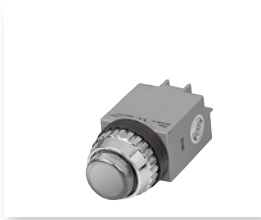
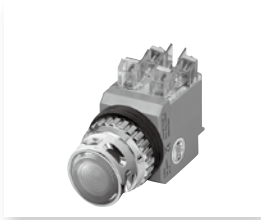


# Control Switch

B Series



Pilot Light



Non-Illuminated  
Push Button Switch



Illuminated  
Push Button Switch



Selector Switch



Key Switch



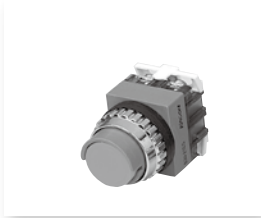
Emergency Stop Switch



Waterproof  
Emergency Stop Switch



Mushroom  
Push Button Switch



Eyebrow  
Push Button Switch



Ø65 Mushroom  
Push Button Switch



Portable  
Push Button Switch



Ø40 Full Guard  
Push Button Switch



Ø65 Full Guard  
Push Button Switch

# Control Switch

## B Series

### Part Number Description

<b>B</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1 Operator Type</b>	1 : Pilot Light 6 : 2 Position Key	2 : Momentary 7 : 3 Position Key	4 : 2 Position Selector 8 : Emergency Stop	5 : 3 Position Selector	
<b>2 Illumination</b>	1 : Non-illuminated Round		7 : Illumination Round (LED)		
<b>3 Color</b>	R : Red B : Blue	G : Green W : White	Y : Yellow		
<b>4 Operating Head Type</b>	N40 : Ø40 F65 : Ø65 portable F : Flower (Only Emergency Stop)	B40 : Full Guard Ø40 C65 : Metal Full Guard Ø65 A : Waterproof Emergency Stop (Only Emergency Stop)	N65 : Ø65 H65 : Ø65 portable L : Latching Emergency Stop (Only Emergency Stop)	B65 : Full Guard Ø65	
<b>5 Rated Voltage</b>	24VDC 110/125VDC	48VDC 220/240VAC	110/125VAC 380VAC		

### General Specification




General Ratings	<b>Rated Current</b>		10A 250VAC			
	<b>Contact Resistance</b>		최대 50mΩ			
	<b>Insulation Resistance</b>		100MΩ min.(at 500VDC)			
	<b>Frequency of ON/OFF</b>	<b>Mechanical</b>	30 times / 1 Min.			
		<b>Electrical</b>	30 times / 1 Min.			
	<b>Dielectric strength</b>	<b>Between terminal</b>	1,800VAC / Min. (50~60Hz)			
		<b>Body and terminal</b>	2,500VAC / Min. (50~60Hz)			
	<b>Expected Life</b>	<b>Mechanical</b>	500,000 times			
		<b>Electrical</b>	100,000 times			
	<b>Degree of Protection</b>		PL: IP65	PB : custom production	PBL, S/S, Key: IP63	EPB: A Type (IP65)
	<b>Ambient Temperature</b>		-25°C ~ +70°C (With no icing)			
	<b>Ambient Humidity</b>		35 ~ 80% RH			
	<b>Illumination</b>	<b>Current Voltage</b>	<b>AC</b>	<b>LED</b>	Approx. 15mA	
			<b>DC</b>	<b>LED</b>	Approx. 15mA	
		<b>Voltage</b>		24VDC		
<b>Expected Life</b>		Min. 50,000hrs				
<b>Contact Ratings</b>	<b>Contact Material</b>		Ag Alloy			
	<b>Rated Current</b>	<b>Voltage</b>	AC1	AC3	DC1	
		<b>24V</b>	20A	10A	6A	
		<b>110V</b>	16A	8A	1.2A	
		<b>250V</b>	10A	5A	0.5A	
		<b>440V</b>	5A	2.5A	0.25A	

☞ All right reserved. Specification subject to change without notice.

<b>Illuminated Voltage</b>	220VAC	200~240VAC(50/60HZ)
	110VAC	100~120VAC (50/60HZ)
	110VDC	100~125VDC
	24VDC	24VDC

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












## Product Selection

Operator Type	Panel Cutting Hole	Contact Form	Color	Part Number	Rated Voltage
Momentary Non-Illuminated Push Button Switch  	Ø25	1N/O + 1N/C	Red	B25-21R	24VDC 48VDC 110/125VDC 110/125VAC 220/240VAC 380VAC
			Green	B25-21G	
			Blue	B25-21B	
			Yellow	B25-21Y	
			White	B25-21W	
	Ø30	1N/O + 1N/C	Red	B30-21R	24VDC 48VDC 110/125VDC 110/125VAC 220/240VAC 380VAC
			Green	B30-21G	
			Blue	B30-21B	
			Yellow	B30-21Y	
			White	B30-21W	
Illuminated LED Pilot Lamp "BA9S + L" LED  	Ø25	-	Red	B25-17R	24VDC 48VDC 110/125VDC 110/125VAC 220/240VAC 380VAC
			Green	B25-17G	
			Blue	B25-17B	
			Yellow	B25-17Y	
			White	B25-17W	
	Ø30	-	Red	B30-17R	24VDC 48VDC 110/125VDC 110/125VAC 220/240VAC 380VAC
			Green	B30-17G	
			Blue	B30-17B	
			Yellow	B30-17Y	
			White	B30-17W	
Momentary Illuminated LED Push Button Switch "BA9S + L" LED  	Ø25	1N/O + 1N/C	Red	B25-27R	24VDC 48VDC 110/125VDC 110/125VAC 220/240VAC 380VAC
			Green	B25-27G	
			Blue	B25-27B	
			Yellow	B25-27Y	
			White	B25-27W	
	Ø30	1N/O + 1N/C	Red	B30-27R	24VDC 48VDC 110/125VDC 110/125VAC 220/240VAC 380VAC
			Green	B30-27G	
			Blue	B30-27B	
			Yellow	B30-27Y	
			White	B30-27W	




