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400-667-9977



HIITIO®

## HCG4 Series DC Disconnect



HCG4

Zhejiang Hecheng Smart Electric Co, Ltd. (referred to as Hecheng Electric) was established in 2004 and is now headquartered at No.1125, Zhixing Road, Xiaoshan Economic and Technological Development Zone, Hangzhou City Zhejiang Province. Hecheng headquarters base 30000 square meters. Hecheng is a leading supplier of new energy industry and industrial control solutions in the world. At present, another large production base of Hecheng Electric is located in Mingguang, Anhui Province, with an area of 14 acres and a plant area of 20000 square meters. Hecheng Electric focuses on new energy vehicles, photovoltaic, energy storage, HVAC/R, industrial control, etc. Hecheng's main R&D production and operation products include: ceramic high-voltage DC relay/contactor, high-voltage DC fuse, airconditioning contactor, IEC contactor, UL 489 circuit breaker and disconnect box, etc. Hecheng's products all have passed UL, CSA, INTERTEK CE, CCC and other certifications.

Hecheng Electric aims at product research and development, 10% of the company's annual revenue is spent on R&D and 2% on IT penetration. Currently, the proportion of R&D personnel with more than 10 years of working experience in the industry is as high as 35%.

In addition, Hecheng Electric has introduced advanced automatic production lines and advanced laboratory testing equipment. We strictly implemented the IATF16949 system in the whole process. PLM + ERP + MES technology realizes the digitalization and intellectualization of the factory. The whole process of R&D, production and sales is able to be traced.



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## Product overview

HCG4 series disconnectors are developed and designed by **Zhejiang Hecheng Smart Electric Co.,Ltd.** with the modular concept. The switch body adopts special module assembly and new appearance design to reduce the exposed metal parts of the switch body and improve the safe operation performance of the switch; the modular design is convenient for the disassembly and assembly of the switch, which is suitable for different use requirements and occasions; handle operating mechanism and electric energy storage are adopted for reliable operation of the switch.

HCG4 series disconnectors are applicable to the low-voltage distribution network with rated working voltage of DC1000V and DC1500V and rated working current of 160A ~ 2500A, which can meet the corresponding rated current of on-load connection and disconnection, and can also withstand the overload current in the line in a short time.

HCG4 series disconnectors can be used for the main power switch, isolation maintenance switch and emergency stop switch of new energy industry, solar energy storage system, electric power, rail transit, data center, etc.

## Up to standard

### National standards

GB / T 14048.1 *General rules for low-voltage switchgear and controlgear*

GB / T 14048.3 *Low-voltage switchgear and controlgear switches, isolators, disconnectors and fuse breakers*

### International standards

IEC 60947-1 *General rules for low-voltage switchgear and controlgear*

IEC 60947-3 *Low-voltage switchgear and controlgear switches, isolators, disconnectors and fuse breakers*

EN 60947-3 *Low-voltage switchgear and controlgear switches, isolators, disconnectors and fuse breakers*

UL98B *Outline of Investigation for Enclosed and Dead-front Switches for use in Photovoltaic Systems*

### Certifications

HCG4 series disconnectors pass RoHS, TUV, CB, CE, UL, EAC and self-declaration

## Product feature

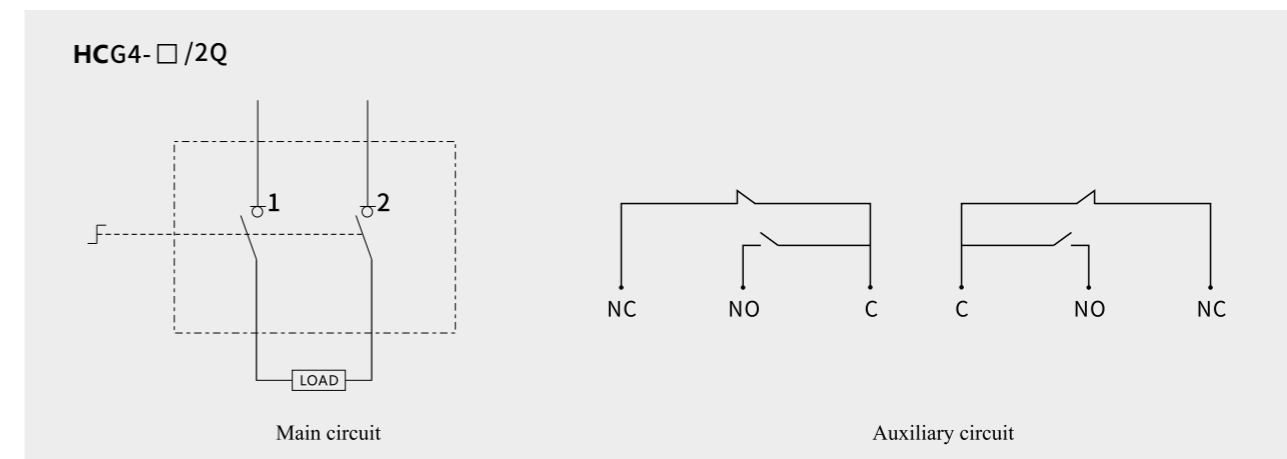
### Safety isolation

1. Visual window: the opening and closing positions of moving contacts are clearly visible, providing a higher level of safety assurance.
2. "0" padlock: when it is at the zero position, the handle can be padlocked to prevent mis-operation.
3. Rotating double breakpoint contact structure: ensure safe isolation distance and meet reliable isolation requirements.
4. Double spring operating mechanism: double spring energy storage mechanism realizes quick connection and disconnection, and the conversion effect is independent of the operating speed.

### Reliable application

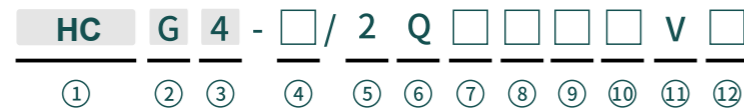
1. It can be operated with load.
2. Modular structure design: the product is composed of unipolar module and operating mechanism module to improve the utilization of installation space.
3. Operation mode: a variety of operation modes, such as front operation, side operation, inside cabinet operation, outside cabinet operation, etc.
4. Expansion accessories: auxiliary contact module.

## Product wiring diagram



## DC1000V manual disconnector

### Product Selection



Serial No.	Name	Switch model
①	Company name	Zhejiang Hecheng Smart Electric Co.,Ltd.
②	Product code	G: Disconnector series
③	Design No.	4
④	Agreed heating current	250, 630, 800, 1600A
⑤	Number of poles	2P
⑥	DC products	Q
⑦	Operating position	M: between switch poles (not noted)
⑧	Operation mode	Front operation: not noted Side operation: C (on the left side, applicable to 250 and 630A)
⑨	Handle operation mode	Operation in cabinet: not noted Operation outside the cabinet: J
⑩	Auxiliary contact	F22 (for 250A): auxiliary contact F44 (applicable to above 630A): auxiliary contact
⑪	Voltage level	V: DC1000V
⑫	Rated current	250: 160, 200, 250A 630: 315, 400, 500, 630A 800: 630, 800A 1600: 1000, 1250, 1600A

Model selection examples:

① HCG4-250/2QJF44V le250

HCG4 series disconnector, DC1000V, rated current 250A, 2-pole, operation outside the cabinet, auxiliary contact, 4 constantly opened and 4 constantly closed.

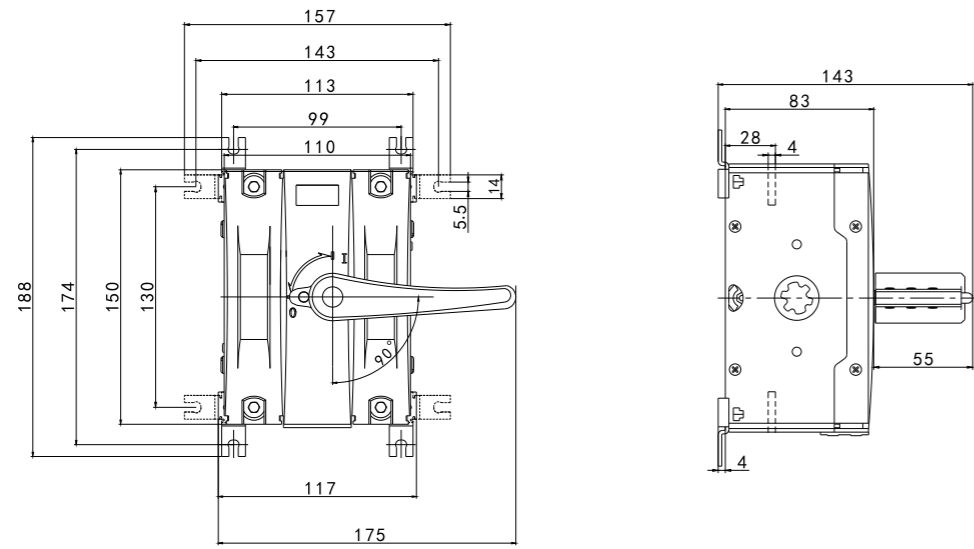
② HCG4-1600/2QV le1250

HCG4 series disconnector, DC1000V, rated current 1250A, 2-pole, operated in the cabinet.

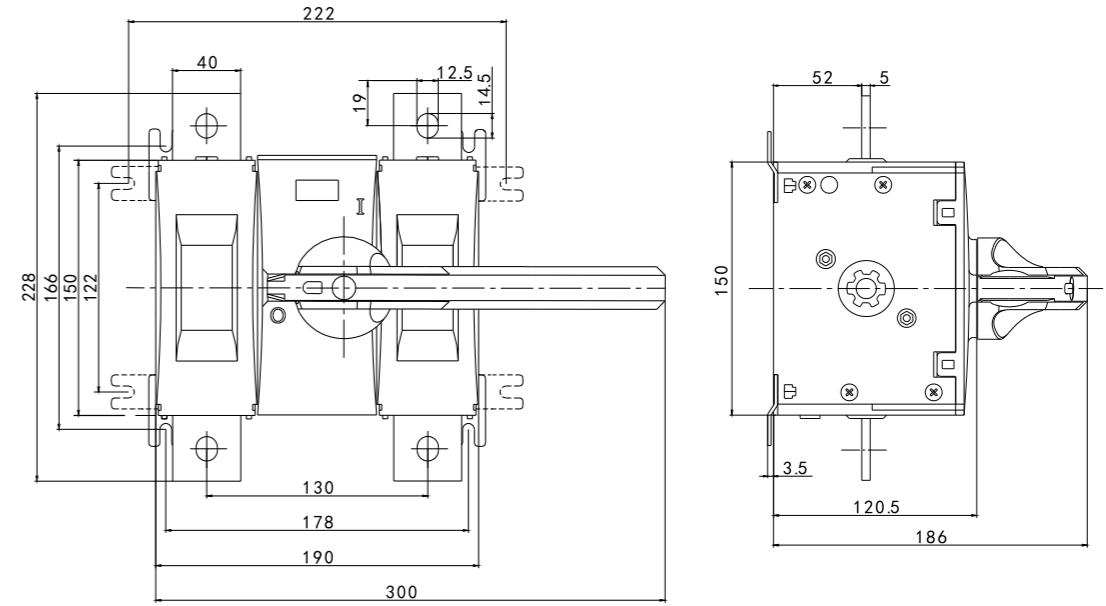
### Specification

Product model	HCG4-250	HCG4-630	HCG4-800	HCG4-1600
Agreed heating current (A)	250	630	800	1600
Rated working current (A)	160, 200, 250	315, 400, 500, 630	630, 800	1000, 1250, 1600
Rated working voltage DC (V)	1000			
Number of poles	2P			
Rated impulse withstand voltage Uimp (kV)	12			
Rated insulation voltage Ui (V)	1500			
Use category	DC-22B	DC-22B	DC-21B	DC-21B
Rated short-time making capacity Icm (kA peak)	7	10	10	20
Rated short-time withstand current Icw	10kA/1s	20kA/1s	10kA/1s	20kA/1s
Mechanical life (times)	15000	10000	10000	10000
Electrical life (times)	200	200	200	100
Terminal tightening torque (Nm)	15-22	50-75	50-75	50-75
Working altitude	Level 3			
Working temperature	-20°C~50°C	-20°C~50°C	-20°C~50°C	-20°C~50°C
Pollution level	Level 3			
Protection level	IP20			
Weight (kg)	1.6	4.4	6.5	11.8
Certifications	RoHS, CCC, CE UL, EAC	RoHS, CCC CE, EAC	CCC, RoHS, TUV CB, CE, EAC	CCC, RoHS, TUV CB, CE, EAC

