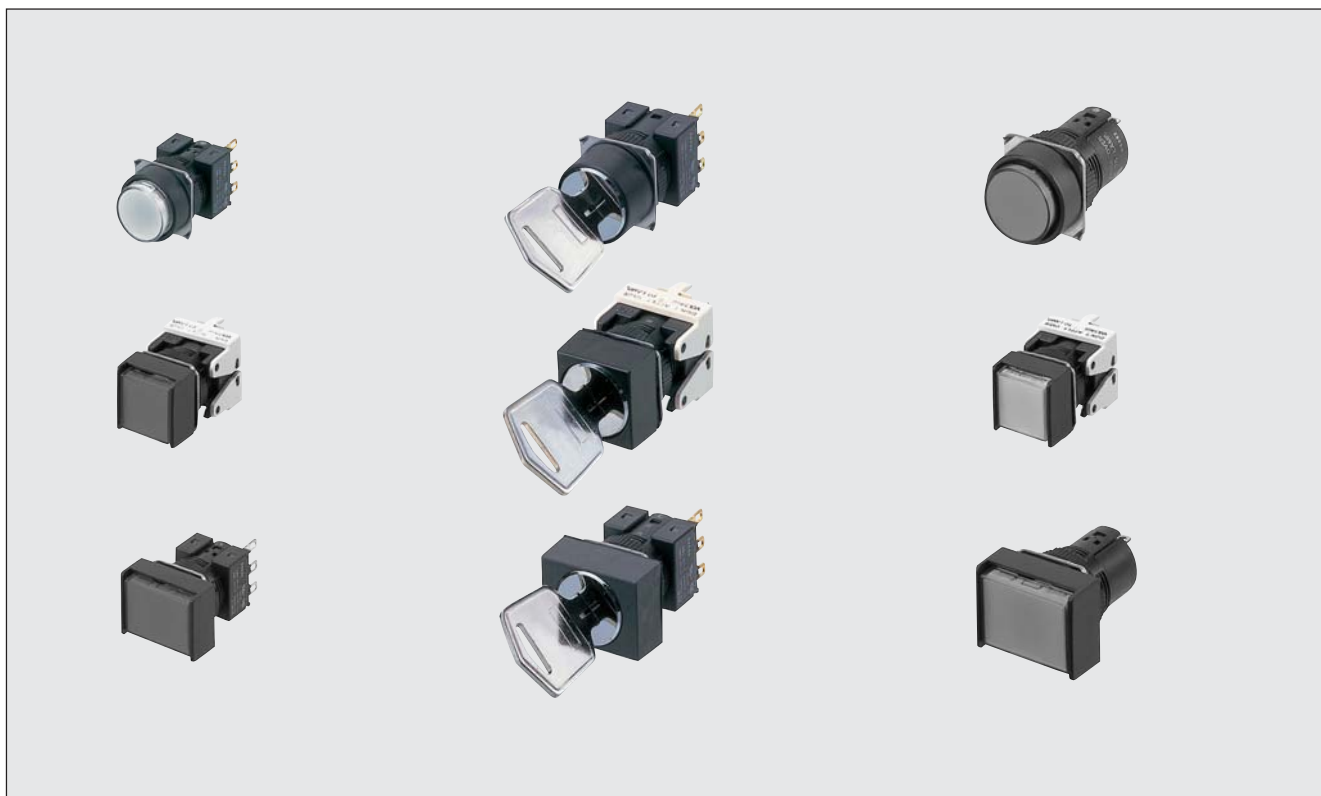


Pushbutton Switches

K6 Series



■ Features

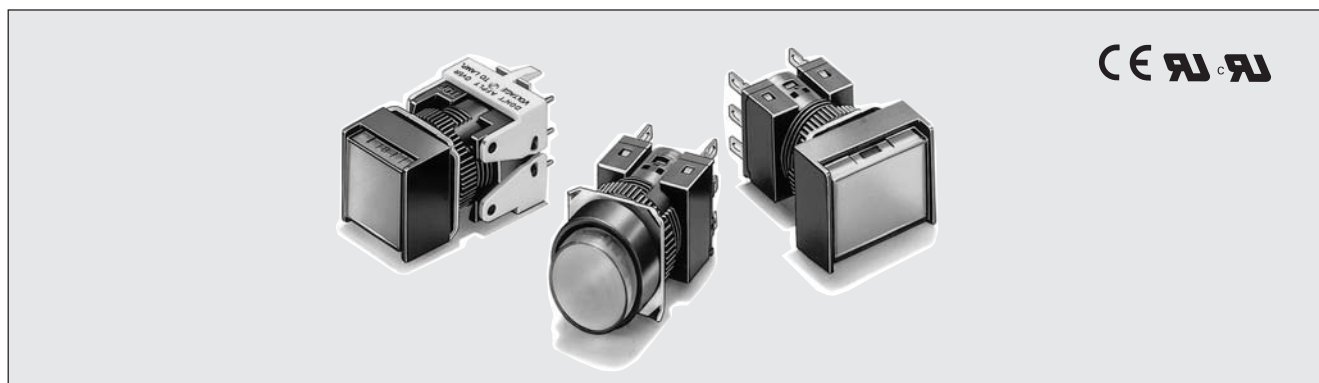
- Separable structure of the short body in 28.5mm depth.
- Wiring work reduction to one third with the quick connector.
- Printed circuit board type is also available in the series.
- Applicable both to general load switching and mill-ampere load switching.
- Energy saving and improved visibility with the high brightness LED.



NOTICE

- The LED light, when used, works on a few mill amperes. Accordingly, when used in a circuit with induced or leakage current, the LED may be unintentionally lit. To prevent this error, insert a resistor in parallel across the indicator terminals.
- When soldering, set the soldering iron to below 270°C, and solder in 3 seconds.
- Use the quality solder of 6:4 (60% tin and 40% lead). Also use the flux not containing chlorine or the chlorine-contained flux may cause corrosion.
- Unless otherwise mentioned, all dimensions are indicated in "mm" in this book.

■ Pushbutton Switches (Separate Unit Type) (Lighting / Non-lighting)



■ Separate Unit Type, Cylindrical $\phi 16$ Series

- Short body in 28.5mm, the smallest class in the industry.
- The switch unit is detachable.
- Applicable both to general load and mill ampere load switching.
- Terminal arrangement for easier wiring.
- Certified under EN60943-5-1 and IEC947-5-1.
- RoHS directive compliant.