# Control Switch

## B Series

### Product Selection

Operator Type	Panel Cutting Hole	Contact Form	Color	Operator Function	Part Number	Rated Voltage
Knob Type Selector 	Ø25	1N/O + 1N/C		2 Step	B25-41S	-
				3 Step	B25-51S	
	Ø30	1N/O + 1N/C		2 Step	B30-41S	-
				3 Step	B30-51S	
Lever Type Selector 	Ø25	1N/O + 1N/C		2 Step	B25-41L	-
				3 Step	B25-51L	
	Ø30	1N/O + 1N/C		2 Step	B30-41L	-
				3 Step	B30-51L	
Key Switch 	Ø25	1N/O + 1N/C		2 Step 	B25-61K	-
				3 Step 	B25-71K	
	Ø30	1N/O + 1N/C		2 Step 	B30-61K	-
				3 Step 	B30-71K	
Emergency Stop Switch + 24K Au Plate 	Ø25	1N/O + 1N/C	Red	-	B25-81R	-
	Ø30	1N/O + 1N/C	Red	-	B30-81R	-
Waterproof Emergency Stop Switch + 24K Au Plate IP65 	Ø25	1N/O + 1N/C	Red	-	B25-81A	-
	Ø30	1N/O + 1N/C	Red	-	B30-81A	-
Waterproof Emergency Stop Switch + EN 418 Standard Compliant product 24K Au Plate IP65 	Ø25	1N/O + 1N/C	Red	-	B25-81L	-
	Ø30	1N/O + 1N/C	Red	-	B30-81L	-
Ø45 Emergency Stop Switch + 24K Au Plate 	Ø25	1N/O + 1N/C	Red	-	B25-81F	-
	Ø30	1N/O + 1N/C	Red	-	B30-81F	-






## Product Selection

Operator Type	Panel Cutting Hole	Contact Form	Color	Part Number	Rated Voltage
Ø40 Non-Illuminated Mushroom Push Button Switch  	Ø25	1N/O+1N/C	Red	B25-21R-N40	-
			Green	B25-21G-N40	
			Yellow	B25-21Y-N40	
	Ø30	1N/O+1N/C	Red	B30-21R-N40	-
			Green	B30-21G-N40	
			Yellow	B30-21Y-N40	
비조광 Ø40 버섯누름버튼	Ø30	1N/O+1N/C	Red	B30-21R-C40	-
			Green	B30-21G-C40	
Non-Illuminated Eyebrow Push Button  	Ø25	1N/O+1N/C	Red	B25-21R-EG	-
			Green	B25-21G-EG	
			Blue	B25-21B-EG	
			Yellow	B25-21Y-EG	
			White	B25-21W-EG	
	Ø30	1N/O+1N/C	Red	B30-21R-EG	-
			Green	B30-21G-EG	
			Blue	B30-21B-EG	
			Yellow	B30-21Y-EG	
			White	B30-21W-EG	
Ø65 Non-Illuminated Mushroom Push Button Switch + 24K Au Plate IP65  	Ø30	1N/O+1N/C	Red	B30-21R-N65	-
			Green	B30-21G-N65	
			Blue	B30-21Y-N65	
			Yellow	B30-21G-N65	
			White	B30-21Y-N65	

# Control Switch

## B Series

### Product Selection

Operator Type	Panel Cutting Hole	Contact Form	Color	Part Number	Rated Voltage
Ø65 Non-Illuminated Portable Push Button Switch + 24K Au Plate IP65 	Ø30	1N/O+1N/C	Black	B30-21K-C65	-
			Red	B30-21R-C65	
			Green	B30-21G-C65	
			Blue	B30-21Y-C65	
			Yellow	B30-21G-C65	
			White	B30-21Y-C65	
Ø65 Non-Illuminated Portable Push Button Switch 	Ø30	1N/O+1N/C	Black	B30-21K-F65	-
			Red	B30-21R-F65	
			Green	B30-21G-F65	
			Blue	B30-21Y-F65	
			Yellow	B30-21G-F65	
			White	B30-21Y-F65	
Ø65 Non-Illuminated Portable Push Button Switch 	Ø30	1N/O+1N/C	Black	B30-21K-H65	-
			Red	B30-21R-H65	
			Green	B30-21G-H65	
			Blue	B30-21Y-H65	
			Yellow	B30-21G-H65	
			White	B30-21Y-H65	
Ø40 Non-Illuminated Full Guard Push Button Switch 	Ø30	1N/O+1N/C	Black	B30-21K-B40	-
			Red	B30-21R-B40	
			Green	B30-21G-B40	
			Blue	B30-21Y-B40	
			Yellow	B30-21G-B40	
			White	B30-21Y-B40	
Ø65 Non-Illuminated Full Guard Push Button Switch 	Ø30	1N/O+1N/C	Black	B30-21K-B65	-
			Red	B30-21R-B65	
			Green	B30-21G-B65	
			Blue	B30-21Y-B65	
			Yellow	B30-21G-B65	
			White	B30-21Y-B65	

