



Sieyuan

**Sieyuan**

**Shanghai Sieyuan Low Voltage  
Switchgear Co., Ltd.**

**New Generation Solutions for Low Voltage DC  
Systems**

# Sieyuan

**Sieyuan Low  
Voltage**

## **The New Force in Low Voltage Electrical Appliances for the New Era**

**Pioneering an Intelligent, Green, Safe, and  
Low-Voltage New World**

# Sieyuan

**Shanghai Sieyuan Low Voltage  
Switchgear Co., Ltd.**

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# Smarter Power Better Life

The stock code of Siyuan Electric: 002028



## Company Introduction

Shanghai Siyuan Low-Voltage Switchgear Co., Ltd., a wholly-owned subsidiary of Siyuan Electric, is an innovative enterprise integrating research and development (R&D), production, and sales. It specializes in DC switch R&D and complete DC system solutions. Leveraging the group's high-, medium-, and low-voltage DC switch platforms, and deep expertise in DC power systems, the company is committed to becoming China's leading DC switchgear R&D and manufacturing provider for DC switches.

# Group R&D investment

R&D Headcount (2025)

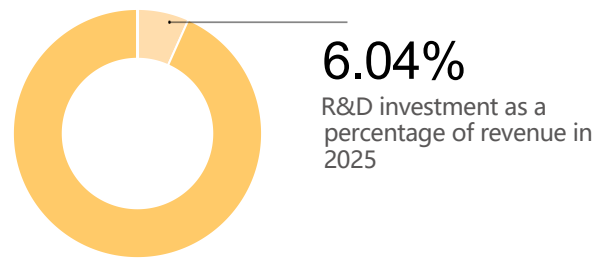
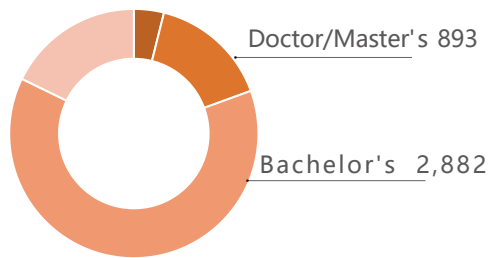
4,781



R&D Investment (2025)

USD 191 million

Educational Background of R&D Personnel



# Joint Research Collaborations

Sieyuan has established long-term cooperation with renowned universities, including Tsinghua University, Shanghai Jiao Tong University, Xi'an Jiaotong University, Huazhong University of Science and Technology, and Zhejiang University. These collaborations focus on high-voltage technology, power electronics, power system control, and power equipment monitoring and live-line detection. The company has also forged strategic partnerships with the China Electric Power Research Institute, provincial electric power research institutes, and TUV to conduct product testing and certification.

Boasting a professional power system simulation and analysis team, Sieyuan focuses on grid-forming, energy storage, auxiliary services, and power quality products. It offers grid-level power system simulation modeling based on globally recognized software such as PSCAD, PSS/E, DigSILENT, ADPSS, and PSASP, and provides tailored solutions to meet specific customer needs.



# Intellectual property

Throughout its development, the company has prioritized the continuous accumulation and investment in product technology and technical human capital, resulting in a portfolio of core technologies that rank advanced or leading both domestically and internationally. To date, the company holds **1,033** authorized patents, comprising **376** invention patents, **622** utility model patents, and **35** design patents. Additionally, it owns **199** software copyrights.



Data Source: 2025 Annual Financial Report of Sieyuan Electric Co., Ltd.

# CNAS-Accredited Laboratory

Accredited by the China National Accreditation Service for Conformity Assessment (CNAS), this electrical and electronic laboratory conducts a wide range of tests, including EMC performance testing, environmental adaptability testing, mechanical performance testing, safety performance testing, electrical performance testing, and accelerated life testing.



EMC Performance Testing



Environmental Adaptability Testing



Mechanical Performance Testing



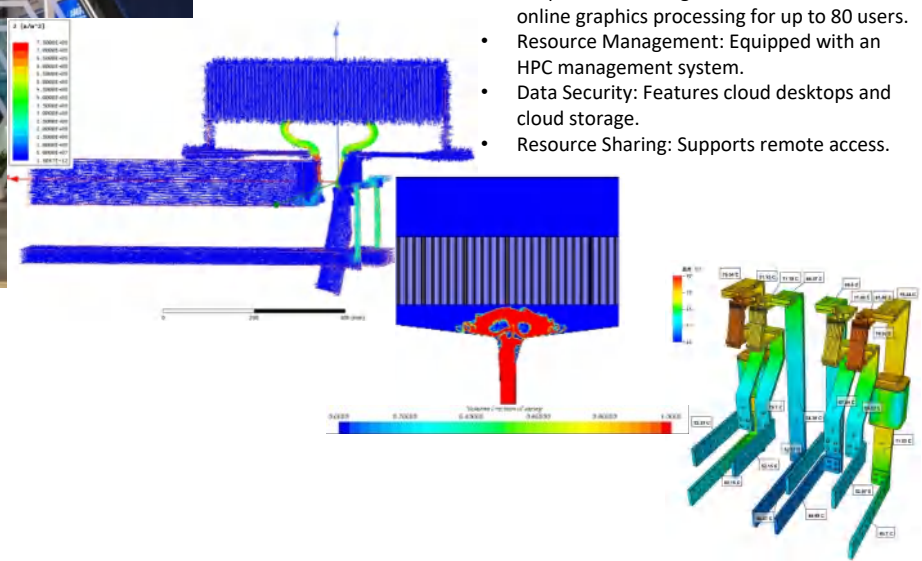
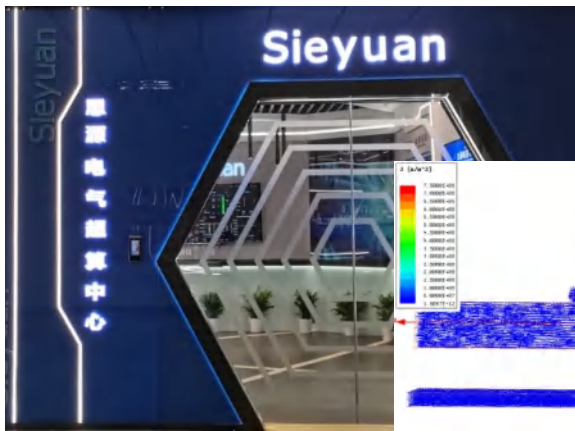
Safety Performance Testing



