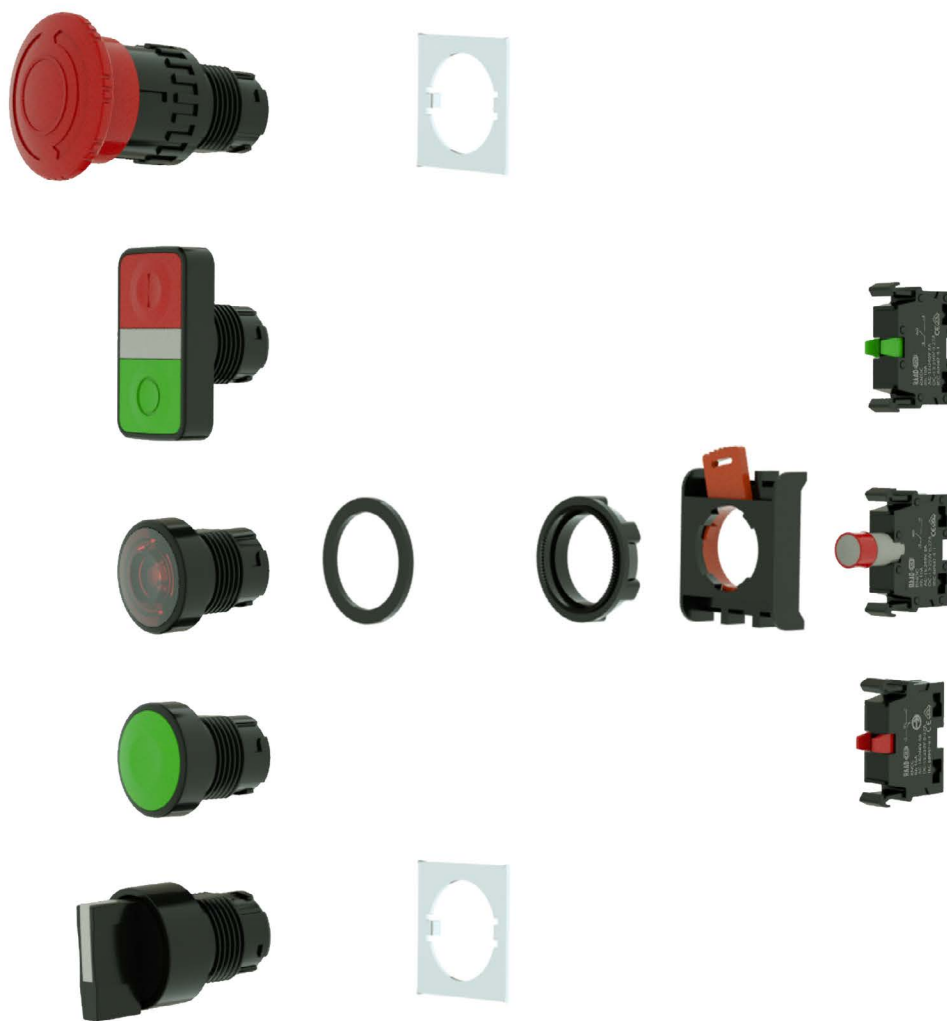


Control Switches



The range of 22mm diameter Control Switches is designed in accordance to IEC 60947-5-1 and IEC 60947-5-5 to provide the following features:

- Easy and rapid installation
- Fixing method unaffected by excessive vibration
- Produced from flame resistant material
- Plastic body construction resistant to corrosion and longer mechanical life
- Independent assembling of NC, NO, and Lamp contacts and freely combined for convenient replacement
- Outstanding appearance and ergonomics
- The BA9S lamp can be requested in each color
- Resistant to unwilling rotation during normal operation, due to anti-rotation washer.

**Working and mounting conditions:**

Conforming standard	IEC 60947-5-1
Ambient temperature	-20 ~ +70
Material	PA
Pollution degree	3

Technical Data:

Rated insulation voltage (V)	400
Rated impulse withstand voltage(kV)	4
Conventional thermal current(A)	10
Utilization Category	AC-15, DC-13

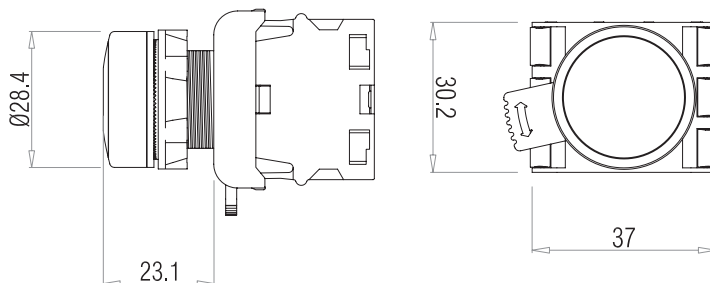
Rated operational voltage(V)*	Rated operational current(A)
380	1.9
240	3
120	6

