

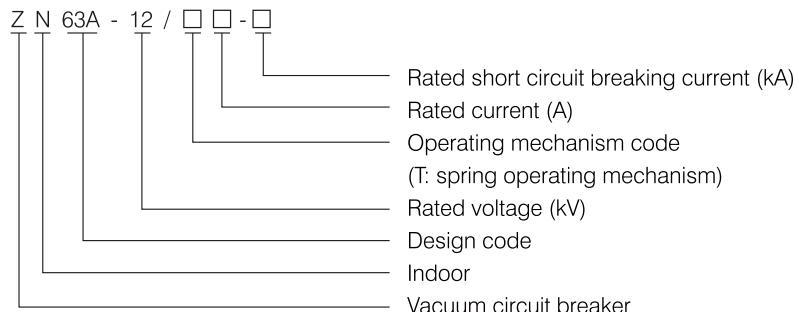


ZN63A-12 (VS1) Vacuum Circuit Breaker, Indoor Type

1. General

- 1.1 Ratings: voltage up to 10kV, current up to 5000A, AC50Hz.
 1.2 Application: for the control and protection of substation and equipments. It matches with switchgear panel KYN28A and XGN.
 1.3 Standard: IEC62271-100

2. Type and Interpretation



3. Working Condition

- 3.1 Ambient air temperature: -15~+40°C
 3.2 Altitude: ≤2000m
 3.3 No operating in such places as subject to dust, smog, corrosive/flammable gas, vapor and salt pollution.
 3.4 Humidity: Daily average value ≤95%
 Monthly average value ≤90%
 3.5 Water vapor pressure: Daily average value ≤2.2kPa
 Monthly average value ≤1.8kPa
 3.6 The external shocking and earthquake could be neglected.
 3.7 The amplitude of electromagnetic interference in the secondary system ≤1.6kV.
 ※ Note:
 1. Customized products for other special working conditions are available on your requirements.
 2. We have developed products suitable for high altitude.

4. Main Technical Parameter

4.1 Main technical parameter of ZN63A-12(VS1)

Table 1

Item	Unit	Parameter							
Rated voltage	kV	12	12	12	12	12	12	12	12
Rated current	A	630	1250	630	1250	630	1250	1250	2000
				1600	1600	2000	2500	3150	3150
					1600		4000	4000	5000
Rated insulation level	1min power frequency withstand voltage	kV	42	42	42	42	42	42	42
	Rated lightning impulse withstand voltage	kV	75	75	75	75	75	75	75
Rated short-circuit breaking current	kA	16	20	25	31.5	40	50		
Rated short-circuit making current (peak)	kA	40	50	63	80	100	130		
Rated withstand current (peak)	kA	40	50	63	80	100	130		

Item	Unit	Parameter					
Rated short-time withstand current	kA	16	20	25	31.5	40	50
Breaking times of rated short-circuit making current	Times	50	50	50	50	30	20
Rated duration of short-circuit	s	4	4	4	4	4	4
Rated operating sequence		O-t-CO-180s-CO*	O-t-CO-180s-CO*	O-t-CO-180s-CO*	O-t-CO-180s-CO*	O-t-CO-180s-CO*	O-t-CO-180s-CO*
Mechanical life	Times	20000	20000	20000	20000	10000	10000
Rated single capacitor bank breaking current	A	630	630	630	630		
Rated back-to-back capacitor bank breaking current		400	400	400	400		

*16kA, 20kA, 25kA, 31.5kA: t=0.3s ≥40kA: t=180s

Forced air cooling is needed when the rated current is ≥4000A.

4.2 Technical parameters of Energy Storage Motor (The Energy Storage Motor adopts permanent-magnet DC motor)

Table 2

Model	Rated voltage(V)	Rated output power(W)	Normal working voltage range(V)	Stored energy time under rated voltage(s)
ZYJ55-1	DC110; DC220	70	85%~110% rated voltage	≤10

