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Company Profile

1. General information:

Yikun Electric Co. Ltd. is a private-owned, high and new technology enterprise, which specializes in power distribution and transmission equipments. Our company was founded on Jun. 6th, 1994, we have ten years of manufacturing experience and became one of the biggest manufacturer and exporter of surge arrester in China. Our company was approved ISO9001 Quality Control System Certificate and 9 types surge arresters have got KEMA Type Test Report, which is the first company in China to pass the KEMA type test according to latest edition of IEC standard. Now our company is one of the 100 key-support enterprises in Wenzhou City and high-tech enterprise of Zhejiang Province as well as the member of the China Electrical Porcelain Surge Arrester Standardization Committee.

362 Yikun people working together will offer good service to all our customers both domestic and abroad with first-class quality, strict administration, high efficiency, and contribute to the development of power supply industry in the world.



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2. Company Culture:

z **Company target:** To become first-class electric equipment supplier in the world and promote the development of world electric industry.

z **Service tenet:** To achieve customer first completely and satisfy customer with best service. z

Company spirit:

³/₄ **Responsibility:** We have the attitude of being practical and realistic and have a strict requirement on ourselves with enjoyable and particular service. We respect for specification and standard, dare to face reality and take on the responsibility.

³/₄ **Reliance:** We emphasize on honesty and reputation, which means we must be honest to our company, our customer, to our colleague and to ourselves.

³/₄ **Cooperation:** We respect other with equality and trust on each other. We will learn from each other and make progress by benign competition. We are a united and strong collectivity.

³/₄ **Participation:** We want to share information and resource with our customers and colleague as well as sharing spirit wealth and material wealth created by us with efforts. “ get from the society and return to the society”, we will also share the spirit culture and material culture created by our company with the society.

³/₄ **Pursuing endless:** We constantly strive to become stronger, transcend ourselves continuously, create and challenge continuously. We pullulate, pursue and develop together...

3. Products Line (Brief):

³/₄ Gapless Metal Oxide Surge Arrester

³/₄ Outdoor Fuse Cutout

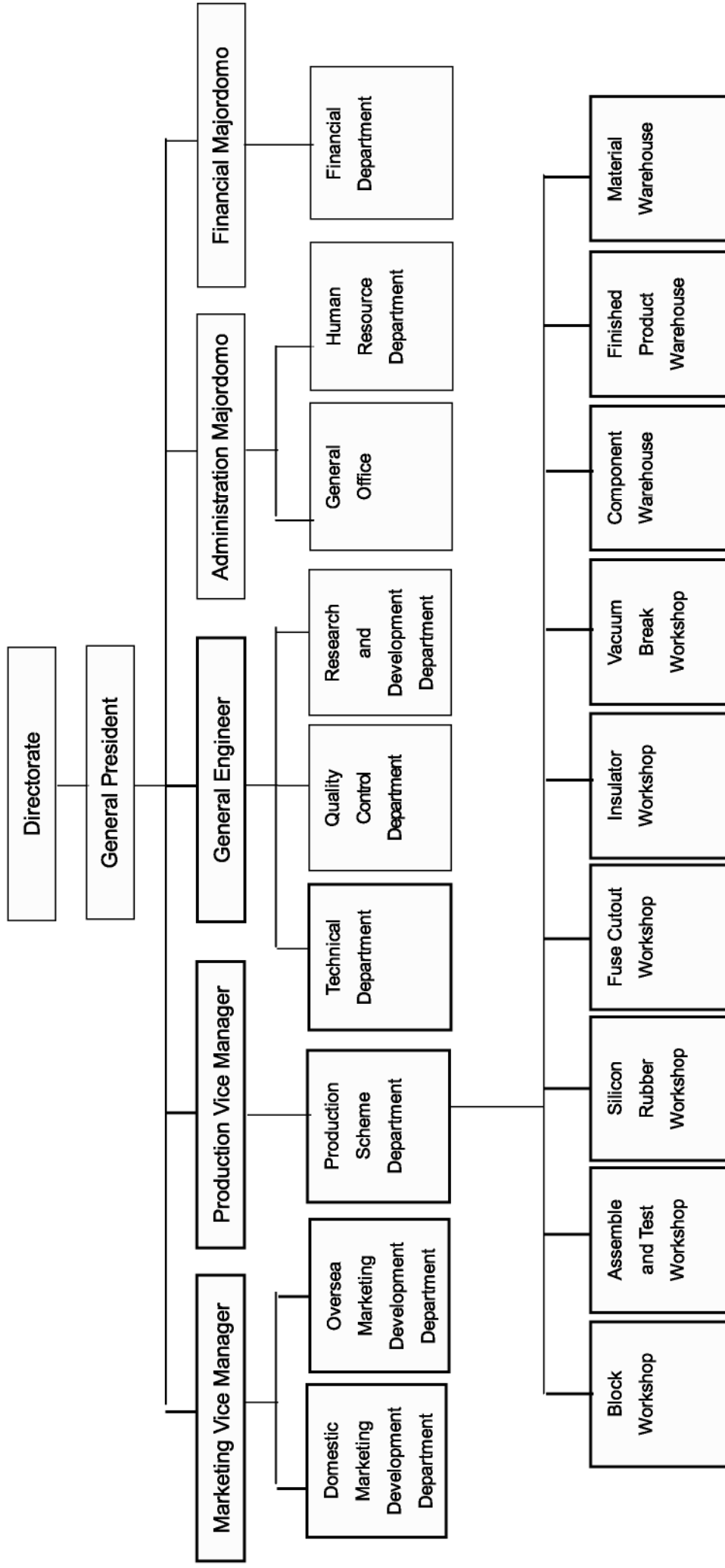
³/₄ Insulator

³/₄ High-voltage Disconnect Switch

³/₄ Vacuum Circuit Breaker

³/₄ Assembly parts of above items, such as ZnO block for surge arrester, silicon rubber, disconnecter, surge counter,

