

MV Circuit Breaker VYF-12GD Indoor Three Position Vacuum Circuit Breaker

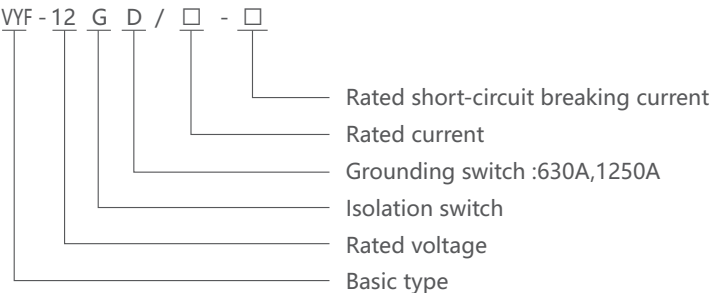
- ❏ The VYF-12GD series three-position combined vacuum circuit breaker adopts a modular framework structure, integrating vacuum circuit breaker, isolation switch, grounding switch, interlocking mechanism, and operating mechanism, with excellent electrical and mechanical performance.
- ❏ Mainly used in three-phase AC 50HZ power systems with a rated voltage of 3.6KV-12KV, for control and protection purposes in industrial and mining enterprises, power plants, and substations. It is a new generation of high-performance miniaturized medium voltage electrical products.
- ❏ Standard: IEC 62271-100

General



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Selection



Note:

If there is no grounding switch, the grounding operation shaft acts as an interlocking shaft, and the external dimensions remain unchanged.

Operating conditions

- Ambient temperature: -25°C +40°C;
- Relative humidity: daily average <95%, monthly average <90%;
- Altitude: not higher than 1000m;
- Earthquake intensity: no more than 8 degrees;
- Place of use: No explosion hazard, chemical and severe vibration and pollution.
- Service conditions above an altitude of 1000 meters
- When the altitude exceeds 1000 meters,the air density will decrease relatively, which will affect the protection factor of electrical appliances.

Features

• Safe and excellent solid-sealed pole

High reliability, stable insulation performance, stronger structure, miniaturization, maintenance-free, more environmentally friendly, high mechanical resistance"

• Visual isolation fracture

Rotary isolation switch with visible fracture after opening"

• Modular operating mechanism

The circuit breaker adopts a modular operating mechanism, which can be independently replaced or repaired, and has good interchangeability. It can be manually operated, as well as AC and DC energy storage operations to achieve remote control

• Three-axis step-by-step operation, reliable mechanical interlock

The isolation switch, circuit breaker, and grounding switch are operated separately on one axis, and there is a forced mechanical interlocking between the three axes to prevent misoperation

• Outgoing terminal with non-contact live display sensor

No capacitance, non-contact induction technology, safe and reliable

• Cabinet door and connecting switch are designed with reliable interlocking structure

Ensure operator safety with adjustment-free cabinet door latching

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Technical data

Item	Unit	Parameter		
Rated voltage	kV	12		
(1min) Rated short-time power frequency withstand voltage: phase to phase/break		42/48		
Rated lightning impulse withstand voltage(peak): phase-to-phase/break		75/85		
Secondary circuit power frequency withstand voltage (1min)	V	2000		
Rated frequency	Hz	50		
Rated current	A	630,1250		
Rated short-circuit breaking current	kA	20	25	20
Rated peak withstand current	kA	50	63	50
Rated short-circuit making current	kA	50	63	50
4s rated short-time withstand current	kA	20	25	20
Rated short-time withstand current duration	S	4		
Rated single/back to back capacitor bank breaking current	A	630/400		
Rated capacitor bank making inrush current	kA	12.5(HZ≤1000Hz)		
Rated short-circuit current breaking times	Times	30		
Mechanical life (isolation switch/circuit breaker/grounding switch)		3000/10000/3000		
The accumulative thickness of allowable wear of moving and static contacts	mm	3		
Rated closing operating voltage	V	AC24/48/110/220 DC24/48/110/220		
Rated opening operating voltage				
Rated voltage of energy storage motor	V	AC24/48/110/220 DC24/48/110/220		
Rated power of energy storage motor	W	70		
Energy storage time	s	≤15		
Contact distance	mm	9±1		
Overtravel		3.5±1		
Contact closing bounce time	ms	< 5		
Three-phase opening and closing asynchronous		≤2		
Opening time (rated voltage)		≤40		
Closing time (rated voltage)		≤60		
Average opening speed (contact just opened ~ 6mm)	m/s	0.9~1.3		
Average closing speed (6mm~ contact just closed)		0.4-0.8		
Contact opening rebound amplitude	mm	≤2		
Contact closing contact pressure	N	2400±200 (20-25kA) 3100+200(31.5kA)		
Rated operating sequence		O-0.3s-CO-180s-CO		

