HV Vacuum Circuit Breakers

Indoor HV Fixed Vacuum Circuit Breakers

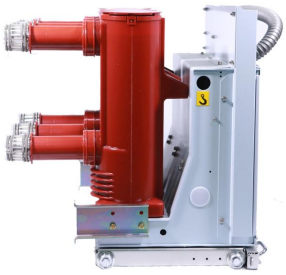
12kV 50Hz 25kA/31.5kA 630-1600A 3Phase





Indoor HV Handcart Vacuum Circuit Breakers

12kV 50Hz 25kA/31.5kA 630-1600A 3Phase

Indoor HV Fixed Vacuum Circuit Breakers

24kV 50Hz 25kA 630-1250A 3Phase



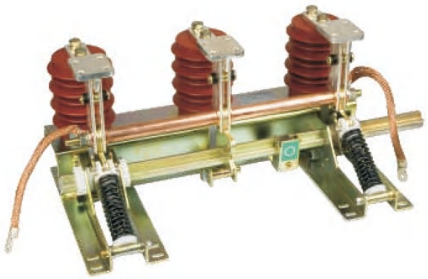

Indoor HV Withdrawable Vacuum Circuit Breakers

24kV 50Hz 20kA25kA/31.5kA 630-1250A 3Phase

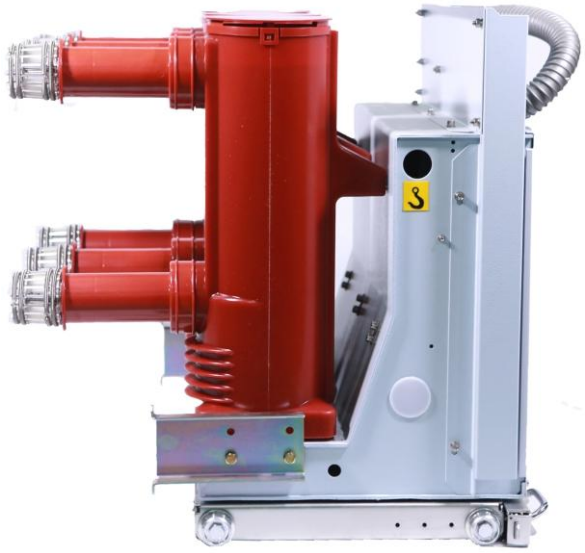



Indoor HV AC Grounding Switches

12kV (7.2kV) 50Hz 25kA/31.5kA 630-1600A 3Phase







ZN63(VS1)-12

Indoor High Voltage Handcart Vacuum Circuit Breaker

☑SUMMARY

ZN63(VS1)-12 indoor high voltage handcart vacuum circuit breaker is applied to 12Kv,three-phase,Ac 50Hz . It can provide control and protection for industrial and mining enterprises,power plants and substations, electrical facilities, and is suitable for frequent operation.The operating mechanism is integrated with the circuit breaker and the design can be used as a fixed installation unit. It can also be a special propulsion mechanism to forma handcart unit.The main loop adopts the integral solid pole to realize the miniaturization, high reliability and free maintenance of the circuit breaker, It can be used in KYN28A-12 (GZS) and other center-mounted handcar switchgears. the fixed type could also be used in the XGN series fixed switchgear.

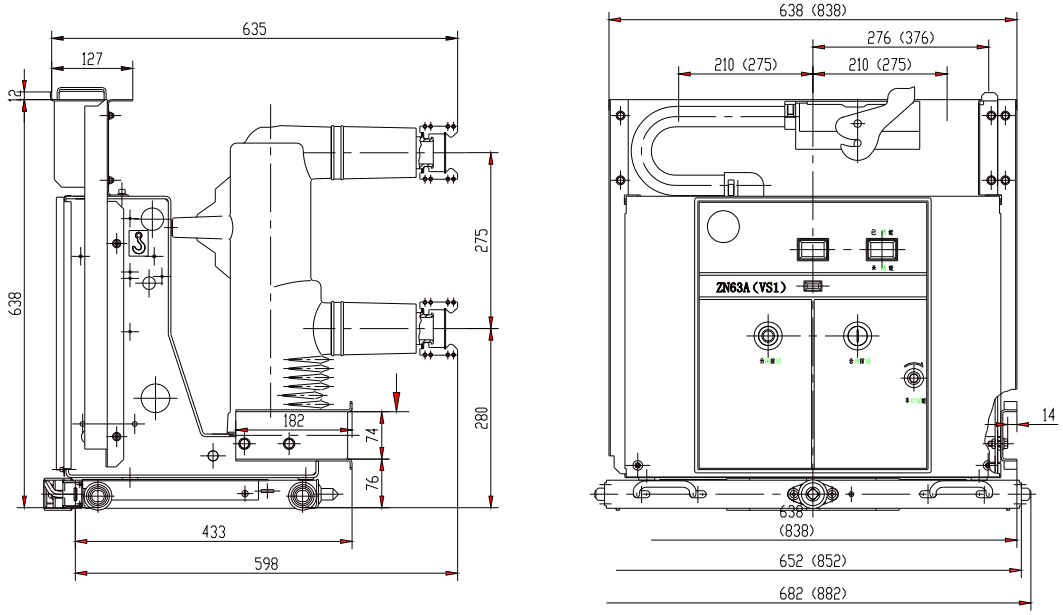
☑ APPLYING AMBIENT CONDITIONS

1. Ambient temperature: -30°C~+40°C.
2. Relative humidity: the average humidity of a day should be no more than95%. The average humidity of a month should be no more than 90%.
3. Earthquake intensity: not exceed 8 degrees.
4. Saturated vapor pressure: the average pressure of a day should be no more than 2.2kPa; the average pressure of a month should be no more than1.8Kpa.
5. The height above sea level: ≤ 1000 m (Except special requirements).
6. It should be installed in the places without fire, explosion, serious filth,and chemical erosion and violent vibration.