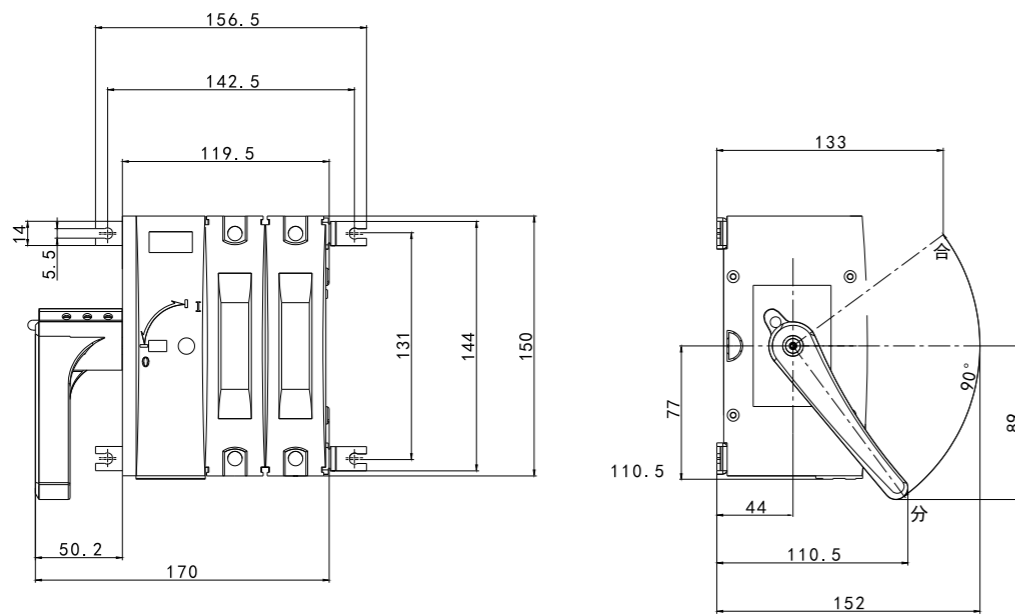
Product outline and installation dimension (DC1000V) (unit: mm)



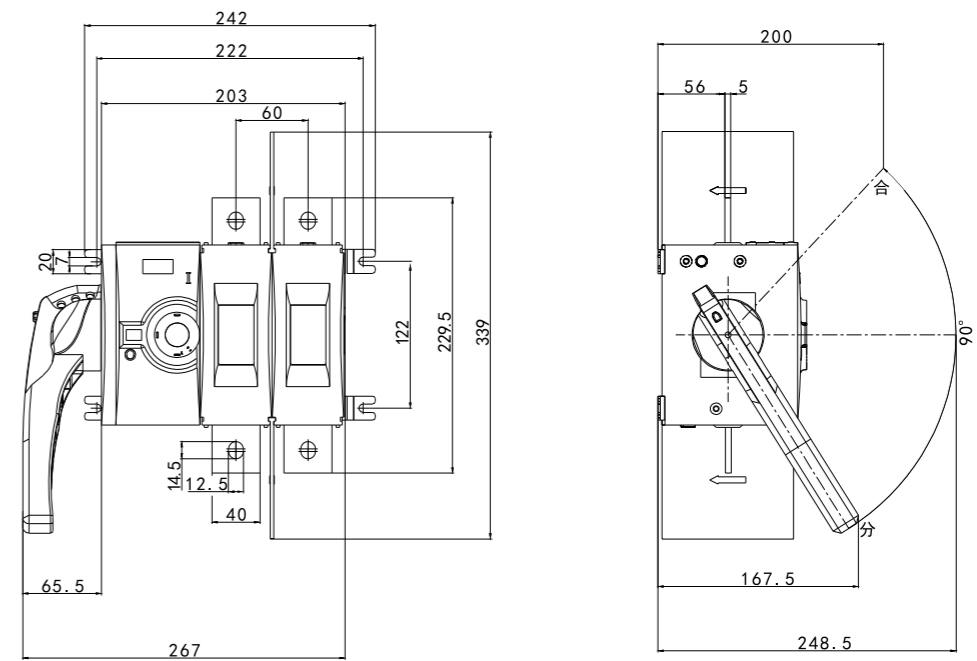
HCG4-250/2QV



HCG4-630/2QV

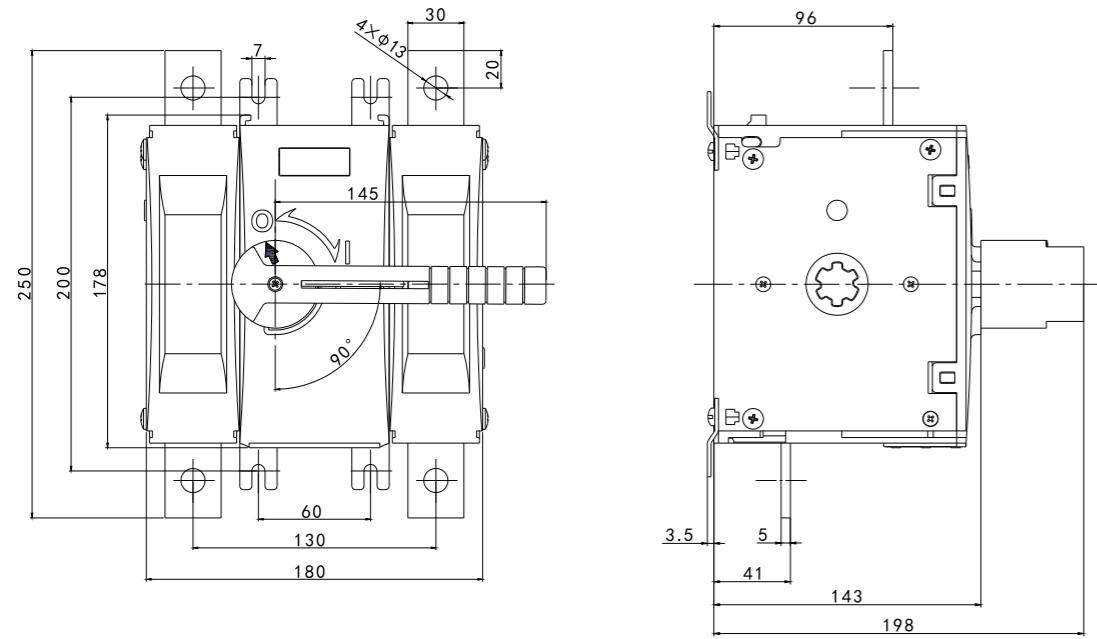


HCG4-250/2QCV

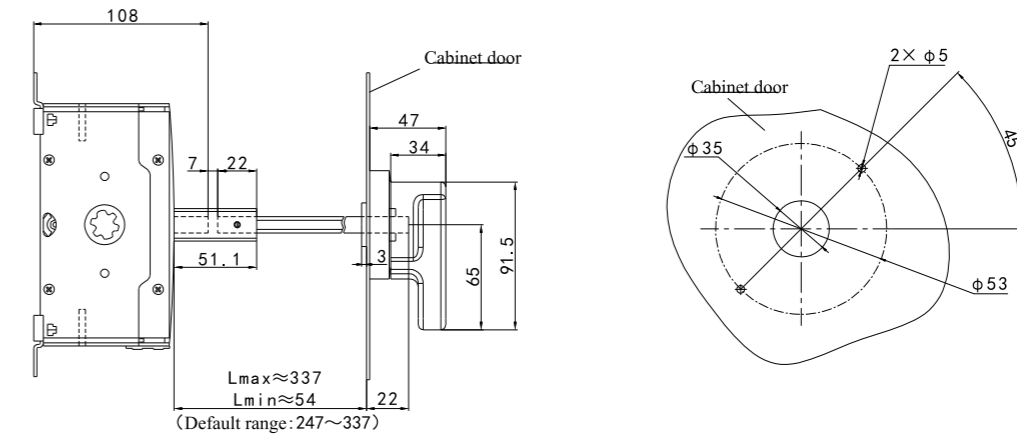


HCG4-630/2QCV

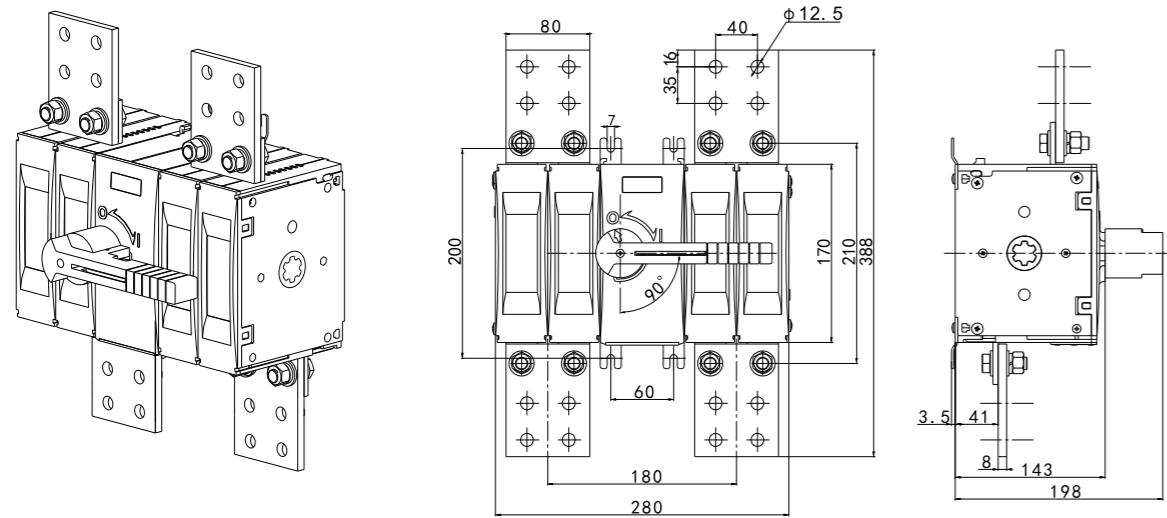
HCG4-250 ~ 1600 / 2QJV DC product outline and installation dimension (operating mechanism outside the cabinet)



