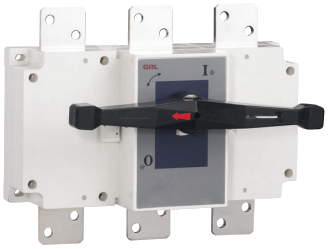
HGL series
Load isolation switch



Model & Meaning

H GL □ - □A / □ JK □ B H
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Code of company.
② Code of load isolation switch.
③ Conventicnal thermal current.
Z tands for change-over load isolation switch (Z1-outlet, Z2-inlet)
C tands for side operated load isolation switch.

④ Number of poles:
3 poles, 4 poles (3 poles+on andoff neutral pole)

⑤ Operation outside, no note for front operation.

⑥ The window for direct observing the contact, do not mark without need.

⑦ Functional code of auxiliary contact (as show in the table), do not mark without need.

⑧ The connection behind the board. Connection in front of board is not marked.

⑨ Operation behind the board, do not mark without need.

One NO One NC	F11	F1NO+F1NC
Two NO Two NC	F12	F2NO+F2NC

Application scope

HGL series load isolation witch mainly suitable for AC 50Hz, rated voltage to 660V, DC rated voltage up to 440V, rated current up to 3,150A. The switch is used in the infrequent making and breaking circuit.

Example of model selection

HGLZ2-160A/4Z_2JF_{11}~380V In 125A

Change over load isolation switch, inlet, AC rated voltage 380V, Conventional thermal current 160A, rated current 125A, 4 poles, operation outside the board, auxiliary contact NO+NC.

Characteristies of products

※ The elastic-accumulating accelerating mechanism for instant release realizes the rapid making and breaking (13.8m/s), having no relation ship with the speed of the operating handle, and increasing greatly the capability of extinguishing electric arc.
※ The shell made of unsaturated polyester resin reinforced by glass fibre possesses excellent perform ance of flame resistant, dielectric performance, safe operation, resist carbonic performance and resist impact performance.
※ Parallel double gap contact possesses self cleaning functions.
※ Allthe contact materials are copper alloy plated with silver, and possess two separation contact surfaces.Large clearance of insulation.
※ Be on "O" , the products can lock the handle with three locks at the same time and thus can avoid error operation.

HGL series
Load isolation switch

Principal technical parameter

Table 1

Conventional thermal current Ith (A)			63A		100A		160A		250A	
Rated current In (A)			40	63	80	100	125	160	200	250
Rated insulation voltage Ui (V) (installation type IV)			690	690	690	690	690	690	690	690
Dielectric strength (V)			5000	5000	5000	5000	5000	5000	5000	5000
Rated surge-resistant voltage Uimp kV (installed category IV)			6	6	6	6	6	6	6	6
Rated working current Ie (A)	380V	AC-21B	40	63	80	80	125	160	200	250
		AC-22B	40	63	80	80	125	160	200	250
		AC-23B	40	50	80	80	125	160	200	250
	660V	AC-21B	40	50	80	80	125	160	200	250
		AC-22B	32	32	50	50	125	160	160	160
		AC-23B	25	25	40	40	80	80	100	125
Motor power P (kW)		380V	18.5	25	40	40	63	80	100	132
		660V	22	22	33	33	75	75	90	110
Rated short-time withstand current Icw (kA Rms) 0.1s/1s			2	2	2	2	8	8	12	12
Rated breaking capability Icn (A Rms) AC23 380V			320	504	640	800	1000	1000	1600	1600
Rated making capability Icm (A Rms) AC23 380V			400	630	800	1000	1250	1600	2000	2500
Rated short-current making capability Icm (kA peak value)			2.84	2.84	2.84	2.84	13.6	13.6	17	17
Mechanical durability 380V			1700	1700	1700	1700	1400	1400	1400	1400
Electrical curability 380V			300	300	300	300	200	200	200	200
Operation moment (Nm)			1.2	1.2	1.2	1.2	6.5	6.5	10	10
Weight (kg)		3 poles	0.37	0.37	0.37	0.37	1.3	1.3	2.2	2.2
		4 poles	0.41	0.41	0.41	0.41	1.5	1.5	2.6	2.6

HGL series
Load isolation switch

Table 2

Conventional thermal current Ith (A)			630A				1600A			3150A		
Rated current In (A)			315	400	500	630	1000	1250	1600	2000	2500	3150
Rated insulation voltage Ui (V) (installation type IV)			1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Dielectric strength (V)			8000	8000	8000	8000	10000	10000	10000	10000	10000	10000
Rated surge-resistant voltage Uimp kV (installed category IV)			6	6	6	6	6	6	6	6	6	6
Rated working current Ie (A)	380V	AC-21B	315	400	500	630	1000	1250	1600	2000	2500	3150
		AC-22B	315	400	500	630	1000	1250	1600	2000	2500	3150
		AC-23B	315	400	500	630						
	660V	AC-21B	315	400	400	500	1000	1000	1600	2000	2500	2500
		AC-22B	315	315	315	315	800	800	800	1000	1250	1600
		AC-23B										
Motor power P (kW)		380V	160	220	280	315	560	560	560	710	710	710
		660V	185	185	185	185	475	475	475	750	750	750
Rated short-time withstand current Icw (kA Rms) 0.1s/1s			25	25	25	25	50	50	50	50	50	50
Rated breaking capability Icn (A Rms) AC23 380V			2520	3200	4000	5040	3000	3750	4800	6000	7500	9450
Rated making capability Icm (A Rms) AC23 380V			3150	4000	5000	6300	3000	3750	4800	6000	7500	9450
Rated short-current making capability Icm (kA peak value)			40	40	40	40	70	70	70	105	105	105
Mechanical durability (number of cyclic operation)			800	800	800	800	500	500	500	300	300	300
Electrical curability 380V			200	200	200	200	100	100	100	100	100	100
Operation moment (Nm)			14.5	14.5	14.5	14.5	37	37	60	60	60	60
Weight (kg)		3 poles	4.3	4.3	4.7	4.7	10.5	10.5	16	25.5	25.5	31
		4 poles	5.4	5.4	6	6	13	13	20	37.5	37.5	51.5

HGL series
Load isolation switch

Conformed standard

International standard

IEC60947-1 (1998)《Low-voltage switchgear and controlgear, part one: General Rules》.

IEC60947-3 (1999)《Low-voltage switchgear and controlgear, switches, disconnectors, switch-disconnectors and fuse-conbination units》.

National standard

GB/T14048.1-2000《Low-voltage switchgear and controlgear, part one: general Rules》.

GB/T14048.3-2000《Low-voltage switchgear and controlgear, switches, disconnectors, switch-disconnectors and fuse-conbination units》.

Normal work co nditions and Installation conditions

※ Ambient temperature:-5°C~40°C，relative humidity is not larger than 95%.

※ Altitude: shall not exceed 2000m.

※ No explosive dangerous medium environment.

※ No rain and snow attack environment.

Note: if the load isolation switch is expected to be used in the condition that the ambient temperature is higher than +40°C or is lower than -5°C, customers should inform to the manufactory.

Load isolation switch of HGL-63~3150A

7 specifications of HGL load isolation switch from 63A to 3150A: Basic model of modularized design, 3 poles, 4 poles (3 poles+on and off neutral pole). It is suitable for the making and breaking operation of electric dircuit or electric isolation. Switches over 1000A are only suitable for electric isolation.

Mark window is set in the front side to indicate the on and off state of the contact.

Rear boservation window can bi provided according to the demand to observe directly the on and off state of the contact, for window pattem, refer to the back operational load isolation switch, HGL-63~1600A/H.