☑TECHNICAL SPECIFICATION

NO.	Item	Unit	Date			
1	Rated voltage	KV	12			
2	Rayed frequency	HZ	50			
3	Rated lighting impulse withstand voltage(peak)	KV	75			
4	Rated short-time power frequency voltage(1min)	KV	42			
5	Rated current	A	630,1250	630,1251	1250,1600 2000,2500	1600,2000 2500,3150 4000,5000
6	Rated short circuit breaking current	KA	20	25	31.5	40
7	Rated short circuit making current(peak)	KA	50	63	80	100
8	Rated short circuit duration	S	4			
9	Rated operating sequence		O-0.3s-CO-180S-CO O-180s-CO-180s-CO(40KA)			
10	Rated single/back to back capaction bank breakong current	A	630/400			
11	Rated short circuit current breaking time	Times	30			
12	Opening time	ms	35~70			
13	Closing time	ms	20~50			
14	Mechanical Life	Times	20000			
15	Rated energy storage and operating voltage	V	AC220/110DC 220/110			
16	Contact stroke	mm	11±1			
17	Contact overtravel	mm	3.5±0.5			
18	Averageclosing speed	m/s	0.5~0.8			
19	Average opening speed	m/s	0.9~1.2			
20	Contact closing bounce time	ms	≤2			
21	Three-phase opening, closing asynchronous	ms	≤2			
22	The main circuit resistance	Ω O	50(630A)≤45(1250A) ≤35(1600-2000A)≤25(more than 2500)			

☑OUTLINE OVERALL AND INSTALLING DIMENSIONS



Rated current	630	1250	1600
Rated short-circuit breaking current	20,25,31.5	25,31.5,40	31.5,40
Matched static contact size	ø35	ø49	ø55
Phase-to-phase distance	210±1.5		





ZN63(VSG)-12

Indoor High Voltage Fixed Vacuum Circuit Breaker

☑SUMMARY

ZN63(VSG)-12 indoor high voltage fixed vacuum circuit breaker is suitable for three-phase, Ac50Hz with 12KV rated voltage. It can provide control and protection for industrial and mining enterprises, power plants and substations, and electrical facilities, and is suitable for frequent operation. The operating mechanism is integrated with the main body of the circuit breaker, and the design can be used as a fixed installation unit. it can also be special propulsion mechanism to form a handcart unit. The main loop adopts the integral solid pole to realize the miniaturization, high reliability and free-maintenance of the circuit breaker. it can be used in KYN28A-12 (GZS) and other center-mounted handcart switchgears. The fixed type could also be used in the XGN series fixed switchgear.

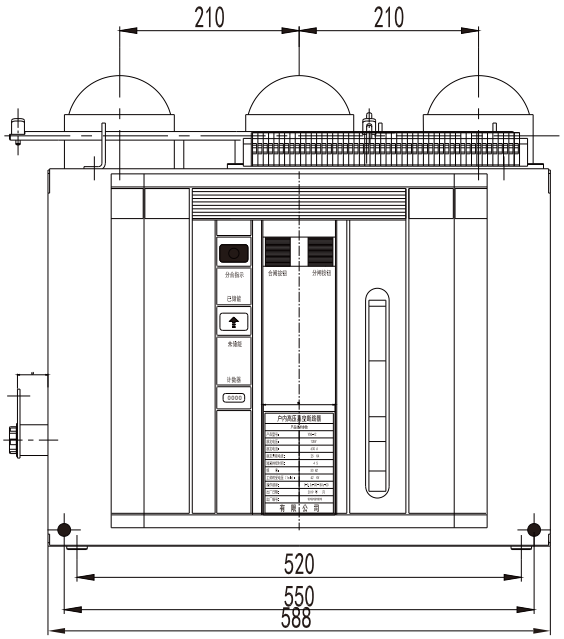
☑ APPLYING AMBIENT CONDITIONS

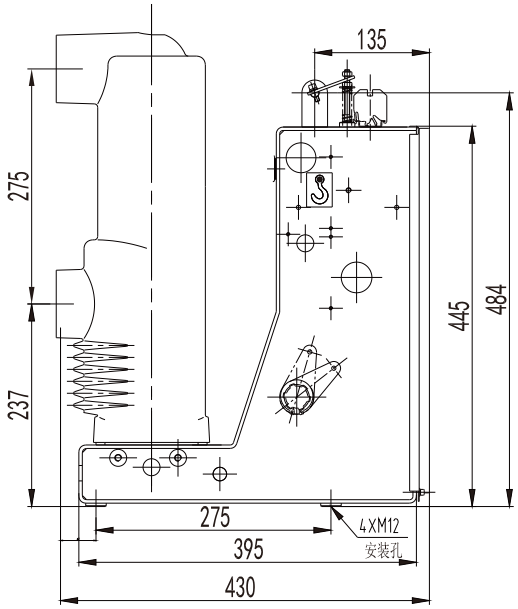
1. Ambient temperature: -30°C~+40°C.
2. Relative humidity: the average humidity of a day should be no more than95%. The average humidity of a month should be no more than 90%.
3. Earthquake intensity: not exceed 8 degrees.
4. Saturated vapor pressure: the average pressure of a day should be no more than 2.2kPa; the average pressure of a month should be no more than1.8Kpa.
5. The height above sea level: ≤ 1000 m (Except special requirements).
6. It should be installed in the places without fire, explosion, serious filth,and chemical erosion and violent vibration.

