Control Switch

J2 Series



Pilot Light



Non-Illuminated
Push Button Switch



Illuminated
Push Button Switch



Non-illuminated
Selector Switch



Illuminated
Selector Switch



Key Selector Switch



Non-illuminated
Emergency Stop Switch



Illuminated
Emergency Stop Switch



Non-Illuminated
Mushroom Push Button Switch



Illuminated
Mushroom Push Button Switch

Part Number Description

J2 - ❶ ❷ ❸ ❹ ❺ ❻ - ❼

❶	Operator Type	1 : Pilot Lamp	2 : Momentary Push Button	3 : Alternative Push Button	
		4 : 2 Position Selector	5 : 3 Position Selector	6 : 2 Position Key	7 : 3 Position Key
		8 : Illuminated Emergency Stop	9 : Non-Illuminated Emergency Stop		
❷	Illumination & Shape	1 : Non-Illuminated Round	7 : Illumination Round(LED)		
❸	Contact	0 : None	10 : 1NO(J2-10)	01 : 1NC(J2-01)	20 : 1NO + 1NO(J2-10 X 2ea)
❹	Operating Head Type	No mark : Push Button(Non-Illuminated), Selector, Key, Emergency Stop			
		T : Flat Head Push Button	Q : Push Button(Illuminated)	M : Mushroom Head	
❺	Color	No mark: Selector(Non-Illuminated), Key, Emergency Stop		R : Red	G : Green
		Y : Yellow	B : Blue	W : White	K : Black
❻	Rated Voltage	D6 : 6VDC	D12 : 12VDC	D4 : 24VDC	
		A1 : 110VAC	A2 : 220VAC		
❼	Selector, Key Operator Function	2 : 2 Step Maintained	3 : 3 Step Maintained		

※ Illuminated black color is only the lens is black translucent and the LED is white.
※ Non-illuminated pushbutton, selector, key, emergency stop switch does not mark operating head type.
※ Non-dimming selector, key switch, emergency stop switch do not mark color.

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General Specification

Specifications	Ambient Temperature		- 20℃ ~ +55℃(with no icing)			
	Ambient Humidity		45% ~ 85%RH(with no icing)			
	Storage Temperature		- 45℃ ~ +80℃			
	Storage Humidity		Min. 90%RH			
	Protection Grade		Front side : IP65(IEC60529) / Selector, Key : IP40			
	Insulation Resistance		100MΩ min.(at 500VDC)			
	Dielectric strength	Contact	2,500V for 1 minute			
		LED	2,000V for 1 minute			
	Vibration Resistant	Durability	500m/s^2			
		Malfunction	200m/s^2			
	Life Cycles	Mechanical	Push Button Switch : 2,000,000 time		Selector, Key, Emergency Stop : 500,000 time	
		Electrical	100,000 time			
Contact Ratings	Rated Insulation Voltage		600V			
	Maximum switching current		10A			
	Rated current @ voltage		24V	120V	240V	380V
	AC 50/60Hz	Resistive Load(AC-12)	10A	10A	6A	2A
		Inductive Load(AC-15)	10A	6A	3A	1.9A
	Dc	Resistive Load(DC-12)	8A	2.2A	1.1A	-
		Resistive Load(DC-13)	4A	1.1A	0.55A	-
	Terminal bolt		M3.5 (Torque : 1.3N·m)			
	Suitable wire standard		14 ~ 16AWG			

*Min using load reference 3VAC/DC 5mA (can use range depends on the environment and the load type) The contact is silver contact
* Contact Material : Ag alloy (24K gold plate)

LED	Color	R : Red, G : Green, Y : Yellow, B : Blue, W : White, K : Black
	Specifications	6V AC/DC, 12V AC/DC, 24V AC/DC, 110V AC/DC, 220V AC/DC
	Rated Voltage	D6 : 6VDC
		D12 : 12VDC
		D4 : 24VDC
		A1 : 100 ~ 120VAC(50/60Hz)
		A2 : 200 ~ 240VAC(50/60Hz)
	Rated Current	15mA
	Life Cycles	50,000hrs

