

ZW32-12/24/33kV Outdoor Vacuum Circuit Breaker+Recloser

Introduction

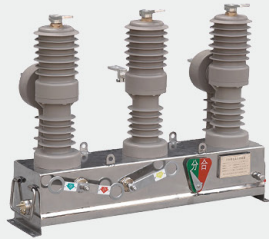
ZW32-12、24、33kV outdoor vacuum circuit breaker + recloser is outdoor distribution equipment with rated voltage 11KV and three-phase AC 50Hz. It is combined micro processing technology, modern network communication technology and the new switch manufacturing technology together, and has multi-protection and functions, such like overload, short circuit, quick break, earthing, reclosing, remote control and remote communication, etc. It is mainly used for breaking and closing the power system load current, overloads current and short-circuit current. Widely used in urban power grid as a section or contact switch, or for rural electric power distribution system of outdoor substation as a outgoing switch.

ZW32-12、24、33kV outdoor vacuum circuit breaker + recloser is a combined serialized product:

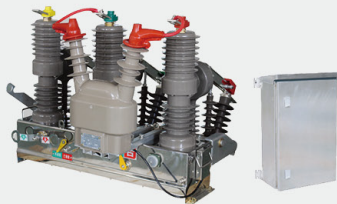
1. Combination disconnecting switch is optional for it, which can provide visible contactor for line maintenance;
2. magnetic operating system is also optional, to form complete operating functions when cooperate with vacuum arcing chamber, making the actions of open and close stable and reliable;
3. Adopts new type of composite solid insulation structure, combined the vacuum arcing chamber, main electric circuit and insulation support as an integrated solid pole column organically, completely solved the contradiction between miniaturization of vacuum arcing chamber and the requirement of external insulation;
4. Horizontal layout of bushing, transversal layout of the output and input, even in the overhead lines connection, also conducive to the access of the cable;
5. The intelligent control power supply system in the unit can ensure to provide continuous power for battery at least 24 hours, to control the switch reliable

Environmental conditions

1. Ambient temperature: -40°C - -40°C ;
2. Altitude: $\leq 2000\text{m}$;
3. Earthquake intensity: ≤ 8 ;
4. Wind pressure: $\leq 700\text{Pa}$
5. No fire, explosion, serious filthy, chemical corrosion and violent vibration of places;