☑TECHNICAL SPECIFICATION

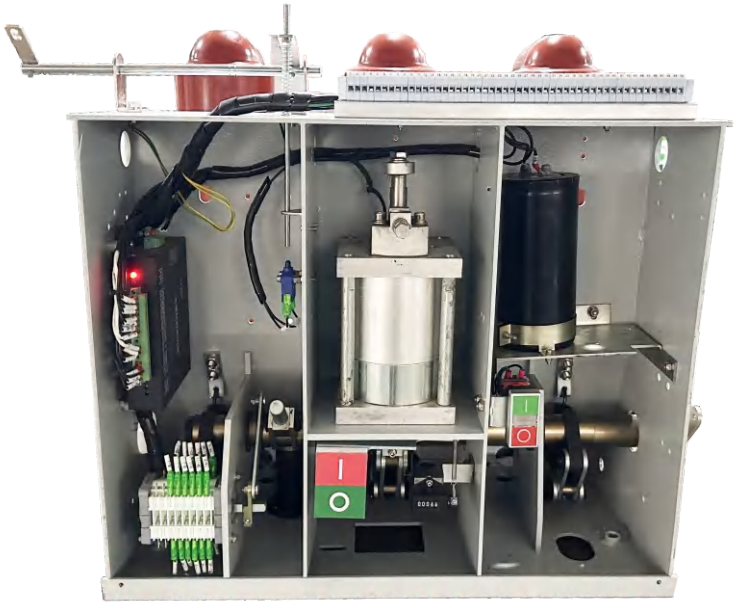
No.	Item		Unit	Data	
1	Rated voltage		KV	12	
2	Rated insulation level	Rated lighting impulse withstand voltage(peak)	KV	75(Phase to phase,to earth)/80(Between open contacts)	
		1 min power frequency withstand voltage		42(Phase to phase,to earth)/48(Between open contacts)	
3	Rated short circuit breaking current		KA	25	31.5
4	Rated current		A	630 1250	630 1250 1600
5	Rated thermal stability current(RMS)		KA	25	31.5
6	Rated dynamic stability current(peak)		KA	63	80
7	Rated short circuit making current		KA	63	80
8	Rated short circuit current breaking time		Times	50	
9	Secondary circuit operating frequency withstand voltage		V/min	2000	
10	Rated operating sequence			O-0.3s-CO-180s-CO	
11	Rated thermal stability time		S	4	
12	Rated single/back to back capacitor bank breaking current		A	630/400	
13	Mechanical life		Times	20000	

☑OUTLINE OVERALL AND INSTALLING DIMENSIONS









ZN73A-12

Indoor High Voltage Permanent Magnet Vacuum Circuit Breaker

☑SUMMARY

AEW- ZN73A-12 indoor high voltage permanent magnet vacuum circuit breaker is suitable for three-phase, Ac50Hz with12KV rated voltage. It can provide control and protection for industrial and mining enterprises, power plants and substations, and electrical facilities. Equipped with permanent magnet operating mechanism developed by our company. For its high reliability and long life, it is especially suitable for the places with bad conditions for example under frequent operation and frequent breaking of short circuit current.

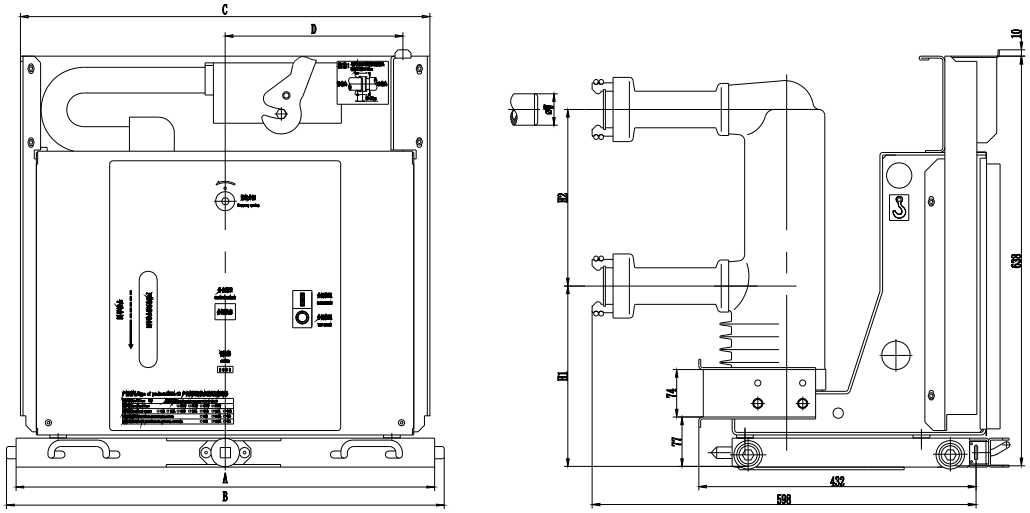
☑ APPLYING AMBIENT CONDITIONS

1. Ambient temperature: -30°C~+40°C.
2. Relative humidity: the average humidity of a day should be no more than95%. The average humidity of a month should be no more than 90%.
3. Earthquake intensity: not exceed 8 degrees.
4. Saturated vapor pressure: the average pressure of a day should be no more than 2.2kPa; the average pressure of a month should be no more than1.8Kpa.
5. The height above sea level: ≤ 1000 m (Except special requirements).
6. It should be installed in the places without fire, explosion, serious filth,and chemical erosion and violent vibration.

