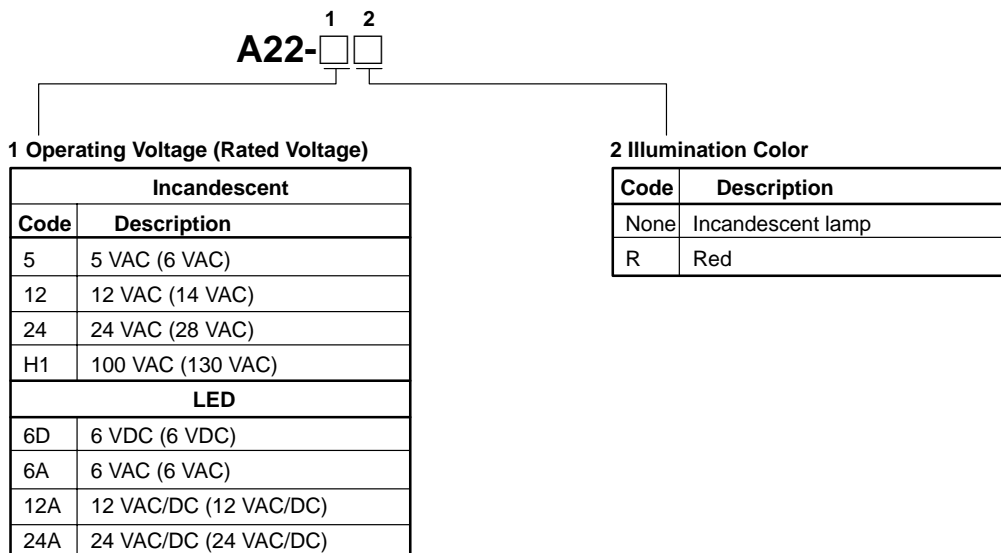
Unit Combinations



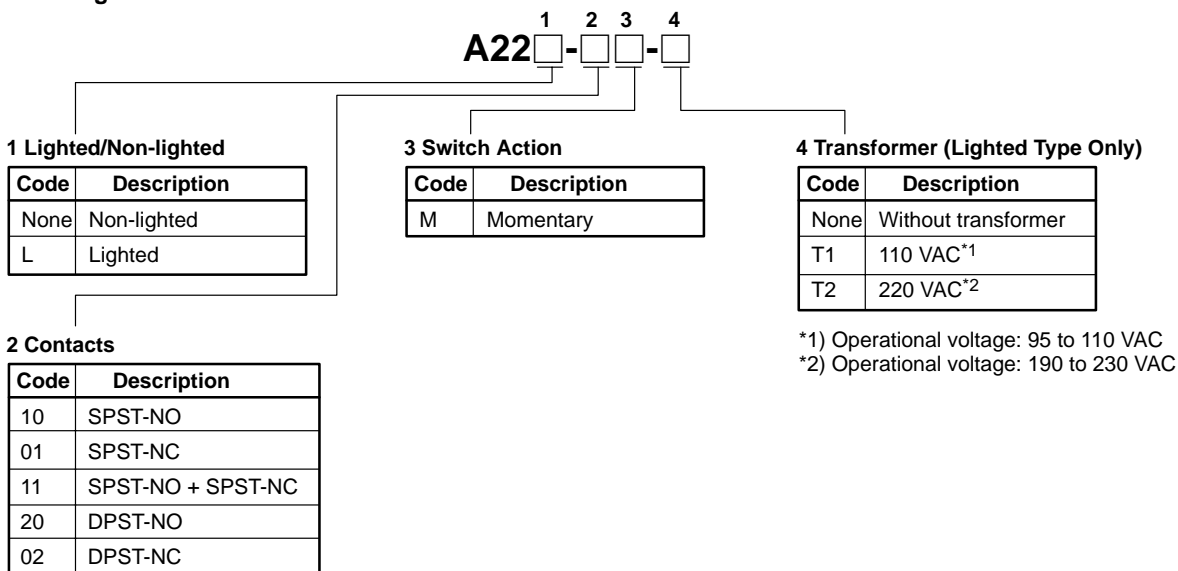
**1. Operational Unit
Lighted/Non-lighted**



2. Lamp





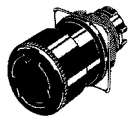
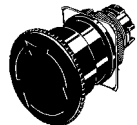

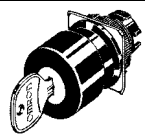
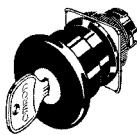
3. Switch Unit
Lighted/Non-lighted



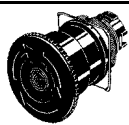
■ Emergency Stop Switch (Subassembly)

Operational Units

Non-lighted


Sealing capability and size	IP65 oil-resistant models		
	Small (30 dia.)	Medium (40 dia.)	Large (60 dia.)
Push-pull	---	A22E-MP 	A22E-LP 
Push-lock, Turn-reset	A22E-S 	A22E-M 	A22E-L 
Push-lock, Key-reset	A22E-SK 	A22E-MK 	---

Lighted

Sealing capability and size	IP65
	Medium (40 dia.)
Push-lock, Turn-reset	A22EL-M 


■ Lamp

LED

Rated voltage	6 VDC	6 VAC	12 VAC/DC	24 VAC/DC
 LED light				
Red	A22-6DR	A22-6AR	A22-12AR	A22-24AR

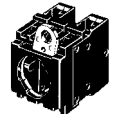
Note: For transformer lighting, use the A22-24AR.

Incandescent

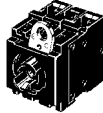
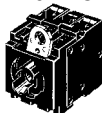
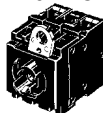
Rated voltage	5 VAC	14 VAC	28 VAC	130 VAC
	A22-5	A22-12	A22-24	A22-H1

Switch Unit (General-purpose Load)

Non-lighted

Switch Action	Contacts	Model
	SPST-NO	A22-10M
	SPST-NC	A22-01M
	SPST-NO + SPST-NC	A22-11M
	DPST-NO	A22-20M
	DPST-NC	A22-02M

Lighted

Switch Action	Contacts	Transformer circuits		
		Without transformer	With transformer	
			110 VAC 	220 VAC 
Momentary	SPST-NO	A22L-10M	A22L-10M-T1	A22L-10M-T2
	SPST-NC	A22L-01M	A22L-01M-T1	A22L-01M-T2
	SPST-NO + SPST-NC	A22L-11M	A22L-11M-T1	A22L-11M-T2
	DPST-NO	A22L-20M	A22L-20M-T1	A22L-20M-T2
	DPST-NC	A22L-02M	A22L-02M-T1	A22L-02M-T2

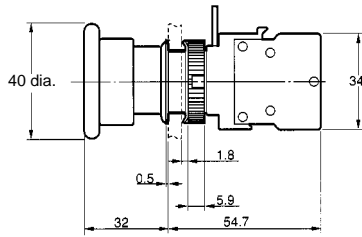
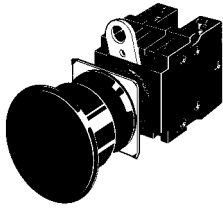
Note: The above illustrations are for the DPST-NO contact.

Dimensions

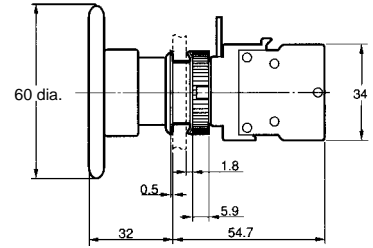
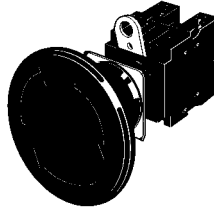
Note: All units are in millimeters unless otherwise indicated.

■ Non-lighted Models

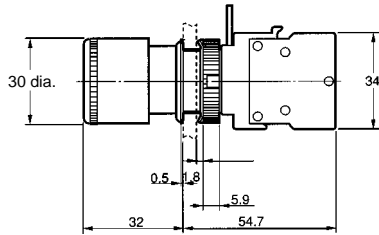
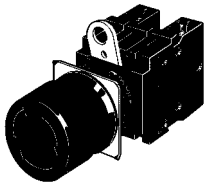
**40-dia. Push-pull
A22E-MP**



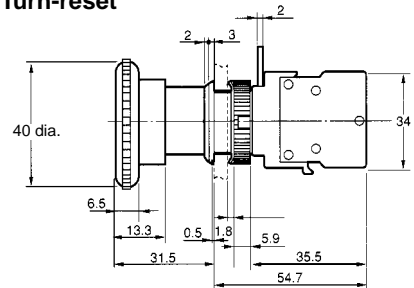
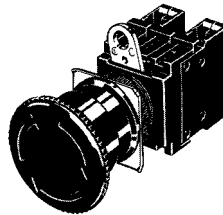
**60-dia Push-pull
A22E-LP**



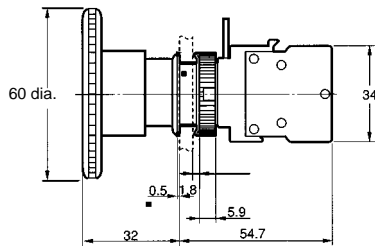
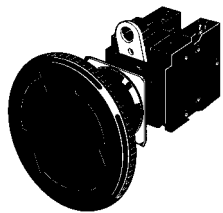
**30-dia. Push-lock, Turn-reset
A22E-S**



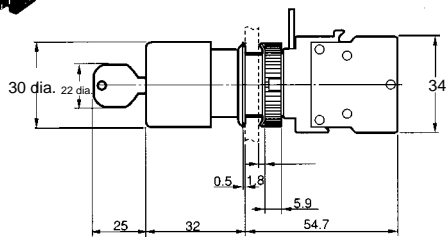
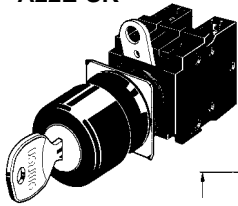
**40-dia. Push-lock, Turn-reset
A22E-M**