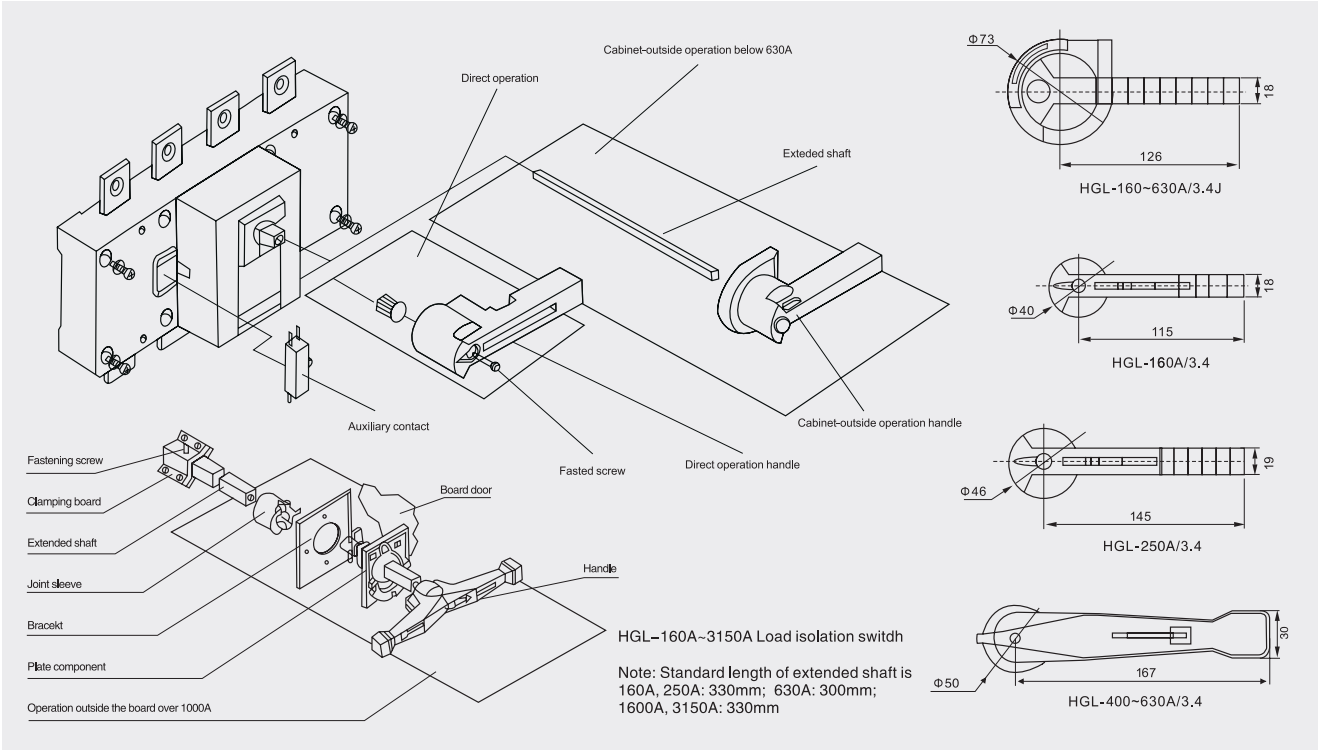
Two group of auxiliary contacts can be assembled.

The electric cable insulating cover can be assembled.

Operation mode

※ Direct operation: The handle is installed in the middle of the switch.

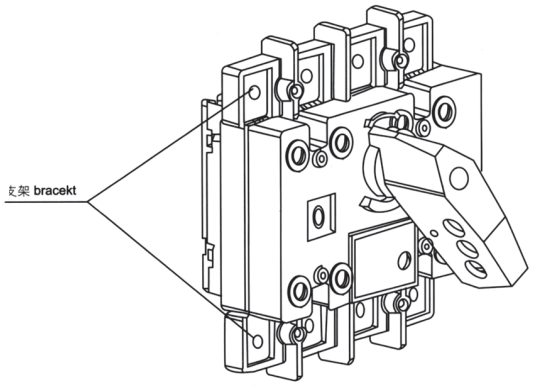
※ Operation outside the board: The handle is installed outside the door off distributing board.



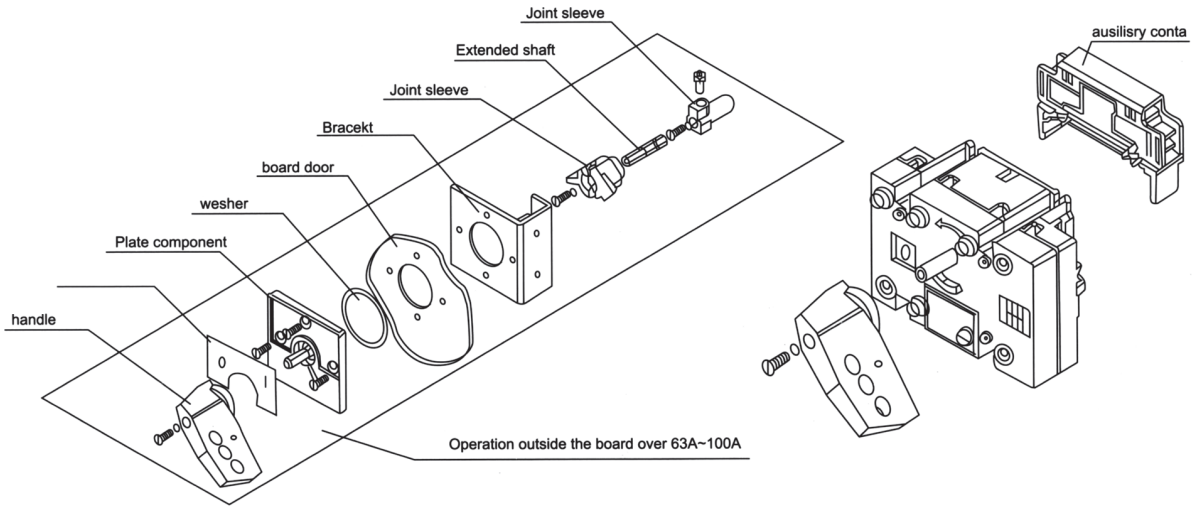
HGL series
Load isolation switch

Load isolation switch of HGL-63A~100A

※ 63A~100A is suitable for the making and breaking of electrical isolation circuit or electric insulation.
※ 63A~100A possesses 3 poles, and 4 poles (3 poles+on of neutral pole).
※ Two sets of auxiliary contacts can be assembled according to demand.
※ Side operation, operation outside, the board can be assemble according to demand.



Note: It's HGL-100A~630A loading islation switch which is no span



※ 63A~100A is suitable for the making and breaking of electrical islation circuit or electric insulation. Two sets of auxiliary contacts can be assembled according to demand.

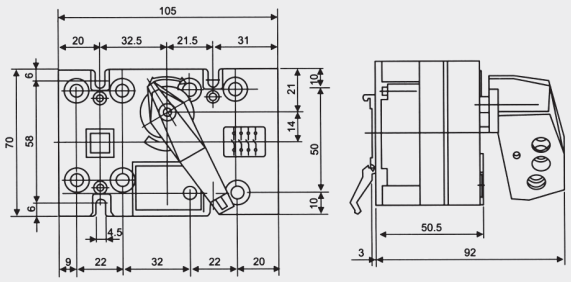
※ 63A~100A possesses three poles, and four poles (3 poles+on of neutral pole). Side operation, operation outside, the board can be assemble according to demand.

HGL series
Load isolation switch

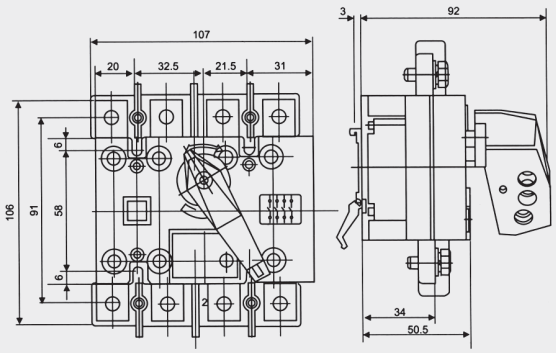
Overall & Installation Dimension

Load isolation switch side operation load isolation switch of HGL-63A~100A

Direct operation of HGL-63A

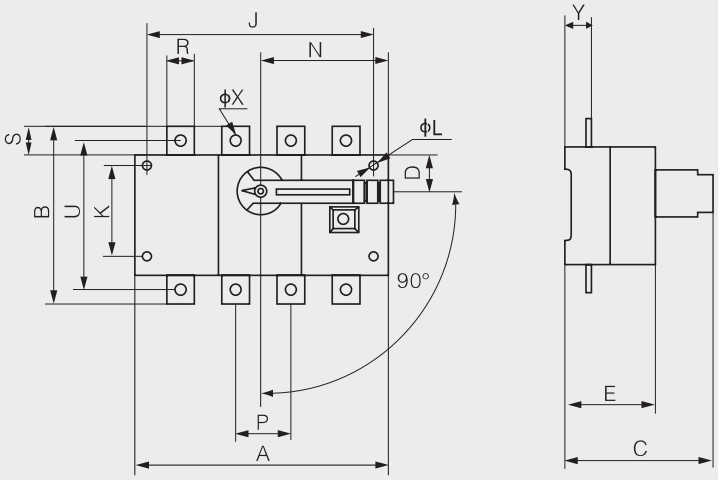


Direct operation of HGL-100A

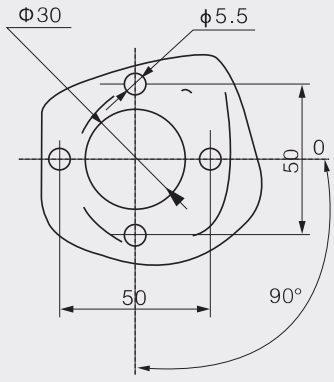


External dimension and installation dimension of HGL-160A~630A load isolation switch