## Accessory

Operator Type	Size (W×D×H)	Color	Part Number	Mounting Size	Model Series						
					K	B	KEX				
	Ø60 t=2.6mm	제품 : 황색 글자 : 흑색	HP111A	Ø22	○	○	-				
			HP111B HP111C	Ø25 Ø30							
	Ø75 t=2.8mm	제품 : 황색 글자 : 흑색	HP112A	Ø22	○	○	-				
			HP112B HP111C	Ø25 Ø30							
	Ø70 t=1mm H=10mm	Yellow	HP117A	Ø22	○	-	-				
			HP117B	Ø25	○	○	-				
			HP117C	Ø30	○	○	-				
	Ø80 t=1mm H=10mm	Yellow	HP118A	Ø22	○	-	-				
			HP118B	Ø25	○	○	-				
			HP118C	Ø30	○	○	-				
	t=0.5mm (KEG1+HP119)	Product : Yellow Letter : Black	HP119E HP119K HP119C	Ø22~Ø30	○	-	-				
			Product : Yellow Letter : Red					HP119E-R	○	○	-
			Product : White Letter : Black					HP119E-W(STOP)	○	○	-
			Product : White Letter : Red					HP119E-W(STOP-R)			
Name Plate	t=0.5mm (KEG1+HP119)	Product : Yellow Letter : Black	HP119E(OFF)	Ø22~Ø30	○	-	-				
			Product : Yellow Letter : Red					HP119E(OFF-R)	○	○	-
			Product : White Letter : Black					HP119E-W(OFF)	○	○	-
			Product : White Letter : Red					HP119E-W(OFF-R)			
	Ø62 t=0.2mm	Product : Yellow Letter : Black	HP119E-1(STOP)	Ø22~Ø30	○	-	-				
			Product : White Letter : Black					HP119E-1W(STOP)	○	○	-
			Product : Yellow Letter : Red					HP119E-1(STOP-R)	○	○	-
	Ø62 t=0.2mm	Product : Yellow Letter : Black	HP119E-1(OFF)	Ø22~Ø30	○	-	-				
			Product : Yellow Letter : Red					HP119E-1(OFF-R)	○	○	-
			Product : White Letter : Black					HP119E-1W(OFF)	○	○	-