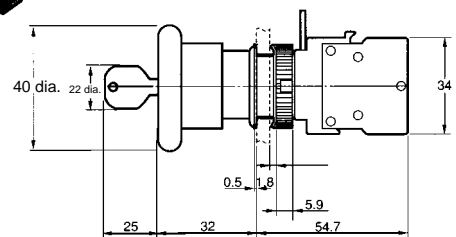
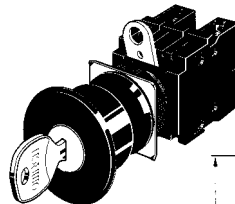
**60-dia. Push-lock, Turn-reset
A22E-L**



**30-dia. Push-lock, Key-reset
A22E-SK**

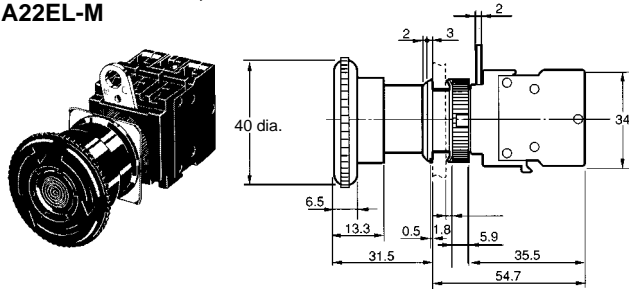


**40-dia. Push-lock, Key-reset
A22E-MK**



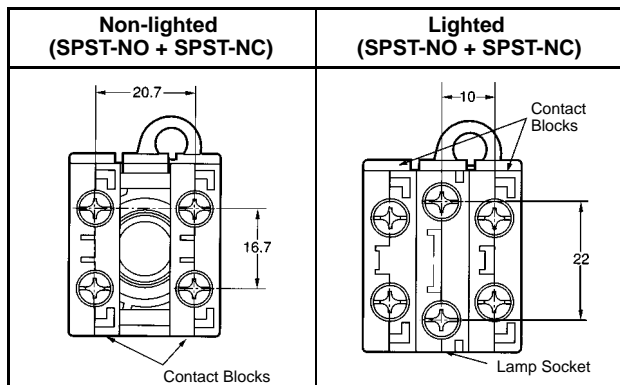
■ Lighted Model

40-dia. Push-lock, Turn-reset
A22EL-M

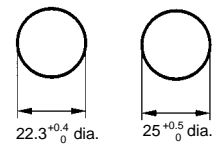


■ Terminal Arrangement

Terminal Arrangement (Bottom View)



Panel Cutout Dimensions



Note: When applying coating such as paint to the panel, the dimensions should be those after the application of coating. Lock fitting is provided as a standard item.

Terminal Connection

Type	Terminal connection
Non-lighted	<p>Bottom view</p>
Lighted without transformer	<p>Bottom view</p>
Lighted with transformer	<p>Bottom view</p>

Note: The above terminal connection diagrams are examples for SPST-NO + SPST-NC.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

22-dia and 25-dia. Round Indicator Series

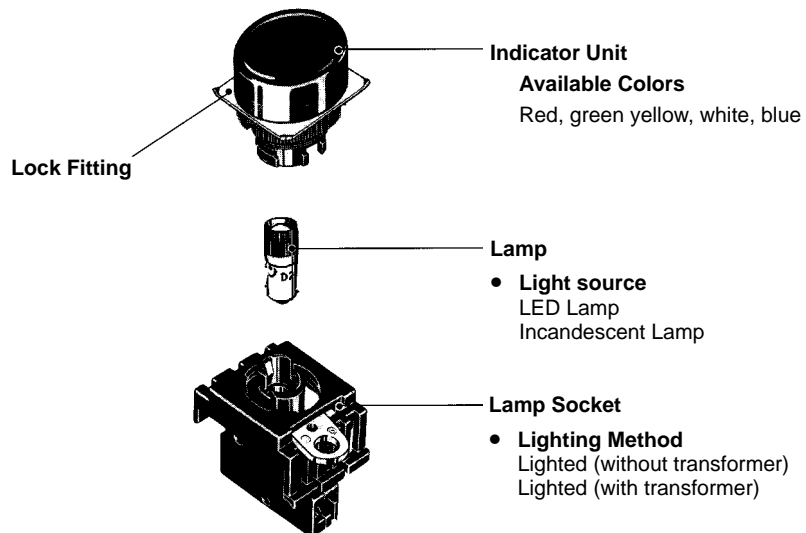
- Easy mounting and removal of Switch Unit.
- Use 25-dia. ring to install in 25-dia. panel cutouts.
- Increase wiring efficiency with three-row mounting of Switch Unit.
- Finger protection mechanism on Lamp Unit provided as a standard feature.
- IP65 oil resistance
EN60947-5-1



This product was manufactured at OMRON Izumo. OMRON Izumo has obtained approvals from international certification bodies for its quality system and environmental control system.

Ordering Information

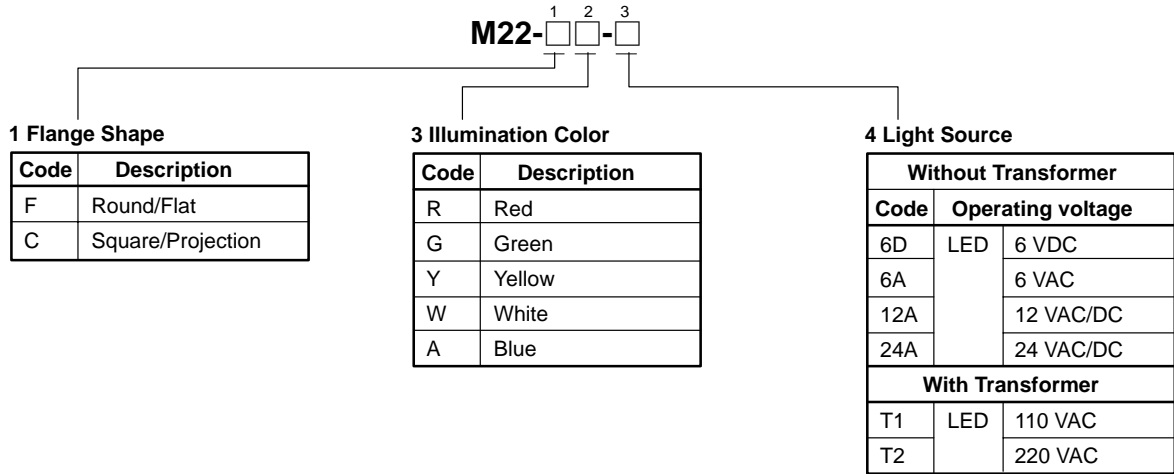
■ Construction



Refer to the pages 48 to 64 for, accessories, installation, and precautions.

■ Model Number Legend (Completely Assembled)

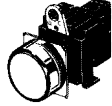

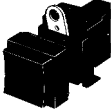
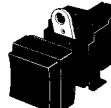
Shipped as a set which includes the Operational Unit, LED (lighted type only), and Lamp Socket.



Note: The LED lamp (24 VAC/DC) can be lit by directly applying 110 VAC/DC (220 VAC/DC) to the lamp terminal. LED incorporates the 24-VAC/DC type.

■ M22 Indicator (Completely Assembled)

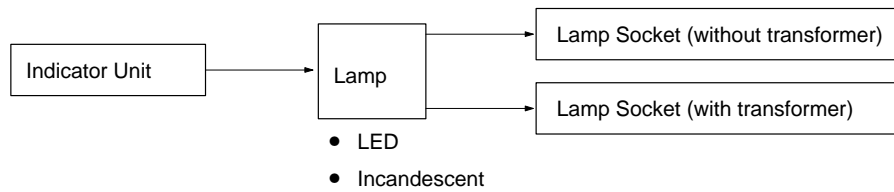
Indicator

Appearance	Lighting	Rated voltage	Model	Illumination color
Round/Flat Without transformer  M22-F	LED	6 VDC	M22-F□-6D	Insert one of the following letters into the box □. R (red) Y (yellow) G (green) W (white) A (blue)
		6 VAC	M22-F□-6A	
		12 VAC/DC	M22-F□-12A	
		24 VAC/DC	M22-F□-24A	
Round/Flat With transformer  M22-F	LED	110 VAC	M22-F□-T1	
		220 VAC	M22-F□-T2	
Square/Projection Without transformer  M22-C	LED	6 VDC	M22-C□-6D	
		6 VAC	M22-C□-6A	
		12 VAC/DC	M22-C□-12A	
		24 VAC/DC	M22-C□-24A	
Square/Projection With transformer  M22-C	LED	110 VAC	M22-C□-T1	
		220 VAC	M22-C□-T2	

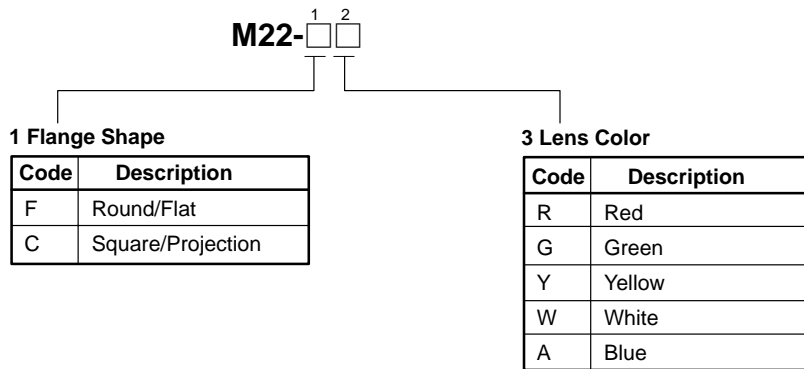
■ Model Number Legend (Subassembly)

The Indicator Unit, Lamp, or Lamp Socket can be ordered separately. Use them in combination for models that are not available as assembled units. These can also be used as inventory for maintenance parts.