Direct operation of HGL-160A~630A

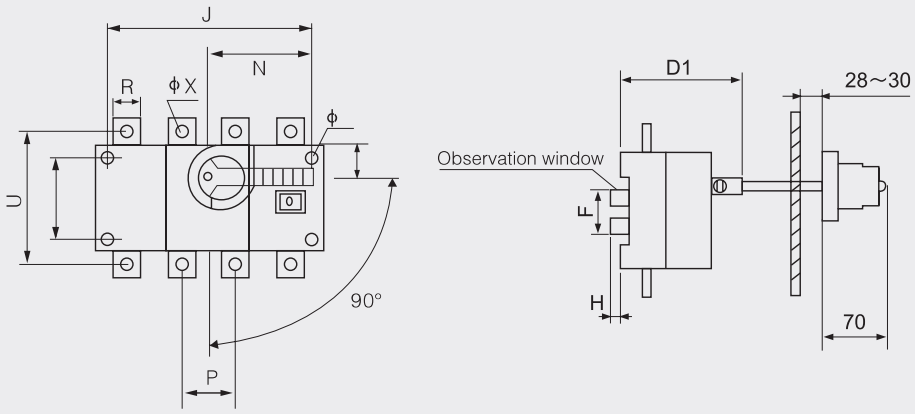


Installation size of handle seat outside board



HGL series
Load isolation switch

Operation outside HGL-160A~630A/JK

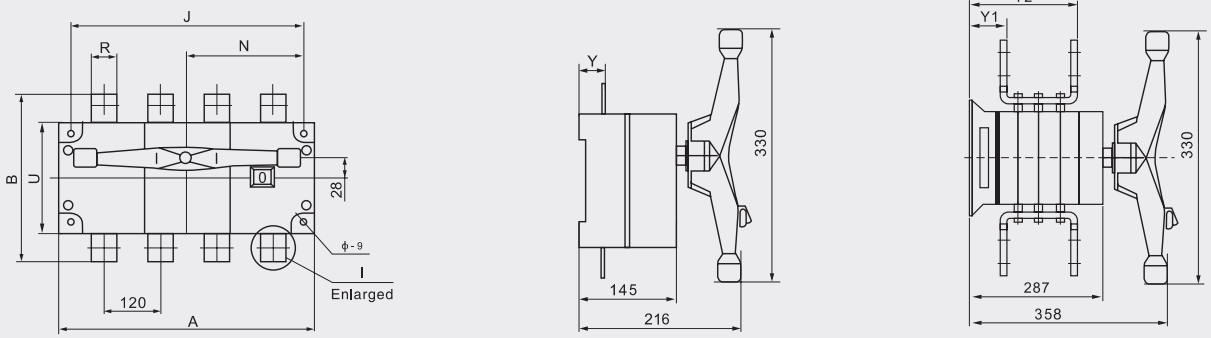


In	A	B	C	D	D1	E	ΦL	J	K	N	P	R	S	U	ΦX	Y	F	H
125A/3	140	135	121	27	93	71	5.5	120	65	75	36	20	25	115	9	24	50	10
125A/4	170	135	121	27	93	71	5.5	150	65	75	36	20	25	115	9	24	50	10
160A/3	140	135	121	27	93	71	5.5	120	65	75	36	20	25	115	9	24	50	10
160A/4	170	135	121	27	93	71	5.5	150	65	75	36	20	25	115	9	24	50	10
200A/3	180	170	144	35	104	84	5.5	160	90	105	50	25	30	140	11	25	79	15
200A/4	230	170	144	35	104	84	5.5	210	90	105	50	25	30	140	11	25	79	15
250A/3	180	170	144	35	104	84	5.5	160	90	105	50	25	30	140	11	25	79	15
250A/4	230	170	144	35	104	84	5.5	210	90	105	50	25	30	140	11	25	79	15
315A/3	230	240	179	50	137	115	7	210	140	135	65	32	40	206	11	37	95	20
315A/4	290	240	179	50	137	115	7	270	140	135	65	32	40	206	11	37	95	20
400A/3	230	240	179	50	137	115	7	210	140	135	65	32	40	206	11	37	95	20
400A/4	290	240	179	50	137	115	7	270	140	135	65	32	40	206	11	37	95	20
500A/3	230	260	179	50	137	115	7	210	140	135	65	40	50	220	13	37.5	95	20
500A/4	290	260	179	50	137	115	7	270	140	135	65	40	50	220	13	37.5	95	20
630A/3	230	260	179	50	137	115	7	210	140	135	65	40	50	220	13	37.5	95	20
630A/4	290	260	179	50	137	115	7	270	140	135	65	40	50	220	13	37.5	95	20

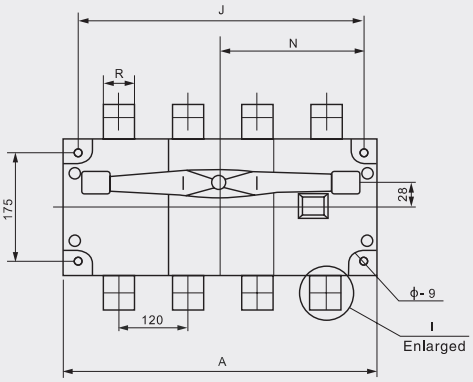
HGL series
Load isolation switch

Load isolation switch side operation load isolation switch of HGL-1600A~3150A

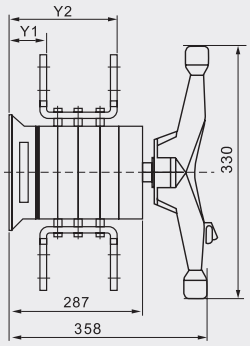
Direct operation of HGL-1600A



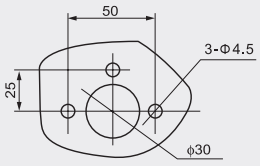
Operation outside of HGL-1600A/JK



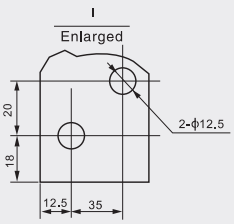
Direct operation of HGL-1600A/JK (operation outside)



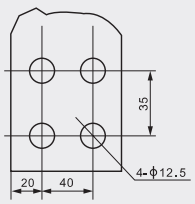
Installation bottom plate for operation outside the board