4. Organization Chart of Yikun Electric Co., LTD.



5. Company Award:

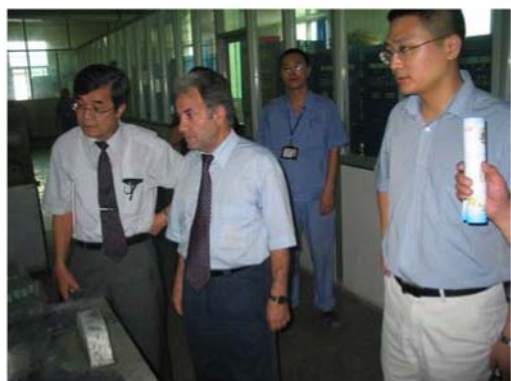
Excluding domestic awards and type test approval, we have already got the following certificates:

- ¾ ISO Certificate ISO9001:2000 (old version)
- ¾ ISO Certificate ISO9001:2000 (latest version)
- ¾ KEMA Type Approval for surge arrester: Type YH5W-9/28 ¾
- KEMA Type Approval for surge arrester: Type YH 10W-15/47 ¾
- KEMA Type Approval for surge arrester: Type YH 10W-24/75 ¾
- KEMA Type Approval for surge arrester: Type YH 10W-30/90 ¾
- KEMA Type Approval for surge arrester: Type YH 10W-60/165 ¾
- KEMA Type Approval for surge arrester: Type Y10W-60/160 ¾
- KEMA Type Approval for surge arrester: Type Y10W-120/312 ¾
- KEMA Type Approval for surge arrester: Type Y10W-120/295 ¾
- KEMA Type Approval for surge arrester: Type Y10W-198/485 ¾
- KEMA Type Approval for fuse cutout: Type YKFCO-15 ¾ KEMA Type Approval for fuse cutout: Type YKFCO-25 ¾ KEMA Type Approval for fuse cutout: Type HYKFCO-25

6. Photos – Products on operation



7. Photos - Meeting



Metal Oxide Surge arrester

1. General information:

Yikun Electric is specialized in producing 0.28~220 kV A.C System metal oxide surge arrester, electric railway surge arrester with porcelain and polymeric housing for protection electrical system and electric railway against over-voltage, meanwhile we are producing surge arrester used for special condition and area. We have produced metal oxide surge arrester for a long history and it is one of the enterprises which produce polymer housing arrester firstly in China. Yikun Electric imports the solid adhesive injection system from Taiwan Fuyuan Co., Ltd and the liquid glue auto-vulcanization shaping injector from America Engle Company. The silicone rubber material produced and applied technology keep ahead at home and abroad.

Yikun has especially designed surge arrester for international market and we have provided many arrester to many countries with high quality and competitive price. Meanwhile, we have won many international tender in South America, Middle East, Africa, Southeast Asia and Europe. The surge arresters produced by us have been welcomed by client and exported to many countries such as Iran, Jordan, Japan, Indonesia, Korea, India, Bangladesh, Nepal and. Till now, we receive many enquiries daily from all over the world, which have improved our quality and technology. Meanwhile we have tried our best to improve technology by ourselves, consequently, our 9 types of surge arresters have passed KEMA type test and got the test report (YH5W-9/28, YH10W-15/47, YH10W-24/75, YH10W-30/90, YH10W-60/165, Y10W-120/312 class 2, Y10W-60/160 class 3, Y10W-120/295 class 3, Y10W-198/485 class 3).

2. Routine test items:

Yikun produce surge arrester according to IEC 60099-4 and ANSI standard, also for every piece of arresters, we will perform routine test items specified in IEC as follows:

- I.) DC Reference voltage test
- II.) Leakage current test under $0.75 U_{1mA}$
- III.) Partial discharge test
- IV.) Power frequency withstand voltage test
- V.) Resistive current test
- VI.) Residual voltage test

3. Service Condition:

- I.) Ambient temperature: $-50^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- II.) Altitude: above 1000m
- III.) Maximum wind velocity: 45m/s
- IV.) Earthquake intensity: 7 degree, 0.3g

Note: We also produce surge arrester used for heavy pollution area and coastal area, when place order, please specify your required creepage distance ratio and altitude.

4. Our arrester features:

Excellent Protective Performance: The metal oxide varistor have good response to steep front surge, excellent volt-ampere characteristics and high discharge capacity, which provides a very consistent protection

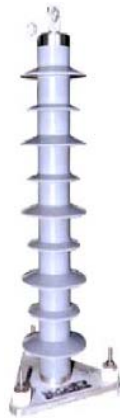
merit at steep front surge, lighting surge and swithing surge and enhance protective capability.

Reliable pressure relief function: the unique pressure relief device worked out upon latest achievements in this field, features precise operation, safely and reliability, which ensure MOA to release internal excessive pressure in any event to minimize fault effect

Unique sealing device: Excellent MOA to sealing is insured during its service life by weathering proof, thermal-resistant and well elastic sealing gasket and unique sealing device as well as high sensitive leakage detection-helium mass spectrometry.



