

MV Circuit Breaker

ZN85-40.5 Indoor Vacuum Circuit Breaker

- ❖ ZN85-40.5 indoor MV vacuum circuit breaker (hereinafter referred to as circuit breaker), suitable for three-phase AC 50Hz, rated voltage 40.5kV power system, can be used for industrial and mining enterprises, power plant and substation as opening and closing load current, overload current, fault current use.
Circuit breaker and operating mechanism adapt the upper and lower arrangement of institutions, effectively reducing the circuit breaker depth.
- ❖ Three-phase arc extinguishing chamber and associative charged body is isolated by three independent epoxy resin insulating cylinder, composite insulating structure, The circuit breaker meets the air distance and creepage distance requirements under normal operating conditions, and effectively reduces the volume of circuit breaker. The vacuum interrupter of the main current ring and the dynamic and static conductive connections are installed in the insulating cylinder with a distance of only 300mm. The electrical connection of the main circuit is fixed connection, which has high reliability. Insulating cylinder is arranged on the upper side of the circuit breaker frame.
- ❖ The overall layout is reasonable, beautiful appearance, simple. It has the characters of small volume, flexible operation, with reliable electrical performance, long service life, convenient maintenance, maintenance free.
- ❖ The circuit breaker is suitable for frequent operation, various occasions and places with harsh operating conditions.
- ❖ Standard: IEC 62271-100

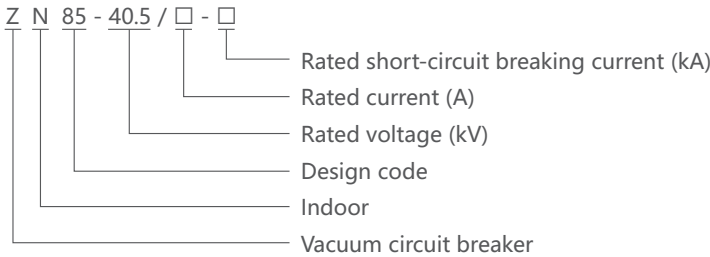
General



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Selection



Operating conditions

1. Ambient temperature -10°C~+40°C
2. Altitude $\leq 1500\text{m}$;
3. Relative humidity: the daily average is not greater than 95%, the monthly average is not greater than 90%, the daily average of saturated steam is not greater than $2.2 \times 10^{-3}\text{Mpa}$, and the monthly average is not greater than $1.8 \times 10^{-3}\text{Mpa}$;
4. The earthquake intensity does not exceed 8 degrees;
5. Places free of fire, explosion hazards, severe pollution, chemical corrosion and severe vibrations.

Features

1. Adopt the lead screw propulsion mechanism, labor saving, stable, good self-locking performance.
2. Small volume, flexible operation, with characters of reliable electrical performance, long service life, easy maintenance, low maintenance.

Installation

1. The installation form of ZN85 vacuum circuit breaker in switch cabinet can be fixed, can also be drawout style, has good interchangeability.
2. This series handcart type circuit breaker is mainly used for 1400mm KYN61 ground cabinet, fixed type circuit breaker is used for XGN-40.5, GG1A-40.5 and box type substation etc..

Actuator

1. Vacuum circuit breaker ZN85 using the integral type 3AV3 spring operating mechanism, mechanism is relatively mature, stable and reliable.
2. Mechanism design is simple, the output curve and the performance is more suitable for the characteristics and requirements of 40.5kV vacuum circuit breaker.