12kV Vacuum Circuit Breaker



12kV Vacuum Circuit Breaker+ Recloser



24/33kV Vacuum Circuit Breaker

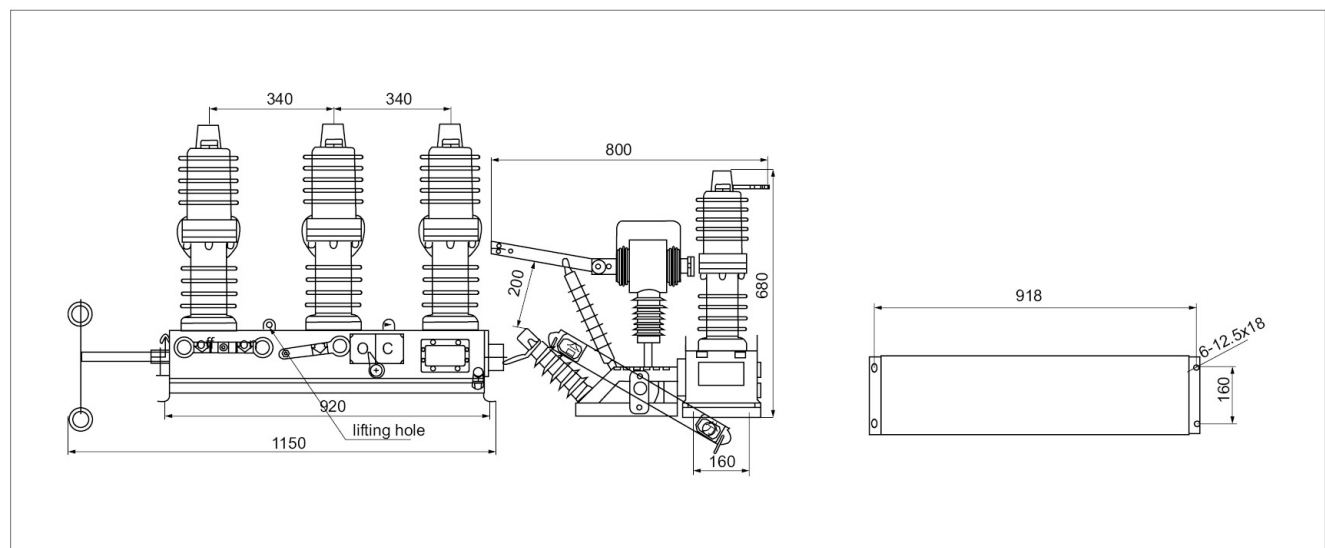


24/33kV Vacuum Circuit Breaker
+ Recloser

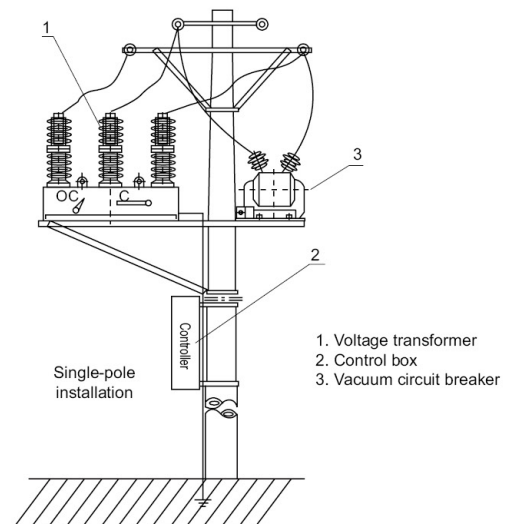
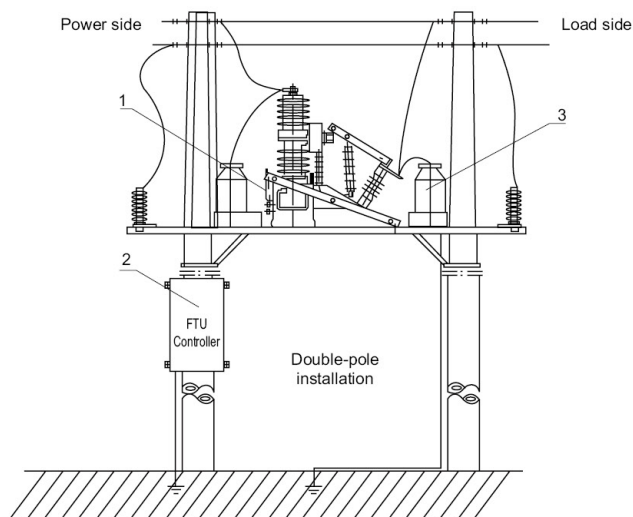
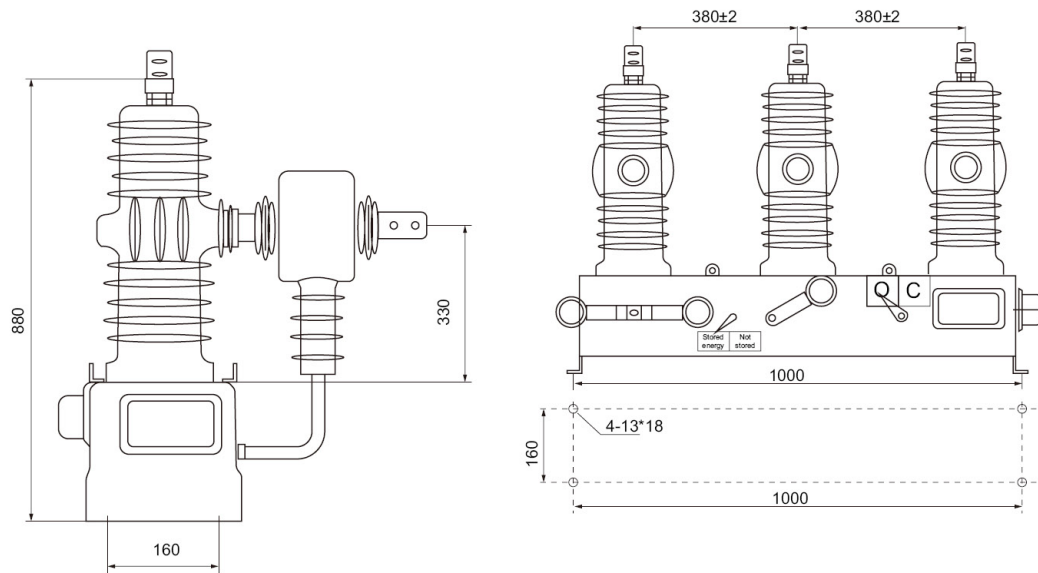
The main technical parameters

