



SF6 Circuit Breaker (up to 252kV)
Disconnecter (up to 252kV)
Earthing Switch (up to 252kV)

2014/2015

SF₆ Circuit Breaker (up to 252kV)

Disconnecter (up to 252kV)

Earthing Switch (up to 252kV)

Brief Introduction

About CHINT Electric

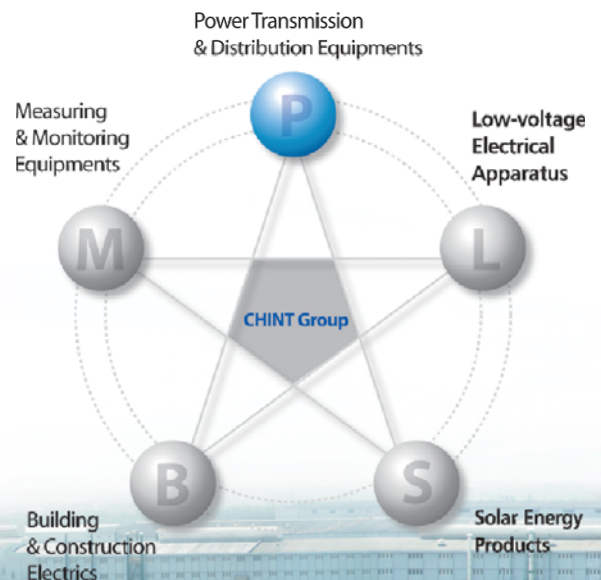
CHINT Electric is a subsidiary of CHINT Group Corporation. With an investment of 450 million USD, CHINT Electric possesses 4300 employees and 5 manufacturing business units with manufactory area of 900,000m² located in Shanghai, which is one of the world's largest power transmission & distribution equipments manufactory centers.

New Orders

Around 725 million USD in the year of 2012

Employee

4,300 employees





Product Range

- Power Transformer up to 750kV
- Distribution Transformer up to 35kV
- Dry-type Transformer up to 35kV
- Reactor up to 220kV
- GIS up to 252kV
- HV Circuit Breaker & Disconnecter up to 252kV
- VCB 12~40.5kV
- MV & LV Switchgear Panel, Prefabricated Substation up to 40.5kV
- LV Terminal Box, Bus Bar Duct
- Surge Arrester & Insulator up to 500kV, CT & PT up to 220kV
- Power Distribution Automation System
- Cable up to 36kV
- Capacitor
- Turn-key Solution

About CHINT Group

- CHINT is the leading player in the Power Transmission & Distribution industry and Low-voltage electrics industry in China. Founded in 1984 by a few local entrepreneurs and currently hiring 29,000 employees worldwide.
- National Employment Advanced Corporate (China State Council, 2012)
- Ranked in The 2011 BCG 100 New Global Challengers (The Boston Consulting Group, 2011)
- CHINT Low-voltage Electrics launched IPO at the Shanghai Stock Exchange of China (2010)
- No.2 in China Electricity Industry's Top 10 Most Competitive Enterprises (China Machinery Industry Information Institute, 2009)
- No.3 in China Electricity Industry (China Machinery Industry Information Institute, 2009)
- No.240 in Top 500 Chinese-Companies (China Enterprise Federation, 2009).
- No.1 in Power T&D and the controlling devices (China Machinery Summit, 2009)
- Ranked in Top 100 Best Employers in China (China Entrepreneurs Summit, 2008)
- No.15 in Top 100 Private & Public Companies in China (Forbes, 2006)
- National Quality Management Award(2004) (One of top honours for manufacturing companies in China)
- Worldwide business operation with 2,000 sales offices, agents, distributors, and local partners in domestic Chinese market and distributors & local partners in over 105 countries. International branches or regional offices set up in USA, UAE, Germany, Russia, Brazil, Ukraine, Hong Kong of China, UK and Nigeria.
- CHINT stretches its business to a new frontier of solar energy by setting up a branch company specialized in the solar energy products development.
- The R&D center of CHINT is recognized as the National Level R&D Center run by the companies, which means the R&D level of CHINT Group has reached the leading position in the industry of China.

Sales References

With a worldwide presence in over 125 countries such as, Italy, Germany, Estonia, USA, Russia, Japan, Australia, Saudi Arabia, Poland, Ukraine, Mongolia, Kazakhstan, Pakistan, Myanmar, Indonesia, Thailand, Egypt, Yemen, Algeria, Morocco, Congo, Tanzania, Mali, Zambia, Kenya, South Africa, Ghana, Nigeria, Colombia, etc, CHINT Electric provides reliable and high-qualified products and solutions to clients engaged in different businesses.



Utility User

Application: cooperation with National Electricity Companies in over 50 countries for power generation, transmission and distribution.

Europe

- EAC-Cyprus
Products: Cable.
- Eesti Energia-Estonia
Products: Power transformer.
- EMS-Serbia
Products: Power transformer.
- ENEL-Italy
Products: Distribution transformer, cable.
- Fingrid-Finland
Products: Distribution transformer.
- HS ORKA HF-Iceland
Products: Power transformer.
- PPC-Greece
Products: Power transformer, cable.
- NEC-Bulgaria
Products: VCB.

Latin America

- BPC-Bhutan
Products: Surge arrester.
- CELEC S.P.-Ecuador
Products: Power transformer.
- CNEL-Ecuador
Products: Power transformer.
- ELCOSA-Honduras
Products: Power transformer.
- Enersis-Chile
Products: Power transformer, surge arrester, insulator, SF₆ circuit breaker.
- ENDESA-Chile
Products: Power transformer, surge arrester, insulator, SF₆ circuit breaker.
- ICE-Costa Rica
Products: Power transformer.
- PREPA-Puerto Rico
Products: Surge Arrester.

Asia-pacific

- EVN-Vietnam
Products: Switch disconnector, power transformer, etc.
- Kamoki-Pakistan
Products: Substation turn-key project.
- MEPE-Myanmar
Products: Reactor, Power transformer.
- NEA-Nepal
Products: Substation turn-key project.
- NTDC-Pakistan
Products: Substation turn-key project.
- QESCO-Pakistan
Products: Surge arrester.
- TEPCO-Japan
Products: Power transformer, circuit breaker, disconnector and CT&PT.

Africa

- EEPCO-Ethiopia
Products: HV Circuit breaker, disconnector, earthing switch, surge arrester, insulator, CT.
- ENE-Angola
Products: GIS.
- JIRAMA-Madagascar
Products: Reactor.
- KENGEN-Kenya
Products: Surge arrester.
- KPLC-Kenya
Products: Cut-out fuse, surge arrester, insulator.
- PHCN-Nigeria
Products: Transformer protection & control panel.
- RECO-Rwanda
Products: Distribution transformer, etc.
- REGIDESO-Burundi
Products: Power transformer, distribution transformer.
- SBEE-Benin
Products: Power transformer.
- SNEL-D.R. Congo
Products: Power transformer.
- SONABEL-Burkina Faso
Products: Power transformer, reactor.
- TANESCO-Tanzania
Products: Substation turn-key project.
- VRA-Ghana
Products: MV switchgear, DC panel, disconnector.
- ZESCO-Zambia
Products: CT-VT metering unit.

Middle-east

- NEC-Sudan
Products: Power transformer.
- NEPCO-Jordan
Products: Power transformer, earthing transformer.
- ONEC-Oman
Products: Power transformer.
- PEC-Yemen
Products: Substation turn-key project.
- PEDEEE-Syria
Products: Insulator, surge arrester, substation turn-key project.
- PEEGT-Syria
Products: Insulator.
- TEIAS-Turkey
Products: Surge arrester, insulator.
- WARD-Lebanon
Products: SF₆ circuit breaker, disconnector, surge arrester, insulator.

CIS

- ENA-Armenia
Products: HV circuit breaker, switch disconnector, etc.

More >>>

Global Operation in Over 125 Countries

Industrial End User

Application: widely applicable for mining, iron-steel, cement, metallurgy, chemical, railway, petroleum, paper, power generation industries, etc.

Mining Industry

- BHP Billiton-Australia
Products: CT& PT, distribution transformer, etc.
- Rio Tinto-Australia
Products: Distribution transformer, CT.
- FMG-Australia
Products: Power transformer.

Iron-steel Industry

- JFE Steel-Japan
Products: Disconnecter.
- Bao Steel-China
Products: Power transformer, MV switchgear panel.

Cement Industry

- Serebryabskiy Cement Plant-Russia
Products: HV capacity compensation device, HV capacitor.
- Viet Quang Cement Plant-Vietnam
Products: Power transformer, HV circuit breaker, disconnecter, MV&LV switchgear panel.

Petroleum & Gas Industry

- Chevron-USA
Products: Switchgear panel, distribution transformer.
- PDVSA-Venezuela
Products: Power transformer, distribution transformer.
- CNPC-China
Products: Power transformer, GIS, MV switchgear panel.

Power Rental Industry

- Aggreko-UK
Products: Power transformer.
- APR Energy-USA
Products: Power transformer, HV circuit breaker, disconnecter, CT, PT.

Paper Industry

- VISOY-Australia
Products: Switchgear panel
- UPM-Finland
Products: MV switchgear panel.

Chemical Industry

- Saint Gobain-France
Products: Power transformer, MV switchgear panel, cable, busduct.
- INVISTA-USA
Products: Distribution transformer, switchgear panel, DC panel.

Power Generation

- TATA Power-India
Products: Power transformer.
- SIBAYAK Geothermal Power Plant-Indonesia
Products: MV&LV switchgear panel, surge arrester, insulator, CT, VCB.

Commercial & Civil Construction

- Shangri-la Hotel-Philippine
Products: Distribution transformer.
- Kiev Boryspil International Airport-Ukraine
Products: GIS.

Shipbuilding Industry

- Fincantieri-Italy
Products: Power transformer.

More >>>

Engineering & Contracting

- EIFFAGE-France
Products: Power transformer, reactor.
- FLUOR-USA
Products: Power transformer.

More >>>

Turn-key Project

- Kamoki-Pakistan
Projects: 230kV substation EPC.
- Saint Gobain-France
Projects: 35kV substation EPC.
- PEC-Yemen
Projects: 132kV and 33kV substation EPC.
- NEA-Nepal
Projects: 132kV and 33kV substation EPC.
- SMCO-D.R. Congo
Projects: 220kV substation EPC.
- TANESCO-Tanzania
Projects: 35kV and 66kV substation EPC.
- NTDC-Pakistan
Projects: 220kV substation EPC.

More >>>



SF6 Circuit Breaker, Disconnecter, Earthing Switch

CHINT Electric HV Switches are widely adopted by Utility Users from Armenia, Chile, Lebanon, Ethiopia, Tanzania, Ghana, Vietnam, Myanmar, Pakistan, Yemen, etc.; Industrial End Users from France, Australia, Kenya, Japan, Vietnam, etc. like JFE Steel and Engineering Companies from Lebanon, USA, Ghana, Vietnam, Bangladesh, Mongolia, etc.



Utility User

- Electric Networks of Armenia (ENA)-Armenia
- Enersis-Chile
- Electricity of Vietnam (EVN)-Vietnam
- Volta River Authority (VRA)-Ghana
- Public Electricity Corporation (PEC)-Yemen
- Water Resources Utilization Department (WARD)-Lebanon
- Ethiopian Electric Power Corporation (EEPCO)-Ethiopia
- Kamoki-Pakistan
- Tokyo Electric Power Company (TEPCO)-Japan
- Cement Plant-Vietnam
- Tanzania Electric Supply Company (TANESCO)-Tanzania
- Myanma Electric Power Enterprise (MEPE)-Myanmar
- Water Resources Utilization Department (WRUD)-Myanmar

Industrial End User

- Saint Gobain-France
- Fortescue Metals Group (FMG)-Australia

Engineering & Contracting

- Eiffage-France

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※ Note: Contact us for more detailed sales references.

