

## MV Circuit Breaker

### ZN28-12 Indoor Vacuum Circuit Breaker

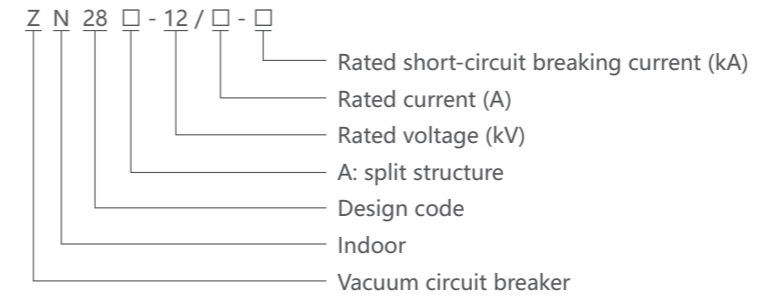
- ZN28-12 indoor MV vacuum circuit breaker is high indoor switch equipment of three-phase AC 50Hz, rated voltage 12kV. The product conforms to the GB1984-89 standard, the product structure has two forms: the switch body and the actuator is mounted together or switch body and actuator installed separately. Integrated structure is ZN28-12 basic model; split structure is ZN28A-12 type, suitable for various kinds of fixed type switch cabinet, such as GG-1A (Z), XGNZ-10 (Z) etc..
- It can be equipped with CD17 type DC electromagnetic actuator and CT17, CT19 spring type operating mechanism.

#### General

## MV Circuit Breaker

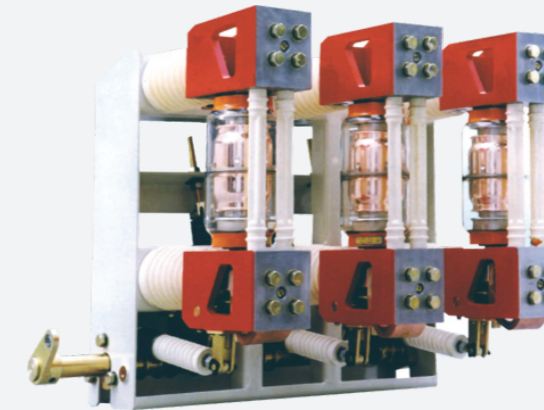
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#### Selection



#### Operating conditions

- The environment temperature: upper limit +40°C, lower limit -15°C;
- Altitude: ≤2000m;
- Relative humidity: daily average value is not greater than 95%, monthly average is not greater than 90%;
- Earthquake intensity: less than 8 degrees;
- No fire, explosion, pollution, chemical corrosion and severe vibration place.



ZN28A-12



ZN28-12

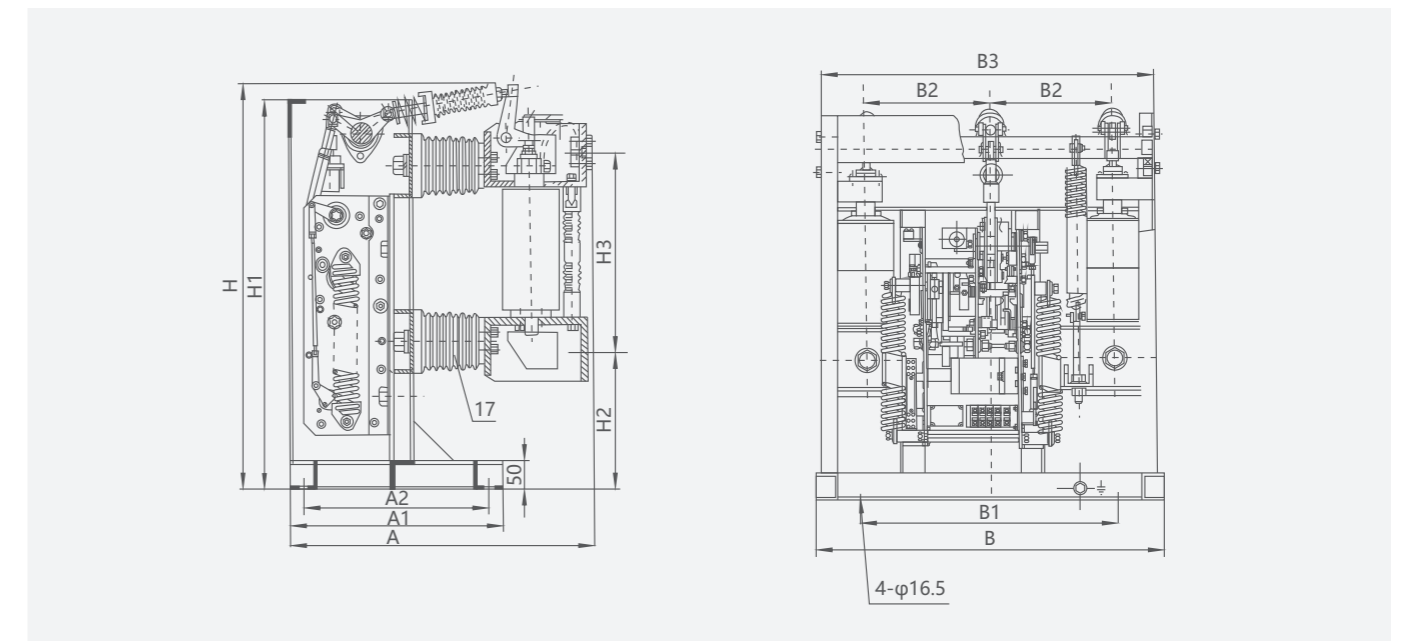
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### Technical data