No.	Name	Unit	Value		
1	Rated voltage	KV	12	24	40.5
2	Rated current	A	630, 1250		1250, 1600
3	Rated frequency	HZ	50		50, 60
4	1 min power frequency withstand voltage	Dry	KA	42/48	65/79
		Wet	KA	34	
5	Lightning impulse withstand current (peak)	KV	75/85	125/145	185
6	Rated short-circuit breaking current	KA	20, 25		31.5
7	Rated short-circuit current (peak)	KA	50, 63		80
8	Rated peak withstand current	KA	50, 63		80
9	4s short-time withstand current	KA	20, 25		31.5
10	Rated operating cycle		O-0.3S, CO-180S-CO		O-0.1 S, CO-3S-CO-6S-CO-60S
11	Rated short-circuit current breaking time	times	30		
12	Mechanical life	times	30000		20000
13	Secondary circuit 1 min power frequency withstand voltage	KV	2		
14	Clearance between open contacts	MM	9 ± 1		
15	Over connect distance	MM	2.5 ± 0.5		
16	Average making speed	M/S	1.2 ± 0.2		
17	Average breaking speed	M/S	0.8 ± 0.2		
18	Making connect bounce time	MS	≤ 2		
19	Circuit resistance	$\mu \Omega$	≤ 80		
20	Making time	MS	25~60		
21	Breaking time	MS	18~45		