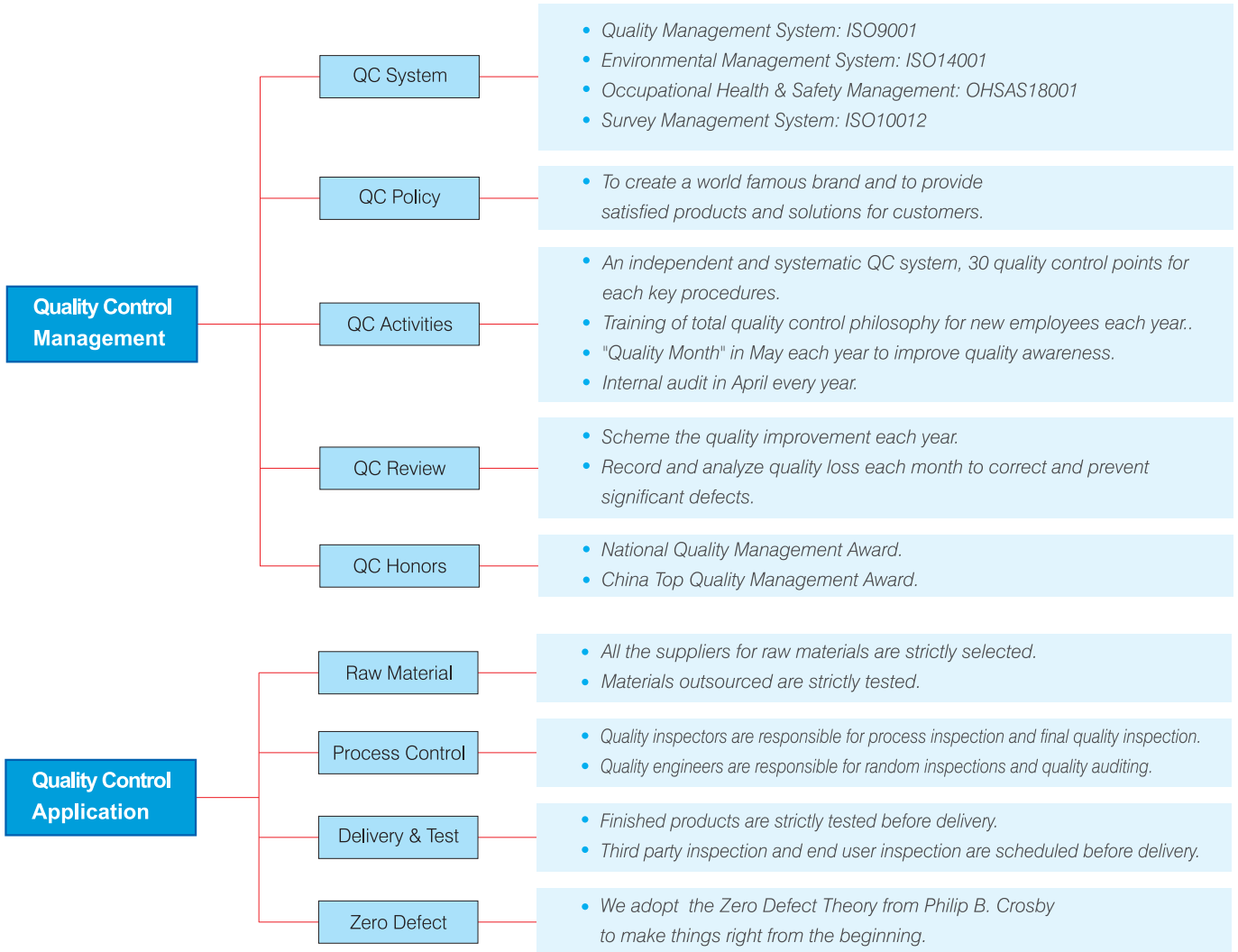


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Quality Management

Quality Management



QC System Certificate



※ Note: Similar to America Baldrige Criteria.

Quality Management / Certification

Quality Management Procedure



Total assembly



252kV Disconnector under assembly



40.5kV SF₆ circuit breaker under commissioning

- 1 Spare part assembly of SF₆ circuit breaker
- 2 275kV Power frequency withstand voltage testing transformer



Certification

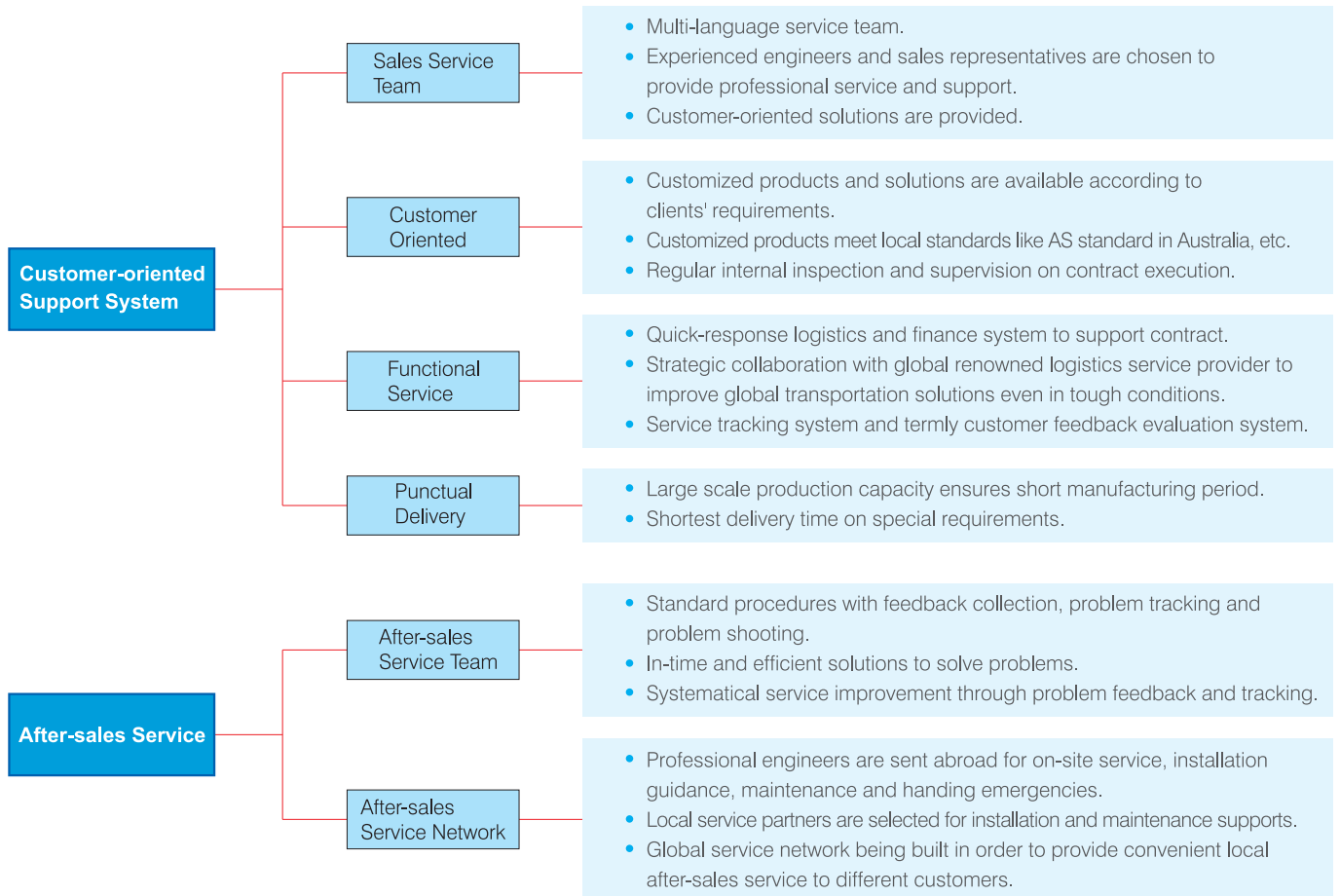
CHINT T&D's products are evaluated by STL (Short-Circuit Testing Liaison) laboratories such as KEMA, CESI, and other international certification like PCT (GOST), TUV; and tested by CNAS (ilac member in China) laboratories such as CTQC, SEPTDTC, etc.



Sales Service

Sales Service

Professional & Fast customer support system set up to ensure customer satisfaction:



- 1 Installation of disconnector in Armenia
- 2 Installation training for local workers
- 3 Installation of SF₆ circuit breaker in Botswana

SF₆ Circuit Breaker

LW8-40.5 SF₆ Circuit Breaker (Dead Tank) (40.5kV)

1 General

1.1 Application: three-phase AC 50Hz outdoor HV electrical apparatus with CT14 spring operating mechanism, for control and protection of 35kV transmission and distribution system as well as communicating with circuit breaker and open/close capacitor group.

1.2 Standard: IEC 62271-100.

2 Type Designation

L W 8 - 40.5

Rated voltage
Design No.
Outdoor
SF₆ circuit breaker

3 Working Condition

3.1 Sunlight: 1000W/m²

3.2 Relative humidity: Daily average value is ≤95%
Monthly average value is ≤90%

3.3 Max wind velocity: 34m/s

3.4 Seismic: Horizontal acceleration: 0.250g
Vertical acceleration: 0.125g

3.5 Pollution level: III (25 mm/kV)

3.6 Thickness of ice covering: 10 mm

3.7 Protection degree: IP5XW

※ Note: Customized products are available.

4 Technical Parameter

4.1 Main Technical Parameter of Circuit Breaker

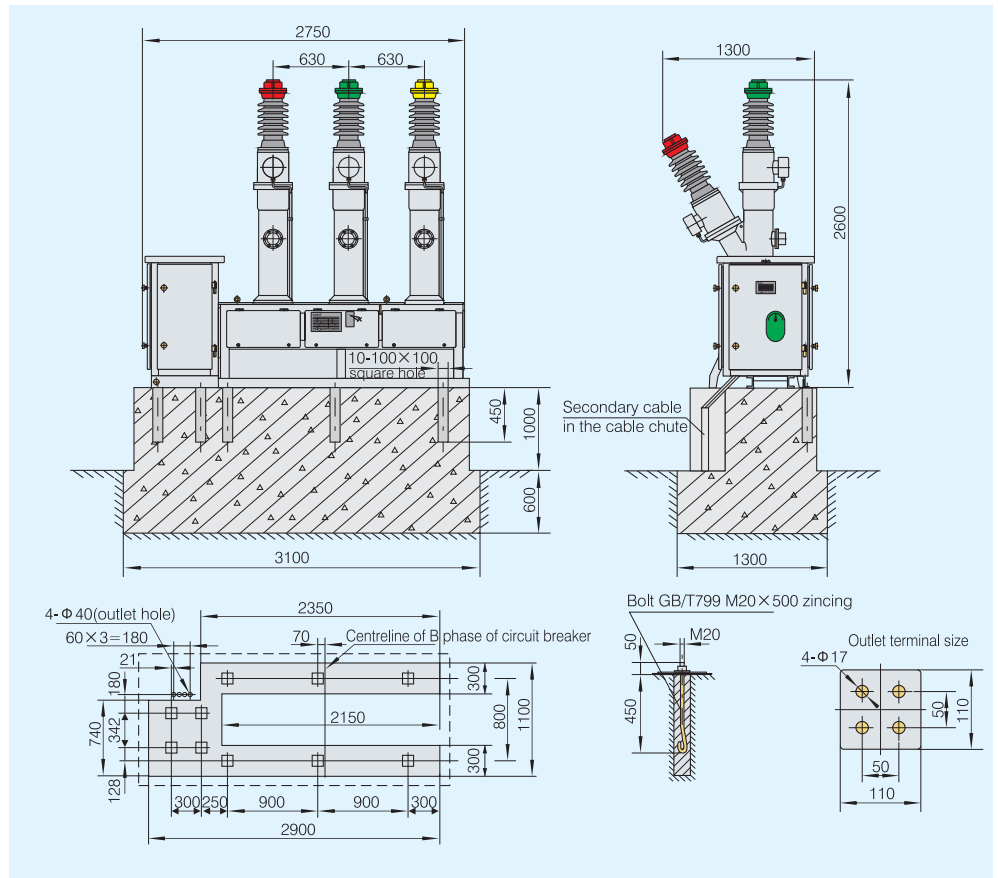
Item	Unit	Parameter			
Altitude	m	1000		2000	
Ambient air temperature	—	-30℃~40℃	-40℃~40℃	-30℃~40℃	-40℃~40℃
Rated voltage	kV	40.5		40.5	
Rated frequency	Hz	50		50	
Rated current	A	2000		2000	
Rated short-circuit breaking current for I _{sc}	kA	31.5	25	31.5	25
Rated short-time withstand current/continuous time	kA/s	31.5/4	25/4	31.5/4	25/4
Rated peak withstand current (peak)	kA	80	63	80	63
Rated short-circuit making current (peak)	kA	80	63	80	63
First-pole-to clear factor	—	1.5		1.5	
Rated out-of-phase breaking current	kA	I _{sc} ×25%		I _{sc} ×25%	
Power frequency withstand voltage for 1min	Open contacts	kV	95+24	95	95
	To earth	kV	95	95	95
Lightning impulse withstand voltage (peak)	Open contacts	kV	185+33	185	185
	To earth	kV	185	185	185
Rated operating sequence	—	O-0.3s-CO-3min-CO			

4.2 Installation and Adjusting Parameters of Circuit Breaker

Item	Unit	Parameter
Moving contact travel	mm	95±2
Contact open distance	mm	60±1.5
Closing synchronization	ms	≤3
Opening synchronization	ms	≤2
Main circuit resistance	μ Ω	≤120
Rigid closing speed	m/s	3.2±0.2
Rigid opening speed	m/s	3.4±0.2

SF6 Circuit Breaker

5 Outline and Installation Dimension (Unit: mm)



6 Ordering Information

Please specify the following items when ordering:

- 6.1 Model.
 - 6.2 Rated electric parameters.
 - 6.3 Service environment conditions.
 - 6.4 Voltage of control supply.
 - 6.5 Quantity, ratio, capacity, and accuracy of current transformers.
 - 6.6 The quantity of necessary spare parts, accessories, special tools and equipments.
- ※ Note: Customized products are available.

SF₆ Circuit Breaker

LW8A-40.5 SF₆ Circuit Breaker (Live Tank) (40.5kV)

1 General

1.1 Application: three-phase AC 50Hz outdoor HV electrical apparatus with CT14 spring operating mechanism, for control and protection of 40.5kV power system as well as communicating with circuit breaker. Current transformer inside as well for measuring and protection.