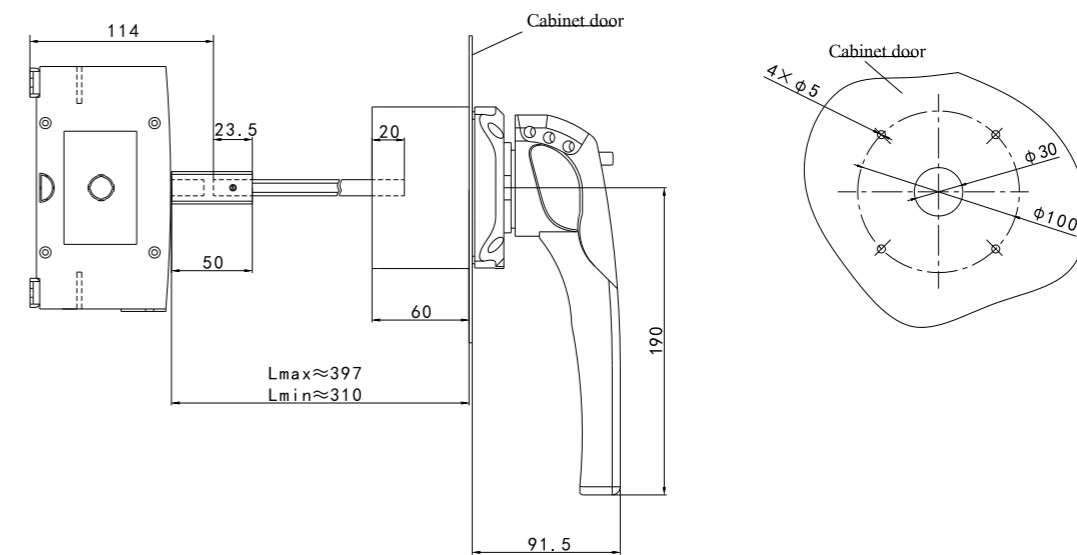
HCG4-800/2QV



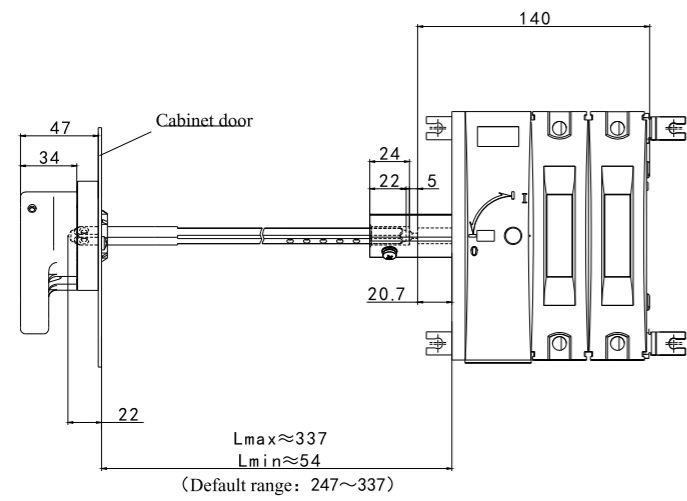
HCG4-250/2QJV



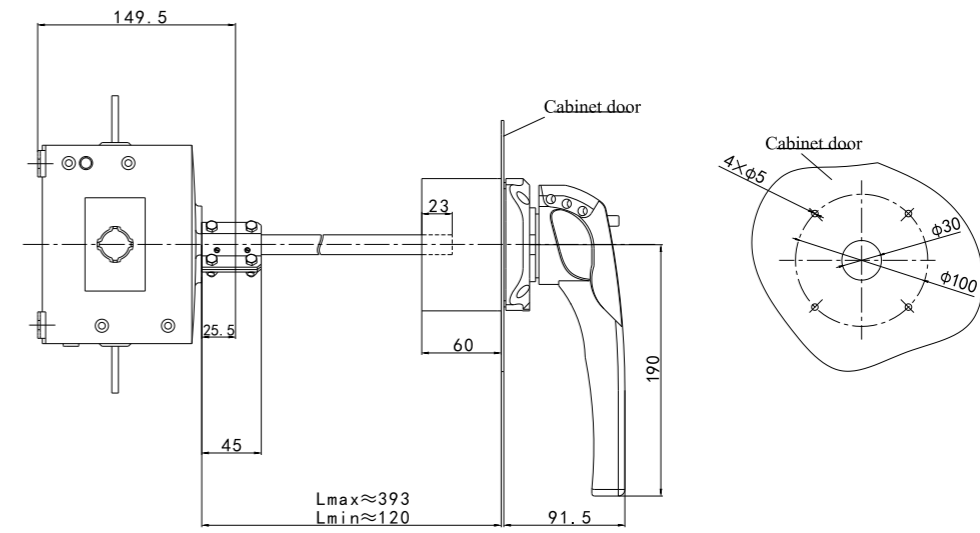
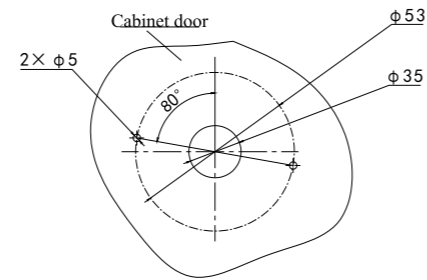
HCG4-1600/2QV



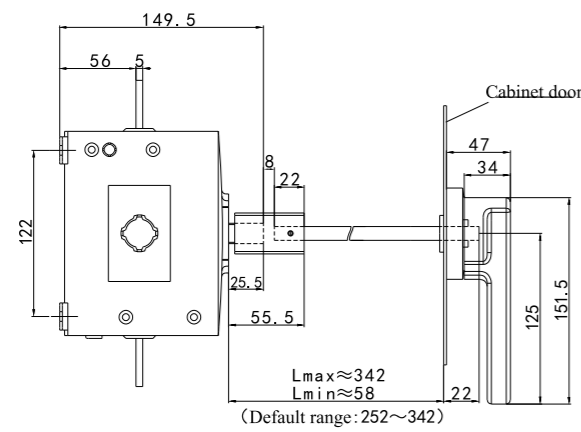
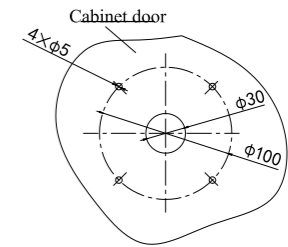
HCG4-250/2QJV(IP65)



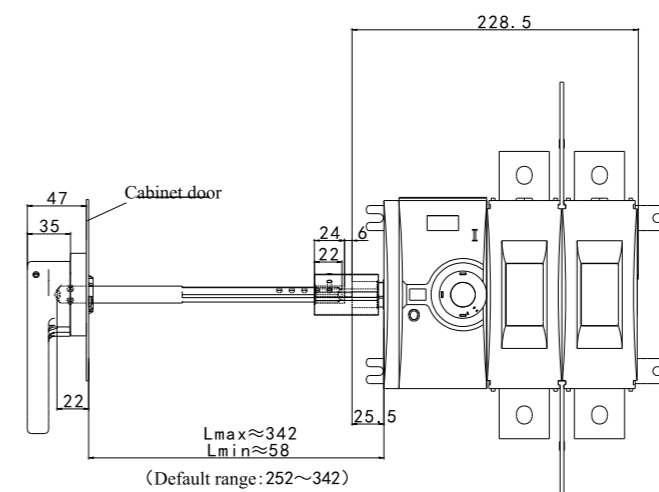
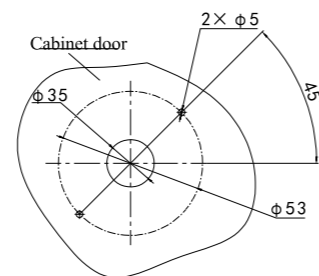
HCG4-250/2QCJV



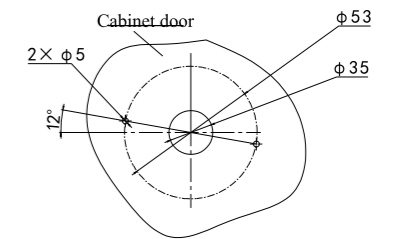
HCG4-630/2QJV(IP65)



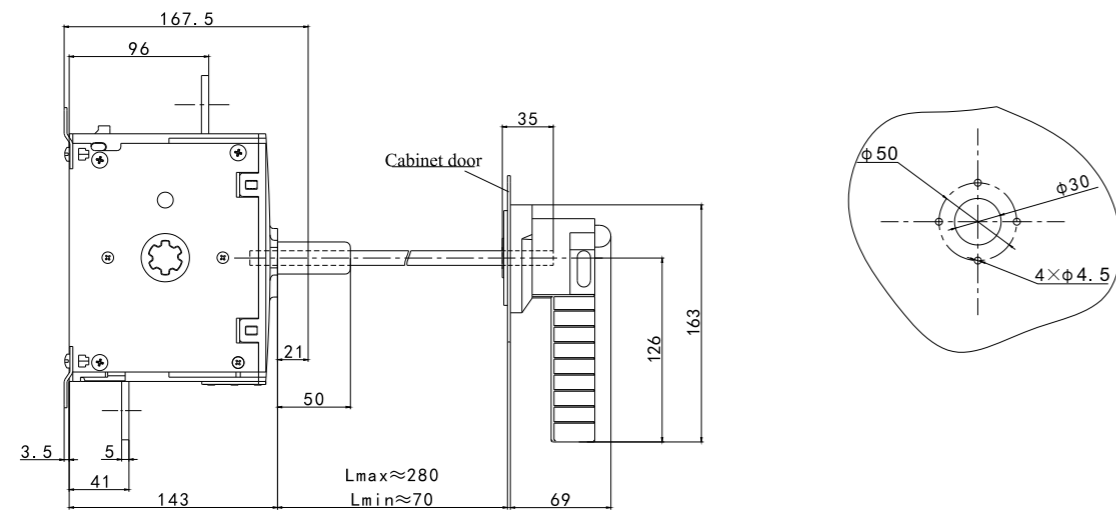
HCG4-630/2QJV



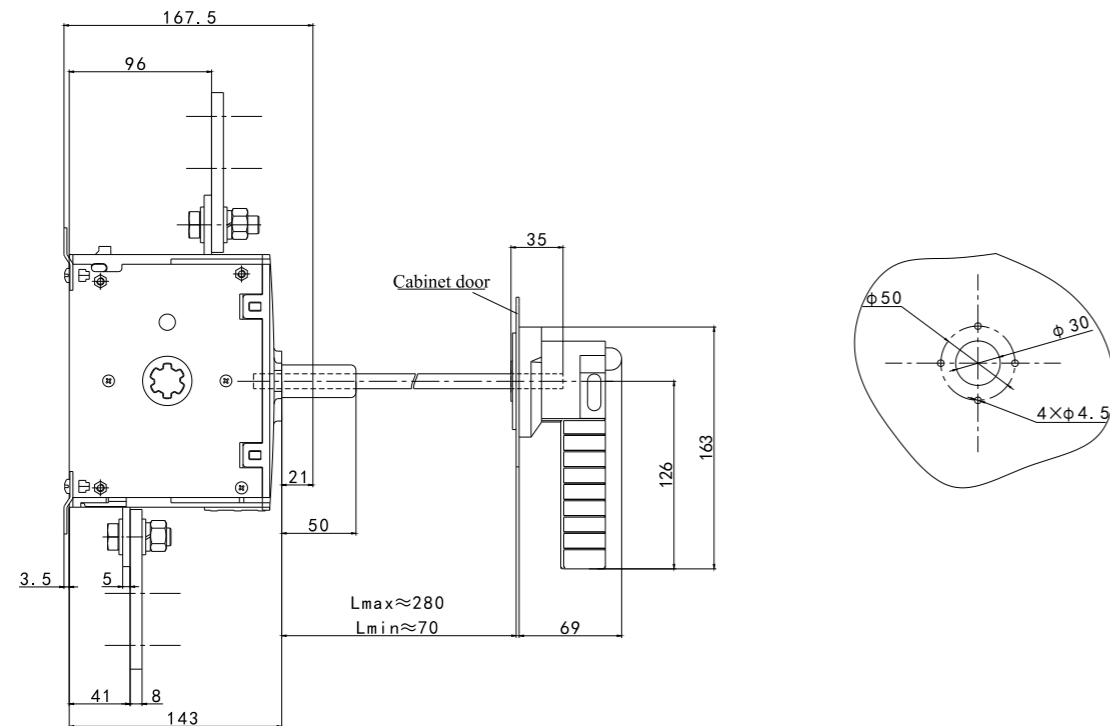
HCG4-630/2QCJV



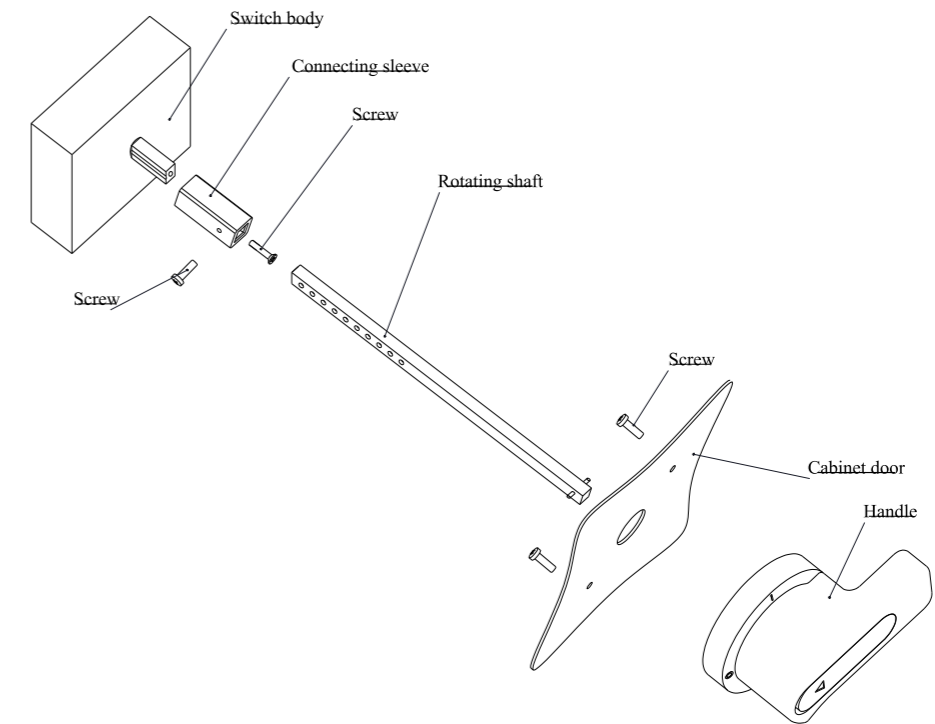
HCG4-250A Diagram of operating mechanism outside the cabinet