* Operating voltage of AC or DC is available

4.3 Technical parameters of opening, closing coils.

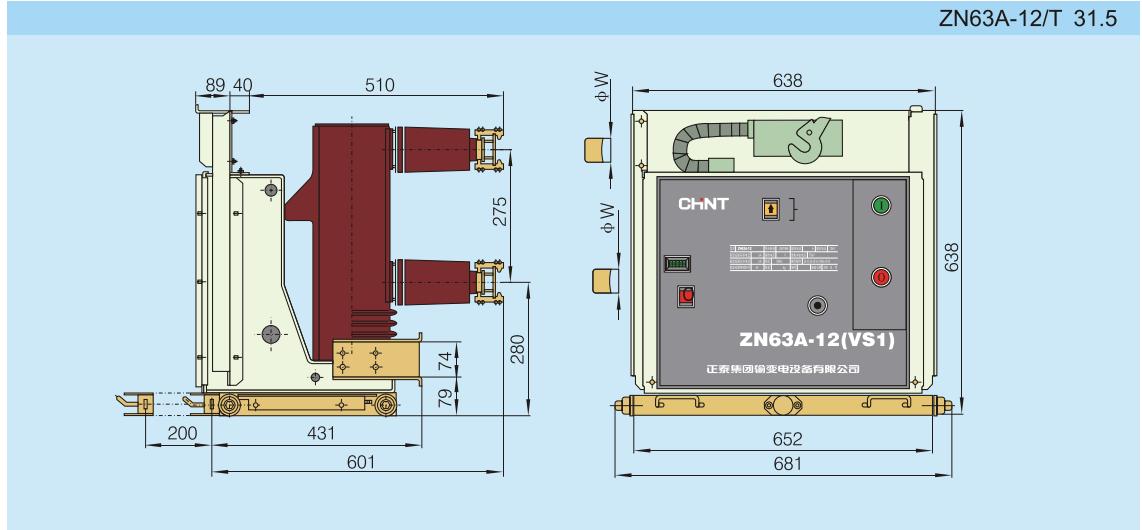
Table 3

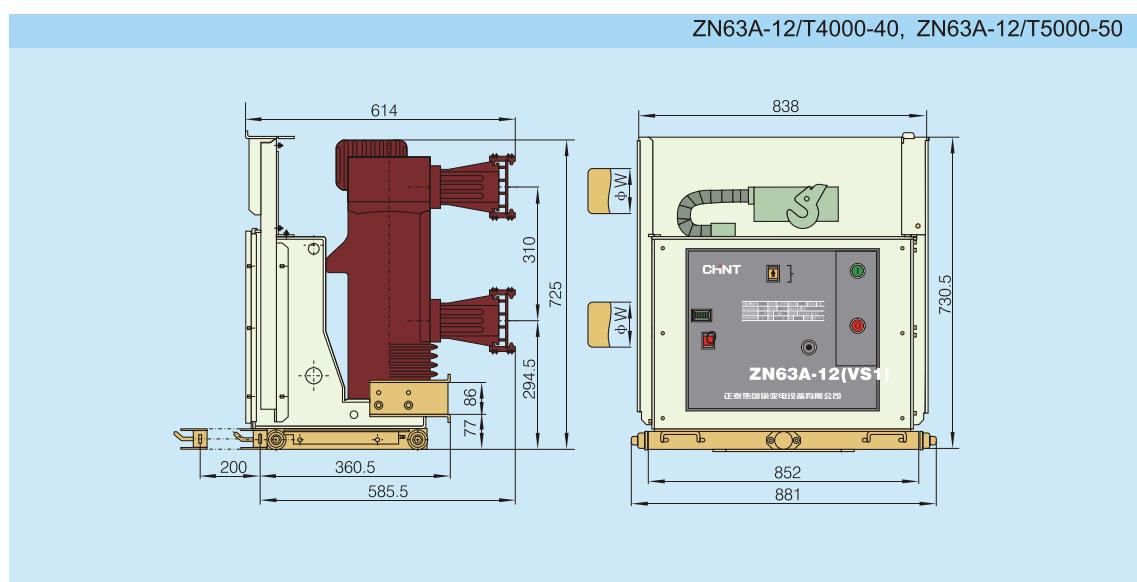
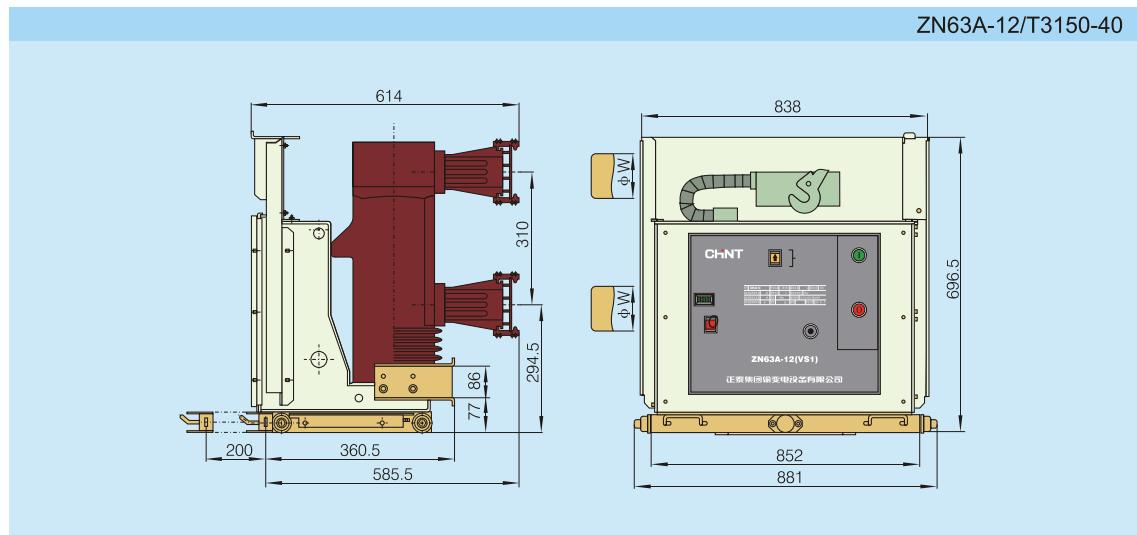
Item	Closing coils	Opening coils	Note
Rated operating voltage(V)	DC220 DC110 AC220 AC110	DC220 DC110 AC220 AC110	No opening subject to the operating voltage of opening coil below 30% of rated operating voltage.
Coil power(W)	440	368(660*)	
Normal working voltage range	AC 85%~110% Rated voltage DC 80%~110% Rated voltage	AC 85%~120% Rated voltage DC 65%~120% Rated voltage	