* For illuminated push buttons the rated operational voltage of lamps are: 24, 48, 110, 220 V (AC/DC)



IEC 60947-5-1	FB - O			FB-C				
Impulse Voltage (kV)	4			4				
Rated Insulation Voltage (V)	400			400				
Current (A)	3			3				
Pollution Degree/Voltage Category/Material Group	3/III/I			3/III/I				
Utilization Category	AC-15, DC-13			AC-15, DC-13				
Ambient Temperature (°C)	-20 ~ +70			-20 ~ +70				
Contact								
Contact type	NO	NC	Lamp	NO	NC	Lamp		
Diagram								
Number of contacts	1	-	-	-	1	-		
Description	Voltage (v)	Color	Ordering No.	Qty	Voltage (v)	Color	Ordering No.	Qty
Pushbutton, Spring-return	Up to 380		6070302001	15	Up to 380		6070301001	15
			6070302006					
			6070302005					
			6070302004					
			6070302009					
Connection Capacity								
Rigid Solid (mm²)	0.5-4							
Stripping Length (mm)	9							
Clamping Screw	M3							
Tightening Torque (N.m)	0.5							
Insulation material	PA							
Height from the electrical panel surface (mm)	10.0							

Overall and Installation Dimension (mm) :





■ FBC-O

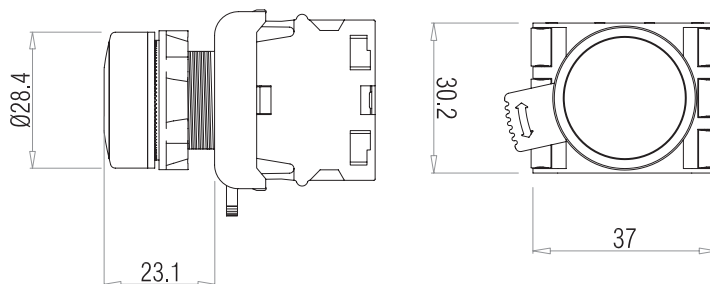


■ FBC-C



IEC 60947-5-1	FBC - O			FBC - C				
Impulse Voltage (kV)	4			4				
Rated Insulation Voltage (V)	400			400				
Current (A)	3			3				
Pollution Degree/Voltage Category/Material Group	3/III/I			3/III/I				
Utilization Category	AC-15, DC-13			AC-15, DC-13				
Ambient Temperature (°C)	-5~40			-5~40				
Contact								
Contact type	NO	NC	Lamp	NO	NC	Lamp		
Diagram								
Number of contacts	1	-	-	-	1	-		
Description	Voltage (v)	Color	Ordering No.	Qty	Voltage (v)	Color	Ordering No.	Qty
Pushbutton, Spring-return	Up to 380		6070302101	15	Up to 380		6070301101	15
			6070302106					
			6070302105					
			6070302104					
			6070302102					
Connection Capacity								
Rigid Solid (mm²)	0.5-4							
Stripping Length (mm)	9							
Clamping Screw	M3							
Tightening Torque (N.m)	0.5							
head insulation material	PC/ABS with White chromated coating							
Body insulation material	PA							
Height from the electrical panel surface (mm)	10.0							

Overall and Installation Dimension (mm) :