60kV-120kVstation polymeric arrester



30kV station type polymeric arrester class 2



60kV stain type porcelain arrester class 2 with 20kA pressure relief



21-36kV polymeric arrester



9-15kV polymeric arrester



15-24kV porcelain arrester



198kV porcelain arrester with 40kA pressure relief



198kV polymeric arrester with 40kA pressure relief



30-120kV polymeric arrester

Table 1~2. Main Guaranteed Technical Particulars of MOA which have passed KEMA type test according IEC 60099-4 and ANSI Standard

Typical technical parameter of metal oxide surge arresters		VALUE									
S.N	CHARACTERISTICS	11	22	33	66	132	220	330	500	1000	1500
1	System Nominal Voltage, KV	YH5W-9/28	YH10W-15/47	YH10W-30/90	Y10W-60/160	Y10W-120/295	Y10W-198/495				
2	Type code of MOA	12	18	36	72.5	145	245				
3	System Highest voltage, KV	9	15	30	60	120	198				
4	Rated Voltage of Arresters (Ur), KV	7.65	12	24	46	92	156				
5	Continuous operating voltage (Uc), KV	5	10	10	10	10	10				
6	Nominal discharge current (Ln), KA	100	100	100	100	100	100				
7	High Current 4/10 Impulse withstand, KA	250	250	250	500	1000	1000				
8	Long duration current Impulse withstand upper value 2000 Ms, a	32	40	99	175	330	580				
9	Steep current 1/20 Impulse Residual Voltage at 10 KA Impulse current, kv										
10	Lightning current 8/20 Impulse Residual Voltage at 500/1000A Impulse Currents, kv a. 5KA 10KA 20KA	25 28 34	42 47 55	85 90 101	150 160 175	275 295 315	450 485 525				
11	Switching Current 30/60 Impulse Residual Voltage at 500/1000A Impulse Current as applicable., kv	21	27	69	130	280	455				
12	Line Discharge class	I	I	I	III	III	III				
13	Pressure Relief class & corresponding fault current, ka	B 20	B 20	B 20	A 40	A 40	A 40				
14	Arrester Insulation Impulse withstand voltage, kv	95	95	170	325	650	1050				
15	Arrester Insulation wet power frequency withstand voltage, kv	50	55	90	140	275	460				
16	Max. External RIV at 1 MHz measured at 1.05 times system highest Voltage, v	≤ 500	≤ 500	≤ 500	≤ 500	≤ 500	≤ 500				
17	Max. Partial discharge in the arrester at 1.05 time continuous operating voltage., pC	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10				
18	Creepage distance, mm	386	520	1007	2450	4630	7000				

NOTE: If arrester with porcelain housing, type code should not include "H", for example, Y5W-9/27 stands for 9kV 5kA surge arrester with porcelain housing. We can produce both in porcelain housing and polymeric housing

Table 2

Typical technical parameter of metal oxide surge arresters		VALUE		
S.N	CHARACTERISTICS			
1	System Nominal Voltage, KV	22	66	132
2	Type code of MOA	YH10W-24/75	YH10W-60/165	Y10W-120/295
3	System Highest voltage, KV	24	72.5	145
4	Rated Voltage of Arresters (Ur), KV	24	60	120
5	Continuous operating voltage (Uc), KV	19	46	92
6	Nominal discharge current (Ln), KA	10	10	10
7	High Current 4/10 Impulse withstand, KA	100	100	100
8	Long duration current Impulse withstand upper value 2000 Ms, KA	250	500	1000
9	Steep current 1/20 Impulse Residual Voltage at 10 KA Impulse current, KV	81	175	330
10	Lightning current 8/20 Impulse Residual Voltage at 500/1000A Impulse Currents, KV d. 5KA e. 10KA f. 20KA	68 75 81	150 160 175	295 312 330
11	Switching Current 30/60 Impulse Residual Voltage at 500/1000A Impulse Current as applicable., KV	58	130	260
12	Line Discharge class	I	II	II
13	Pressure Relief class & corresponding fault current, KA	B	B	B
		20	20	20
14	Arrester Insulation Impulse withstand voltage, KV	125	325	550
15	Arrester Insulation wet power frequency withstand voltage, KV	75	140	275
16	Max. External RIV at 1 Mhz measured at 1.05 times system highest Voltage, V	≅ 500	≅ 500	≅ 500
17	Max. Partial discharge in the arrester at 1.05 time continuous operating voltage., pC	≅ 10	≅ 10	≅ 10
18	Creepage distance, mm	600	1800	4630
NOTE: If arrester with porcelain housing, type code should not include "H".				

Table 3. Main technical parameter for surge arrester range from 3-220kV which is conform to IEC and ANSI standard

Item	Rated voltage KV	Continuous operating voltage		1/5 μ steep current residual voltage, KV		8/20 μ s lighting impulse residual voltage, KV		30/60 μ switching impulse residual voltage KV		2ms rectangular current, A		4/10 μ high current impulse KA		Insulation voltage, KV		Creepage distance, mm
		KV	r.m.s	5KA	10KA	5KA	10KA	5KA	10KA	5KA	10KA	5KA	10KA	Lightning impulse	Power frequency	
1	3		2.55	10	10.6	8.9	9.4	6.8	7.1	100	250	65	100	40	18	105
2	6		5.1	20	21	18	19	13.6	14	100	250	65	100	60	25	227
3	9		7.65	30	31.7	26.8	28.2	20.4	21.2	100	250	65	100	60	25	227
4	10		8.4	33	34.8	29.5	31	22.4	23.3	100	250	65	100	75	30	232
5	11		9.3	36.4	38.4	32.5	34.2	24.7	25.7	100	250	65	100	75	30	386
6	12		10.2	40	42.2	35.7	37.6	27.1	28.2	100	250	65	100	95	40	386
7	15		12.7	50.1	52.8	44.7	47	34	35.3	100	250	65	100	105	45	386
8	18		15.3	60	63.3	53.6	56.4	40.7	42.3	100	250	65	100	125	55	493
9	21		17	66.6	70.3	59.5	62.6	45.5	47	100	250	65	100	125	55	493
10	24		19.5	76.6	80.9	68.4	72	52	54	200	400	65	100	125	55	600
11	27		22	86.4	91.2	77.1	81.2	58.6	60.9	200	400	65	100	125	55	1065
12	30		24.4	95.8	101.1	85.5	90	65	67	200	400	65	100	170	70	1065
13	33		27.5	107.9	113.9	96.3	101.4	73.2	76.1	200	400	65	100	170	70	1220
14	36		29	115	119	105	110	78	84	250	400	65	100	185	85	1340
15	60		48		170		160		130		500		100	550	140	2268
16	72		58		223		191		155		500		100	550	140	2268
17	96		77		265		237		188		500		100	550	175	3168
18	120		96		330		295		280		700		100	650	275	4630
19	198		156		580		485		455		1000		100	1050	460	7000
20	228		182		631		520		488		1000		100	1050	460	7300