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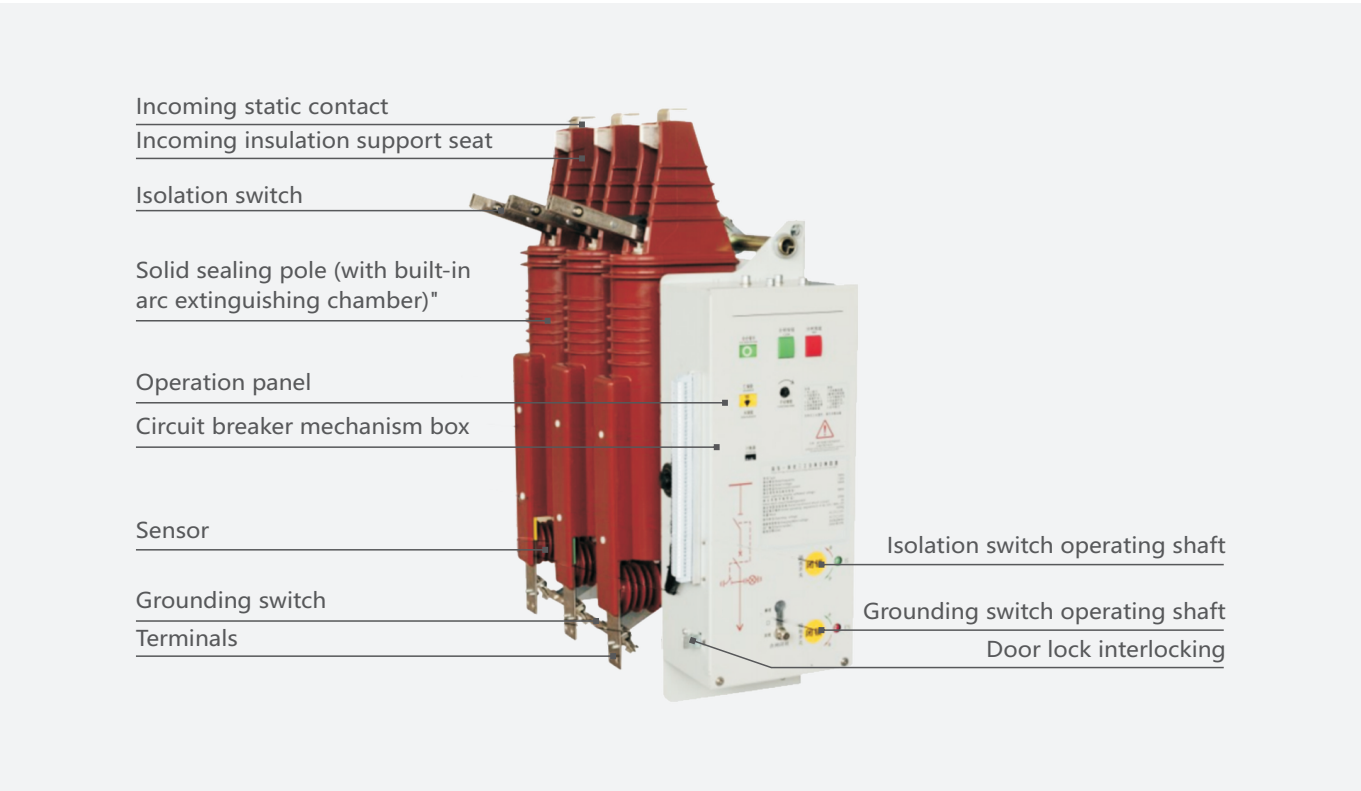
Configuration

Standard configuration: Wiring according to the standard wiring diagram, including anti-tripping device, no locking device, no over-current device, no under-voltage device