■ FBL-O

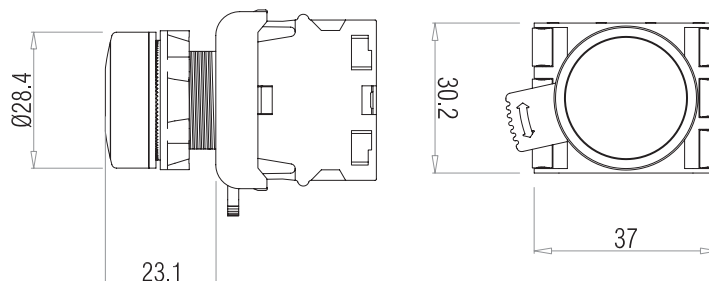


■ FBL-C



IEC 60947-5-1	FBL-O			FBL-C				
Impulse Voltage (kV)	4			4				
Rated Insulation Voltage (V)	400			400				
Current (A)	3			3				
Pollution Degree/Voltage Category/Material Group	3/III/I			3/III/I				
Utilization Category	AC-15, DC-13			AC-15, DC-13				
Ambient Temperature (°C)	-5~40			-5~40				
Contact								
Contact type	NO	NC	Lamp	NO	NC	Lamp		
Diagram								
Number of contacts	1	-	1	-	1	1		
Description	Voltage (V AC/DC)	Color	Ordering No.	Qty	Voltage (V AC/DC)	Color	Ordering No.	Qty
Pushbutton, Spring-return, Illuminated with lamp ...	24		6070302008	15	24		6070301006	15
			6070302027					
			6070302023					
			6070302019					
Pushbutton, Spring-return, Illuminated with lamp ...	48		6070302007	15	48		6070301005	15
			6070302026					
			6070302022					
			6070302018					
Pushbutton, Spring-return, Illuminated with lamp ...	110		6070302003	15	110		6070301004	15
			6070302025					
			6070302021					
			6070302017					
Pushbutton, Spring-return, Illuminated with lamp ...	220		6070302002	15	220		6070301003	15
			6070302024					
			6070302020					
			6070302016					
Connection Capacity								
Rigid Solid (mm²)	0.5-4							
Stripping Length (mm)	9							
Clamping Screw	M3							
Tightening Torque (N.m)	0.5							
Insulation material								
PA								
Height from the electrical panel surface (mm)	10.0							

Overall and Installation Dimension (mm) :





■ FBCL-O

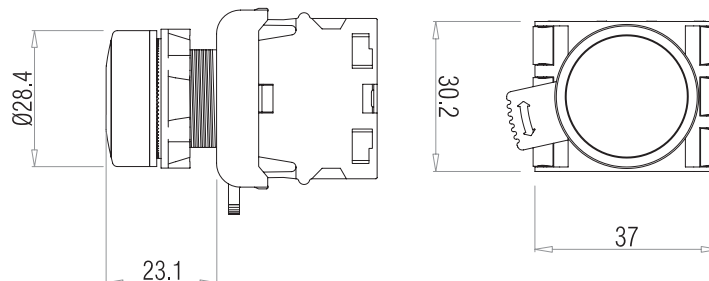


■ FBCL-C



IEC 60947-5-1	FBCL-O			FBCL-C				
Impulse Voltage (kV)	4			4				
Rated Insulation Voltage (V)	400			400				
Current (A)	3			3				
Pollution Degree/Voltage Category/Material Group	3/III/I			3/III/I				
Utilization Category	AC-15, DC-13			AC-15, DC-13				
Ambient Temperature (°C)	-5~40			-5~40				
Contact								
Contact type	NO	NC	Lamp	NO	NC	Lamp		
Diagram								
Number of contacts	1	-	1	-	1	1		
Description	Voltage (V AC/DC)	Color	Ordering No.	Qty	Voltage (V AC/DC)	Color	Ordering No.	Qty
Pushbutton, Spring-return, Illuminated with lamp ...	24		6070302111	15	24		6070301106	15
			6070302127					
			6070302123					
			6070302115					
Pushbutton, Spring-return, Illuminated with lamp ...	48		6070302110	15	48		6070301105	15
			6070302126					
			6070302122					
			6070302114					
Pushbutton, Spring-return, Illuminated with lamp ...	110		6070302109	15	110		6070301104	15
			6070302125					
			6070302121					
			6070302113					
Pushbutton, Spring-return, Illuminated with lamp ...	220		6070302108	15	220		6070301103	15
			6070302124					
			6070302120					
			6070302112					
Connection Capacity								
Rigid Solid (mm²)		0.5-4						
Stripping Length (mm)		9						
Clamping Screw		M3						
Tightening Torque (N.m)		0.5						
Head insulation material		PC/ABS with white chromated coating						
Body insulation material		PA						
Height from the electrical panel surface (mm)		10.0						

Overall and Installation Dimension (mm) :