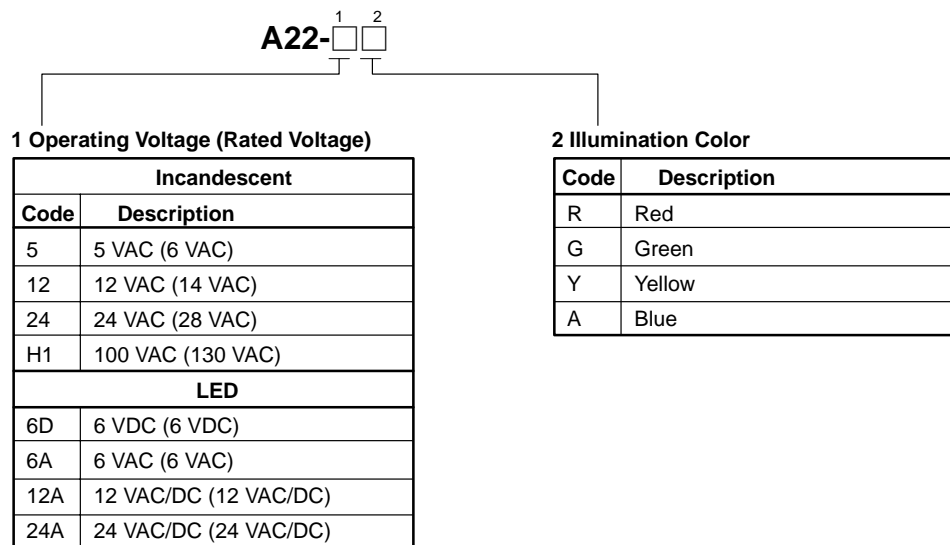
Unit Combinations



1. Indicator Unit



2. Lamp



3. Lamp Socket


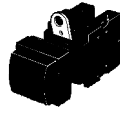
M22-00-□¹

1 Transformer

Code	Description
None	Without transformer
T1	110 VAC
T2	220 VAC


■ M22 Indicator (Subassembly)

Indicator

Appearance	IP65 oil-resistant	
	Color of Operational Unit	Model
Round 	Red	M22-FR
	Green	M22-FG
	Yellow	M22-FY
	White	M22-FW
	Blue	M22-FA
Square 	Red	M22-CR
	Green	M22-CG
	Yellow	M22-CY
	White	M22-CW
	Blue	M22-CA

Lamps


LED

Rated voltage	6 VDC	6 VAC	12 VAC/DC	24 VAC/DC
 LED light				
Red	A22-6DR	A22-6AR	A22-12AR	A22-24AR
Green	A22-6DG	A22-6AG	A22-12AG	A22-24AG
Yellow (see note 2)	A22-6DY	A22-6AY	A22-12AY	A22-24AY
Blue	A22-6DA	A22-6AA	A22-12AA	A22-24AA

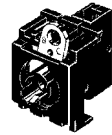
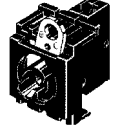
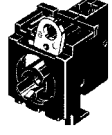
Note: 1. For transformer lighting, use the A22-24A□.

2. Used when the Indicator Unit color is yellow or white.

Incandescent

Rated voltage	6 VAC	14 VAC	28 VAC	130 VAC
	A22-5	A22-12	A22-24	A22-H1

Lamp Socket

Item			
Classification	Without transformer	With transformer (110 VAC)	With transformer (220 VAC)
Model	M22-00	M22-00-T1	M22-00-T2

Specifications

■ Ratings

LED Lamp

Rated voltage	Rated current	Operating voltage
6 VDC	60 mA	6 VDC \pm 5%
6 VAC/DC	60 mA	6 VAC/DC \pm 5%
12 VAC/DC	30 mA	12 VAC/DC \pm 5%
24 VAC/DC	15 mA	24 VAC/DC \pm 5%

Incandescent Lamp

Rated voltage	Rated current	Operating voltage
6 VDC	200 mA	5 V
14 VAC/DC	80 mA	12 V
28 VAC/DC	40 mA	24 V
130 VAC/DC	20 mA	100 V

■ Approved Standards

Recognized organization	Standards	File No.
UL, cUL (see note)	UL508	E41515
ASTA	EN60947-5-1	---

Note: UL: CSA C22 No. 14

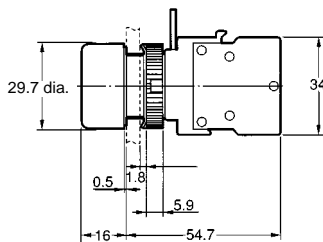
Transformer Lighting

Rated voltage	Operational voltage	Applicable lamp (BA9S/13□ gold)
110 VAC	95 to 115 VAC	LED Lamp (A22-24□)
220 VAC	190 to 230 VAC	

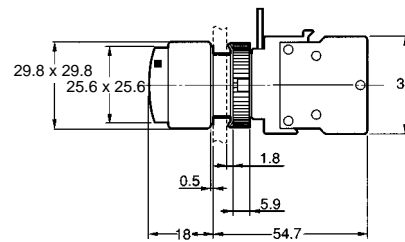
Dimensions

■ Indicators

Flat M22-F

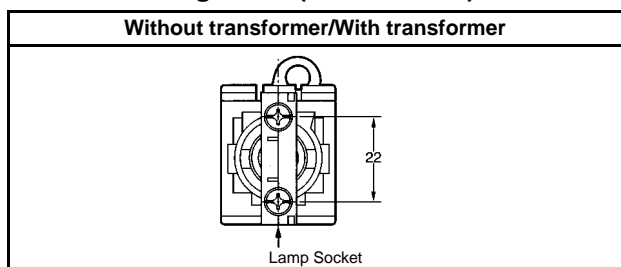


Square M22-C

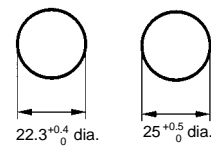


■ Terminal Arrangement

Terminal Arrangement (Bottom View)

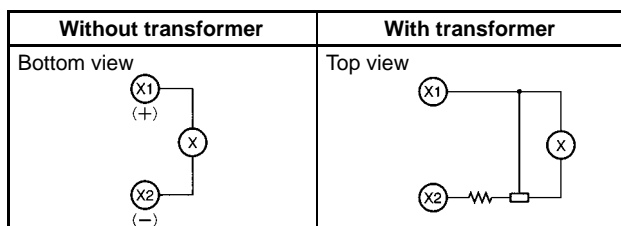


Panel Cutout Dimensions



Note: When applying coating such as paint to the panel, the dimensions should be those after the application of coating. Lock fitting is provided as a standard item.

Terminal Connection



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Specifications (Common to All Models)

■ Approved Standards

Recognized organization	Standards	File No.
UL, cUL (see note)	UL508	E41515
ASTA	EN60947-5-1	---

Note: UL: CSA C22 No. 14

■ Ratings

Contacts (General-purpose Load)

Rated carry current	Rated voltage	Rated current (A)			
		AC15 (inductive load)	AC12 (resistive load)	DC13 (inductive load)	DC12 (resistive load)
10	24 VAC	10	10	---	---
	110 VAC	5	10	---	---
	220 VAC	3	6	---	---
	380 VAC	2	3	---	---
	440 VAC	1	2	---	---
	24 VDC	---	---	1.5	10
	110 VDC	---	---	0.5	2
	220 VDC	---	---	0.2	0.6
	380 VDC	---	---	0.1	0.2

Note: 1. Rated current values are determined according to the testing conditions specified by JIS C4520. The above ratings were obtained by conducting tests under the following conditions as specified by JIS C4505.

- (1) Ambient temperature: 20°±2°C
- (2) Ambient humidity: 65±5%
- (3) Operating frequency: 20 operations/min

2. Minimum applied load: 10 mA, 5 VDC

Contacts (Microload)

Rated applied load	Minimum applied load
50 mA, 5 VDC (Resistive load)	1 mA, 5 VDC

LED Indicators without Transformer

Rated voltage	Rated current	Operating voltage
6 VDC	60 mA	6 VDC±5%
6 VAC	60 mA	6 VAC/DC±5%
12 VAC/DC	30 mA	12 VAC/DC±5%
24 VAC/DC	15 mA	24 VAC/DC±5%

Incandescent Lamp

Rated voltage	Rated current	Operating voltage
6 VDC	200 mA	5 V
14 VAC/DC	80 mA	12 V
28 VAC/DC	40 mA	24 V
130 VAC/DC	20 mA	100 V

Transformer Lighting

Rated voltage	Operational voltage	Applicable lamp (BA8S/13□ gold)
110 VAC	95 to 115 VAC	LED Lamp (A22-24A□)
220 VAC	190 to 230 VAC	

■ Characteristics

Item		Pushbutton Switches		Emergency Stop Switches		Knob-type Selector Switches		Key-type Selector Switch
		Non-lighted models: A22-F, A22-T, A22-G, A22-S, A22-C, A22-D, A22-H, A22-M	Lighted models: A22L-T, A22L-G, A22L-H, A22L-D, A22L-C	Non-lighted models: A22E	Lighted models: A22EL	Non-lighted models: A22S	Lighted models: A22W	Non-lighted models: A22K
Allowable operating frequency	Mechanical	Momentary operation: 60 operations/min max.		30 operations/min max.		Manual release: 30 operations/min max. Automatic release: 30 operations/min max.		
	Electrical	30 operations/min max.				30 operations/min max.		
Insulation resistance		100 MΩ min. (at 500 VDC)						
Dielectric strength		2,500 VAC, 50/60 Hz for 1 min between terminals of same polarity 2,500 VAC, 50/60 Hz for 1 min between terminals of different polarity and also between each terminal and ground						
Vibration resistance (see note 2)		Malfunction: 10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms)						
Shock resistance	Mechanical	1,000 m/s ² {100G}	1,000 m/s ² {100G}	1,000 m/s ² {100G}		1,000 m/s ² {100G}	1,000 m/s ² {100G}	1,000 m/s ² {100G}
	Malfunction (see note 2)	1,000 m/s ² {100G} max.	600 m/s ² {60G} max.	250 m/s ² {25G} max.		1,000 m/s ² {100G} max.	600 m/s ² {60G} max.	1,000 m/s ² {100G} max.
Life expectancy	Mechanical	Momentary operation: 5,000,000 operations min.		Momentary operation: 300,000 operations min.		500,000 operations min.	100,000 operations min.	500,000 operations min.
	Electrical	500,000 operations min.		300,000 operations min.	300,000 operations min.	500,000 operations min.	100,000 operations min.	500,000 operations min.
Ambient temperature (see note 1)		Operating: -20°C to 70°C Storage: -40°C to 70°C	Operating: -20°C to 55°C Storage: -40°C to 70°C	Operating: -20°C to 70°C Storage: -40°C to 70°C	Operating: -20°C to 55°C Storage: -40°C to 70°C	Operating: -20°C to 70°C Storage: -40°C to 70°C	Operating: -20°C to 55°C Storage: -40°C to 70°C	Operating: -20°C to 70°C Storage: -40°C to 70°C
Ambient humidity		Operating: 35% to 85%						
Degree of protection		IP65 (oil-resistant)	IP65	IP65 (oil-resistant)	IP65	IP65 (oil-resistant)	IP65	IP65 (oil-resistant)
Electric shock protection class		Class II						
PTI (tracking characteristic)		175						
Degree of contamination		3 (IEC947-5-1)						










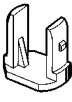

Note: 1. With no icing or condensation.
2. Malfunction within 1 ms.