ZnO Blocks for surge arrester

Our company also produce zinc oxide varistor for surge arrester range from Dia 32~Dia 82mm, which is suitable for all kinds of 5kA and 10kA surge arrester. Our varistor can withstand high current impulse 65kA and 100kA, the arrester assembled by our varistor have passed KEMA type test and it have been exported to many countries such as Yugoslavia, Turkey, India, Pakistan, Iran, Korea, Japan and Argentina.

Technical table of ZnO Varistor

5kA rating ZnO Blocks

Voltage rating	kV	4	5	3
Specification		32x28±1 (4kV/pc)	32x34±1 (5kV/pc)	32x20±1 (3kV/pc)
V1 mA Value	kV	5.86.1	7.47.6	4.54.6
Residual voltage Ratio		1.80	1.80	1.80
Max Residual voltage	kV	10.511	13.13.7	8.1 8.3
2ms Rectangular current impulse A		150	150	150
4/10 High current impulse	kA	65	65	65
Leakage current in 75% V1 m A A		15	15	15

10kA rating ZnO Blocks

Voltage rating	kV	4	5	3
Specification		42x28±1 (4kV/pc)	42x34±1 (5kV/pc)	42x20±1 (3kV/pc)
V1 mA Value	kV	5.86.1	7.47.6	4.54.6
Residual voltage Ratio		1.85	1.85	1.85
Max Residual voltage	kV	10.711.5	13.714.2	8.48.6
2ms Rectangular current impulse A		250	250	250
4/10 High current impulse	kA	80	80	80
Leakage current in 75% V1 m A A		15	15	15



ZnO Varistor for surge arrester



Disconnecter

Note: We also produce 3kV/10kA class 2 (Size: Dia 52x21) and 3kV/10kA class 3 (Size: Dia72x21 and Dia 82x21)

Outdoor Fuse Cutout

1. Application:

Drop-out fuse cutout is installed at the high-voltage side of transformer or distribution sub-line. It provides reliable over-current protection for primary distribution systems. Over-current protection safeguards an electric system from excessive currents produced by abnormal conditions such as line faults, line or equipment overloads, or equipment failures. It will provides full range over-current protection from minimum melt of a given fuse link to the maximum nameplate current rating.



2. Service Condition:

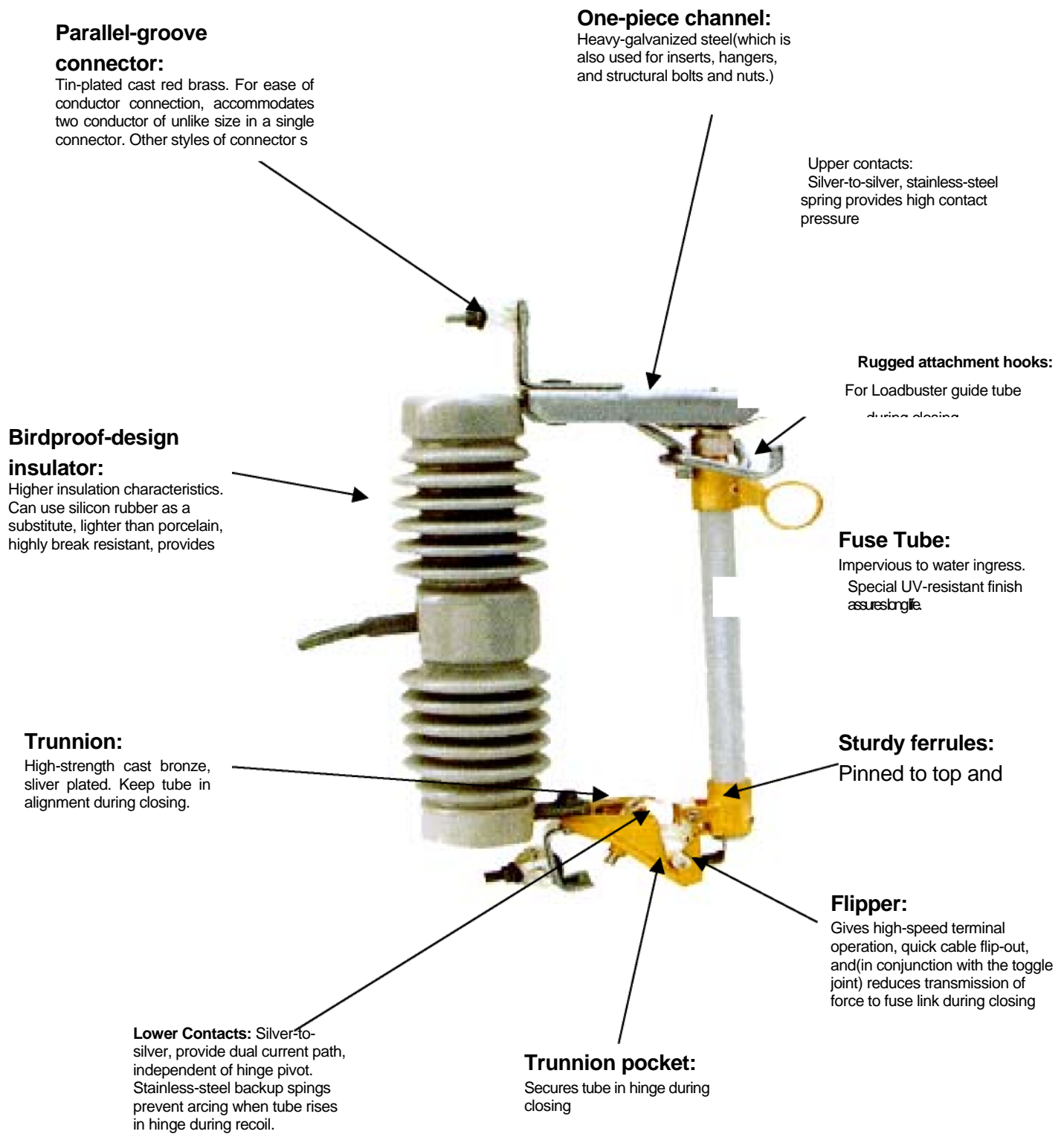
- I.) Ambient temperature: $-40^{\circ}\text{C} \sim +40^{\circ}\text{C}$
- II.) Altitude: up to 1500m above sea level.
- III.) Maximum wind velocity: 35m/s
- IV.) Earthquake intensity: 8 degree