DPB

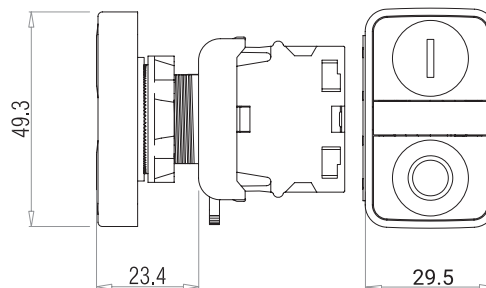


DPBC



IEC 60947-5-1	DPB			DPBC		
Impulse Voltage (kV)	4			4		
Rated Insulation Voltage (V)	400			400		
Current (A)	3			3		
Pollution Degree/Voltage Category/Material Group	3/III/I			3/III/I		
Utilization Category	AC-15, DC-13			AC-15, DC-13		
Ambient Temperature (°C)	-5~40			-5~40		
Contact						
Contact type	NO	NC	Lamp	NO	NC	Lamp
Diagram						
Number of contacts	1	1	-	1	1	-
Description	Voltage (v)	Ordering No.	Qty	Voltage (v)	Ordering No.	Qty
Double Pushbutton Spring-return	Up to 380	6070303001	10	Up to 380	6070303101	10
Connection Capacity						
Rigid Solid (mm²)	0.5-4					
Stripping Length (mm)	9					
Clamping Screw	M3					
Tightening Torque (N.m)	0.5					
Head insulation material	PA			PC/ABS with white chromated coating		
Body insulation material	PA					
Height from the electrical panel surface (mm)	10.50					

Overall and Installation Dimension (mm) :





DPBL
VDE CE



DPBCL
VDE CE

IEC 60947-5-1	DPBL			DPBCL		
Impulse Voltage (kV)	4			4		
Rated Insulation Voltage (V)	400			400		
Current (A)	3			3		
Pollution Degree/Voltage Category/Material Group	3/III/I			3/III/I		
Utilization Category	AC-15, DC-13			AC-15, DC-13		
Ambient Temperature (°C)	-5~40			-5~40		
Contact						
Contact type	NO	NC	Lamp	NO	NC	Lamp
Diagram						
Number of contacts	1	1	1	1	1	1
Description	Voltage (V AC/DC)	Ordering No.	Qty	Voltage (V AC/DC)	Ordering No.	Qty
Double Pushbutton Spring-return Illuminated with lamp	24	6070303009	10	220	6070303102	10
	48	6070303008	10			
	110	6070303007	10			
	220	6070303002	10			
Double Pushbutton Spring-return Illuminated with RED lamp	220	6070303003	10	220	6070303103	10
Connection Capacity						
Rigid Solid (mm ²)	0.5-4					
Stripping Length (mm)	9					
Clamping Screw	M3					
Tightening Torque (N.m)	0.5					
Head insulation material	PA			PC/ABS with white chromated coating		
Body insulation material	PA					
Height from the electrical panel surface (mm)	10.50					

Double Pushbutton With Protection cover:



Type	Voltage (V AC/DC)	Lamp Color	Ordering No.	Qty.
DPB- C	-		6070303036	10
DPBL- C	220		6070303037	
DPBL- C	220		6070303038	
DPBL- C	110		6070303039	
DPBL- C	48		6070303040	
DPBL- C	24		6070303041	
DPBC- C	-		6070303042	
DPBCL- C	220		6070303043	
DPBCL- C	220		6070303044	

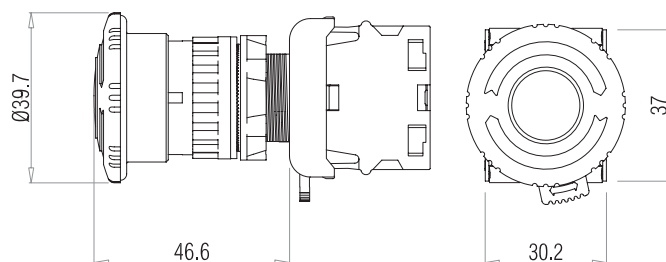


ESTR



IEC 60947-5-1	ESTR		
Impulse Voltage (kV)	4		
Rated Insulation Voltage (V)	400		
Current (A)	3		
Pollution Degree/Voltage Category/Material Group	3/III/I		
Utilization Category	AC-15, DC-13		
Ambient Temperature (°C)	-5~40		
Contact			
Contact type	NO	NC	Lamp
Diagram			
Number of contacts	-	1	-
Description	Voltage (v)	Ordering No.	Qty
Emergency stop button, Turn to release ESTR Spring-return	Up to 380	6070301002	10
Connection Capacity			
Rigid Solid (mm²)	0.5-4		
Stripping Length (mm)	9		
Clamping Screw	M3		
Tightening Torque (N.m)	0.5		
Insulation material	PA		
Height from the electrical panel surface (mm)	26.50		

Overall and Installation Dimension (mm) :



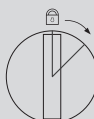
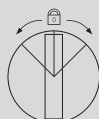