* 660W for opening coils with breaking current 50kA.

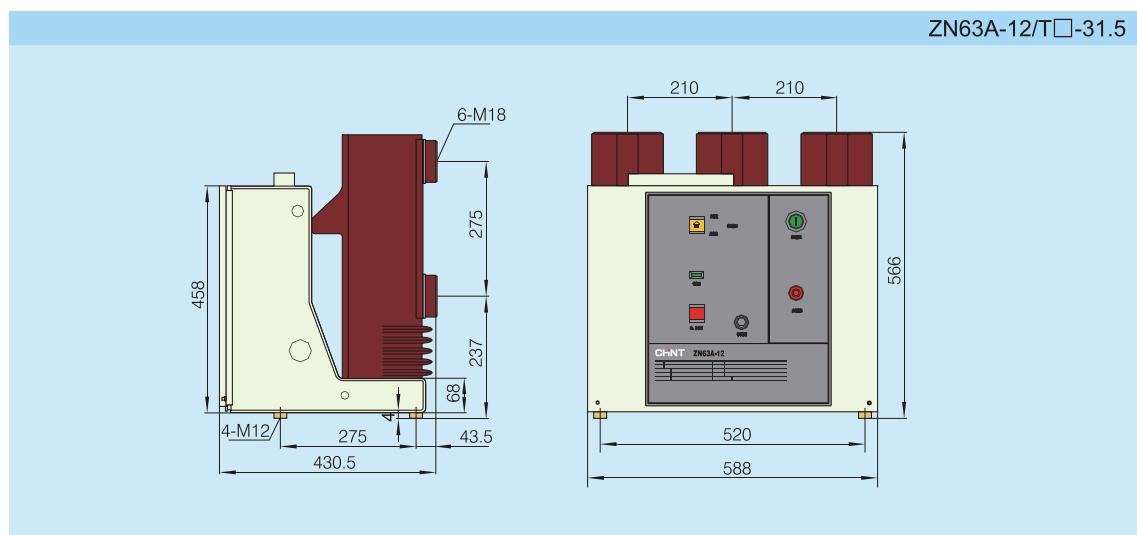
5. Overall & Installation Dimension

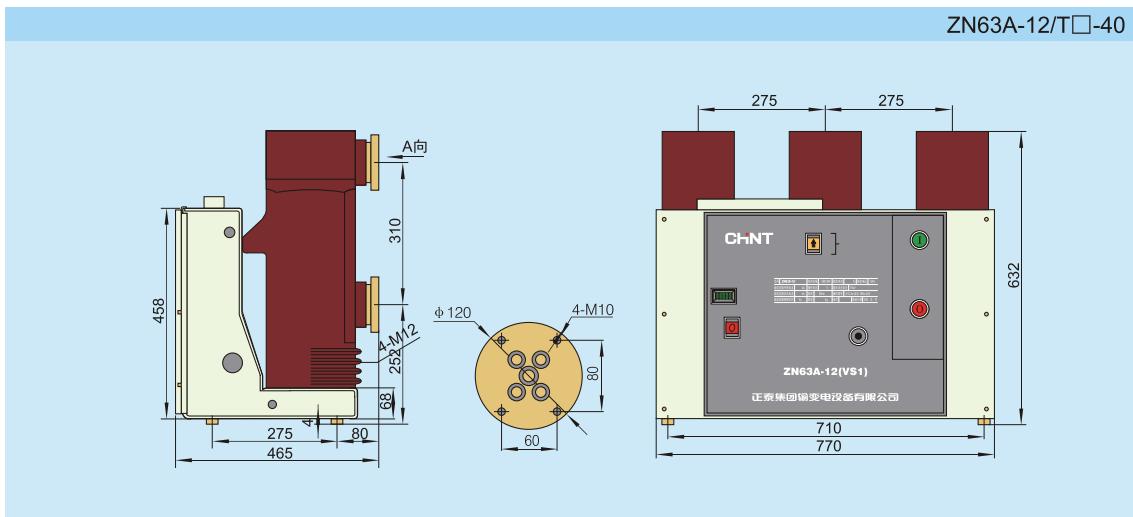
5.1 The overall & installation dimension of trolley type VCB



