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ZW32-12 装配区

ZW20-12 装配区

真空断路器总装配车间

ZW32-40.5 装配区

ZN63(VS1)-12 装配区

Product catalog

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Industry Applications

State Grid: Zhejiang Grid | Jiangsu Grid | Shanxi Grid | Xinjiang Grid | Shandong Grid | Chongqing Grid

Key Projects

China Railway Electrification Bureau Group | Meizhou Jiaoling Power Supply Bureau, Guangdong Power Grid | Kashgar Electric Power Company, Xinjiang | Wenxian Electric Power Bureau | Sichuan Local Water Conservancy and Hydropower Construction Company

ZN63(VS1)-12

Indoor high-pressure vacuum circuit breaker

summary

VS 1-12 indoor high voltage vacuum circuit breaker is an indoor switching equipment with three-phase AC 50 Hz rated voltage of 12kV power system, which serves as the protection and control unit of power grid equipment and power equipment of industrial and mining enterprises. Suitable for frequent operation under rated working current, or more open short circuit current.

The circuit breaker adopts the integrated design of the operation mechanism and the circuit breaker body, which can be used as a fixed installation unit, and can also be equipped with a special propulsion mechanism to form the hand car unit.

Model and meaning

Z N 63(VS1) - 12 / □ - □

- Rated short circuit break current (kA)
- rated current (A)
- Rated voltage (kV)
- product design

Use environmental conditions

- Ambient temperature: not higher than + 40℃, not less than-15℃ (no storage and transportation at-30℃);
- Altitude: not more than 1000m;
- Relative humidity: daily average is not more than 95%, monthly average is not more than 90%, average saturated steam pressure is not more than 2.210³ MPa; monthly average is not more than 1.810³MPa;
- Earthquake intensity: not more than magnitude 8 magnitude;
- No fire, explosion, serious pollution, chemical corrosion and violent vibration places.

Main technical parameters

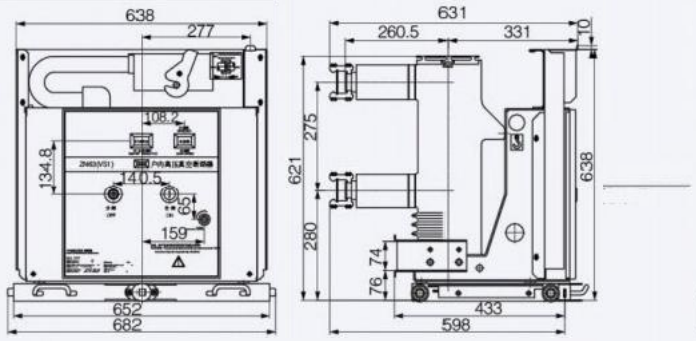
project		unit	parameter		
rated voltage		kV	12		
maximum operating voltage		kV	12		
rated current		A	630	1250	1600
Rated short circuit open break current		kA	20	25	31.5
Rated short circuit off current		kA	50	63	80
Rated peak order to withstand current		kA	50	63	80
4S rated short-circuit withstand current		kA	20	25	31.5
Rated insulati	Power frequency withstand voltage (before and after	kV	42 (fracture 48)		
on level	rated opening)				
	Impact resistance (before and after rated opening)		75 (fracture 85)		
Rated operation order			0-0.3s-CO-180s-CO		

ZN 63 (VS 1) - 12 indoor high pressure vacuum circuit breaker

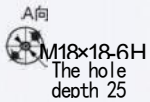
Main technical parameters

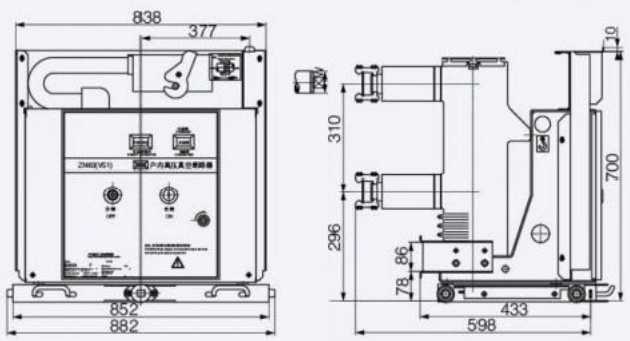
mechanical life		Times	1000	
Rated short circuit open current open break times		Times	50	
Rated closing voltage of the operating mechanism (DC)		V	110,220	
Rated gate voltage of operating mechanism (DC)		V	110,200	
clearance between open contacts		mm	11±1	
Over-stroke (contact spring compression length)		mm	3.5±0.5	
Three-phase split, closing bounce time		ms	≤2	
Bulounce time of contact closing		ms	≤2	
Average split speed		m/s	0.9±1.2	
Average closing speed		m/s	0.4±0.8	
Switching time	At the maximum operating voltage	S	≤0.05	
	At the minimum operating voltage		≤0.08	
closing time		S	0.1	
Main circuit resistance of each phase		uQ	60	50

Outline and installation dimensions (mm)

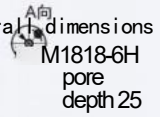


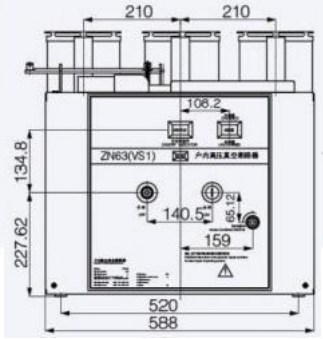
External size (ZN 63) (800)

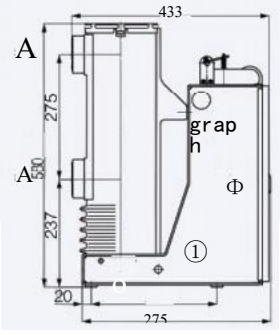


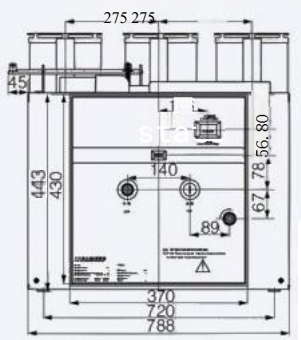


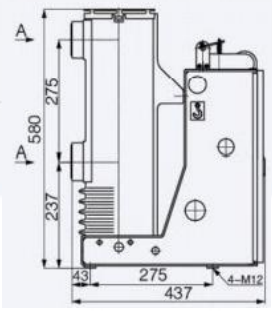
Handle type (ZN 63) (1000) overall dimensions











Fixed (ZN 63) (800) dimensions Fixed (ZN 63) (1000) Overall dimensions

ZN 63 (VS 1) -24 indoor high pressure vacuum circuit breaker

summary

VS 1-24 indoor high voltage vacuum circuit breaker is an indoor switch with three-phase AC 50 Hz rated voltage of 24 kV power system, and a protection and control unit of power grid equipment and power equipment of industrial and mining enterprises.

The product is suitable for places requiring frequent operation at rated working current or multiple breaking short circuit current. The circuit break adopts the integrated design of the operation mechanism and the circuit breaker body, which can be used as a fixed installation unit or equipped with a special stacking mechanism to form the function of the hand car unit.

Model and meaning

Z N63(VS1)-24/ □ - □

- Rated short circuit break current (kA)
- rated current (A)
- Rated voltage (kV)
- product

Use environmental conditions

- Ambient temperature: not higher than + 40℃, not less than-15℃ (no storage and transportation at-30℃);
- Altitude: not more than 1000m;
- Relative humidity: daily average not more than 95%, monthly average not more than 90%, average saturated steam pressure not more than 2.210³ MPa; monthly average not more than 1.810- ³MPa;
- Earthquake intensity: not more than magnitude 8 magnitude;
- No fire, explosion, serious pollution, chemical corrosion and violent vibration places.

Main technical parameters

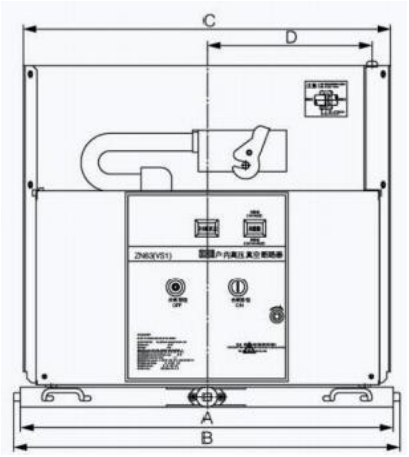
project	unit	data		
rated voltage	kV	24		
Rated short-time power frequency withstand voltage (1 min)		65 / 79 (interphase, opposite ground / fracture)		
Rated lightning impact withstand voltage (peak value)		125 / 145 (interphase, ground / fracture)		
rated frequency	Hz	50		
rated current	A	630 1250	630 1250 1600 2000 2500 3150	630 1250 1600 2000 2500 3150
Rated short circuit open break current	kA	20/25	31.5	40
Rated short-time current		20/25	31.5	40
Rated short-circuit duration	S	4		

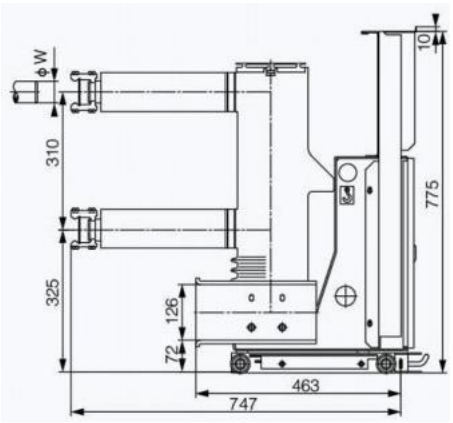
ZN 63 (VS 1) - 24 indoor high pressure vacuum circuit breaker

Main technical parameters

project	unit	data		
Rated peak order to withstand current	kA	50/63	80	
Rated short-circuit switch-off current		50/63	80	
Power frequency withstand voltage of secondary circuit (1 min)	V	2000		
Rated single / back-to-back capacitor set open off current	A	630 / 400 (800 / 400 for 40 kA)		
Combined flow of rated capacitor bank	kA	12.5 (frequency not greater than 1000 Hz)		
mechanical life	Times	20000		
Rated current breaks (electrical life)		20000		
Rated short circuit current break times		50(40kA≤30)		
Dynamic and static contacts allow to wear the accumulated thickness	mm	2		
Energy storage time	S	≤10		
clearance between open contacts	mm	13±1		
overtravel		3.5±0.5		
Bulounce time of contact closing	ms	≤2		
Three-phase separation, closing not synchronization		≤2		
Average trip speed (contact apart-8 mm)	m/s	1.5±0.2		
Average closing speed (8 mm-contact closure)		0.8±0.2		
Leading electrical circuit resistance	μΩ	50 (630A) 45 (1250A); 35 (1600-2000A) 25 (2500A) on		
Rated operation order		Points-0.3 split in 180s-split		

Outline and installation dimensions (mm)





rated voltage	Rated off current	Phase spacing	A	B	C	D
630A 1250 A 1600 A	25kA 31.5kA 40kA	210	652	682	638	277
		275	852	882	838	377
630A 1250 A 1600 A	25kA 31.5kA 40kA	210	652	682	638	277
		275	852	882	838	377

rated voltage	W
630A	φ35

ZN63(VS1)-12

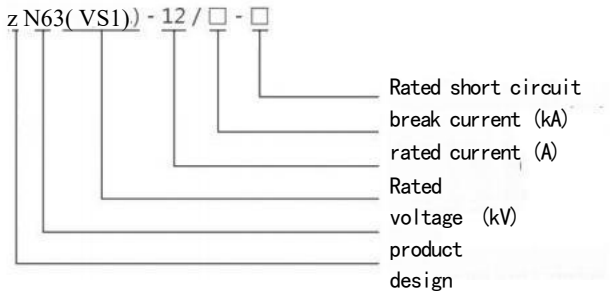
Side-mounted indoor high-voltage vacuum circuit breaker

summary

ZN 63 (VS 1) -12 side-mounted indoor high voltage vacuum circuit breaker is an indoor high voltage switchdevice, which is suitable for three-phase power system with rated voltage area and frequency 50Hz as protection and control appliances. Due to the special advantages of vacuum circuit breaker, it is especially suitable for frequent operation under rated current or repeated short circuit current.

ZN 63 (VS 1) -12 side-mounted indoor high voltage vacuum circuit breaker adopts the fixed installation, mainly used for the fixed switch cabinet. The circuit breaker can be used alone, ring network power supply, box type transformer or various non-standard power supply system.

Model and meaning



Use environmental conditions

◆ Ambient temperature: not more than + 40℃, not less than-15℃;

◆ Air relative humidity: daily average is not more than 95%, monthly average is not more than 90%;

◆ The altitude shall not exceed 1000m;

◆ The seismic intensity shall not exceed magnitude 8;

◆ No fire, explosion, serious pollution, chemical corrosion and violent vibration places. Note: If customers have other special requirements, they can order, and our company will give the maximum satisfaction.

Main technical parameters

project		unit	parameter		
rated voltage		kV	12		
maximum operating voltage		kV	12		
rated current		A	630	1250	1600
Rated short-circuit open-break current		kA	20	25	31.5
Rated short-circuit switch-off current		kA	50	63	80
Rated peak order to withstand current		kA	50	63	80
4S rated short-circuit withstand current		kA	20	25	31.5
Rated insulation level	Power frequency withstand voltage (before and after rated opening)	kV	42 (fracture 48)		
	Impact resistance (before and after rated opening)		75 (fracture 85)		
Rated operation order			0-0.3s-CO-180s-CO		

ZN63(VS1)-12

Indoor fixed-seal-type vacuum circuit breaker

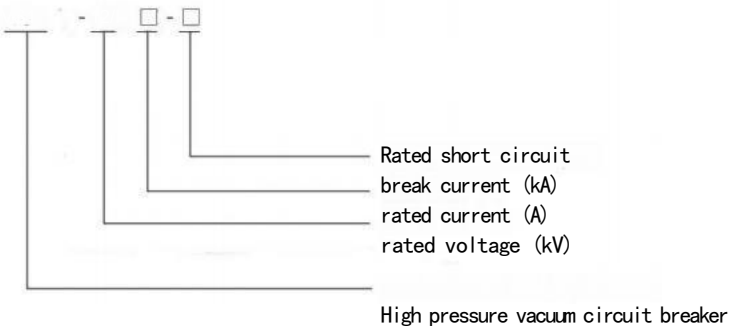
summary

VS 1-12kV series indoor fixed sealing pole column high-voltage vacuum circuit breaker, suitable for three-phase AC power system with rated voltage of 7.2~12 kV and a frequency of 50 Hz, widely used in power plants, substation, petrochemical, metallurgy, manufacturing, airport and community, as the protection and control of electrical facilities, especially suitable for frequent operation or multiple short circuit current under rated current, can be installed in open or fixed air insulated switch cabinet. The products comply with GB1984 AC high voltage circuit breaker, DL / T40312~40.5kV indoor AC high voltage circuit breaker, EC60694, IEC6227-100 and other relevant standards.