SEI2

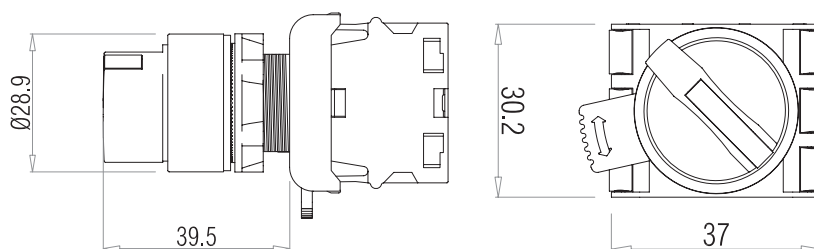


SEI3



IEC 60947-5-1	SEI2				SEI3			
Impulse Voltage (kV)	4				4			
Rated Insulation Voltage (V)	400				400			
Current (A)	3				3			
Pollution Degree/Voltage Category/Material Group	3/III/I				3/III/I			
Utilization Category	AC-15, DC-13				AC-15, DC-13			
Ambient Temperature (°C)	-20 ~ +70				-20 ~ +70			
Type of position	 Two position momentary				 Three position momentary			
Contact								
Contact type	NO		NC		Lamp		NO	
Diagram								
Number of contacts	1		-		-		2	
Description								
	Voltage (v)	Type	Ordering No.	Qty	Voltage (v)	Type	Ordering No.	Qty
Selector switch, momentary	Up to 380	SEI2	6070303010	12	Up to 380	SEI3	6070303011	12
Connection Capacity								
Rigid Solid (mm²)	0.5-4							
Stripping Length (mm)	9							
Clamping Screw	M3							
Tightening Torque (N.m)	0.5							
Insulation material								
Height from the electrical panel surface (mm)	PA							
26.50								

Overall and Installation Dimension (mm) :



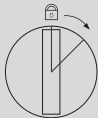
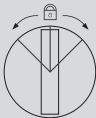


SEIC2

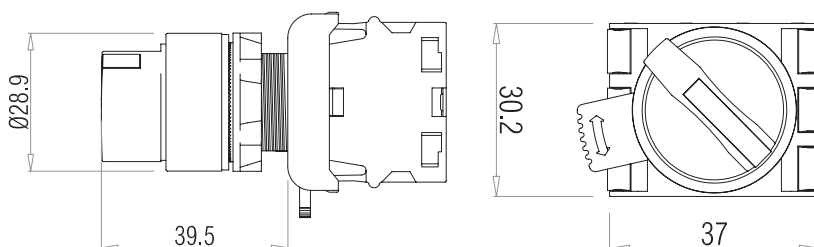


SEIC3



IEC 60947-5-1	SEIC2				SEIC3			
Impulse Voltage (kV)	4				4			
Rated Insulation Voltage (V)	400				400			
Current (A)	3				3			
Pollution Degree/Voltage Category/Material Group	3/III/I				3/III/I			
Utilization Category	AC-15, DC-13				AC-15, DC-13			
Ambient Temperature (°C)	-20 ~ +70				-20 ~ +70			
Type of position	 Two position momentary				 Three position momentary			
Contact								
Contact type	NO		NC		Lamp		NO	
Diagram								
Number of contacts	1		-		-		2	
Description								
	Voltage (v)		Type	Ordering No.	Qty	Voltage (v)		Type
Selector switch, momentary, coated	Up to 380		SEIC2	6070303110	12	Up to 380		SEIC3
Connection Capacity								
Rigid Solid (mm²)	0.5-4							
Stripping Length (mm)	9							
Clamping Screw	M3							
Tightening Torque (N.m)	0.5							
Insulation material								
	PA							
Height from the electrical panel surface (mm)	26.50							

Overall and Installation Dimension (mm) :



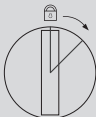
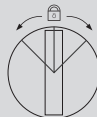