* LED working 50% less than the original brightness after 50000 hours。

Product Selection

Operator Type	ø	Contact		Color	Part Number	Rated Voltage
		Configuration	Maximum Combined			
Illuminated Pilot Lamp Switch	Ø22, Ø25	-	-	Red	J2-170TR	D6(6VDC) D12(12VDC) D4(24VDC) A1(110VAC) A2(220VAC)
				Green	J2-170TG	
				Blue	J2-170TB	
				Yellow	J2-170TY	
				White	J2-170TW	
				Black	J2-170TK	
Non-Illuminated Push Button Momentary Switch	Ø22, Ø25	1NO (J2-10)	3ea	Red	J2-2110R	-
				Green	J2-2110G	
				Blue	J2-2110B	
				Yellow	J2-2110Y	
				White	J2-2110W	
				Black	J2-2110K	
Non-Illuminated Push Button Alternative Switch	Ø22, Ø25	1NO (J2-10)	3ea	Red	J2-3110R	-
				Green	J2-3110G	
				Blue	J2-3110B	
				Yellow	J2-3110Y	
				White	J2-3110W	
				Black	J2-3110K	
Illuminated Push Button Momentary Switch	Ø22, Ø25	1NO (J2-10)	2ea	Red	J2-2710QR	D6(6VDC) D12(12VDC) D4(24VDC) A1(110VAC) A2(220VAC)
				Green	J2-2710QG	
				Blue	J2-2710QB	
				Yellow	J2-2710QY	
				White	J2-2710QW	
				Black	J2-2710QK	
Illuminated Push Button Alternative Switch	Ø22, Ø25	1NO (J2-10)	2ea	Red	J2-3710QR	D6(6VDC) D12(12VDC) D4(24VDC) A1(110VAC) A2(220VAC)
				Green	J2-3710QG	
				Blue	J2-3710QB	
				Yellow	J2-3710QY	
				White	J2-3710QW	
				Black	J2-3710QK	

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Product Selection

Operator Type	ø	Contact Configuration	Contact Maximum Combined	Color	Selector Type	Operator Function	Part Number	Rated Voltage
2 Step Non-Illuminated Selector Switch 	Ø22, Ø25	1NO (J2-10)	3ea	Black	Maintained		J2-4110-2	-
3 Step Non-Illuminated Selector Switch 	Ø22, Ø25	2NO (J2-10 X 2ea)	2ea	Black	Maintained		J2-5120-3	-
2 Step Illuminated Selector Switch 	Ø22, Ø25	1NO (J2-10)	2ea	Red	Maintained		J2-4710R-2	D6(6VDC) D12(12VDC) D4(24VDC) A1(110VAC) A2(220VAC)
				Green			J2-4710G-2	
				Blue			J2-4710B-2	
				Yellow			J2-4710Y-2	
				White			J2-4710W-2	
3 Step Illuminated Selector Switch 	Ø22, Ø25	2NO (J2-10 X 2ea)	2ea	Red	Maintained		J2-5720R-3	D6(6VDC) D12(12VDC) D4(24VDC) A1(110VAC) A2(220VAC)
				Green			J2-5720G-3	
				Blue			J2-5720B-3	
				Yellow			J2-5720Y-3	
				White			J2-5720W-3	
2 Step Key Selector 	Ø22, Ø25	1NO (J2-10)	3ea	Black	Maintained		J2-6110-2	-
3 Step Key Selector 	Ø22, Ø25	2NO (J2-10 X 2ea)	2ea	Black	Maintained		J2-7120-3	-

Product Selection

Operator Type	ø	Contact		Color	Part Number	Rated Voltage
		Configuration	Maximum Combined			
Non-Illuminated Ø40 Mushroom Push Button Momentary Switch 	Ø22, Ø25	1NO (J2-10)	2ea	Red	J2-2110MR	-
				Green	J2-2110MG	
				Blue	J2-2110MB	
				Yellow	J2-2110MY	
				White	J2-2110MW	
Non-Illuminated Ø40 Mushroom Push Button Alternative Switch 	Ø22, Ø25	1NO (J2-10)	2ea	Red	J2-3110MR	-
				Green	J2-3110MG	
				Blue	J2-3110MB	
				Yellow	J2-3110MY	
				White	J2-3110MW	
Illuminated Ø40 MushroomPush Button Momentary Switch 	Ø22, Ø25	1NO (J2-10)	2ea	Red	J2-2710MR	D6(6VDC) D12(12VDC) D4(24VDC) A1(110VAC) A2(220VAC)
				Green	J2-2710MG	
				Blue	J2-2710MB	
				Yellow	J2-2710MY	
				White	J2-2710MW	
Illuminated Ø40 Mushroom Push Button Alternative Switch 	Ø22, Ø25	1NO (J2-10)	2ea	Red	J2-3110MR	D6(6VDC) D12(12VDC) D4(24VDC) A1(110VAC) A2(220VAC)
				Green	J2-3110GR	
				Blue	J2-3110MB	
				Yellow	J2-3110MY	
				White	J2-3110MW	

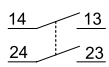
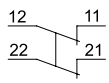
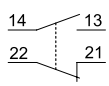
Control Switch