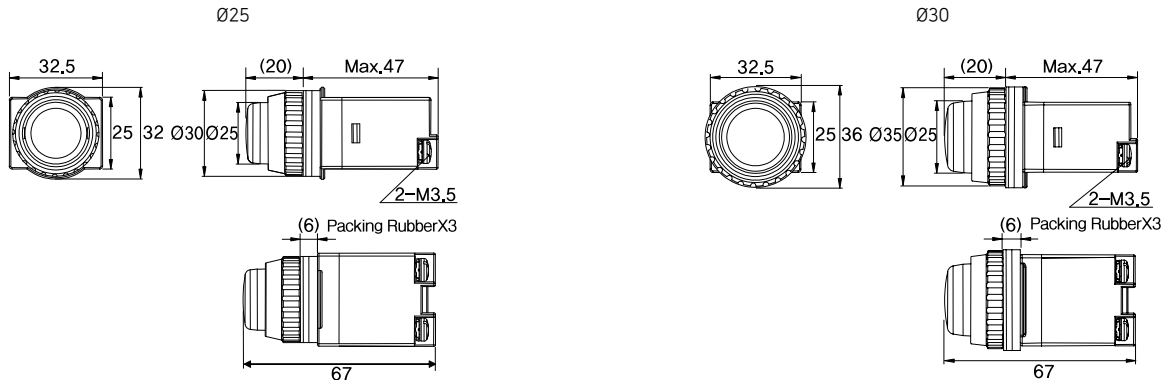




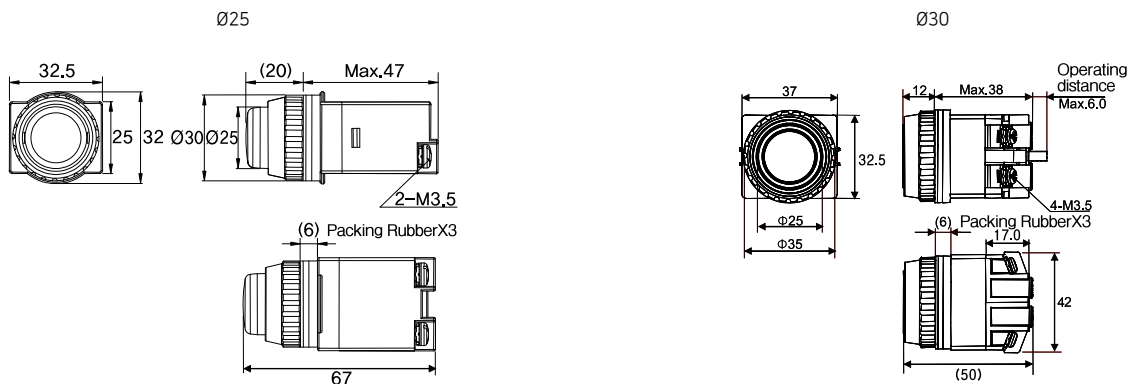
## Dimension

Unit : mm

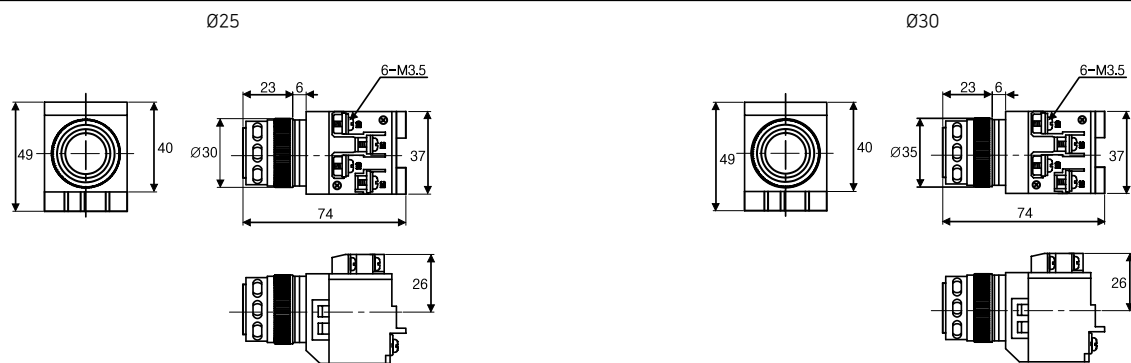
### Pilot Light



### Push Button



### Illuminated Push Button



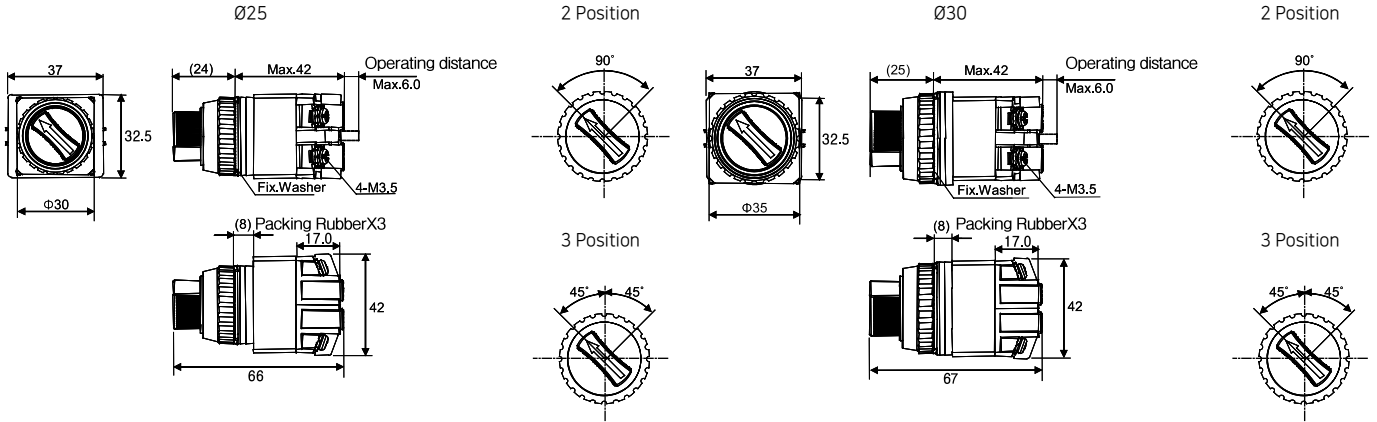
# Control Switch

## B Series

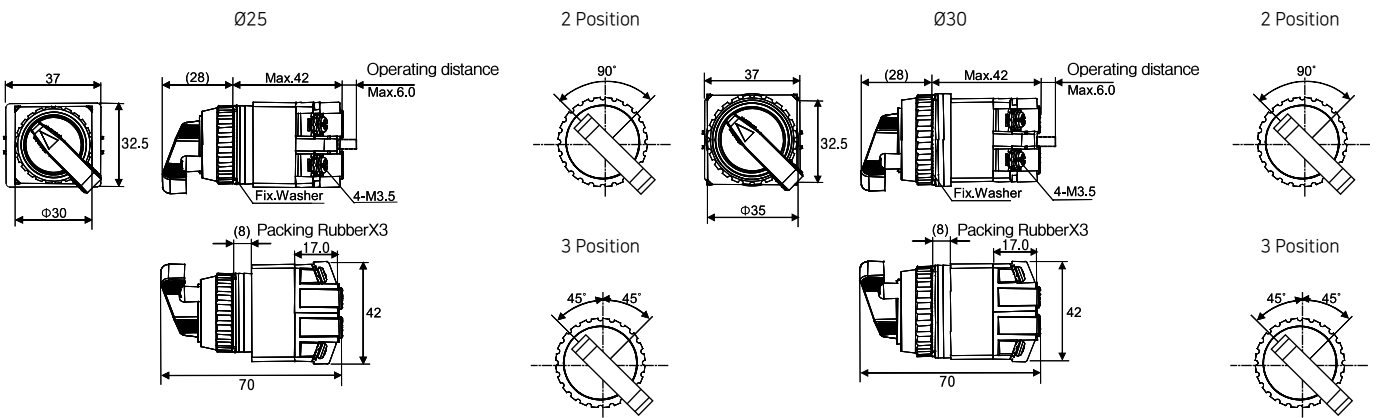
### Dimension

Unit : mm