☑TECHNICAL SPECIFICATION

No.	Item		Unit	Data		
1	Rated voltage		KV	12		
2	Rated insulation level	1 min power frequency withstand voltage	KV	42		
		Lighting impulse withstand voltage		75		
3	Rated current		A	630-1250	1250-3150	1250-
4	Rated short circuit breaking current		KA	20	31.5	40
5	Rated short-circuit closing current (peak)		KA	50	80	100
6	Rated dynamic stability current (peak)		KA	50	80	100
7	Rated thermal stability current (RMS)		KA	20	31.5	40
8	Rated short circuit current breaking time		Times	30	30	20
9	Rated thermal stability time		S	4		
10	Rated operating sequence			O-0.3s-CO-180s-CO		
11	Mechanical life		Times	=50000 =50000 =30000*		
12	Permanent magnet mechanism and transmissionpart mechanical life		Times	=100000 =100000 =100000		
13	Rated single capacitor bank breaking current		A	630		
14	Rated back-to-back capacitor bank breaking current		A	400		
15	Rated out-of-step breaking current		KA	12.6 16		

☑OUTLINE OVERALL AND INSTALLING DIMENSIONS



Rated current	Rated breaking current	distance	H1	H2	A	B	C	D	W
630A	25KA/31.5KA	150	260	205	502	532	490	202	ø35
		210			652	682	638	277	
		150	280	275	502	532	490	202	
		210			652	682	638	277	
1250A	25KA/31.5KA	150	260	205	502	532	490	202	ø49
		210			652	682	638	277	
		150	280	275	502	532	490	202	
		210			652	682	638	277	
1600A	31.5KA/40KA	210	280	275	652	682	638	277	ø55
		275			852	882	838	377	



AEW-VSG-24

Indoor High Voltage Fixed Vacuum Circuit Breaker

☑SUMMARY

VSG -24 series indoor side mounted high voltage vacuum circuit breaker is indoor high voltageswitchgear is suitable for three-phase power systems with a rated voltage of 24kV and a ratedfrequency of 50 Hz as a function of protection and control of electrical appliances, due to the special advantages of vacuum circuit breakers especialy for places requiring frequent operation at rated current or multiple short-circuit currents VSG-24 series side mounted vacuum circuit breaker is fixedly installed and is mainly used for fixed switchgear The circuit breaker can be used alone or for ring network power supply, box type or various non-standard power supply systems.

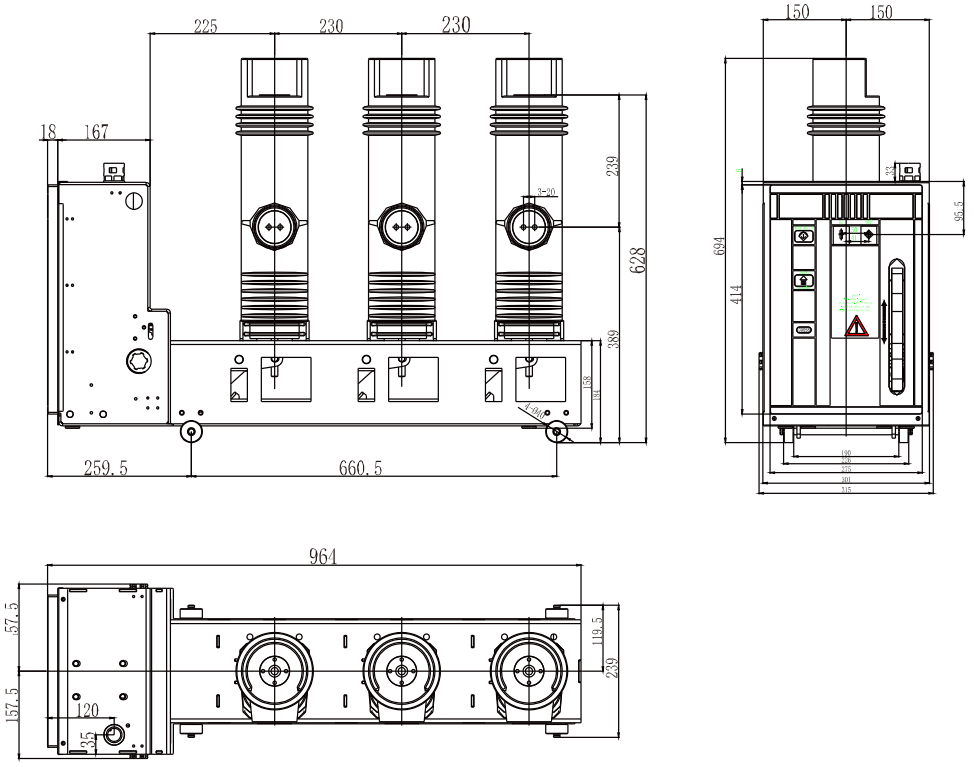
☑ APPLYING AMBIENT CONDITIONS

1. Ambient temperature: -30°C~+40°C.
2. Relative humidity: the average humidity of a day should be no more than95%. The average humidity of a month should be no more than 90%.
3. Earthquake intensity: not exceed 8 degrees.
4. Saturated vapor pressure: the average pressure of a day should be no more than 2.2kPa; the average pressure of a month should be no more than1.8Kpa.
5. The height above sea level: ≤ 1000 m (Except special requirements).
6. It should be installed in the places without fire, explosion, serious filth,and chemical erosion and violent vibration.