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Technical data

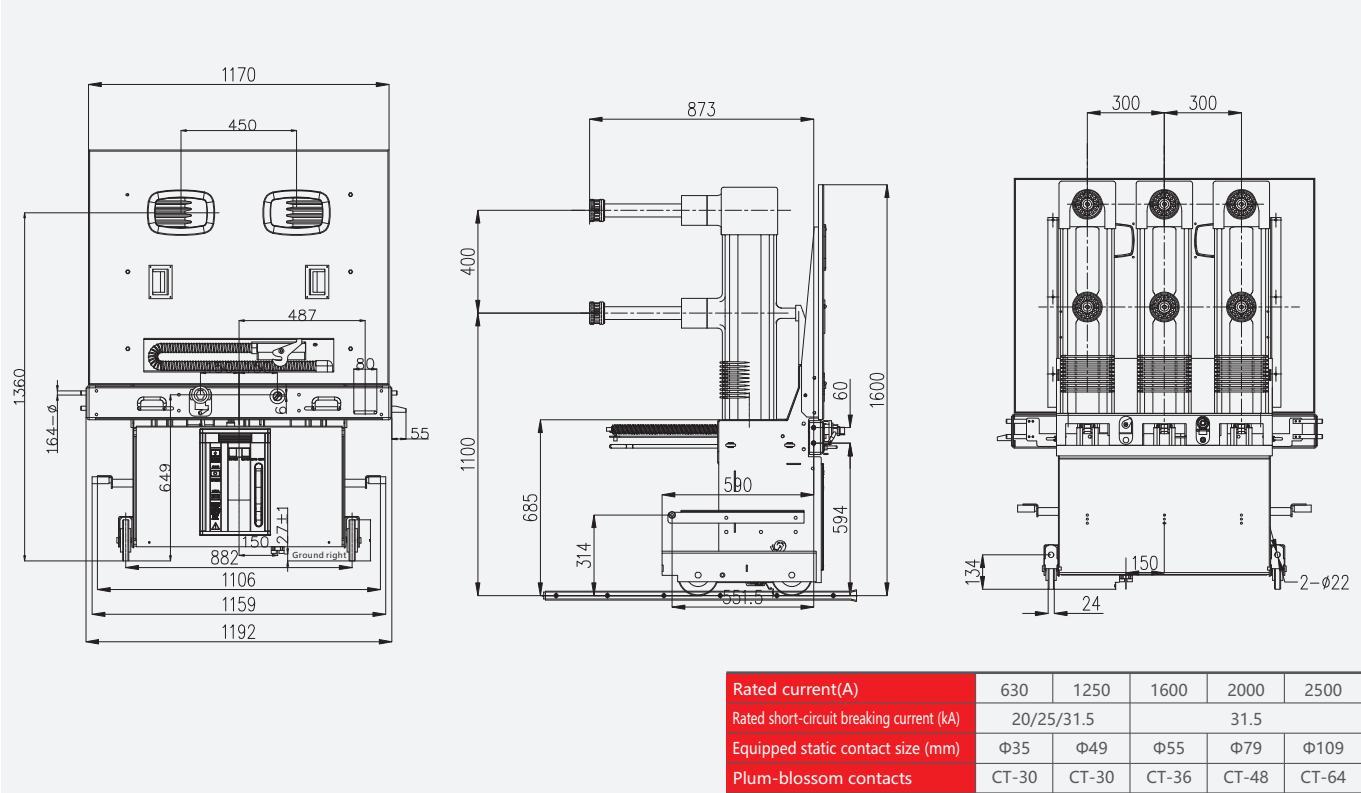
Item	Unit	Parameter	
Parameters of voltage, current, life			
Rated voltage	kV	40.5	
Rated short time power frequency withstand voltage (1min)	kV	95	
Rated lightning impulse withstand voltage (peak)	kV	185	
Rated frequency	Hz	50	
Rated current	A	630, 1250, 1600, 2000 2500	
Rated short-circuit breaking current	kA	25	31.5
Rated short-time withstand current (RMS)	kA	25	31.5
Rated peak withstand current	kA	63	80
Rated short-circuit closing current	kA	63	80
Rated single / back-to-back capacitor bank breaking current	A	600/400	
Rated short-circuit current duration	S	4	
Rated short-circuit current breaking Times	Times	20	
Rated operating sequence		O-0.3s-CO-180s-CO	
The main galvanic circle resistance	μΩ	≤65	
Rated operation voltage		AC/DC≧ 220/110	
Mechanical life	Times	≥10000	
Mechanical property parameters			
Open clearance between contacts	mm	18±1	
Overtravel	mm	5±1	
Contact closing bounce time	ms	≤3	
Three-phase, switching synchronism	ms	≤2	
Average opening speed	m/s	1.7±0.2	
Average closing speed	m/s	0.75±0.2	
Opening time (rated voltage)	ms	≤90	
Closing time (rated voltage)	ms	≤60	
Allowable wear thickness for dynamic and static contact	mm	3	

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Overall and mounting dimensions(mm)

External dimensions of insulating cylinder type



Dimensions of solid seal type