J2 Series

Product Selection

Operator Type	Ø	Contact		Color	Part Number	Rated Voltage
		Configuration	Maximum Combined			
Illuminated Ø40 Emergency Switch 	Ø22, Ø25	1NC (J2-10)	2ea	Red	J2-8701	D6(6VDC) D12(12VDC) D4(24VDC) A1(110VAC) A2(220VAC)
Non-Illuminated Ø40 Emergency Switch 	Ø22, Ø25	2NC (J2-10 X 2ea)	3ea	Red	J2-9101	-

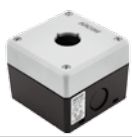
Accessory

Operator Type		Contact	Contact Form	Color	Rated Voltage	Part Number
LED		-	-	Red Green Yellow Blue White	D6(6V AC/DC) D12(12V AC/DC) D4(24V AC/DC) A1(110V AC/DC) A2(220V AC/DC)	BA9S-JR BA9S-JG BA9S-JY BA9S-JB BA9S-JW
Standard Contact		1NO		-	-	J2-10
		1NC		-	-	J2-01
Optional Contact (*Sold separately)		2NO		-	-	J2-S20
		2NC		-	-	J2-S02
		1NO + 1NC		-	-	J2-S11

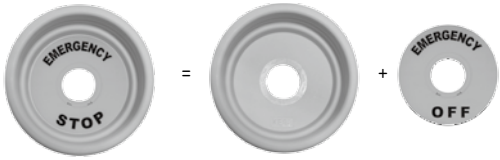
Control Switch

J2 Series

Accessory

Operator Type		Hole size	Color	Part Number
Protection Cover		Ø22	Cover : C (Clear) Bottom : C (Clear)	KEG42
Name Plate		Ø22	Product : Yellow Letter : Black	HP119E HP119K HP119C
			Product : Yellow Letter : Red	HP119E-R
			Product : White Letter : Black	HP119E-W(STOP)
			Product : White Letter : Red	HP119E-W(STOP-R)
		Ø22	Product : Yellow Letter : Black	HP119E(OFF)
			Product : Yellow Letter : Red	HP119E(OFF-R)
			Product : White Letter : Black	HP119E-W(OFF)
			Product : White Letter : Red	HP119E-W(OFF-R)
		Ø22	Product : Yellow Letter : Black	HP119E-1(STOP)
			Product : White Letter : Black	HP119E-1W(STOP)
			Product : Yellow Letter : Red	HP119E-1(STOP-R)
		Ø22	Product : Yellow Letter : Black	HP119E-1(OFF)
			Product : Yellow Letter : Red	HP119E-1(OFF-R)
			Product : White Letter : Black	HP119E-1W(OFF)
Safety Guard		Ø22	Yellow	KEG82
			White	KEG82W
AL Safety Guard		Ø22	Yellow	KEG92
			White	KEG92W
Box		Ø22	Yellow	KEX-101Y

※ HP119 name panel is also suitable with KEG8, KEG9 series
- Example of usage

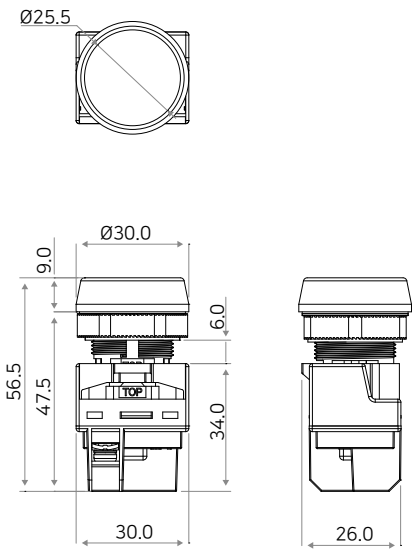


※ Panel Thickness (Unit : mm)
Switch only : 1.0 ~ 4.0
Switch with guard : 1.0 ~ 2.2