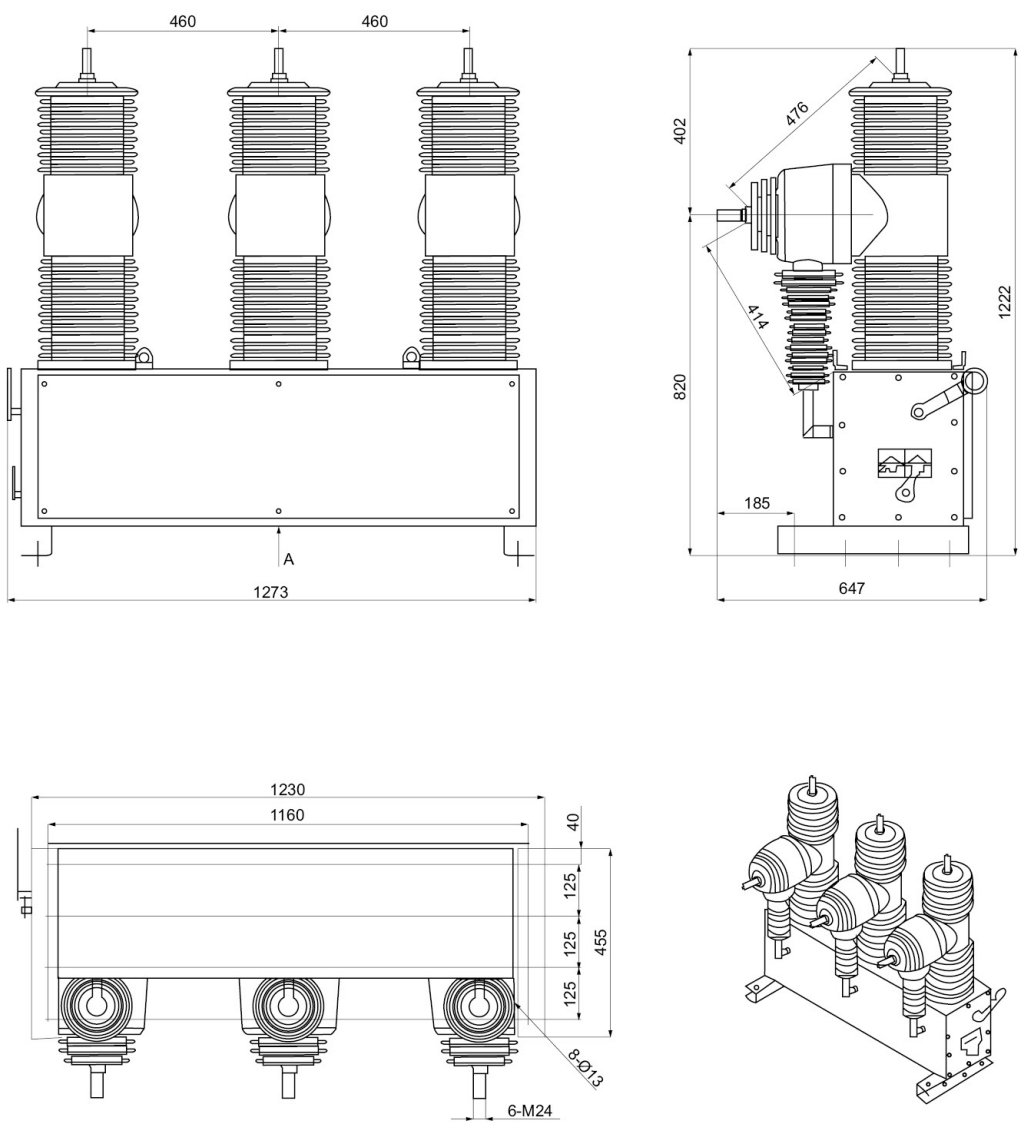
12kV Outline and installation dimension drawing