1.2 Standard: IEC 62271-100.

2 Type Designation

L W 8A - 40.5

Rated voltage
Design No.
Outdoor
SF₆ circuit breaker

3 Working Condition

3.1 Sunlight: 1000W/m²

3.2 Relative humidity: Daily average value is ≤95%

Monthly average value is ≤90%

3.3 Max wind velocity: 34m/s

3.4 Seismic: Horizontal acceleration: 0.250g

Vertical acceleration: 0.125g

3.5 Pollution level: III (25mm/kV)

3.6 Thickness of ice covering: 10mm (when wind speed ≤15m/s)

3.7 Protection degree: IP5XW

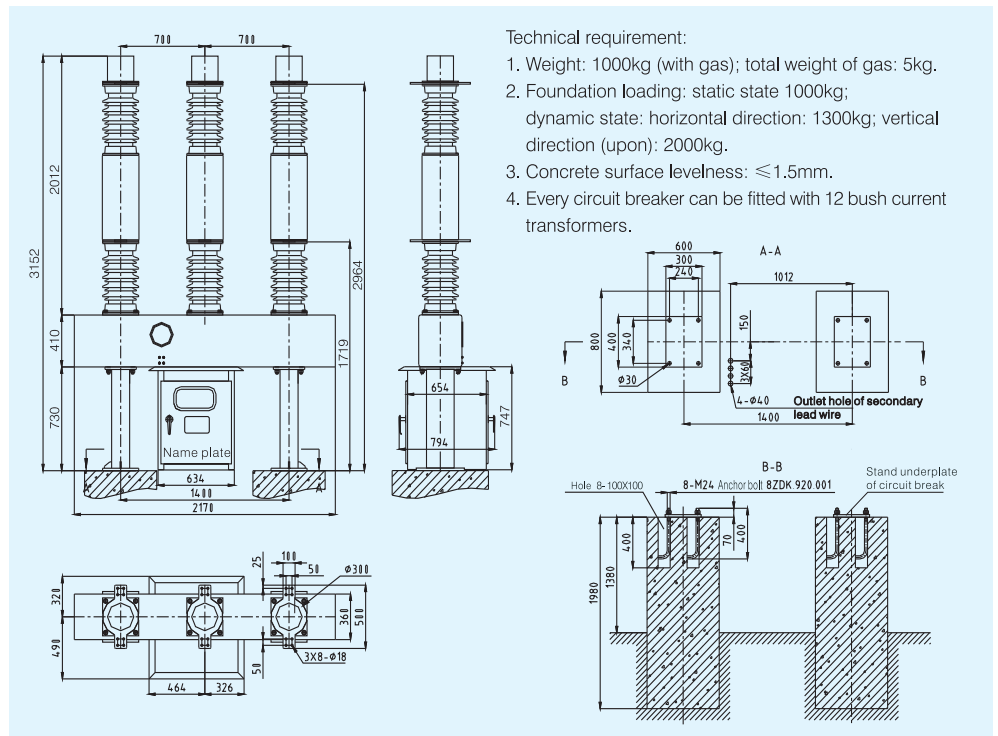
※ Note: Customized products are available.

4 Technical Parameter

Item	Unit	Parameter			
Altitude	m	1000		2000	
Ambient air temperature	—	-30℃~40℃	-40℃~40℃	-30℃~40℃	-40℃~40℃
Rated voltage	kV	40.5		40.5	
Rated frequency	Hz	50		50	
Rated current	A	2000		2000	
Rated short-circuit breaking current for I _{sc}	kA	31.5	25	31.5	25
Rated short-time withstand current/continuous time	kA/s	31.5/4	25/4	31.5/4	25/4
Rated peak withstand current (peak)	kA	80	63	80	63
Rated short-circuit making current (peak)	kA	80	63	80	63
First-pole-to clear factor	—	1.5		1.5	
Rated out-of-phase breaking current	kA	I _{sc} ×25%		I _{sc} ×25%	
Power frequency withstand voltage for 1min	Open contacts	95+24	95	95	95
	To earth	95	95	95	95
Lightning impulse withstand voltage (peak)	Open contacts	185+33	185	185	185
	To earth	185	185	185	185
Rated operating sequence	—	O-0.3s-CO-3min-CO			

SF₆ Circuit Breaker

5 Outline and Installation Dimension (Unit: mm)



6 Ordering Information

Please specify the following items when ordering:

- 6.1 Model.
 - 6.2 Rated electric parameters.
 - 6.3 Service environment conditions.
 - 6.4 Voltage of control supply.
 - 6.5 Quantity ,ratio, capacity and accuracy of current transformers.
 - 6.6 The quantity of necessary spare parts, accessories, special tools and equipments.
- ※ Note: Customized products are available.



SF₆ Circuit Breaker

LW36-126 SF₆ Circuit Breaker (126kV)

1 General

1.1 Application: three-pole AC 50Hz outdoor HV electrical apparatus, for control and protection of 110kV power system as well as communicating with circuit breaker.

1.2 Standard: IEC 62271-100.

2 Type Designation



3 Working Condition

3.1 Daily temperature variation: $\leq 25^{\circ}\text{C}$

3.2 Sunshine: 0.1 W/cm^2

3.3 Relative humidity: Daily average value $\leq 95\%$
Monthly average value $\leq 90\%$

3.4 Wind velocity: 34 m/s

3.5 Seismic: Horizontal acceleration is 0.250g
Vertical acceleration is 0.125g

3.6 Pollution level: III (25mm/kV), IV (31mm/kV)

3.7 Thickness of ice covering: 10 mm (the wind velocity $\leq 15\text{m/s}$)

3.8 Protection degree: IP5XW

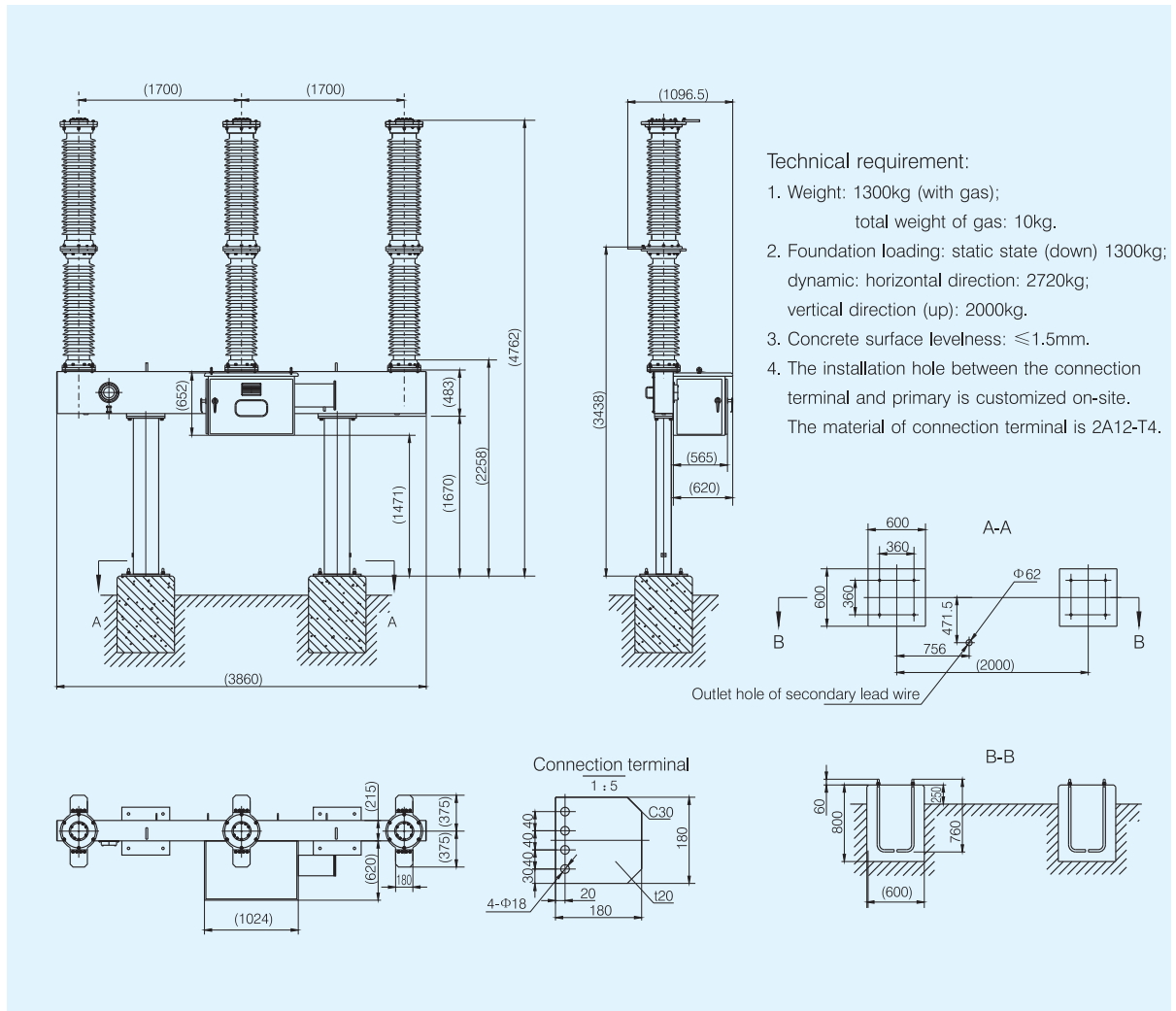
※ Note: Customized products are available.

4 Technical Parameter

Item		Unit	Parameter			
Altitude		m	1000		2000	
Ambient air temperature		—	$-30^{\circ}\text{C} \sim 40^{\circ}\text{C}$	$-40^{\circ}\text{C} \sim 40^{\circ}\text{C}$	$-30^{\circ}\text{C} \sim 40^{\circ}\text{C}$	$-40^{\circ}\text{C} \sim 40^{\circ}\text{C}$
Rated voltage		kV	126			
Rated frequency		Hz	50			
Rated current		A	3150			
Rated short-circuit breaking current for I_{sc}		kA	40	31.5	40	31.5
Rated short-circuit making current (peak)		kA	100	80	100	80
Rated short-time withstand current/continuous time		kA	40	31.5	40	31.5
Rated short-time withstand continuous time		s	4	4	4	4
Rated peak withstand current (peak)		kA	100	80	100	80
Short-line fault breaking current		kA	$I_{sc} \times 90\%$, $I_{sc} \times 75\%$			
Rated out-of-phase breaking current		kA	$I_{sc} \times 25\%$			
First-pole-to clear factor		—	1.5			
Rated line charging open/close current		A	31.5			
Rated out-phase earthing interrupting current		A	$I_{sc} \times 87\%$			
Power frequency withstand voltage for 1min	Open contacts	kV	230+73	230	210	210
	Between poles / to earth		230	230	210	210
Lightning impulse withstand voltage (peak)	Open contacts	kV	550+103	550	450	450
	Between poles / to earth		550	550	450	450
Rated operating sequence		—	O-0.3s-CO-3min-CO			

SF₆ Circuit Breaker

5 Outline and Installation Dimension (Unit:mm)



6 Ordering Information

Please specify the following items when ordering:

- 6.1 Model.
- 6.2 Rated electric parameters(voltage, current).
- 6.3 Service environment conditions.
- 6.4 Voltage of control supply.
- 6.5 Wiring direction of primary terminal.
- 6.6 The quantity of necessary spare parts, accessories, special tools and equipments.

※ Note: Customized products are available.

SF₆ Circuit Breaker

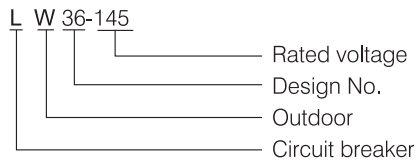
LW36-145 SF₆ Circuit Breaker (145kV)

1 General

1.1 Application: three-phase AC 50Hz outdoor/indoor HV electrical apparatus, for control and protection of 132kV power system as well as communicating with circuit breaker.