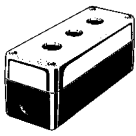





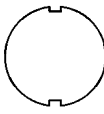
■ Operating Characteristics (for SPST-NO/SPST-NC)





Item	Pushbutton Switches	Emergency Stop Switches	Knob-type Selector Switch		Key-type Selector Switch	
	Lighted Non-lighted Pushbutton Switches	Push-lock turn-reset system	Manual release	Automatic release	Manual release	Automatic release
	A22-F, A22-G, A22-C, A22-S, A22-T, A22-H, A22-D, A22-M, A22L-T, A22L-H, A22L-D, A22L-G, A22L-C	A22E	A22S, A22W	A22S, A22W	A22K	
Total travel force (TTF) max.	29.4 N {3.0 kgf}	44.1 N {4.5 kgf}	0.34 N • m {3.5 kgf • cm} (see note)	0.25 N • m {2.5 kgf • cm} for two notches (see note)	0.34 N {3.5 gf} (see note)	0.25 N • m {2.5 kgf • cm} for three notches (see note)
				0.34 N • m {3.5 kgf • cm} for three notches		0.34 N • m {3.5 kgf • cm} for three notches
Total travel (TT)	5.5 mm max.	10±1 mm	Approx. 90° for two notches (Approx. 45° for three notches)		Approx. 90° for two notches	
Releasing force (RF) min.	---	0.25 N • m max. {2.5 kgf • cm} (see note)	0.34 N • m max. {3.5 kgf • cm} (see note)	---	0.34 N • m max. {3.5 kgf • cm} (see note)	---

Note: Rotation torque for Emergency Stop Pushbutton, Knob-type Selector, and Key-type Selector Switches.

Accessories (Common to All Models) (Order Separately)

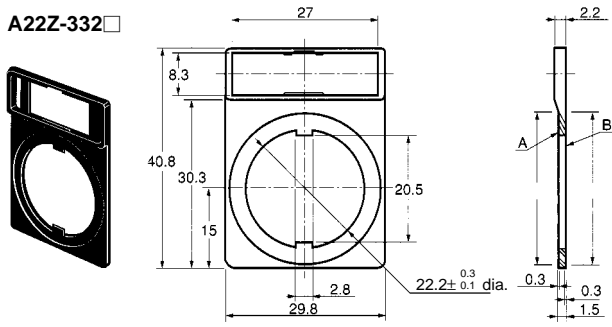
Item		Appearance	Classification		Model	Remarks
Contact Blocks			SPST-NO	General-purpose load	A22-10	Provided as standard. Order Contact Blocks only when adding or replacing them.
				Microload	A22-10S	
			SPST-NC	General-purpose load	A22-01	
				Microload	A22-01S	
			DPST-NO	General-purpose load	A22-20	
				Microload	A22-20S	
			DPST-NC	General-purpose load	A22-02	
				Microload	A22-02S	
Lamp Sockets			Direct lighting		A22-TN	Used when changing the lighting method.
			Transformer illumination	110 VAC	A22-T1	
				220 VAC	A22-T2	
Mounting Latches			For momentary models		A22-3200	Provided as standard. Order Mounting Latches only when mounting Contact Blocks or Lamp Sockets that are purchased individually.
			For latching models		A22-3210	
Legend Plate Frames	Standard size		With Snap-in Legend Plate (Without text)	White	A22Z-3321	Snap-in Legend Plate is acrylic.
				Red	A22Z-3322	
				Black	A22Z-3323	
			Without Snap-in Legend Plate		A22Z-3320	
	Large size		With Snap-in Legend Plate (Without text)	White	A22Z-3331	
				Red	A22Z-3332	
				Black	A22Z-3333	
			Without Snap-in Legend Plate		A22Z-3330	
Lock Fitting			Round		A22Z-3360	The body is equipped with a Lock Fitting. This Lock Fitting is used when a more secure lock feature is required.
Metallic Bezel Rings			For flat or projection models		A22Z-3580	Replace with the standard model. Material: nickel-plated zinc
			For full-guard models		A22Z-3582	
Sealing Caps			For flat models		A22Z-3600F	Used to prevent dust or water from entering the Operational Unit. Color: opaque Material: silicon
			For projection models		A22Z-3600T	
			For full-guard models		A22Z-3600G	
Color Lenses			Red		A22Z-30TR	Used for changing the Operational Unit color of the Push-button Switch.
			Green		A22Z-30TG	
			Yellow		A22Z-30TY	
			White		A22Z-30TW	
			Blue		A22Z-30TA	
Three-throw Spacers			For Pushbutton Switches		A22Z-3003	Used when mounting three Non-lighted Switch Units. Cannot be used with Lighted Emergency Stop Switches. (See page 32.)
Hole Plug			Round		A22Z-3550	Can be plugged into pre-cut panel holes for future expansion. The color is black.

Item		Appearance	Classification		Model	Remarks
Control Boxes (Enclosures)		One hole	Exclusively for A22	A22Z-B101	For those designed exclusively for A22, DPST-NO or DPST-NC Switches cannot be used. For those applicable to A3T, latching A22-series models, DPST-NO or DPST-NC Switches cannot be used. Material: Polycarbonate resin	
			Applicable to A3T	A22Z-B201		
		One hole, yellow box (for emergency stop)	Exclusively for A22	A22Z-B101Y		
			Applicable to A3T	A22Z-B201Y		
		Two holes	Exclusively for A22	A22Z-B102		
			Applicable to A3T	A22Z-B202		
Three holes	Exclusively for A22	A22Z-B103				
	Applicable to A3T	A22Z-B203				
Connectors			Applicable cable diameter (mm)	7 to 9 dia.	A22Z-3500-1	Plastic connector used to extend a cable from the Switch Box. (See page 61.)
				9 to 11 dia.	A22Z-3500-2	
25-dia. Ring			---		A22Z-R25	Can be fit into a 25-dia. hole in the panel. (See page 54.) Since this is not attached to the main body, order separately.
Snap-in Legend Plates	Standard size		Without text	Black	A22Z-3443B	Attached to the Standard-size Legend Plate Frame. Material: Acrylic (See page 55.)
				Red	A22Z-3443R	
				White	A22Z-3443W	
				Transparent	A22Z-3443C	
			White text on red background	○	A22Z-3443R-2	
				STOP	A22Z-3443R-4	
			White text on black background	|	A22Z-3443B-1	
				START	A22Z-3443B-3	
				ON	A22Z-3443B-5	
				OFF	A22Z-3443B-6	
	UP	A22Z-3443B-7				
	DOWN	A22Z-3443B-8				
	Large size		Without text	Black	A22Z-3453B	Attached to the Large-size Legend Plate Frame Material: Acrylic (See page 55.)
				Red	A22Z-3453R	
White				A22Z-3453W		
Transparent				A22Z-3453C		
For Emergency Stop Switch		60-dia. round plate with black letters on a yellow background		A22Z-3466-1	"EMERGENCY STOP" is engraved on the plate. Used as an Emergency Stop Switch Legend Plate	
		90-dia. round plate with black letters on a yellow background		A22Z-3476-1		
Character Films			No print (Round)		A22Z-3460	After printing on a film, affix to the indicator plate of the Lighted Pushbutton Switch. (The back is coated with adhesive.)
Character print (Round)	|		A22Z-3460-1			
	○		A22Z-3460-2			
	START		A22Z-3460-3			
	STOP		A22Z-3460-4			
No print (Square)				A22Z-3480		

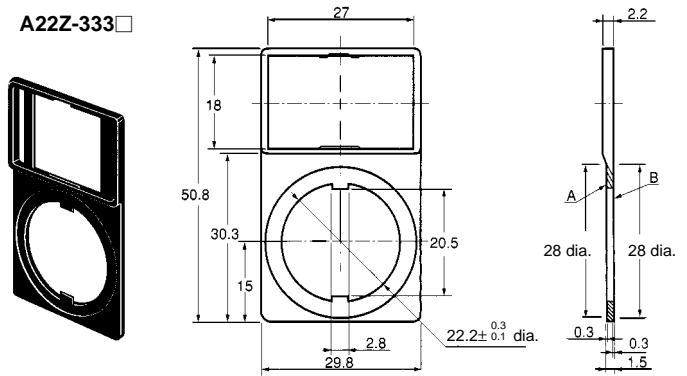
Item	Appearance	Classification	Model	Remarks
Lamp Extractor		---	A22Z-3901	Rubber tool used to easily replace Lamps
Tightening Wrench		---	A22Z-3905	Tool used to tighten nuts from the back of the panel
Lens Tightening Tool		---	A22Z-3908	Used for replacing the cap of the Half-guard Pushbutton Switch.
Lens Puller		---	A3PJ-5080	Used for removing the lens from the indicator of the Square Lighted Pushbutton Switch.