HCG4-800/2QJV



HCG4-1600/2QJV



Applicable to HCG4-250/2QJV

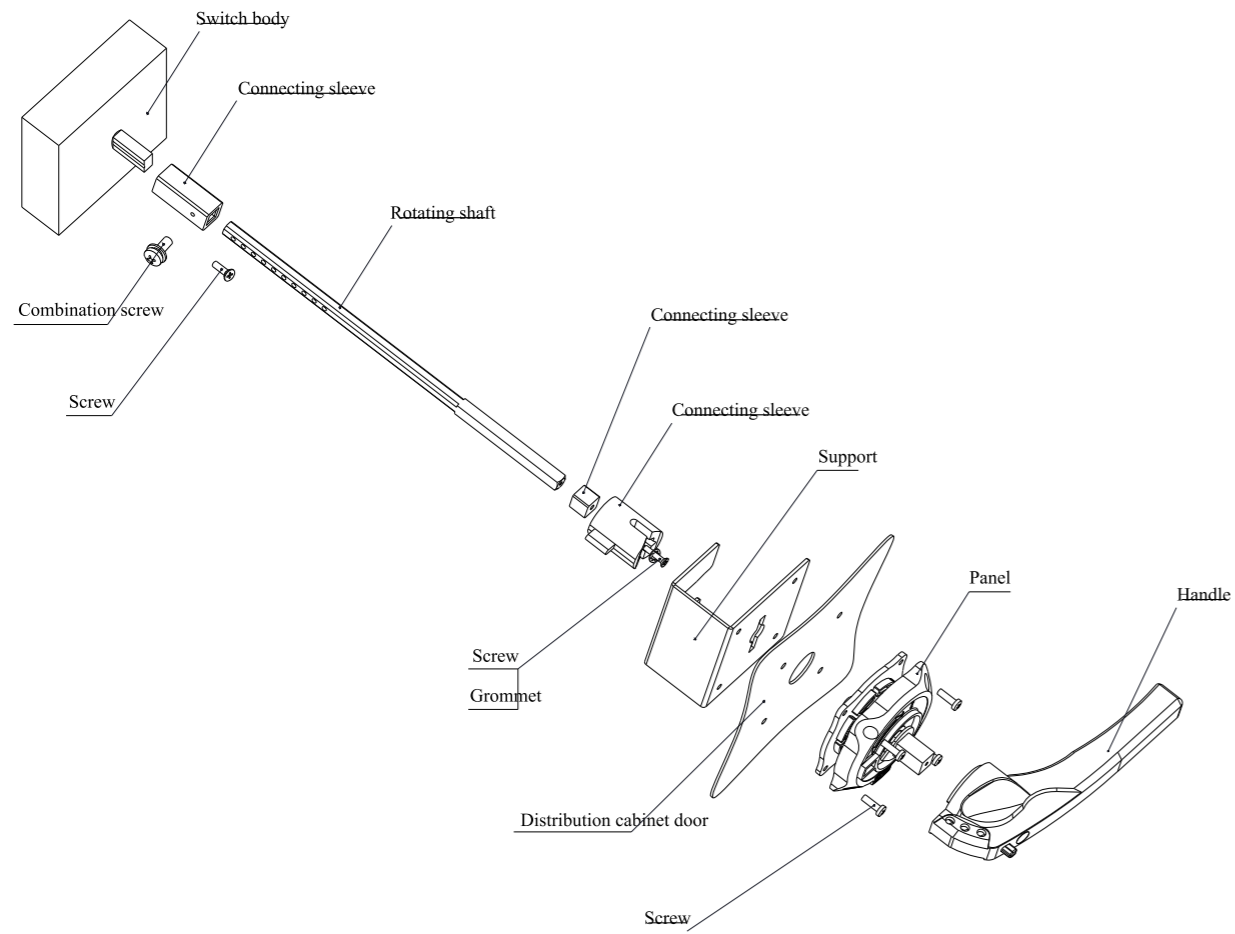
Installation dimension of extension shaft for operation outside the cabinet

Product model	Standard length (mm)	Cross section (mm <sup>2</sup> )
HCG4-250/2QJV	330	8×8

Note: the length of extension shaft can be customized



HCG4-630A Diagram of operating mechanism outside the cabinet

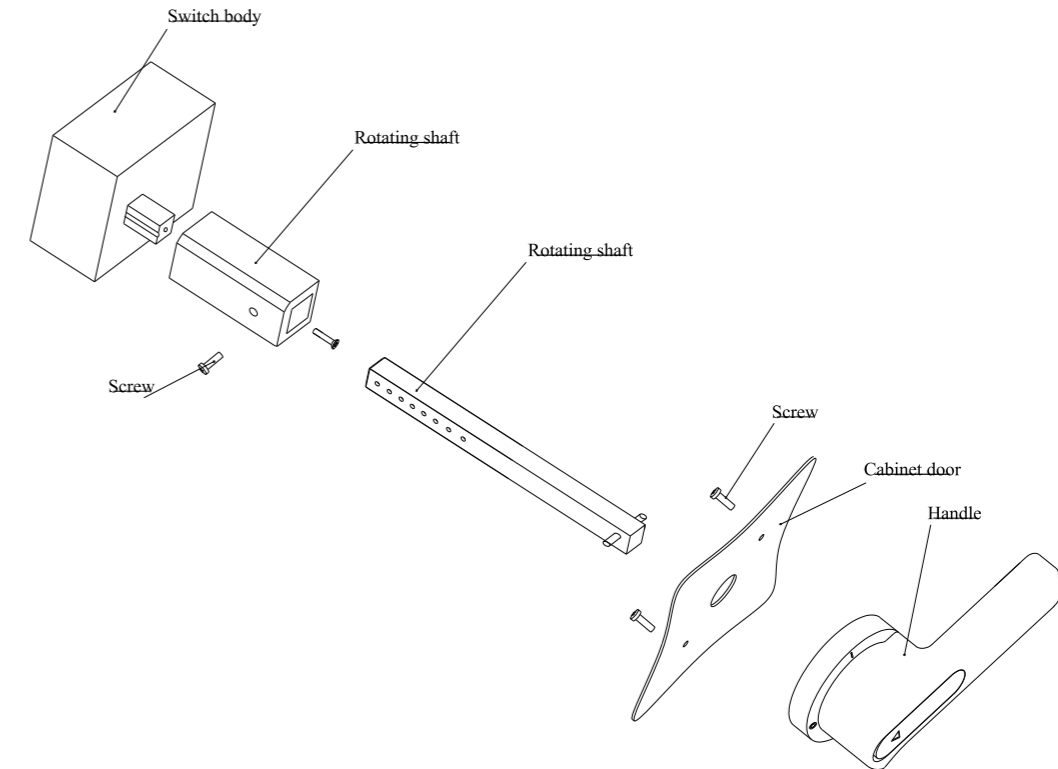


Applicable to HCG4-250/2QJV (IP65)

Note: the length of extension shaft can be customized

Product model	Standard length (mm)	Cross section (mm <sup>2</sup> )
HCG4-250/2QJV(IP65)	330	10×10

Note: the length of extension shaft can be customized



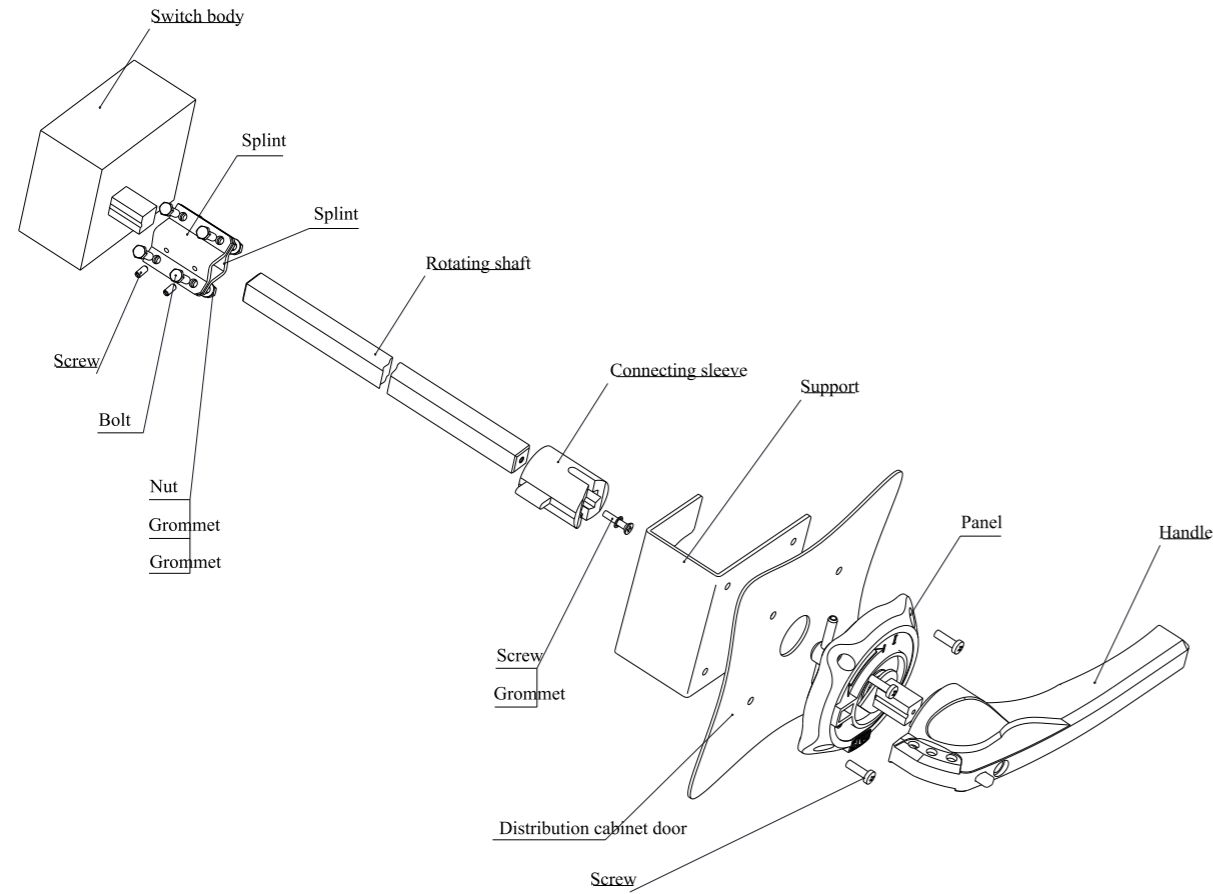
Applicable to HCG4-630/2QJV

Installation dimension of extension shaft for operation outside the cabinet

Product model	Standard length (mm)	Cross section (mm <sup>2</sup> )
HCG4-630/2QJV	330	10×10