VS 1-12kV series high voltage vacuum circuit breaker adopts advanced APG process, which directly seals the vacuum arc extinguishing chamber and the leading electric loop in the epoxy resin pole column to form the fixed sealing insulation mode, which represents the highest level of design and manufacturing of high voltage vacuum circuit breaker in the world today.

Note: The model is VBC 7-12 when the fixed sealing pole column of the vacuum arc extinguishing chamber is replaced with an ordinary insulating cylinder.

Model and meaning



Use environmental conditions

- Altitude: not more than 2000m;
- Ambient temperature: maximum temperature + 40℃; minimum temperature-15℃;
- Relative humidity: 95%;
- Earthquake intensity: magnitude 8;
- Installation place: no water drop, fire, no explosion risk, serious pollution, chemical corrosion and violent vibration place.

Main technical parameters

project		unit	parameter			
rated voltage		kV	12			
rated frequency		Hz	50			
Rated insulation level	Rated lightning impact withstand voltage peak	kV	75			
	1 min power frequency withstand voltage	kV	42			
rated current		A	630 1250	630 1250	1250、1600 2000、2500	1600.2000 2500、3150 4000、5000

ZN 63 (VS 1) -12 indoor sealed vacuum circuit breaker

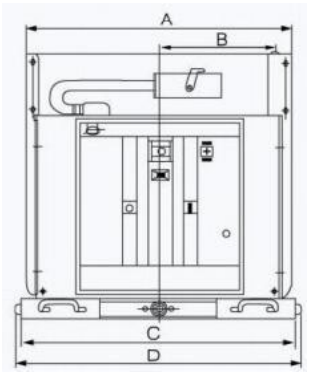
Main technical parameters

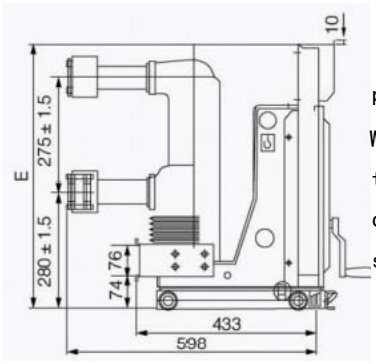
project	unit	parameter			
Rated short circuit open break current	kA		25	31.5	40
Rated short circuit current (peak)	kA		63	80	100
Rated short-circuit duration	S	4			
Rated operation order		O-0.3s-CO-180s-cOO-180s-CO-180s-CO(40kA)			
Rated single / back to back capacitor bank open current	A	630/400			
Rated short circuit open current open break times	Times	30			
closing time	ms	30~70			
Switching time	ms	20~50			
mechanical life	Times	10000			
Rated energy storage and operating voltage	V	AC220/110DC220/110			
clearance between open contacts	mm	11±1			
Touch head super line distance	mm	3.5±0.5			
Average closing speed	m/s	0.5~0.8			
Average split speed	m/s	0.9~1.2			
Bulounce time of contact closing	ms	≤2			
Three-phase separation, closing not synchronization	ms	≤2			
Main loop resistance	μΩ	50 (630A) 45 (1250A) 35 (1600~2000A) 25 (2500 or above)			

Outline and installation dimensions (mm)

630A,1250A,..25kA

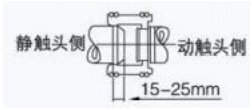
630A,1250A,1600A...31.5kA





pay attention to!

When cooperating with the cabinet, the dynamic contact and size are 15~25mm.



VBC 7-12 Handtype (fixed seal column)

Phase spacing	A	B	C	D	E
With a 650mm cabinet width	150	490	202	502	637
With a total of 800mm cabinet width	210	638	277	652	637
With a 1,000 mm cabinet width	275	638	377	852	637/697

rated current	With a quiet touch
630A	φ35
1250A	φ49
1600A	φ55

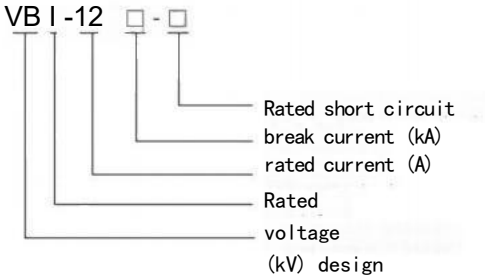
summary

VBI-12kV series indoor high voltage vacuum circuit breaker, suitable for three-phase AC power system with rated voltage of 7.2~12 kV and frequency of 50 Hz, widely used in power plants, substation, petrochemical, metallurgy, manufacturing, airport and community, as the protection and control of electrical facilities, especially suitable for frequent operation or multiple break short circuit current under rated current, can be installed in open or fixed air insulated switchgear. The products meet GB1984 AC high voltage circuit breaker, DL/T403《12~40.5kV indoor AC high voltage circuit breaker and IEC60694 IEC6227-100 and other relevant standard requirements.

VBI-12kV series indoor high voltage vacuum circuit breaker adopts advanced APG process, which directly seals the vacuum arc extinguishing chamber and the leading electric loop in the epoxy resin pole column to form the fixed sealing insulation mode, which represents the highest level of design and manufacturing of high voltage vacuum circuit breaker in the world today.

Note: The model is VS 1-12 when the installation column of vacuum arc extinguishing chamber is replaced with ordinary insulating cylinder.

Model and meaning



Use environmental conditions

- Altitude: not more than 2000m;
- Ambient temperature: maximum temperature + 40℃; minimum temperature-15℃;
- Relative humidity: 95%;
- Earthquake intensity: magnitude 8;
- Installation place: no water drop, fire, no explosion risk, serious pollution, chemical corrosion and violent vibration place.

Main technical parameters

project		unit	parameter		
rated voltage		kV	12		
maximum operating voltage		kV	12		
rated current		A	630	1250	1600
Rated short circuit open break current		kA	20	25	31.5
Rated short circuit off current		kA	50	63	80
Rated peak order to withstand current		kA	50	63	80
4S rated short-circuit withstand current		kA	20	25	31.5
Rated insulation level	Power frequency withstand voltage (before and after rated opening)	kV	42 (fracture 48)		
	Impact resistance (before and after rated opening)		75 (fracture 85)		
Rated operation order			O-0.3s-CO-180s-CO		

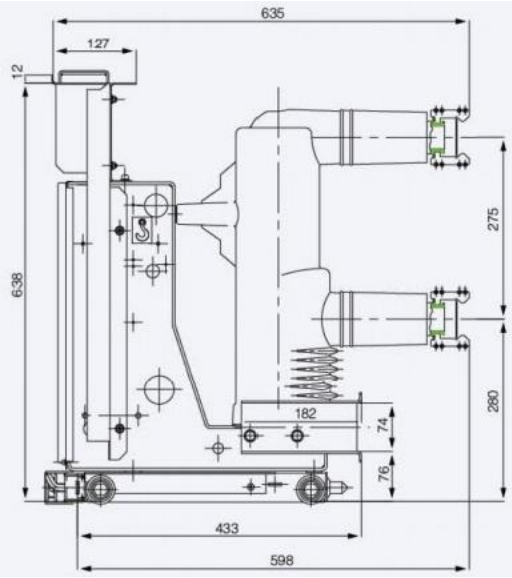
VBI-12

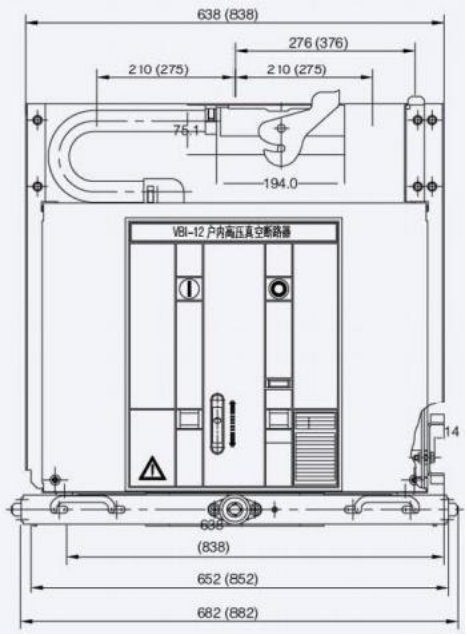
Indoor high-pressure vacuum circuit breaker

Main technical parameters

project		unit	parameter	
mechanical life		Times	1000	
Rated short circuit open current open break times		Times	50	
Rated closing voltage of the operating mechanism (DC)		V	110,220	
Rated gate voltage of the operating mechanism (DC)		V	110,200	
clearance between open contacts		mm	11±1	
Over-stroke (contact spring compression length)		mm	3.5±0.5	
Three-phase split, closing bounce time		ms	≤2	
Bulounce time of contact closing		ms	≤2	
Average split speed		m/s	0.9±1.2	
Average closing speed		m/s	0.4±0.8	
Switching time	At the maximum operating voltage	S	≤0.05	
	At the minimum operating voltage		≤0.08	
closing time		s	0.1	
Main circuit resistance of each phase		u0	60	50

Outline and installation dimensions (mm)





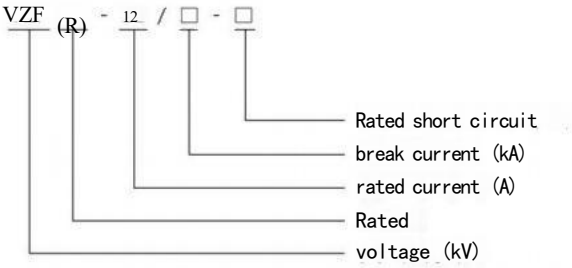
VZF(R)-12

Indoor high voltage vacuum load switch-fuse combination appliances

summary

VZF (R) -12 indoor high voltage vacuum load switch and its fuse combination electrical appliances (hereinafter referred to as vacuum load switch), is the latest generation of vacuum switch equipment research and developed according to the unique design concept and the combination of market demand, it is widely used in indoor armored air insulated switch cabinet. Under normal use conditions, as long as the technical parameters of the vacuum switch, it can ensure safe and reliable operation in the power grid of the corresponding voltage level.

Model meaning



regular service conditions

- Ambient air temperature: -40℃ ~ + 40℃, and not exceeding 35℃ within 24 hours
- Relative humidity: daily average is not greater than 95%; monthly average is not greater than 90%
- Altitude: 1000 m

meet a criterion

VZF (R) -12 indoor high voltage vacuum load switch-fuse combination appliances are manufactured according to the following standards and specifications: ●GB3804-20043.6kV~4 0.5 kV high voltage AC load switch

- GB16926-2009 High voltage AC load switch fuse combination electrical appliances

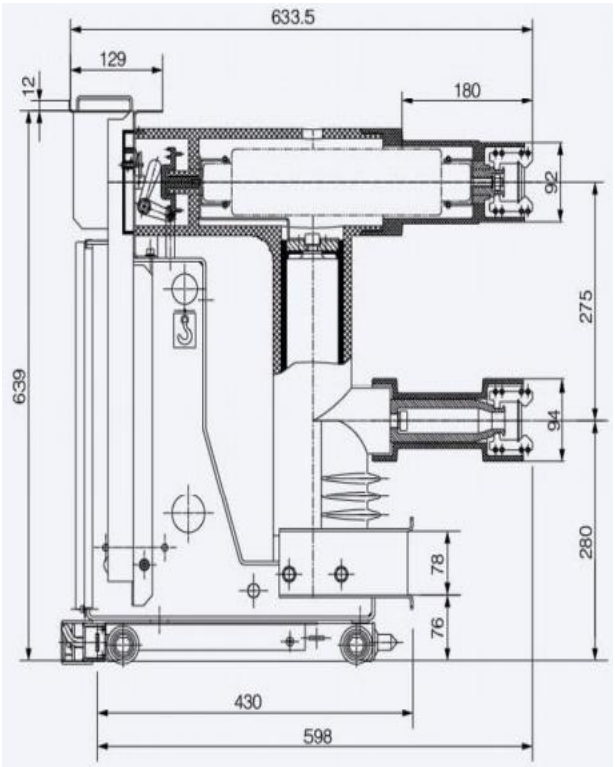
VZF(R)-12

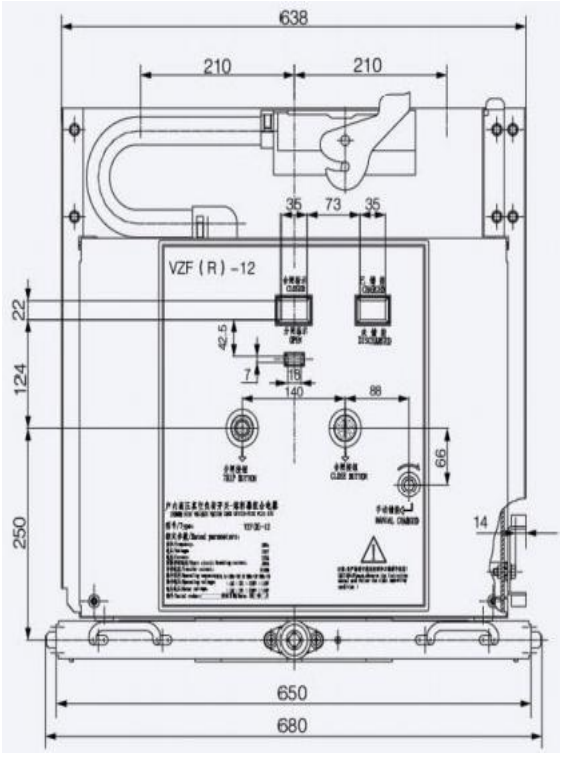
Indoor high voltage vacuum load switch-fuse combination appliances