1.2 Standard: IEC 62271-100.

2 Type Designation



3 Working Condition

3.1 Altitude: ≤1000m

3.2 Ambient air temperature: -30℃ ~ +40℃

3.3 Daily temperature variation: ≤ 25℃

3.4 Sunshine: 0.1 W/cm²

3.5 Relative humidity: Daily average value ≤95%
Monthly average value ≤90%

3.6 Max wind velocity: 34m/s

3.7 Seismic: Horizontal acceleration is 0.250g
Vertical acceleration is 0.125g

3.8 Pollution level: III (25mm/kV), IV (31mm/kV)

3.9 Thickness of ice covering: 10 mm (the wind velocity ≤15m/s)

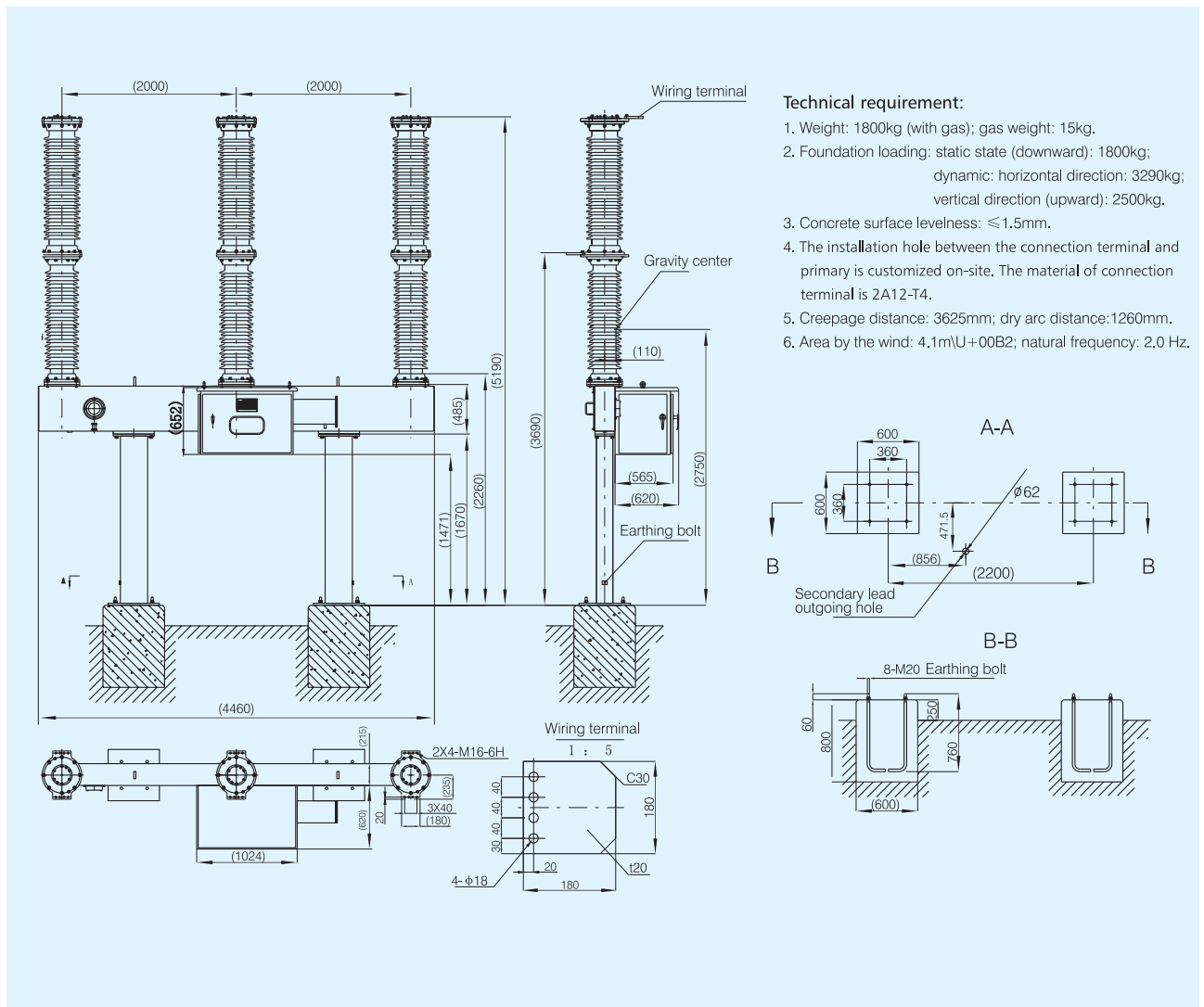
※ Note: Customized products are available.

4 Technical Parameter

Item	Unit	Parameter				
Altitude	m	1000		2000		
Ambient air temperature	—	-30℃～40℃	-40℃～40℃	-30℃～40℃	-40℃～40℃	
Rated voltage	kV	145				
Rated frequency	Hz	50		60		
Rated current	A	3150				
Rated short-circuit breaking current I _{sc}	kA	40	31.5	31.5	25	
Rated short time withstand current/continuous time	kA/S	40/3	31.5/3	31.5/3	25/3	
Rated withstand current (peak)	kA	100	80	80	63	
Rated short-circuit making current (peak)	kA	100	80	80	63	
First-pole-to clear factor	—	1.5				
Nearby area fault breaking current	kA	I _{sc} ×90%, I _{sc} ×75%				
Rated out-of-phase breaking current	kA	I _{sc} ×25%				
Power frequency withstand voltage for 1min (effective value)	Open contacts	kV	275+84	275	275+84	275
	To earth		275	275	275	275
Lightning impulse withstand voltage (peak)	Open contacts	kV	650+119	650	650+119	650
	To earth		650	650	650	650
Rated operating sequence	—	O-0.3s-CO-3min-CO				

SF₆ Circuit Breaker

5 Outline and Installation Dimension (Unit:mm)



6 Ordering Information

Please specify the following items when ordering:

- 6.1 Model.
- 6.2 Rated electrical parameters (voltage, current).
- 6.3 Service environment conditions.
- 6.4 Voltage of control supply and auxiliary supply.
- 6.5 The quantity of necessary spare parts, accessories, special tools and equipments.

※ Note: Customized products are available.

SF₆ Circuit Breaker

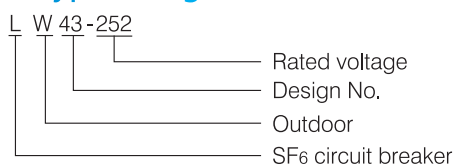
LW43-252 SF₆ Circuit Breaker (252kV)

1 General

1.1 Application: three-phase AC 50Hz outdoor HV electrical apparatus, for control and protection of 220kV power system as well as communicating with circuit breaker.

1.2 Standard: IEC 62271-100.

2 Type Designation



3 Working Condition

3.1 Daily temperature variation: $\leq 25^{\circ}\text{C}$

3.2 Sunshine: $0.1\text{W}/\text{cm}^2$

3.3 Relative humidity: Daily average value $\leq 95\%$
Monthly average value $\leq 90\%$

3.4 Max wind velocity: $34\text{m}/\text{s}$

3.5 Seismic: Horizontal acceleration: 0.250g
Vertical acceleration: 0.125g

3.6 Pollution level: III ($25\text{mm}/\text{kV}$), IV ($31\text{mm}/\text{kV}$)

3.7 Thickness of ice covering: 10mm (the wind velocity $\leq 15\text{m}/\text{s}$)

3.8 Protection degree: IP5XW

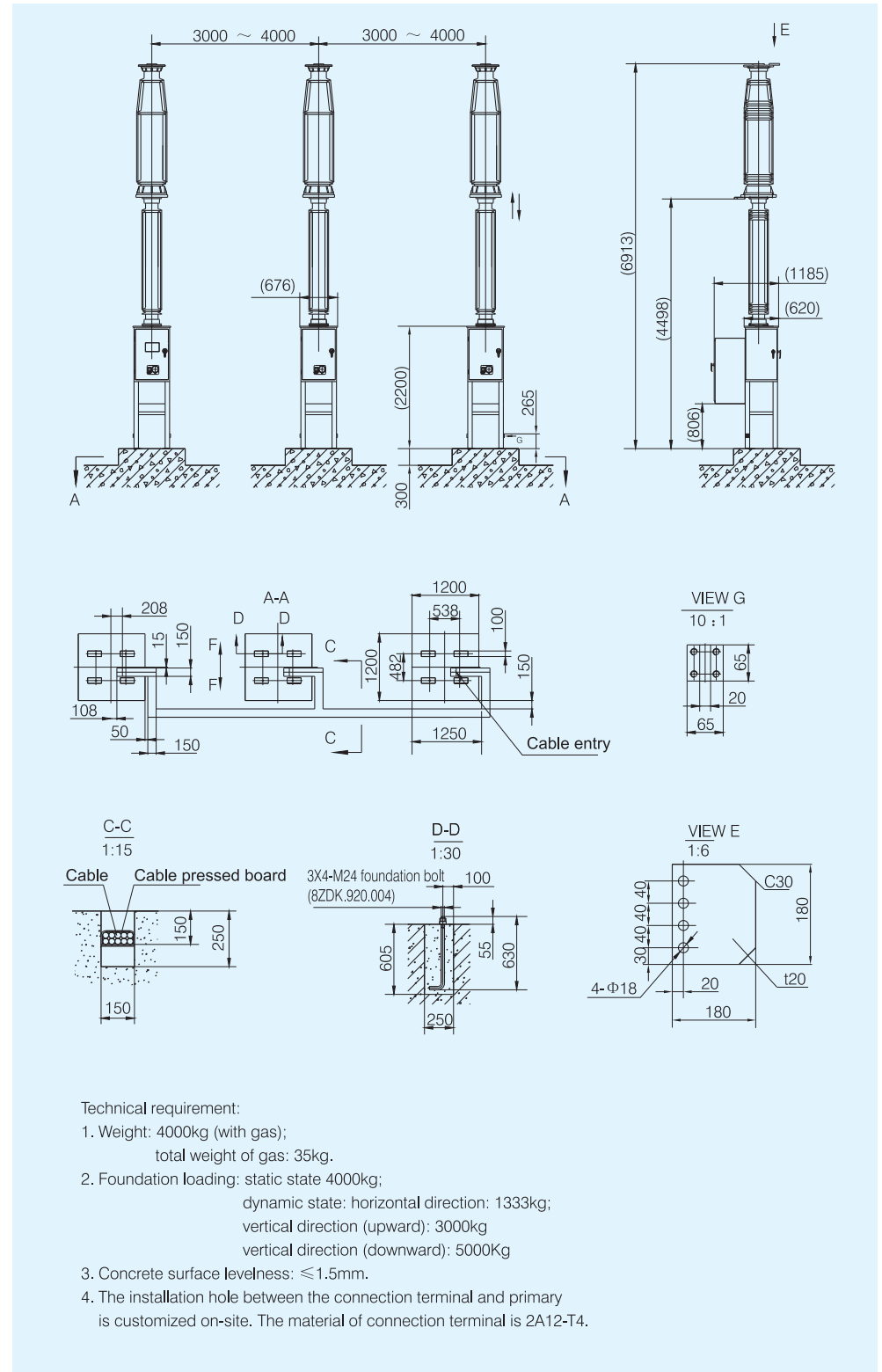
※ Note: Customized products are available.

4 Technical Parameter

Item	Unit	Parameter			
Altitude	m	1000		2000	
Ambient air temperature	—	$-30^{\circ}\text{C} \sim 40^{\circ}\text{C}$	$-40^{\circ}\text{C} \sim 40^{\circ}\text{C}$	$-30^{\circ}\text{C} \sim 40^{\circ}\text{C}$	$-40^{\circ}\text{C} \sim 40^{\circ}\text{C}$
Rated voltage	kV	252			
Rated frequency	Hz	50			
Rated current	A	4000	3150	4000	3150
Rated short-circuit breaking current for I_{sc}	kA	50	40	50	40
Rated short-circuit making current (peak)	kA	125	100	125	100
Rated short-time withstand current	kA	50	40	50	40
Rated short-time withstand continuous time	s	3	3	3	3
Rated peak withstand current (peak)	kA	125	100	125	100
Short-line fault breaking current	kA	$I_{sc} \times 90\%$, $I_{sc} \times 75\%$			
Rated out-of-phase breaking current	kA	$I_{sc} \times 25\%$			
First-pole-to clear factor	—	1.5			
Rated line charging open/close current	A	160			
On-load transformer breaking current	A	$0.5 \sim 20$			
Power frequency withstand voltage for 1min	Open contacts	kV	460; 395+145	395	395
	To earth	kV	460	395	395
Lightning impulse withstand voltage (peak)	Open contacts	kV	1050; 950+206	950	950
	To earth	kV	1050	950	950
Rated operating sequence	—	O-0.3s-CO-3min-CO			

SF6 Circuit Breaker

5 Outline and Installation Dimension (Unit:mm)



SF₆ Circuit Breaker

6 Ordering Information

Please specify the following items when ordering:

6.1 Model.

6.2 Rated electric parameters(voltage, current.

6.3 Service environment conditions.

6.4 Voltage of control supply.

6.5 Wiring direction of primary terminal.

6.6 The quantity of necessary spare parts, accessories, special tools and equipments.

※ Note: Customized products are available.



SF₆ Circuit Breaker

LW43A-252 SF₆ Circuit Breaker (252kV)

1 General

1.1 Application: three-pole AC 50Hz outdoor HV electrical apparatus for control and protection in 220kV power system as well as communicating with circuit breaker.