EMC Performance Testing



# Supercomputing Center

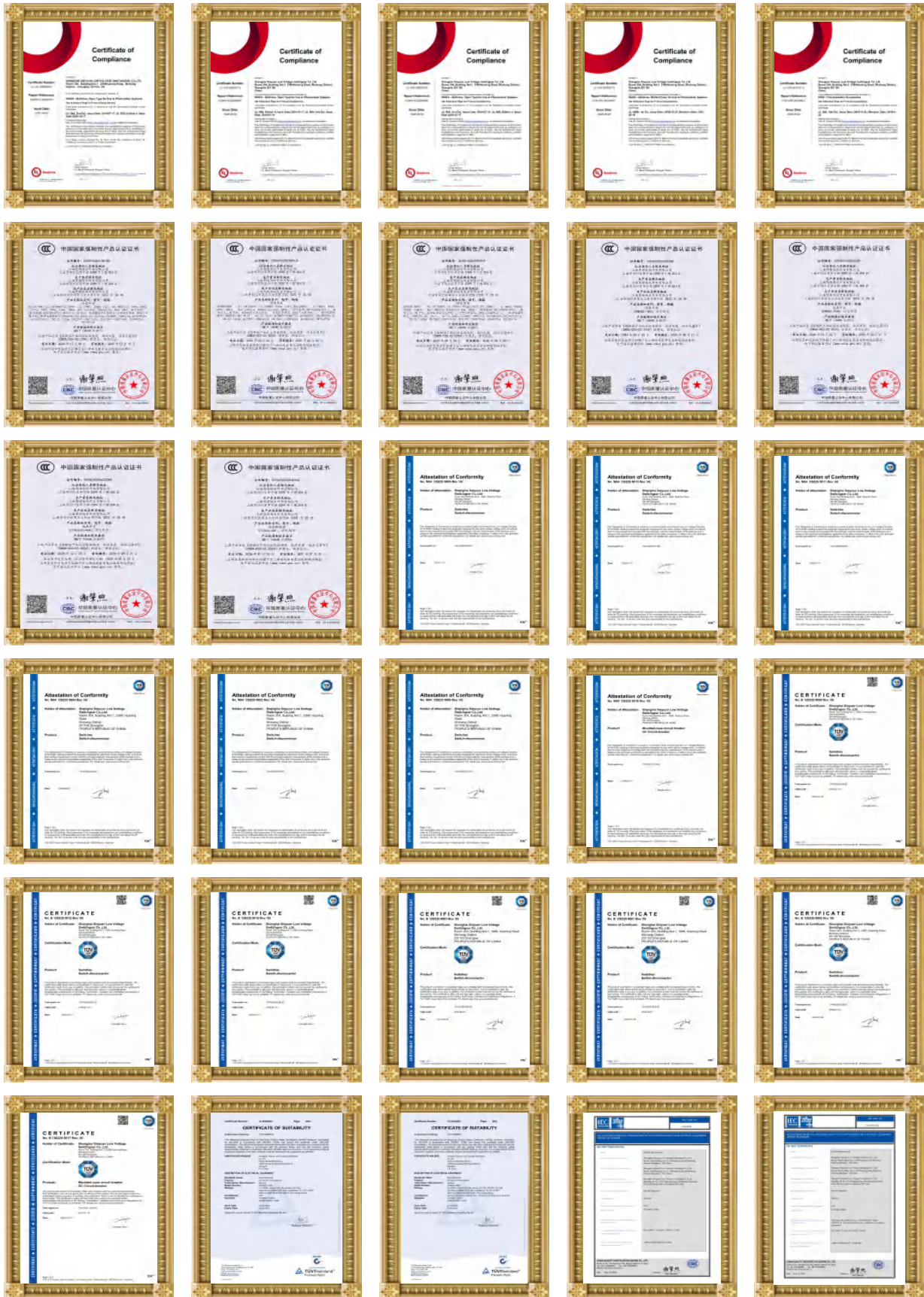


- Computing Capacity: A 100 TFlops supercomputing center (including graphics node computing power) has been commissioned, with a plan to expand to 200 TFlops by 2030. It supports power sector artificial intelligence (AI) operations.
- Graphics Processing: Enables simultaneous online graphics processing for up to 80 users.
- Resource Management: Equipped with an HPC management system.
- Data Security: Features cloud desktops and cloud storage.
- Resource Sharing: Supports remote access.

Siyuan Supercomputing Center adopts the industry-proven PBS Works solution, delivering industry-leading HPC workload management and job scheduling. Its advanced, high-performance simulation and computing resources serve the entire group.

# Product Certifications

All products manufactured by Sieyuan Low-Voltage Division have obtained certifications from authoritative domestic and international testing institutions.