Legend Plate Frames

A22Z-332

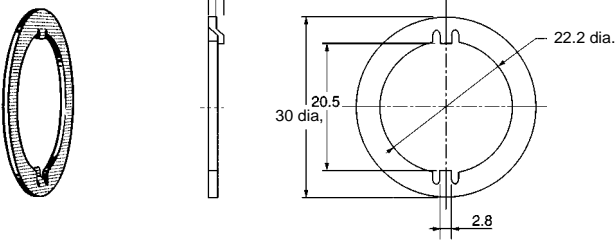


A22Z-333



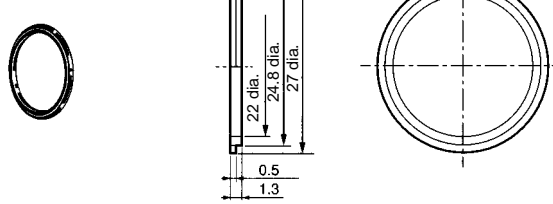
Lock Fitting

A22Z-3360



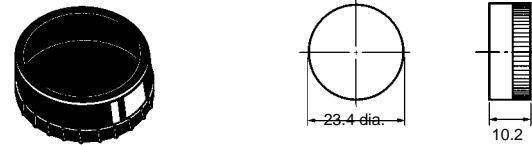
25-dia. Ring

A22Z-R25



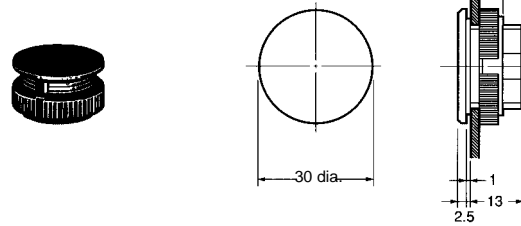
Color Lens

A22L-30T



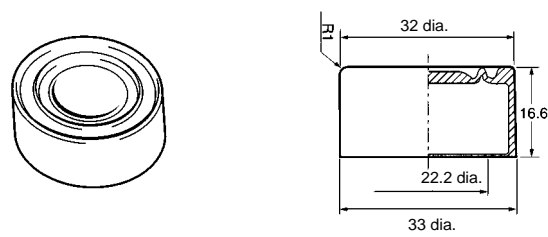
Hole Plug (Round)

A22Z-3530

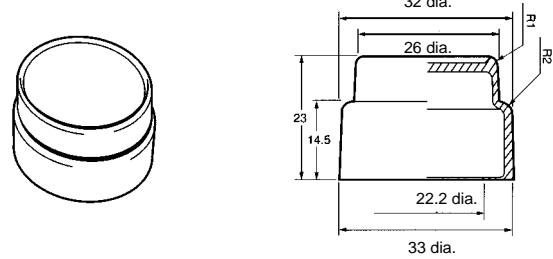


Sealing Caps

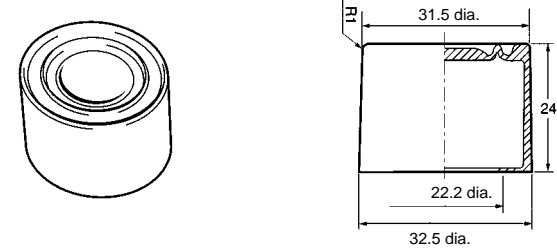
**For Flat Models
A22Z-3600F**



**For Projection Models
A22Z-3600T**

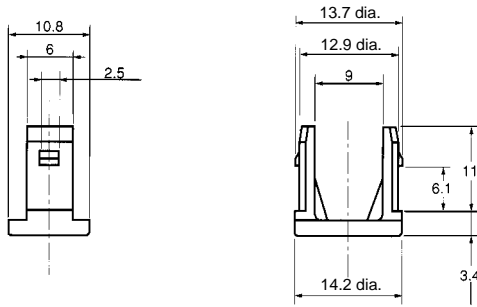
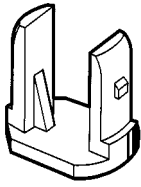


**For Full-guard Models
A22Z-3600G**



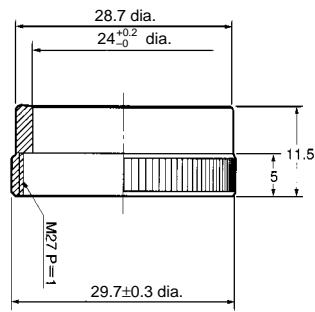
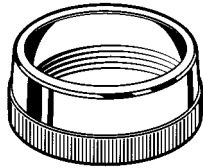
Three-throw Spacer

A22Z-3003

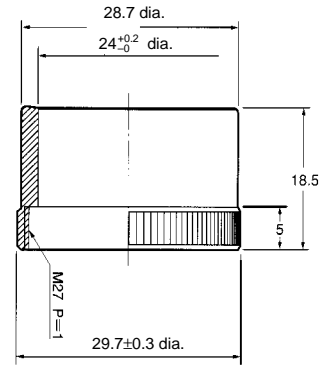
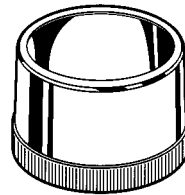


Metallic Bezel Rings

For Flat/Projection Models
A22Z-3580

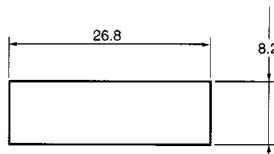
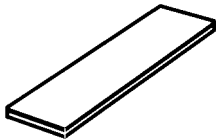


For Full-guard Models
A22Z-3582

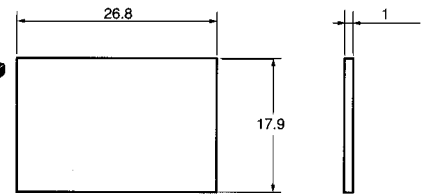
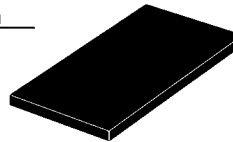


Snap-in Legend Plates

For General-purpose Models
A22L-3443 □ □



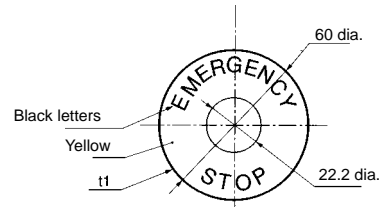
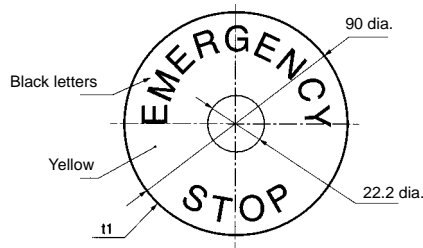
For Large Models
A22Z-3453 □



For Emergency-stop Models

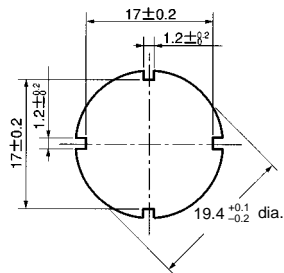
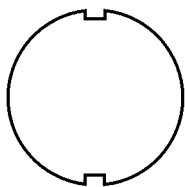
A22Z-3476-1

A22Z-3466-1

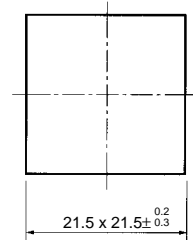
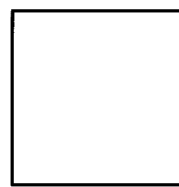


Character Film

For Round Models
A22Z-3460 □

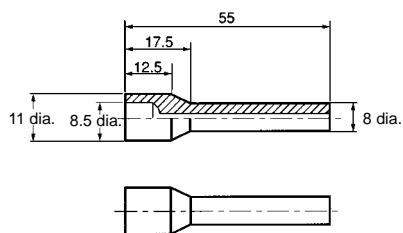


For Square Models
A22Z-3480



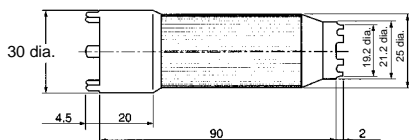
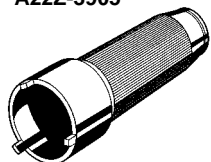
Lamp Extractor

A22Z-3901



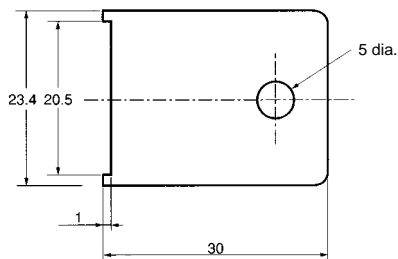
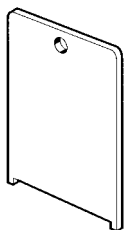
Tightening Wrench

A22Z-3905



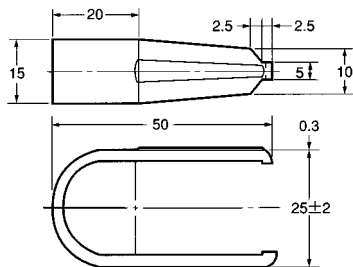
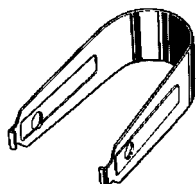
Lens Tightening Tool

A22Z-3908



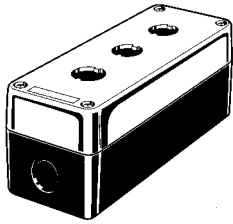
Lens Puller

A3PJ-5080

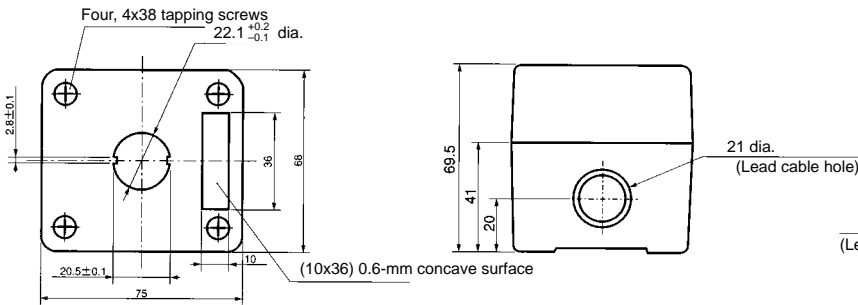


Control Box (Enclosure)