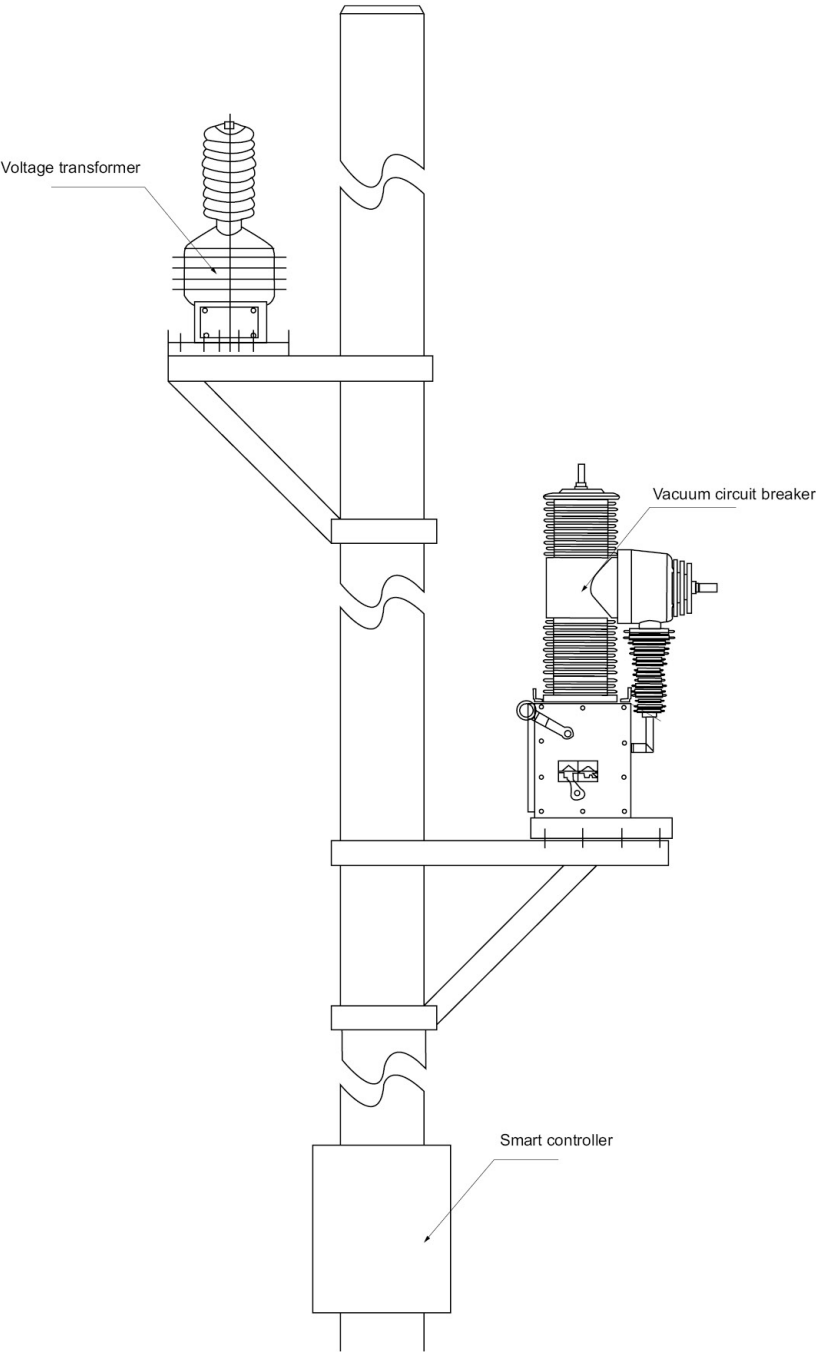


24kV Outline and installation dimension drawing



33kV Outline and installation dimension drawing





The function of the controller

- phase distance protection
- zero-sequence protection
- real-time clock
- incident record
- real-time status query

The characteristics of the controller

- can take 485/232 communication interface,or through GSM short message
- the wireless remote monitoring
- jump switching circuit adopts the design by mistake
- zero sequence current can distinguish zone and fault zone,the remote control

Communication methods

Serial communication
Remote control of the ball in from close range

Optional communication way

PDA handheld communication and realizes the four-remote function.
GSM short message realizes the four-remote function.
After can be directly controlled by mobile phone also can network is controlled by the background concentration
GPRS wireless communication,which can realize the four remote functions, networking and centrally controlled by the background.

The main technical parameters

Item	Specified value	Value
Operating input voltage	AC220V $\pm$ 20%	
Machine power	< 15W	
Output voltage(opening and closing operation)	DC220V	
The phase current sampling the input values(second)	0-100A	Second current above 100a allow saturation
The zero sequence current input values(second)	0.01 A-1A	Zero sequence quadratic current 1a to allow more saturation
Power input values allow sampling error	$\pm$ 3%	
Phase protection the set valued for the current range(second)	1A-50A	Set to zero close corresponding protection function
The set values for the current zero sequence pilot protection scope(second)	0-0.5A	Set to zero close corresponding protection function
Environment temperature	-40℃ -85℃	