# Global Service Center



# Partner





● Offices

100+

Served Countries & Regions

1h

Service response

24h

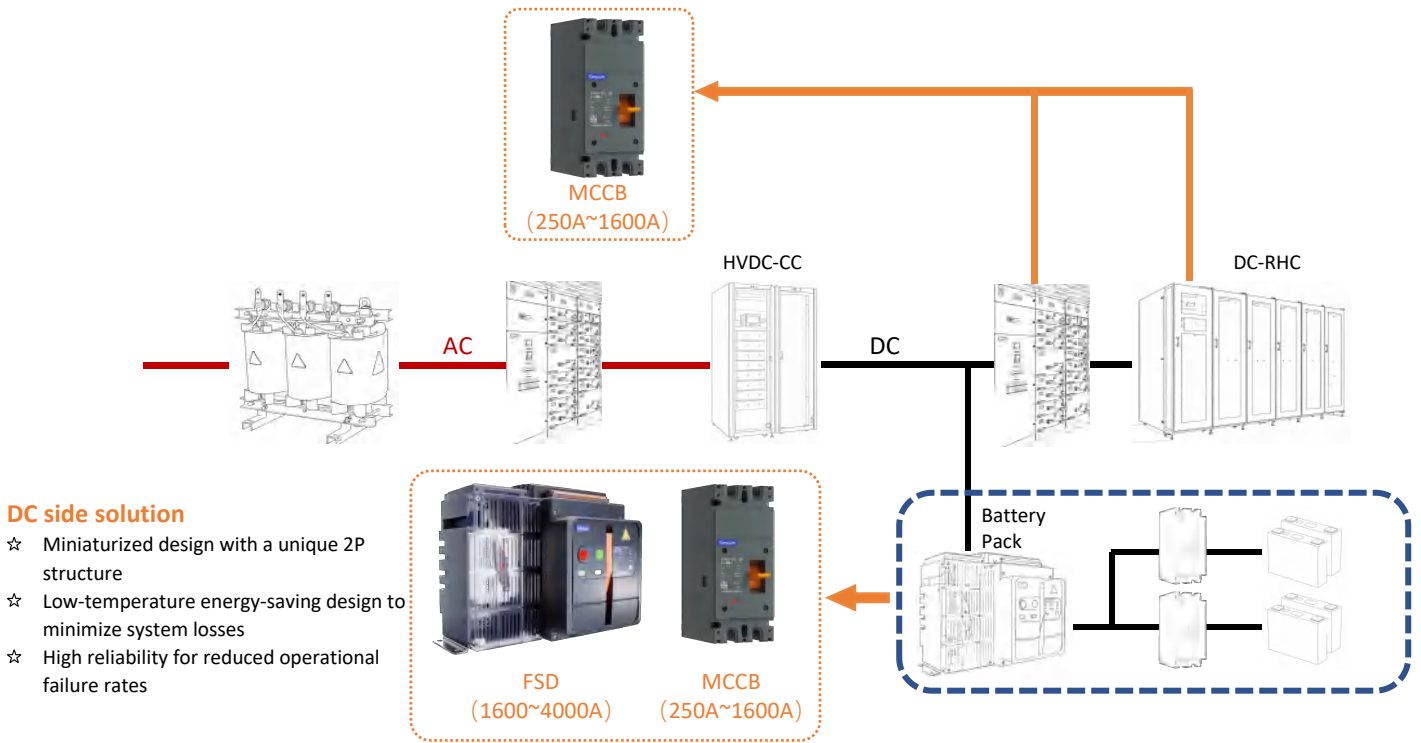
Arrive at the scene

Siyuan's products and services are available in over 100 countries and regions around the world, and it has served more than 6,000 projects globally. The company is a qualified supplier for power operators in over 50 countries and regions, including State Grid of China, China Southern PowerGrid, SEC Company of Saudi Arabia, Transco Company of ABU Dhabi, CFE Company of Mexico, Transelec Company of Chile, and NEGU Company of Uzbekistan.