■ Structure

Operation section

Cap

Engraving plate

Diffusion plate

Reflection plunger

● Color of operation section

• Lighting type (LED)

Red Yellow Green White Blue

• Lighting type (Incandescent lamp)

Red Yellow Green White Blue

• Non-lighting

Red Yellow Green White Blue Black

● Protection degree
IP65

Case section

● Flange shape
Round (KL1 ☐)



Square (KL2 ☐)



Rectangular (KL3 ☐)



Lamp section

Socket section

● Specifications

125V AC, 5A

250V AC, 3A








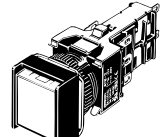
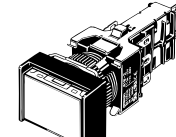
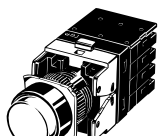
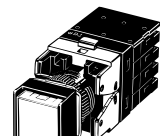
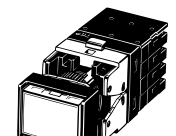
30V DC, 3A

Minimum applicable load

5V DC, 1mA

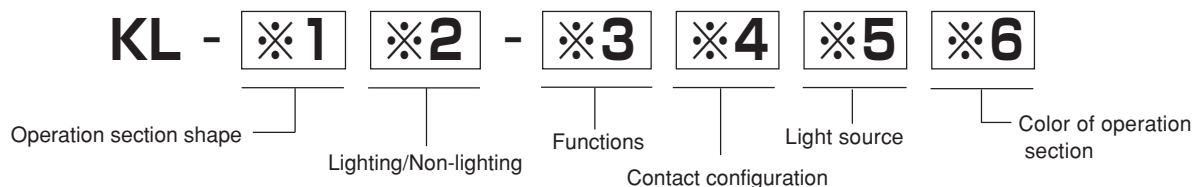
● Kind of terminal
Soldering terminal / tab terminal common to #110
PCB terminal
Quick connector

Product Models

	Shape		
	Round	Square	Rectangular
Soldering terminal	 KL1□ Series	 KL2□ Series	 KL3□ Series
PCB terminal			
Voltage reduction lighting			
Quick connector			

■ **Set Model ...** (Operation section + Case section assembly) and (Lamp section + Socket section) combined can be delivered in a set.

Model Designation



※1 Operation section shape

Code	Shape	
1	Round	Protrusion
2	Square	Bi-directional guard
3	Rectangular	Bi-directional guard

※2 Lighting/Non-lighting

Code	Description
B	Non-lighting
L	Lighting

※3 Functions

Code	Function
M	Momentary
A	Alternate

"Momentary operation: Self-resetting
"Alternate operation: Self-holding

※4 Contact configuration

Code	Contact	Terminal
1	1C	Soldering terminal
2	2C	

※5 Light source

Code	Lamp	Operating Voltage	Rated Voltage
None	Non-lighting		
5	Incan-descent lamp	5V AC/DC	6V AC/DC
12		12V AC/DC	14V AC/DC
24		24V AC/DC	28V AC/DC
5E	LED	5V DC	5V DC
12E		12V AC/DC	12V AC/DC
24E		24V AC/DC	24V AC/DC

B-input: Contact configuration

Code	Lamp	Operating Voltage	Rated Voltage
T1	LED	100/110V AC/DC	110V AC/DC
T2		200/220V AC/DC	220V AC/DC

-Soldering terminal is available for 100V type only.
-No voltage reduction unit is available for PCB terminal.
-Enquire to our representative about the prices and delivery.

B-input: Cpmctact cpmfогiratopm

Code	Contact	Terminal
1P	1C	PCB terminal
2P	2C	
2S	2C	Quick connector

-Only 2c contacts are available with the quick connector.
-Enquire to our representative about the prices and delivery.

※6 Color of operation section

Code	Function
R	Red
Y	Yellow
PY	Pure yellow
G	Green (Incandescent lamp only)
GY	Green (LED only)
W	White
A	Blue
B	Black (non-lighting only)

■ **Set Model...** (Operation section + Case section assembly) and (Lamp section + Socket section) combined can be delivered in a set.

● **Soldering terminal**

Round

IP 65 Oil resistant



(KL1L / KL1B)

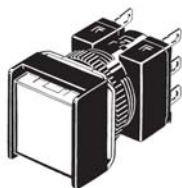
Number of Outputs	Lighting Device	Operating Voltage	Momentary Operation (Self-resetting)	Alternate Operation (Self-holding)	Color of Operation Section in Code and (Color)*	
1c	LED lamp	5V DC	KL1L-M15E <input type="checkbox"/>	KL1L-A15E <input type="checkbox"/>	R (Red)	Y (Yellow)
		12V AC/DC	KL1L-M112E <input type="checkbox"/>	KL1L-A112E <input type="checkbox"/>	PY (Pure yellow)	G (Green)
		24V AC/DC	KL1L-M124E <input type="checkbox"/>	KL1L-A124E <input type="checkbox"/>	A (Blue)	W (White)
	Incandescent lamp	5V AC/DC	KL1L-M15 <input type="checkbox"/>	KL1L-A15 <input type="checkbox"/>	R (Red)	Y (Yellow)
		12V AC/DC	KL1L-M112 <input type="checkbox"/>	KL1L-A112 <input type="checkbox"/>	PY (Pure yellow)	G (Green)
		24V AC/DC	KL1L-M124 <input type="checkbox"/>	KL1L-A124 <input type="checkbox"/>	W (White)	A (Blue)
	Non-lighting		KL1B-M1 <input type="checkbox"/>	KL1B-A1 <input type="checkbox"/>	B (Black) **	
2c	LED lamp	5V DC	KL1L-M25E <input type="checkbox"/>	KL1L-A25E <input type="checkbox"/>	R (Red)	Y (Yellow)
		12V AC/DC	KL1L-M212E <input type="checkbox"/>	KL1L-A212E <input type="checkbox"/>	PY (Pure yellow)	G (Green)
		24V AC/DC	KL1L-M224E <input type="checkbox"/>	KL1L-A224E <input type="checkbox"/>	A (Blue)	W (White)
	Incandescent lamp	5V AC/DC	KL1L-M25 <input type="checkbox"/>	KL1L-A25 <input type="checkbox"/>	R (Red)	Y (Yellow)
		12V AC/DC	KL1L-M212 <input type="checkbox"/>	KL1L-A212 <input type="checkbox"/>	PY (Pure yellow)	G (Green)
		24V AC/DC	KL1L-M224 <input type="checkbox"/>	KL1L-A224 <input type="checkbox"/>	W (White)	A (Blue)
	Non-lighting		KL1B-M2 <input type="checkbox"/>	KL1B-A2 <input type="checkbox"/>	B (Black) **	

* The color of operation section should be designated at of the model name.

** B (Black) is available only for non-lighting.

Square

IP 65 Oil resistant



(KL2L / KL2B)

Number of Outputs	Lighting Device	Operating Voltage	Momentary Operation (Self-resetting)	Alternate Operation (Self-holding)	Color of Operation Section in Code and (Color)*
1c	LED lamp	5V DC	KL2L-M15E <input type="checkbox"/>	KL2L-A15E <input type="checkbox"/>	R (Red) Y (Yellow)
		12V AC/DC	KL2L-M112E <input type="checkbox"/>	KL2L-A112E <input type="checkbox"/>	PY (Pure yellow) G (Green)
		24V AC/DC	KL2L-M124E <input type="checkbox"/>	KL2L-A124E <input type="checkbox"/>	A (Blue) W (White)
	Incandescent lamp	5V AC/DC	KL2L-M15 <input type="checkbox"/>	KL2L-A15 <input type="checkbox"/>	R (Red) Y (Yellow)
		12V AC/DC	KL2L-M112 <input type="checkbox"/>	KL2L-A112 <input type="checkbox"/>	PY (Pure yellow) G (Green)
		24V AC/DC	KL2L-M124 <input type="checkbox"/>	KL2L-A124 <input type="checkbox"/>	W (White) A (Blue)
	Non-lighting		KL2B-M1 <input type="checkbox"/>	KL2B-A1 <input type="checkbox"/>	B (Black) **
2c	LED lamp	5V DC	KL2L-M25E <input type="checkbox"/>	KL2L-A25E <input type="checkbox"/>	R (Red) Y (Yellow)
		12V AC/DC	KL2L-M212E <input type="checkbox"/>	KL2L-A212E <input type="checkbox"/>	PY (Pure yellow) G (Green)
		24V AC/DC	KL2L-M224E <input type="checkbox"/>	KL2L-A224E <input type="checkbox"/>	A (Blue) W (White)
	Incandescent lamp	5V AC/DC	KL2L-M25 <input type="checkbox"/>	KL2L-A25 <input type="checkbox"/>	R (Red) Y (Yellow)
		12V AC/DC	KL2L-M212 <input type="checkbox"/>	KL2L-A212 <input type="checkbox"/>	PY (Pure yellow) G (Green)
		24V AC/DC	KL2L-M224 <input type="checkbox"/>	KL2L-A224 <input type="checkbox"/>	W (White) A (Blue)
	Non-lighting		KL2B-M2 <input type="checkbox"/>	KL2B-A2 <input type="checkbox"/>	B (Black) **

* The color of operation section should be designated at of the model name.