Main technical parameters

project		unit	parameter			
			VZF-12 / T630-20 Vacuum-load Switch	VZFR-12 / T125-50 Vacuum Load Switch - fuse combination combination	VZFH-12 / T630-25 high score break vacuum switch	VZFHR-12 / T125-50 high score true **Air switch-fuse combination appliance**
rated voltage		kV	12	12	12	12
Rated insulation level	Lightning impact withstand voltage	kV	75	75	75	75
	1 min power frequency withstand voltage	kV	42	42	42	42
rated frequency		Hz	50/60	50/60	50/60	50/60
rated current		A	630	125 (Fuse)	630	125 (Fuse)
Rated short circuit open break current		kA		50 (Fuse device)	25 (arc chamber)	25 (arc chamber)
Rated short circuit off current (peak)		kA	50		63	
Rated short-time current		kA	20		25	
Rated peak order to withstand current		kA	50		63	
Rated cable charging open-break current		A	16			
Turn off the no-load transformer		KVA	1250		1250	
Rated off AC current		A		3150		3150
Number of disconnections of the rated short-circuit current		Times				
mechanical life			M 2 level	M2 level	M2 level	M 2 level
weight		KG	125			

Outline and installation dimensions (mm)





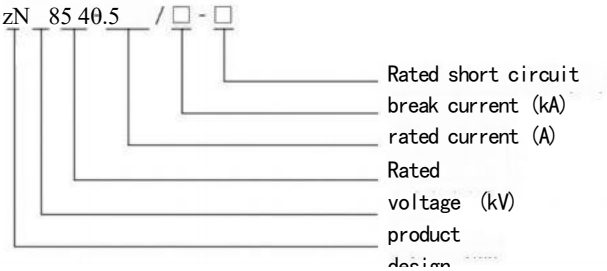
ZN85-40.5

Indoor high-pressure vacuum circuit breaker

summary

ZN 85-40.5 indoor high voltage vacuum circuit breaker is suitable for three-phase AC 50Hz, 40.5kV system, which can be used for industrial and mining enterprises, power plants and substations as split load current, overload current fault current, and suitable for frequent operation occasions. The circuit breaker adopts the upper and lower layout structure to effectively reduce the depth of the circuit breaker. And adopt composite insulation structure, three-phase arc chamber and linked charged body by three independent epoxy resin insulation shell phase isolation, using composite insulation structure, circuit breaker meet the normal operation conditions of air distance and distance requirements, and effectively reduce the volume of the circuit breaker dominant circuit vacuum arc chamber and static conductive connection installed in the insulation cylinder, make the phase is only 300mm. The electrical connection of the main circuit adopts fixed connection with high reliability.

Model and meaning



Use environmental conditions

◆ Altitude: no more than 2,000 meters;

◆ Ambient temperature: upper limit is + 40℃, lower limit is + 15℃;

◆ Relative humidity: daily average is not more than 95%, monthly average is not more than 90%;

◆ Seismic intensity: no more than 8 degrees; no fire and explosion risk, no severe vibration and chemical corrosion and other serious pollution places. Note: If the above environmental conditions are exceeded, please negotiate with the manufacturer.

design feature

The circuit breaker adopts the arc extinguishing chamber and the overall arrangement of the mechanism, which is conducive to debugging.

Using air and organic material composite insulation structure, compact design, light weight. It can be equipped with the vacuum arc extinguishing chamber and domestic ZMD vacuum arc extinguishing chamber of Cutler-Hammer company. The two kinds of arc extinguishing chambers adopt vertical magnetic field for arc extinguishing, low interception, and good asymmetric opening performance. Simple spring operating mechanism, 10000 operations maintenance free.

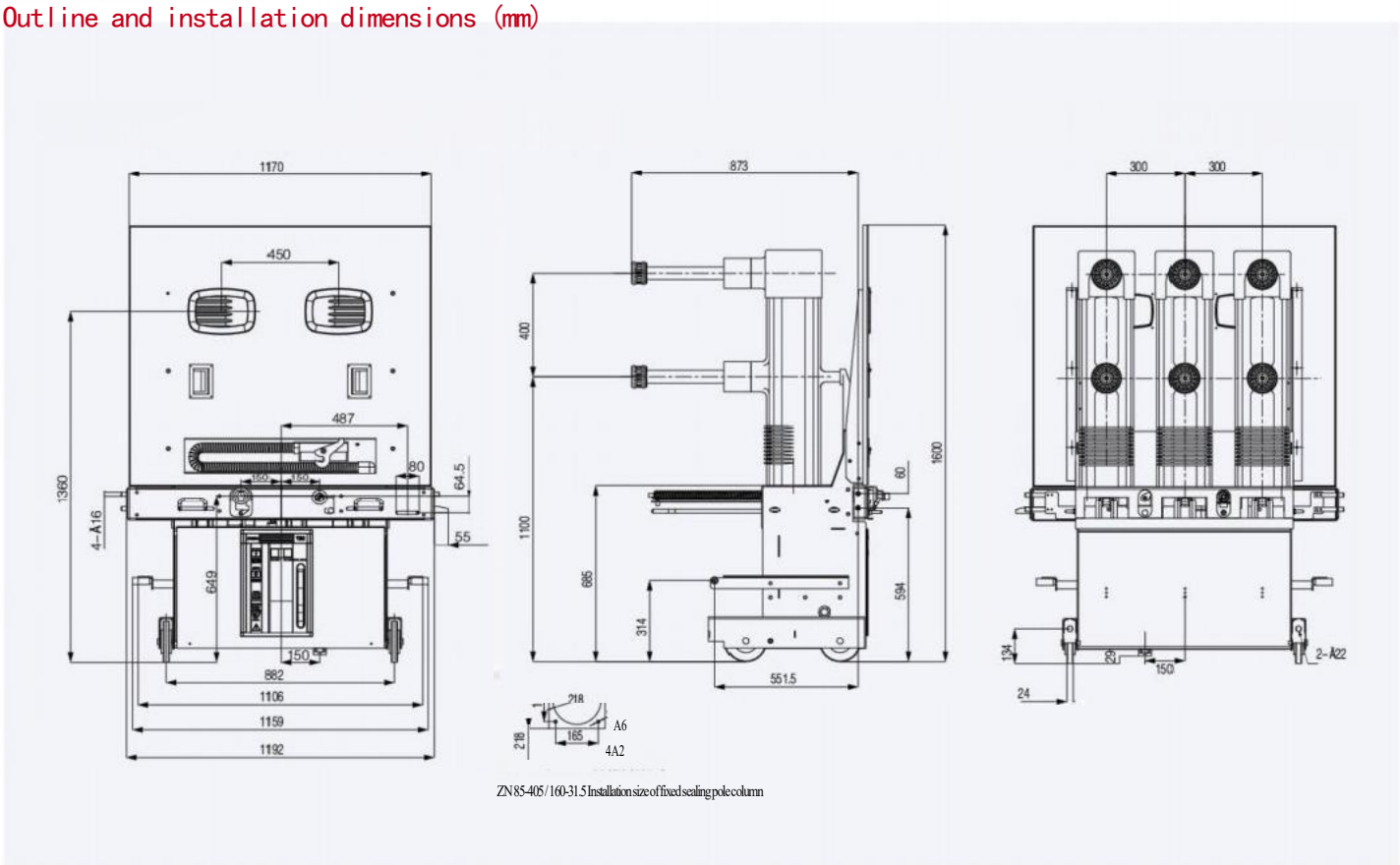
ZN85-40.5

Indoor high-pressure vacuum circuit breaker

Main technical parameters

oject		unit	parameter			
rated voltage		kV	40.5			
rated current		A	1250		1600	2000、2500
Rated short circuit open break current		kA	25	31.5	25	31.5
Dynamic stable current (peak value)		kA	63	80	63	80
4S thermal stable current		kA	25	31.5	25	31.5
Rated short circuit off current (peak)		kA	63	80	63	80
Rated short circuit current break times		Times	20			
Rated operation order			0-0.3 S-CO-180s-CO			
Rated insulation level	1 min power frequency withstand voltage	kV	95			
	Lightning impact withstand voltage (peak value)		185			
mechanical life		Times	10000			
Rated single capacitor bank open and current		A	630			
Rated back to back capacitor pack current		A	400			
Rated voltage of the energy storage motor		V	AC、DC:110;220			
Energy storage motor rated power		W	≤230			
Energy storage motor energy storage time		S	≤15			
Rated voltage of the switch coil		V	Dc:110;220			
Rated current of the switch coil		A	1.05(110V)0.96(220V)			
clearance between open contacts		mm	20±2			
Touch contact trip		mm	7.5±1.5			
Three phase is inconsistent		ms	≤2			
Bulounce time of contact closing		ms	≤3			
Main circuit resistance (excluding touch wall)		μQ	≤40			

Outline and installation dimensions (mm)



ZN85-405/160-31.5 Installation size of fixed sealing pole column

ZNF-12GD(R)

Indoor high voltage three-station vacuum load switch

summary

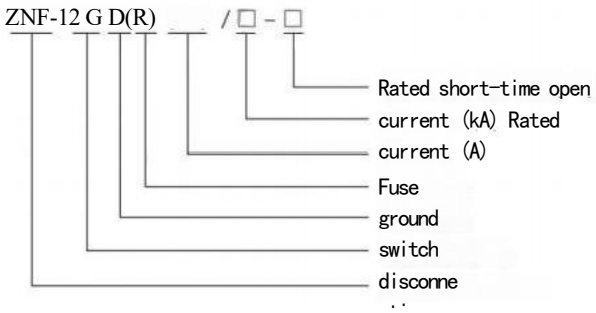
Products suitable for 6-12 kV medium voltage power grid;

Two products JJD-12GD/630-25. JD-12GD/1250-31.5;

This product integrates vacuum circuit breaker, disconnecting switch, grounding switch and sensor; the product design is side-mounted product, meet the trend of miniaturization, the fitting cabinet size is (45010001800).

Traditional high voltage fixed switch cabinet XGN 2 or XGN 66, etc., in the complete factory need separate isolation switch, vacuum circuit breaker, ground switch, sensors, installation and debugging mechanical interlocking, complex process, large consumption, high technical requirements for workers, using the product, with multi-function vacuum circuit breaker, switch body with isolation station, circuit breaker station, grounding station more integrated, systematic, simple, fast, convenient and reliable installation.

Model meaning



regular service conditions

- Peripheral air temperature: -25℃ ~ + 40℃;
- Relative humidity: daily average 95%, monthly average 90%;
- Altitude: not more than 1000 meters;
- Seismic intensity: no more than 8 degrees;
- Place of use: no explosion risk, chemical and violent vibration.

Main technical parameters

project		unit	parameter
rated voltage		kV	12
Rated insulation level (Interphase and ground and fracture)	1 min power frequency withstand voltage (effective value)	kV	42
	Lightning shock withstand voltage (peak value)		75/85
rated current		A	630/1250
rated frequency		Hz	50/60
Rated short circuit open break current		kA	20、25、31.5
rated dynamic current		kA	50、63、80
Rated heat-stable current		kA	20、25、31.5

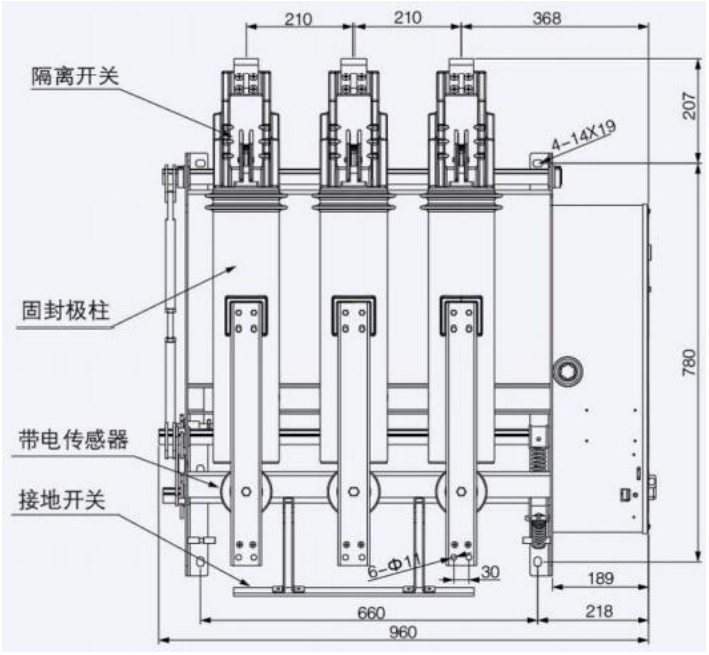
ZNF-12GD(R)

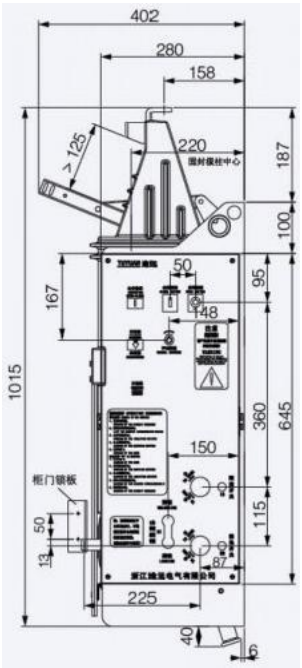
Indoor high voltage three-station vacuum load switch

Main technical parameters

project	unit	parameter
Rated heat stabilization time	S	4
DC star with rated short circuit breaking current	%	38
Rated short circuit open current open break times	Times	50
The different phase ground fault breaking capability is capacity	kA	17.4
Normal operation order		0-0.3S-CO-180S-CO
closing time	mS	≤40-55
Switching time	mS	≤27-35
Rated opening time	mS	<50
Mechanical life of the circuit breaker	Times	10000
Rated voltage of the auxiliary circuit	DC	220,110,48
Maximum power consumption of the auxiliary circuit	VA	100
Isolation switch life	Times	3000
Earthing switch life	Times	3000
weight	KG	120

Outline and installation dimensions (mm)





ZW32-12F

Switch the circuit breaker on the outdoor primary and secondary fusion column

summary

ZW 32-12F outdoor column vacuum circuit breaker is a new generation product developed by our company corresponding to the new requirements of the primary and secondary integration of the grid. The switch configuration fully meets the requirements of the primary and secondary integration of the State Grid, which is convenient for the unified procurement and mass production of the State Grid. The switch is compact in structure, with reasonable layout and complete functions. All indexes meet the requirements of state Grid; uniform protection CT, zero sequence CT and zero sequence voltage sensor, which has the characteristics of wide measuring range, high measuring accuracy and high reliability, and complete simulation to accurately determine various faults of the line.