Note: the length of extension shaft can be customized

HCG4-800 (1600) A Diagram of operating mechanism outside the cabinet

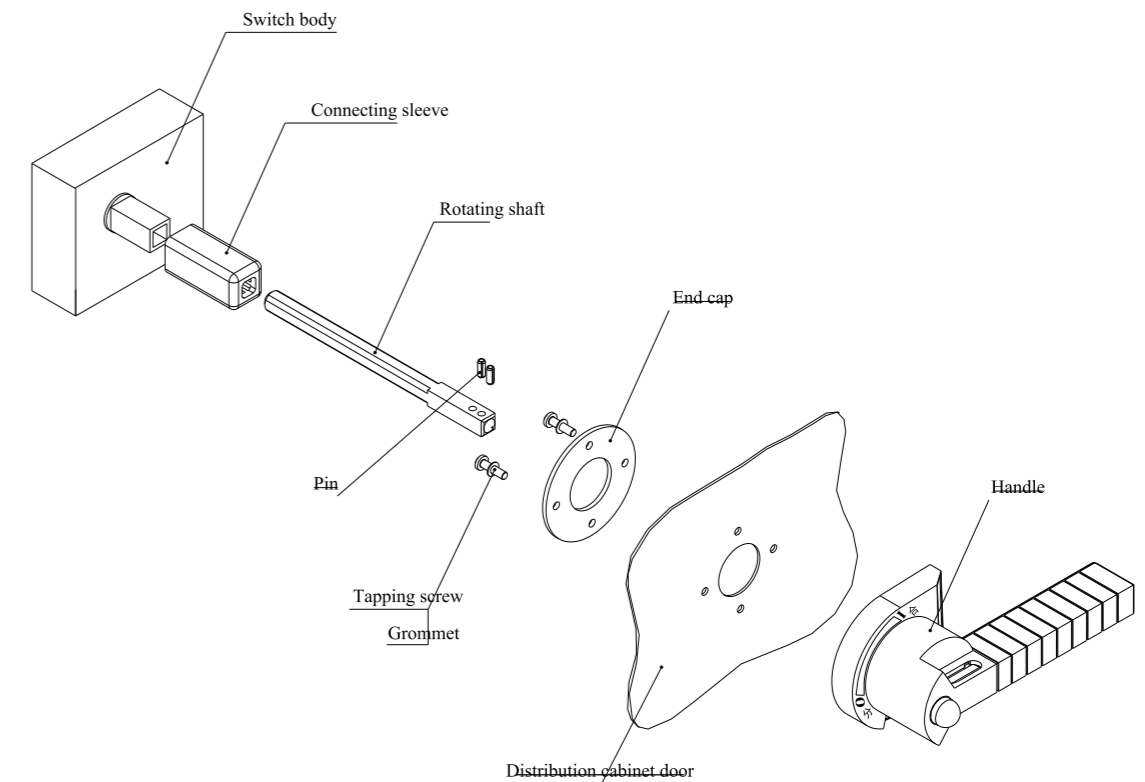


Applicable to HCG4-630/2QJV (IP65)

Installation dimension of extension shaft for operation outside the cabinet

Product model	Standard length (mm)	Cross section (mm <sup>2</sup> )
HCG4-630/2QJV(IP65)	330	15×15

Note: the length of extension shaft can be customized



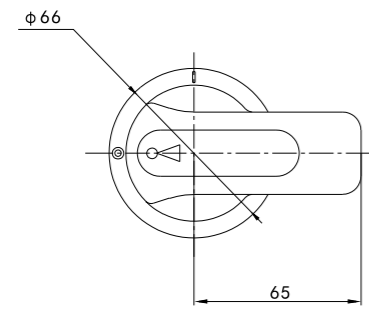
Applicable to HCG4-800(1600)/2QJV

Installation dimension of extension shaft for operation outside the cabinet

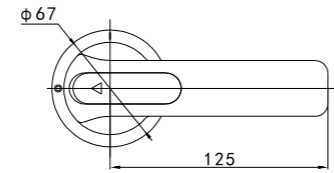
Product model	Standard length (mm)	Cross section (mm <sup>2</sup> )
HCG4-800(1600)/2QJV	332	10×10

Note: the length of extension shaft can be customized

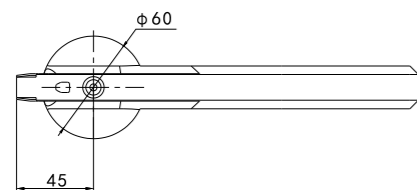
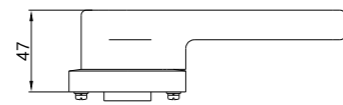
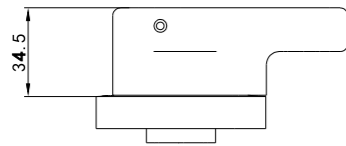
Installation dimension of operating handle outside the cabinet (unit: mm)



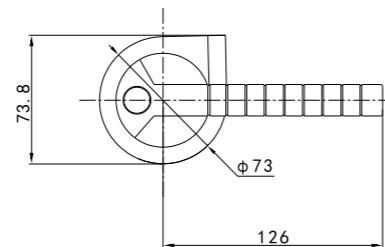
HCG4-250/2QJV  
HCG4-250/2QCJV



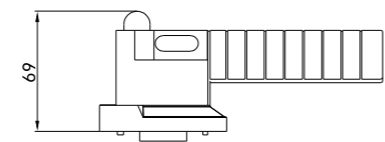
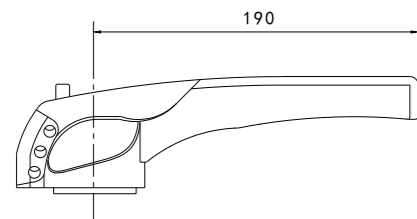
HCG4-630/2QJV  
HCG4-630/2QCJV



HCG4-250~630/2QJV(IP65)



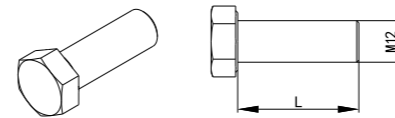
HCG4-800(1600)/2QJV



Screw dimensions for copper bar wiring (unit: mm)



Socket head cap screw

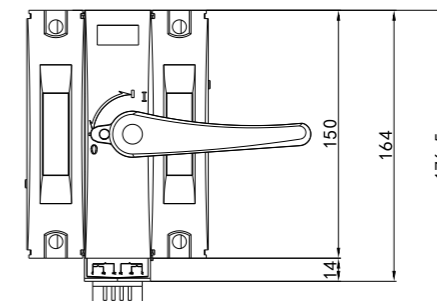
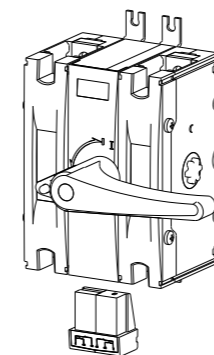


Outer hexagon bolt

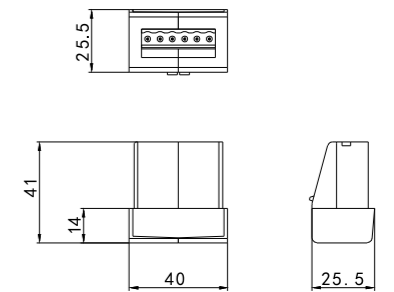
Current level	Copper bar connecting screw
HCG4-250A	Socket head cap screw M8*20
HCG4-630A	Outer hexagon bolt M12*35
HCG4-800(1600)A	Outer hexagon bolt M12*35

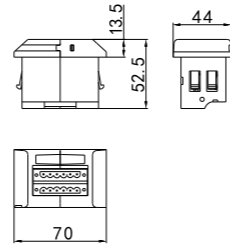
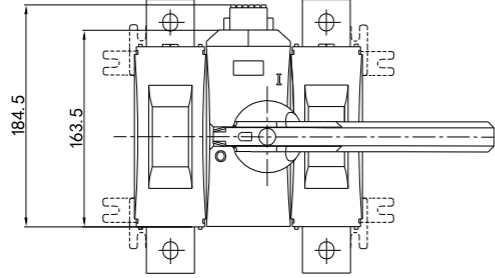
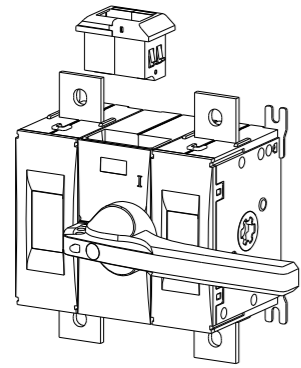
Outline and installation dimension of auxiliary contact (unit: mm)

HCG4-250-1600/2QF22(F44) V DC product outline and installation dimension (auxiliary contact)

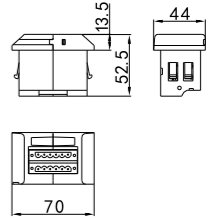
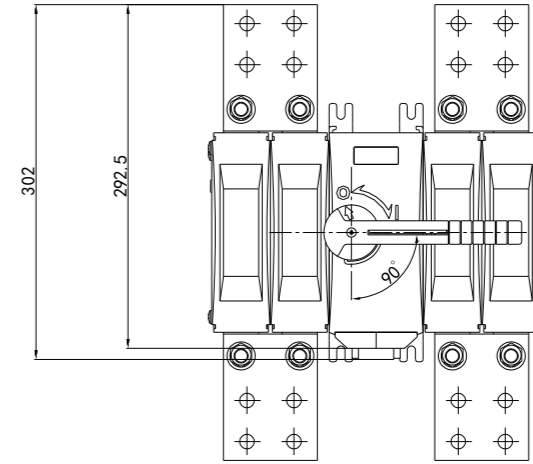
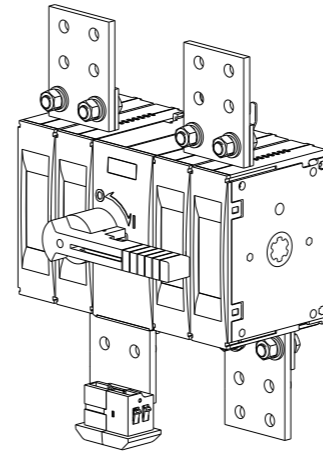


HCG4-250/2QF22V



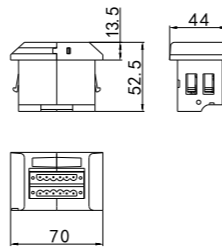
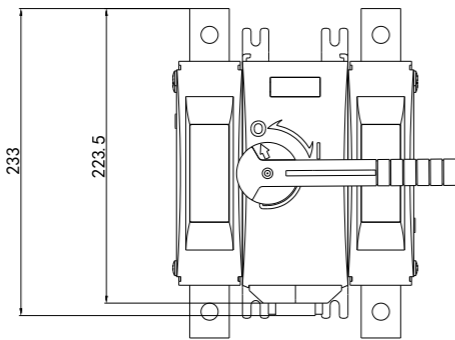
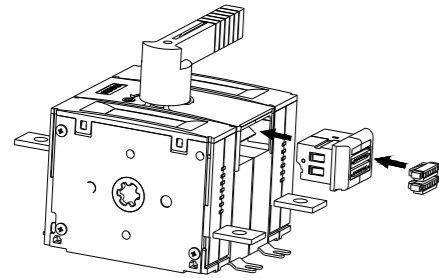


HCG4-630/2QF44V

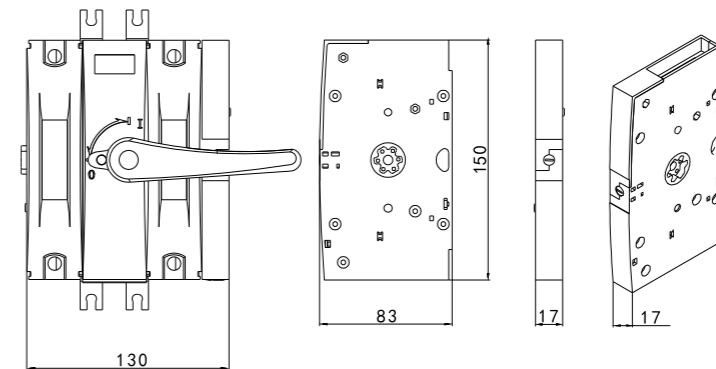
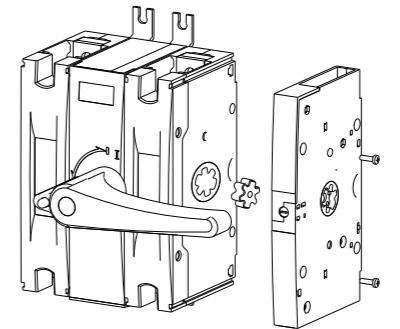


HCG4-1600/2QF44V

HCG4-250/2QS22(ST22)V outline and installation dimension (auxiliary module)



HCG4-800/2QF44V



## DC1000V electric disconnecter

### Product Selection

HC
G
4
-
□
/
2
Q
V
□
□
□
□
□
□

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬

Serial No.	Name	Switch model
①	Company name	Zhejiang Hecheng Smart Electric Co.,Ltd.
②	Product code	G: Disconnecter series
③	Design No.	4
④	Agreed heating current	1600A
⑤	Number of poles	2P
⑥	DC products	Q
⑦	Voltage level	V: DC1000V
⑧	Electric operating mechanism	DC1: AC/DC230V DC2: AC/DC110V DC3: AC380V
⑨	Closing electromagnet	Not noted: AC230V B1: AC110V B2: AC380V
⑩	Shunt release	Not noted: AC230V I1: AC110V I2: AC380V
⑪	Undervoltage trip	U1: AC230V U2: AC400V (optional: note if necessary)
⑫	Auxiliary contact	F44: 4 constantly opened and 4 constantly closed (standard configuration, not noted)
⑬	Rated current	1000, 1250, 1600A

Model selection examples:

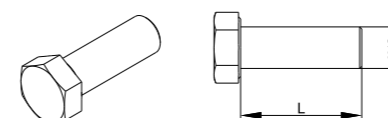
①HCG4-1600/2QV DC1 Ie1250

HCG4 series disconnecter, DC1000V, rated current 1250A, 2-pole, electric operating mechanism AC / DC230V, closing electromagnet AC230V, shunt release AC230V, auxiliary contact 4 constantly open and 4 constantly closed.