☑TECHNICAL SPECIFICATION

No.	Item		Unit	Data	
1	Rated voltage		KV	24	
2	Rated frequency		HZ	50/60	
3	Rated insulation level	1 min power frequency withstand voltage	KV	65	
		Lightning impulse withstand voltage		125	
4	Rated current		A	630	1250
5	Rated short-circuit breaking current		KA	20	20
				25	
				31.5	
6	Rated short circuit closing current(peak)		KA	50	
				63	
				80	
7	Contact resistance per phase			=50	=45
8	Contact opening distance		mm	12±1	
9	Overtravel		ms	3.5±0.5	
10	Contact closing bounce time		ms	=2	
11	Three phase opening and closing not synchronism		ms	=2	
12	Opening time		ms	20-50	
13	Closing time		ms	30-70	
14	Average opening time		m/s	1.1-1.6	
15	Average closing time		m/s	0.5-1.0	

☑OUTLINE OVERALL AND INSTALLING DIMENSIONS







AEW-VSG/C-24

Indoor Side Mounted High Voltage Vacuum Circuit breaker

☑SUMMARY

AEW- VSG/C-24 series indoor side mounted high voltage vacuum circuit breaker is indoor high voltage switchgear, is suitable for three-phase power systems with a rated voltage of 12 kV and a rated frequency of 50 Hz, as a function of protection and control of electrical appliances, due to the special advantages of vacuum circuit breakers, especially for places requiring frequent operation at rated current or multiple short-circuit currents. VSG/C-24 series side mounted vacuum circuit breaker is fixedly installed and is mainly used for fixed switchgear The circuit breaker can be used alone or for ring network power supply, box type or various non-standard power supply systems.

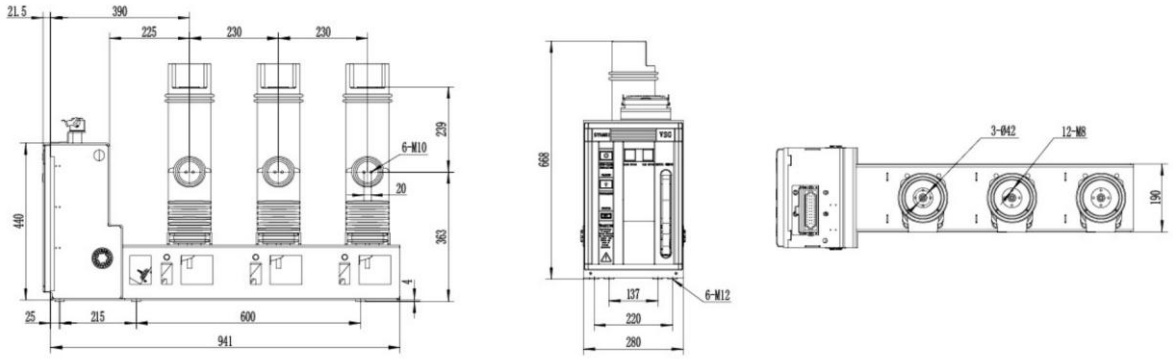
☑ APPLYING AMBIENT CONDITIONS

1. Ambient temperature: -30°C~+40°C.
2. Relative humidity: the average humidity of a day should be no more than95%. The average humidity of a month should be no more than 90%.
3. Earthquake intensity: not exceed 8 degrees.
4. Saturated vapor pressure: the average pressure of a day should be no more than 2.2kPa; the average pressure of a month should be no more than1.8Kpa.
5. The height above sea level: ≤ 1000 m (Except special requirements).
6. It should be installed in the places without fire, explosion, serious filth,and chemical erosion and violent vibration.

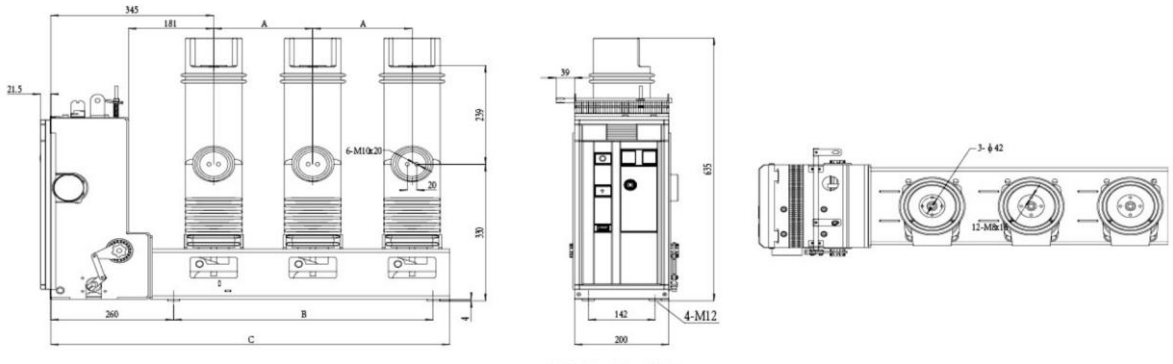
☑TECHNICAL SPECIFICATION

No.	Item		Unit	Data	
1	Rated voltage		KV	24	
2	Rated frequency		HZ	50/60	
3	Rated insulation level	1 min power frequency withstand	KV	65	
		Lightning impulse withstand voltage		125	
4	Rated current		A	630	1250
5	Rated short-circuit breaking current		KA	20	
				25	
				31.5	
6	Rated short circuit closing current (peak)		KA	50	
				63	
				80	
7	Contact resistance per phase			=50	=45
8	Contact opening distance		mm	12±1	
9	Overtravel		ms	3.5±0.5	
10	Contact closing bounce time		ms	=2	
11	Three phase opening and closing not synchronism		ms	=2	
12	Opening time		ms	20-50	
13	Closing time		ms	30-70	
14	Average opening time		m/s	1.1-1.6	
15	Average closing time		m/s	0.5-1.0	

☑OUTLINE OVERALL AND INSTALLING DIMENSIONS



VSG/C-24-280



VSG/C-24-200





AEW-VSG-24

Indoor withdrawable vacuum circuit breaker

☑SUMMARY

AEW-VSG -24 series indoor side mounted high voltage vacuum circuit breaker is indoor high voltage switchgear is suitable for three-phase power systems with a rated voltage of 24kV and a rated frequency of 50 Hz as a function of protection and control of electrical appliances, due to the special advantages of vacuum circuit breakers especialy for places requiring frequent operation at rated current or multiple short-circuit currents VSG-24 series side mounted vacuum circuit breaker is fixedly installed and is mainly used for fixed switchgear The circuit breaker can be used alone or for ring network power supply, box type or various non-standard power supply systems.