** B (Black) is available only for non-lighting.

■ **Set Model...** (Operation section + Case section assembly) and (Lamp section + Socket section) combined can be delivered in a set.



Rectangular

IP 65 Oil resistant

(KL3L / KL3B)


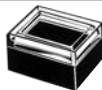

Number of Outputs	Lighting Device	Operating Voltage	Momentary Operation (Self-resetting)	Alternate Operation (Self-holding)	Color of Operation Section in Code and (Color)*
1c	LED lamp	5V DC	KL3L-M15E <input type="checkbox"/>	KL3L-A15E <input type="checkbox"/>	R (Red) Y (Yellow)
		12V AC/DC	KL3L-M112E <input type="checkbox"/>	KL3L-A112E <input type="checkbox"/>	PY (Pure yellow) G (Green)
		24V AC/DC	KL3L-M124E <input type="checkbox"/>	KL3L-A124E <input type="checkbox"/>	A (Blue) W (White)
	Incandescent lamp	5V AC/DC	KL3L-M15 <input type="checkbox"/>	KL3L-A15 <input type="checkbox"/>	R (Red) Y (Yellow)
		12V AC/DC	KL3L-M112 <input type="checkbox"/>	KL3L-A112 <input type="checkbox"/>	PY (Pure yellow) G (Green)
		24V AC/DC	KL3L-M124 <input type="checkbox"/>	KL3L-A124 <input type="checkbox"/>	W (White) A (Blue)
	Non-lighting		KL3B-M1 <input type="checkbox"/>	KL3B-A1 <input type="checkbox"/>	B (Black) **
2c	LED lamp	5V DC	KL3L-M25E <input type="checkbox"/>	KL3L-A25E <input type="checkbox"/>	R (Red) Y (Yellow)
		12V AC/DC	KL3L-M212E <input type="checkbox"/>	KL3L-A212E <input type="checkbox"/>	PY (Pure yellow) G (Green)
		24V AC/DC	KL3L-M224E <input type="checkbox"/>	KL3L-A224E <input type="checkbox"/>	A (Blue) W (White)
	Incandescent lamp	5V AC/DC	KL3L-M25 <input type="checkbox"/>	KL3L-A25 <input type="checkbox"/>	R (Red) Y (Yellow)
		12V AC/DC	KL3L-M212 <input type="checkbox"/>	KL3L-A212 <input type="checkbox"/>	PY (Pure yellow) G (Green)
		24V AC/DC	KL3L-M224 <input type="checkbox"/>	KL3L-A224 <input type="checkbox"/>	W (White) A (Blue)
	Non-lighting		KL3B-M2 <input type="checkbox"/>	KL3B-A2 <input type="checkbox"/>	B (Black) **

* The color of operation section should be designated at of the model name.

** B (Black) is available only for non-lighting.

■ Accessories / Parts / Tools




● Accessories

Category	Shape	Compatible Type	Model	Notes for Use
Switch guard		Round, Square	KLZ2-5050	Cannot be used with the dustproof cover simultaneously
		Rectangular	KLZ3-5050	
Dustproof cover		Round	KLZ1-5060	Cannot be used with the switch guard simultaneously
		Square	KLZ2-5060	
		Rectangular	KLZ3-5060	
Panel plug		Round	KLZ1-3003	Can supplement the already cut panel apertures Protection degree: IP40, Color: Black
		Square	KLZ2-3003	
		Rectangular	KLZ3-3003	

● Parts

Category	Shape	Compatible Type		Model	Notes for Use
Engraving plate		Round	Milky white	KLZ1-5204	- Attached to the operation section for the standards (transparent)
		Square		KLZ2-5204	- The quality of the material in polyarylate resin.
		Rectangular		KLZ3-5204	
Color cap	Round 	Common to Incandescent lamp, LED, and non-lighting.	White	KLZ □ -5101W	- Designate either of the followings into □ : 1. Round 2. Square 3. Rectangular - Attached to the operation section for the standards. Require for a color change - Select either to the color of LED lamp which is used.
			Red	KLZ □ -5101R	
	Yellow		KLZ □ -5101Y		
	Pure yellow		KLZ □ -5101PY		
	Blue		KLZ □ -5101A		
	Square 	Only for LED	Green	KLZ □ -5101GY	
		Common to Incandescent lamp and non-lighting	Green	KLZ □ -5101G	
	Rectangular 		Only for non-lighting	Black	

● Tools

Category	Shape	Model	Applicable Product Category					Notes for Use
			Push-button	Knob selector	Key selector	Emergency stop	Indicator	
Removing tool for operation section		KC3P-5080	●	—	—	—	●	Convenient for taking out the operation section Nut fastener
Nut fastener		KLZ-3004	●	●	●	●	●	Convenient for consecutive mounting. Fasten with torque 0.49N-m or less
Removing tool for lamps / switches		KLZ-5080	●	●	●	●	●	Convenient for taking out lamps or switches with solder terminal

Approved Safety Standards

• UL, cUL (File No. E223434)

5A 125V AC, 3A 250V AC (General Use)
3A 30V DC (Resistive)

Ratings

• Switches

Rated Voltage (V)	Resistive Load (A)
125 AC	5
250 AC	3
30 DC	3

Minimum applicable load: 1mA at 5V DC

The test conditions are as follows.

- (1) Load: Resistive
- (2) Physical states: No vibration or no shock applied.
- (3) Ambient temperature: 20° ±2°C
- (4) Operation frequency: 20 times/minute

• Contact type

Name	Contact Type
Double throw (c-contact)	

• LED Lamps

Rated Voltage	Rated Current	Operating Voltage	Incorporated
5V DC	30mA(15mA)	5V±5% AC/DC	33Ω(68Ω)
12V AC/DC	15mA	12V±5% AC/DC	270Ω(560Ω)
24V AC/DC	10mA	24V±5% AC/DC	1600Ω(2000Ω)

Note: In () are values for red color.