### Specification

Product model	HCG4-1600
Agreed heating current (A)	1600
Rated working current (A)	1000, 1250, 1600
Rated working voltage DC (V)	1000
Number of poles	2P
Rated impulse withstand voltage Uimp (kV)	12
Rated insulation voltage Ui (V)	1500
Use category	DC-21B
Rated short circuit making capacity Icm (kA peak)	20
Rated short-time withstand current (Icw)	20kA/1s
Mechanical life (times)	7000
Electrical life (times)	100
Terminal tightening torque (Nm)	50-75
Working altitude	≤ 2000m (capacity reduction is required for more than 2000m)
Working temperature	-20°C~50°C
Pollution level	Level 3
Protection level	IP20
Weight (kg)	39
Certifications	RoHS, TUV, CCC, CB, CE, EAC

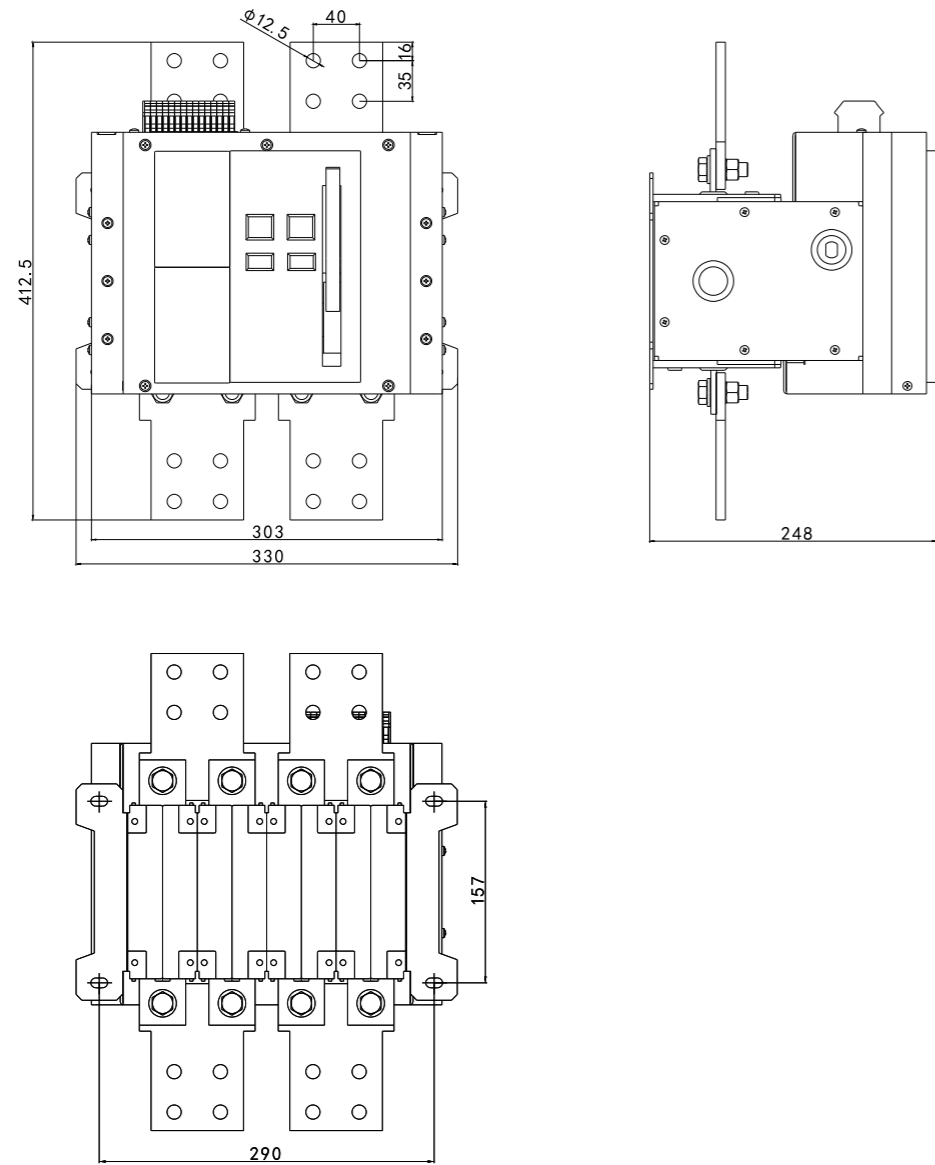
### Screw dimensions for copper bar wiring (unit: mm)



Outer hexagon bolt

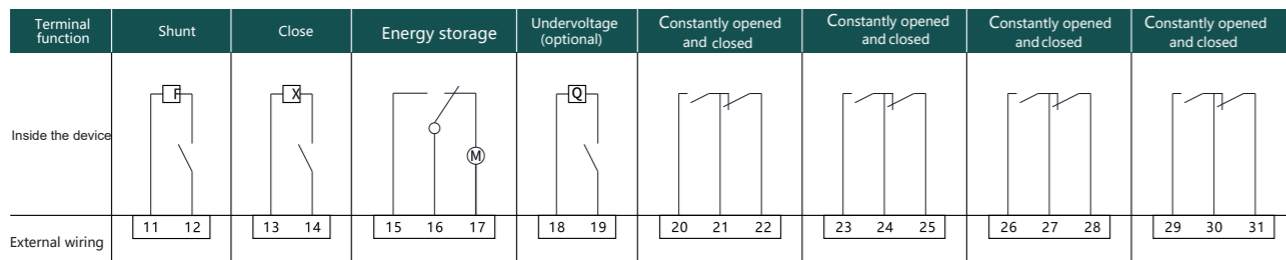
Current level	Copper bar connecting screw
HCG4-1600A	Outer hexagon bolt M12*35

Product outline and installation dimension (DC1000V) (unit: mm)



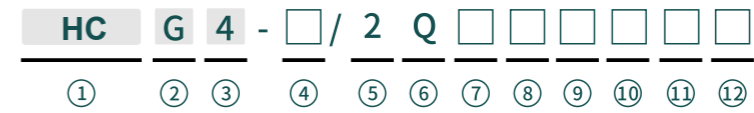
HCG4-1600/2QVDC

Connector terminal diagram



DC1500V manual DC disconnector

Product Selection



序号	序号名称	开关型号
①	Company name	Zhejiang Hecheng Smart Electric Co.,Ltd.
②	Product code	G: Disconnecter series
③	Design No.	4
④	Agreed heating current	500、800、1600A
⑤	Number of poles	2P
⑥	DC products	Q
⑦	Operating position	M: between switch poles (not noted)
⑧	Operation mode	Front operation: not noted
⑨	Handle operation mode	Operation in cabinet: not noted Operation outside the cabinet: J
⑩	Auxiliary contact	F44: 4 constantly opened and 4 constantly closed
⑪	Voltage level	W: DC1500V (default not noted)
⑫	Rated current	500: 200、250、315、400、500 800: 630、800 1600: 1000、1250、1600 UL: 500: I -250A II-315A III-400A IV-500A

Model selection examples:

① HCG4-500/2QJF44 Ie400

HCG4 series disconnecter, DC1500V, rated current 400A, 2-pole, external operation, auxiliary contact 4 constantly opened and 4 constantly closed.

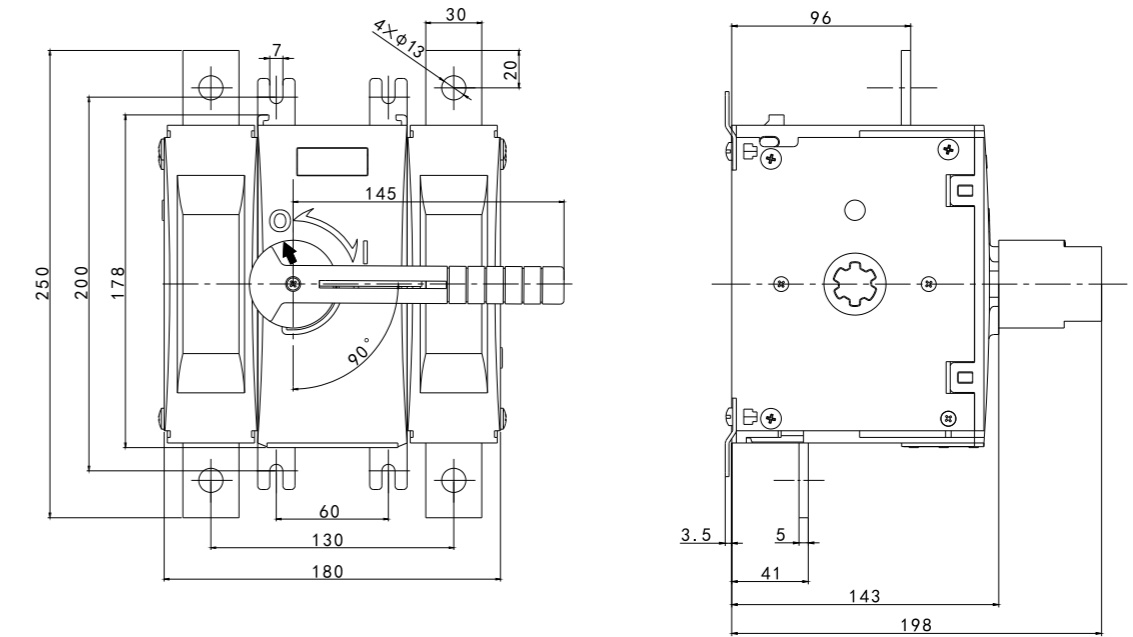
② HCG4-500/2QJ IV

HCG4 series disconnecter meets UL certification, DC1500V, rated current 500A, 2-pole, operating outside the cabinet.