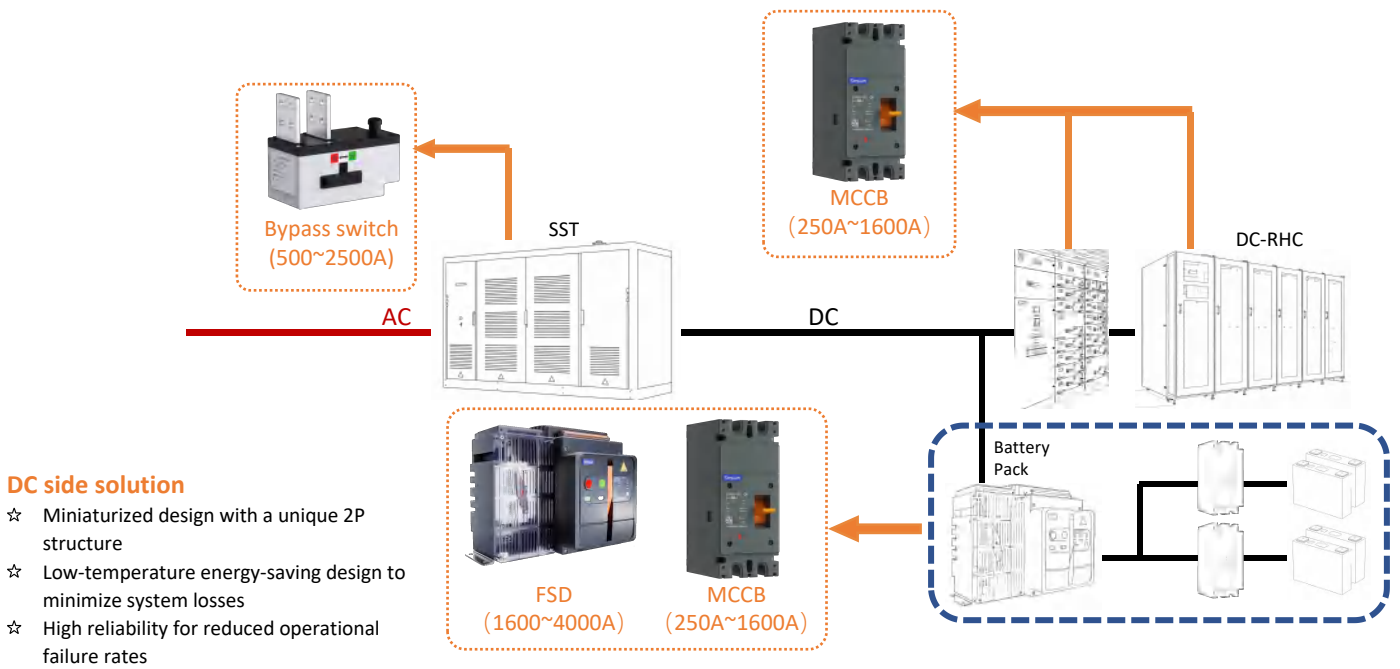


# Sieyuan

## Data Center HVDC Power Supply Solution

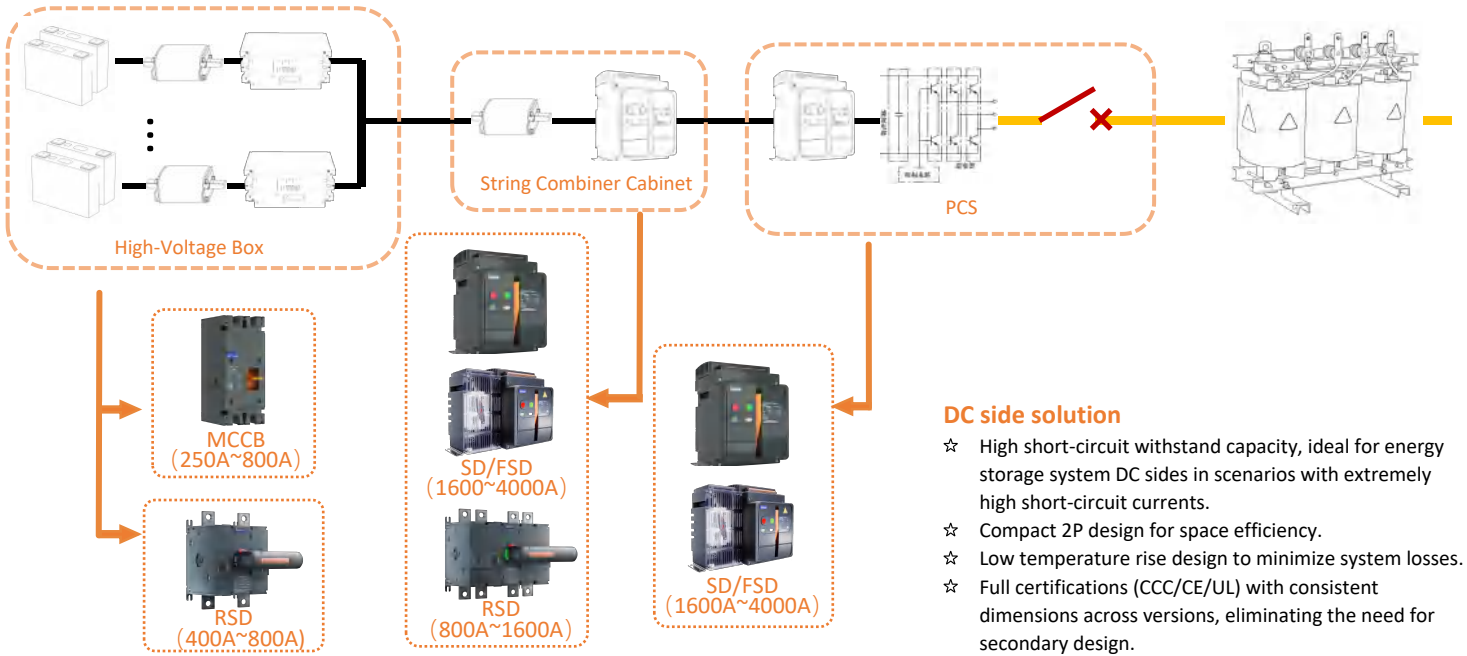


## Data Center SST Power Supply Solution

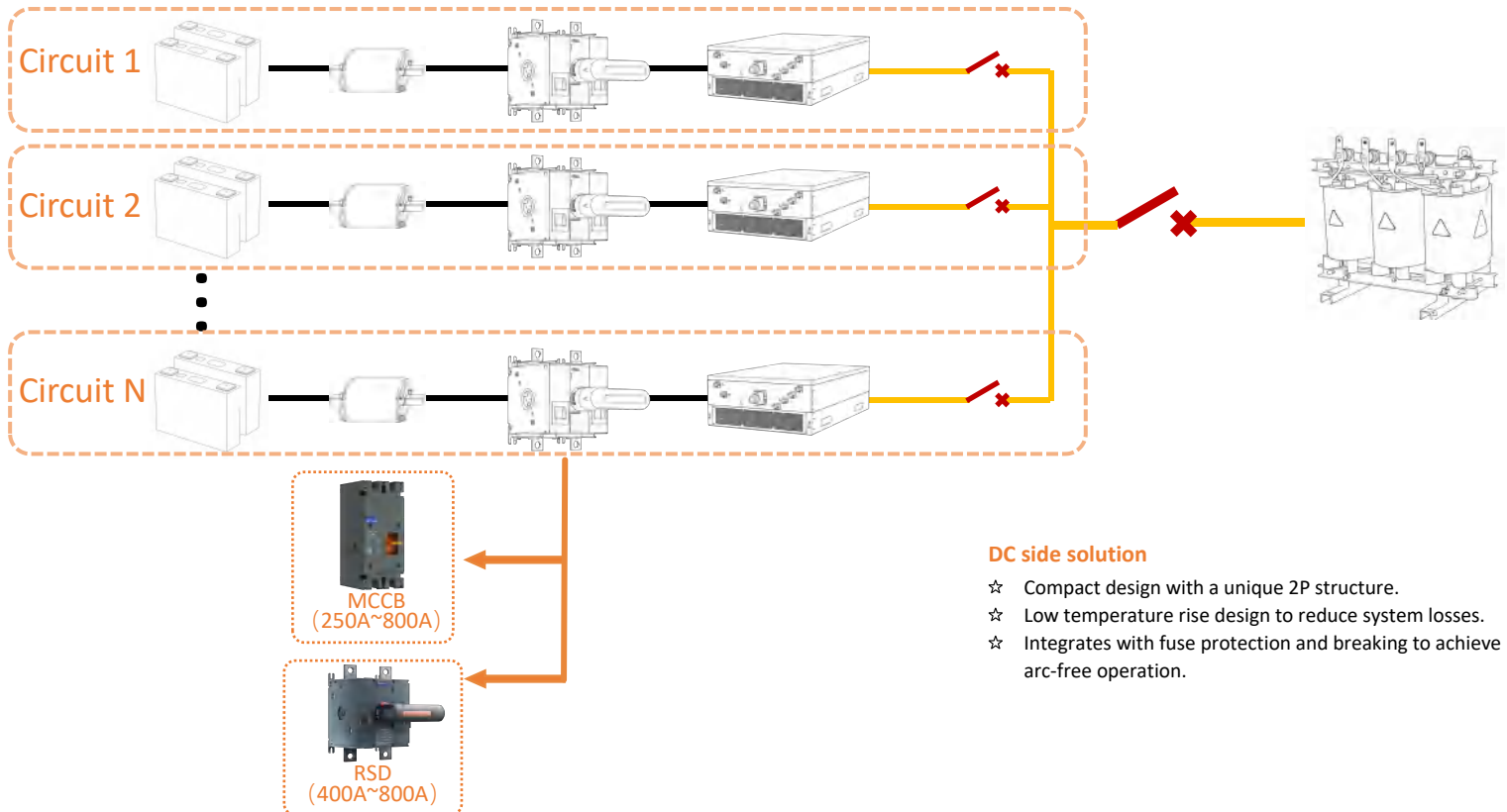


# Sieyuan

## Concentrated Energy Storage Solutions



## String Inverter Energy Storage Solutions



# Sieyuan

## DC Frame Type Switch Disconnecter/ DC Switch-disconnectors and Fuse-combination Unit SYW6GZ-1600



CE



TUV



AS



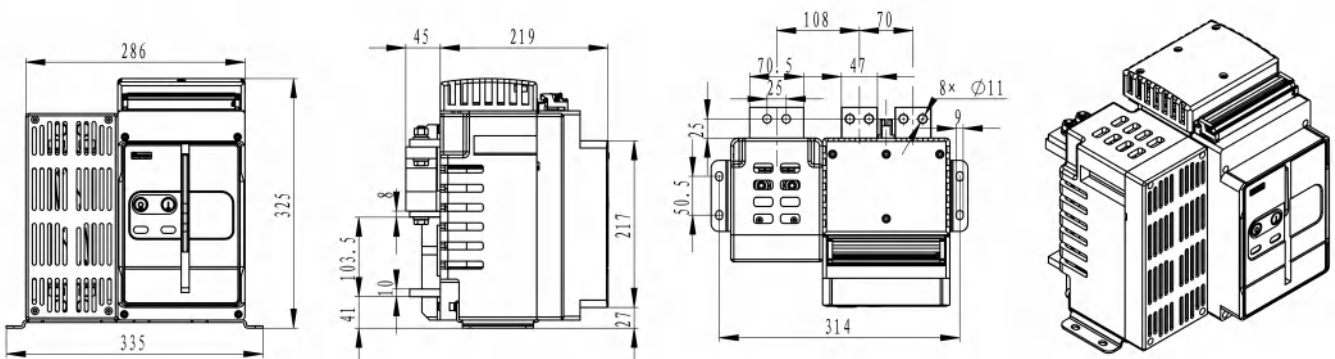
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The SYW6GZ-1600 DC switch-disconnector / DC fusible switch disconnecter is suitable for DC systems with a rated operating voltage of DC 1500V or below and a rated operating current of 1600A or below, provides main circuit making, breaking, isolation and protection. Typical applications: energy storage, photovoltaic systems, DC distribution.

### Performance Parameters

S/N	Item	Unit	Parameter Value
1	Rated operating voltage $U_e$	V	DC 1500
2	Rated insulation voltage $U_i$	V	DC 1500
3	Rated impulse withstand voltage $U_{imp}$	kV	12
4	Rated operating current $I_e$	A	630、800、1000、1250、1600
5	Rated short-time withstand current $I_{cw}$	kA/1s	50
		kA/0.1s	120
6	Rated short-circuit making capacity $I_{cm}$	kA	50
7	Utilization category	/	DC-PV2
8	Short-circuit breaking capacity (in coordination with the fuse)	kA	250
9	Operating ambient temperature	°C	-40 ~ +70
10	Altitude conditions	m	5000
11	Mechanical endurance	Cycles	10000
12	Electrical durability	Cycles	500
13	Protection degree	/	IP20
14	Pollution degree	/	Degree 3