• LED Lamps

Rated Voltage	Rated Current	Operating Voltage
6V AC/DC	60mA	5V AC/DC
14V AC/DC	40mA	12V AC/DC
28V AC/DC	24mA	24V AC/DC

Specifications

• Switch section

Item	Category	Pushbutton Switch
Allowable Operation Frequency	Mechanical	Momentary operation: Max. 120 times/minute Alternate operation: Max. 60 times/minute *
	Electrical	Max. 20 times/minute *
Insulation Resistance		100MΩ or more (by 500V DC megohmmeter)
Withstand Voltage	Between Same Polarities	1000V AC, 50/60Hz, 1 minute **
	Between Opposite Polarities	2000V AC, 50/60Hz, 1 minute **
	Each terminal - Ground	2000V AC, 50/60Hz, 1 minute **
	Between Lamp Terminals	1000V AC, 50/60Hz, 1 minute **
Vibration	Malfunctioning	Double amplitude 1.5mm, 10 ~ 55Hz (Malfunctioning within 1ms)
Shock Resistance	Permanence	500m/s ²
	Malfunctioning	Max. 150m/s ² (Malfunctioning within 1ms)
Life Duration	Mechanical	Momentary operation: 2 million times or more Alternate operation: 200 thousand times or more
	Electrical	100 thousand times or more
Protection Class against Electrical Shock		Class II
PTI (Tracking Characteristics)		175
Degree of Contamination		3 (IEC947-5-1)
Weight		Approx. 10g (Lighting type 2c with soldering terminals)
Operating Ambient Temperature		-10 ~ +55°C (No freezing or condensation)
Operating Ambient Humidity		35 ~ 85%RH
Storage Ambient Temperature		-25 ~ +65°C (No freezing or condensation)

* One time should include a "set" and a "reset".

** Without LED or incandescent lamp attached.

• Quick connector section

Item	Category	Quick Connector		
Recommended Wire		Stranded wire 0.5mm ² or single wire ϕ 0.8mm		
Applicable Wire and Breaking Strength	Stranded Wire	0.3mm ²	0.5mm ²	0.75mm ²
	Single Wire	ϕ 0.5mm	ϕ 0.8mm	ϕ 1.0mm
	Strength	10N	20N	30N
Removing Length of Insulation		10±1mm		
Standards Conformity		JIS C 2811 Industrial Terminal Block		

• Operational Characteristics

Features	Category	Pushbutton Switch	
		IP65 Oil Resistance	
		1c	2c
Maximum Operating Force OF		2.94N	4.91N
Minimum Releasing Force RF		0.29N	
Total Travel TT		Approx. 3mm	
Maximum Pretravel PT		2.5mm	
* Minimum Lock Stroke (LTA)		0.5mm	

* Lock stroke is only for alternate operation.

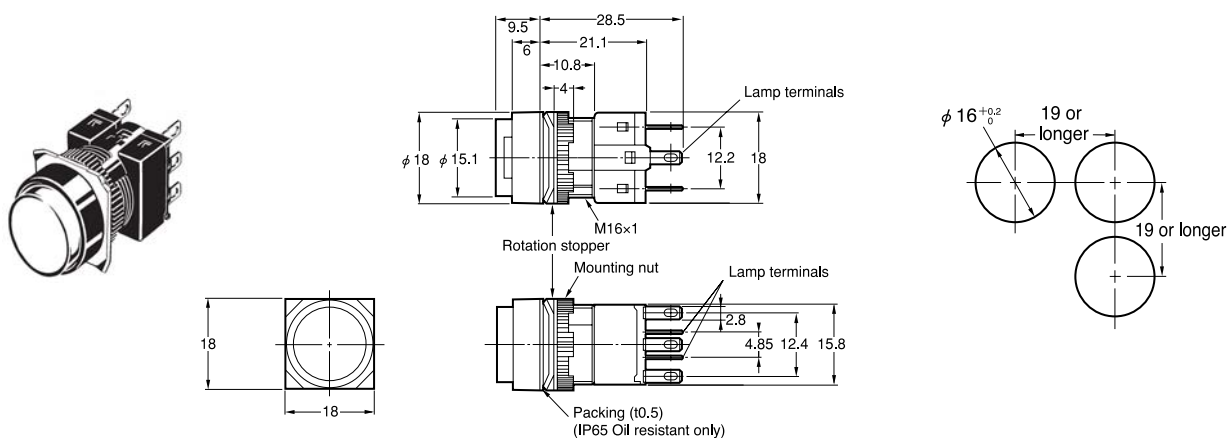
■ Dimensions

- The lamp terminals are provided for the non-lighting switches.
- The terminals can be used both for the soldering terminals and tab terminals (#110).

▼ Round/KL1 ☐

Soldering terminal

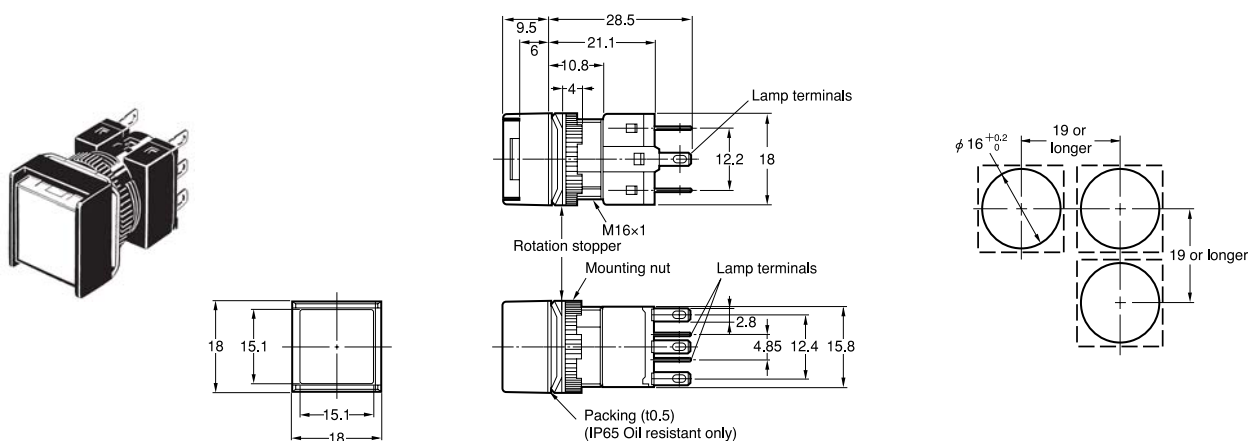
- For panel cutting, refer to the illustration in page 4-12.



▼ Square/KL2 ☐

Soldering terminal

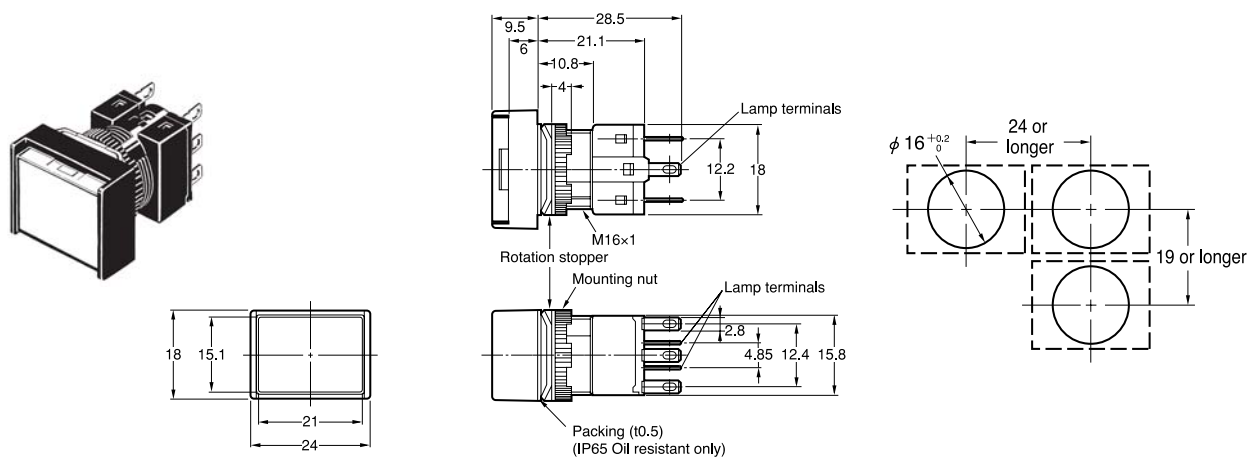
- For panel cutting, refer to the illustration in page 4-12.