ZW 32-12F switch body is pillar type, using solid sealed vacuum arc extinguishing chamber, silicone rubber sealing (as insulation and buffer), small size, packaged in epoxy resin insulation cylinder, excellent condensation performance, long working life and reliable performance. The spring operating mechanism is miniaturized and optimized, and the reliability is much higher than the traditional spring mechanism. Meet environmental requirements: oil and SF6 gas, high antifouling grade, beautiful, light, easy to transport. External 1 group of EVT, ECT (three-phase voltage, current, zero-sequence voltage, current, used for measurement, measurement and protection). External 2 electromagnetic single-phase power supply PT, 10/0.1/0.22KV.

Model and meaning

zW32-12F/I 630-25

- Rated short circuit break current (kA)
- rated current (A)
- Spring operation mechanism
- FTU: Secondary rated voltage
- rating (kV)
- Design serial number
- An outdoor — vacuumbreaker

Main technical parameters

Main technical parameters of the circuit breaker

project			unit	parameter
rated voltage			kV	12
The insulation level of the broken mouth	Working frequency (dry test)		kV	48
	Lightning impact test voltage (peak value)		kV	85
Ground-level and interphase insulation levels	power frequency	Dry try	kV	42
		Wet try	kV	34
	Lightning impact test voltage (peak value)		kV	75
rated current			A	630
Rated short circuit open break current			kA	25
Rated short circuit open current open break times			Su bk A	30
Rated short-time current				25
Rated short-circuit duration			S	4
Rated short circuit off current (peak)			kA	63
Rated peak order to withstand current			kA	63
mechanical life			Times	10000
Number of open rated current			Times	10000
net weight			kg	180

ZW32-12F

Switch the circuit breaker on the outdoor primary and secondary fusion column

Mechanical characteristics parameters

project	unit	parameter
Contact pitch (mm)	mm	9±1
Contact contact stroke (mm)	mm	2±0.5
Contact closing bounce time (ms)	ms	≤2
Resistance (μ Q) of each phase (ms)	μ Ω ms	≤120 ≤2ms
Closing closing (ms)	mm	≤2ms
Aaverage speed (m/s)	m/s	0.8～1.2m/s
Average closing speed (m/s)	m/s	0.4～0.8m/s
Closing time; closing time	ms ms	20～ 6018～ 45
Interphase center distance	mm	340
Rated power of the energy storage motor	W	40
Rated voltage of the energy storage motor	V	DC24
Rated rating and closing operating voltage	V	DC24

Main technical parameters

Electronic-type current sensor		
Rated current ratio	phase current	600A/1V
	zero-sequence current	20A/0.2V
Accurate level	phase current	0.5S/5P10
	zero-sequence current	10P10,(1%--120%)In<1%
Implementation method		Low power electromagnetic type
load impedance		≥20kQ
temperature range		-40℃-70℃
Electronic-type voltage sensor		
rated voltage ratio	phase voltage	(10kV/)/(3.25V/)
	residual voltage	(10kV/)/(6.5V/3)
Accurate level	phase voltage	0.5
	residual voltage	1
Implementation method		Resistance division pressure
temperature range		40℃-70℃
Bureau put		At 14.4kV, 10 pC
load impedance	Terminal input impedance> 10 MQ Distribution line loss acquisition module input impedance 310 MQ 3 Integrated impedance of> 5 MΩ	
Electromagnetic type voltage transformer (external type)		
Quantity (only)		2
Rated voltage ratio (kV)		10/0.1/0.22
Accurate level		0.5
capacity (VA)	10 / 0.1 winding, 30VA 10 / 0.22 winding, meet the product power consumption requirements rated capacity 150VA short -time capacity 300VA / 1s	

W20-12F

Switch the circuit breaker on the outdoor primary and secondary fusion column

summary

ZW 20-12F outdoor column vacuum circuit breaker is a new generation product developed by our company according to the new requirements of the primary and secondary integration of the switch on the column. The switch configuration fully meets the requirements of the primary and secondary integration of the State Grid, which is convenient for the unified procurement and mass production of the State Grid. The switch is compact in structure, with reasonable layout and complete functions, all indexes meet the requirements of state grid; protection CT, zero sequence CT and zero sequence voltage sensor with uniform parameters, with the characteristics of wide measuring range, high measuring accuracy and high reliability, and complete simulation to accurately determine various faults of the line.

ZW 20-12F switch body is a common box type, using vacuum arc extinguishing SF 6 gas insulation. The box body adopts gas sealing, explosion-proof and insulation structure technology, and the overall sealing performance is excellent. The internal charged SF6 gas does not leak and is not affected by the external environment. The spring operating mechanism is miniaturized and optimized, and the operation reliability is much higher than the traditional spring mechanism in China. Built-in 1 group of EVT, ECT (three-phase voltage, current, zero-sequence voltage, current, used for measurement, measurement and protection). External 2 electromagnetic single-phase power supply PT,10/0.1/0.22 kV.

Model and meaning

zw20-12E/I 630-25

- Rated short circuit break current (kA)
- rated current (A)
- Spring operation mechanism
- FTU: -Secondary set
- -Rated voltage level (kV)
- -Design the serial number of the outdoor vacuumbreaker

Main technical parameters

Main technical parameters of the circuit breaker

project			unit	parameter
rated voltage			kV	12
The insulation level of the broken mouth	Working frequency (dry test)		kV	48
	Lightning impact test voltage (peak value)		kV	85
Ground-level and interphase insulation levels	power frequency	Dry try	kV	42
		Wet try	kV	34
	Lightning impact test voltage (peak value)		kV	75
rated current			A	630
Rated short circuit open break current			kA	20、25
Rated short circuit open current open break times			times	30、
Rated short-time current			kA	20、25
Rated short-circuit duration			S	4
Rated short circuit off current (peak)			kA	50、63
Rated peak order to withstand current			kA	50、63
mechanical life			Times	10000
Number of open rated current			Times	10000
net weight			kg	180

ZW20-12F

Switch the circuit breaker on the outdoor primary and secondary fusion column

Mechanical characteristics parameters

project	unit	parameter
clearance between open contacts	mm	g^4 5
Contact over-stroke switch speed	mm m/s	3^{+1} 1.2±0.2
closing speed	m/s	0.6±0.2
Bulounce time of contact closing	ms	≤2
Alternative center distance	mm	275±1
External charged air insulation distance, external creepage ratio distance	mm cm/kV	235±2 3.8
Three-phase switching is different	ms	≤2
The conductive circuit resistance of each phase	μΩ	≤150
closing time	ms	20～60
Switching time	ms	18～45
Rated power of the energy storage motor	W	40
Rated voltage of the energy storage motor	V	DC24
Rated closing operating voltage SF6 Gas rated pressure (gauge pressure)	V mpa	DC24 “0”

Main technical parameters

Electronic-type current sensor		
Rated current ratio	phase current	600A/1V
	zero-sequence current	20A/0.2V
Accurate level	phase current	0.5S/5P10
	zero-sequence current	10P10, (1%--120%)In<1%
Implementation method		Low power electromagnetic type
load impedance		≥20kQ
temperature range		-40℃-70℃

Electronic-type voltage sensor		
rated voltage ratio	phase voltage	(10kV/3)/(3.25V/√3
	residual voltage	(10kV/)/(6.5V/3)
Accurate level	phase voltage	0.5
	residual voltage	1
Implementation method		Resistance division pressure
temperature range		-40℃-70℃
Bureau put		At 14.4kV, 10 pC
load impedance	Terminal input impedance> 10 MQ distribution line loss acquisition module input impedance> 10 MQ comprehensive impedance> 5M Ω	

Electromagnetic type voltage transformer (external type)	
Quantity (only)	2
Rated voltage ratio (kV)	10/0.1/0.22
Accurate level	0.5
capacity (VA)	10 / 0.1 winding, 30VA 10 / 0.22 winding, meet the product power consumption requirements rated capacity 150VA short-time capacity 300VA / 1s

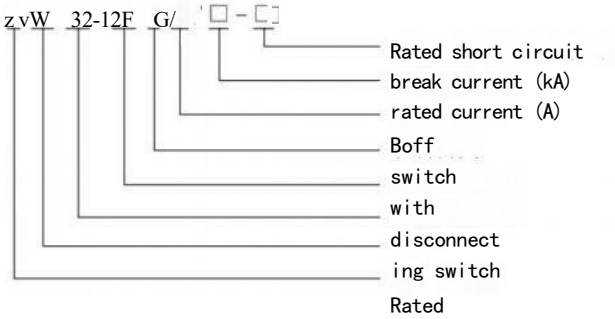
ZW32-12F

Outdoor high-pressure vacuum circuit breaker (intelligent type)

summary

In case of internal failure of the 12kV overhead distribution line T connection line or the terminal user, the protection time of the incoming switch and the protection time of the substation cannot be properly adjusted, which will cause the outlet switch of the substation to trip. If the fault is permanent in nature, the substation overlap will not succeed, then a local accident within a medium voltage user boundary will blackout the entire 12 kV distribution line. If an outdoor dividing circuit breaker is installed at the T junction or the user end (responsibility dividing point), the fault within the user boundary (overcurrent, short circuit, single phase grounding), and the fault will be automatically isolated, ensuring the normal power consumption of users in the non-fault area. The application of ZW 32-12F outdoor high voltage vacuum circuit breaker (intelligent) in 12 kV feed overhead line can avoid the joint accident power failure, reduce the scope of fault power failure, shorten the power failure time of users, and protect the safe operation of the main network. And has the function of fault detection, protection control function and communication function, can realize automatic removal of single-phase ground fault and automatic isolation of interphase short circuit fault. The installation point uses the responsibility boundary point from the incoming line of the 12 kV distribution line user, and can also be applied to the branch line connection that meet the requirements.

Model and meaning



Use environmental conditions

- Ambient temperature: not more than + 40℃, not less than-40℃;
- Air relative humidity: daily average is not more than 95%, monthly average is not more than 90%;
- An altitude of no more than 2,000 meters;
- Wind pressure not exceeding 700 Pa (equivalent to a wind speed of 34 m/s);
- The seismic intensity shall not exceed magnitude 8;
- No fire, explosion, serious pollution, chemical corrosion and violent vibration places.

Main technical parameters

Main technical parameters of the circuit breaker

project		unit	parameter	
rated voltage		kV	12	
rated current		A	630.1250	
rated frequency		Hz	50	
Power frequency withstand voltage (1min)	Dry (alternate, ground / fracture)	kV	42/48	
	Wet test (against ground and external insulation)		34	
Lightning shock withstand current (peak) (interphase, ground / fracture)		kA	75/85	
Rated short circuit open break current		kA	20	25
Rated short circuit off current (peak)		kA	50	63
Rated bee values to withstand current		kA	50	63
4S short-time withstand current		kA	20	25

ZW32-12F

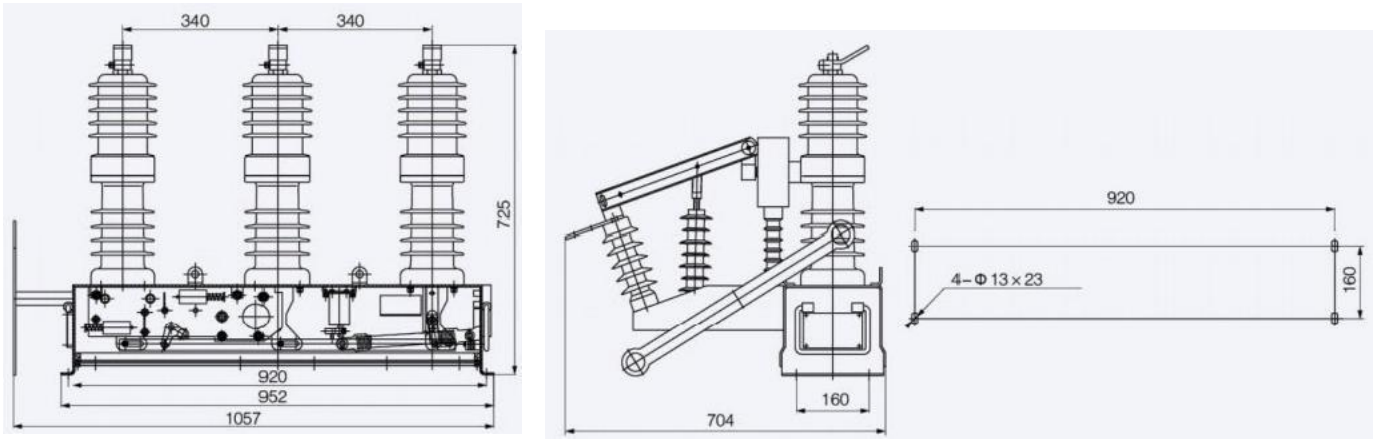
Outdoor high-pressure vacuum circuit breaker (intelligent type)