### Dimensions



# Sieyuan



## DC Frame Type Switch Disconnecter/ DC Switch-disconnectors and Fuse-combination Unit SYW6GZ-2500

The SYW6GZ-2500 DC switch-disconnector/ DC fusible switch disconnecter is suitable for DC systems with a rated operating voltage of DC1500V or below and a rated operating current of 2500A or below, provides main circuit making, breaking, isolation and protection. Typical applications: energy storage, photovoltaic systems, DC distribution.



CE



TUV

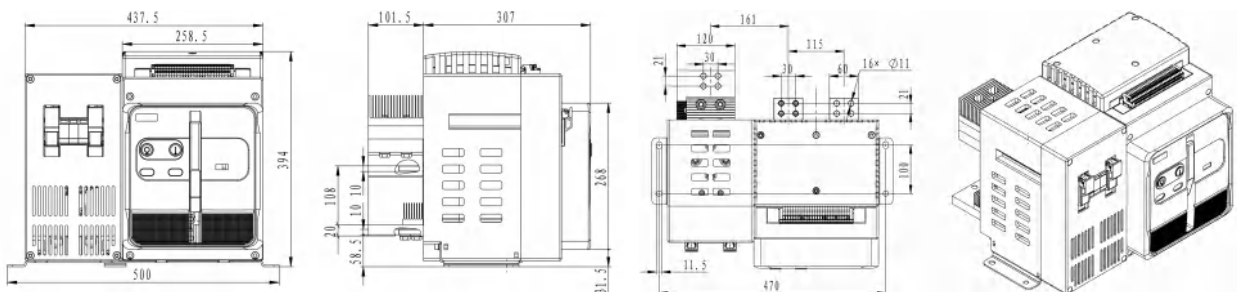


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### Performance Parameters

S/N	Item	Unit	Parameter Value
1	Rated operating voltage $U_e$	V	DC 1500
2	Rated insulation voltage $U_i$	V	DC 1500
3	Rated impulse withstand voltage $U_{imp}$	kV	12
4	Rated operating current $I_e$	A	800、1000、1250、 1600、2000、2500
5	Rated short-time withstand current $I_{cw}$	kA/1s	55
		kA/0.2s	150
6	Rated short-circuit making capacity $I_{cm}$	kA	55
7	Utilization category	/	DC-PV2
8	Short-circuit breaking capacity (in coordination with the fuse)	kA	250
9	Operating ambient temperature	°C	-40 ~ +70
10	Altitude conditions	m	5000
11	Mechanical endurance	Cycles	10000
12	Electrical durability	Cycles	500
13	Protection degree	/	IP20
14	Pollution degree	/	Degree 3

### Dimensions



# Sieyuan

## DC Frame Type Switch Disconnecter/ DC Switch-disconnectors and Fuse-combination Unit SYW6GZ-4000



The SYW6GZ-4000 DC switch-disconnector/ DC fusible switch disconnecter is suitable for DC systems with a rated operating voltage of DC1500V or below and a rated operating current of 4000A or below, provides main circuit making, breaking, isolation and protection. Typical applications: energy storage, photovoltaic systems, DC distribution.