▼ Rectangular/KL3 ☐

Soldering terminal

- For panel cutting, refer to the illustration in page 4-12.



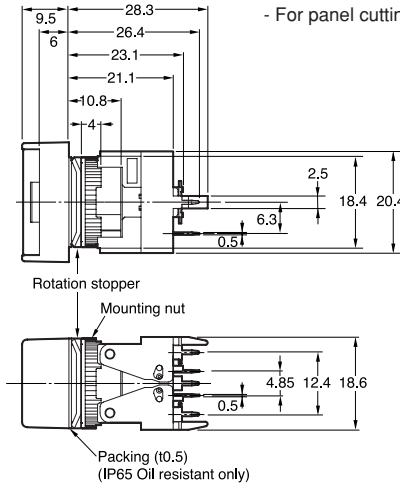
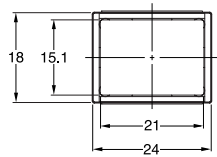
■ Dimensions

-The lamp terminals are provided for the non-lighting switches.

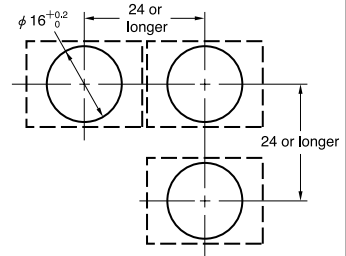
-The terminals can be used both for the soldering terminals and tab terminals (#110).

▼ Rectangular Type PCB terminal

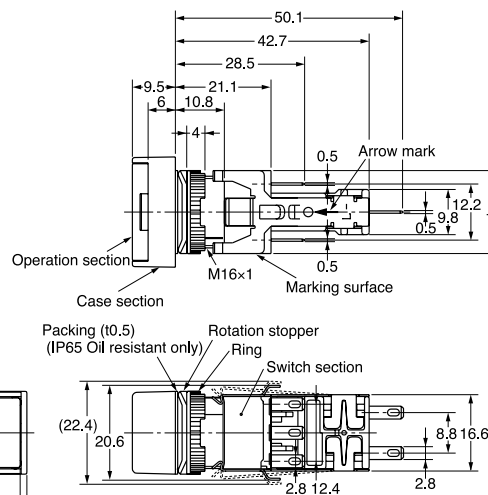
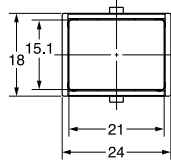
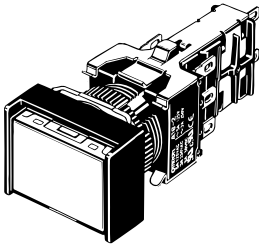
-Descriptions below are the case for rectangular switch for the traditional example.
-The lamp terminals are provided for the non-lighting switches.



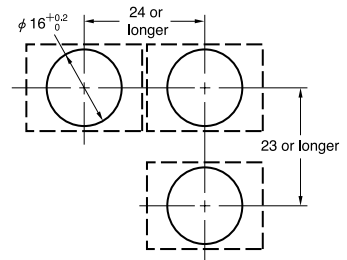
- For panel cutting, refer to the illustration in page 4-12.



▼ Rectangular Type Voltage reduction lighting Soldering terminal

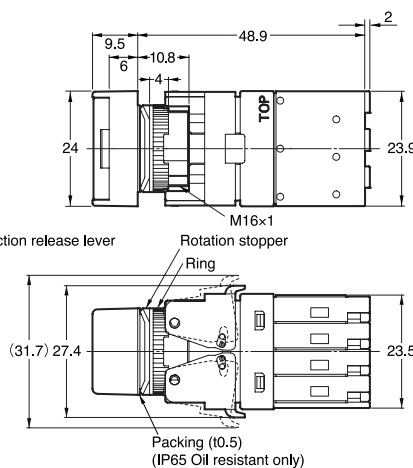
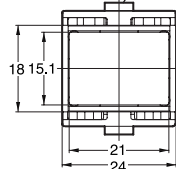
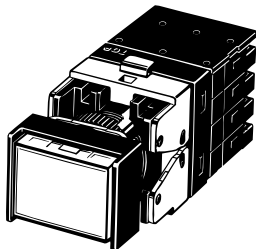


Panel cut dimensions

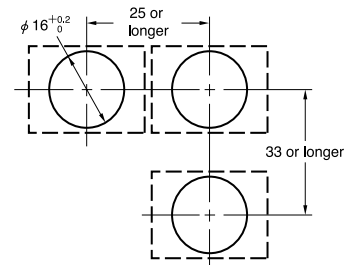


Panel thickness: 0.5 ~ 3.2mm

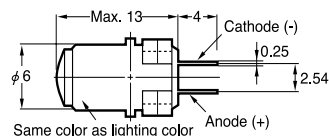
▼ Rectangular Type Quick connector



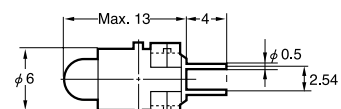
Panel cut dimensions



▼ Lamp Section LED lamp KL-5E□, 12E□, 24E□

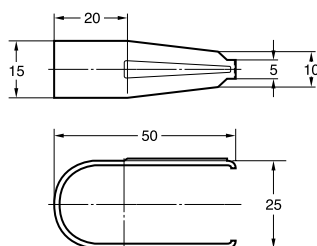


Incandescent lamp KL-5, 12, 24

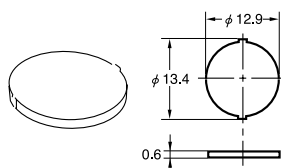


■ Dimensions of Accessories / Tools / Parts

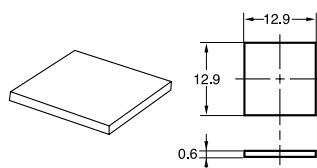
▼ Removing Tool for Operation Section KC3P-5080



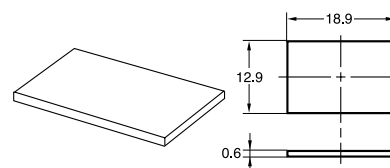
▼ Engraving Plate KLZ1-5204



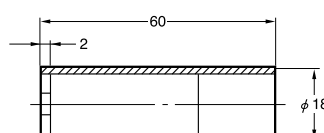
KLZ2-5204



KLZ3-5204



▼ Nut Fastener KLZ-3004



Note 1: The thickness is 0.6mm.
2: The material is as follows.