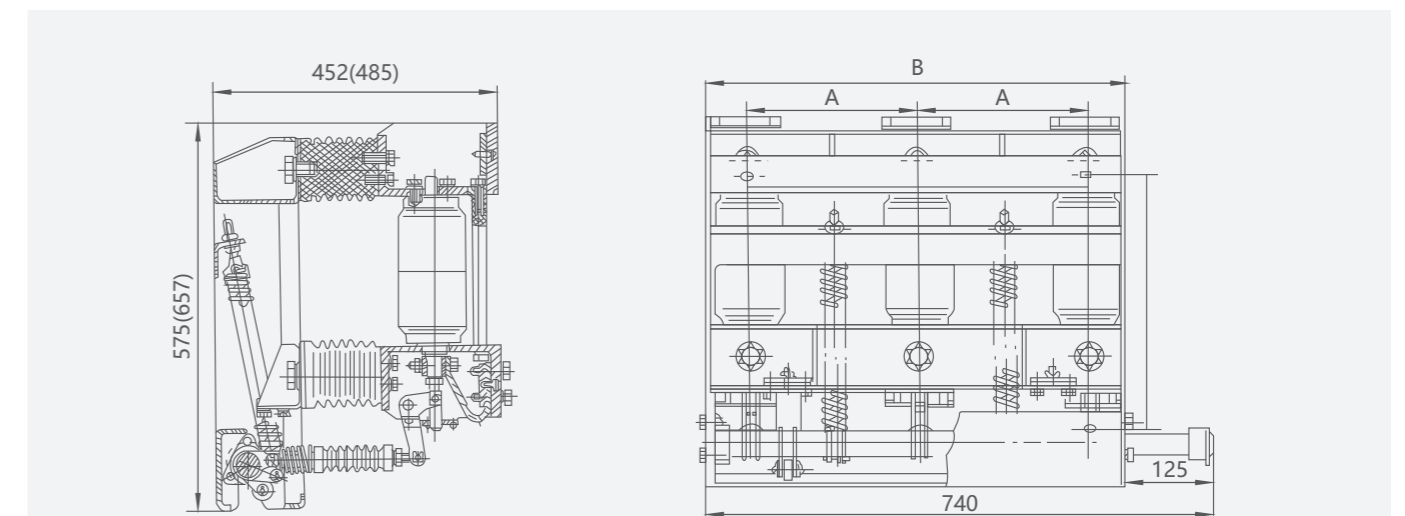
Item	Unit	Parameter			
Parameters of voltage, current, life					
Rated voltage	kV	12			
Rated short time power frequency withstand voltage (1min)	kV	42			
Rated lightning impulse withstand voltage (peak)	kV	75			
Rated frequency	Hz	50			
Rated current	A	630	630	1250	1600
		1250	1250	2000	2500
Rated short-circuit breaking current	kA	20	25	31.5	40
Rated short-time withstand current (RMS)	kA	20	25	31.5	40
Rated peak withstand current	kA	50	63	80	100
Rated short-circuit closing current	kA	50	63	80	100
Rated single / back-to-back capacitor bank breaking current	A	630/400			
Rated short-circuit current duration	S	4			
Rated short-circuit current breaking times	Times	50		30	
Rated operating sequence		O-t-CO-180s-CO rated short-circuit breaking current less than 31.5kA, t=0.3s rated short-circuit breaking current 40kA, t=180s			
Rated operation voltage		≅ 220/110			
Mechanical life	Times	≥10000			
Mechanical property parameters					
Open clearance between contacts	mm	11±1			
Overtravel	mm	4±1			
Contact closing bounce time	ms	≤2		≤3	
Three-phase, switching synchronism	ms	≤2			
Average opening speed	m/s	0.9~1.3			
Average closing speed	m/s	0.4~0.8			
Opening time (rated voltage)	ms	≤60			
Closing time (rated voltage)	ms	≤100			

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### Overall and mounting dimensions(mm)



Type	H	H1	H2	H3	A	A1	A2	B	B1	B2	B3
ZN28-12/T <sup>2500</sup> <sub>3150</sub> -40	780	700	268	371	581	450	390	700	560	275	690
ZN28-12/T2000-31.5	697	677	235	347	550	380	330	634	480	250	620
ZN28-12/T <sup>630</sup> <sub>1250</sub> - <sup>20</sup> <sub>31.5</sub>	697	677	235	347	550	380	330	594	440	230	580



Rated current	20kA, 25kA, 31.5kA		40kA	
Code	A	B	A	B
Data	250	610	275	690