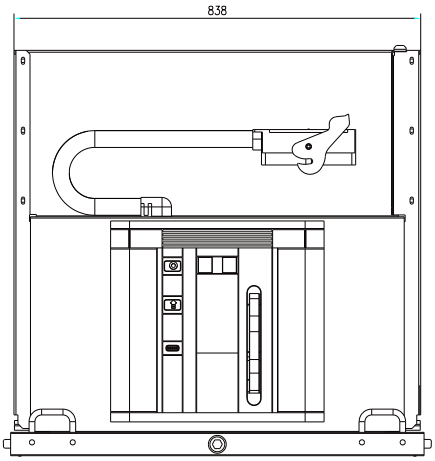
☑ APPLYING AMBIENT CONDITIONS

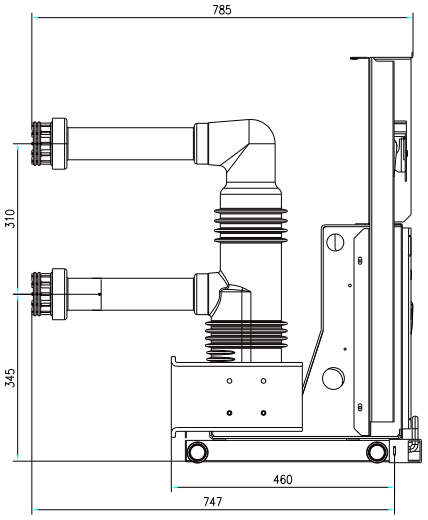
1. Ambient temperature: -30°C~+40°C.
2. Relative humidity: the average humidity of a day should be no more than95%. The average humidity of a month should be no more than 90%.
3. Earthquake intensity: not exceed 8 degrees.
4. Saturated vapor pressure: the average pressure of a day should be no more than 2.2kPa; the average pressure of a month should be no more than1.8Kpa.
5. The height above sea level: ≤ 1000 m (Except special requirements).
6. It should be installed in the places without fire, explosion, serious filth,and chemical erosion and violent vibration.

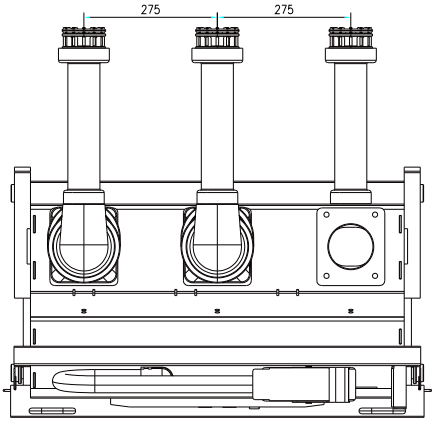
☑TECHNICAL SPECIFICATION

No.	Item	Unit	Data		
1	Rated voltage	KV	24		
2	Rated frequency	Hz	50		
3	Rated current	A	630	1250	1600
4	Rated short circuit breaking current	KA	20	25	31.5
5	Rated short circuit closing current(peak)	KA	20	63	80
6	Rated short circuit duration	s	4		
7	Rated short circuit breaking current breaking time	Times	20		
8	Rated operating sequence		0-0.3s-CO-180s-CO		
9	Rated lighting impulse withstand voltage(Between open contacts)	KV	125		
10	Rated 1 min power frequency withstand voltage(Between open contacts	KV	65		
11	Closing time	ms	=100		
12	Opening time	ms	=50		
13	Mechanical life	Times	20000		
14	Rated energy storage and operating voltage	V	~220/110		
15	Break time	ms	=65		
16	Energy storage time	s	=10		

☑OUTLINE OVERALL AND INSTALLING DIMENSIONS











AEW-VSG/C-40.5

Indoor fixed side mounted vacuum circuit breaker

☑SUMMARY

AEW-VSG/C-40.5 Series Side Mounted Vacuum Circuit Breaker is a new type of three-phase 50Hz according to the unique design concept and combined with the market demand and development, the rated voltage of indoor switchgear 40.5kV, it can be provided to industrial and mining enterprises, power plant and substation as the control and protection of electrical equipment, and is suitable for frequent operation.