Main technical parameters

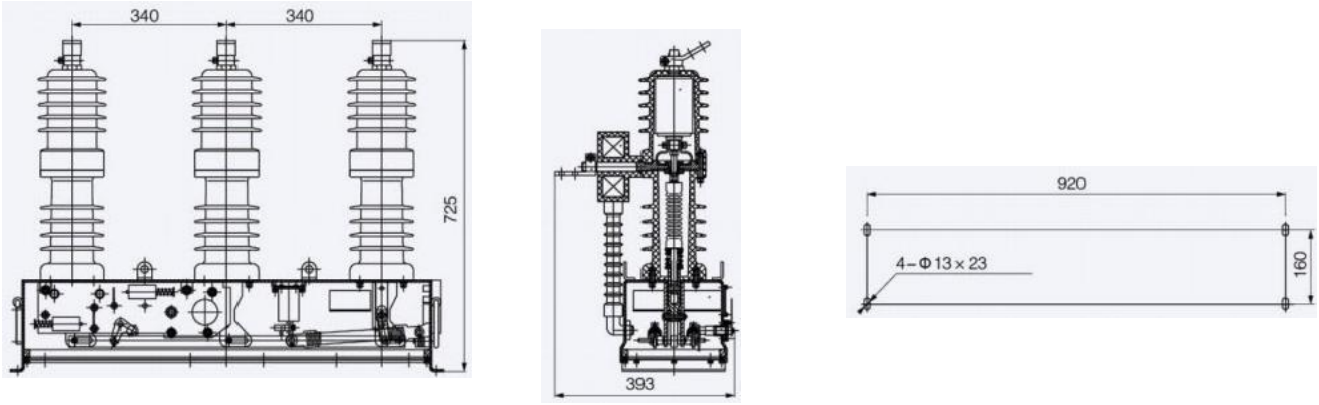
Main mechanical parameters of the circuit breaker

project	unit	parameter
Rated operation cycle		Points-0.3s-split-180s-split
Rated short circuit current break times	Times	30
mechanical life	Times	10000
Secondary circuit: 1min power frequency withstand voltage	kV	2
clearance between open contacts	mm	9±1
Touch the head over the trip	mm	2.5±1
Switching speed	m/s	1.1±0.3
closing speed	m/s	0.6±0.2
Bulounce time of contact closing	ms	≤2
Alternative center distance	mm	340±2
Three-phase split and synchronization	ms	≤2
The conductive circuit resistance of each phase	μΩ	80 (with isolation 150)
weight	kg	About 7 0

Outline and installation dimensions (mm)



The ZW 32-12G band is in isolation



ZW 32-12 without isolation

ZW20-12F

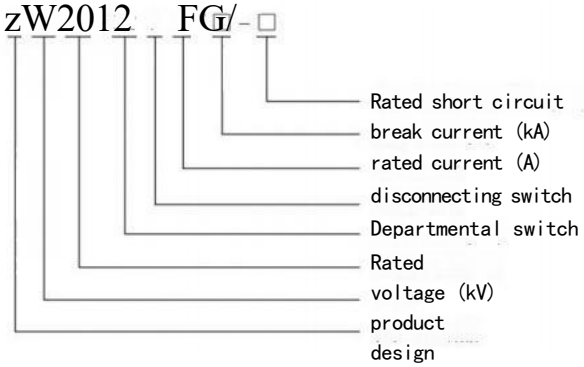
Outdoor high-pressure vacuum circuit breaker (intelligent type)

summary

The ZW 20-12F outdoor high voltage vacuum circuit breaker (intelligent type) is an outdoor high voltage switchgear with a rated voltage of 12kV and a three-phase AC voltage of 50 / 60 Hz. It is mainly used for load current, overload current and short circuit current of switching off and closing power system.

It is suitable for substations, industrial and mining enterprises and urban and rural distribution network for protection and control, especially for frequent operation of places and urban network automatic distribution network. This product and controller matching, can meet the requirements of distribution automation system, and can reliably and effectively complete the traditional coincidence function. It adopts a mature box-type sealing structure, with good sealing performance, so that it is not affected by the external environment, is a maintenance-free product. Its spring operating mechanism or permanent magnet operation mechanism has high reliability and is good for circuit breaker on the column.

Model and meaning



design feature

◆ Miniature-size design;

◆ Box inverted structure, full sealing, simple sealing effect, high anti-fouling grade;

◆ Transmission mode is novel, simple and reliable;

◆ The main components are sealed in the box to achieve real maintenance free;

◆ External voltage transformer and disconnecting switch can be installed.

Use environmental conditions

◆ Operating environment temperature: not more than 40℃; the daily average temperature is not more than 35℃; the minimum ambient air temperature is-25℃;

◆ Relative air humidity: daily average is not more than 95%, monthly average is not more than 90%; daily average water vapor pressure is not more than 2.2 kPa, monthly average is not more than 1.8 kPa;

◆ Altitude: not more than 2000m;

◆ There is no obvious contamination by dust, smoke, corrosive and / or combustible gases, vapors or salt spray around it;

◆ The vibration or ground motion from the outside of the switchgear and the control equipment is negligible;

◆ The amplitude of the induced electromagnetic interference in the secondary system does not exceed 1.6kV.

ZW20-12F

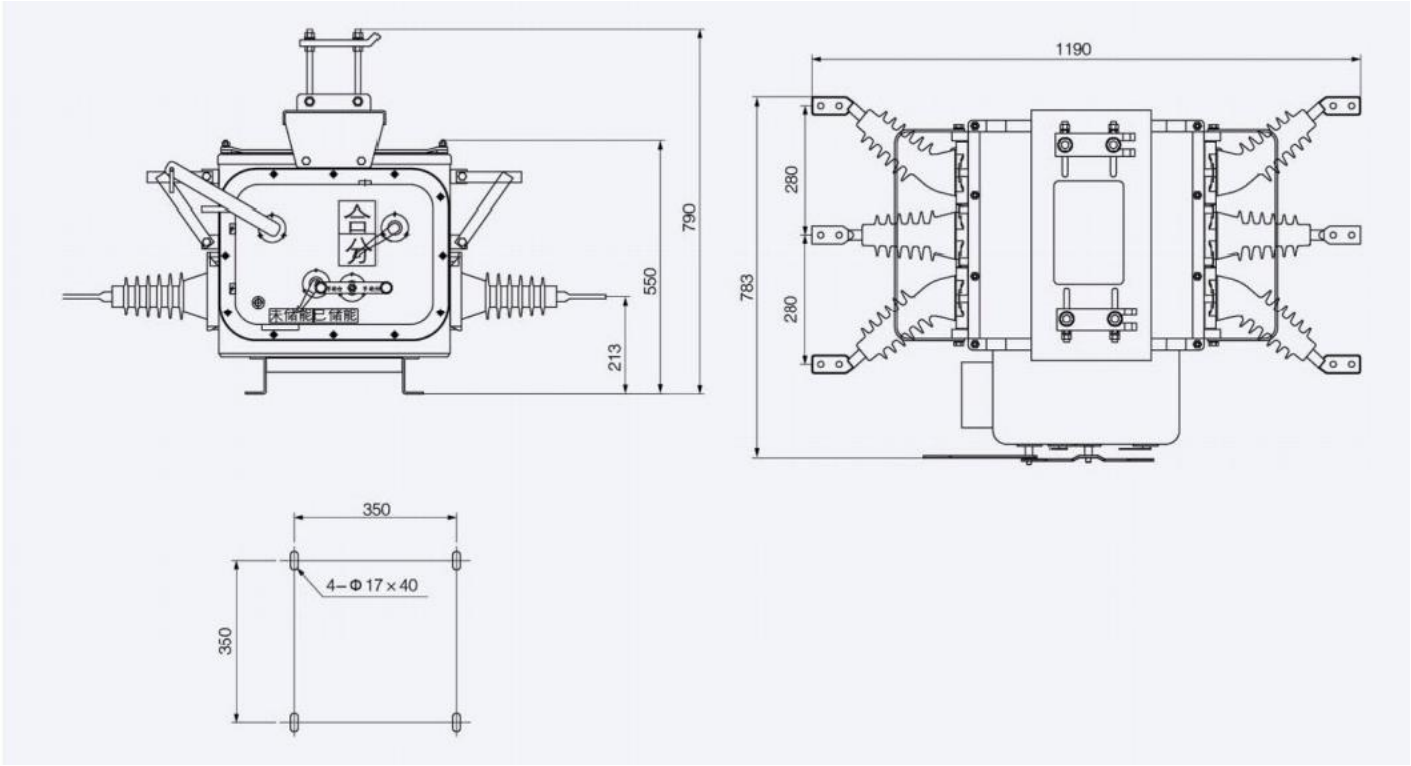
Outdoor high-pressure vacuum circuit breaker (intelligent type)

Main technical parameters

Main mechanical parameters of the circuit breaker

project	unit	parameter
Power frequency withstand voltage (1 min): interphase, ground / break	kV	42/48
Lightning impact withstand voltage (peak) interphase, ground / break	kV	75/85
Secondary circuit: 1min power frequency withstand voltage	kV	2
net weight	kg	140 (with isolation 170)
clearance between open contacts	mm	9±0.5
Touch the head over the trip	mm	3±0.5
Switching speed	m/s	1.2±0.2
closing speed	m/s	0.6±0.2
Bulounce time of contact closing	ms	≤2
Alternative center distance	mm	135±1.5
External charged air insulation distance	mm	240±2
External climbing ratio	cm/kV	3.8
Three-phase switching is different	m5	≤2
The conductive circuit resistance of each phase	μQ	150 (with isolation 200)
closing time	ms	≤45
Switching time	ms	≤45
Isolation and opening distance	mm	≥190
Touch blade rigid closing position deflection	mm	≤2
Manual split and closing operating moment	N.m	≤150
Rated power of the energy storage motor	W	→40
Rated voltage of the energy storage motor	V	AC220
Rated closing operating voltage	V	AC220
Maximum / lowest closing operating voltage	V	AC264/143
Rated gate operating voltage	V	AC220
Maximum / minimum switch operating voltage	V	AC264/143
Maximum / lowest motor voltage	V	AC242/187
SF6 Gas rated pressure (gauge pressure)	MPa	“0”

Outline and installation dimensions (mm)



ZW8-12F

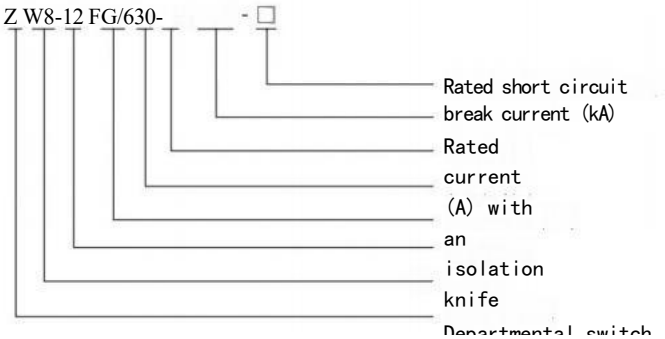
Outdoor high-pressure vacuum circuit breaker (intelligent type)

summary

ZW 8-12F series vacuum circuit breaker is a high voltage outdoor switchgear with rated voltage of 12 kV and three-phase AC of 50 Hz, which is mainly used to cut off the load current, overload current and short circuit current of rural grid, urban network and small power system. The overall structure of the product is three-phase co-box type, three-phase vacuum arc extinguishing chamber placed in the metal box, using SMC insulation material and ground insulation, reliable performance and high insulation strength.

ZW 8-12G is composed of ZW 8-12 circuit breaker and isolation knife, called the combined circuit breaker, which can be used as a segment switch. The operating mechanism of this series of products is CT23 type spring energy storage operating mechanism, which is divided into electric and manual two kinds. The circuit breaker has the function of closing surge flow control and meet the control and measurement requirements. Equipped with an electronic control unit, it can realize the "four remote" monitoring.

Model and meaning



Main technical parameters

project		unit	6.3kA	12.5kA	20kA
rated voltage		kV	12		
rated current		A	630		
Rated short circuit open break current		kA	6.3	12.5	20
Rated short circuit off current (peak)		kA	16	31.5	50
Rated peak order to withstand current		kA	16	31.5	50
Rated short-time current		kA	6.3	12.5	20
Rated insulation level	Lightning impact withstand voltage (peak value)	kV	75		
	1 min power frequency withstand voltage	kV	42		

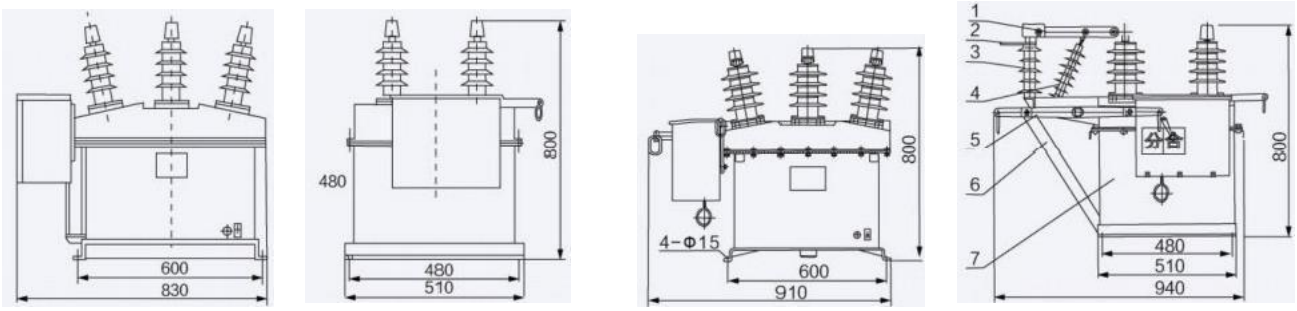
ZW8-12F

Outdoor high-pressure vacuum circuit breaker (intelligent type)

Main technical parameters

project		unit	6.3kA	12.5kA	20kA
Rated operation sequence of mechanical life		Times	Points-0.3s-combined-180s-combined-10000		
Rated short circuit open current breaking times operating mechanism rated closing voltage		V t i m e s	30 110,220		
Rated switch voltage of the operating mechanism		V	110,220		
clearance between open contacts		mm	11±1		
Over-stroke (contact spring compression length)		mm	3±0.3		
Three-phase separation, closing is inconsistent		ms	≤2		
Bulounce time of contact closing		ms	≤2		
Average split speed		m/s	1.0±0.2		
Average closing speed		m/s	0.7±0.15		
Switching time	At the maximum operating voltage and at the minimum operating voltage	ms ms	15-50 30-60		
closing time		ms	25-50		
Main circuit resistance of each phase		μΩ	120 (with G 200)		
Dynamic and static contact allow to wear accumulated thickness		mm	3		
weight Alternative center distance		kg mm	152 (with G180) 175 ± 1.5		

Outline and installation dimensions (mm)



ZW 8-12F shape and installation dimensions drawing ZW 8 G-12 shape and installation dimensions

1. Contact blade 2. Touch blade seat 3. Touch knife pillar 4. insulation pull rod 5

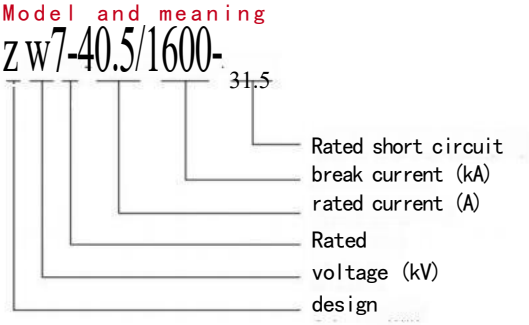
ZW7-40.5

Outdoor high-pressure vacuum circuit breaker

summary

ZW 7-40.5 outdoor high voltage vacuum circuit breaker is used for three-phase power system with AC 50Hz and rated voltage of 40.5 kV, which is used as breaking and closing load current, overload current and short circuit current.