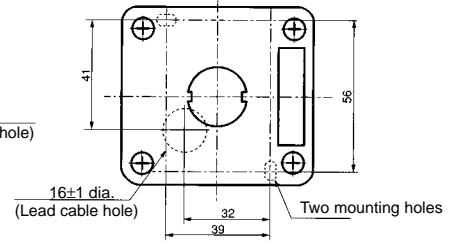
A22Z-B10



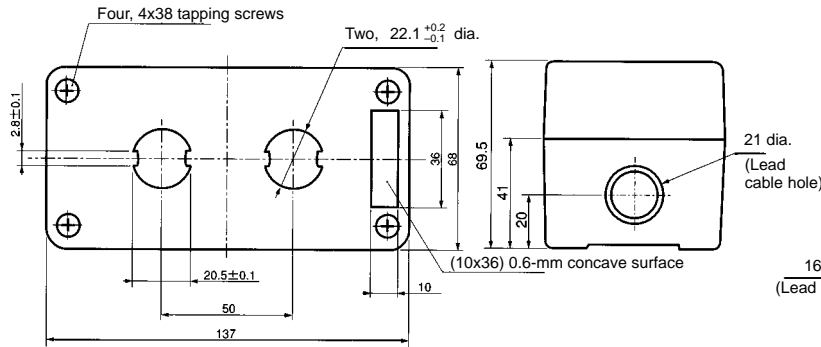
A22Z-B101 (One Hole)
A22Z-B101Y



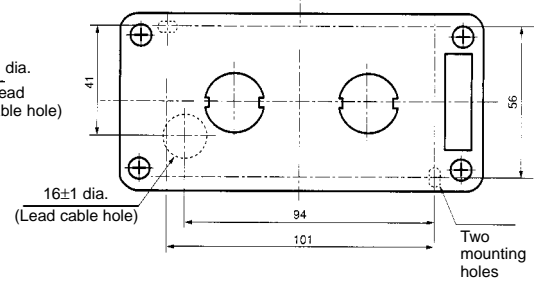
Cable Port Hole (Top View)



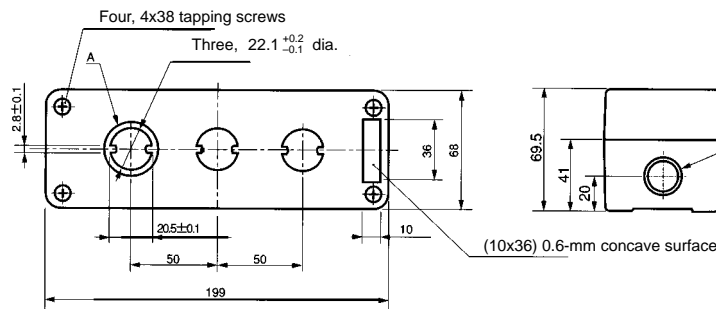
A22Z-B102 (Two Holes)



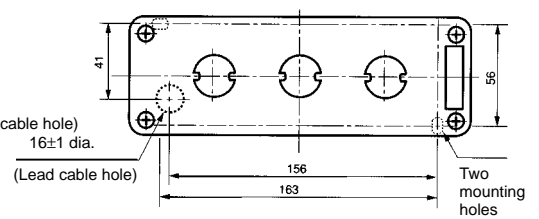
Cable Port Hole (Top View)



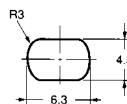
A22Z-B103 (Three Holes)



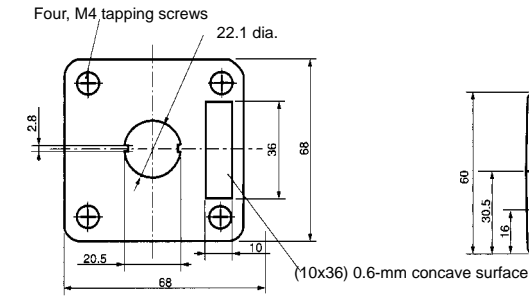
Cable Port Hole (Top View)



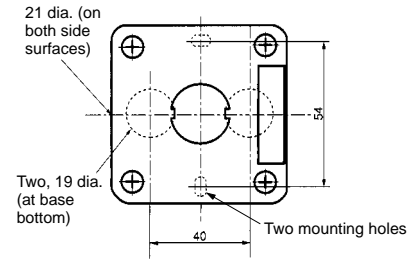
Panel Mounting Hole



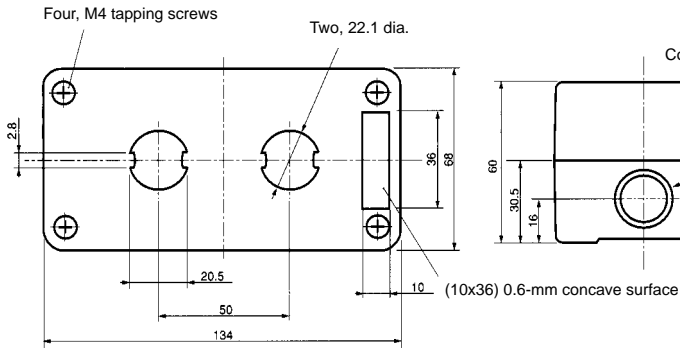
A22Z-B201 (One hole)
A22Z-B201Y



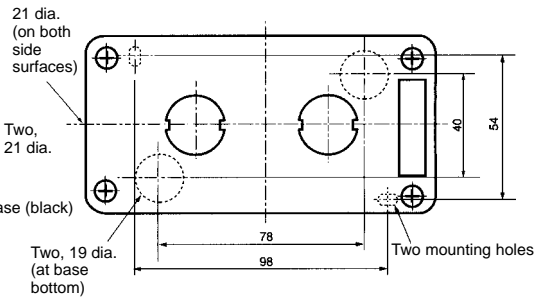
Cable Port Hole (Top View)



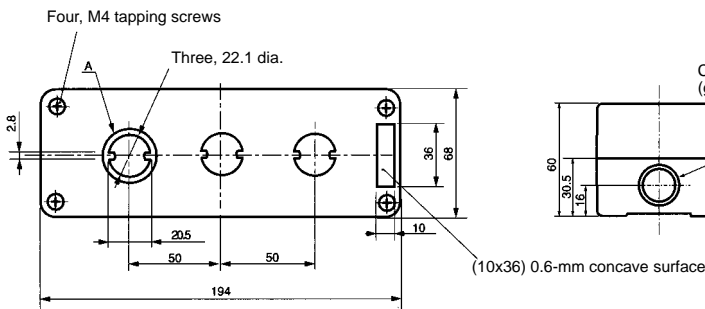
A22Z-B202 (Two holes)



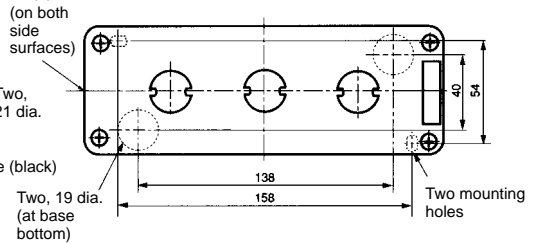
Cable Port Hole (Top View)



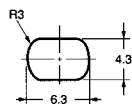
A22Z-B203 (Three holes)



Cable Port Hole (Top View)



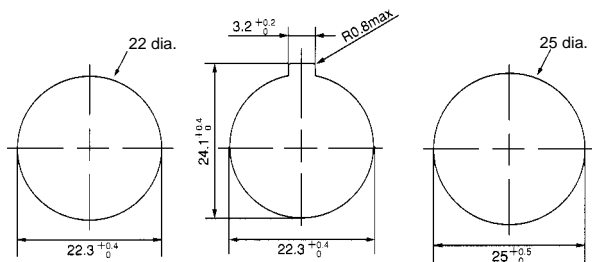
Panel Mounting Hole



Installation (Common to All Models)

■ Mounting the Panel

Panel Hole Dimensions

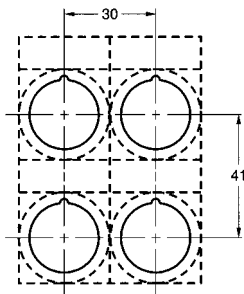


For 25-dia. holes, always use 25-dia. Rings. (Since the cutout dimensions are large, IP65 cannot be guaranteed unless 25-dia. Rings are used.)

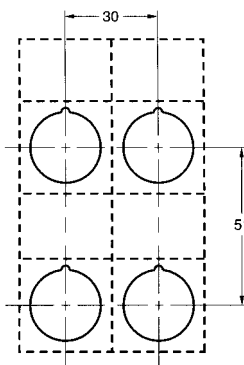
If outer surface treatment such as coating is performed for the panel, the panel dimensions after outer surface treatment must meet the specified panel dimensions.

Matrix Installation

1. The following panel hole dimensions apply when Switch Units and the Standard-size Legend Plate Frame Lock Fitting are mounted.



2. The following panel hole dimensions apply when the Large-size Legend Plate Frame is mounted.



Locking should be applied toward the Engraving Plate.

Note: The above dimensions are the smallest-possible mounting dimensions. However, these dimensions do not apply to large Pushbutton Switches. For large Pushbutton Switches, determine the distance between holes, taking the Operational Unit and Legend Plate Frame into account.

Mounting the Operational Unit on the Panel

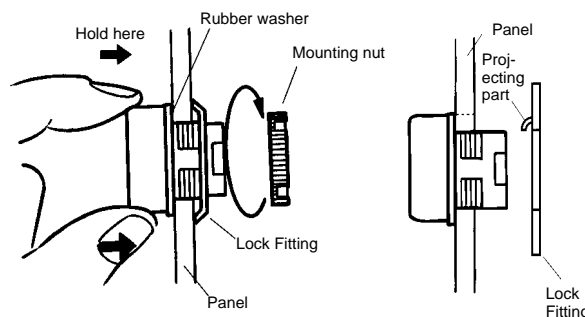
Insert the Operational Unit from the front surface of the panel, insert the Lock Fitting and the mounting nut from the terminal side, then tighten the nut. Before tightening, check that the rubber washer is present between the Operational Unit and the panel.

When using a Legend Plate Frame, put one rubber washer each between the Legend Plate Frame and the panel and between the Operational Unit and the Legend Plate Frame. (One rubber washer will be provided when one Legend Plate Frame is ordered.)