1.2 Standard: IEC 62271-100.

2 Type Designation

L W 43A -252

Rated voltage
Design No.
Outdoor
SF₆ circuit breaker

3 Working Condition

3.1 Altitude: ≤1000m; special area ≤3000m

3.2 Daily temperature variation: ≤25 °C

3.3 Ambient air temperature: -40 °C ~ +40 °C

3.4 Max wind velocity: 34m/s

3.5 Seismic: Horizontal acceleration: 0.250g
Vertical acceleration: 0.125g

3.6 Thickness of ice covering: ≤10mm

3.7 Relative humidity: Daily average ≤95%
Monthly average ≤90%

3.8 Pollution level: III (25mm/kV), IV (31mm/kV)

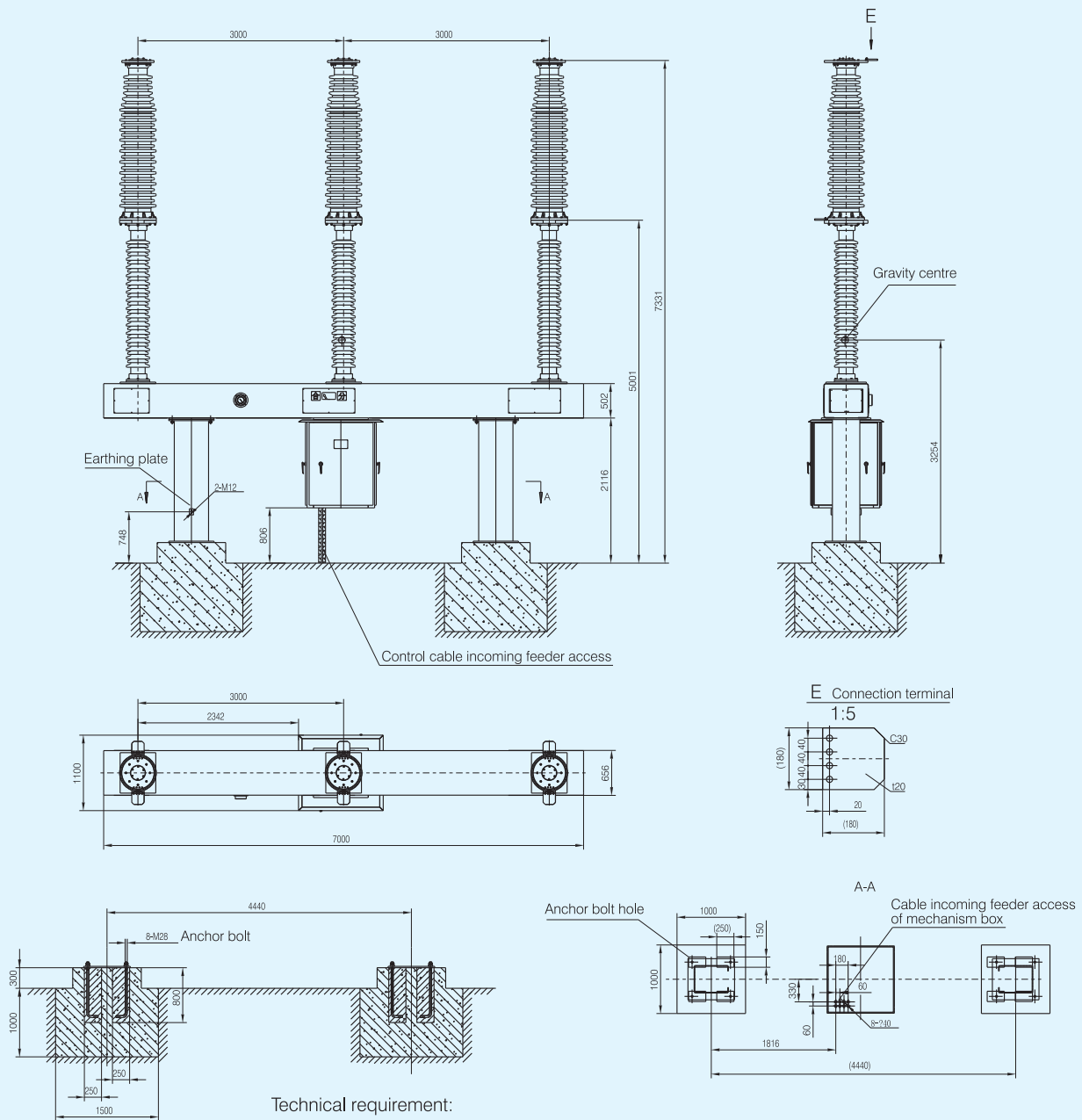
3.9 Protection degree: IP5XW

4 Technical Parameter

Item	Unit	Parameter			
Altitude	m	1000		2000	
Ambient air temperature	—	-30°C ~ 40°C	-40°C ~ 40°C	-30°C ~ 40°C	-40°C ~ 40°C
Rated voltage	kV	252			
Rated frequency	Hz	50			
Rated current	A	4000	3150	4000	3150
Rated short-circuit breaking current for I _{sc}	kA	50	40	50	40
Rated short-circuit making current (peak)	kA	125	100	125	100
Rated short-time withstand current	kA	50	40	50	40
Rated short-time withstand continuous time	s	3	3	3	3
Rated peak withstand current (peak)	kA	125	100	125	100
Short-line fault breaking current	kA	I _{sc} × 90%, I _{sc} × 75%			
Rated out-of-phase breaking current	kA	I _{sc} × 25%			
First-pole-to clear factor	—	1.5			
Rated line charging open/close current	A	160			
On-load transformer breaking current	A	0.5 ~ 20			
Power frequency withstand voltage for 1min (effective value)	Open contacts	460; 460+145	460	460	460
	To earth	460	460	460	460
Lightning impulse withstand voltage (peak)	Open contacts	1050; 1050+206	1050	1050	1050
	To earth	1050	1050	1050	1050
Rated operating sequence	—	O-0.3s-CO-3min-CO			

SF₆ Circuit Breaker

5 Outline and Installation Dimension (Unit:mm)



Technical requirement:

1. Waterproof glue is used on the joining spots of the flange of all exposed bolts.
2. Weight: 5,500kg (gas included); total gas weight: 35kg.
3. Foundation loading: static state: 5,500kg;
dynamic state: horizontal direction 2,720kg; vertical direction(upward) 10,000kg
4. Concrete surface levelness $\leq 1.5\text{mm}$.
5. The installation hole between the connection terminal and primary is customized on-site. The material of connection terminal is 2A12-T4.

6 Ordering Information

Please specify the following items when ordering:

- 6.1 Model.
 - 6.2 Rated electric parameters (voltage, current)
 - 6.3 Service environment conditions.
 - 6.4 Voltage of control supply.
 - 6.5 Wiring direction of primary terminal.
 - 6.6 The quantity of necessary spare parts, accessories, special tools and equipments.
- ※ Note: Customized products are available.

Disconnecter

GW4 Series Outdoor AC Disconnecter (40.5kV/126kV/145kV/252kV)

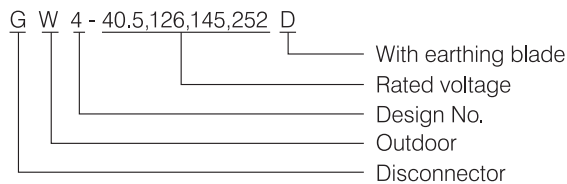


1 General

1.1 Application: three-phase AC 50Hz outdoor HV electrical apparatus, for switching under no-load condition and electrical disconnecting between electrical apparatus and live circuit in rated voltage 35~220kV power system.

1.2 Standard: IEC 62271-102.

2 Type Designation



3 Working Condition

3.1 Altitude: $\leq 2000\text{m}$

3.2 Ambient air temperature: $-40^{\circ}\text{C} \sim +40^{\circ}\text{C}$

3.3 Max wind velocity: 34m/s

3.4 Seismic: Horizontal acceleration: 0.250g
Vertical acceleration: 0.125g

3.5 Thickness of ice covering: $\leq 10\text{mm}$

3.6 Pollution level of insulator: III (25mm/kV), IV (31mm/kV)

3.7 Installation area without fire, explosion, chemical corrosion and frequent shocking

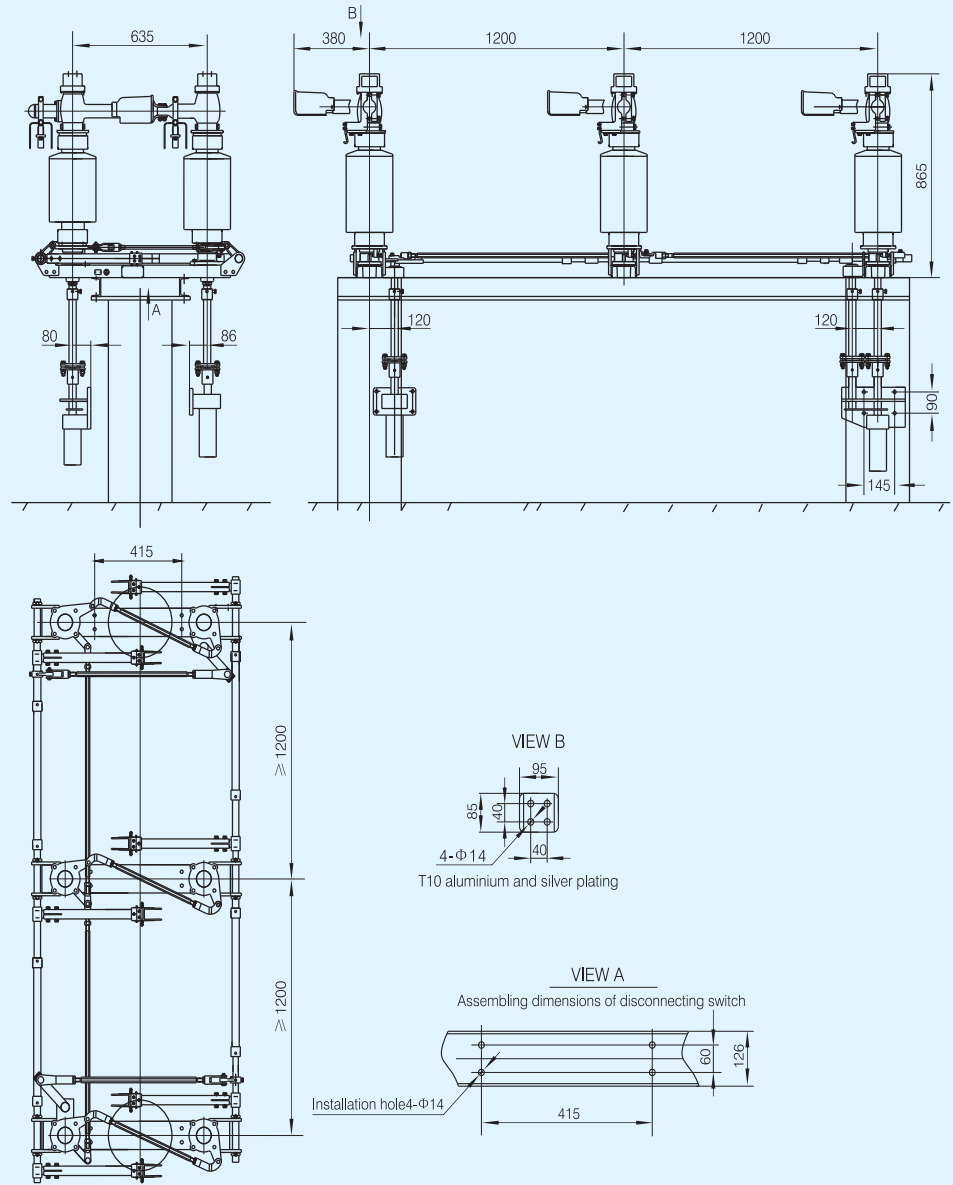
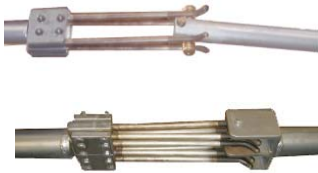
4 Technical Parameter

Item			Unit	Parameter			
Rated voltage			kV	40.5	126	145	252
Rated current			A	2000	2000	2000	3150
Rated short time withstand current, 3s			kA	40	40	40	50
Rated peak withstand current			kA	80	100	100	125
Rated power frequency withstand voltage (rms)	To earth	kV	95	230	275	460	
	Open contacts	kV	110	230+70	315	460+145	
Rated lightning impulse withstand voltage (peak)	To earth	kV	185	550	650	1050	
	Open contacts		215	550+100	750	1050+200	
Rated tension of connecting terminal	Longitudinal	N	750	1000	1000	1500	
	Horizontal		400	750	750	1000	
	Vertical		500	1000	1000	1250	
Min failing load			N	4000	6000	6000	8000
ES induction current switching capability	Electromagnetic coupling	Rated induction current	A	—	50	80	80
		Rated induction voltage	kV	—	0.5	2	1.4
	Electrostatic coupling	Rated induction current	A	—	0.4	2	1.25
		Rated induction voltage	kV	—	3	6	5
Open/close bus switching circuit			A	—	1600	1600	1600
Mechanical life			Time	3000	3000	3000	3000
Single pole weight			kg	80	240	300	650

Disconnecter

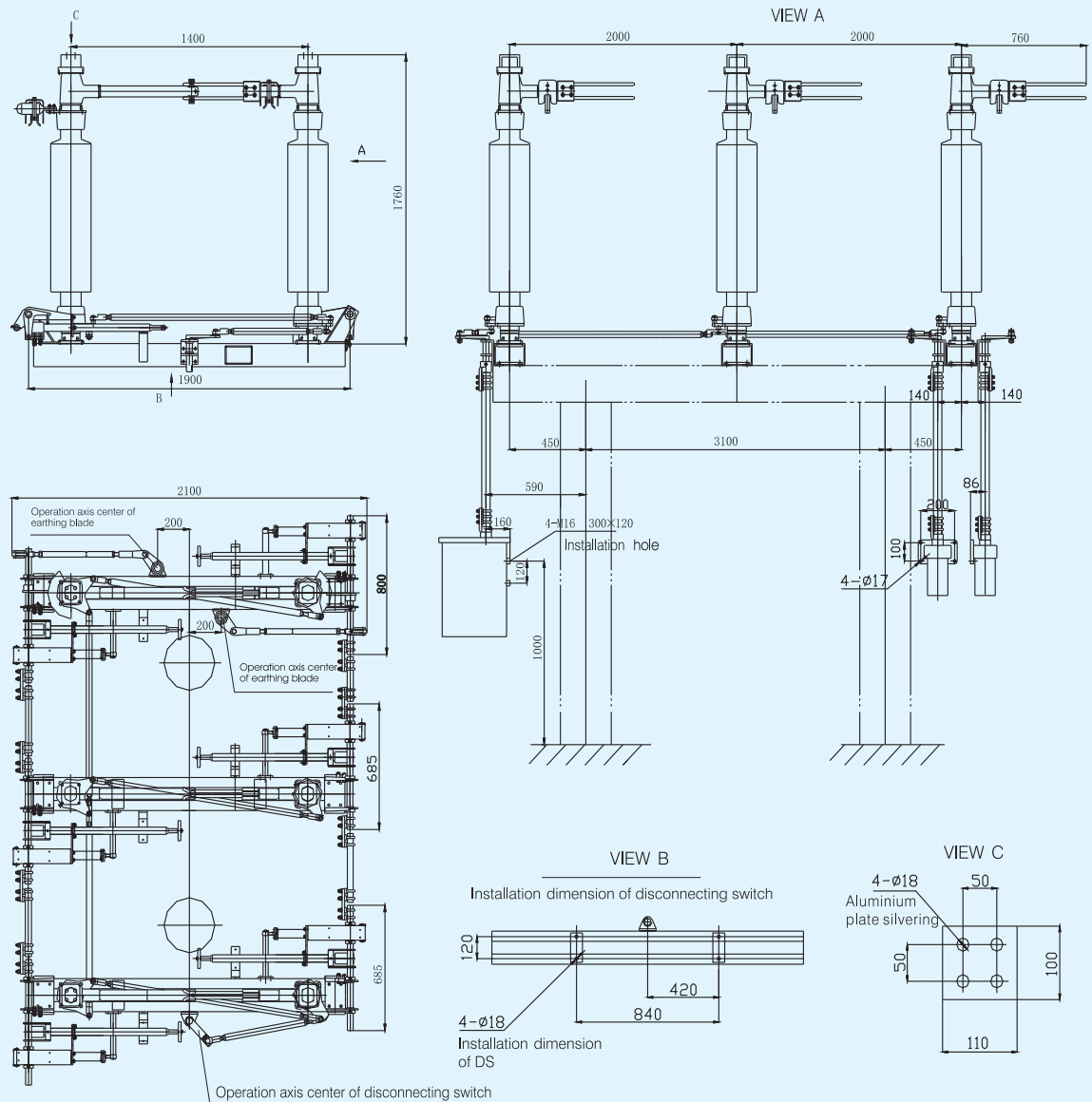
5 Outline and Installation Dimension (Unit: mm)