1000A



1250A~1600A



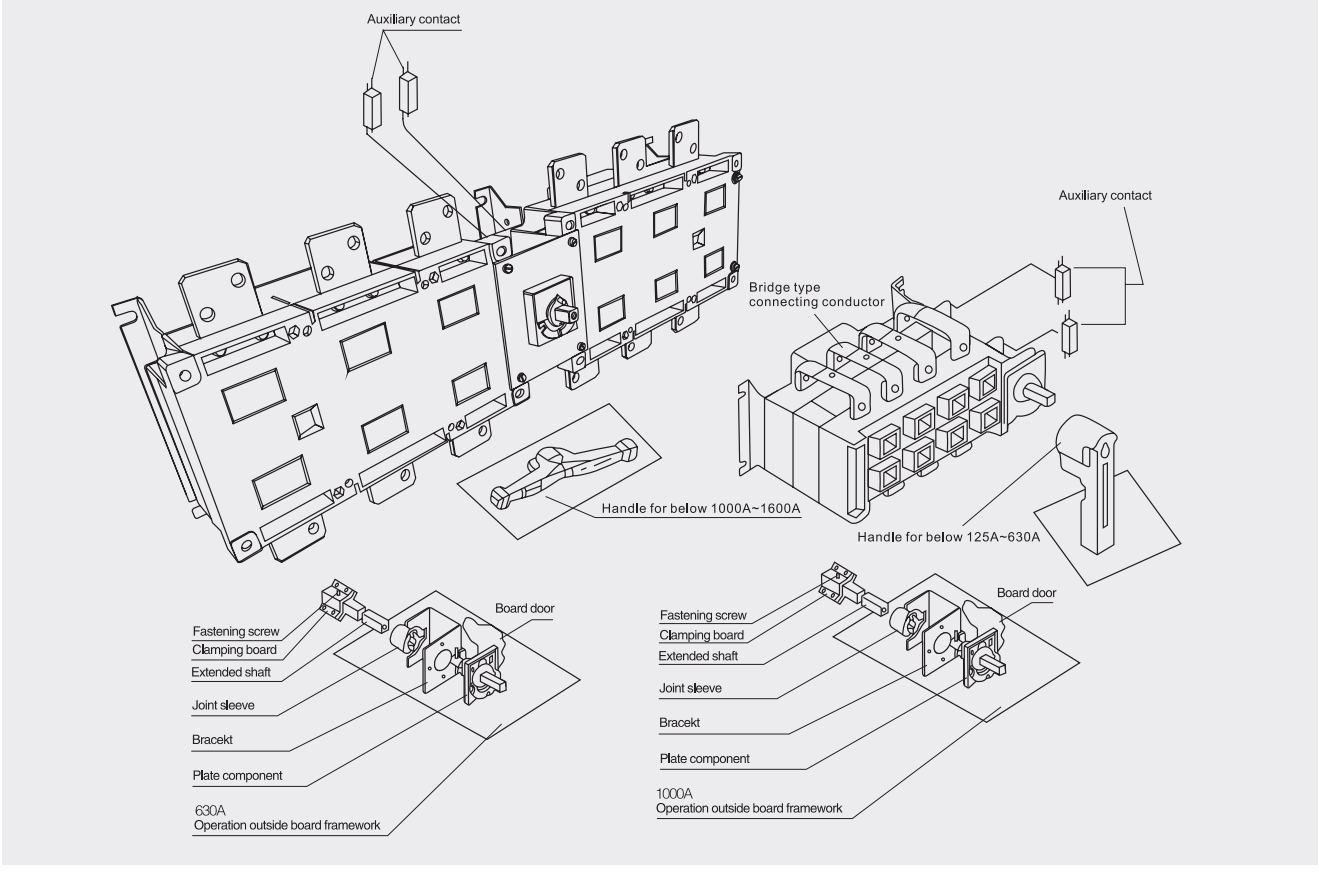
In	A	A1	B	J	N	R	U	Y	Y1	Y2
1000A/3	378	105	310	353	171	60	200	48		
1000A/4	498	105	310	473	231	60	200	48		
1250A/3	378	105	336	353	171	80	200	48		
1250A/4	498	105	336	473	231	80	200	48		
1600A/3	378	105	336	353	171	80	200	49		
1600A/4	498	105	336	473	231	80	200	49		
2000A/3	378		455	353	171	80	200		78.5	225.5
2000A/4	498		455	473	231	80	200		78.5	225.5
2500A/3	378		455	353	171	80	200		78.5	225.5
2500A/4	498		455	473	231	80	200		78.5	225.5
3150A/3	378		505	353	171	120	200		78.5	227
3150A/4	498		505	473	231	120	200		78.5	227

HGLZ series
change-over load isolation switch

HGLZ-160A~1600A changeover load isolation switch

※ HGLZ-160A~1600A. The load isolation switch is suitable for the changeover of two sets of low voltage electric circuit or the changeover of 2 sets of load devices or safety isolation.
※ Mode of operation:Direct operation: handle is installed on the switch. Operation outside the board: handle is installed outside the door of power distributing board.
※ Products with observation windows can be provided according to the demand to observe directly the on and off state of contact.
※ The products have three poles, four poles (three poles+on and off neural pole).
※ Extended shaft is used for the operation outside the board.
※ Two sets of auxiliary contacts can be assembled acording to the demand.
※ Mechanical performance and electrical performance correspond to the mechanical property of HGLZ-160A~1600A.
※ A bridge can provided to connect the inlet or outlet terminal of the switch.
※ The electric cable insulating cover can be assembled.

Note: the bridge connection is chosen, an explanation is needed to indicate the inlet or outlet is connected with it.

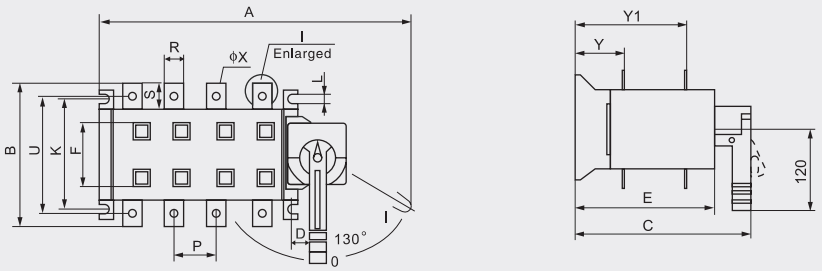


HGLZ series
change-over load isolation switch

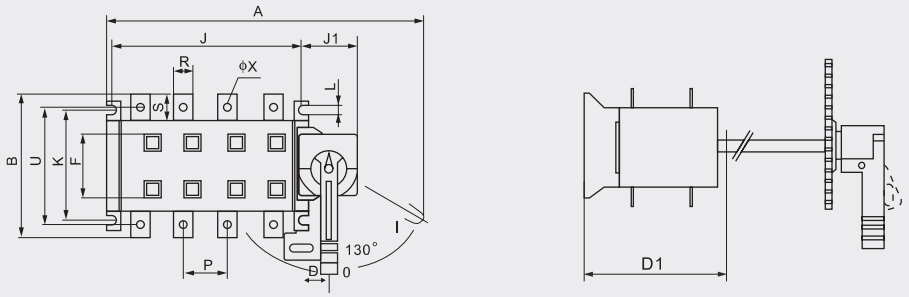
Overall & Installation Dimension

External dimension and installation dimension of HGLZ1-160A~1600A side operation load isolation switch

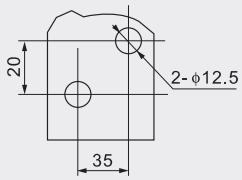
Direct operation of HGLZ1-160A~1600A



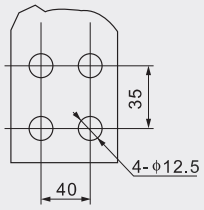
Operation outside of HGLZ1-160A~1600A



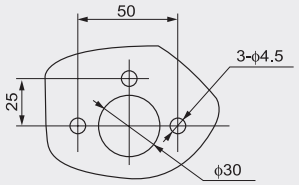
1000A



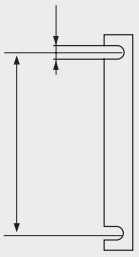
1250A~1600A



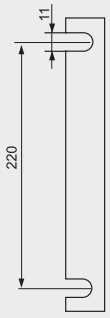
Installation size handle seat outside board



Mounting foot



Mounting foot above 1000A



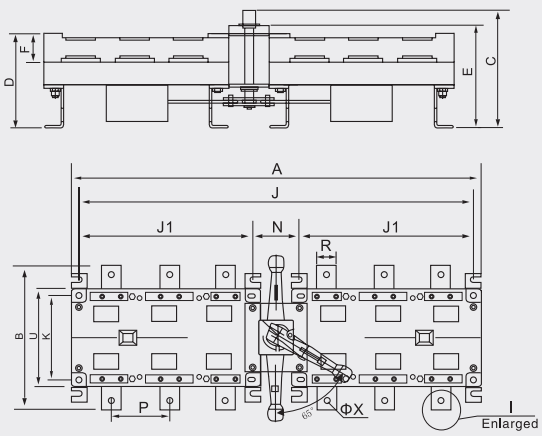
Specification	K1	L1
HGLZ-125~160A	95	7
HGLZ-200~250A	115	9
HGLZ-315~630A	180	11