3. Operation order:

In normal operation, the fuse tube of cutout is at close position by tightening the fuse link. When fault occurs in system, fault current will make the fuse link melt quickly and create electric arc with much gas and high pressure inside the tube, which will blow vertically along the inside tube to crush out the electric arc by drawing out. When fuse link melt, lower static contact will turn down because of losing tension and lock structure will discharge fuse tube that will drop-out to form a sensitive breaking position. When pull-load is needed, using insulating pole to pull live contact. At that time, main static and live contact still touch together, then pull contacts continuously to separate auxiliary contact, which will create electric arc between auxiliary contacts. The electric arc will be tightened in the arc chute that will produce gas too and crush out the electric arc when the current is below zero.

4. Construction:

This cutout is composed of insulating base, a fuse tube and mounting bracket. Two sides of fuse tube fit with upper and lower contacts. This cutout is available with a 100A or 200A fuseholder. Detail construction please see attached picture:



Parallel-groove connector:

Tin-plated cast red brass. For ease of conductor connection, accommodates two conductor of unlike size in a single connector. Other styles of connector s

One-piece channel:

Heavy-galvanized steel(which is also used for inserts, hangers, and structural bolts and nuts.)

Upper contacts:
Silver-to-silver, stainless-steel spring provides high contact pressure

Rugged attachment hooks:

For Loadbuster guide tube during closing

Birdproof-design insulator:

Higher insulation characteristics. Can use silicon rubber as a substitute, lighter than porcelain, highly break resistant, provides

Fuse Tube:

Impervious to water ingress. Special UV-resistant finish assures long life.

Trunnion:

High-strength cast bronze, silver plated. Keep tube in alignment during closing.

Sturdy ferrules:

Pinned to top and

Flipper:

Gives high-speed terminal operation, quick cable flip-out, and(in conjunction with the toggle joint) reduces transmission of force to fuse link during closing

Lower Contacts: Silver-to-silver, provide dual current path, independent of hinge pivot. Stainless-steel backup springs prevent arcing when tube rises in hinge during recoil.

Trunnion pocket:

Secures tube in hinge during closing

5. Technical specifications:

Drawing No.	Type Code	Voltage, (KV)			Rated current (A)	Rated interrupting current Sym., (KA)	Creepage Distance (mm)	Weight (KG)
		Rated	Power frequency withstand	BIL				
1	YKE1	11	40	110	100 (200)	10 (12)	250	7.3
2	YKE2	15	45	125	100 (200)	10(12)	350	8.5
3	YKE3	15	45	125	100 (200)	10(12)	350	8.5
4	YKE4	24	65	150	100 (200)	8(10)	540	12
5	YKE5	24	65	150	100 (200)	8(10)	470	13
6	YKE6	30	70	170	100 (200)	8(10)	700	15
7	YKE7	33	70	170	100 (200)	10(12)	720	15.5
8	YKE9	15	45	125	100 (200)	10	350	8.5
9	YKE10	24	65	150	100 (200)	8	460	11
10	YKE11	30	70	170	100 (200)	6	700	15
11	YKEFC2	15	45	110	100 (200)	10(12)	380	3.8



(1) (2) (3) (4) (5)



(6) (7) (8) (9) (10)

6. Standards applied:

- a) IEC 60282-2
- b) ANSI/IEEE C37.40
- c) ANSI/IEEE C37.41
- d) ANSI/IEEE C37.42

11-220KV Composite Insulator

1. General information:

Composite insulator, characterized by small size, light weight, high mechanical strength, no zero value detection, easy installation and less maintenance, have become a new generation insulator for high-voltage transmission line. The composite insulator produced by our company has applied whole injection technique and the combination of hardware fitting and core has used compression technique, which is equipped with fully-automatic detection damage inspection system. The top of hardware fitting have four layer sealing to eliminate the key-problem influencing the reliability of composite insulator---interface electric staving. Therefore, the advanced producing equipment and strict producing techniques have ensured our composite insulator's technical data to meet the requirement of IEC standard.