Model and meaning



Use environmental conditions

- Air temperature: upper limit + 40℃, lower limit-30℃;
- Altitude: 2000 m (if the altitude needs to increase, the rated insulation level will be increased accordingly);
- Wind pressure: not more than 700 Pa (equivalent to the wind speed of 34 m/s);
- Seismic intensity: 8 degrees;
- Filth grade: grade;
- Maximum daily temperature difference: not exceeding 25℃.

major function

Using vacuum arc extinguishing, strong breaking ability, long electrical life, mechanical life 10000 times;

Simple structure, maintenance free,

no maintenance cycle; good

insulation performance, strong anti-

pollution ability;

It can be equipped with spring or electromagnetic operation mechanism,

reliable mechanical performance and frequent operation; no fire and explosion

hazard; internal current transformer, calculation accuracy of 0.2 level,

three-phase interactive protection;

The condensation controller is attached inside, which can keep the circuit breaker to operate reliably at a certain temperature and humidity.

ZW7-40.5

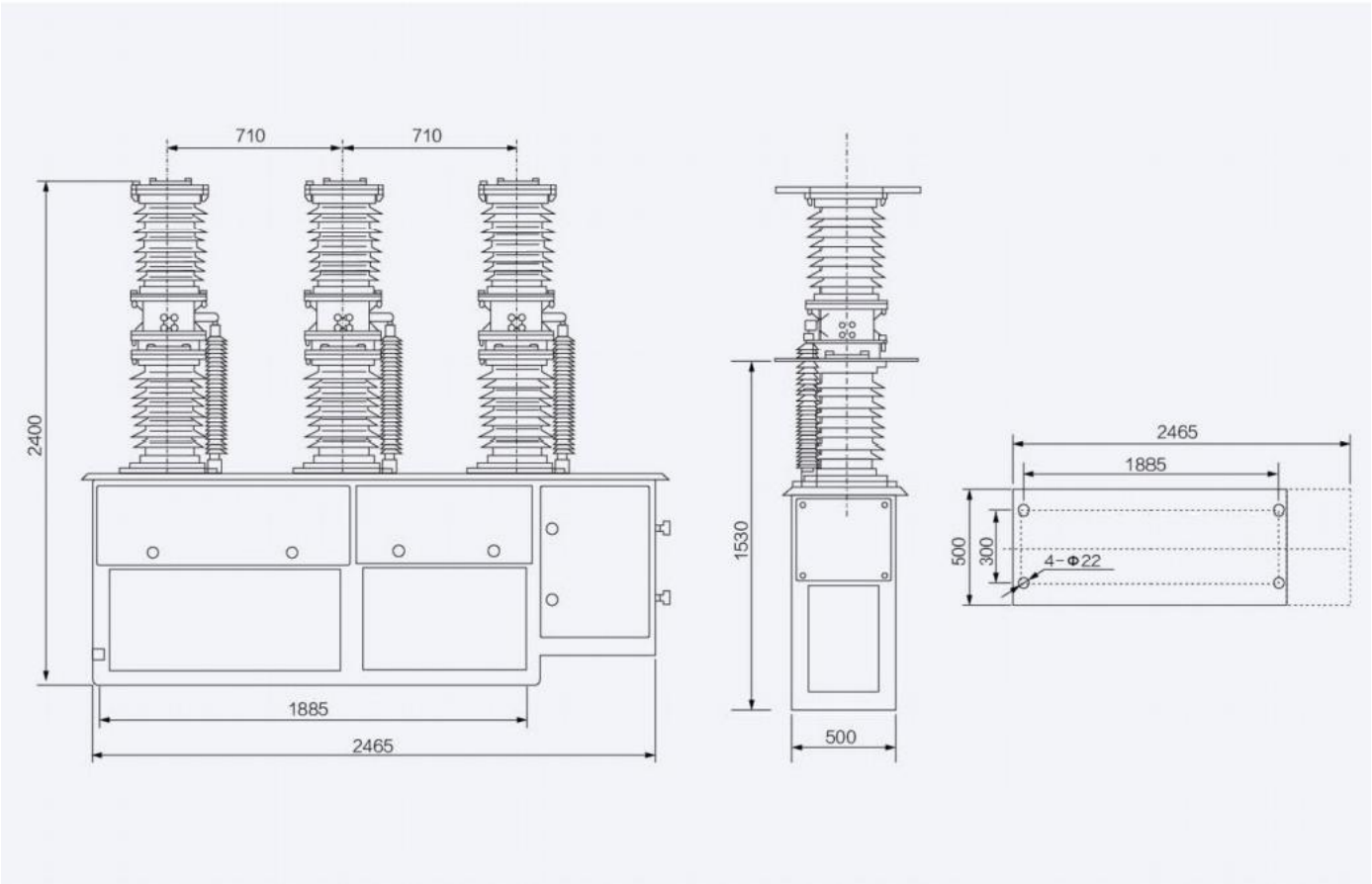
Outdoor high-pressure vacuum circuit breaker

Main technical parameters

project			unit	parameter
rated voltage			kV	40.5
Rated insulation level	power frequency withstand voltage	dry-type	kV	95
		wet-type	kV	80
	Lightning impact withstand voltage (peak value)		kV	185
rated current			A	1250、1600、2000
Rated short circuit open break current			kA	20、25、31.5
Rated operation order				Points-0.3s combined-180s
Rated short circuit current break times			Times	12
Rated short circuit off				

project	unit	parameter
Average split speed	m/s	1.5±0.2
Average closing speed	m/s	0.7±0.2
Bulounce time of contact closing	S	≤2
Three-phase (sub) gate simultaneous time difference	S	≤2
closing time	S	≤150
Switching time	S	≤60
mechanical life	Times	10000
Rated operating voltage and the rated voltage of the auxiliary circuit	V	DC220、110、24
Rated operating voltage and the rated voltage of the auxiliary circuit	V	AC220、110、24
DC resistance per phase circuit (excluding transformer)	μΩ	≤100
Dynamic and static contact allow wear thickness	mm	3
weight	KG	800

Outline and installation dimensions (mm)

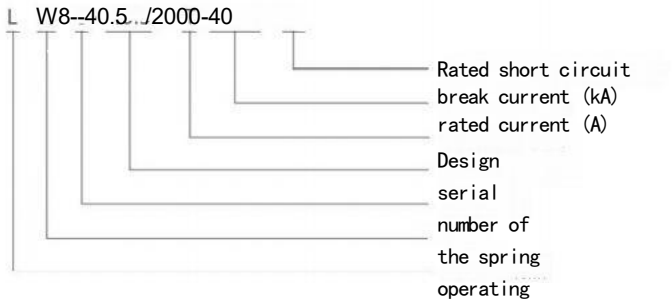


LW8/LW6/LW34-40.5/T2000-40 Outdoor high-pressure sulfur hexafluoride AC circuit breaker

summary

LW8/LW6/LW34-40.5/T2000-40 The outdoor high pressure sulfur hexafluoride AC circuit breaker is a small outdoor porcelain column structure with CT14 spring operating mechanism; the mechanism and body connection, simple installation, easy debugging, reliable operation, more than 3000 times; the compressor arc extinguishing structure, with strong breaking capacity, 40 kA for 12 times, the highest in China; the sealing performance is reliable. The imported sealant pad, the dynamic seal adopts "V" type sealing ring with spring pressure compensation structure, the secondary wiring board of the transformer is matched by the cooperative enterprise to ensure the annual leakage rate is <1%; the internal current transformer adopts the microcrystal alloy high magnetic conductivity material, which can reach 0.2 or 0.2s accurately, and 12 transformers can be attached according to the user needs. No-load long line 50 km without reignition.

Model and meaning



Main technical parameters

project		unit	parameter
rated voltage		kV	40.5
Rated insulation level	Lightning impact resistance (peak)	kV	185
	1 min power frequency withstand voltage	kV	95
rated current		A	2000
mechanical life		Times	3,000
Rated air pressure of sulfur hexafluoride gas (gauge pressure at 20℃)		Mpa	0.5
Alarm pressure / minimum functional pressure (gauge pressure at 20℃)		Mpa	0.47/0.45
Rated short circuit open break current		kA	40
Rated short circuit off current (peak)			100
Rated short-time withstand current (thermal stable current)			40
Rated peak withstand current (dynamic stable current)		kA	100
Rated step-off current		kA	10
Accumulated number of breaks under rated short circuit power off flow		Times	12
Rated short-circuit duration		s	4
Closing time (at rated operating voltage)		s	≤0.1
Opening time (at rated operating voltage)		S	≤0.06
Rated operation order			0-0.3s-CO-180s-CO
Rated to open and close the individual capacitor bank current		A	400
Annual air leakage rate		%	≤1

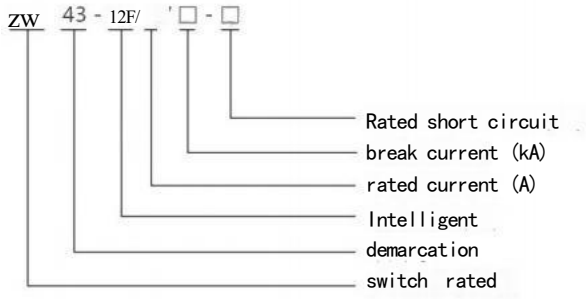
ZW43-12F

Outdoor high-pressure vacuum circuit breaker

summary

ZW 43-12F outdoor high voltage vacuum circuit breaker (intelligent type) is an outdoor high voltage switchgear with a rated voltage of 12kV and three-phase AC of 50 Hz. It is mainly used for the load current, overload current and short circuit current of breaking and closing power system. It is suitable for substations, industrial and mining enterprises and urban and rural distribution network for protection and control, especially for frequent operation of places and urban network automatic distribution network. It meets the following standards: GB / T1984 High voltage AC Circuit Breaker GB / T11022 Common Technical Requirements of High voltage Switchgear and Control Equipment Standard, DI402 Order Technical Conditions for AC High voltage Circuit Breaker.

Model and meaning



design feature

◆ Vacuum arc extinguishing chamber adopts patent fixed sealing technology, small size, long life, high reliability, shielding cover exposed; packaged in epoxy resin, good climate resistance, easy transportation operation mechanism using high reliability bistable permanent magnet technology, simple structure, no maintenance, mechanical life can be up to 30000 times;

◆ Epoxy wax packaging: in line with environmental protection requirements: widely verified outdoor performance: ozone and ultraviolet resistance; strong, light, not easy to break;

◆ Permanent magnet mechanism: few moving parts; no maintenance; application of bistable permanent magnet technology;

◆ Using vacuum arc extinguishing, solid insulation, small volume, light weight, large breaking capacity, high insulation level;

◆ Manual switch device: when the control system fails, the manual switch can be used for emergency switch operation to reliably open the rated load current;

◆ Position detector: the proximity switch is installed on the linkage axis, without mechanical components, simple and reliable detection of the platform position of the switch;

◆ Switch shell use of stainless steel or plastic spray treatment, corrosion resistance, good climate resistance;

◆ Disconnecting switch, forming a visible break and reliable interlock, forming a combination of electrical appliances;

◆ The controller realizes remote control, telemetry, remote communication, remote adjustment "four remote" function.

Performance advantages

This type of product is operated by the permanent magnet operating mechanism; because the permanent magnet operating mechanism is provided by the permanent magnet to keep the switch in the split and closing position, the number of mechanical parts is short, thus greatly improving the reliability and mechanical life of the switch.

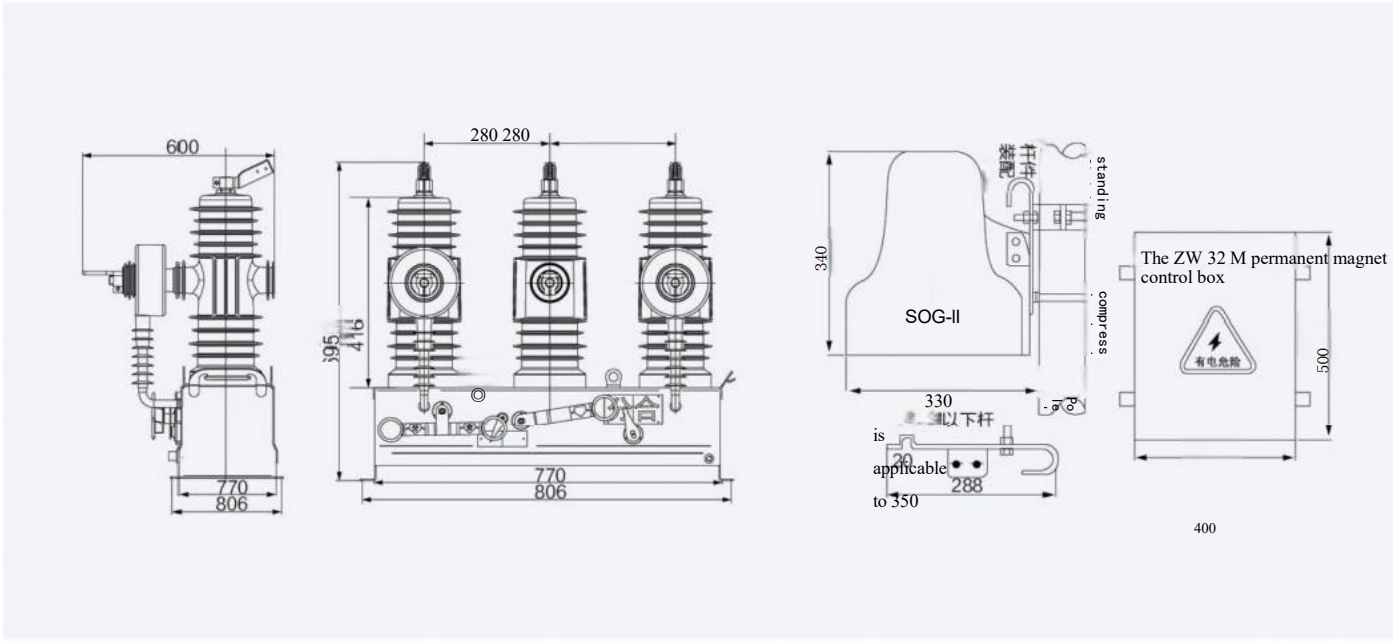
ZW43-12F

Outdoor high-pressure vacuum circuit breaker

Main technical parameters

project		unit	parameter	
rated voltage		kV	12	
Rated insulation level	1 min power frequency voltage (pole, ground / break)		shield	42/49
			wet	34
	Lightning impact resistance (pole and ground)		75	
	Lightning impact resistance (fracture)		85	
rated frequency		Hz	50	
rated current		A	630	
Rated short-time tolerance for current and duration		kA/4S	20	
Rated short circuit open break current		kA	20	
Rated short circuit off current			50	
Rated peak order to withstand current			50	
Rated operation order		/	0-0.3s-CO-180s-CO	
Rated short circuit current break times		Times	30	
mechanical life			30000	
Contact accumulated wear thickness		mm	3	
net weight		kg	70	

Outline and installation dimensions (mm)



FZ (R) N25-12 Vacuum load switch

summary

FZN25-12, FZN25-12R.D Type vacuum load switch and combined electrical appliances, applicable to three-phase AC 50 Hz ring network or terminal power supply and industrial power equipment, for load control and short circuit protection, load switch split load, closed loop current, no-load transformer and cable charging current. The combination appliance can break any current up to the rated short circuit current. The ight isolation break and vacuum arc chamber are used. With both manual and electric functions.