HGLZ series
change-over load isolation switch

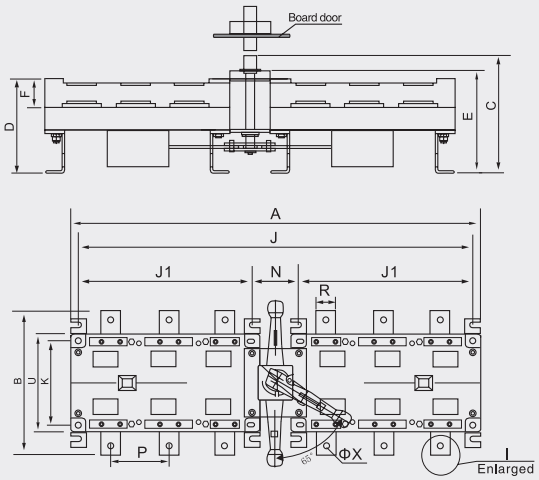
In	A	B	C	D	D1	E	J	J1	K	L	P	R	U	ΦX	Y	Y1
125A~160A/3	267	135	212	29	187	153	120	65	95	7	36	20	115	9	55	121
125A~160A/4	297	135	212	29	187	153	150	65	95	7	36	20	115	9	55	121
200A~250A/3	308	170	251	30	216	182	160	65	116	9	50	25	140	11	64	146
200A~250A/4	358	170	251	30	216	182	210	65	116	9	50	25	140	11	64	146
315A~400A/3	420	240	322	45	277	243	210	77	179	11	65	32	206	11	83	193
315A~400A/4	490	240	322	45	277	243	270	77	179	11	65	32	206	11	83	193
500A~630A/3	420	240	322	45	277	243	210	77	179	11	65	40	220	13	83	193
500A~630A/4	490	240	322	45	277	243	270	77	179	11	65	40	220	13	83	193
1000A/3	583	312	397	52.5	352	309	353	108.5	220	11	120	60	235	13	107	251.5
1000A/4	703	312	397	52.5	352	309	473	108.5	220	11	120	60	235	13	107	251.5
1250A/3	583	338	397	52.5	352	309	353	108.5	220	11	120	80	233	13	107	251.5
1250A/4	703	338	397	52.5	352	309	473	108.5	220	11	120	80	233	13	107	251.5
1600A/3	583	338	397	52.5	352	309	353	108.5	220	11	120	80	233	13	108	251.5
1600A/4	703	338	397	52.5	352	309	473	108.5	220	11	120	80	233	13	108	251.5

External dimension and installation dimension of HGLZ2-160A~1600A side operation load isolation switch

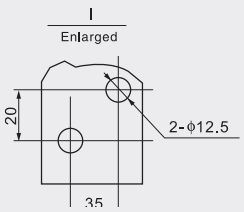
Operation inside of HGLZ2-160A~1600A



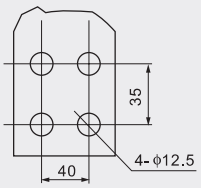
Operation outside of HGLZ2-160A~1600A



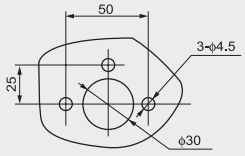
1000A



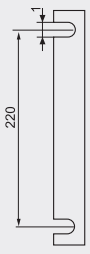
1250A~1600A



Installation size handle seat outside board



Mounting foot

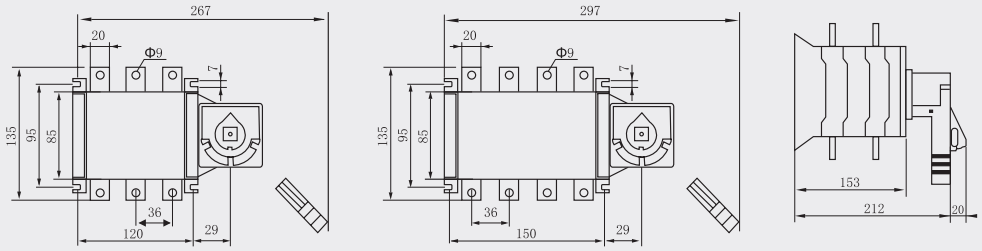


HGLZ series
change-over load isolation switch

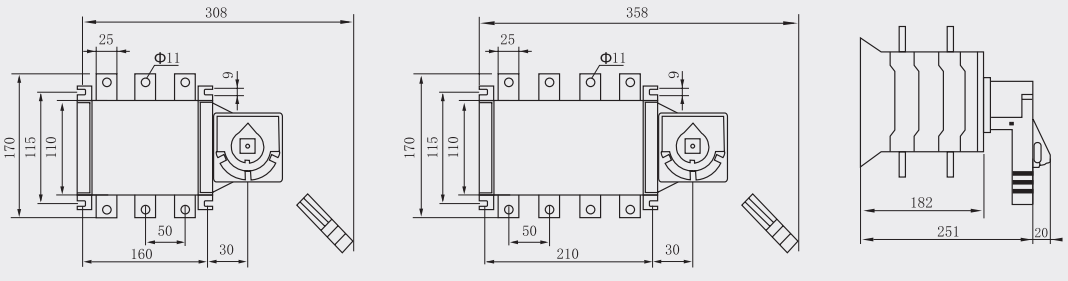
In	A	B	C	D	E	F	J	J1	K	N	P	R	U	ΦX
125A~160A/3	319	135	125	67	89	24	299	120	65	59	36	20	85	9
125A~160A/4	379	135	125	67	89	24	359	150	65	59	36	20	85	9
200A~250A/3	405	170	134	79	104	25	385	160	90	65	50	25	110	11
200A~250A/4	505	170	134	79	104	25	485	160	90	65	50	25	110	11
315A~400A/3	535	240	166	108	131	37	515	210	140	95	65	32	160	11
315A~400A/4	655	240	166	108	131	37	635	270	140	95	65	32	160	11
500A~630A/3	535	260	166	108	131	37.5	515	210	140	95	65	10	160	13
500A~630A/4	655	260	166	108	131	37.5	635	270	140	95	65	10	160	13
1000A/3	836	310	192	150	163	48	811	353	175	105	120	60	200	13
1000A/4	1076	310	192	150	163	48	1051	473	175	105	120	60	200	13
1250A/3	836	336	192	150	163	48	811	353	175	105	120	60	200	13
1250A/4	1076	336	192	150	163	48	1051	473	175	105	120	60	200	13
1600A/3	836	336	192	150	163	49	811	353	175	105	120	60	200	13
1600A/4	1076	336	192	150	163	49	1051	473	175	105	120	60	200	13

External dimension and installation dimension of HGLZ1-160A~630A side operation load isolation switch

HGLZ1-160

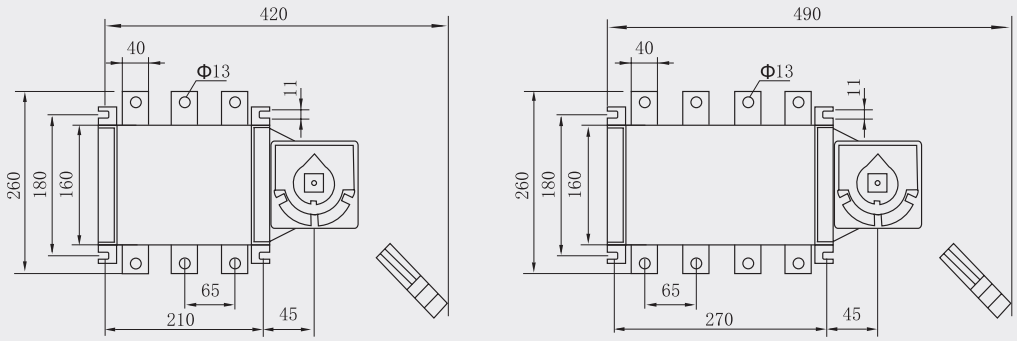


HGLZ1-250



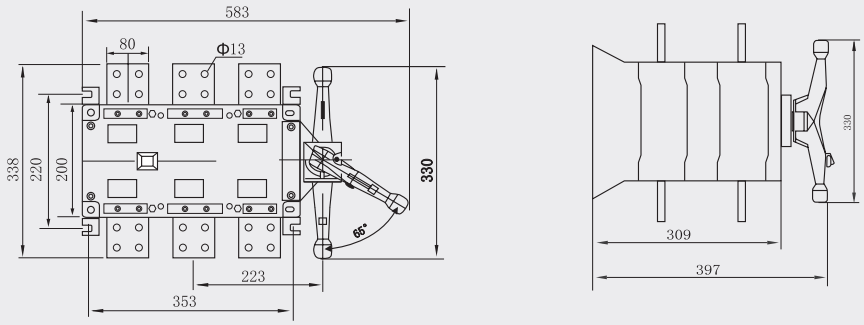
HGLZ series
change-over load isolation switch

HGLZ1-630

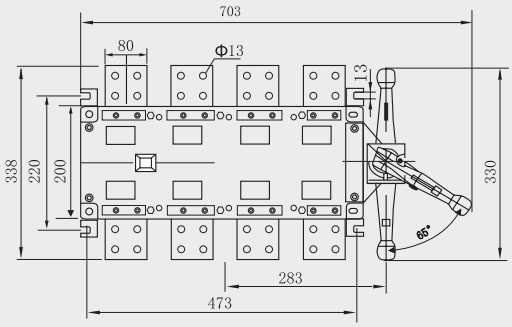


External dimension and installation dimension of HGLZ1-160A~1600A side operation load isolation switch

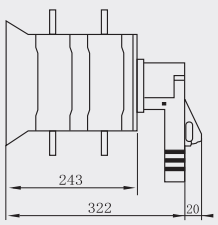
HGLZ1-1600



HGLZ1-1600



HGLZ1-630



HGLR series
switch-disconnector-fuse

Model & Meaning

H GLR - □A / □ · □ C J □ B □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Code of company.