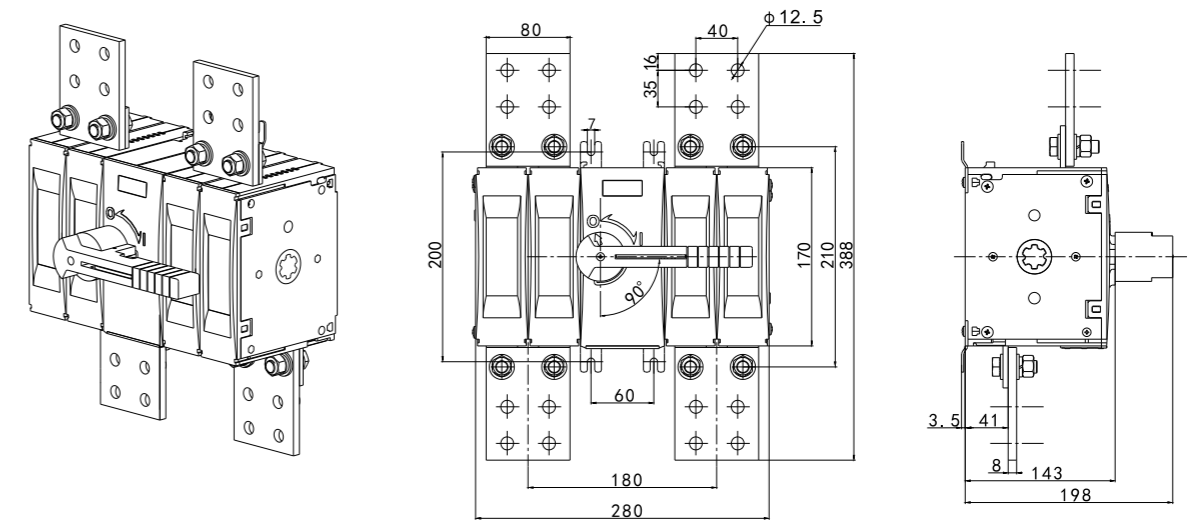
Specification

Product model	HCG4-500	HCG4-800	HCG4-1600
Agreed heating current (A)	500	800	1600
Rated working current (A)	200, 250, 315 400, 500	630, 800	1000, 1250, 1600
Rated working voltage DC (V)	1500		
Number of poles	2P		
Rated impulse withstand voltage Uimp (kV)	12		
Rated insulation voltage Ui (V)	1500		
Use category	DC-21B DC-PV2	DC-21B	DC-21B
Rated short-time making capacity Icm (kA peak)	10	10	20
Rated short-time withstand current Icw	10kA/1s	10kA/1s	20kA/1s
Mechanical life (times)	8000	8000	7000
Electrical life (times)	200	200	100
Terminal tightening torque (Nm)	50-75	50-75	50-75
Working altitude	≤ 2000m (capacity reduction is required for more than 2000m)		
Working temperature	-20°C~50°C	-20°C~50°C	-20°C~50°C
Pollution level	Level 3		
Protection level	IP20		
Weight (kg)	6.6	6.7	11.9
Certifications	CCC, RoHS, CB, TUV UL, CE, EAC	RoHS, TUV, CCC CB, CE, EAC	RoHS, TUV, CB CE, CCC, EAC

Product outline and installation dimension (DC1500V) (unit: mm)

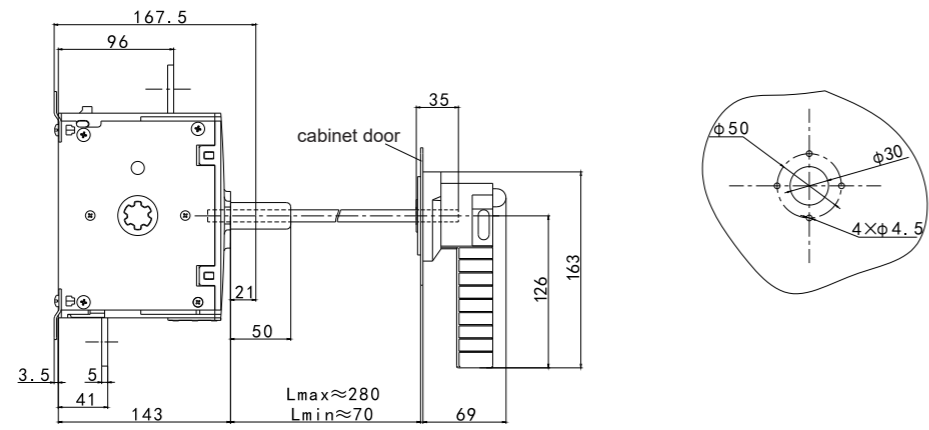


HCG4-500(800)/2Q

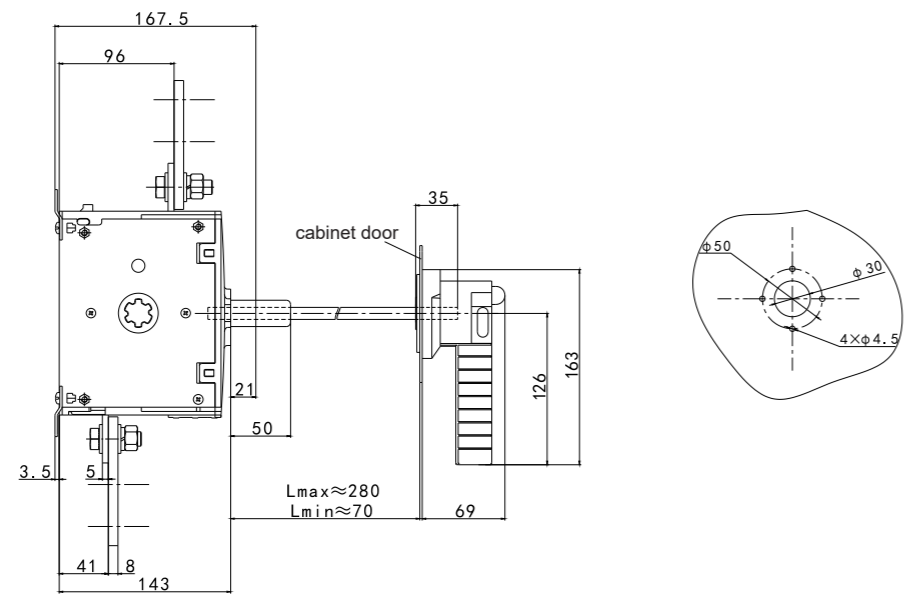


HCG4-1600/2Q

HCG4-500~1600/2QJ DC product outline and installation dimension (operating mechanism outside the cabinet)

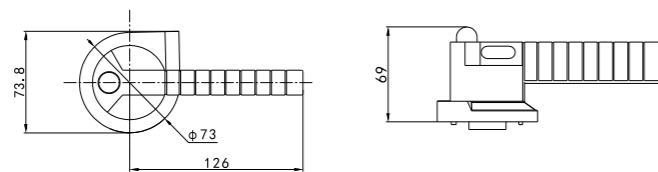


HCG4-500(800)/2QJ



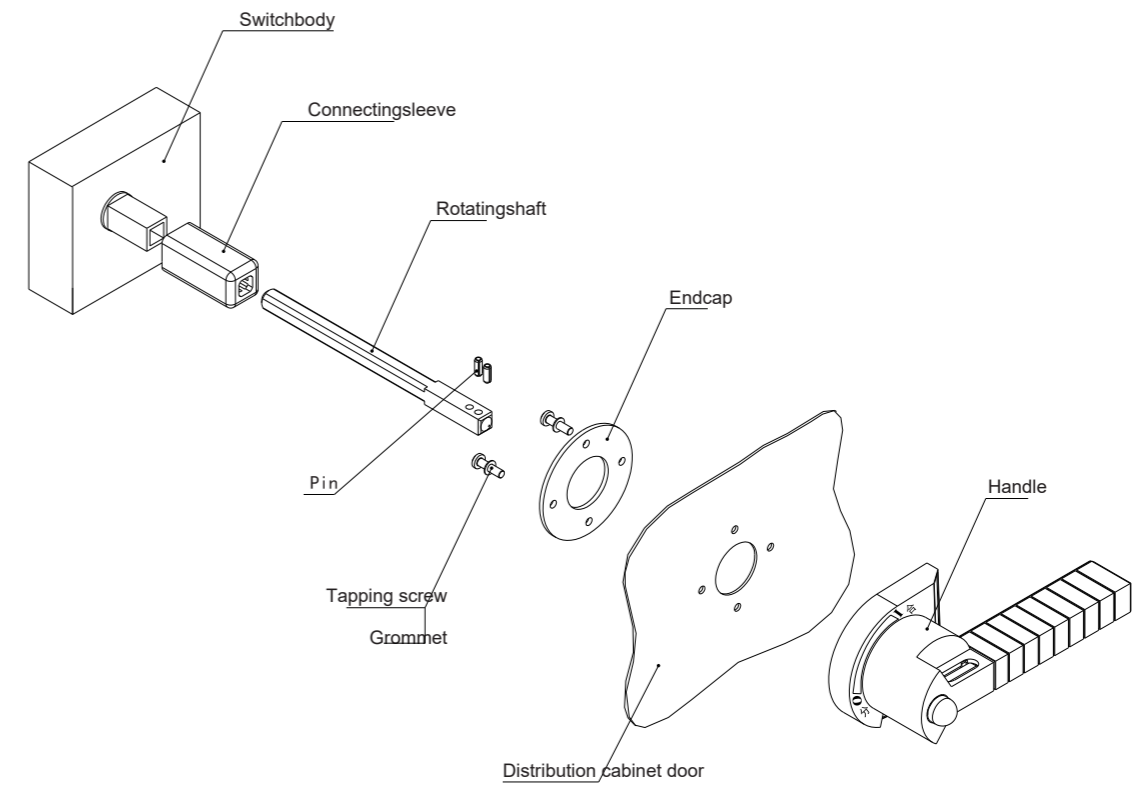
HCG4-1600/2QJ

Installation dimension of operating handle outside the cabinet (unit: mm)



HCG4-500(800、1600)/2QJ

HCG4-500 (800, 1600) A Diagram of operating mechanism outside the cabinet



Applicable to HCG4-500 (800, 1600) / 2QJ

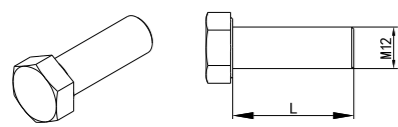
Installation dimension of extension shaft for operation outside the cabinet

Product model	Product model Standard length (mm)	Cross section (mm <sup>2</sup> )
HCG4-500(800、1600)/2QJ	332	10×10

Note: the length of extension shaft can be customized



Screw dimensions for copper bar wiring (unit: mm)

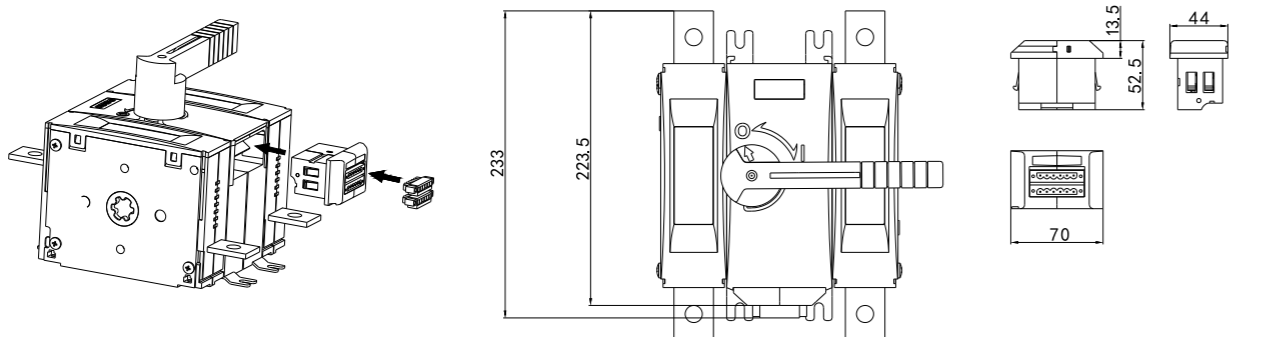


Outer hexagon bolt

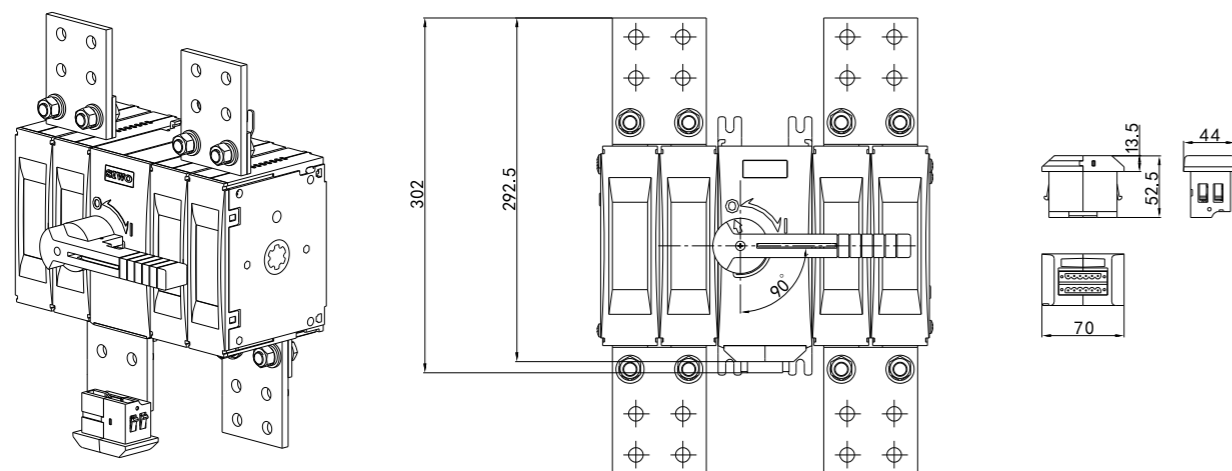
Curr ent level	Copperbarconnecting screw
HCG4-500(800、1600)A	Outerhexagonbolt M12*35