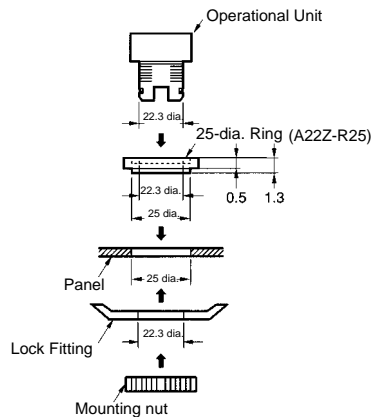
Align the Lock Fitting with the groove in the casing, then insert the Lock Fitting so that its edge is located on the panel side.

Tighten the mounting nut at a torque of 0.98 to 1.96 N • m {10 to 20 kgf • cm}.

When using a Lock Ring, replace with the supplied Lock Fitting, insert the projecting part into the lock slot, and then tighten the mounting nut.

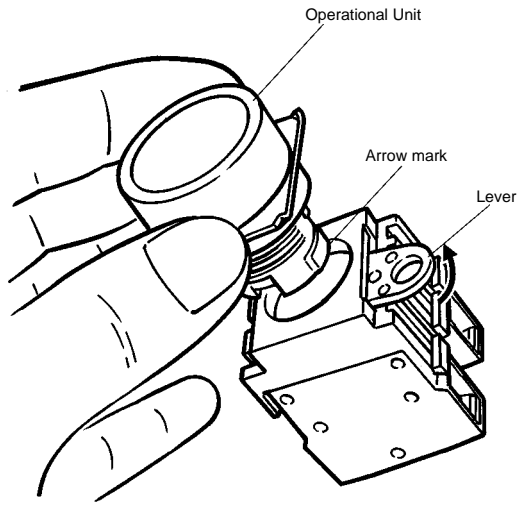


When the panel cutout dimension is 25 dia., remove the supplied rubber washer and mount the 25-dia. Ring as shown below. (Since the A22Z-R25 is not attached to the main body, order separately.)



Mounting the Switch on the Operational Unit

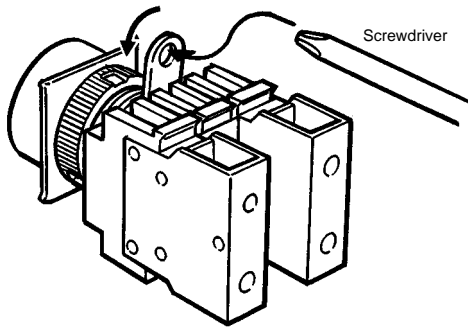
Insert the Operational Unit into the Switch Unit, aligning the arrow mark inscribed on the Operational Unit with the lever on the Switch Unit, then move the lever in the direction indicated by the arrow in the following figure.



Removing the Switch

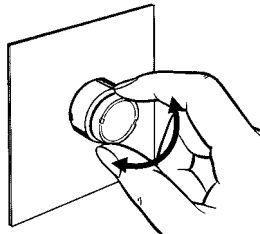
Move the lever in the direction indicated by the arrow in the following figure, then pull the Operational Unit or the Switch Unit.

Since the lever has a hole with an inside diameter of 6.5 mm, the lever can be moved in the specified direction by inserting a screwdriver into the hole and then moving the screwdriver.



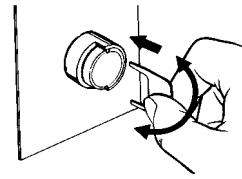
■ Mounting/Replacing the Color Lens Projection, Fall-guard

Grip and rotate the Color Lens with your fingers.



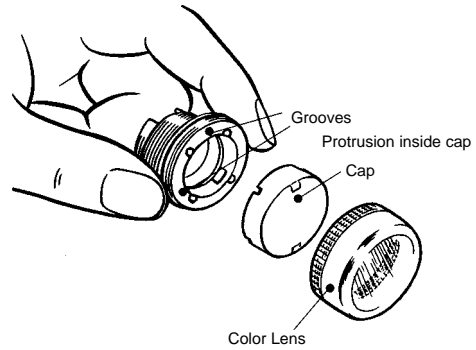
Half-guard Indicators

Put the tips of the Lens Tightening Tool (A22Z-3908) into the Color Lens slot and turn the Tool.



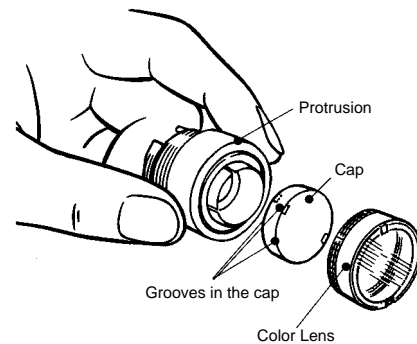
■ Assembling the Cap Lighted Pushbutton Switch

Mount the Color Lens so that the protrusions inside the cap fit into the grooves in the Operational Unit.



Indicator

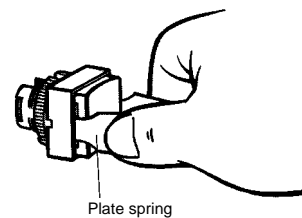
Mount the Color Lens so that the protrusions inside the Operational Unit fit into the grooves in the cap.



Square Pushbutton/Indicator

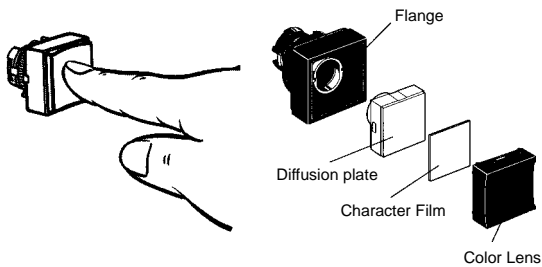
Removing the Color Lens:

Insert the protruding tip of the Lens Puller (A3PJ-5080) into the lens slot, hold the plate spring, and pull them to remove the Color Lens.



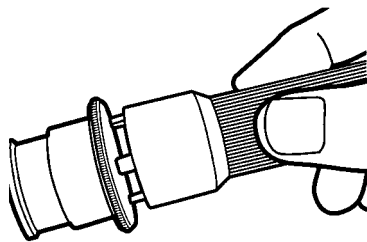
Mounting the Color Lens:

Mount the Color Lens on the flange and firmly push the Color Lens. When the Color Lens is inserted, check whether it operates properly. When replacing the Lamp, remove the Color Lens and diffusion plate with fingers or Lens Puller. Attach the Character Film properly so that it fits inside the protruding part of the diffusion plate. Then, match the diffusion plate to the square flange and insert the Lens.



Emergency Stop Switch

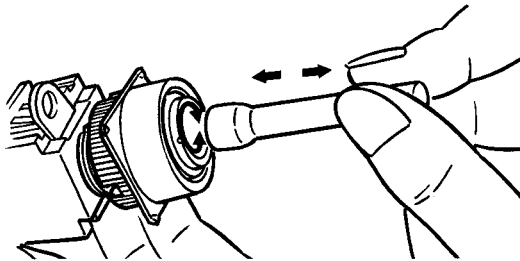
Insert the protrusion of the Tightening Wrench (A22Z-3905) into the Cap slot and then turn to remove the Cap.



Installing/Replacing the Lamp

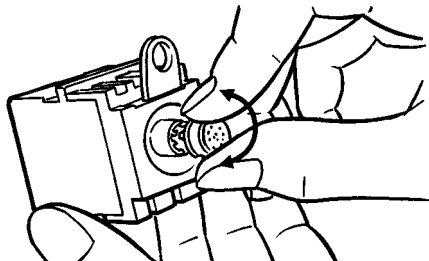
Installing from the Panel Surface

Insert the Lamp Extractor (A22Z-3901) into the lamp, then rotate the Extractor while pressing it.



Installing/Replacing on the Switch Unit

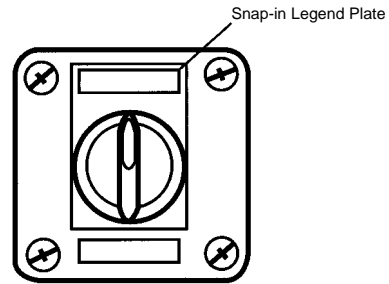
Grip the indicator with your fingers, then rotate the indicator while pressing it against the Switch Unit.



Control Box (Enclosure)

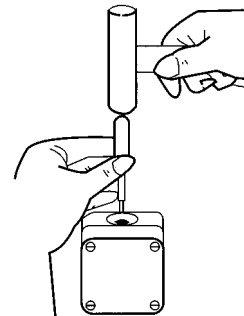
Mounting the Switch

The Standard-size Legend Plate Frame can be mounted. Mount the Frame as shown in the following diagram. Mount the Switch in the same way as for an ordinary panel.



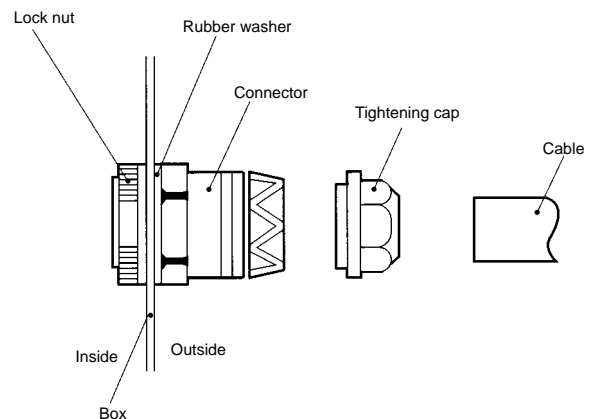
Creating a Cable Port Hole

Place the tip of a screwdriver on the surface where the cable port hole is to be created with the cover attached and strike the screwdriver to punch a hole. Attempts to punch a hole on the other side of the case will damage the Box.



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.