② Fuse combination switches.

③ Conventional thermal current.

④ Rated current A for fuse-link.

⑤ Number of poles:
3 poles, 4 poles (3 poles+on and off neutral pole)

⑥ Side operation, no note for front operation.

⑦ External operation standard extended shaft 330mm
If there is special requirements,mark after J, no note for internal operation.

⑧ Auxiliary contact.

⑨ The connection behind the board. Connection in front of board is not marked.

⑩ Form: I modular (160A~1400A)
II integrated (400A~630A)

Note: Function in brackets will not be noted if it is not needed.
I : S-NO+NC S type auxiliary contacts
II : F-NO+NC S type auxiliary contacts

Introduction

HGLR series fuse combination switches (hereinafter called as switch for short) is a kind of multi-poles hand-operated switch, adopting the shell made of unsaturated polyester resin reinforced with glass-fibres, having very high dielectric performance, protective capability and safe operation.

The operating device is an elastic-accumulating and accelerating instant-release device, which makes instant making and breaking of the double gap contact. It has no relation ship with the operation handle and thus greatly increase both the various electrical and mechanical performance. The fuse combination switches can assure the circuit to be turmed making and breaking under load, having reliable breaking protection against over-current or short-circuit apparent visible the off state.

Having strong humidity and heat resistant properties.

The switch has an artistic, novel, succinct, small-sized outline, but has various functions, being the best choice among the congeneric products.

Example of model selection

HGLR-160A/3C

Conventional thermal current 160A, 3 poles, side operation side the board.

HGLR series
switch-disconnector-fuse

Rated current A for fuse combination switches(A)	Rated current A for fuse-link(A)	Fuse-link dimension
63	2、4、6、10、16、20、25、32、40、50、63	00C
160	2、4、6、10、16、20、25、32、40、50、63、80、100、125、160	00
250	16、20、25、40、50、63、80、100、125、160、200、250	1
400	50、63、80、100、125、160、200、250、315、400	2
630	200、250、300、400、500、630	3
1250	800、1000、1250	4

Characteristies of products

※ The elastic-accumulation and instant-release mechanical realize the fast on and off (13.8m/s). Having no relation ship with the speed of the handle and thus increasing various electrical properties.
※ The shell made of unsaturated polyester resin reinforced with glass fibres has fine fire-resistant dielectric and safe-operational properties.
※ The parallel double gap contact has self-cleaming function.
※ It can assure the circuit to be turmed making and breaking under load, and has relicable over-current and short-circuit protection function.
※ when change fuse, it can be safety, facility, fast.

Normal work conditions and installation conditions

※ Ambient temperature:-5°C~40°C.
※ Altitude: shall not exceed 2000m.
※ The atmosphere condition: The relative humidity shall not exceed 50% when the environmental temperature is +40°C in installing place; And the relative humidity may be higher at the lowertemperature condition. Such as when the humidity is 90% when the temperature is +20°C. It shall take some special management to avoid the dew occurs on the product surface due to temperature change.
※ Pollution grade:III
※ The product shall be installed in the place without remarkable shake, strke and quiver, rain and snow, in the medium without danger of exploding, and in the places without gas and conductive dust, with can make the metal go rust and affect insulation performances.

HGLR-63~1250 type of fuse combination switches

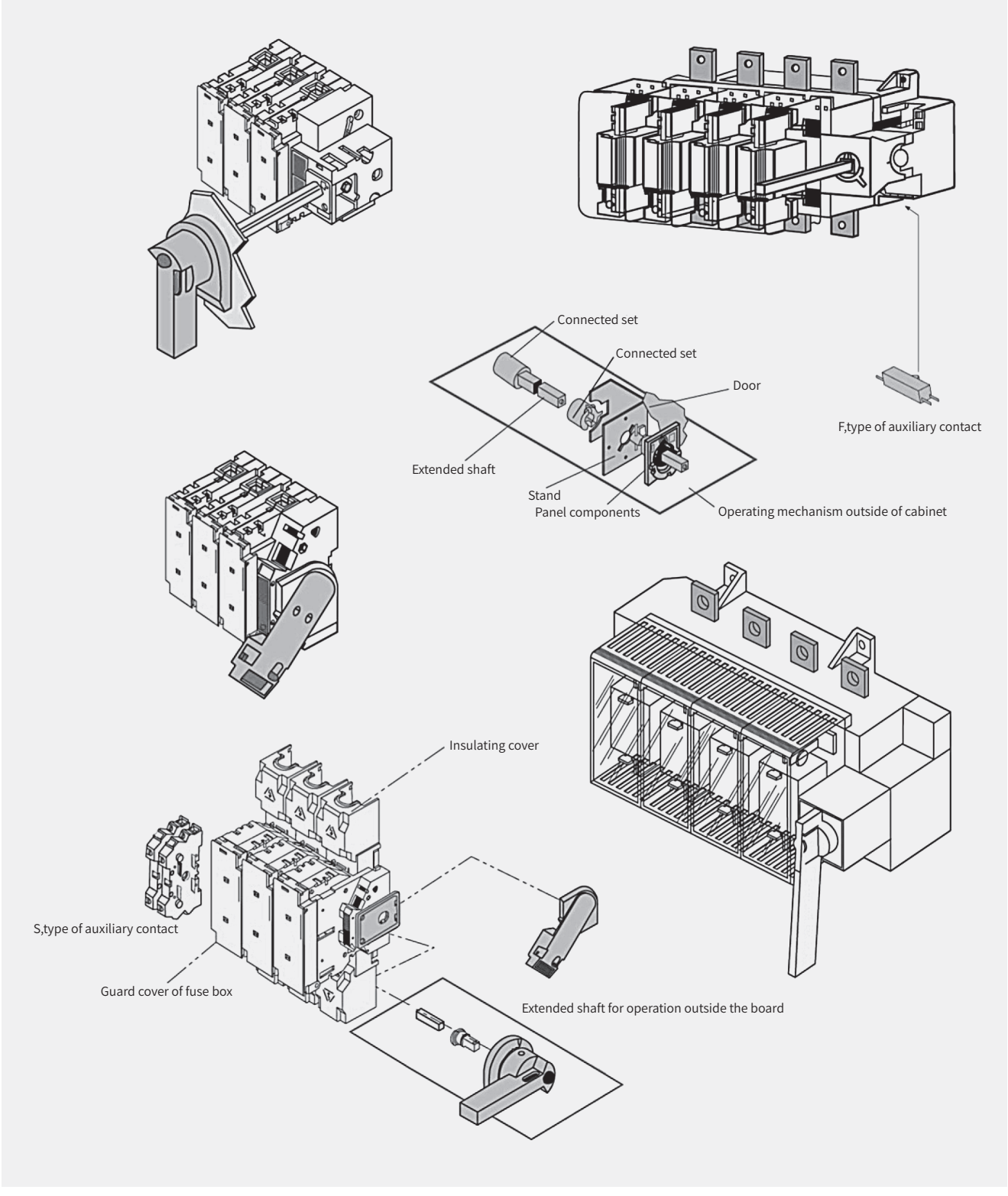
HGLR-63~400 is of modular design structure.
HGLR-63~1250 is Overall design structure.
Ensure making and break under load, reliable over-current and short-circuit off-protection.
Structures and operation forms:

F、S type of auxiliary contact can be provided.