CE



TUV



UL



AS

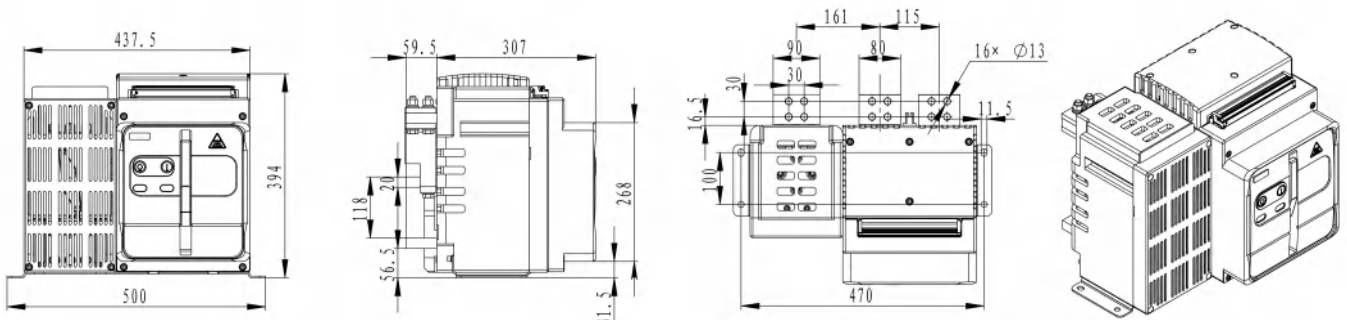


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### Performance Parameters

S/N	Item	Unit	Parameter Value
1	Rated operating voltage $U_e$	V	DC 1500
2	Rated insulation voltage $U_i$	V	DC 1500
3	Rated impulse withstand voltage $U_{imp}$	kV	12
4	Rated operating current $I_e$	A	1600、2000、2500、 3200、3600、4000
5	Rated short-time withstand current $I_{cw}$	kA/1s	100
		kA/0.2s	150
6	Rated short-circuit making capacity $I_{cm}$	kA	55
7	Utilization category	/	DC-PV2
8	Short-circuit breaking capacity (in coordination with the fuse)	kA	250
9	Operating ambient temperature	°C	-40 ~ +70
10	Altitude conditions	m	5000
11	Mechanical endurance	Cycles	10000
12	Electrical durability	Cycles	500
13	Protection degree	/	IP20
14	Pollution degree	/	Degree 3

### Dimensions





## DC Rotary Switch-Disconnecter SYG6Z-400

This SYG6Z-400 DC rotary switch-Disconnecter is suitable for DC systems with a rated operating voltage of DC 1500V or below and a rated operating current of 400A or below. It is designed to perform the functions of making, breaking and isolation in the main circuit. Typical application include electrochemical energy storage, large-scale photovoltaics, DC data centers, and DC distribution.



CE



TUV



UL



AS

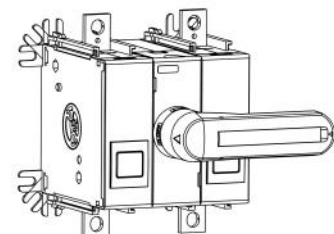
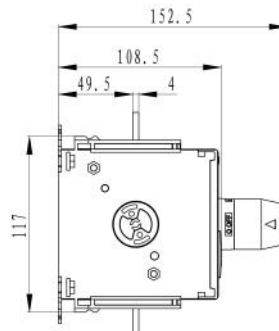
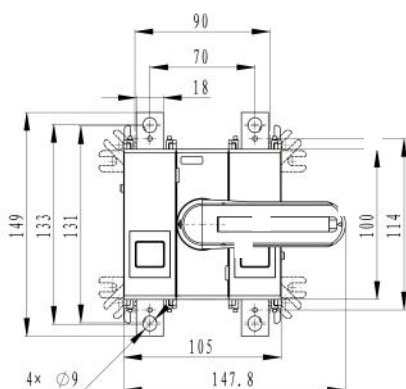


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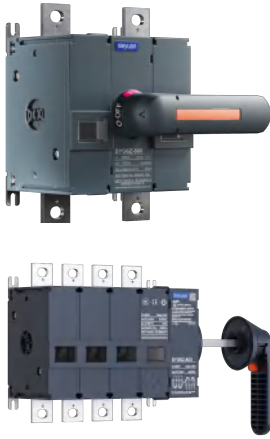
### Performance Parameters

S/N	Item	Unit	Parameter Value
1	Rated operating voltage Ue	V	DC 1500
2	Rated insulation voltage Ui	V	DC 1500
3	Rated impulse withstand voltage Uimp	kV	15
4	Rated operating current Ie (UL)	A	200、250、275、325
	Rated operating current Ie (IEC)	A	160、200、225、250、275、320、400
5	Rated short-time withstand current Icw	kA/1s	8.5
		kA/0.15s	20
6	Rated short-circuit making capacity Icm	kA	10
7	Utilization category	/	DC-21B / DC-PV2
8	Operating ambient temperature	°C	-40 ~ +70
9	Altitude conditions	m	5000
10	Mechanical endurance	Cycles	10000
		Cycles	160A~200A:1000
		Cycles	225A~320A:400
11	Electrical durability	Cycles	225A~320A:400
		Cycles	400A:200
12	Mechanical endurance	/	IP20,IP65(handle outside the cabinet)

### Dimensions



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## DC Rotary Switch-Disconnecter SYG6Z-800

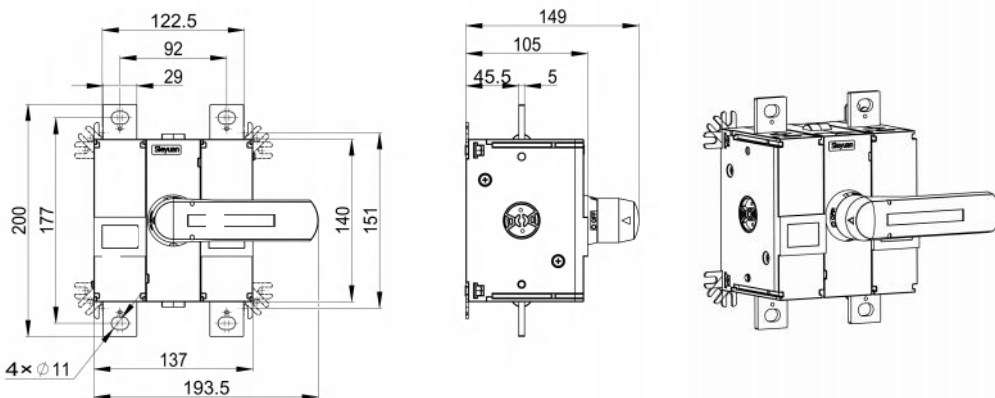
This SYG6Z-800 DC rotary switch-Disconnecter is suitable for DC systems with a rated operating voltage of DC 1500V or below and a rated operating current of 800A or below. It is designed to perform the functions of making, breaking and isolation in the main circuit. Typical application include electrochemical energy storage, large-scale photovoltaics, DC data centers, and DC distribution.