Item	Parameter	Note
Energy storage motor	75W	Standard
Closing coil	A(D)C24~220V	Standard
Opening coil	A(D)C24~220V	Standard
Isolation switch auxiliary switch	1Open1Close5A	Standard
Grounding switch auxiliary switch	1Open1Close5A	Standard
Energy storage mechanism auxiliary switch	2Open1Close5A	Standard
Circuit breaker auxiliary Switch	8Open8Close5A	Standard
Anti-trip device	A(D)C24~220V	Standard
Live sensor (inductive)	Non-contact	Standard
Locking device	A(D)C24~220V	Optional
Overcurrent release	3.5A、 5A	Optional
Undervoltage device	A(D)C24~220V	Optional

Applicable cabinet type

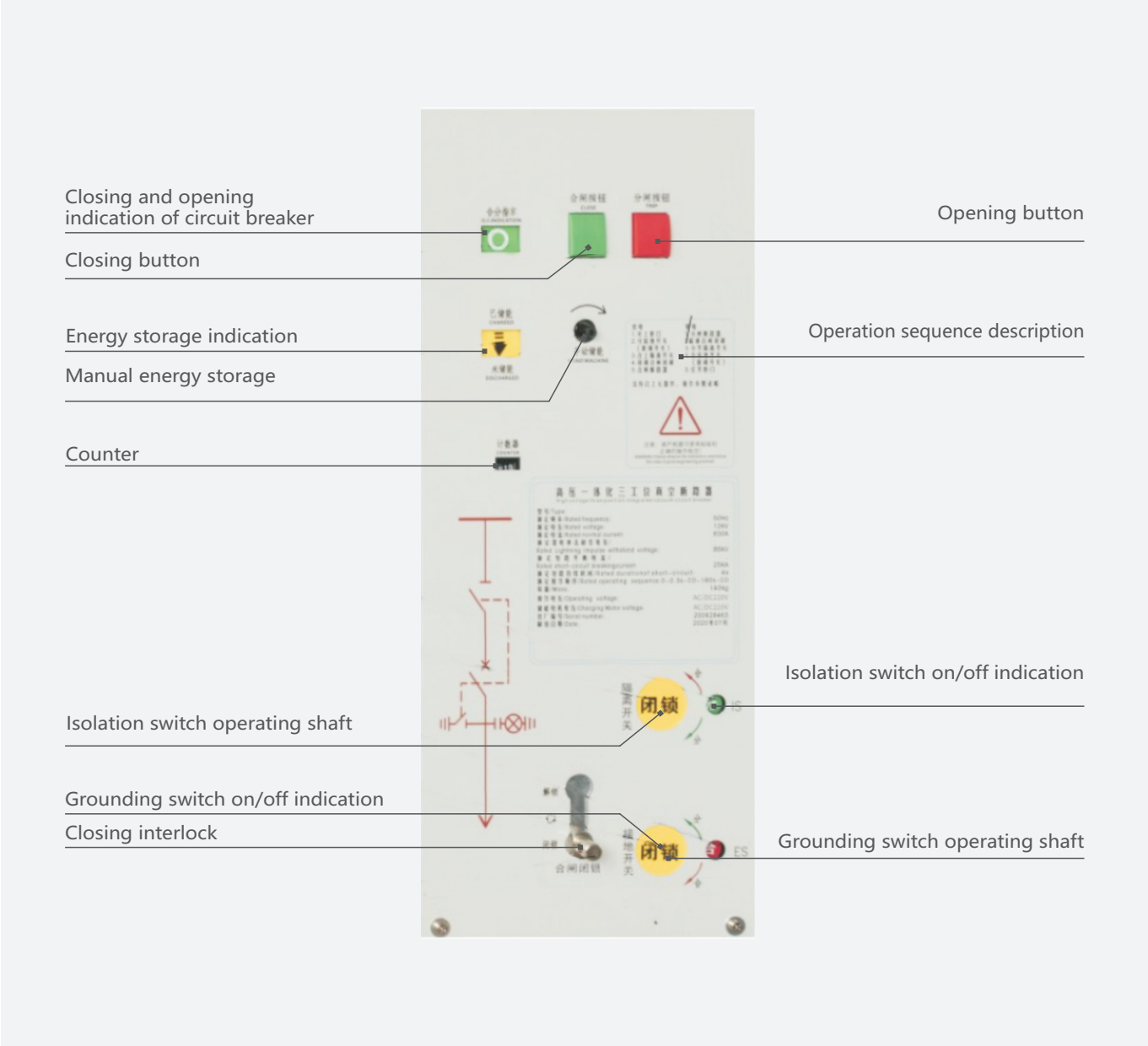
It can be assembled in small fixed cabinets, ring network cabinets or box transformers. The main circuit of VYF-12GD series three-position combined vacuum circuit breaker is arranged longitudinally. The upper part is an isolation switch, the middle part is a vacuum circuit breaker, and the lower part is a grounding switch. Detector mechanism, interlocking mechanism 1 are positioned at switch front, and this switch can be installed upside down.