FZN25-12, FZN25-12R.D Unique transmission structure design, the arc extinguishing chamber only in the moment of closing and opening to withstand high pressure, so small volume, light weight.

FZN25-12, FZN25-12R.D One-time operation of isolation fracture and arc extinguishing chamber fracture.

FZN25-12, FZN25-12R.D There can be a grounding valve between the static contact and the dynamic contact conductor, which is connected with the grounding switch, which not only ensures safety and facilitates maintenance.

Model and meaning

FZN25- 12/ T630 20 -

- Rated short-time withstand current (kA)
- Rated current (A)
- Rated voltage (kV)
- design serial number
- Indoor vacuum load switch

FZN 25-12 R D/T125-31.5

- Rated short circuit break current (kA)
- Max maximum rated current (A)
- Ground switch
- fuse
- Rated voltage (kV)
- design serial number
- Vacuum load switch-fuse combination appliances

Use environmental conditions

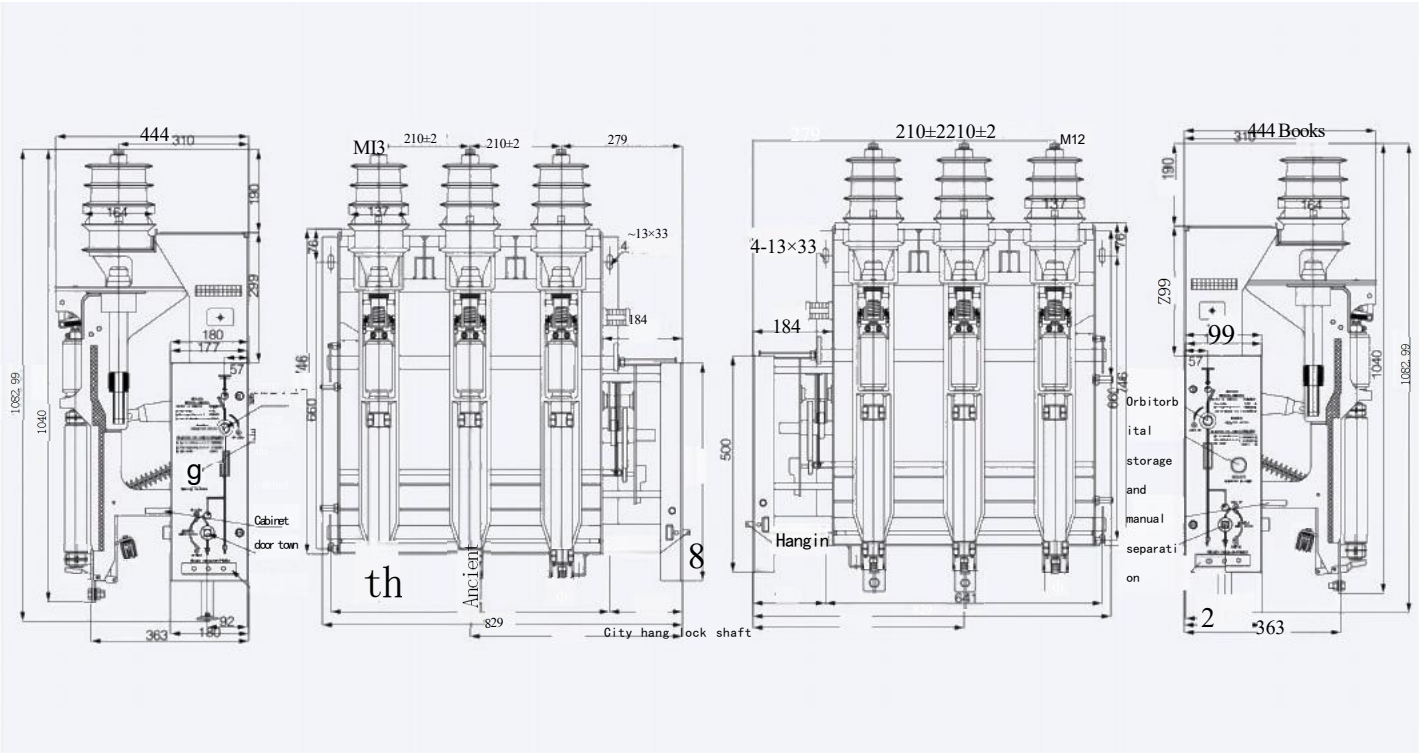
- Altitude: not more than 2000m;
- Ambient temperature: maximum temperature + 40℃; minimum temperature: -15℃;
- Relative humidity: 95%;
- Seismic intensity: magnitude 8
- Installation place: no water drop, fire, no explosion risk, serious pollution, chemical corrosion and violent vibration place.

FZ (R) N25-12 Vacuum load switch

Main technical parameters

project		unit	parameter	
			FZN25-12D/T630-20	FZN25-12R.D/T125-31.5
rated voltage		kV	12	
rated frequency		Hz	50	
rated current		A	630	125
Rated insulation level	1 min power frequency withstand voltage	kV	Arc extinguishing chamber break 30; ground and alternate 42; isolation break 48	
	Lightning impact pressure resistance	kV	Ground and alternate 75; isolation break 85	
Rated stable current (peak)		kA	50	
4S thermal stable current		kA	20	
Rated active load breaking current		A	630	125
Rated closed-loop open current		A	630	125
Rated cable charging open-break current		A	10	10
No-load transformer capacity		kVA	1250	1250
Rated short circuit open break current		kA		31.5
Rated transfer current, rated handover current		A		2000
Fuse model				SDLAJ-12 SFLAJ-12
Impactor to output energy		J		2-5 (Medium)
Rated short-circuit switch-off current		kA	50	
Ground switch is rated for dynamic and stable current		kA	50	
Ground switch 2S heat-stabilized current		kA	20	
Rated voltage of the auxiliary circuit		V	AC/CD:220/110	
mechanical life		Times	10000	

FZN 25-12D / 125-31.5 Vacuum Load Switch-Fuse Combined Appliance Size (mm)



FK(R)N12-12

Pressure gas type load switch

summary

FKN 12-12D / T630-20 indoor AC high voltage load switch (hereinafter referred to as FKN 12-12D load switch) is a three-phase high voltage switchdevice with rated voltage of 12 kV and rated frequency of 50 Hz, which is used for dividing load current, closed loop current, no-load transformer and cable charging current, and short circuit current. The load switch equipped with the ground switch can withstand the short-circuit current.

FKRN12-12D / T125-31.5 AC high voltage load switch- -fuse combination is an indoor high voltage switchgear with FZN 12-12D load switch and S □ LAJ-12 (XRNT □ -10) high voltage current-limiting fuse.

It can reliably break any current until short circuit current, load switch break working current, fuse break short circuit current, combined break any overcurrent between the working current and full short circuit current, at the same time the fuse makes the load switch through its impactor.

Model and meaning

F K N 12-12 D/T630-20

- Rated short-time withstand current (kA)
- Rated current (A)
- spring mechanism
- earth switch
- Rated voltage (kV)
- design serial

Description: The spring mechanism is divided into manual operation spring mechanism and electric operation spring mechanism.

FKRN12-12 P/I125-31.5

- Rated short circuit break current (kA)
- Fuse rated current (A)
- spring mechanism
- earth switch
- Rated voltage (kV)
- design serial number

Use environmental conditions

- Air temperature: -25℃ ~ + 40℃;
- Sea dial height: not more than 1000m;
- Relative humidity: daily average is not more than 95%, monthly average is not more than 90%;
- Earthquake strength: no more than magnitude 8;
- Installation site: no fire, explosion risk, chemical corrosion and violent vibration site;
- gradation for surface pollution: II.

main application

FKN 12-12D compressor load switch, FKRN12-12D series compressor load switch-fuse combination electrical appliance, suitable for 12 kV and below, as the control and protection of transformer, cable, overhead line and other power equipment; especially for terminal substation and box substation of urban network and rural grid. It is also suitable for the control and protection of ring network and double radiation power supply unit.

FKN 12-12D series compressor load switch can split the load current and overload current.

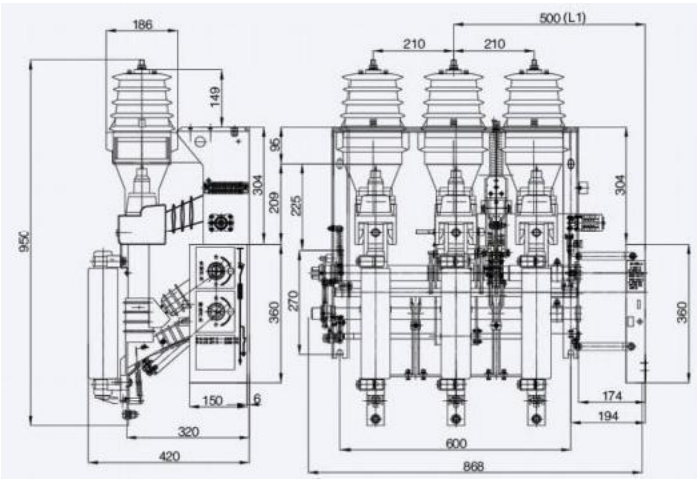
FKRN12-12D series compressor load switch-fuse combination electrical appliances can split load current, overload current, open line short circuit current.

FK (R) N12- 12 Pressure gas load switch

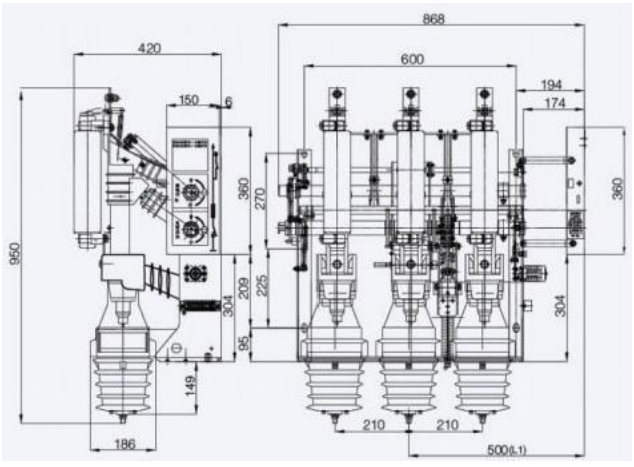
Main technical parameters

project			unit	FKN12-12D	FKRN12-12D
rated voltage			kV	12	12
rated frequency			Hz	50	50
rated current			A	630	125
Rated insulation level	1 min power frequency withstand voltage	To the ground, alternate	kV	42	42
		isolating fracture	kV	48	48
	Lightning shock withstand voltage (peak value)	To the ground, alternate	kV	75	75
		isolating fracture	kV	85	85
load switch			kA	20	
earth switch			kA	20	20
load switch			S	4	
earth switch			S	2	2
Rated short circuit off current (peak)			kA	50	
Rated off current	Active load breaking current		A	630	
Rated off current	Closed loop off current		A	630	
Rated off current	5% active load breaking current		A	31.5	
Rated off current	cable charging current		A	10	
Rated off current	No-load transformer capacity		kVA	1250	1250
Rated short circuit break current (current limiting fuse)			kA		31.5
Rated transfer current			A		1200
mechanical life			Times	2000	2000
Impactor to output energy			J		1+0.5

Outline and installation dimensions (mm)



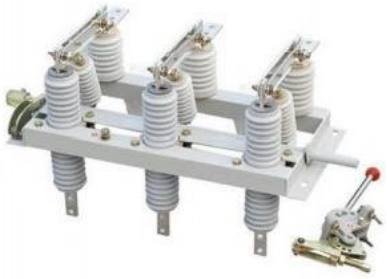
Note: L or L1 can be determined by the user, conventional L=174



Note: L or L1 can be determined by the user, conventional L=174

GN19-12

indoor high-voltage isolating switch



summary

GN 19-12 series indoor high voltage disconnecting switch is a high voltage switchgear, used for rated voltage 12 kV, AC 5 0 Hz and below power system, with CS6-1 manual operation mechanism, as in the case of voltage and no load, the split and combined circuit, also have derived products anti-pollution type, plateau type and add live display device.

Model and meaning

GN 19-12 / (C) / only

- Rated Heat stable current (kA) Rated current (A)
- Wear a wall
- Rated voltage
- (kV) design

Use environmental conditions

- Altitude: not more than 1000m;
- Air temperature: -25℃ ~ + 40℃;
- Relative humidity: the daily average is not more than 95%, the daily average is not more than 90%;
- Seismic intensity: no more than 8 degrees;
- Installation site: no fire, inflammable, explosive, serious pollution, chemical corrosion and violent vibration site.