2. Composite suspension insulator

Table 1: Main dimensions and characteristics of suspension type composite insulator

No.	Type	System nominal voltage kV	Rated mechanical tension load kN	Structure height mm	Electric arc distance mm	Min. nominal creepage distance, Mm	Power frequency withstand voltage 1min KV
1	FXBW3-35/70	35	70	6 1 0 1 5	450	1015	95
2	FXBW3-35/100	35	100	6 1 0 1 5	450	1015	95
3	FXBW3-66/70	66	70	8 7 0 1 5	700	1900	185
4	FXBW3-66/100	66	100	8 7 0 1 5	700	1900	185
5	FXBW3-110/70	110	70	1 1 8 1 5	1000	3150	230
6	FXBW3-110/100	110	100	1 1 8 5 5	1000	3150	230
7	FXBW3-220/100	220	100	2 1 5 1 5	1900	6300	395
8	FXBW3-220/160	220	160	2 1 5 1 5	1900	6300	395



3. Composite post station insulator

This product is suitable for the power station facilities. It possesses good water repellency, aging resistance, anti-electric leakage trace, anti-electric corrosion damage, very high anti-tension strength and anti-bending strength. Its mechanical strength, anti-shock, shake-proof and fragmentation-proof performances are good with light weight and convenient installation. Its top and bottom installation sizes are the same as the corresponding porcelain station post installation sizes so that they can be exchanged for us.

Table 2: Main dimensions and characteristics of post station type composite insulator

No.	Type	System nominal voltage kV	Rated mechanical tension load kN	Structure height mm	Electric arc distance mm	Min. nominal creepage distance, Mm	Power frequency withstand voltage 1min KV
1	FPS-10.5/5	10	5	250	180	380	90
2	FZS-10/4	10	4	215	125	270	90
3	FZS-35/6	35	6	320	320	750	142



4	FZS-110/10	110	10	1080	1080	2750	170
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4. Composite insulator for electrified railway

This product applies to electrified railway tunnel with complex operating conditions. It can effectively prevent from the accidents of pollution and flashing and can reduce the workload for cleaning and maintaining. For its small dimension, it is an irreplaceable product by porcelain and glass insulators when the tunnel headroom is small.

Table 3: Main dimensions and characteristics of electrified railway type composite insulator

Type No	Rated voltage (KV)	Rated Mechanical load (KN)	Lighting full-wave impulse withstand voltage (KV)	Power frequency wet withstand voltage (KV)	Min.nominal creepage distance (mm)	Structure height (mm)
FQX1-25	25	60	270	130	1400	650
FQX2-25	25	60	270	130	1400	840
FQX3-25	25	60	270	130	1400	930



FQX4-25	25	60	270	130	1400	645
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High-voltage Disconnect Switch

1. Application

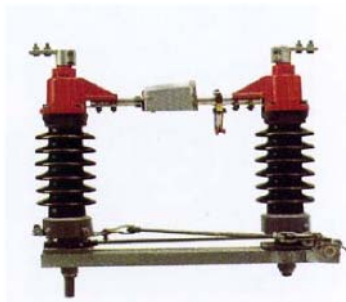
Model GW1-10G outdoor high-voltage disconnecting switch is a single-phase AC 50Hz high-voltage switch equipment, used in electric power system with the rated current of 10KA, and for connecting or disconnecting power under voltage load

2. Normal service conditions

- I.) Altitude is not more than 1500m.
- II.) Ambient temperature: upper limit+40,lower limit-30for general areas and - 4 0 f o r very cold areas.
- III.) Wind pressure is not more than 100Pa.
- IV.) Earthquake intensity is not more than Grade 8
- V.) Places without frequent violent quake.
- VI.) Common type is installed in the places without gas, steam, chemical deposit, salt-spray fog, dirt, and other explosive and corrosive matters which affect seriously the insulating and conducting property of disconnecting switch.

Note: Anti-pollution type applies to the area polluted seriously, but there should not be the matters which can result in fire and explosion.

3. Main types:



Series GW4



Series GW5

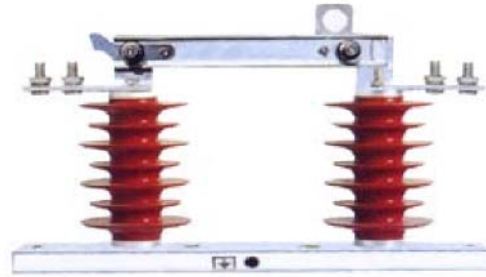
Table1: Technical data of Series GW4 & GW5

SN	Rated voltage (KV)	Rated current (A)	Disconnecting switch (KA)		Earthed switch (KA)		Earthing method
			Rated withstand current (peak)	Rated instant withstand current	Rated withstand current (peak)	Rated instant withstand current	
GW4	12	4001000	50	20 (4s)	50	80	Non-earthed Single-earthed Double-earthed
			80	31.5 (4s)			
	17.5 40.5	400 630 400 1250	80	31.5			
GW5	40.5	630	50	20 (4s)			
	69	1000		31.5 (4s)			
	126	1250		31.5 (4s)			

1600/2000



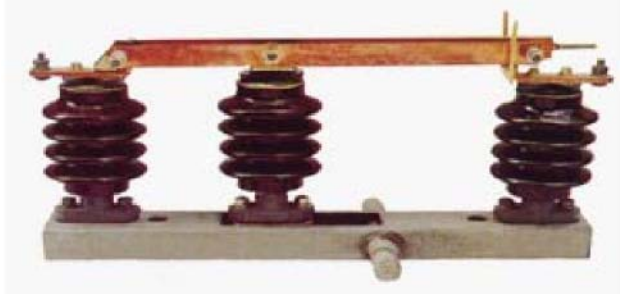
Series GW9-10



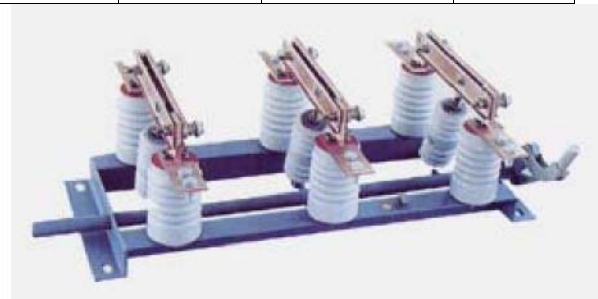
Series HGW9-10

Table 2: Technical data of Series GW9-10 & HGW9-10

Series No.	Rated voltage (KV)	Rated current (A)	heat-stable current,4s (A)	Dynamic stable current (A)	Impulse withstand voltage (KV)		Power-frequency voltage (KV)	withstand
					Phase-to-ground	Between breakage	Phase-to-ground	Between breakage
GW9-10/200	10	200	12500	31500	75	85	38	42
GW9-10/400	10	400	12500	31500	75	85	38	42
GW9-10/630	10	630	12500	31500	75	85	38	42
HGW9-10/200	10	200	12500	31500	75	85	38	42
HGW9-10/400	10	400	12500	31500	75	85	38	42
HGW9-10/630	10	630	12500	31500	75	85	38	42