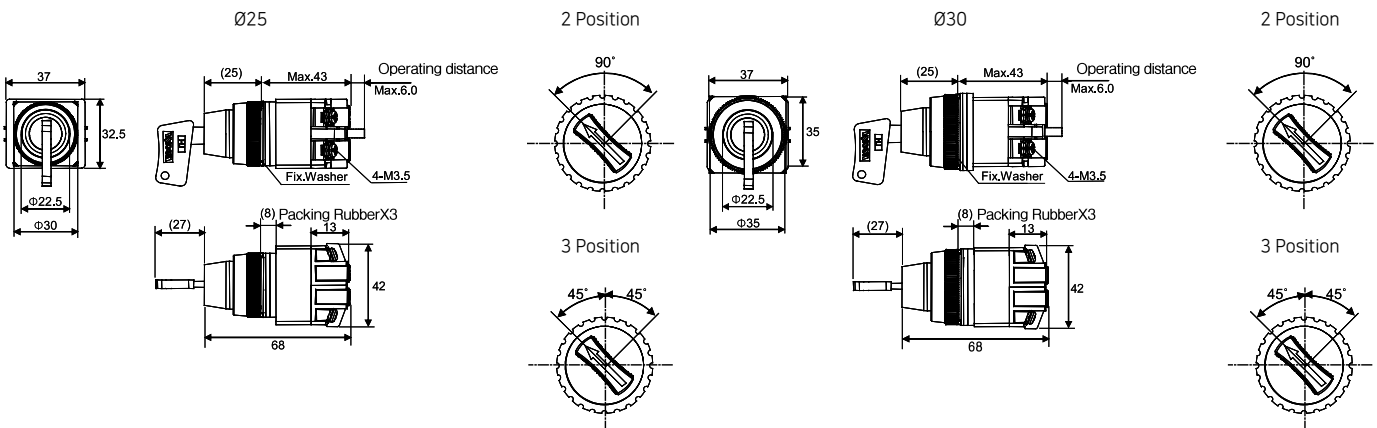
#### Knob Type Selector



#### Lever Type Selector



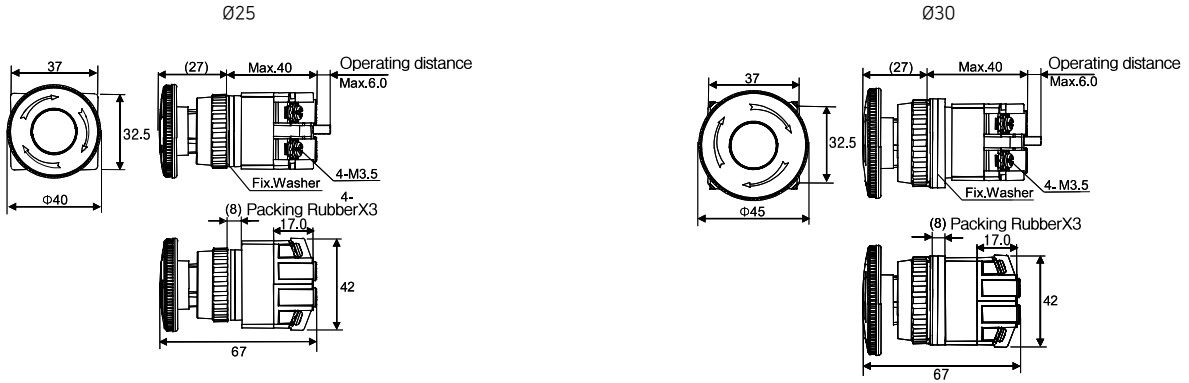
#### Key



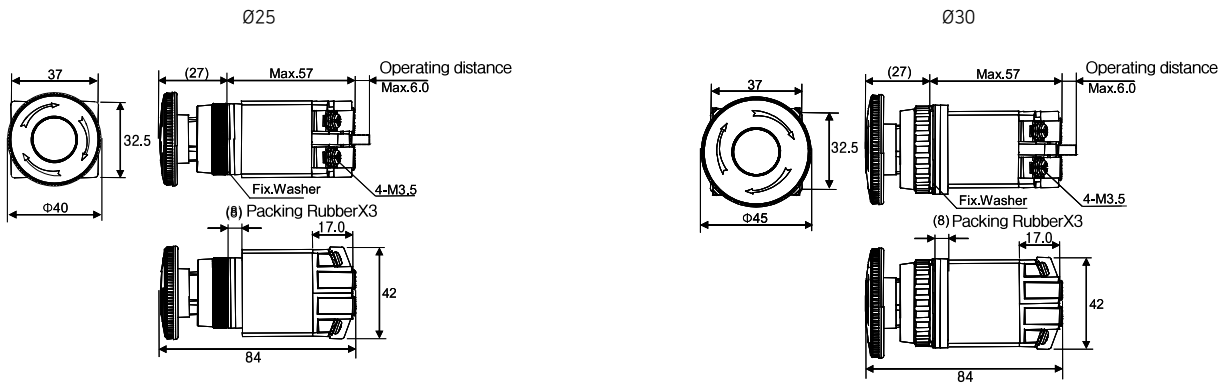
## Dimension

Unit : mm

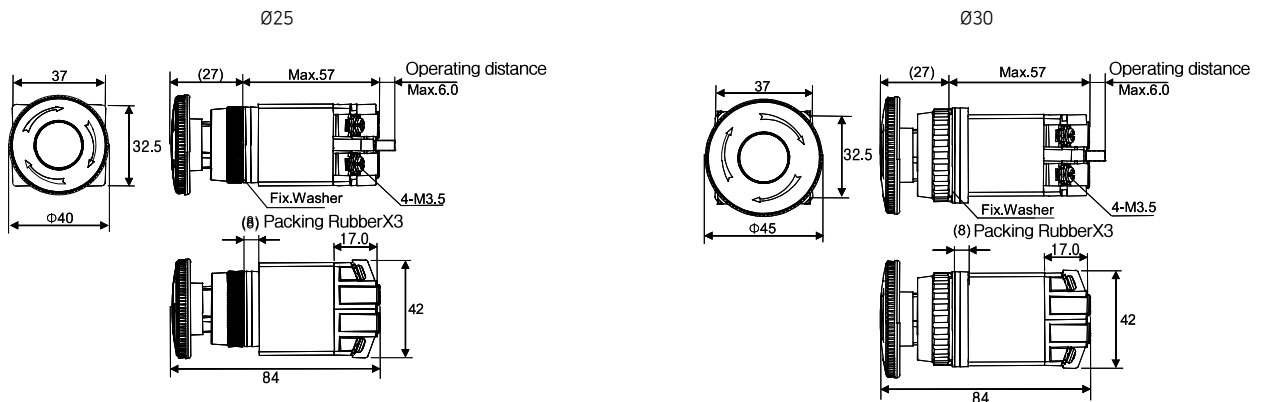
### Emergency Stop



### Emergency Stop (Waterproof)



### Latching type Emergency Stop



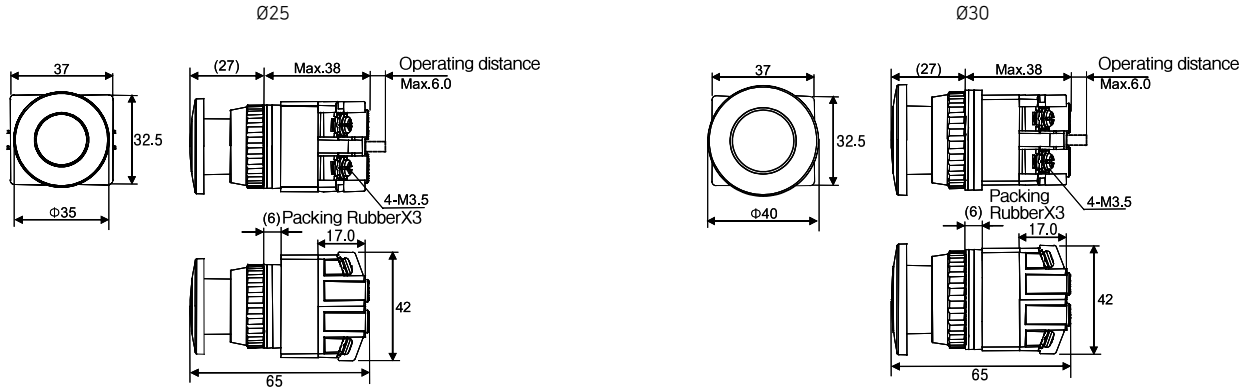