Main technical parameters

model	Rated Voltage (kV)	rated voltage (V)	4-second thermal stable current (kA)	dynamic current (kA
GN19-12/(C)/400-12.5	12	400	12.5	31.5
GN19-12/(C)/630-20	12	630	20	50
GN19-12/(C)/1000-31.5	12	1000	31.5	80
GN19-12/(C)/125040	12	1250	40	100

GN30-12

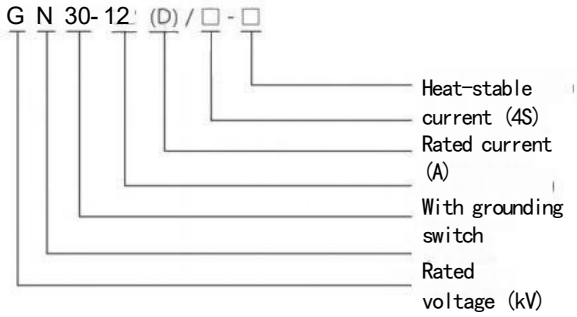
Indoor rotary high-voltage disconnecting switch

summary

GN 30-12 rotary indoor high voltage disconnecting switch is a new type of rotary touch touch switch. The main structure is to fix two groups of insulators and contacts on the upper and lower two planes of the three-phase common bottom frame. Through the rotating touch knife, so as to realize the split and closing of the switch.

GN 30-12D switch is the form of adding grounding knife on the basis of GN 30-12 switch, which can meet the needs of different power systems. This product is compact design, small space, strong insulation capacity, easy to install and adjust, its performance meets the requirements of GB1985-89 "AC high voltage isolation switch and grounding switch", suitable for the rated voltage 10 kV AC 50 Hz and below the indoor system, as the split circuit in the case of voltage and no load. It can be used with high voltage switchgear or used alone.

Model and meaning



Use environmental conditions

- Altitude: not more than 1000m;
- Air temperature: upper limit + 40℃; lower limit-10℃;
- Relative humidity: daily average is not more than 95%; monthly average is not more than 90%;
- Seismic intensity: no more than 8 degrees;
- Filty grade: no place without serious dust, chemical corrosive and explosive substances;
- Installation site: no place without frequent violent vibration.

Main technical parameters

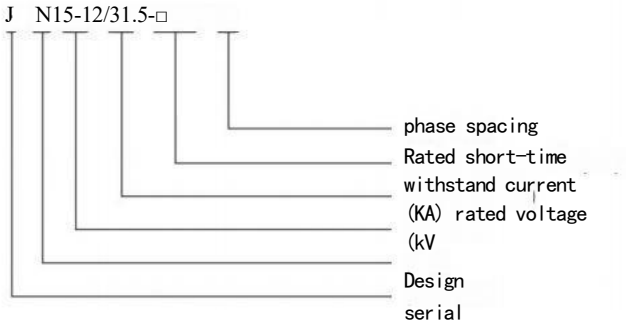
Product model, specification / item / parameters		GN30-12/400-12.5 GN30-12D/400-12.5	GN30-12/630-20 GN30-12D/630-20	GN30-12/1000-31.5 GN30-12D/1000-31.5	GN30-12/1250-31.5 GN30-12D/1250-31.5
Rated Voltage (kV)		2			
rated current (A)		400	630	1000	
Thermal stable current (KA)		12.5	20	31.5	1250
Thermal stabilization time (S)		4			
Dynamic stable current (KA)		31.5	50	80	
Rated insulation level	Lightning impact voltage (kV)	Interphase, phase ground 75, fracture 85			
Rated insulation level	1 min power frequency withstand voltage (kV)	Interphase, phase ground 42, fracture 48			

JN 15-12 / 31.5 indoor high voltage ground switch

summary

JN 15-12 / 31.5 indoor high voltage grounding switch is a new type of grounding switch with international advanced level developed by our company according to the prototype of ES 1 grounding switch. Structure form is assembly, its performance conforms to the requirements of GB1985-2004 "AC high voltage isolating switch and grounding switch" and IEC129, suitable for indoor 3-12 Kv three-phase ac 50 (60) Hz power system: it has a certain ability to protect other electrical equipment from damage, can be used with various high voltage switch cabinet, as the grounding protection of high voltage electrical equipment maintenance.

Model and meaning



Use environmental conditions

- Surrounding air temperature: upper limit + 40℃, lower limit-10℃;
- Sea dial height: not more than 1000 meters;
- Humidity conditions: the average daily relative humidity shall not exceed 95%, and the average monthly relative humidity shall not exceed 90%;
- Seismic column degree: no more than 8 degrees;
- Filth grade: grade.

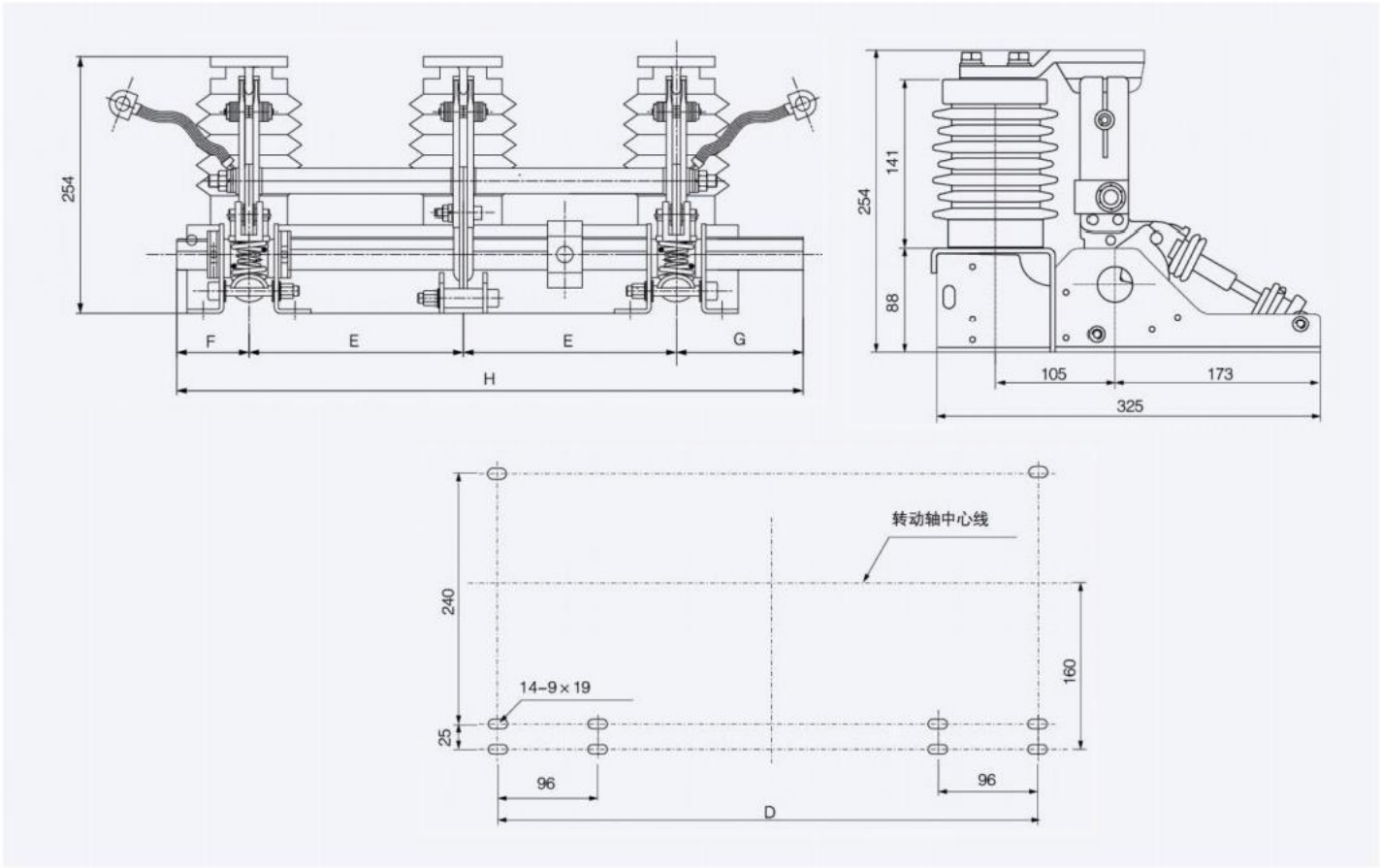
Main technical parameters

project		unit	parameter	
rated voltage		Kv	12	
Rated short-time withstand current (heat-stable)		KA	31.5	
Rated short-circuit holding time		S	4	
Rated short-circuit switch-off current		KA	80	
Rated peak withstand current (dynamic stable)		KA	80	
Rated insulation level	Rated short-time power frequency withstand voltage	kV	Relative and alternate	42
Rated insulation level	Rated lightning impact withstand voltage	kV	Relative and alternate	75
mechanical life		Times	2000	

JN15-12/31.5

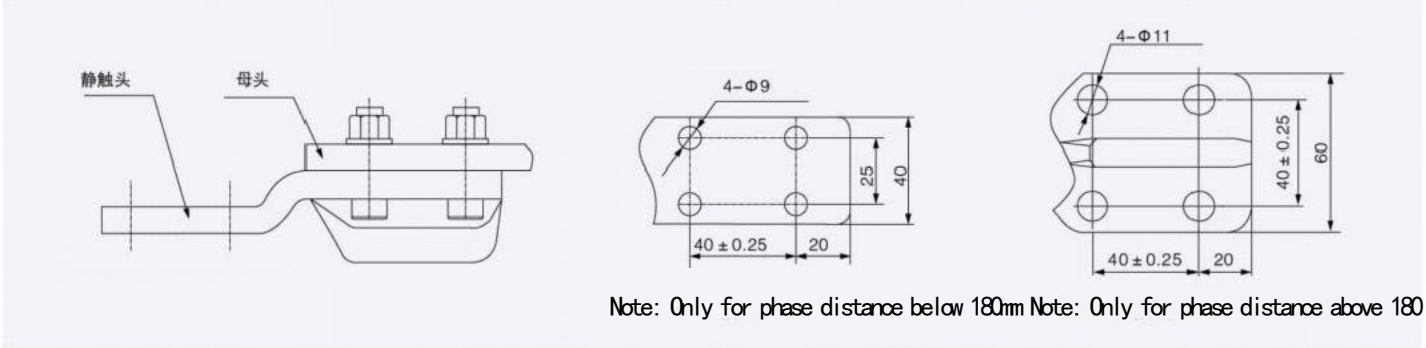
Indoor high-voltage earth switch

Outline and installation dimensions (mm)



model	E	F	G	H	D
JN15-12/31.5-150	150	75	165	535	396
JN15-12/31.5-165	165	75	160	565	426
JN15-12/31.5-210	210	75	160	655	516
JN15-12/31.5-250	250	75	160	735	596
JN15-12/31.5-275	275	75	185	810	646

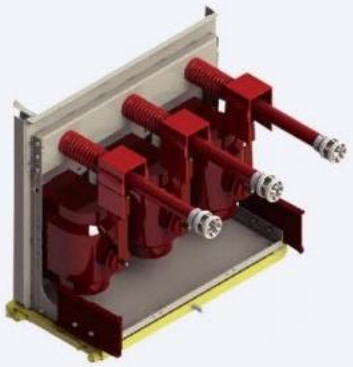
Copper row wiring terminal diagram



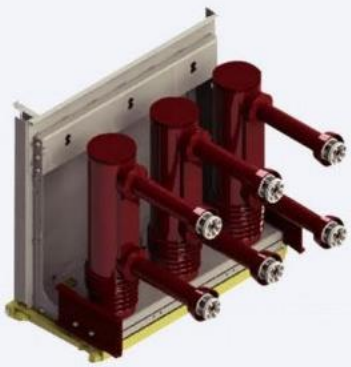
Note: Only for phase distance below 180mm Note: Only for phase distance above 180 mm

High voltage hand car series

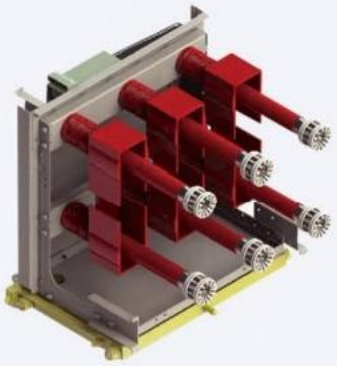
24kV
PT 手车



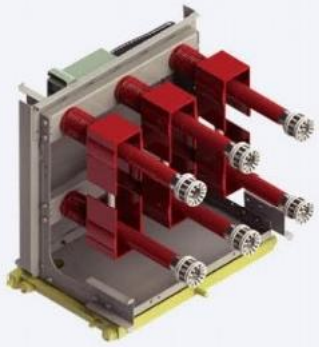
24kV
隔离手车
（简易型）



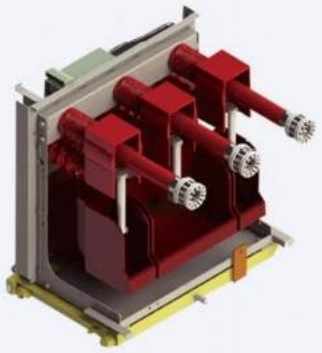
10kV
隔离手车
（简易型）



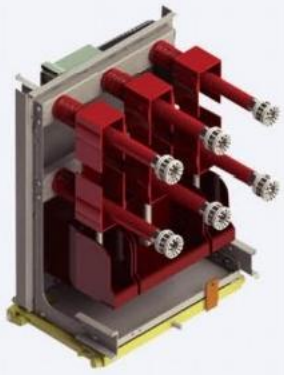
10kV
熔断器手车



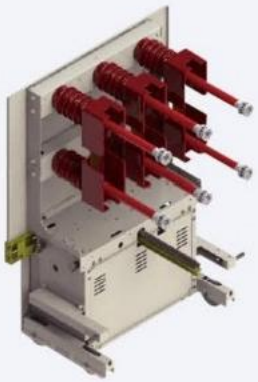
10kV
PT+ 避雷器手车



10kV
隔离 +2PT 手车



35kV
隔离手车
（简易型）



10kV
计量手车