SEI2-L

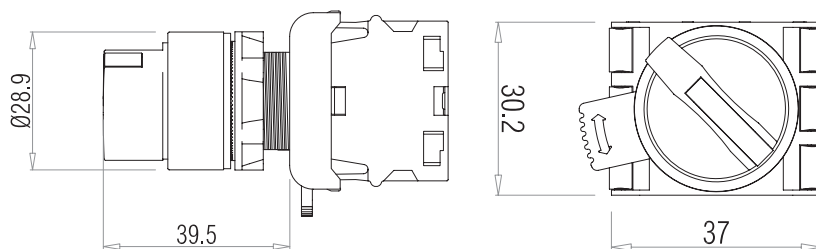


SEI3-L



IEC 60947-5-1	SEI2-L				SEI3-L			
Impulse Voltage (kV)	4				4			
Rated Insulation Voltage (V)	400				400			
Current (A)	3				3			
Pollution Degree/Voltage Category/Material Group	3/III/I				3/III/I			
Utilization Category	AC-15, DC-13				AC-15, DC-13			
Ambient Temperature (°C)	-20 ~ +70				-20 ~ +70			
Type of position	 Two position momentary				 Three position momentary			
Contact								
Contact type	NO		NC		Lamp		NO	
Diagram								
Number of contacts	1		-		1		2	
Description	Voltage (V AC/DC)		Color	Ordering No.	Qty	Voltage (V AC/DC)		Color
Selector switch, momentary with lamp (SEI-L)	24		6070303030	12	24		6070303034	12
			6070303031	12			6070303035	12
			6070303012	12			6070303014	12
	220		6070303013	12	220		6070303015	12
			6070303016	12			6070303017	12
Connection Capacity								
Rigid Solid (mm ²)	0.5-4							
Stripping Length (mm)	9							
Clamping Screw	M3							
Tightening Torque (N.m)	0.5							
Insulation material								
Height from the electrical panel surface (mm)	PA							
	26.50							

Overall and Installation Dimension (mm) :



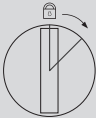
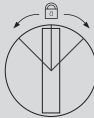


SEIC2-L

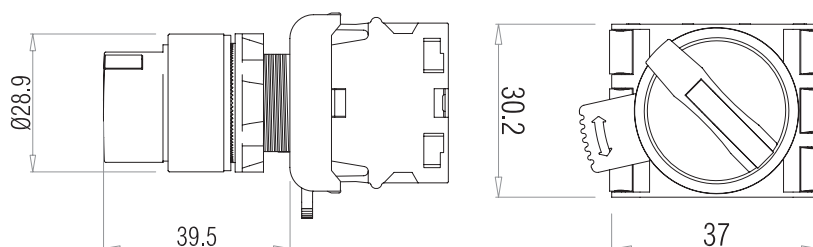


SEIC3-L



IEC 60947-5-1	SEIC2-L				SEIC3-L			
Impulse Voltage (kV)	4				4			
Rated Insulation Voltage (V)	400				400			
Current (A)	3				3			
Pollution Degree/Voltage Category/Material Group	3/III/I				3/III/I			
Utilization Category	AC-15, DC-13				AC-15, DC-13			
Ambient Temperature (°C)	-20 ~ +70				-20 ~ +70			
Type of position	 Two position momentary				 Three position momentary			
Contact								
Contact type	NO		NC		Lamp		NO	
Diagram								
Number of contacts	1		-		1		2	
Description	Voltage (V AC/DC)	Color	Ordering No.	Qty	Voltage (V AC/DC)	Color	Ordering No.	Qty
Selector switch, momentary, coated and with lamp (SEIC-L)	220		6070303112	12	220		6070303114	12
			6070303113	12			6070303115	12
			6070303117	12			6070303116	12
Connection Capacity								
Rigid Solid (mm²)	0.5-4							
Stripping Length (mm)	9							
Clamping Screw	M3							
Tightening Torque (N.m)	0.5							
Insulation material	PA							
Height from the electrical panel surface (mm)	26.50							

Overall and Installation Dimension (mm) :



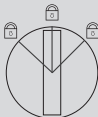


■ SES2

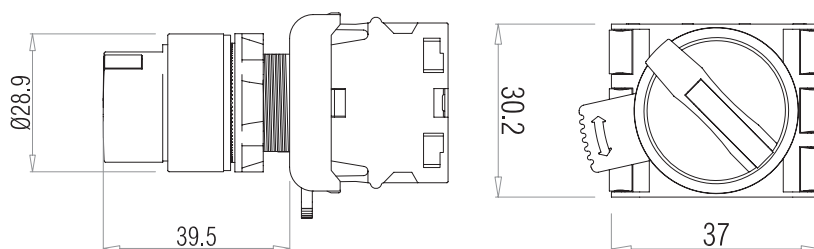


■ SES3



IEC 60947-5-1	SES2				SES3			
Impulse Voltage (kV)	4				4			
Rated Insulation Voltage (V)	400				400			
Current (A)	3				3			
Pollution Degree/Voltage Category/Material Group	3/III/I				3/III/I			
Utilization Category	AC-15, DC-13				AC-15, DC-13			
Ambient Temperature (°C)	-20 ~ +70				-20 ~ +70			
Type of position	 Two position stay-put				 Three position stay-put			
Contact								
Contact type	NO		NC		Lamp		NO	
Diagram								
Number of contacts	1		-		-		2	
Description		Voltage (v)	Type	Ordering No.	Qty	Voltage (v)	Type	Ordering No.
Selector switch, stay-put (SES)		Up to 380	SES2	6070303020	12	Up to 380	SES3	6070303021
Connection Capacity								
Rigid Solid (mm²)		0.5-4						
Stripping Length (mm)		9						
Clamping Screw		M3						
Tightening Torque (N.m)		0.5						
Insulation material		PA						
Height from the electrical panel surface (mm)		26.50						