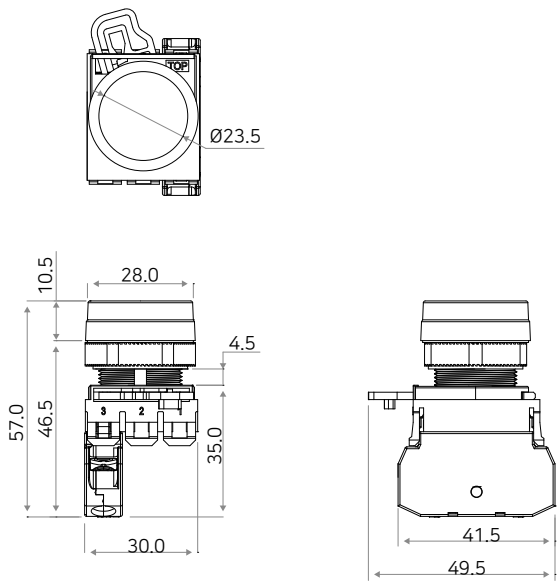
Dimension

Unit : mm

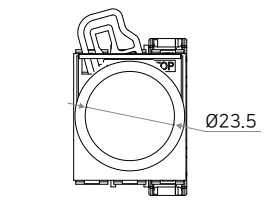
Pilot Lamp

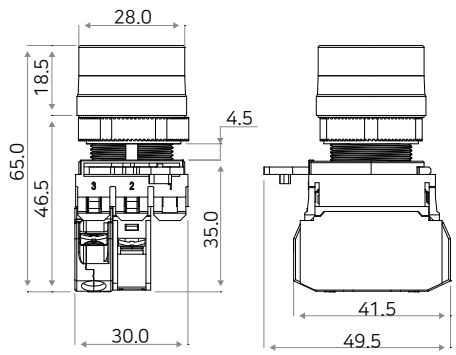


Push Button



Illuminated Push Button





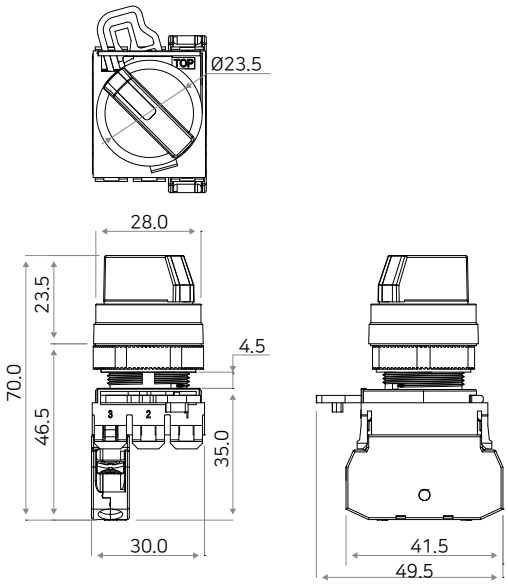
Control Switch

J2 Series

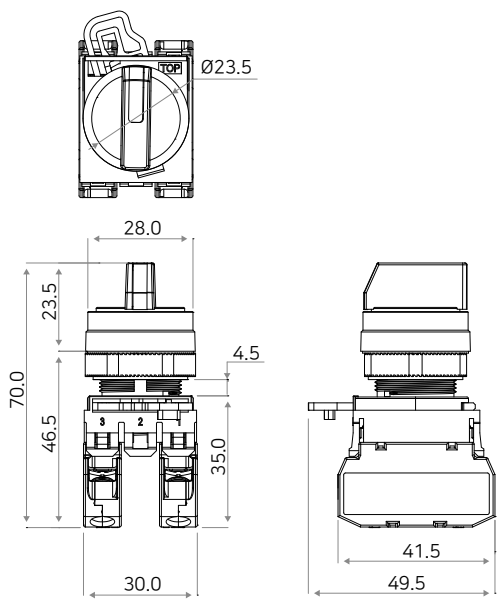
Dimension

Unit : mm

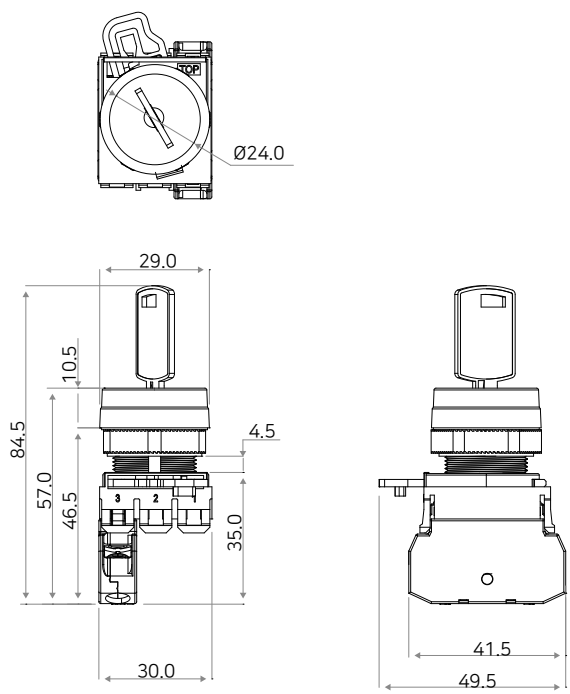
2 Step Selector Switch



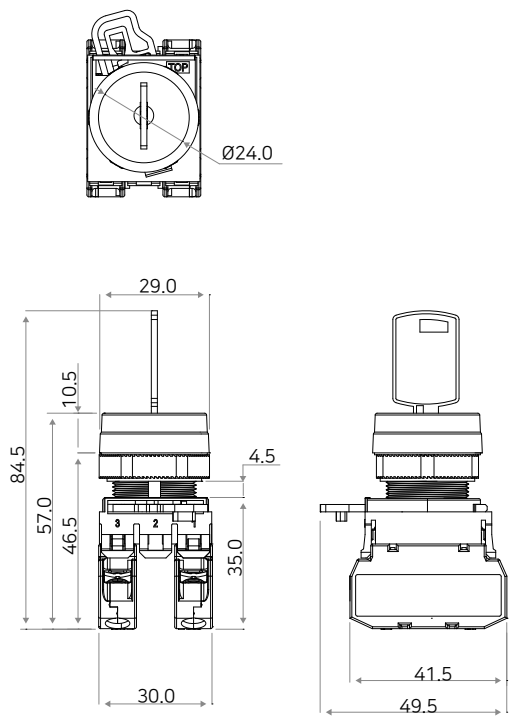
3 Step Selector Switch



2 Step Key Selector



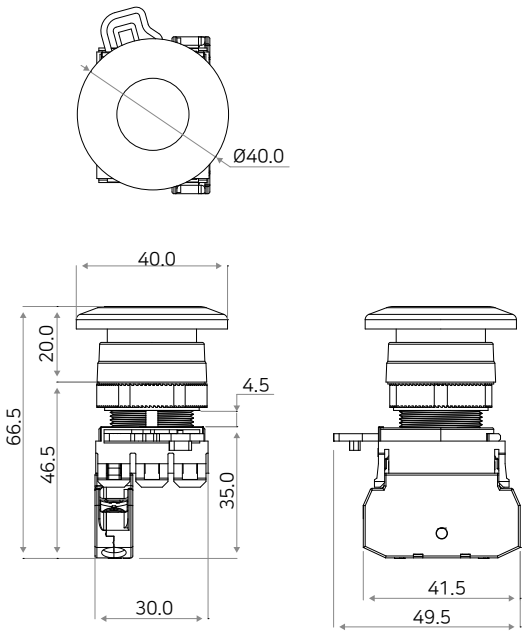