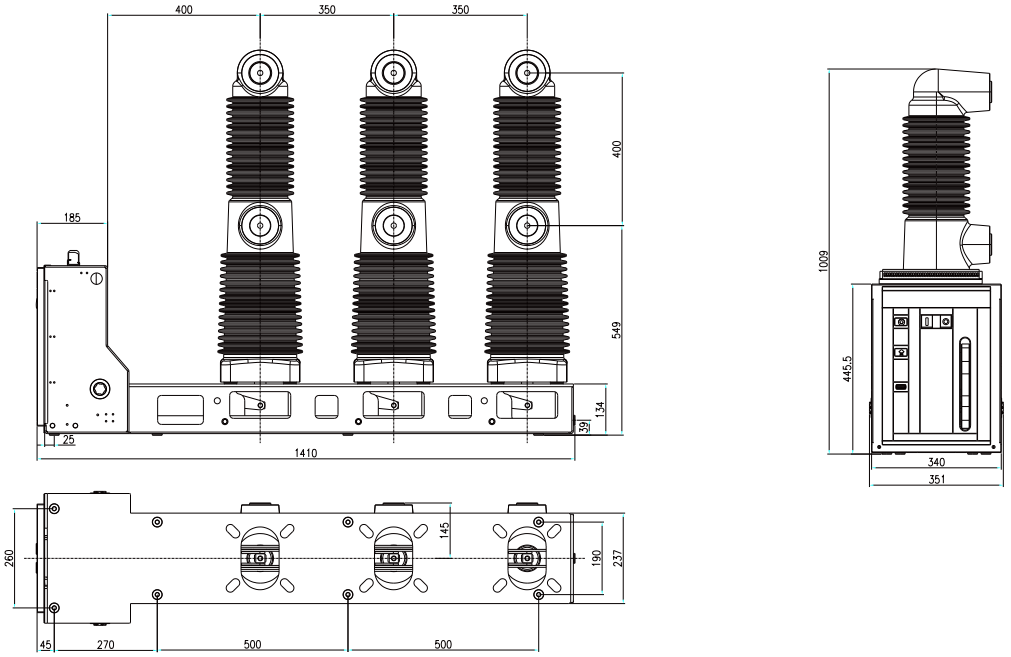
☑ APPLYING AMBIENT CONDITIONS

1. Ambient temperature: -30°C~+40°C.
2. Relative humidity: the average humidity of a day should be no more than95%. The average humidity of a month should be no more than 90%.
3. Earthquake intensity: not exceed 8 degrees.
4. Saturated vapor pressure: the average pressure of a day should be no more than 2.2kPa; the average pressure of a month should be no more than1.8Kpa.
5. The height above sea level: ≤ 1000 m (Except special requirements).
6. It should be installed in the places without fire, explosion, serious filth,and chemical erosion and violent vibration.

☑TECHNICAL SPECIFICATION

No.	Item		Unit	Data		
1	Rated voltage		kV	40.5		
2	Rated insulation level	1 min power frequency withstand voltage(RMS)	kV	95		
		Lighting impulse withstand voltage(peak)		185		
3	Rated frequency		Hz	50		
4	Rated current		A	1250	1600	200
5	4S rated short-time withstand current		kA	25	31.5	
6	Rated peak withstand current		kA	63	80	
7	Rated short circuit breaking current		kA	25	31.5	
8	Rated short circuit closing current		kA	63	80	
9	Rated order of operation			o-0.3s-CO-180s-CO		
10	Rated short circuit breaking current breaking times		time	20		
11	Breaking current of rated capacitor bank		A	630		
12	Mechanical		time	20000		
13	Contact opening distance		mm	18±1		
14	Contact stroke		mm	5±1		
15	Average closing speed		m/s	0.8±0.2		
16	Average breaking speed		m/s	1.8±0.2		
17	Breaking time (rated voltage)		m/s	20-50		
18	Closing time (rated voltage)		m/s	=100		
19	Contact closing trip time		ms/M	=3		
20	Three phase switching off synchronism		ms/M	=2		
21	The movable and static contact allow the accumulated thickness of friction		mm	3		
22	Dominant loop resistance		μ O	=60		

☑OUTLINE OVERALL AND INSTALLING DIMENSIONS







AEW-VBI-40.5

VBI-40.5 Floor Mounted Vacuum Circuit Breaker

☑SUMMARY

AEW-VBI -40.5 VBI indoor high-voltage vacuum circuit breaker is an indoor device with three-phase AC 50Hz and rated voltage of 40 5kV. It can be used for the control and protection of electrical equipment in industrial and mining enterprises, power plants and substations, especially for places with frequent operations, The installation form of the circuit breaker in the switch cabinet can be either a fxed type or a with drawable type installed on a trolley.VBI indoor high-voltage vacuum circuit breaker has reliable performance and is easy to Install. It is the best choice for the control and protection of high-voltage transmission and distribution systems.