# Control Switch

## B Series

### Dimension

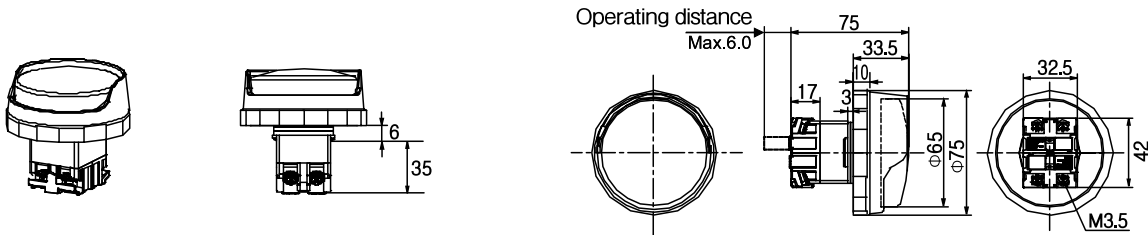
Unit : mm

#### Mushroom Push Button

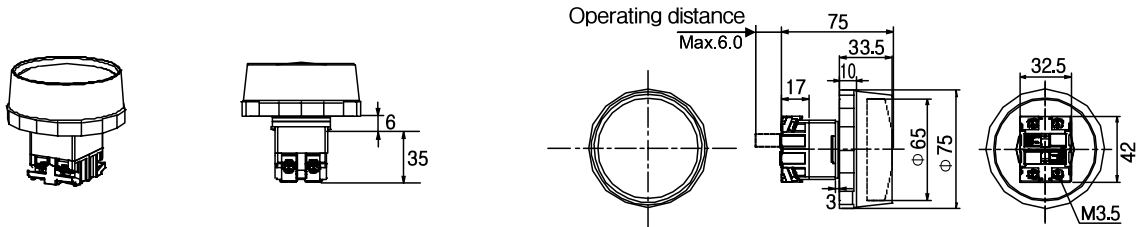


#### Portable Push Button

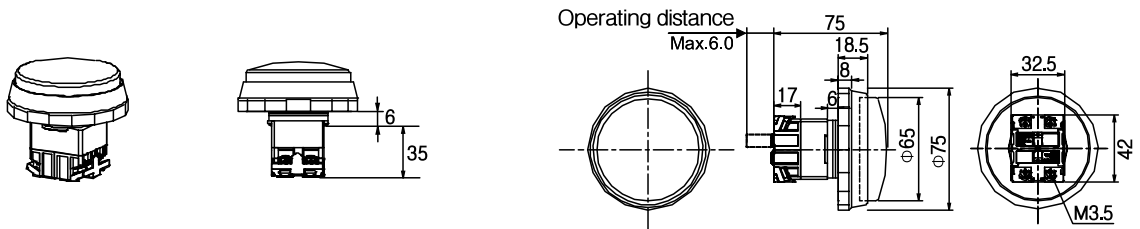
Ø30



Ø30



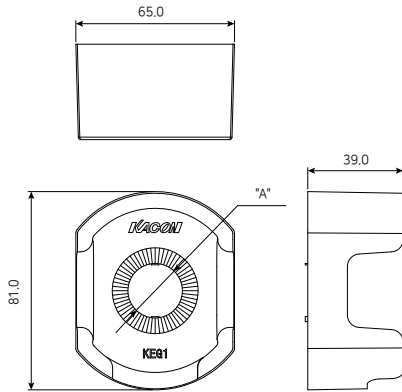
Ø30



# Accessory

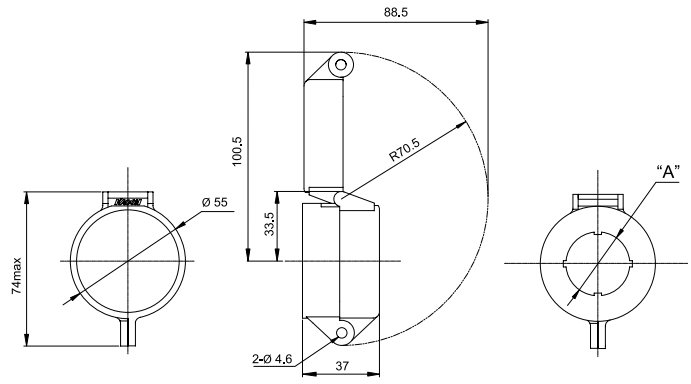