3 Step Key Selector



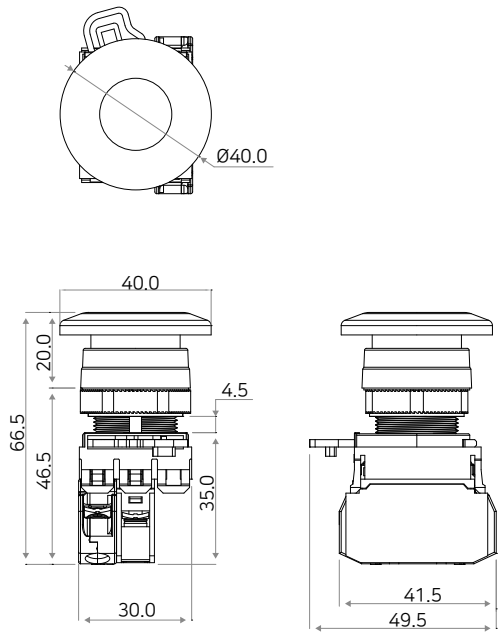
Dimension

Unit : mm

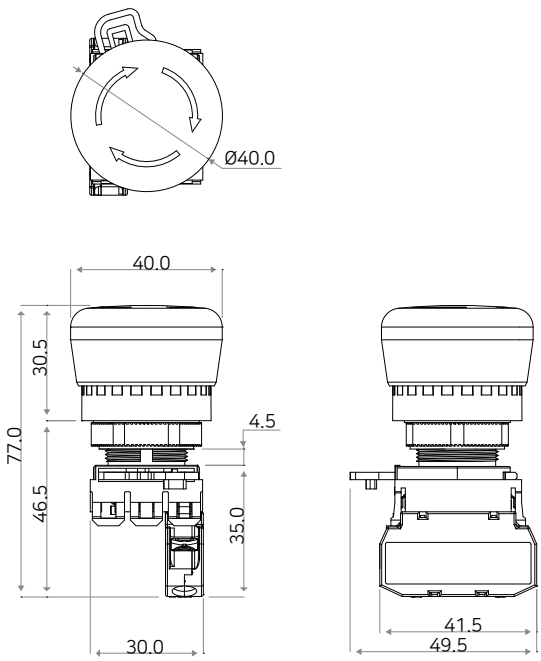
Mushroom Push Button Switch



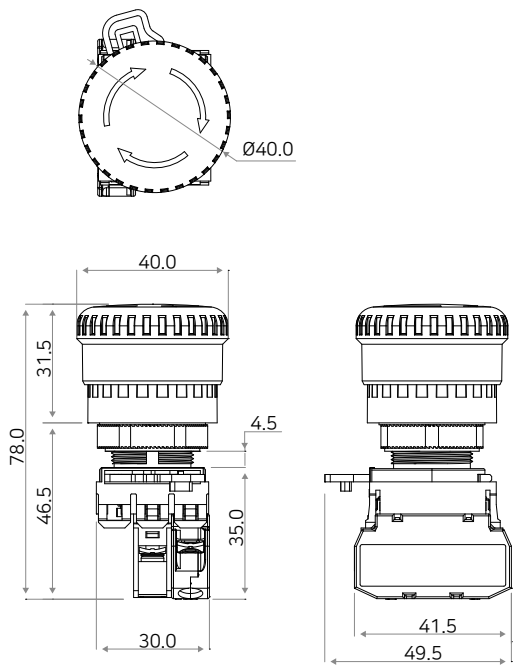
Illuminated Mushroom Push Button Switch



Emergency Switch



Illuminated Emergency Switch



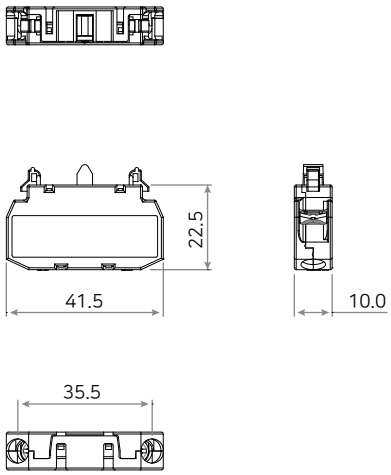
Control Switch

J2 Series

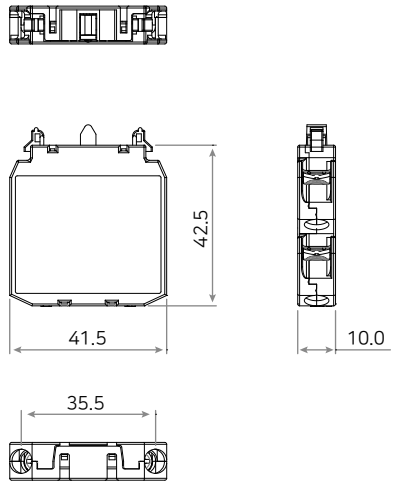
Dimension

Unit : mm

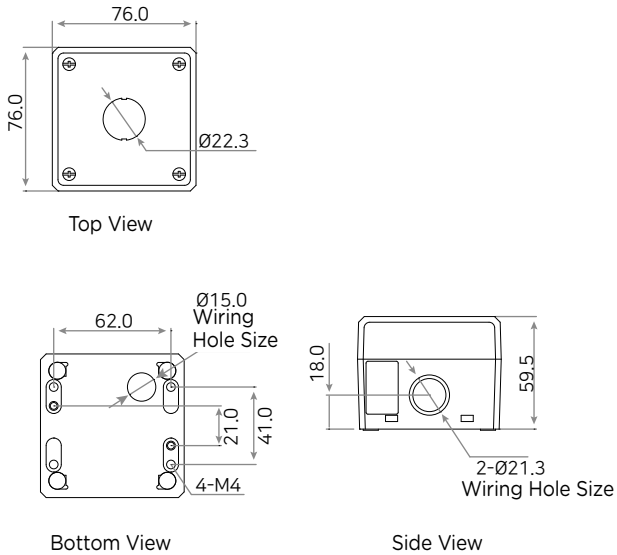
J2-10, J2-01



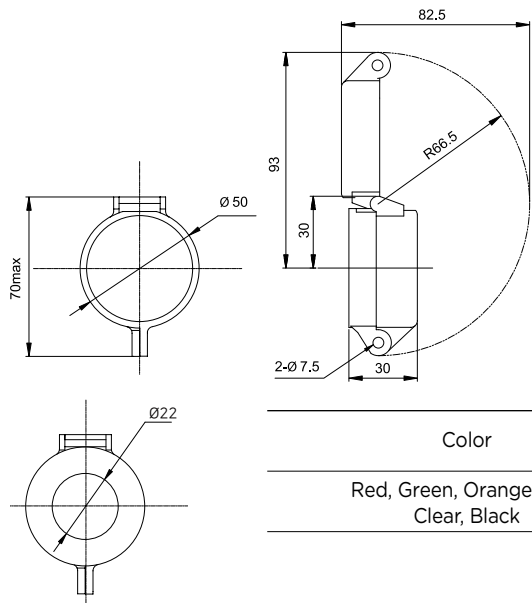