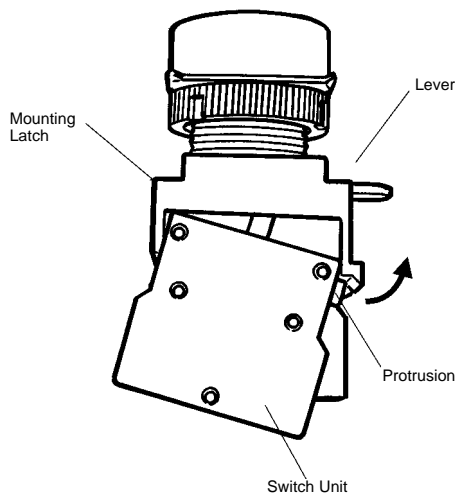


Cable diameter	Connector
7 to 9 dia.	A22Z-3500-1
9 to 11 dia.	A22Z-3500-2

■ Installing/Removing the Switch Unit

Installing the Switch Unit

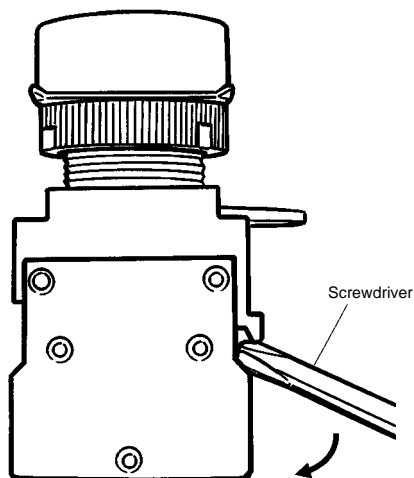
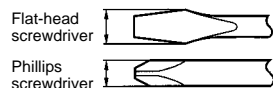
Hook the small protrusion on the Switch Unit into the groove on the other side of the lever, then push up the Switch Unit in the direction indicated by the arrow in the figure below.



Removing the Switch Unit

Insert a screwdriver between the Mounting Latch and the Switch Unit, then push down the screwdriver in the direction indicated by the arrow in the following figure.

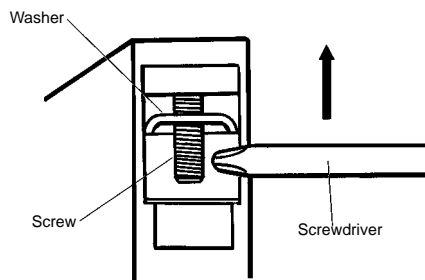
Use either of the following screwdrivers.



■ Wiring

Wiring Round Crimp Terminals

Loosen the terminal screw from the Switch Unit until it completely comes off the groove, insert a screwdriver as shown in the following figure, then push up the washer in the direction indicated by the arrow to temporarily secure it. Now, a round crimp terminal can be connected. After inserting the terminal, tighten the screws to complete wiring.

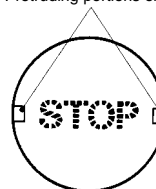


■ Engraving

Engrave the characters on the surface on the Cap. Make sure that the characters are aligned parallel to the imaginary line connecting the two protruding portions to the left and right of the Cap.

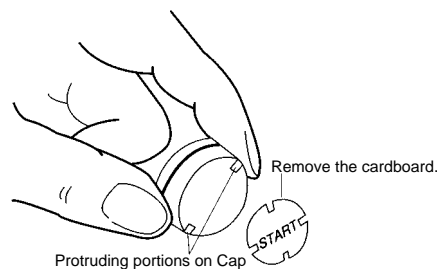
The characters must not be engraved deeper than 0.5 mm. Apply an alcohol-based paint coating, such as melamine, alkyd, or acrylic resin paint coating, to the engraved characters.

Protruding portions on Cap



■ Affixing Character Film

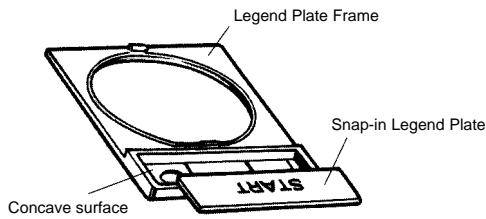
Hold the Cap, remove the cardboard on the Film, and attach the Film to the Cap. Make sure that the protruding portions of the Cap engage the cutout portions of the Film and that the characters are aligned parallel to the imaginary line connecting the two protruding portions to the left and right of the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



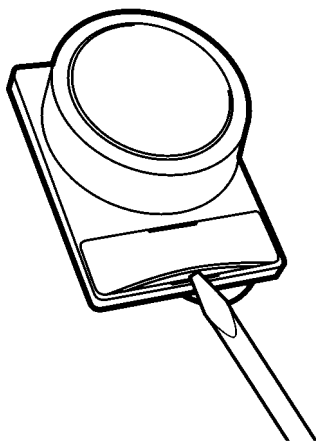
■ Mounting and Dismounting Snap-in Legend

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.

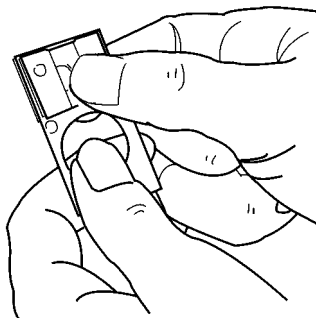


To easily remove the Snap-in Legend Plate from the Legend Plate Frame mounted to the panel, insert a Tool with a thin tip into the space between the Snap-in Legend Plate and the Legend Plate Frame.



The Snap-in Legend Plate is easily removed by pressing the Snap-in 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.



■ Engraving Method

Material: Acrylic

Engrave the characters directly on the matted side of the Snap-in Legend Plate.

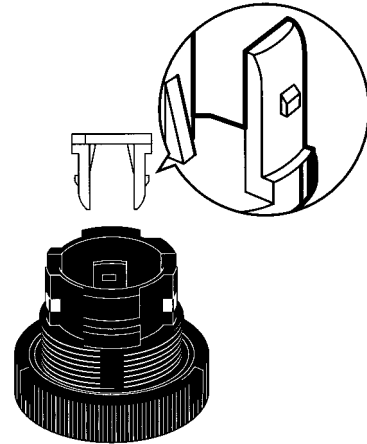
The characters must be engraved no deeper than 0.5 mm.

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 to the characters. Then apply paint coating of a different color to the remaining part of the Snap-in Legend Plate.

■ Mounting Three-throw Spacer

Press and secure the two protruding portions of the Three-throw Spacer to the two indented portions of the inner side of the control panel.



Precautions (Common to All Models)

! WARNING

Do not apply a voltage between the incandescent lamp and the terminal that is greater than the rated voltage. If the incandescent lamp is broken, the Operational Units may pop out.

Always turn OFF the power and wait for 10 minutes before replacing the incandescent lamp. If the lamp is replaced immediately after the power is turned OFF, the remaining heat may cause burns.

■ Correct Use

Mounting

Always make sure that the power is turned OFF before mounting, removing, or wiring the Switch, or performing maintenance.

Do not tighten the mounting ring more than necessary using tools such as pointed-nose pliers. Doing so will damage the mounting ring. The tightening torque is 0.98 to 1.96 N • m {10 to 20 kgf • cm}.

The panel thickness is 1 to 5 mm.

Wiring

After wiring the Switch, maintain an appropriate clearance and creepage distance.

When DC-specific LEDs are used, wire the Switch so that the X1 terminal is positive.

Terminal screws must be Phillips or slotted M3.5 screws with a square washer.

The tightening torque is 1.08 to 1.27 N • m {11 to 13 kgf • cm}.

Single wires, stranded wires, and crimp terminals can be connected to the Switch.

Operating Environment

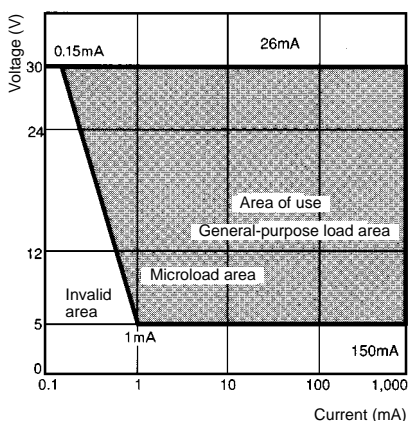
The IP65 model is designed with a protective structure so that it will not sustain damage if it is subjected to water from any direction to the front of the panel.

Using the Microload

Insert a contact protection circuit, if necessary, to prevent the reduction of life expectancy due to extreme wear on the contacts caused by loads where inrush current occurs when the contact is opened and closed.

The minimum applicable load is the N-level reference value. This value indicates the malfunction reference level for the reliability level of 60% (λ_{60}) (conforming to JIS C5003).

The equation, $\lambda_{60} = 0.5 \times 10^{-4}/\text{time}$ indicates that the estimated malfunction rate is less than 1/2,000,000 with a reliability level of 60%.



LEDs

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: 26 mm max.

Power consumption: 2.6 W max.

Others

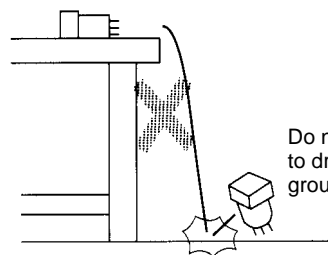
The oil-resistant IP65 uses NBR rubber and is resistant to general cutting oil and cooling oil. Some particular oils cannot be used with the oil-resistant IP65, however, so contact your OMRON representative for details.

If the panel is to be finished with coating, etc., make sure that the panel meets the specified dimensions after the coating.

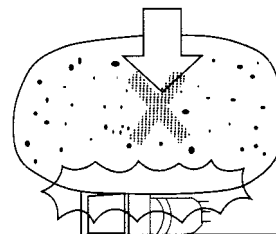
Do not subject the Switch to extreme shock or vibration. Doing so will cause malfunctions and damage to the Switch.

Do not let sharp objects come into contact with the Switches that are made of resin. Doing so will damage the Switches, causing scratches on the outside of the Operational Units, and malfunction.

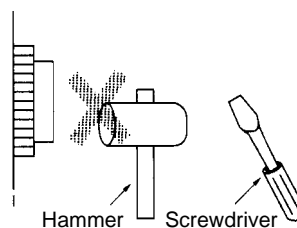
When handling the Switches, do not throw or drop them.



Do not allow the Switch to drop and hit the ground.



Do not place or drop heavy objects on the Switch.



Do not operate the Switch with hard or sharp objects.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.