Outline and installation dimension of auxiliary contact (unit: mm)

HCG4-500-1600/2QF22(f44) DC product outline and installation dimension (auxiliary contact)



HCG4-500(800)/2QF22



HCG4-1600/2QF22

DC1500V electric disconnecter

Product Selection

HC G 4 - □ / 2 Q □ □ □ □ □ □ □ □ □  
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬

Serial No.	Name	Switch model
①	Company name	Zhejiang Hecheng Smart Electric Co.,Ltd.
②	Product code	G: Disconnector series
③	Design No.	4
④	Agreed heating current	1600、2500A
⑤	Number of poles	2P
⑥	DC products	Q
⑦	Voltage level	Not noted: DC1500V
⑧	Electric operating mechanism	DC1: AC/DC230V DC2: AC/DC110V DC3: AC380V
⑨	Closing electromagnet	Not noted: AC230V B1: AC110V B2: AC380V
⑩	Shunt release	Not noted: AC230V I1: AC110V I2: AC380V
⑪	Undervoltage trip	U1: AC230V U2: AC400V U2: AC400V (optional: note if necessary)
⑫	Auxiliary contact	F44: 4 constantly opened and 4 constantly closed (standard configuration, not noted)
⑬	Rated current	1600: 1000、1250、1600A 2500: 2000、2500A

Model selection examples:

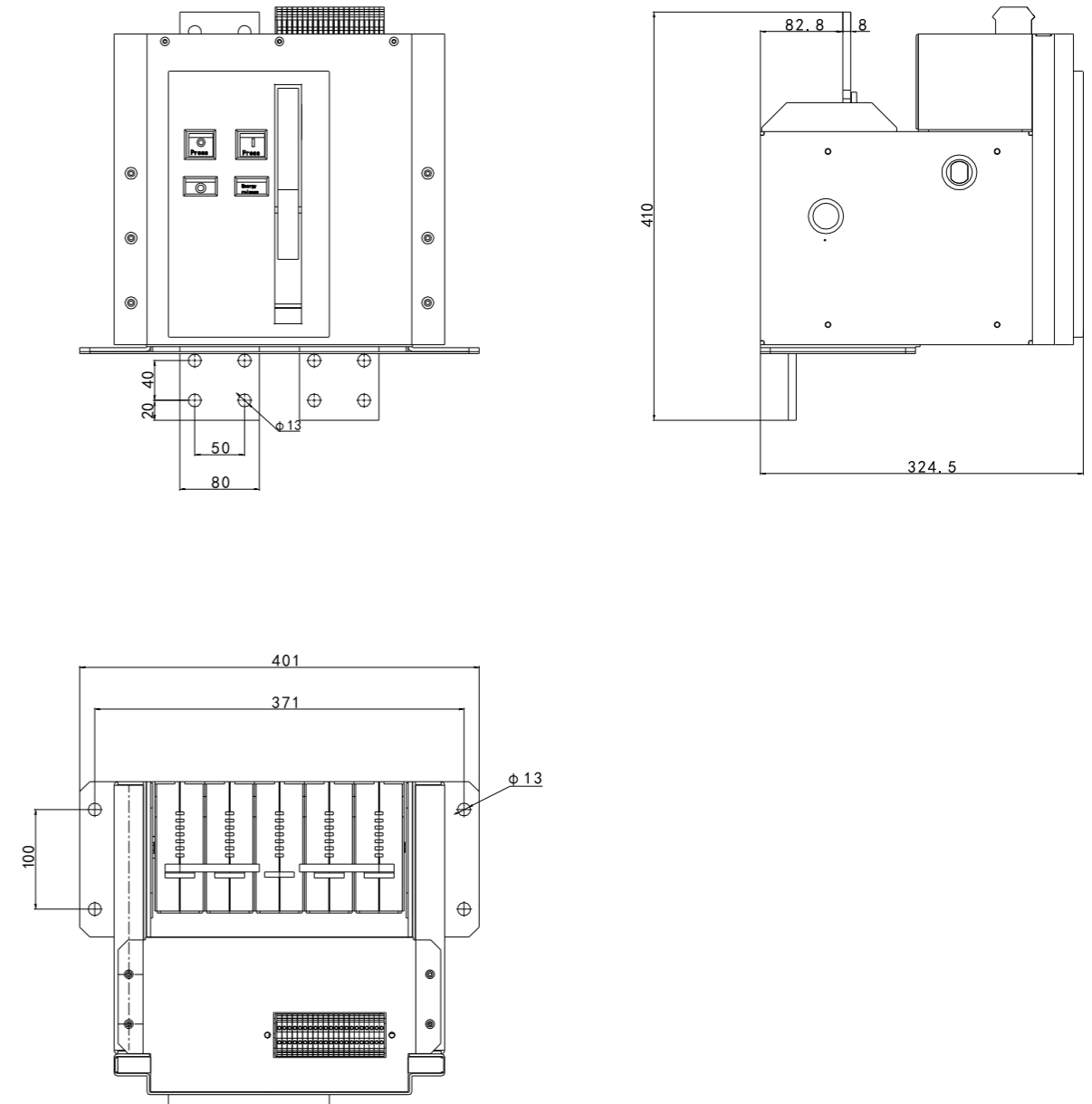
① HCG4-2500/2Q DC1 Ie2000A

HCG4 series disconnector, DC1500V, rated current 2000A, 2-pole, electric operating mechanism AC / DC230V, closing electromagnet AC230V, shunt release AC230V, auxiliary contact 4 constantly open and 4 constantly closed.

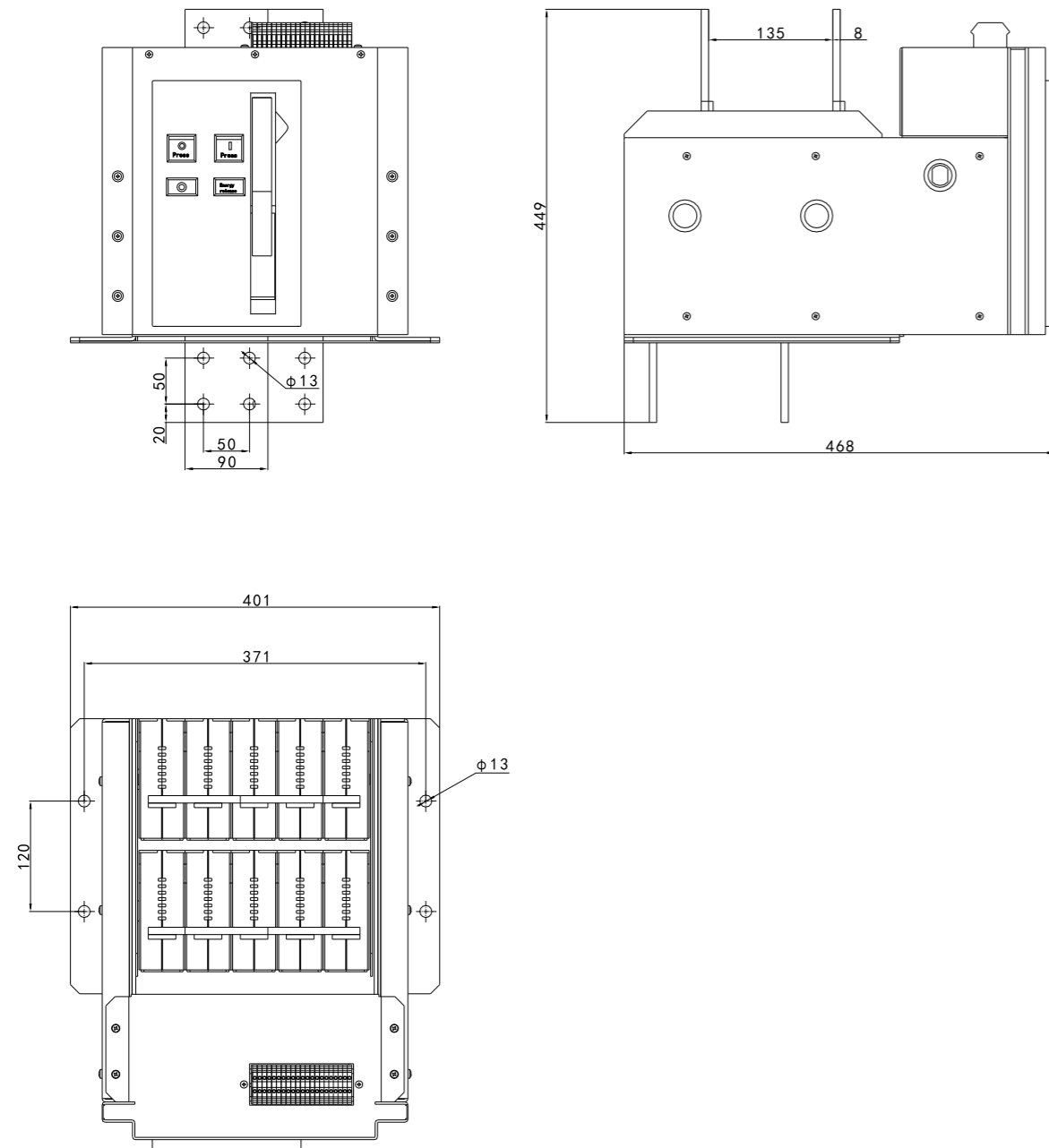
## Specification

Product model	HCG4-1600	HCG4-2500
Agreed heating current (A)	1600	2500
Rated working current (A)	1000, 1250, 1600	2000, 2500
Rated working voltage DC (V)	1500	
Number of poles	2P	
Rated impulse withstand voltage Uimp (kV)	12	
Rated insulation voltage Ui (V)	1500	
Use category	DC-21B	DC-21B
Rated short-time making capacity Icm (kA peak)	20	50
Rated short-time withstand current (Icw)	20kA/1s	100kA/200ms
Mechanical life (times)	7000	5000
Electrical life (times)	100	100
Terminal tightening torque (Nm)	50-75	50-75
Working altitude		
Working temperature	-20°C~50°C	-20°C~50°C
Pollution level	Level 3	
Protection level	IP20	
Weight (kg)	39	52.6
Certifications	CB, CE, RoHS, TUV, CCC, EAC	CCC, TUV, CB, CE, EAC

## Product outline and installation dimension (DC1500V) (unit: mm)

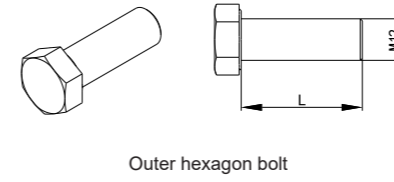


HCG4-1600/2QDC



HCG4-2500/2QDC

Screw dimensions for copper bar wiring (unit: mm)



Current level	Copper bar connecting screw
HCG4-1600(2500)A	Outer hexagon bolt M12*35

Connector terminal diagram

Terminal function	Shunt	Close	Energy storage	Undervoltage (optional)	Constantly opened and closed	Constantly opened and closed	Constantly opened and closed	Constantly opened and closed
Inside the device								
External wiring	11 12	13 14	15 16 17	18 19	20 21 22	23 24 25	26 27 28	29 30 31

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