### Performance Parameters

S/N	Item	Unit	Parameter Value
1	Rated operating voltage $U_e$	V	DC 1500
2	Rated insulation voltage $U_i$	V	DC 1500
3	Rated impulse withstand voltage $U_{imp}$	kV	15
4	Rated operating current $I_e$ (UL)	A	325、400、500、600
	Rated operating current $I_e$ (IEC)	A	400、500、630、800
5	Rated short-time withstand current $I_{cw}$	kA/1s	10
		kA/0.15s	20
6	Rated short-circuit making capacity $I_{cm}$	kA	10
7	Utilization category	/	DC-21B / DC-PV1
8	Operating ambient temperature	°C	-40 ~ +70
9	Altitude conditions	m	5000
10	Mechanical endurance	Cycles	10000
11	Electrical durability	Cycles	400A、500A: 400
		Cycles	630A、800A: 200
12	Protection degree	/	IP20,IP65(handle outside the cabinet)

### Dimensions



## DC Rotary Switch-Disconnecter SYG6Z-1600



This SYG6Z-1600 DC rotary switch-disconnector is suitable for DC systems with a rated operating voltage of DC 1500V or below and a rated operating current of 1600A or below. It is designed to perform the functions of making, breaking and isolation in the main circuit. Typical application include electrochemical energy storage, large-scale photovoltaics, DC data centers, and DC distribution.



CE



TUV



UL



AS

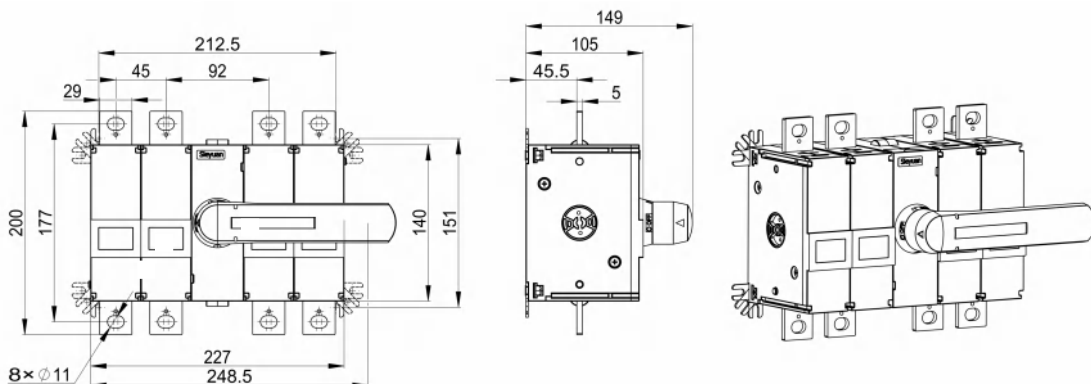


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### Performance Parameters

S/N	Item	Unit	Parameter Value
1	Rated operating voltage Ue	V	DC 1500
2	Rated insulation voltage Ui	V	DC 1500
3	Rated impulse withstand voltage Uimp	kV	15
4	Rated operating current Ie (UL)	A	600、800、1000、1200
	Rated operating current Ie (IEC)	A	800、1000、1250、1600
5	Rated short-time withstand current Icw	kA/1s	20
		kA/0.1s	63
6	Rated short-circuit making capacity Icm	kA	20
7	Utilization category	/	DC-21B / DC-PV1
8	Operating ambient temperature	°C	-40 ~ +70
9	Altitude conditions	m	5000
10	Mechanical endurance	Cycles	10000
11	Electrical durability	Cycles	800A、1000A: 400
		Cycles	1250A、1600A: 200
12	Protection degree	/	IP20,IP65(handle outside the cabinet)

### Dimensions



## DC Molded Case Circuit Breaker SYM6Z-400/500

This SYM6Z-400/500 DC molded-case circuit breaker (MCCB) is suitable for DC systems with a rated operating voltage of DC 1500V or below and a rated operating current of 500A or below. It provides overload/short-circuit protection, making, breaking and isolation functions for the main circuit. Typical applications: energy storage, photovoltaic systems, DC distribution.



CE



TUV

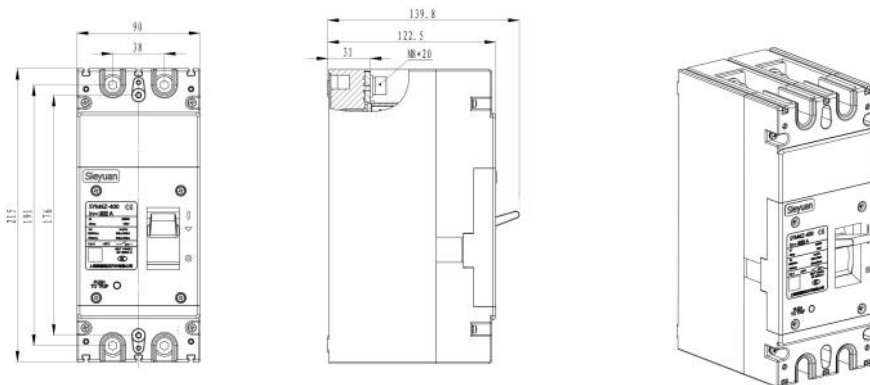


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### Performance Parameters

S/N	Item	Unit	Parameter Value
1	Rated operating voltage $U_e$	V	DC 1500
2	Rated insulation voltage $U_i$	V	DC 1500
3	Rated impulse withstand voltage $U_{imp}$	kV	12
4	Rated operating current $I_e$	A	250、320、400、500
5	Rated ultimate Short-circuit breaking capacity $I_{cu}$	kA	DC 1500V:30( $\tau=2ms$ ) DC 1000V:50
6	Rated service Short-circuit breaking capacity $I_{cs}$	kA	DC 1500V:25( $\tau=2ms$ ) DC 1000V:50
7	Operating ambient temperature	°C	-40 ~ +70
8	Operating ambient temperature	m	5000
9	Mechanical endurance	Cycles	10000
10	Electrical durability	Cycles	1000
11	Protection degree	/	IP20