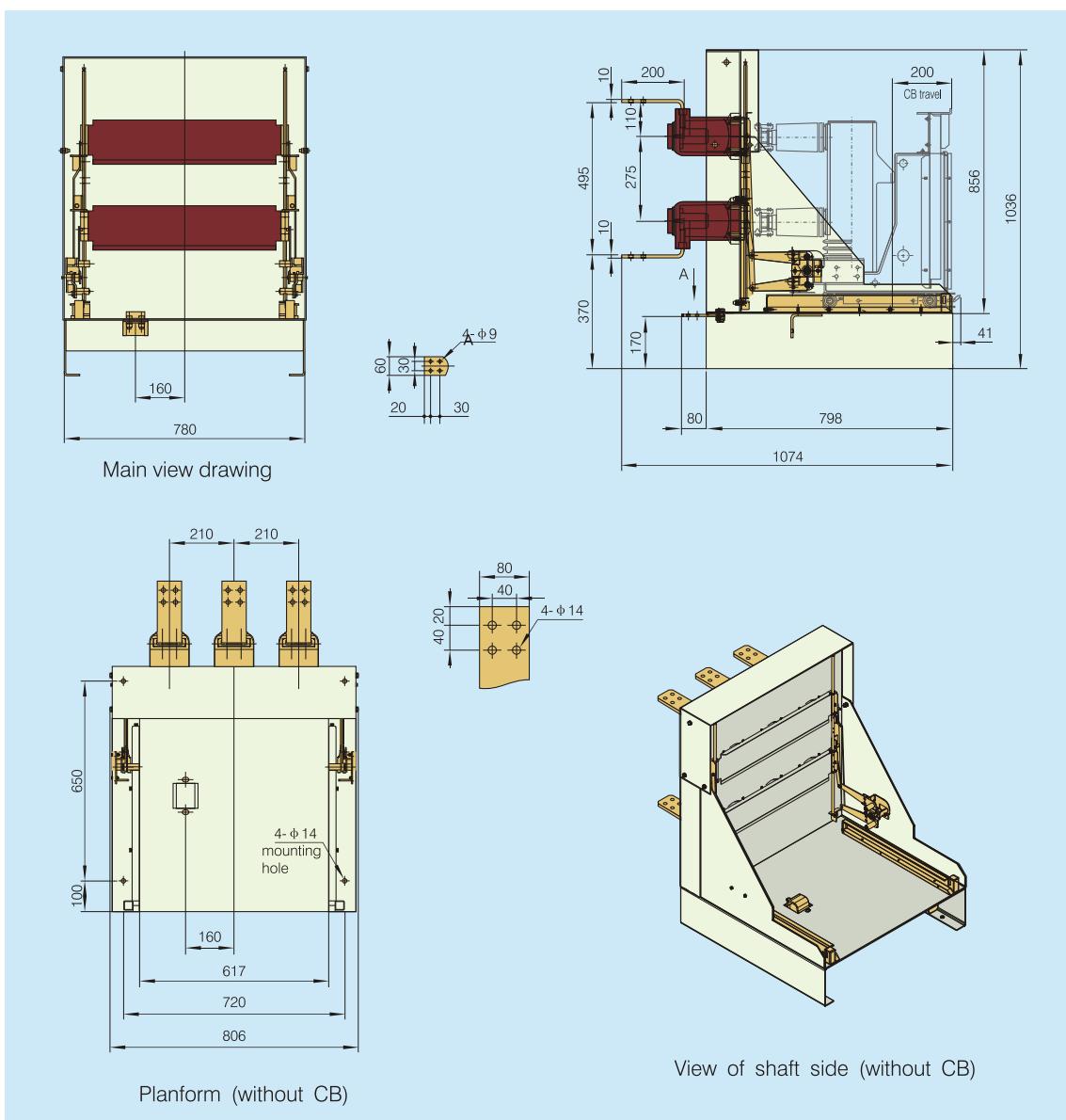


5.2 The overall & installation dimension of fixed-type VCB

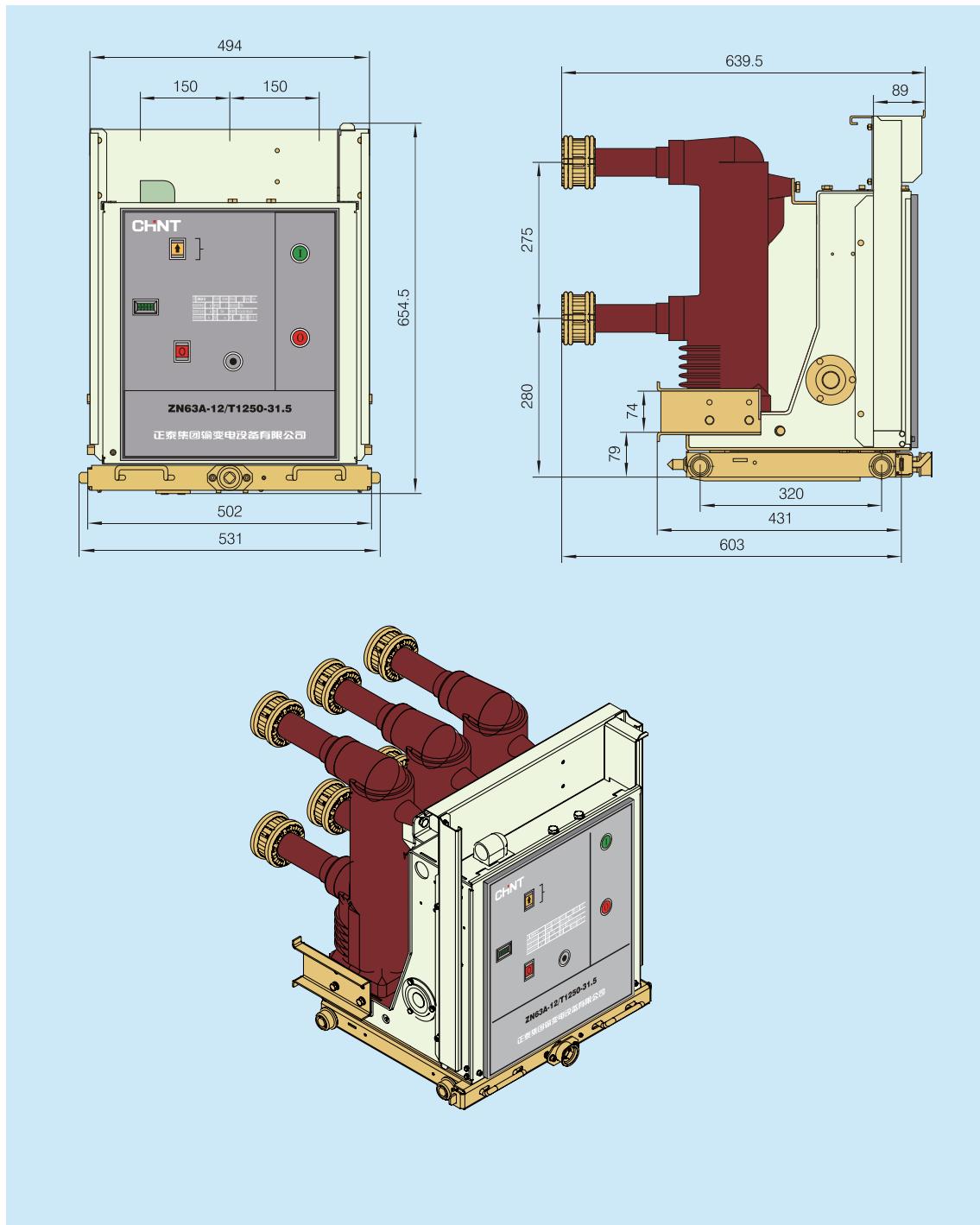




5.3 Installation dimension of removable ZN63A-12 circuit breaker and valve



5.4 The overall & installation dimension of ZN63S-12/T1250-31.5 circuit breaker (Phase distance 150mm)



6. Internal Electrical Schematic Diagram of Circuit Breaker

