ZN85-40.5G(3AV3)
Indoor AC HV Vacuum Circuit Breaker



1. Application

ZN85-40.5G(3AV3) indoor AC HV Vacuum circuit breaker is applicable for power system with three-phase AC50Hz,40.5kV, used for industrial and mining enterprises, power plants and transformer transformer substations to protect and control equipemnts, also, it can be used in the location where with frequent operating.



2. Type and Meaning

ZN 85 - 40.5G / 2000 - 31.5

- 31.5 — Rated short circuit breaking current
- 2000 — Rated current
- 40.5G — Rated voltage
- 85 — Design No.
- ZN — Indoor vacuum circuit breaker

3. Service Environment

Environmental temperature is from:-15~40°C;
Environmental humidity:
Daily average relative humidity≤95%
Monthly average relative humidity≤90%
Earthquake intensity≤8
Keep away from such environment as subject to dust, dirt, smog, corrosive of flammable gas, vapor and salt pollution.

4. Technical Parameter

Item	Unit	Value
Rated voltage	kV	40.5
1 min power frequency withstand voltage (virtual value)	kV	95
Lighting impulse withstand voltage (peak)	kV	185
Rated frequency	Hz	50
Rated current	A	1250,1600,2000
Rated short-time withstand current	kV	25 31.5
Rated peak withstand current	kV	63 80
Rated short circuit duration	S	4
Rated short-circuit breaking current	kA	25 31.5
Rated short-circuit making current	kA	63 80
Rated operating sequence		0-0.3s-CO-180s-CO
Break time	ms	<80
Rated short-circuit breaking current times	times	20
Rated breaking current of capacitor bank	A	630
Rated back-back capacitor bank drop-out current	A	400
Rated operating voltage	V	-110/~110 -220/~220
Mechanical endurance		10000

5. Structrue Feature

The arc-extinguish chamber is on the upper part and the mechanism is on the lower part. This structure is convenient for debug .

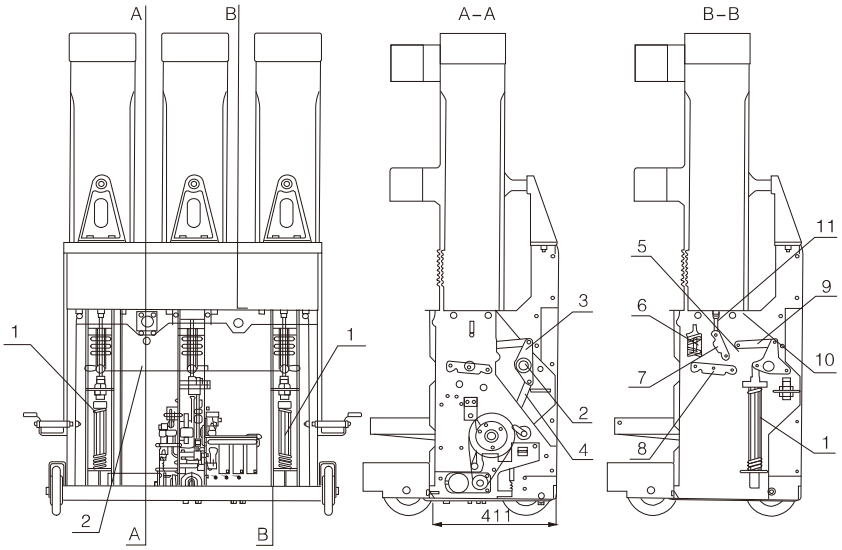
Complex insulating structure using air and organic material; Compactable dimension and small weight.

Vacuum arc-extinguish chamber of Cutler-Hammer Company (USA) and domestic ZMD are both appli cable for th e VCB. Both two kinds of chambers extinguish arc by vertical magnetic field and featuring with low cut-off and good on-off capability with asymmetry.

Simple spring operation mechanism is free from maintenance within 10000 times of operations.

Lead-screw propeller, easy and stable operation and good self-locking capability.

6. Outline and Installation Dimension (mm)



1. Break-brake spring
2. Large shaft
3. Middle connecting lever
4. Transmission rod
5. Drive connecting plate
6. Contact spring
7. Drive connecting plate3
8. Drive connecting plate4
9. Drive connecting plate1
10. Side connecting lever
11. Rod end joint bearing