GW4-40.5 II DW type Disconnector



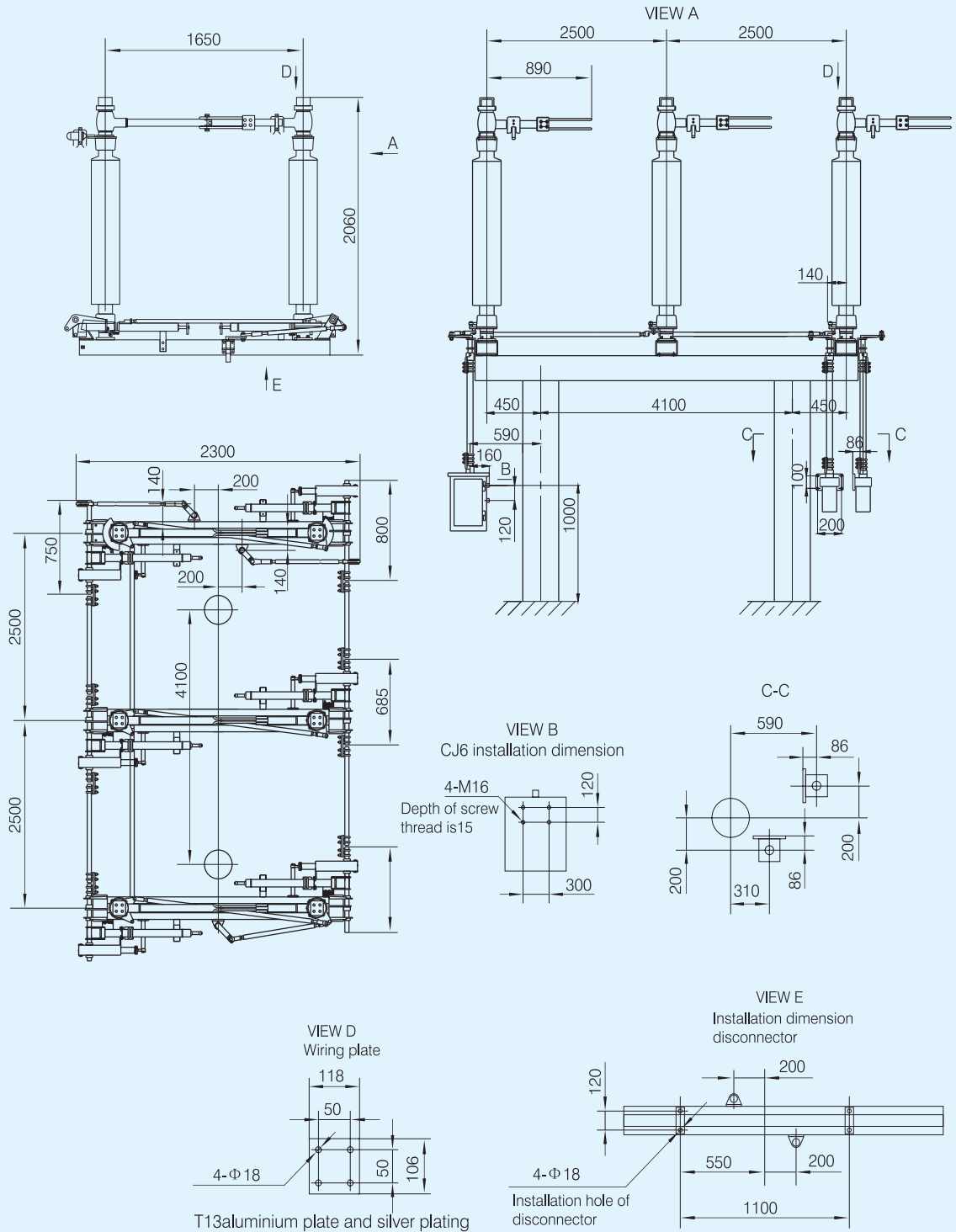
Disconnecter

GW4-126 II DW Disconnector



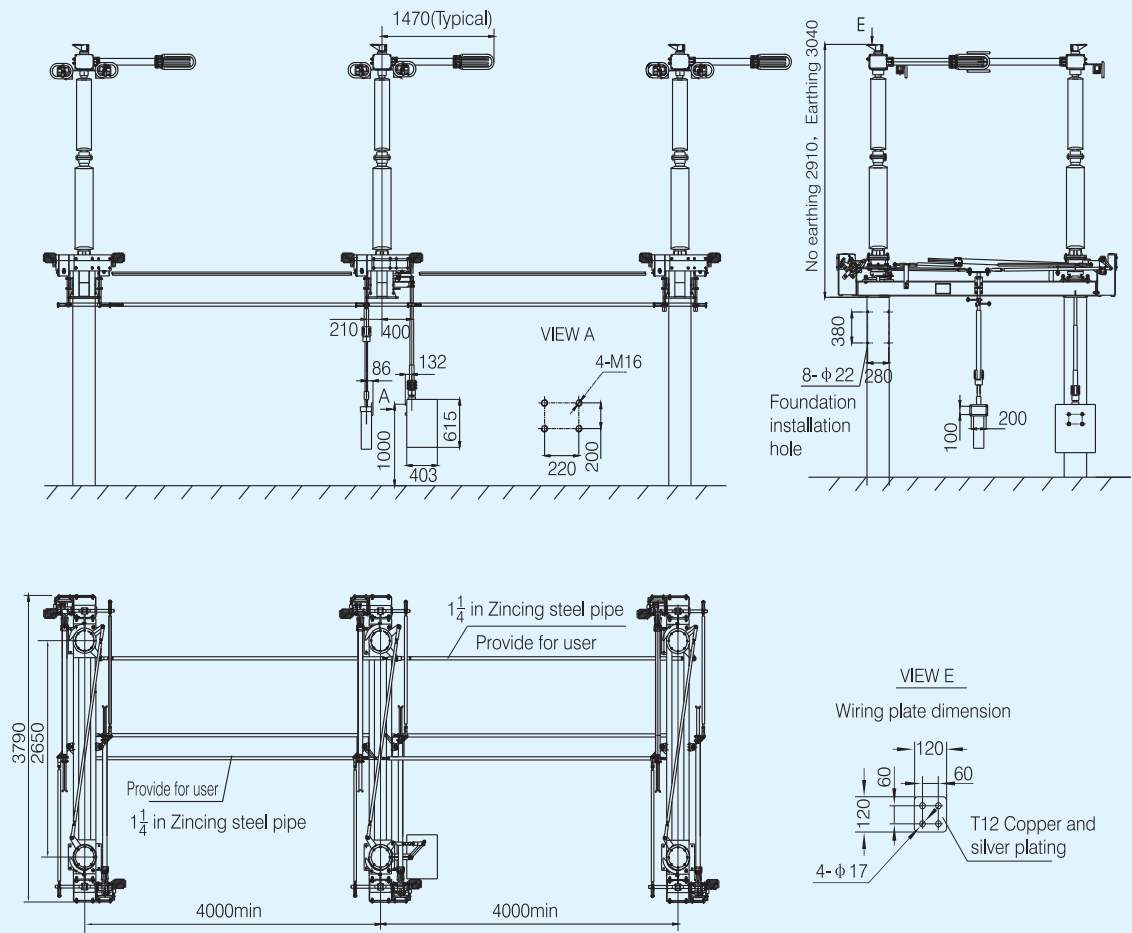
Disconnecter

GW4-145 II DW Disconnector



Disconnecter

GW4-252 II DW Disconnecter



6 Ordering Information

Please specify the following items when ordering:

- 6.1 Model, specification and quantity of disconnecter.
- 6.2 Rated current, rated short time and peak withstand current.
- 6.3 Pollution level and altitude.
- 6.4 Please indicate whether fitted with earthing blade, in which side and whether fitted with electromagnetic lock.
- 6.5 The electric motor voltage, control voltage and auxiliary poles of electric operation mechanism.

※ Note: Customized products are available.

Disconnecter

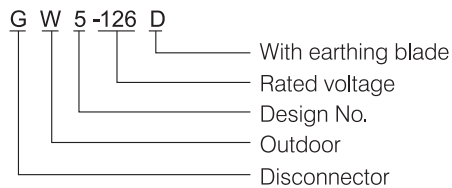
GW5-126 Outdoor AC Disconnector (126kV)

1 General

1.1 Application: three-phase AC 50Hz outdoor HV electrical apparatus, for switching under no-load condition and electrical disconnecting between electrical apparatus under repairing and live HV circuit in rated voltage 110kV power system.

1.2 Standard: IEC 62271-102.

2 Type Designation



3 Working Condition

3.1 Altitude: $\leq 2000\text{m}$

3.2 Ambient air temperature: $-40^{\circ}\text{C} \sim +40^{\circ}\text{C}$

3.3 Max wind velocity: 34m/s

3.4 Seismic: Horizontal acceleration: 0.250g

Vertical acceleration: 0.125g

3.5 Thickness of ice covering: $\leq 10\text{mm}$

3.6 Pollution level of insulator: III (25mm/kV), IV (31mm/kV)

3.7 Installation area without fire, explosion, chemical corrosion and frequent shocking.

4 Technical Parameter

Item			Unit	Parameter	
Rated voltage			kV	126	
Rated current			A	2000	
Rated withstand current (peak)			kA	100	
Rated short time withstand current, 3s (effective value)			kA	40	
Rated frequency			Hz	50	
Earthing switch	Rated withstand current (peak)		kA	100	
	Rated short time withstand current,3s (effective value)		kA	40	
Rated tension of connecting terminals			Longitudinal	N	1000
			Horizontal	N	750
			Vertical	N	1000
Rated insulation level	Rated short time power frequency withstand voltage (effective value)	To earth	kV	230	
		Open contacts	kV	230+70	
	Lightening impulse withstand voltage (peak)	To earth	kV	550	
		Open contacts	kV	550+100	
Earthing switch induction current open/close capability	Electromagnet coupling	Rated induction current	A	50	
		Rated induction voltage	kV	0.5	
	Electrostatic coupling	Rated induction current	A	0.4	
		Rated induction voltage	kV	3	
Open/close bus switching circuit			A	1600	
Mechanical life			Time	3000	
Disconnector circuit resistance			μ Ω	85	
Single pole weight			kg	230	

Disconnecter

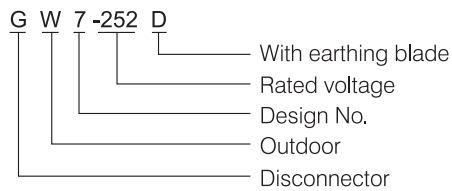
GW7-252 Outdoor AC Disconnecter (252kV)

1 General

1.1 Application: three-phase AC 50Hz outdoor HV electrical apparatus, for switching under no-load condition and electrical disconnecting between electrical apparatus under repairing and live HV circuit in rated voltage 220kV power system.

1.2 Standard: IEC 62271-102.

2 Type Designation



3 Working Condition

3.1 Altitude: $\leq 2000\text{m}$

3.2 Ambient air temperature: $-40^{\circ}\text{C} \sim +40^{\circ}\text{C}$

3.3 Max wind velocity: 34m/s

3.4 Seismic: Horizontal acceleration: 0.250g
Vertical acceleration: 0.125g

3.5 Thickness of ice covering: $\leq 10\text{mm}$

3.6 Pollution level of insulator: III(25mm/kV), IV(31mm/kV)

3.7 Installation area without fire, explosion, chemical corrosion and frequent shocking.

4 Technical Parameter

Item			Unit	Parameter
Rated voltage			KV	252
Rated current			A	5000
Rated withstand current (peak)			kA	160
Rated short time withstand current, 3s (effective value)			kA	63
Rated frequency			Hz	50
Earthing switch	Rated withstand current (peak)		kA	160
	Rated short time withstand current, 3s (effective value)		kA	63
Rated tension of connecting terminals	Longitudinal		N	1500
	Horizontal		N	1000
	Vertical		N	1250
Rated insulation level	Rated short time power frequency withstand voltage (effective value)	To earth	kV	460
		Open contacts	kV	460+145
	Lightning impulse withstand voltage (peak)	To earth	kV	1050
		Open contacts	kV	1050+200
Earthing switch induction current open/close capability	Electromagnet coupling	Rated induction current	A	80
		Rated induction voltage	kV	2
	Electrostatic coupling	Rated induction current	A	3
		Rated induction voltage	kV	12
Open/close bus switching circuit			A	1600
Mechanical life			Time	3000
Disconnector circuit resistance			μ Ω	50
Single pole weight			kg	1020

Disconnecter



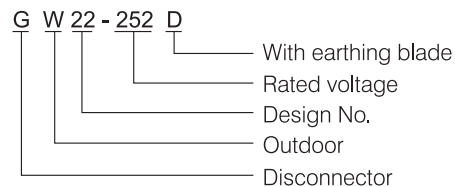
GW22-252 Outdoor AC Disconnector of Vertical single-column & Single-arm Flexible Fold Type (252kV)

1 General

1.1 Application: single-column single-arm vertical fold type three-phase AC 50Hz outdoor HV electrical apparatus, for switching under no-load condition and electrical disconnection between electrical apparatus and live circuit in rated voltage 252kV power system.