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Dual interlocking: circuit breakers, isolation switches, and grounding switches are equipped with forced mechanical interlocking operations;
Design anti misoperation locking devices for circuit breakers, isolation switches, and grounding switches;
The isolation switch and grounding switch are operated separately on an independent shaft in steps, and a forced mechanical interlocking operation is set between the two operations;
After the switch opening and closing operation, please observe and confirm their respective opening and closing states.

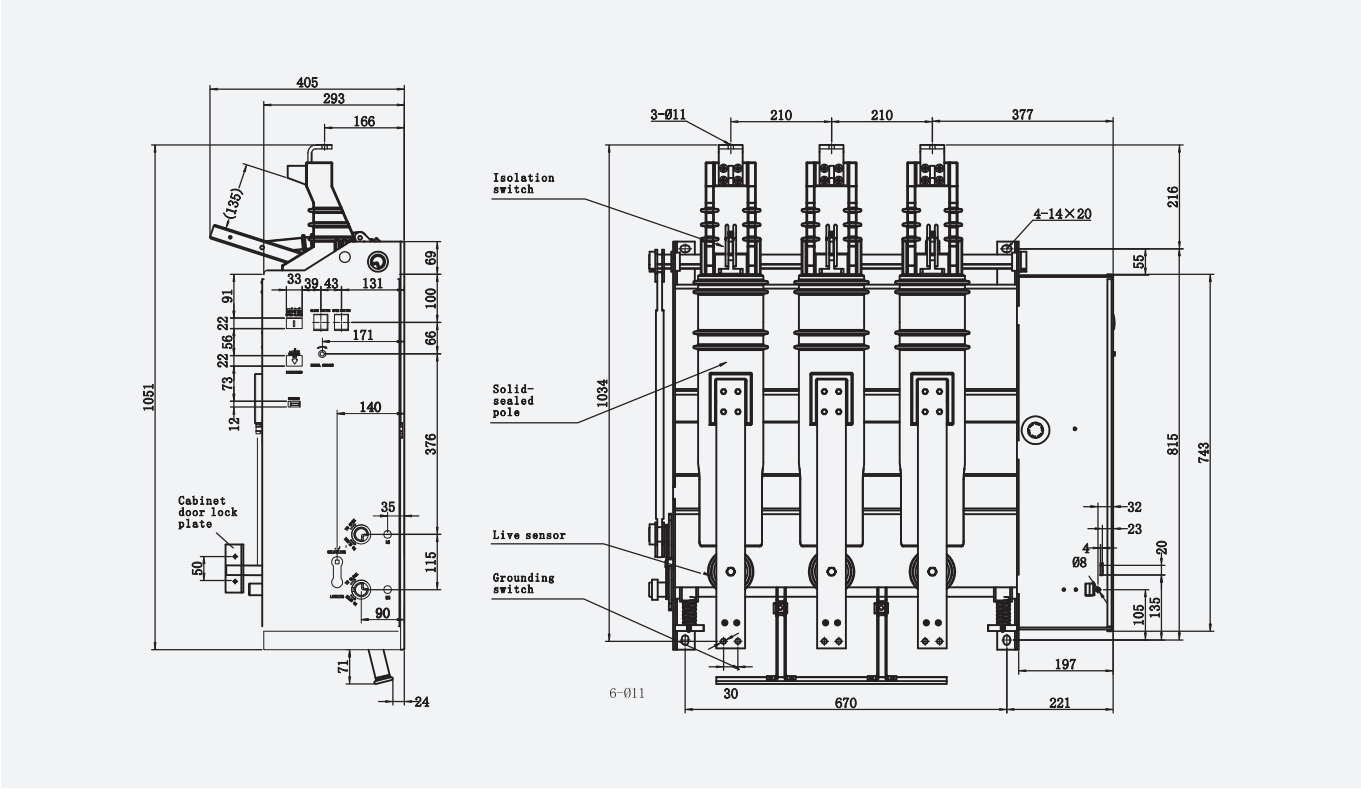


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Overall and mounting dimensions(mm)

Formal overall dimensions



Formal overall dimensions