Unite : mm

## KEG12 / 15 / 13



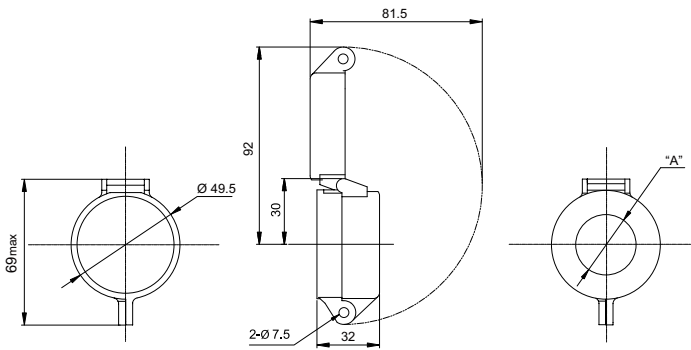
Model	"A"	Color
KEG12	Ø22	Red, Green Orange, Blue
KEG15	Ø25	
KEG13	Ø30	

## KEG32 / 35 / 33



Model	"A"	Color
KEG32	Ø22	Red, Green Orange, Blue Clear, Black
KEG35	Ø25	
KEG33	Ø30	

## KEG42 / 45 / 43



Model	"A"	Color
KEG42	Ø22	Red, Green Orange, Blue Clear, Black
KEG45	Ø25	
KEG43	Ø30	