GW1-12G(D)/□-□



GN19-12(C)/-

Table 3: Technical data of Series GW1-12G(D)-

Series No.	Rated voltage (KV)	Rated current (A)	Rated withstand current (peak) (KA)	Rated instant withstand current (KV)	Earthing method
GW1-12G/630	12	630	50	20	Non earthed
GW1-12G(D)/1250	12	1250	100	40	
GW1-12G(Dx)/630	12	630	50	20	D1: Static contact earthed
GW1-12G(Dx)/1250	12	1250	100	40	D2: Dynamic contact earthed

Table 4: Technical data of Series GN19-12(C)-

Series No.	Rated voltage (KV)	Rated current (A)	Rated withstand current (peak) (KA)	Rated instant withstand current (KV)
GN 19-12/400-1.25	12	400	31.5	12.5
GN 19-12/630-20	12	630	50	20
GN 19-12/1000-31.5	12	1000	80	31.5
GN 19-12/1250-31.5	12	1250	80	31.5
GN 19-12C/400-12.5	12	400	31.5	12.5
GN 19-12C/630-20	12	630	50	20
GN 19-12C/1000-31.5	12	1000	80	31.5
GN 19-12C/1250-31.5	12	1250	80	31.5

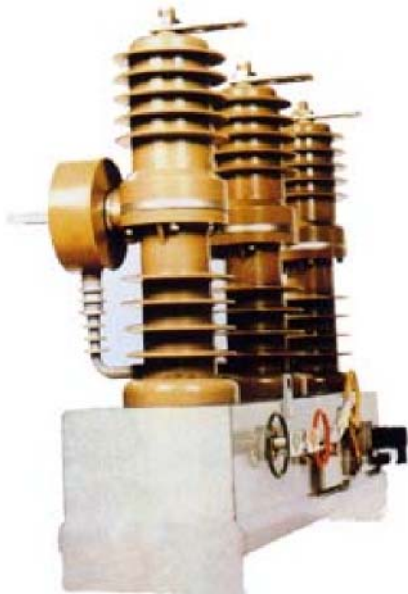
ZW32-12 Outdoor High-voltage Vacuum Breaker

1. General Information:

ZW32-12 outdoor high-voltage pole vacuum breaker is outdoor distribution equipment with 12 kV rated voltage and three-phase A.C 50Hz. It is mainly used for breaking, close and open load current as well as over-load current and short circuit current in electrical system. It is suitable for applying to transformer substation and distribution system of industrial enterprise as protection and control and also for rural electrical network area, which means it is specially used for reconstruction of rural electrical network and urban electrical network.

2. Service Environmental Conditions

- I.) Altitude is not more than 2000m.
- II.) Ambient Temperature: within the range of - 4 5 t o + 4 0 , a n d the variation of the day temperature is not more than 25
- III.) Wind Speed no more than 34m/s
- IV.) Unstable for the flammable explosivechemic erode and exquisite vibratile place
- V.) Polluted Level IV
- VI.) Earthquake strength not in excess of 8 degree



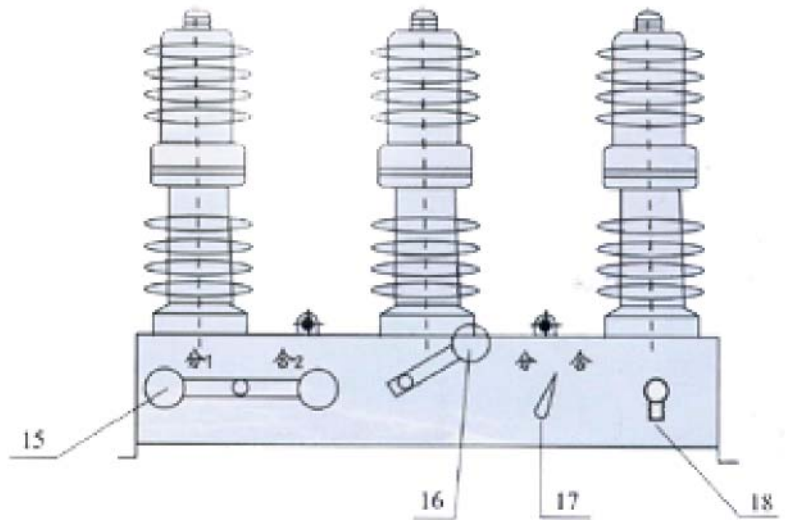
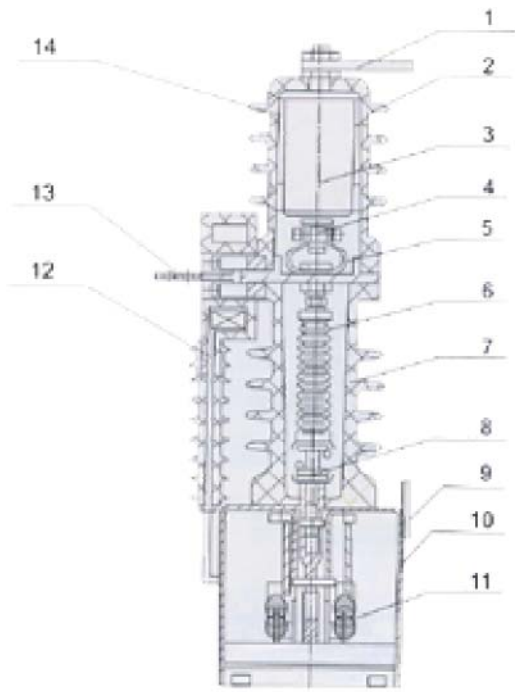
ZW32 type without disconnecting switch