Engraving Plate Color	Protection Degree	Material
Milky white	IP65	Polyarylate resin
Transparent		

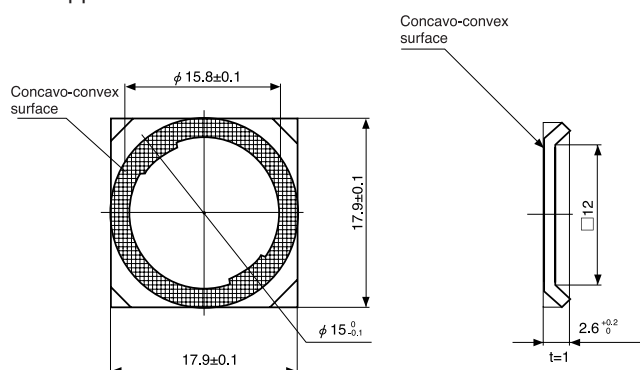
▼ Panel Plug (Black color resin)

Select one matching the panel design and mount it from the panel front surface. The panel cut dimensions are the same as those for the switches.

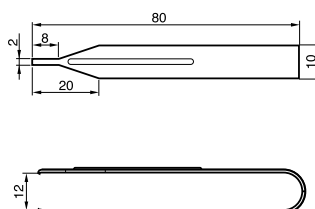
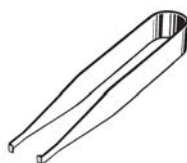
Protection degree: IP40

Round	Square	Rectangular
KLZ1-3003 	KLZ2-2003 	KLZ3-3003

▼ Rotation Stopper

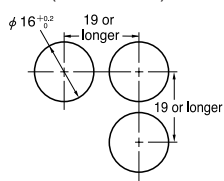
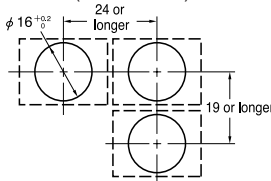


▼ Removing tool for Switch section / Lamps KLZ-5080



■ Panel Cut Dimensions

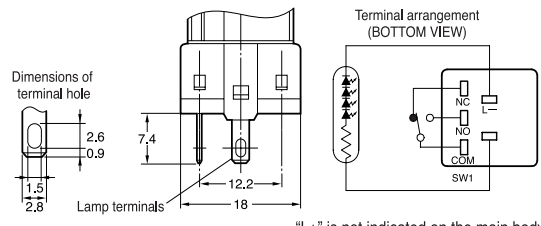
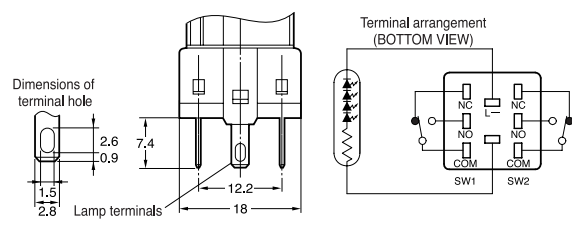
▼ Soldering terminal switches

Round (KL1 □) Square (KL2 □)	Rectangular (KL3 □)
(TOP VIEW) 	(TOP VIEW) 
<p>Note:</p> <ul style="list-style-type: none"> • Use the panel of 0.5 ~ 3.2mm thickness, or otherwise, 0.5 ~ 2mm if the switch guard or dustproof cover is used. • When the panel is coated with paint or the like, design the cut dimensions so that they meet the instructions after such coating is completed. 	

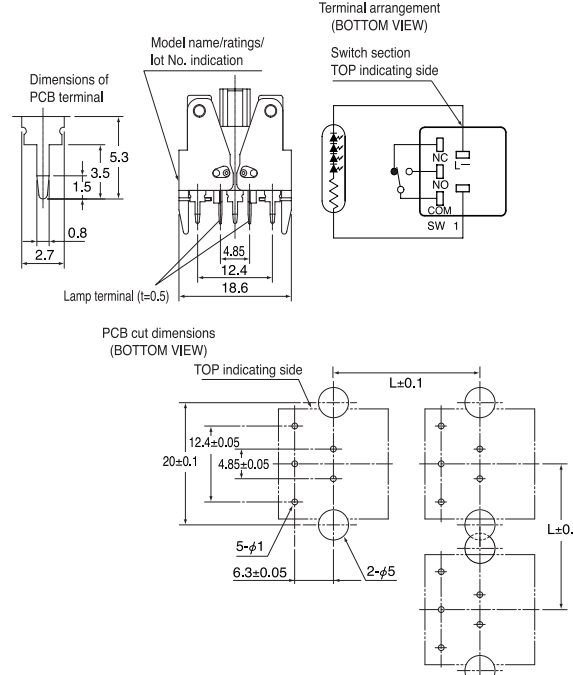
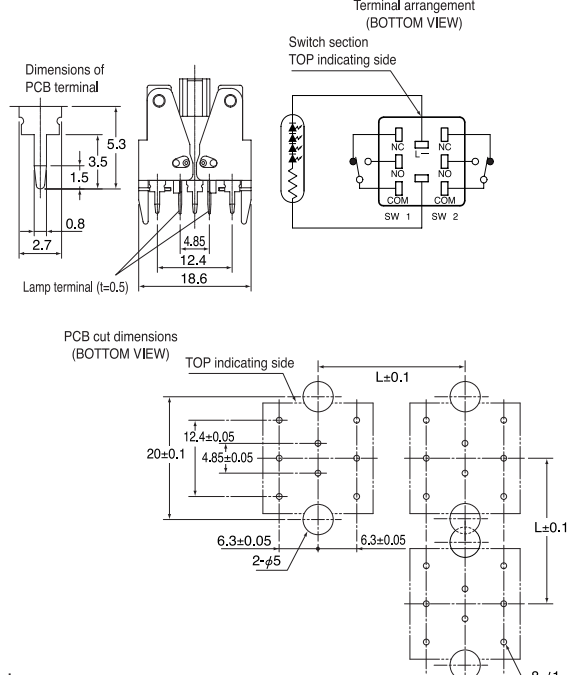
■ Terminal Arrangement

Without voltage reduction lighting (The terminals are provided for the non-lighting switches.)

▼ Soldering terminal

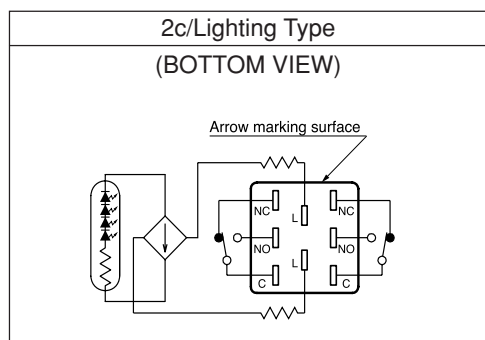
1c/Lighting Type	2c/Lighting Type
	

▼ PCB terminal (The terminals are provided for the non-lighting switches.)

1c/Lighting Type	2c/Lighting Type
	

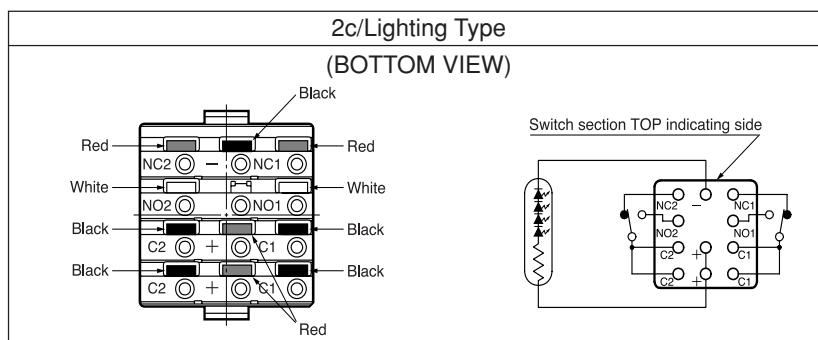
■ Terminal Arrangement

▼ Voltage reduction lighting



- The voltage reduction circuit is incorporated.