※ Direct front operation: the handle is installed in front of the switch.
※ Direct side operation: the handle is installed at the right side of the switch.
※ Front operation outside the board: the handle is assembled at the front of the distributing board.
※ Side operation outside the board: the handle is assembled at the right side of the board .

HGLR series
switch-disconnector-fuse

HGLR-63~1250 sketch diagram of fuse combination switches



HGLR series
switch-disconnector-fuse

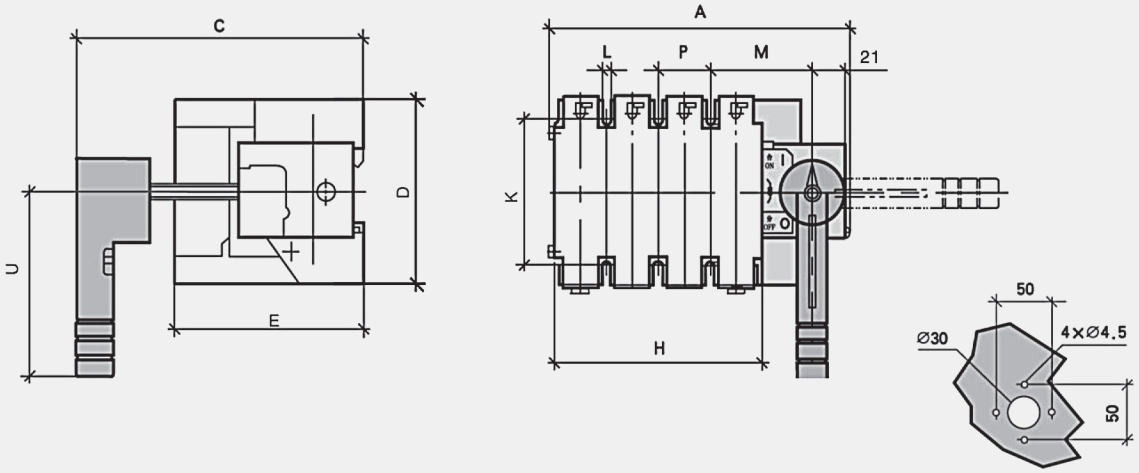
Electrical and mechanical properties of HGLR-63~1250 type of fuse combination switch

Conventional thermal current Ith (A)		63	160	250	400	630	1250
RT16 fuse-link dimension NT		00C	00C	1	2	3	4
Rated insulation voltage Ui (V)		750	750	750	750	750	750
Dielectric strength (V)							
Rated surge-resistant voltage (Uimp kV)		6	6	6	6	6	6
Rated working current Ie (A)							
380V	AC-23B	63	160	250	400	630	1250
660V	AC-21B		160	250	400	630	1250
short-circuit limiting current (Iq) (kA)		50	50	50	50	50	50
Connected with breaking capacity(A Rms)							
Rated making capability		630	1600	2500	4000	6300	10000
Rated breaking capability		504	1280	2000	3200	5040	10000
Operating performance							
Mechanical durability 380V		1700	1400	1400	800	800	500
Electrical curability 380V		300	200	200	200	200	100
Mechanical durability 660V		1700	1400	1400	800	800	500
Weight (kg)							
3 poles		1	1.8	3.2	4.8	16	28
4 poles		1.3	2.3	4.5	6.1	19	33

HGLR series
switch-disconnector-fuse

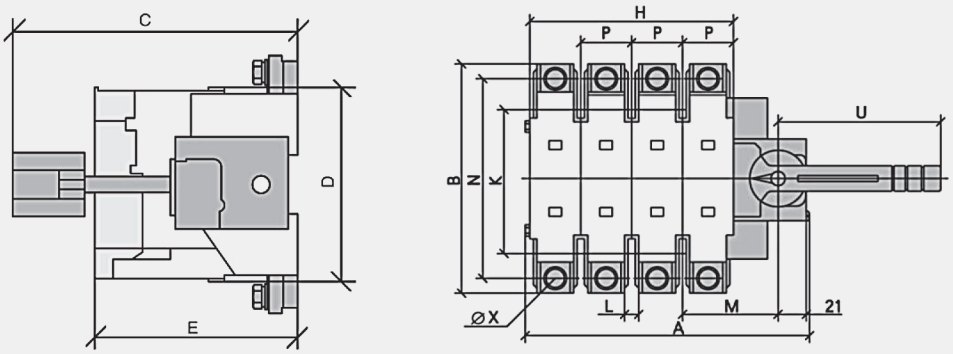
HGLR-63~400 Overall & Installation Dimension

Front operation 63



Door hole

Front operation 160~400

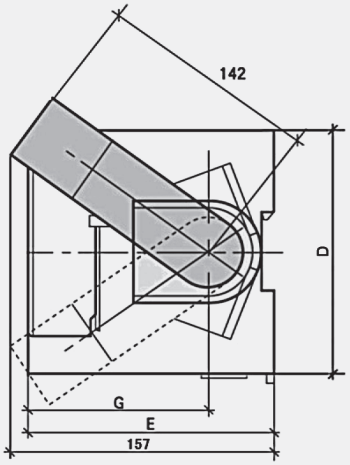


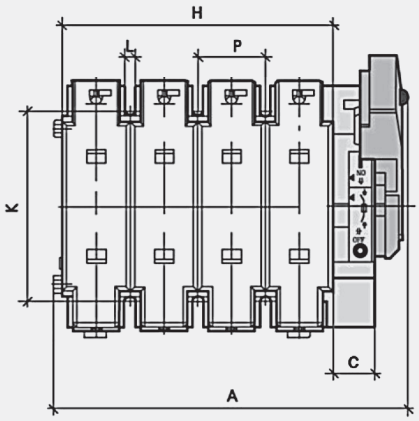
Specification	A	B	C	D	E	H	M	K	N	P	U	L	ΦX
HGLR-63A/3	154		191	121	117	96	63	90		32	115	5	
HGLR-63A/4	186		191	121	117	128	63	90		32	115	5	
HGLR-160A/3	167	162	192	121	127	108	67	90	141	36	115	5	9
HGLR-160A/4	203	162	192	121	127	144	67	90	141	36	115	5	9
HGLR-250A/3	239	195	200	165	146	180	93	137	165	60	145	6	11
HGLR-250A/4	323	195	200	165	146	240	117	137	165	60	145	6	11
HGLR-400A/3	281	205	200	170	149	198	122	137	175	66	145	6	11
HGLR-400A/4	347	205	200	170	149	264	122	137	175	66	145	6	11

HGLR series
switch-disconnector-fuse

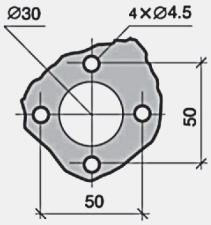
HGLR-630~1250 sketch diagram of fuse combination switches