ZW32 type with disconnecting switch

3. Structure of Vacuum Circuit Breaker

- | | |
|-----------------------------------|---------------------------------|
| 1.upper out line | 10.mechanical box |
| 2.upper support insulating sleeve | 11.spring operating mechanical |
| 3.vacuum eliminate-arc room | 12.current transformer |
| 4.electric clamp | 13. lower out line |
| 5.soft connector | 14.insulating rubber |
| 6.pull pole | 15.on-off operating pole |
| 7.lower support insulating sleeve | 16.power storage operating pole |
| 8.compress spring | 17.on-off state display |
| 9.suspend angle | 18.circuit controlling socket |



4. Main Types of Vacuum Break Produced

1. ZW32-12 Outdoor High-Voltage Vacuum Break
2. ZW8-12 Outdoor High-Voltage Vacuum Break
3. ZW6-12/630-20 Outdoor High-Voltage Vacuum Break

Technical Parameter for the ZW32-12 Outdoor High-Voltage Vacuum Break

(Service Environmental Conditions is as above mentioned)

No	Item	Unit	Value
1	Rated voltage	kV	12
2	Rated frequency	Hz	50
3	Rated current	A	630
4	Rated short-circuit breaking current	kA	20
5	Rated withstand current (peak)	kA	50
6	Rated instant current withstand/duration	kA/s	20/4
7	Rated withstand current (peak)	kA	50
8	Service life of mechanism	times	10000
9	Times of switch on/off at Rated cut-off current while short-circuit	times	30
10	Power-frequency voltage withstand (1min) phase-phase, phase-earth, breakage	kV	34(wet) 42(dry) / 49(dry)
11	Lightning voltage withstand voltage (peak) phase-phase, phase-earth, breakage	kV	75/85
12	Power-frequency voltage withstand (1min) of controlling circuit	kV	2
13	Operating Voltage	V	AC220, DC220 AC110, DC110

Technical Parameter for the ZW8-12 Outdoor High-Voltage Vacuum Break

Service Environmental Conditions:

- I.) .Altitude is not more than 1000m.
- II.) .Ambient Temperature: within the range of - + 4 0 .
- III.) .Wind Speed no more than 34m/s
- IV.) .No regular exquisite quiver

No	Item	Unit	Value
1	Rated Voltage	kV	12
2	Rated Current	A	6 3 0 4 0 0 2 0 0
3	Power-frequency voltage withstand(1min)	kV	42
4	Lightning impulse withstand voltage(peak value)	kV	75
5	Rated short-circuit breaking current	kA	20
6	Rated switch-on current while short-circuit (peak value)	kA	50
7	4s instant current withstand	kA	20
8	Rated operating procedures		-0.3s, -180s (off), (on-off)
9	Breaking times of Rated short-circuit current	times	30
10	Service life of mechanism	times	10000
11	Service life of mechanism (Opening/Closing Coil)	V	DC220VAC220V D C A C
12	Allowed worn thickness of dynamic and static contacts	mm	3
13	Rated Current of overload trip	A	5

Technical Parameter for the ZW6-12/630-20 Outdoor High-Voltage Vacuum Break

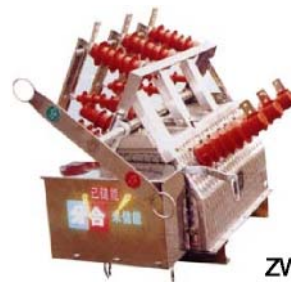
Service Environmental Conditions

- I.) .Altitude is not more than 2000m.
- II.) .Ambient Temperature: within the range of - + 4 0 .
- III.) .Wind Speed no more than 34m/s
- IV.) .Earthquake strength not in excess of 8 degree

No	Item	Unit	Value
1	Rated voltage	kV	12
2	Rated current	A	630
3	Power-frequency withstand voltage(1min)	kV	42
4	Lightning impulse withstand voltage (peak value)	kV	75
5	Rated short-circuit breaking current	kA	20
6	Rated switch-on current while short-circuit (peak value)	kA	50
7	Rated withstand current	kA	50
8	4s instant current withstand	kA	20
9	Rated operating Procedures		-0.3s,-180s (off), (on-off)
10	Rated short-circuit breaking current	times	30
11	Service life of mechanism	times	10000
12	Rated voltage of energy-storing Motor	V	110200 A C D C
13	Rated operating voltage (with CT spring device)	Opening Coil	200 100
		Closing Coil	AC DC



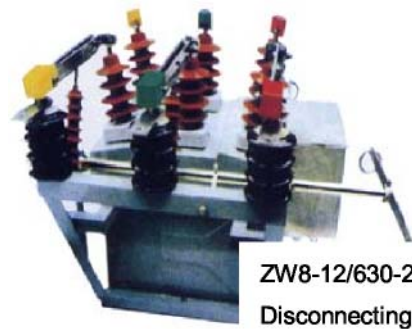
ZW32-12



ZW-12/630-20



ZW8-12/630-20
without
Disconnecting
Switch



ZW8-12/630-20with
Disconnecting Switch

14	Allowed worn thickness of dynastic and static contacts	mm	3
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