▼ Quick connector



- The voltage reduction circuit is incorporated for the Voltage Reduction Type (KL-T1-2S, KL-T2-2S) Quick Connector.

■ Wiring Procedures for Quick Connector

● Wiring

- (1) Remove the insulation at the wire end for 10mm. (Allowable range: 10mm ± 1mm)
- (2) For stranded wire, twist the wire edge straight.
- (3) While pushing the release button completely at the wire insertion, insert the wire to the depth. (Using a fine screwdriver is recommended.)
- (4) Release the button to lock the wire.
- (5) Confirm that the wire will not be pulled out easily.

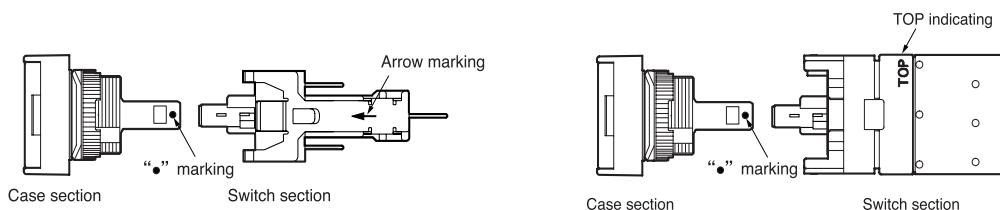
● Removing wiring

- (1) Pull the wire while pushing the release button.

Note: When re-inserting the wire once locked, cut the end and remove the insulation to use.

■ Instructions

1. The panel thickness must be 0.5 ~ 3.2mm.
2. The tightening torque for the ring must be within the range 0.29 ~ 0.49N-m.
3. The panel cut dimensions for the quick connector installation should be according to the description in the page 20; however, 33mm or more is required for the occasion that the switch will be removed from the panel. Be aware that, if the switch is installed tightly with the cut dimensions below the specified, the switch may not be removed.
4. Give an attention to the proper direction when installing the case section on the switch section. Align the "●" mark of the case with the arrow mark, or TOP indicating, of the switch section before assembling.

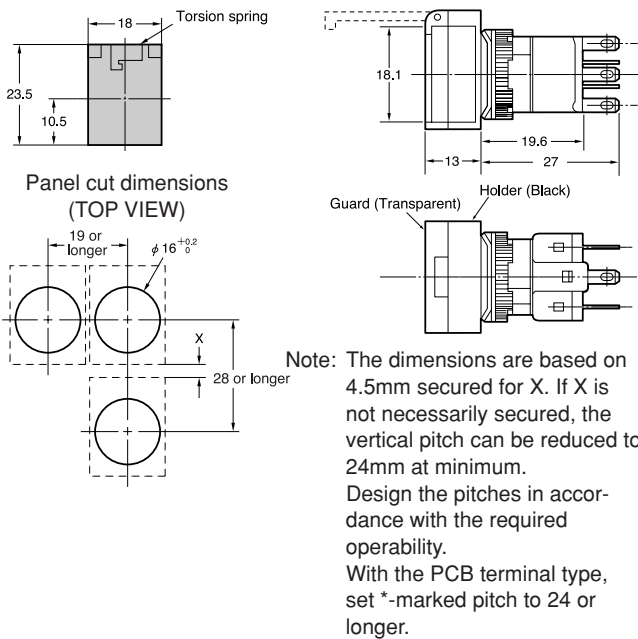


5. When using stranded wire for the quick connector, be sure to twist the wire end before inserting to the wire lock.
6. Insert the wire to the depth until it stops. Also, ensure that the wire is secured firmly by pulling the wire with appropriate force.
7. Consider so that the terminals and connected wires will not get physically stressed.
8. Ensure the proper wiring with the diagrams and terminal numbers.