Overall and Installation Dimension (mm) :



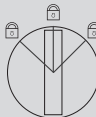


■ SESC2

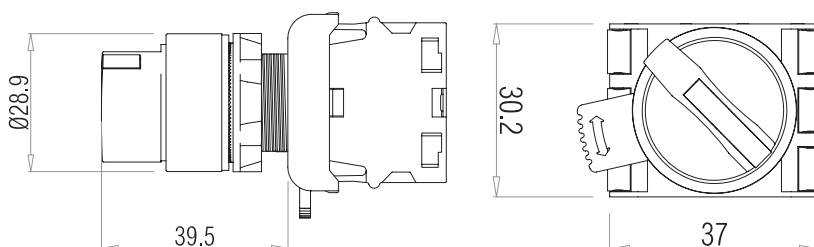


■ SESC3



IEC 60947-5-1	SESC2				SESC3			
Impulse Voltage (kV)	4				4			
Rated Insulation Voltage (V)	400				400			
Current (A)	3				3			
Pollution Degree/Voltage Category/Material Group	3/III/I				3/III/I			
Utilization Category	AC-15, DC-13				AC-15, DC-13			
Ambient Temperature (°C)	-20 ~ +70				-20 ~ +70			
Type of position	 Two position stay-put				 Three position stay-put			
Contact								
Contact type	NO		NC		Lamp		NO	
Diagram								
Number of contacts	1		-		-		2	
Description								
	Voltage (v)	Type	Ordering No.	Qty	Voltage (v)	Type	Ordering No.	Qty
Selector switch, stay-put, coated (SESC)	Up to 380	SESC2	6070303120	12	Up to 380	SESC3	6070303121	12
Connection Capacity								
Rigid Solid (mm ²)	0.5-4							
Stripping Length (mm)	9							
Clamping Screw	M3							
Tightening Torque (N.m)	0.5							
Insulation material								
Height from the electrical panel surface (mm)	26.50							

Overall and Installation Dimension (mm) :





■ SES2-L

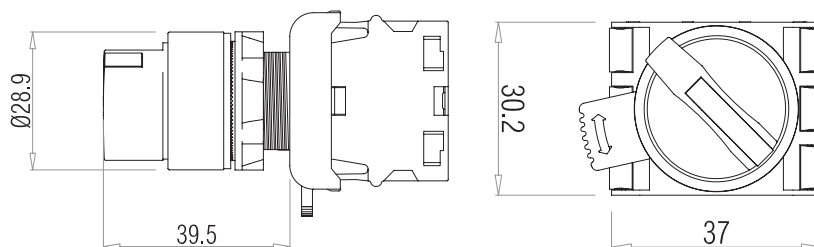


■ SES3-L



IEC 60947-5-1	SES2 - L				SES3-L					
Impulse Voltage (kV)	4				4					
Rated Insulation Voltage (V)	400				400					
Current (A)	3				3					
Pollution Degree/Voltage Category/Material Group	3/III/I				3/III/I					
Utilization Category	AC-15, DC-13				AC-15, DC-13					
Ambient Temperature (°C)	-20 ~ +70				-20 ~ +70					
Type of position	 Two position stay-put				 Three position stay-put					
Contact										
Contact type	NO		NC		Lamp		NO			
Diagram										
Number of contacts	1		-		1		2			
Description	Voltage (V AC/DC)		Color	Ordering No.	Qty	Voltage (V AC/DC)		Color	Ordering No.	Qty
Selector switch, stay-put with lamp (SES-L)	24		6070303028	12	24		6070303032	12		
			6070303029	12			6070303033	12		
	220		6070303022	12	220		6070303024	12		
			6070303023	12			6070303025	12		
			6070303026	12			6070303027	12		
Connection Capacity										
Rigid Solid (mm ²)	0.5-4									
Stripping Length (mm)	9									
Clamping Screw	M3									
Tightening Torque (N.m)	0.5									
Insulation material	PA									
Height from the electrical panel surface (mm)	26.50									