J2-20, J2-02, J2-11



KEX-101Y



KEG42

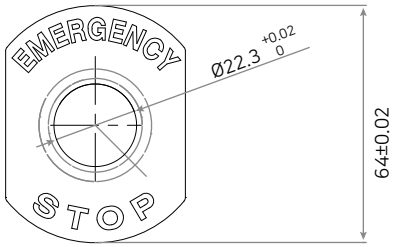


Color
Red, Green, Orange, Blue Clear, Black

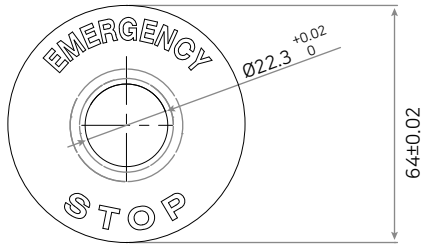
Dimension

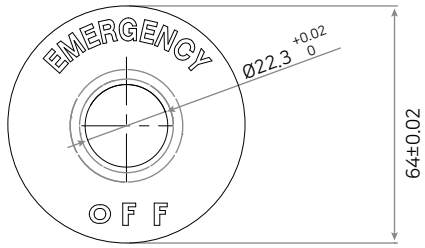
Unit : mm

HP119

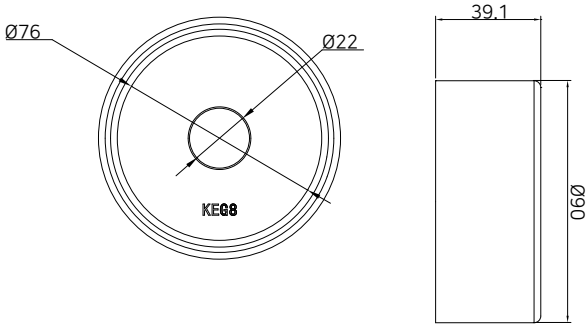


HP119-1 Series

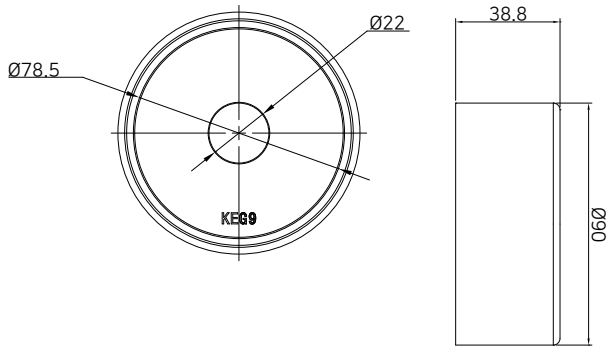




KEG82



KEG92

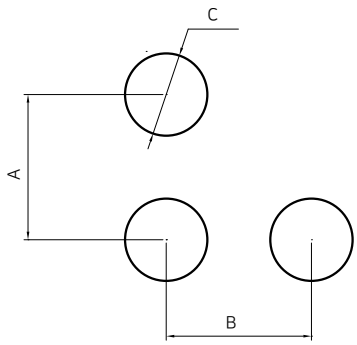


Control Switch

J2 Series

Pre-Caution

Panel Cut-Out



Panel Hole	C
Ø22	22.3
Ø25	25.3

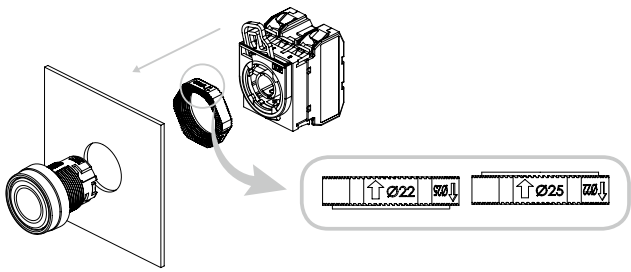
Panel Thickness (Unit : mm)

With switch alone : 1.0 ~ 4.0

With optional product : 1.0 ~ 2.2

	A	B
Push Button	Min. 50	Min. 30
Key Selector		
Selector		
Pilot Lamp	Min. 30	Min. 30
Mushroom Push	Min. 50	Min. 40
Emergency switch	Min. 50	Min. 50

Caution when fixing ring panel is attached

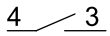


Ø22, Ø25 compatible fixing Ring

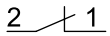
Please check numbers on side of the ring for suitable mounting to panel hole.