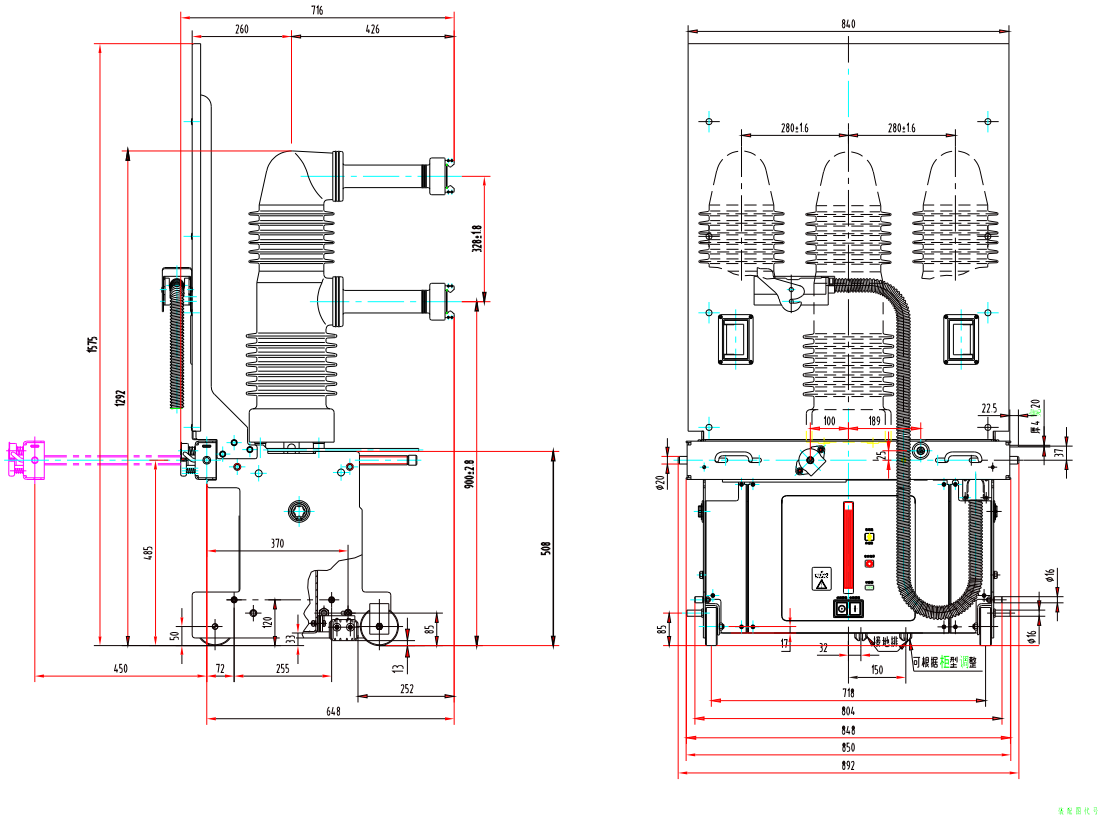
☑ APPLYING AMBIENT CONDITIONS

1. Ambient temperature: -30°C~+40°C.
2. Relative humidity: the average humidity of a day should be no more than95%. The average humidity of a month should be no more than 90%.
3. Earthquake intensity: not exceed 8 degrees.
4. Saturated vapor pressure: the average pressure of a day should be no more than 2.2kPa; the average pressure of a month should be no more than1.8Kpa.
5. The height above sea level: ≤ 1000 m (Except special requirements).
6. It should be installed in the places without fire, explosion, serious filth,and chemical erosion and violent vibration.

☑TECHNICAL SPECIFICATION

No.	Item	Unit	Data		
1	Rated voltage	KV	40.5		
2	1 min rated short-duration power frequency withstand voltage	KV	95		
3	Lighting impulse withstand voltage	KV	185		
4	Rated frequency	Hz	50/60		
5	Rated current	A	630/1250/1600/2000/2500		
6	Rated short-circuit breaking current	KA	20	25	31.5
7	Rated short-circuit making current(peak value)	KA	50	63	80
8	Rated short-time withstand current	KA	20	25	31.5
9	Rated peak withstand current	KA	50	63	80
10	Rated short-time withstand current duration	S	4		
11	Rated operating sequence		0-0.3s-CO-180s-CO		
12	Rated short-circuit current breaking times	Times	30		
13	Mechanical Life	Times	10000		
14	Contact opening diastance	mm	20±2		
15	Contact overtravel	mm	6±1		
16	Average closing speed	m/s	0.6±0.2		
17	Average breaking speed	m/s	1.2±0.2		
18	Contact closing bounce time	ms	=3		
19	Contact Closing and Breaking Non-simultaneous	ms	=2		
20	Circuit resistance per phase	μ O	=80		
21	Permissible accumulated wear thickness of dynamic and static contact	mm	3		

☑OUTLINE OVERALL AND INSTALLING DIMENSIONS







AEW-ZN85-40.5

Indoor Handcart Vacuum Circuit Breaker

☑SUMMARY

AEW-ZN85 -40.5 ZN85-40.5/T(3AV3) indoor handcart vacuum circuit breaker is suitable for three-phase, Ac50Hz with 40.5KV rated voltage. It can be used for industrial and mining enterprises, power plants and substations as load current and overload current fault current, and is suitable for the occasion with frequent operation.The circuit breaker adopts an upper and lower arrangement structure to effectively reduce the depth of the circuit breaker. It adopts the composite insulation structure, the three-phase arc extinguishing chamber and the associated electrified body. Separated by three independent epoxy insulation cases, the circuit breaker meets the air distance and creepage requirements under normal operating conditions after the composite insulation structure and it effectively reduces the size of the circuit breaker. The main conductive circuit vacuum interrupter and the dynamic and static conduclive conneclion are installed in the insulation tube, so that the phase to phase distance is only 300mm.The main circuit electrical connections are all fixed connections with high reliability.

☑ APPLYING AMBIENT CONDITIONS

1. Ambient temperature: -30°C~+40°C.
2. Relative humidity: the average humidity of a day should be no more than95%. The average humidity of a month should be no more than 90%.
3. Earthquake intensity: not exceed 8 degrees.
4. Saturated vapor pressure: the average pressure of a day should be no more than 2.2kPa; the average pressure of a month should be no more than1.8Kpa.
5. The height above sea level: ≤ 1000 m (Except special requirements).
6. It should be installed in the places without fire, explosion, serious filth,and chemical erosion and violent vibration.

☑TECHNICAL SPECIFICATION

No.	Item		Unit	Data			
1	Rated voltage		KV	40.5			
2	Rated current		A	1250		1600	2000、
3	Rated short circuit breaking current		KA	25	31.5	25	31.5
4	Rated dynamic stability current (peak)		KA	63	80	63	80
5	4S thermal stability current		KA	25	31.5	25	31.5
6	Rated short circuit closing current (peak)		KA	63	80	63	80
7	Rated short circuit current breaking time		Times	20			
8	Rated operating sequence			O-0.3s-CO-180s-CO			
9	Rated insulation level	1 min power frequency withstand	KV	95			
		Lightning impulse withstand voltage		185			
10	Mechanical life		Times	10000			
11	Rated single capacitor bank opening and closing current		A	630			
12	Rated back-to-back capacitor bank current		A	400			
13	Rated voltage of energy storage motor		V	AC、DC:110; 220			
14	Rated power of energy storage motor		W	=230			
15	Energy storage time of energy storage motor		S	=15			
16	Rated voltage of opening and closing coil		V	DC:110; 220			
17	Rated current of opening and closing coil		A	1.05(110V) 0.96(220V)			
18	Contact stroke		mm	20±2			
19	Contact contact stroke		mm	7.5±1.5			
20	Three-phase opening,closing phase asynchronous		ms	=2			
21	Contact closing bounce time		ms	=3			
22	The main circuit resistance (not include the contact arm)		μ O	=40			

☑OUTLINE OVERALL AND INSTALLING DIMENSIONS