Overall and Installation Dimension (mm) :



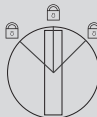


■ SESC2-L

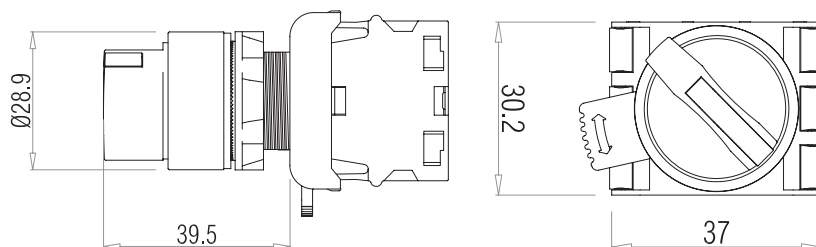


■ SESC3-L



IEC 60947-5-1	SESC2-L				SESC3-L							
Impulse Voltage (kV)	4				4							
Rated Insulation Voltage (V)	400				400							
Current (A)	3				3							
Pollution Degree/Voltage Category/Material Group	3/III/I				3/III/I							
Utilization Category	AC-15, DC-13				AC-15, DC-13							
Ambient Temperature (°C)	-20 ~ +70				-20 ~ +70							
Type of position	 Two position stay-put				 Three position stay-put							
Contact												
Contact type	NO		NC		Lamp		NO		NC		Lamp	
Diagram												
Number of contacts	1		-		1		2		-		1	
Description	Voltage (V AC/DC)		Color	Ordering No.	Qty	Voltage (V AC/DC)		Color	Ordering No.	Qty		
Selector switch, stay-put, coated with lamp (SESC-L)	220		6070303122	12	220		6070303124	12				
			6070303123	12			6070303125	12				
			6070303127	12			6070303126	12				
Connection Capacity												
Rigid Solid (mm ²)						0.5-4						
Stripping Length (mm)						9						
Clamping Screw						M3						
Tightening Torque (N.m)						0.5						
Insulation material						PA						
Height from the electrical panel surface (mm)						26.50						

Overall and Installation Dimension (mm) :



Flush Buttons Protection cover (C-FB)



C-FB is a protection cover used as an encase made of silicone rubber material offering further protection from chemicals, oil, etc. This accessory's applications and details can be found in the following table.

Type	Ordering No.	Application	Material	Color	Qty.
C-FB	6070306008	FB-O, FB-C, FBC-O, FBC-C FBL-O, FBL-C, FBCL-O, FBCL-C	Silicon Rubber	Transparent	50

Double Push Buttons Protection cover (C-DPB)



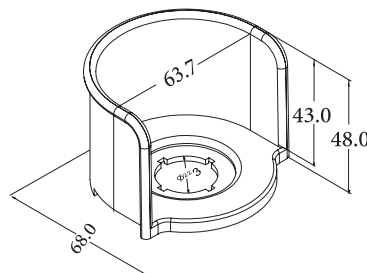
C-DPB is a protection covers used as an encase made of silicone rubber material offering further protection from chemicals, oil, etc. This accessory's applications and details can be found in the following table.

Type	Ordering No.	Application	Material	Color	Qty.
C-DPB	6070306009	DPB, DPBC, DPBL, DPBCL	Silicon Rubber	Transparent	50

Emergency-button Guard (G-ESTR)



G-ESTR is a guard for preventing the unwanted touch of ESTR



Type	Ordering No.	Application	Material	Qty.
G-ESTR	6070306007	ESTR	PA	5



RNCC

VDE CE



RNOC

VDE CE



RSC

VDE CE

IEC 60947-5-1	RNCC		RNOC		RSC
Diagram					
Utilization category	AC-15 / DC-13				-
Rated insulation voltage (V)	400				400
Rated operational Voltage (V)	250 (DC)	380 (AC)	240 (AC)	120 (AC)	Refer to Page 184
Rated operational current (A)	0.27 (DC)	1.9 (AC)	3 (AC)	6 (AC)	Refer to Page 184
Conventional free air thermal current (A)	10				
Pollution Degree/VoltageCategory/Material Group	3/III/I				

Description	Voltage (v)	Ordering No.	Qty.
Single normally open contact	Up to 380V	6070401001	50
Single normally close contact		6070402001	50
Single lamp contact		6070403001	50
Connection Capacity			
Rigid Solid (mm²)	0.5-4		
Stripping Length (mm)	9		
Clamping Screw	M3		
Tightening Torque (N.m)	0.5		
Insulation material	PA		

Overall and Installation Dimension (mm) :