Terminal Arrangement

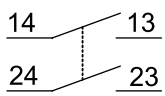
1NO



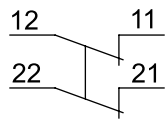
1NC



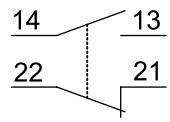
2NO



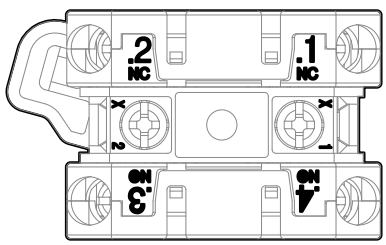
2NC

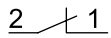


1NO + 1NC

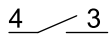


Illuminated type terminal arrangement



NC 

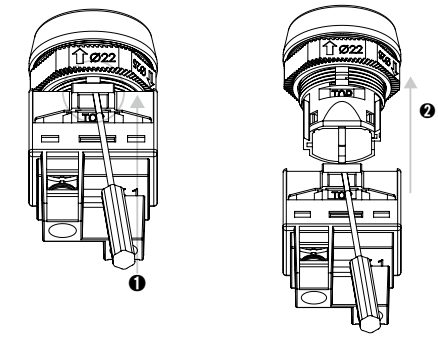
X1, X2 : LED Power

NO 

Pre-Caution

Separation of control unit and main unit

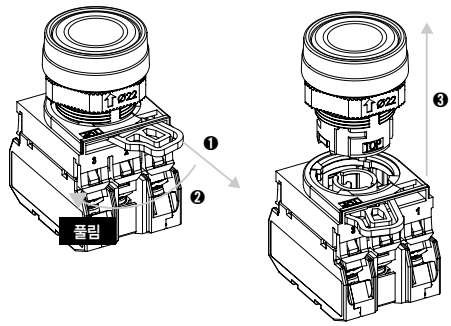
Pilot Light



❶ Push the hook on a body to upper direction as figure 1

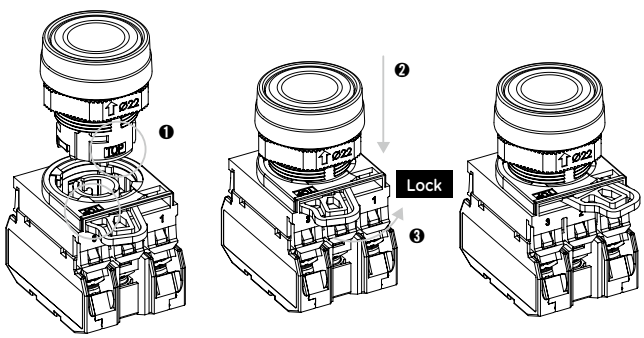
❷ Than LED lens shall be disassembled from the body.

Push button, Selector, Key, Emergency Switches



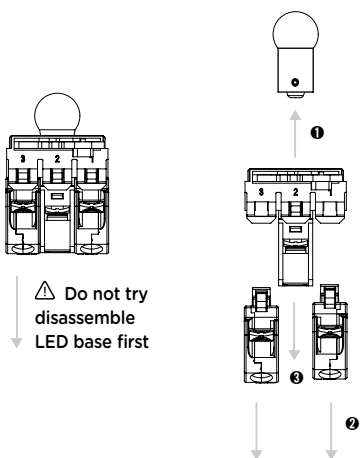
❶ Pull and turn the lever as a figure 1.
❷ Rotate it in direction 2 to unlock it.
❸ Pull out the operator from the body.

How to assemble



❶ Match same direct with 'TOP' indication between operator & body as figure 1
❷ Assemble operator to body as figure 2.
❸ Lock the operator by turning the lever too right as figure 3.

How to change LED



1. Please disassemble as following instruction as figures
   Remove (❶)LED -> (❷) Contact block -> (❸) LED base

2. If you do not following the instruction it shall be a cause of broken switches.

Control Switch

J2 Series

Pre-Caution

Key, Selector Switches contact block configuration

2 Step

Contact block	Parts number Example	Position	Contact	Lever: Left	Lever: Right
1NO + 1NO	J2-10 + J2-10	R	NO		●
		L	NO		●
1NO + 1NC	J2-10 + J2-01	R	NO		●
		L	NC	●	
1NC + 1NC	J2-01 + J2-01	R	NC	●	
		L	NC	●	
2NO + 2NC	J2-20 + J2-02	R	NO		●
			NO		●
		L	NC	●	
			NC	●	

3 Step

Contact block	Parts number Example	Position	Contact	Lever: Left	Lever: Center	Lever: Right
1NO + 1NO	J2-10 + J2-10	R	NO			●
		L	NO	●		
1NO + 1NC	J2-10 + J2-01	R	NO			●
		L	NC		▬	
1NC + 1NC	J2-01 + J2-01	R	NC	▬		
		L	NC		▬	
2NO + 2NC	J2-20 + J2-02	R	NO			●
			NO			●
		L	NC		▬	
			NC		▬	



Parts number

J2 - 5 1 20 - 3

- 3 Step Selector Switch
- Non-Illuminated
- 1NO + 1NO ····· ※ Standard contact configuration
  - None
  - 1NO
  - 1NC
  - 1NO + 1NO
- Maintained
- Ø22, Ø25