# Control Switch

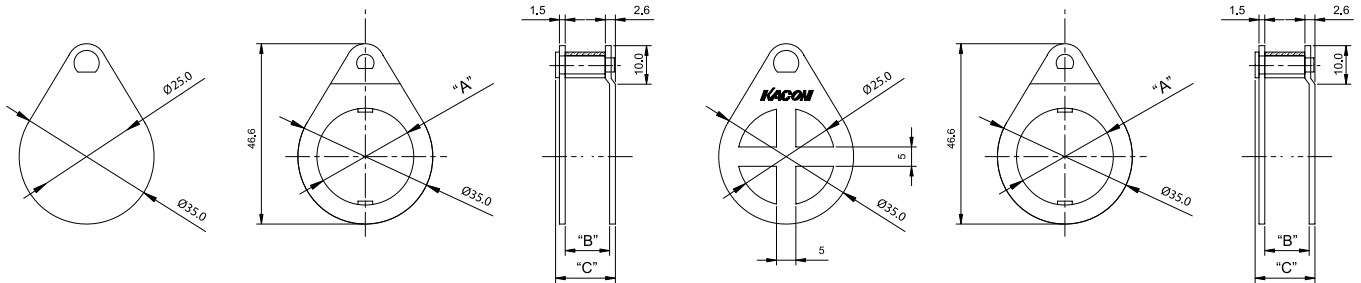
## B Series

### Accessory

Unite : mm

HP113 / 114

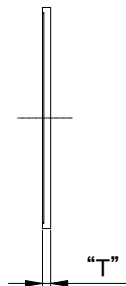
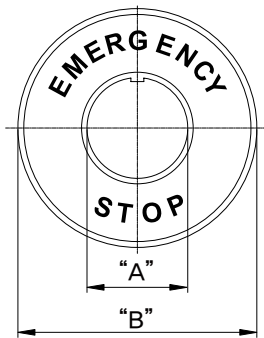
HP115 / 116



Model	"A"	"B"	"C"	Product
HP113	Ø25	14m	18m	Push Button
HP114	Ø30	14m	18m	

Model	"A"	"B"	"C"	Product
HP115	Ø25	23m	28m	Push Button Lighted
HP116	Ø30	23m	28m	

HP111 / 112



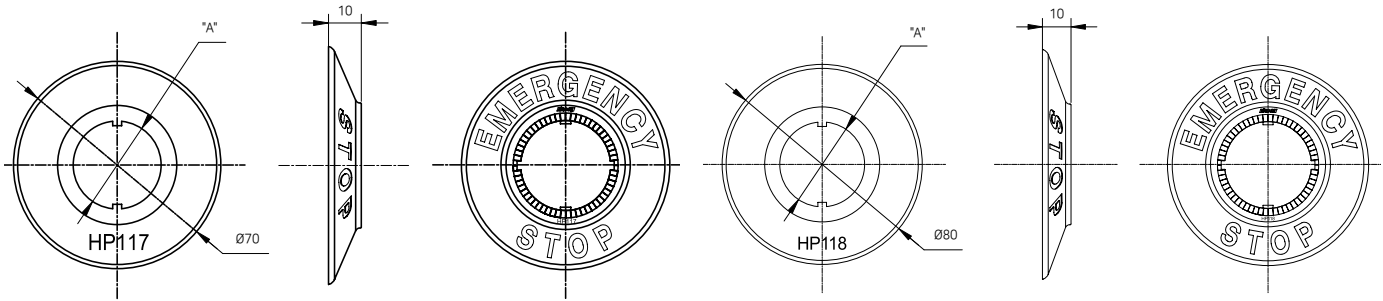
Model	"A"	"B"	"T"
HP111A	Ø22.2	Ø60	2.6
HP111B	Ø25.2	Ø60	2.6
HP111C	Ø30.1	Ø60	2.6
HP112A	Ø22.2	Ø75	2.8
HP112B	Ø25.2	Ø75	2.8
HP112C	Ø30.1	Ø75	2.8

Accessory

Unite : mm

HP117A / 117B / 117C

HP118A / 118B / 118C



Model	"A"	Color
HP117A	Ø22	Yellow
HP117B	Ø25	
HP117C	Ø30	

Model	"A"	Color
HP118A	Ø22	Yellow
HP118B	Ø25	
HP118C	Ø30	

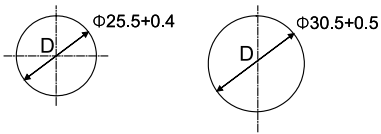
# Control Switch

B Series

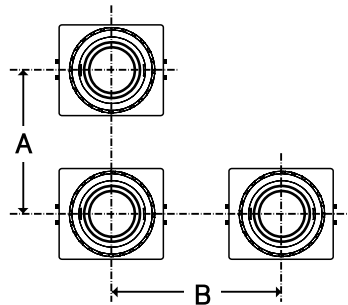
## Panel Cut-Out / Mounting Dimension

Unit : mm

### Panel Cut-Out



### Panel Mounting Dimension



### Space Dimension

D Panel Hole		Ø25.5 +0.4 -0	Ø30.5 +0.5 -0
A Space		35	40
B Space	Pilot Light	Min. 35	Min. 40
	Push Button	Min. 45	Min. 45
	Selector	Min. 50	Min. 50
	Key	Min. 50	Min. 50
	Emergency Stop	Min. 60/(A Space 60)	Min. 60/(A Space 60)
	Portable Push Button	Min. 78/(A Space 78)	Min. 78/(A Space 78)

### Key, Selector contact form drawing (basic contact)

2 Position				3 Position				
Contact	Terminal code	Left	Right	Contact	Terminal code	Left	Middle	Right
1a1b	NO		●	1a1b	NO	●		
	NC	●			NC			●
2a	NO		●	2a	NO	●		
	NO		●		NO	●		
2b	NC	●		2b	NC			●
	NC	●			NC			●
2a2b	NO		●	2a2b	NO	●		
	NC	●			NC			●
	NO		●		NO	●		
	NC	●			NC			●