Side drection operation of 63

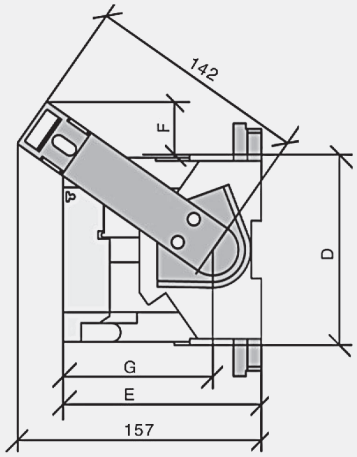


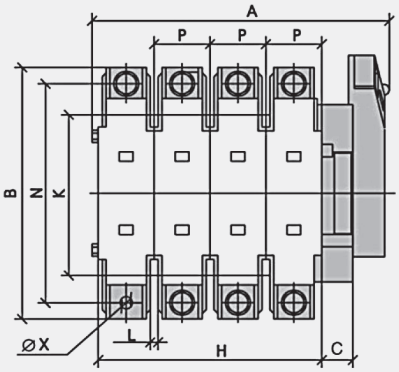


Front operation 160~400



Door hole

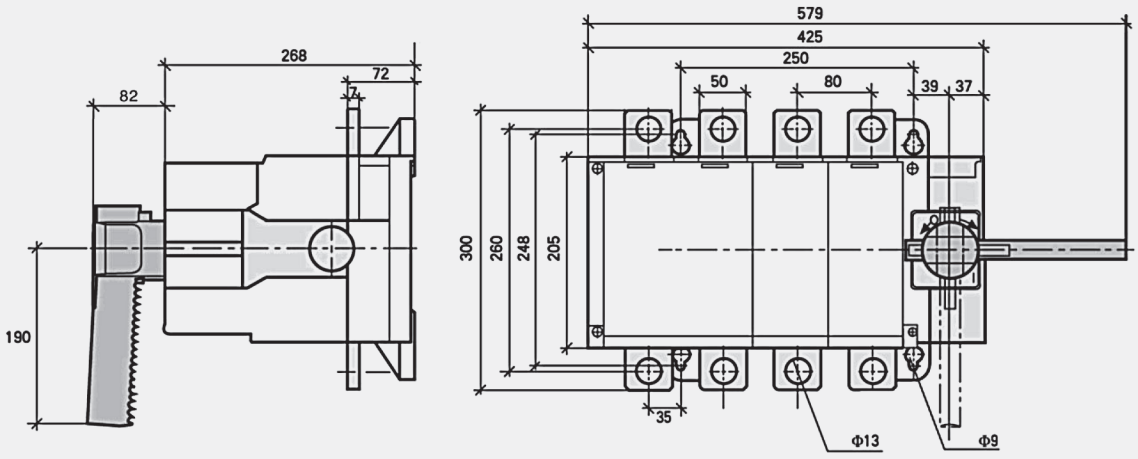




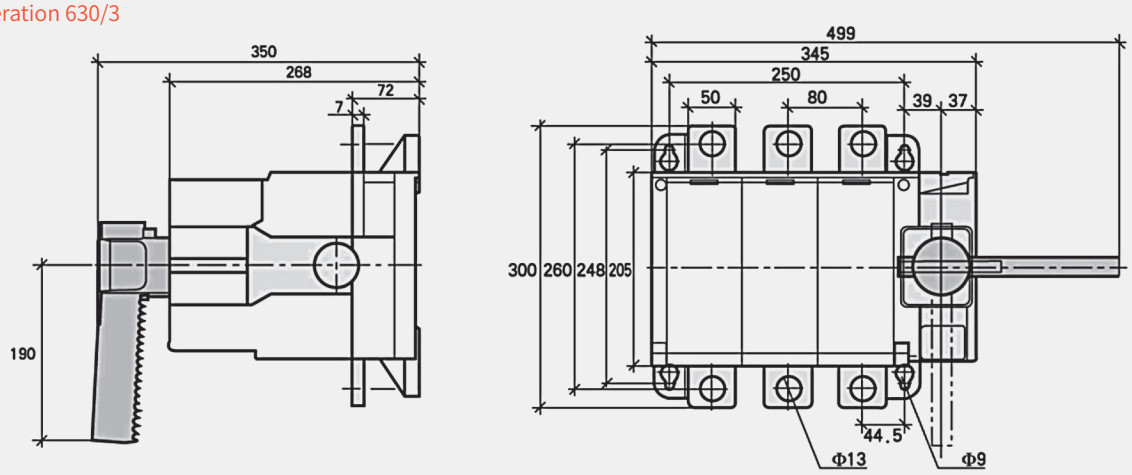
Specification	A	B	C	D	E	F	H	K	N	P	L	G	ΦX
HGLR-63A/3C	140		20	121	117	40	96	90		32	5	94	
HGLR-63A/4C	172		20	121	117	40	128	90		32	5	94	
HGLR-160A/3C	152	162	20	121	127	40	108	90	141	36	5	104	9
HGLR-160A/4C	188	162	20	121	127	40	144	90	141	36	5	104	9
HGLR-250A/3C	224	195	20	165	146	18	180	137	165	60	6	123	11
HGLR-250A/4C	314	195	50	165	146	18	240	137	165	60	6	123	11
HGLR-400A/3C	272	205	50	170	149	15	198	147	175	66	6	126	11
HGLR-400A/4C	338	205	50	170	149	15	264	147	175	66	6	126	11

HGLR-630 Overall & Installation Dimension

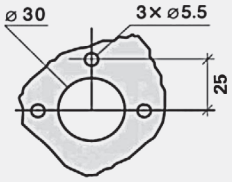
Front operation 630/4



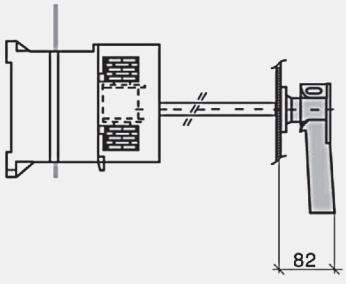
Front operation 630/3



Door hole

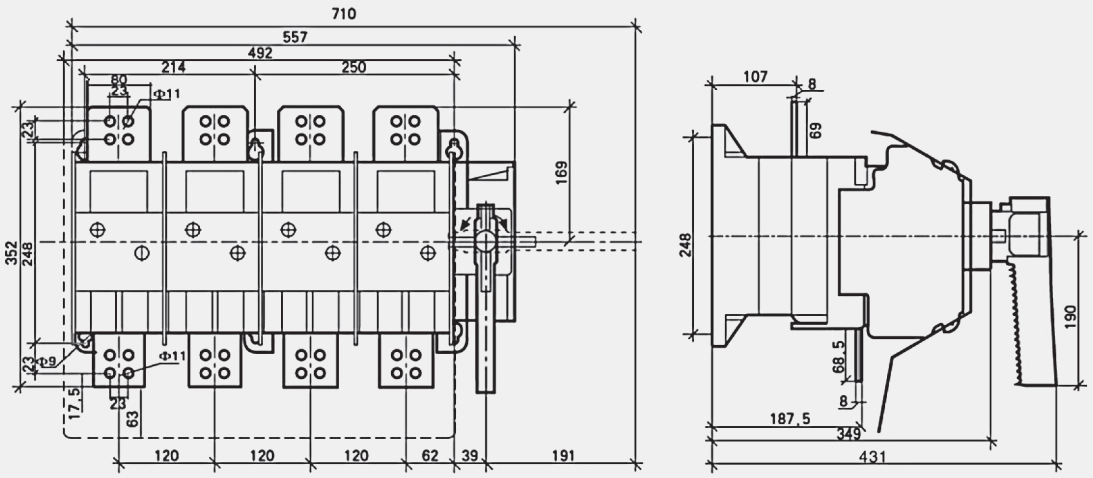


Front operation outside the borad 630

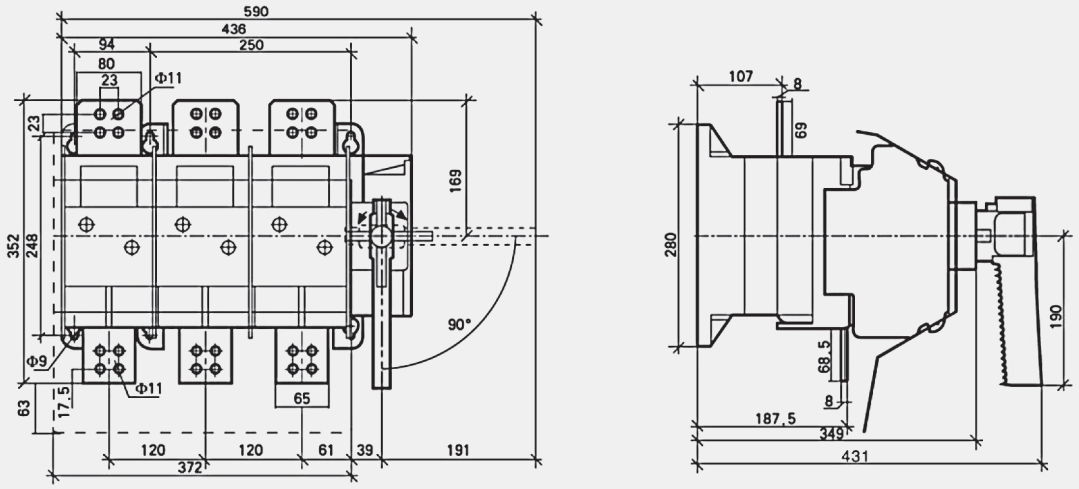


HGLR-1250 Overall & Installation Dimension

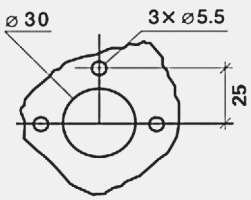
Front operation 1250/4



Front operation 1250/3



Door hole



Front operation outside the borad 1250