1.2 Standard: IEC 62271-102.

2 Type Designation



3 Working Condition

3.1 Altitude: $\leq 2000\text{m}$

3.2 Ambient air temperature: $-40^{\circ}\text{C} \sim +40^{\circ}\text{C}$

3.3 Max wind velocity: 34m/s

3.4 Seismic: Horizontal acceleration: 0.250g
Vertical acceleration: 0.125g

3.5 Thickness of ice covering: $\leq 10\text{mm}$

3.6 Pollution level of insulator: III (25mm/kV), IV (31mm/kV)

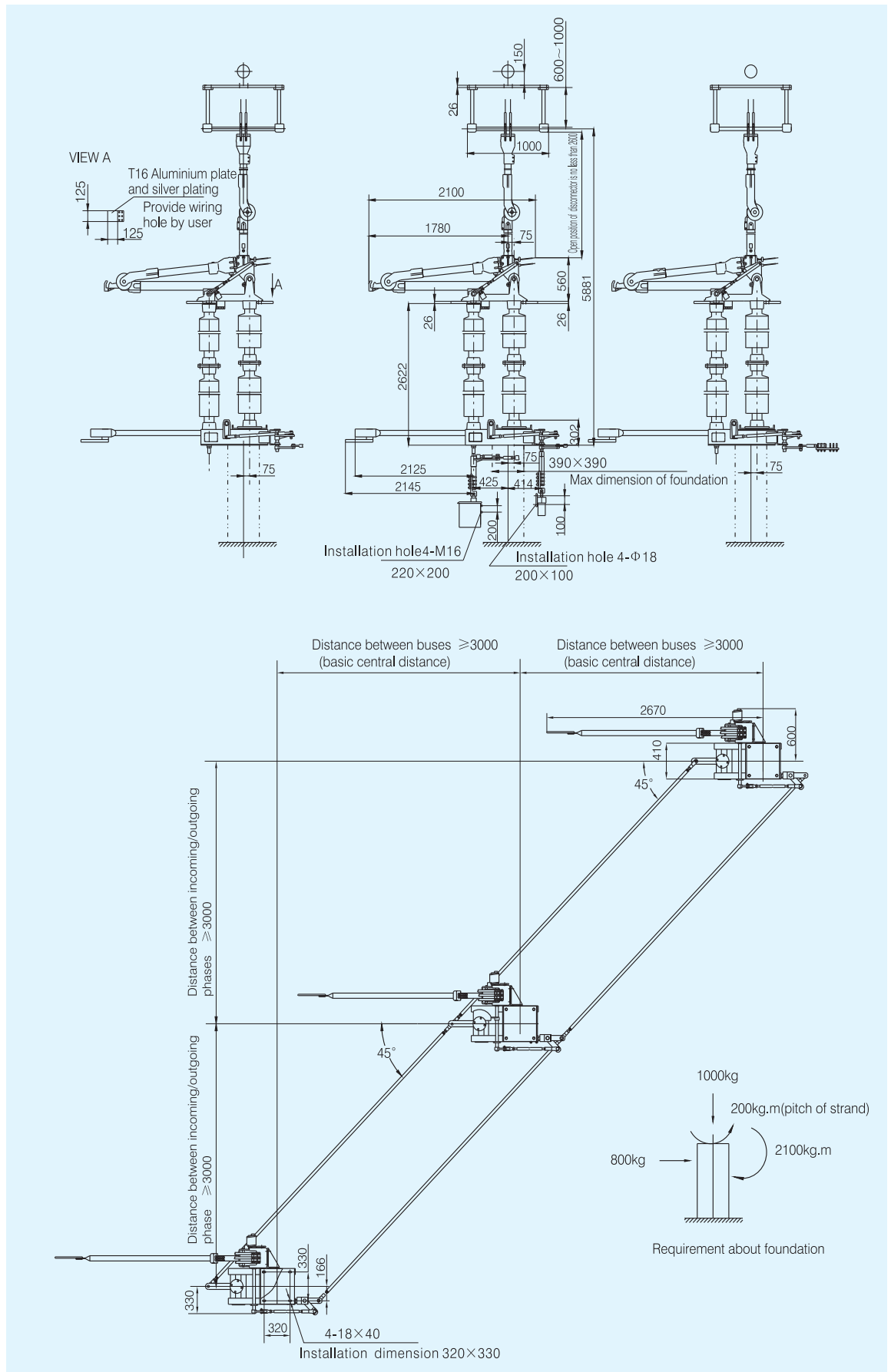
3.7 Installation area without fire, explosion, chemical corrosion and frequent shocking.

4 Technical Parameter

Item			Unit	Parameter
Rated voltage			kV	252
Rated current			A	3150
Rated short time withstand current, 3s			kA	50
Rated peak withstand current			kA	125
Rated power frequency withstand voltage (rms)	To earth		kV	460
	Open contacts			460+145
Rated lightning impulse withstand voltage (peak)	To earth		kV	1050
	Open contacts			1050+200
Mechanical strength of terminals	Longitudinal		N	2000
	Horizontal			1000
	Vertical			1250
Rated contact field (hard wire/soft wire)	Total drift of Level Y		mm	150
	Vertical shift Z			150
	Longitudinal displacement of support conductor X			150
Min failing load			N	8000
ES induction current switching capability	Electromagnetic coupling	Rated induction current	A	80
		Rated induction voltage	kV	1.4
	Electrostatic coupling	Rated induction current	A	1.25
		Rated induction voltage	kV	5
Open/close bus switching circuit			A	1600
Mechanical life			Time	3000
Single pole weight			kg	700

Disconnecter

5 Outline and Installation Dimension (Unit: mm)



Disconnecter



6 Ordering Information

Please specify the following items when ordering:

6.1 Model, specification and quantity of disconnector.

6.2 Rated current, rated short time and peak withstand current.

6.3 Pollution level and altitude.

6.4 Indicate if fitted with earthing blade or electromagnetic lock.

6.5 The electric motor voltage, control voltage and auxiliary poles of electric operation mechanism.

※ Note: Customized products are available.



Disconnecter



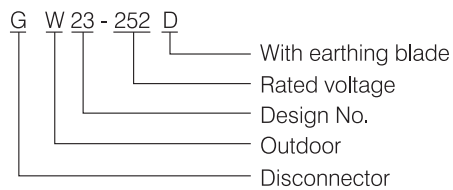
GW23-252 Outdoor AC Disconnector Of Horizontal Double-column & Single-arm Flexible Fold Type (252kV)

1 General

1.1 Application: double-column horizontal fold type three-phase AC 50Hz outdoor HV electrical apparatus, for switching under off-load condition and electrical disconnection between electrical apparatus and live circuit in rated voltage 220kV power system.

1.2 Standard: IEC 62271-102.

2 Type Designation



3 Working Condition

3.1 Altitude: $\leq 2000\text{m}$

3.2 Ambient air temperature: $-40^{\circ}\text{C} \sim +40^{\circ}\text{C}$

3.3 Max wind velocity: 34m/s

3.4 Seismic: Horizontal acceleration: 0.250g
Vertical acceleration: 0.125g

3.5 Thickness of ice: $\leq 10\text{mm}$

3.6 Pollution level of insulator: III(25mm/kV), IV(31mm/kV)

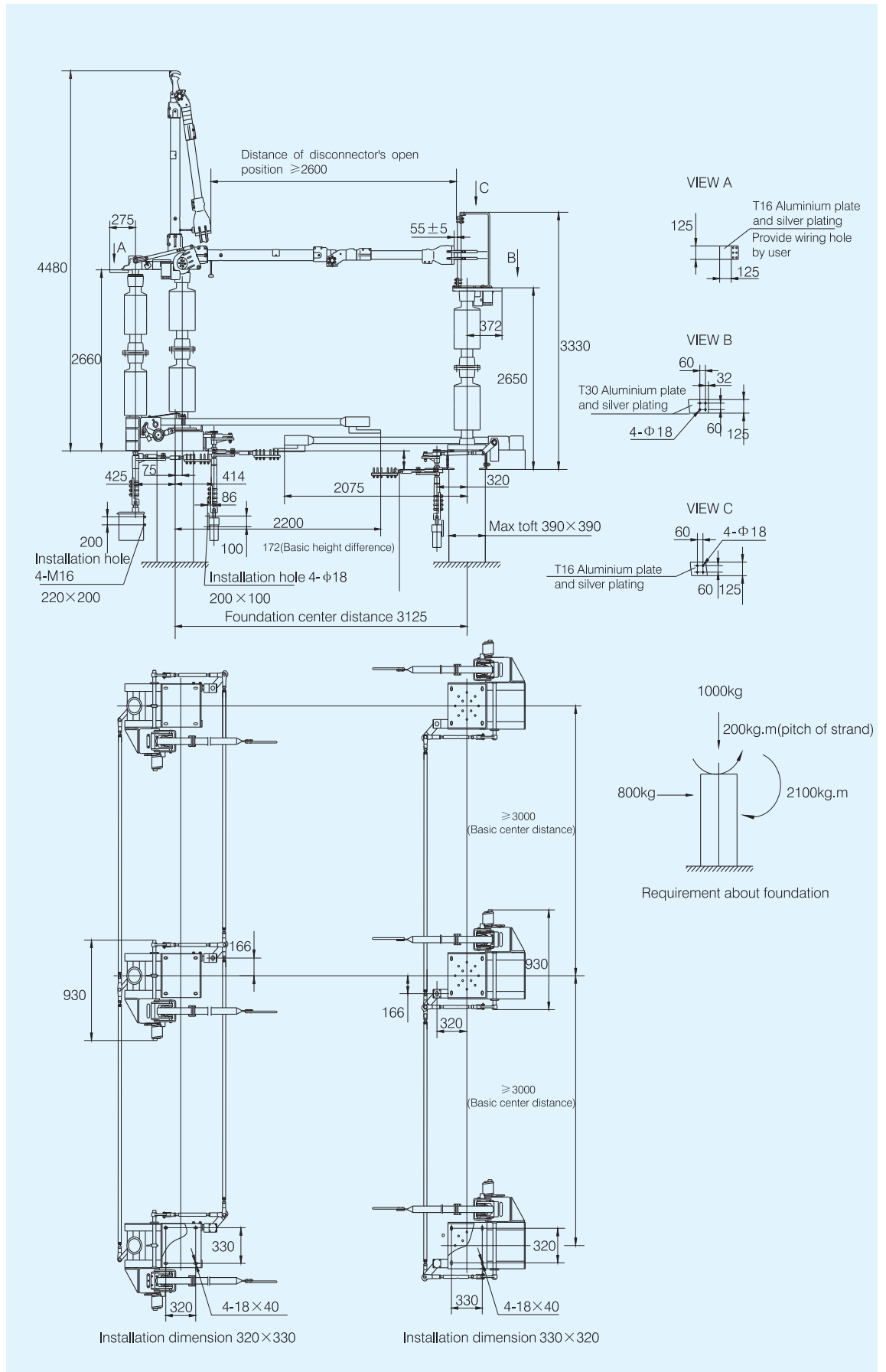
3.7 Installation area without fire, explosion, chemical corrosion and frequent shocking

4 Technical Parameter

Item			Unit	Parameter
Rated voltage			kV	252
Rated current			A	3150
Rated short time withstand current,3s			kA	50
Rated peak withstand current			kA	125
Rated power frequency withstand voltage	To earth		kV	460
	Open contacts			460+145
Rated lightning impulse withstand voltage	To earth		kV	1050
	Open contacts			1050+200
Mechanical strength of terminals	Longitudinal		N	1500
	Horizontal			1000
	Vertical			1250
Min failing load			N	8000
Earthing switch induction current open/close capability	Electromagnetic coupling	Rated induction current	A	80
		Rated induction voltage	kV	1.4
	Electrostatic coupling	Rated induction current	A	1.25
		Rated induction voltage	kV	5
Open/close bus switching circuit			A	1600
Mechanical life			Time	3000
Single pole weight			kg	1050

Disconnecter

5 Outline and Installation Dimension (Unit: mm)



Disconnecter



6 Ordering Information

Please specify the following items when ordering:

6.1 Model, specification and quantity of disconnector.

6.2 Rated current, rated short time and peak withstand current.

6.3 Pollution level and altitude.

6.4 Please indicate whether fitted with earthing blade, in which side and whether fitted with electromagnetic lock.

6.5 The electric motor voltage, control voltage and auxiliary poles of electric operating mechanism.

※ Note: Customized products are available.