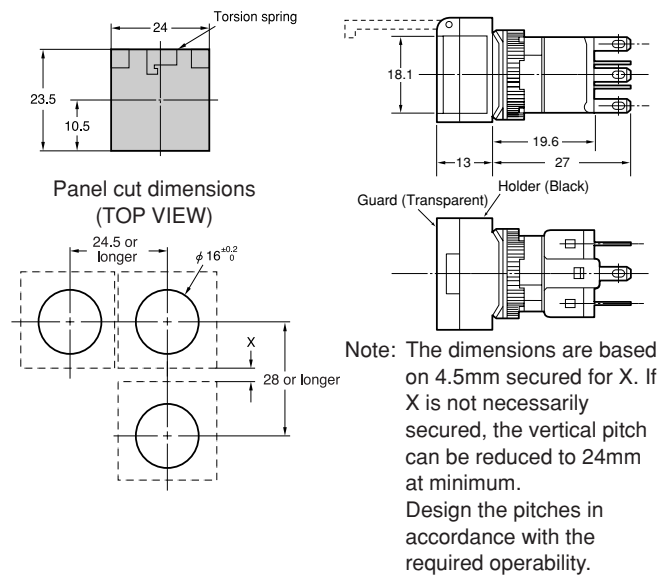
■ Accessories Dimensions When Installed

● Switch guard dimensions for installation

▼ Square/KLZ2-5050

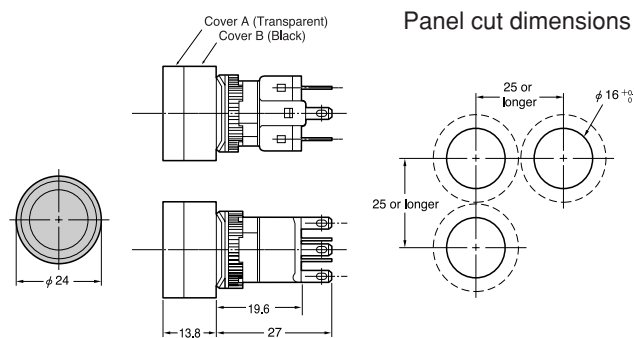


▼ Rectangular/KLZ3-5050

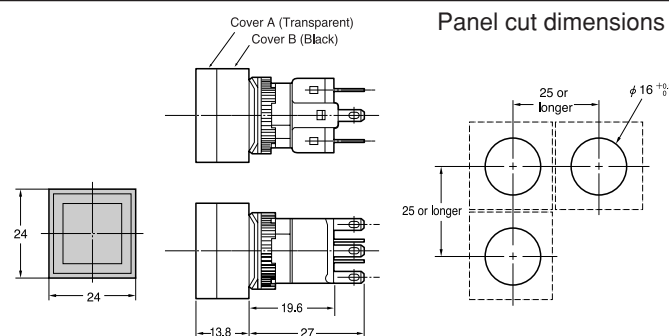


▼ Dustproof cover dimensions for installation

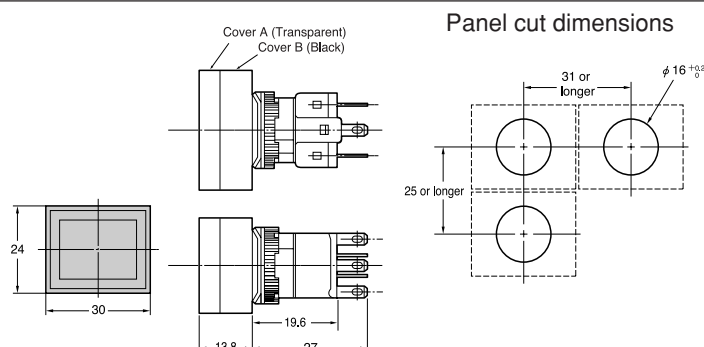
Round/KLZ1-5060



Square/KLZ2-5060



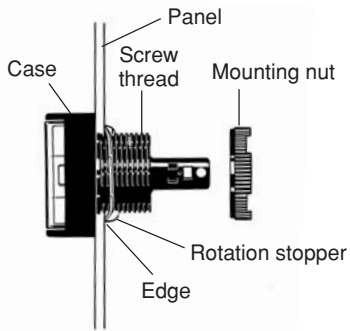
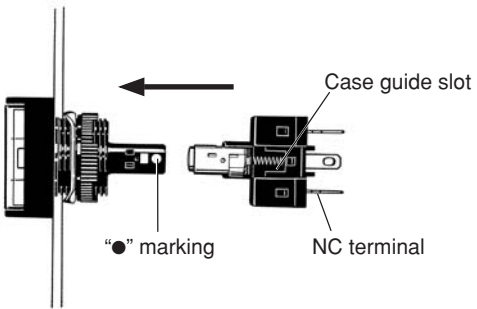
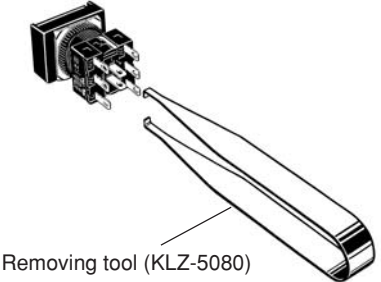
Rectangular/KLZ3-5050



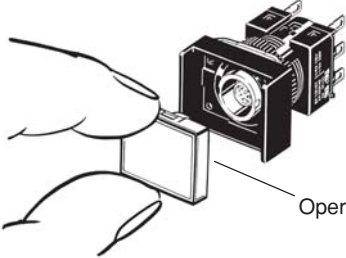
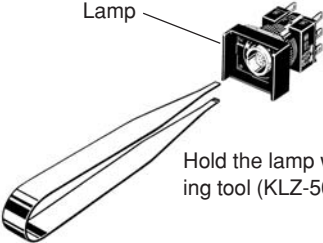
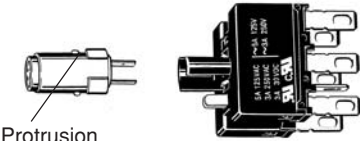
■ Instructions for Use

● Mounting switches on panel

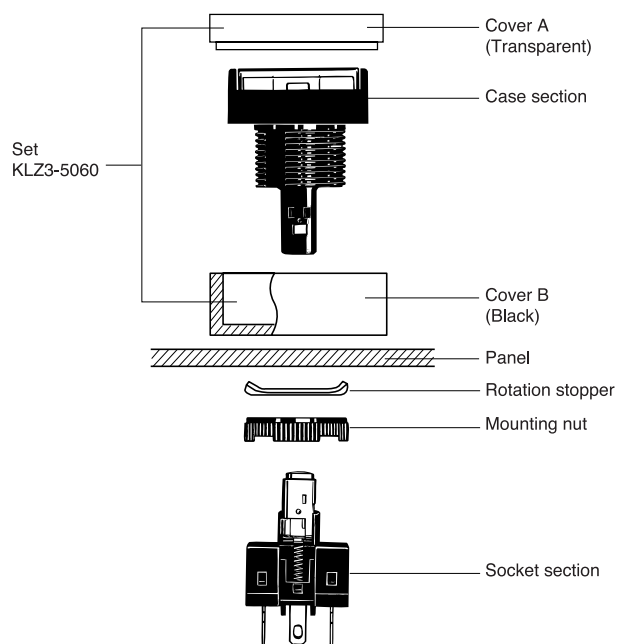
Install the main body unit on the panel, and attach the socket section at the rear through one-touch operation.

(1) Installing on the panel	(2) Mounting the switch section
<ul style="list-style-type: none"> • Insert the main body unit from the panel front, and attach the rotation stopper and mounting nut from the rear to fasten tightly. • When attaching the rotation stopper, set it with its edge towards the panel and its protrusion fit in the groove across the screw thread of the case. • Tightening torque for the nut must be within the range 0.29 to 0.49 N-m. 	<ul style="list-style-type: none"> • Assemble the main body unit with the switch section through one-touch operation. • Pay attention to the direction to assemble. Align the "●" marking on the case side with the case guide slot near the NC terminal of the switch section, and insert completely until it clicks. Ensure that there is no unnecessary gap between the case and switch section. 
(3) Removing switch section	<p>Note: For the PCB terminal, refer to page 4-12.</p>
<ul style="list-style-type: none"> • Apply the removing tool (KLZ-5080) between the switch holder of the case section and the switch section from the rear, and hold the switch to pull out straight. 	

● Attaching and replacing the operation section

(1) Removing and attaching the operation section	(2) Removing the lamp section
<p>(1) Pull the operation section as shown to remove by hand or with the removing tool (KC3P-5080).</p>  <p>Operation section</p> <p>(2) To attach the operation section, insert it until it clicks.</p>	<p>(1) Removing from the operation section side;</p>  <p>Lamp</p> <p>Hold the lamp with the removing tool (KLZ-5080) to pull out.</p> <p>(2) Removing from the switch section; Remove the switch section with the removing tool (KLZ-5080) and remove the lamp by hand.</p>
(3) Installing the lamp section	
<p>• Pay attention to the direction. Align the protrusion with the smaller guide of the case section to insert.</p>  <p>Protrusion</p> <p>• Using the removing tool (KLZ-5080), the lamp can be installed from the operation section side. Install the lamp section in the reverse order of the removing procedures in (2) above.</p>	

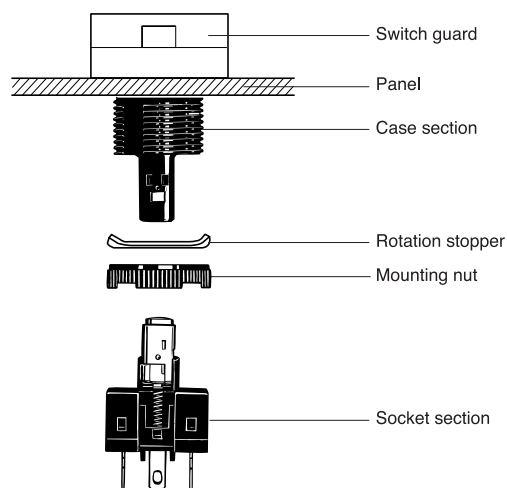
● Handling the KLZ □ Dustproof cover



1. Separate the dustproof cover A from B.
2. Insert the case section in the cover B.
3. Insert the assembly made in 2. above into the panel.
4. Attach the rotation stopper and the mounting nut at the panel rear to fasten firmly.
5. Push the four upper sides of cover A so that the cover A is inserted in the cover B with its all sides tightly attached with those of cover B.
6. Mount the socket section on the case section.

Note: The panel thickness must be within the range 0.5 ~ 2mm.

● Handling the KLZ □ Switch guard



1. Insert the case section in the switch guard.
2. Insert the assembly made in 1. above into the panel.
3. Attach the rotation stopper and the mounting nut at the panel rear to fasten firmly.
4. Mount the socket section on the case section.

Note: The panel thickness must be within the range 0.5 ~ 2mm.