### Dimensions



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## AC Bypass Switch SYBS Series (Air-insulated Type)

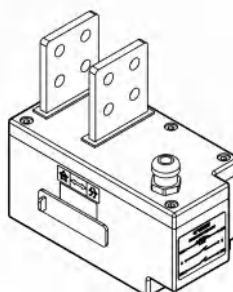
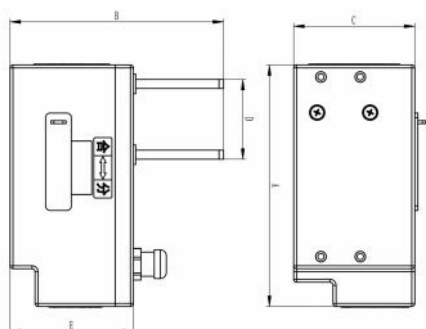


This SYBS Series Bypass Switch is suitable for the submodule of the SVG/High Voltage Inverter power unit, with a redundant design. When an IGBT in a sub-module fails, the bypass switch can be quickly activated to bypass the fault, ensuring the continuous and stable operation of the entire system.

### Performance Parameters

S/N	Item	Unit	Parameter Value
1	Rated operating voltage $U_e$	V	AC 1500
2	1min power frequency withstand voltage $U_d$	kV	5
3	Rated operating current $I_e$	A	500、 800
4	Operating ambient temperature	°C	-25 ~ + 60
5	Altitude conditions	m	3000
6	Mechanical endurance	Cycles	2000
7	Storage temperature	°C	-40 ~ +70
8	Transportation temperature	°C	-25 ~ +70
9	Closing time (including bounce)	ms	≤15
10	Feedback time of closing state (including bounce)	ms	≤30
11	Seismic intensity	Magnitude	≤8

### Dimensions



Specification	A	B	C	D	E
500A	160	141	80	51.9	80
800A	160	118	80	52.9	81.5

\*The actual interface size is customized according to customer requirements

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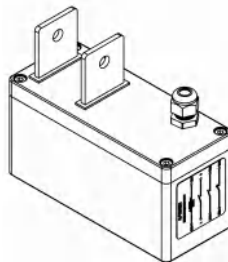
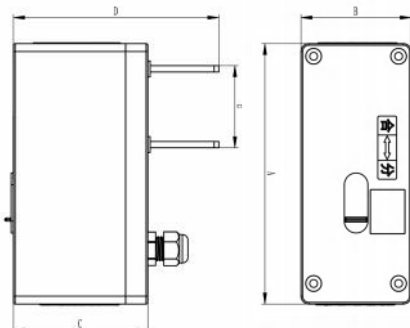
## AC Bypass Switch SYBS Series (Vacuum Type)

This SYBS Series Bypass Switch is suitable for the submodule of the SVG/High Voltage Inverter power unit, with a redundant design. When an IGBT in a sub-module fails, the bypass switch can be quickly activated to bypass the fault, ensuring the continuous and stable operation of the entire system.

### Performance Parameters

S/N	Item	Unit	Parameter Value			
1	Rated operating voltage Ue	V	AC 1500	AC 3600	AC 5500	
2	1min power frequency withstand voltage Ud	kV	5	10	12	20
3	Rated operating current Ie	A	700	1250	2500	
4	Rated short-time withstand current Icw	/	3.2kA/0.1s	10kA/2s	20kA/2s	20kA/2s
5	Rated short-circuit making capacity Icm	kA	1.6	5	15	
6	Operating ambient temperature	°C	-25 ~ +60			
7	Altitude conditions	m	3000			
8	Mechanical endurance	Cycles	2000			
10	Storage temperature	°C	-40 ~ +70			
11	Transportation temperature	°C	-25 ~ +70			
12	Closing time (including bounce)	ms	≤3.5	≤5	≤3.5	≤5
13	Closing bounce time	μs	0			
14	Feedback time of closing state (including bounce)	ms	≤7			
15	Seismic intensity	Magnitude	≤8			

### Dimensions



Specification	A	B	C	D	E
700	165	70	85	130	52
1250	260	110	100	210	81
2500	300	140	140	244	110
2500ZH	310	156	125	238	160

\*The actual interface size is customized according to customer requirements

## Project Case

As a dedicated electrical device for DC applications, the 2P switch-disconnector has gained widespread industry recognition and large-scale adoption due to its optimized core parameters and technological innovations. It has become a key component in DC systems within the new energy and energy storage sectors. The first batch of these switches was put into production and operation in **June 2024** and has maintained stable performance ever since.



### Qinghai Delingha 1 GW Source-Grid-Load-Storage Project Supporting 200 MW/800 MWh Energy Storage

Cooperative product: **SYW6GZ-2500 (DC SD)**  
Customer pain points: **High-altitude applications**(Stringent requirements for insulation performance, temperature rise control and mechanical reliability)



### Inner Mongolia Ancheng New Energy Alxa 95MW/380MWh Energy Storage Power Station Project

Cooperative product: **SYW6GZ-1600 (DC FSD)**  
Customer pain points: **Grid-forming energy storage applications**(Mandatory requirements for high overload capacity and broadband operation stability)



### Chongqing CNC Xiyong Comprehensive Bonded Area 100MW/200MWh Energy Storage Power Station Project

Cooperative product: **SYW6GZ-4000 (DC FSD)**  
Customer pain points: **Grid-forming energy storage applications**(Mandatory requirements for high overload capacity and broadband operation stability)



### Zarnowice Poland 262MW/981MWh Energy Storage Power Station Project

Cooperative product: **SYW6GZ-4000UL (DC FSD)**  
Customer pain points: **Global Application Scenarios**(Compliance with local technical standards and efficient overseas after-sales service support)