Earthing Switch

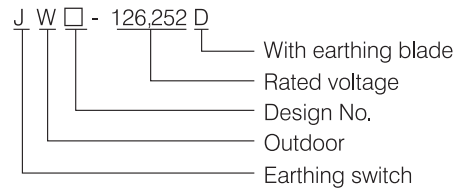
JW□-126, JW□-252 Outdoor AC Earthing Switch (126kV/252kV)

1 General

1.1 Application: three-phase AC 50Hz outdoor HV electrical apparatus, for earthing of HV bus in rated voltage 110~220kV power system.

1.2 Standard: IEC 62271-102.

2 Type Designation



3 Working Condition

3.1 Altitude: $\leq 2000\text{m}$

3.2 Ambient air temperature: $-40^{\circ}\text{C} \sim +40^{\circ}\text{C}$

3.3 Max wind velocity: 34m/s

3.4 Seismic: Horizontal acceleration: 0.250g

Vertical acceleration: 0.125g

3.5 Thickness of ice covering: $\leq 10\text{mm}$

3.6 Pollution level of insulator: III(25mm/kV), IV(31mm/kV)

3.7 Installation area without fire, explosion, chemical corrosion and frequent shocking

3.8 Sunshine radiation: $\leq 1000\text{W}/\text{m}^2$ (sunny noon).

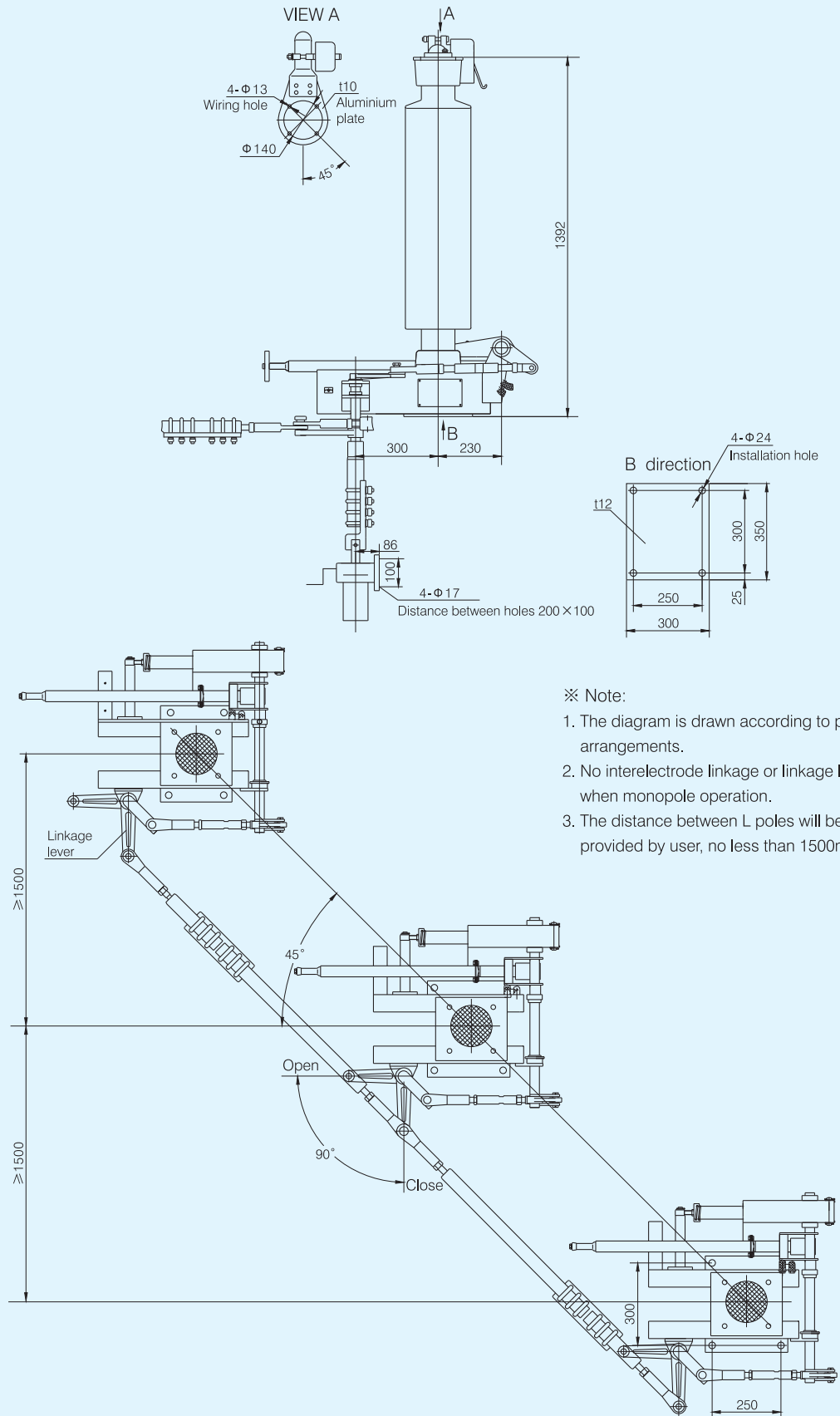
4 Technical Parameter

Item			Unit	Parameter	
Rated voltage			kV	126	252
Rated peak withstand current			A	100	125
Rated short time withstand current, 3s			kA	40	50
Rated power frequency withstand voltage	To earth		kV	230	460
	Open contacts			265	530
Rated lightning impulse withstand voltage	To earth		kV	550	1050
	Open contacts			630	1200
Mechanical strength of terminals	Longitudinal		N	1000	2000
	Horizontal			750	1500
	Vertical			1000	1250
Earthing switch induction current open/close capability	Electromagnetic coupling	Rated induction current	A	50	80
		Rated induction voltage	kV	0.5	1.4
	Electrostatic coupling	Rated induction current	A	0.4	1.25
		Rated induction voltage	kV	3	5
Mechanical life			Times	3000	3000
Min failing load			N	6000	8000
Single pole weight			kg	110	230
Radio interference level			μV	≤2000	≤2000

Earthing Switch

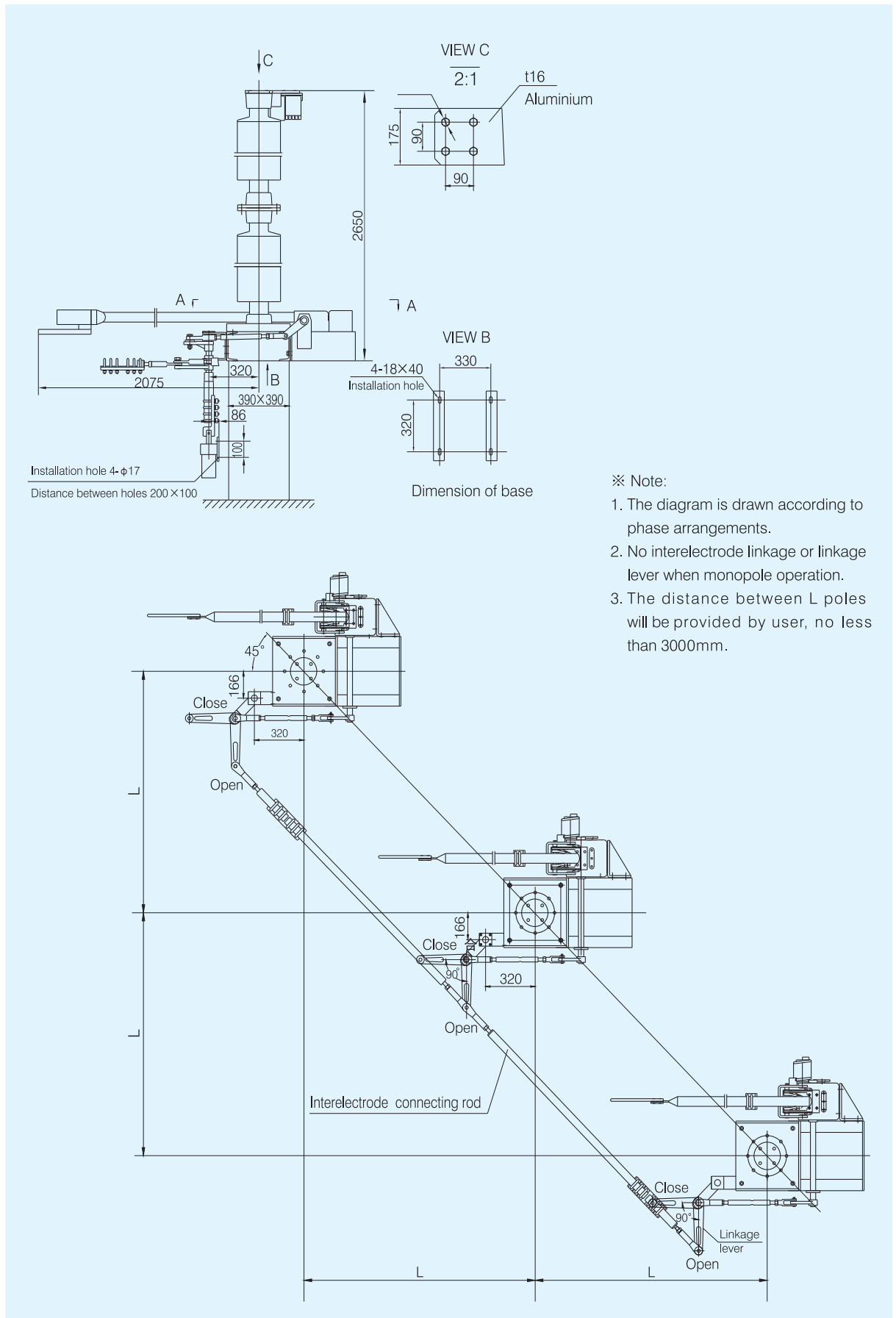
5 Outline and Dimension (Unit: mm)

5.1 JW□ Earthing Switch

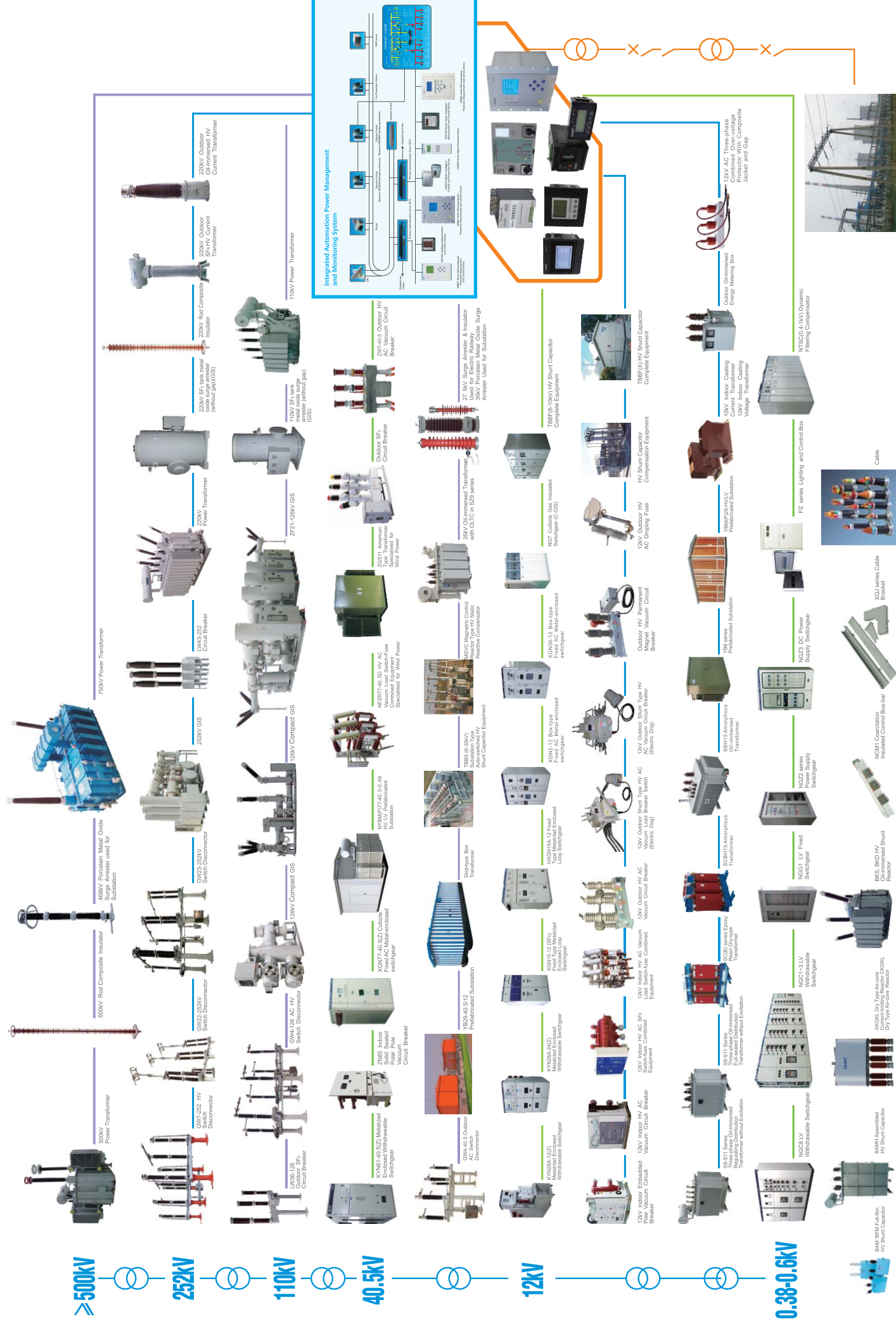


Earthing Switch

5.2 JW□-252 Earthing Switch



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