

# SCHVB-12(M)

永磁式户内交流高压真空断路器

Permanent magnet ac high voltage vacuum circuit breaker



## 适用范围

### Application

SCHVB-12(M) 户内交流高压真空断路器是三相交流 50Hz, 额定电压为 12kV 的户内开关设备。配装我公司自行研发的永磁操动机构, 供工矿企业、发电厂及变电站作为电气设施的控制和保护之用。该产品具有安全、高可靠、寿命长等特点, 特别适用于频繁操作、多次开断短路电流等条件恶劣的场所。

SCHVB - 12 (M) indoor ac high voltage vacuum circuit breaker is three-phase ac 50 hz, rated voltage of 12 kv indoor switchgear. For my company to develop of permanent magnetic operating mechanism, for industrial and mining enterprises, power plants and substations for the use of electrical facilities, control and protection. The product has the characteristics of safety and high reliability and long life, especially suitable for frequent operation, many times the breaking short circuit current and other conditions.

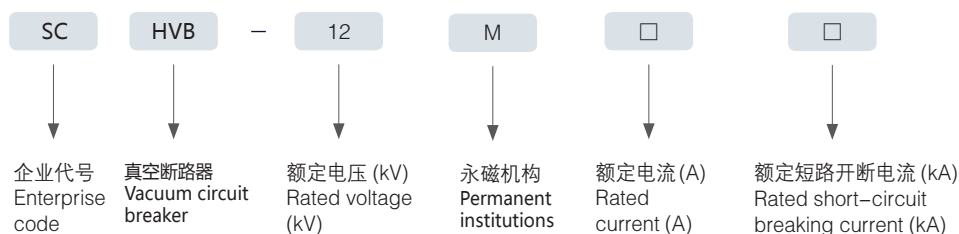
## 主要性能特点

### Main performance characteristics

- 高可靠、长寿命、免维护;
  - 国内首创永磁操作机构机械寿命高达 100000 次;
  - 与传统的操动机构相比较, 无须机械脱、锁扣装置, 零部件数量大为减少, 工作时仅有一个运动部件, 故障率极低;
  - 操动机构的性能与灭弧室开断、关合所需的特性极为吻合;
  - 合、分闸操作可靠的双稳态;
  - 具有防跳功能;
  - 具有控制电源低电压拒合报警功能;
  - 机械手动分闸与电动分闸速度相同, 在二次电源故障情况下, 应用于紧急分闸;
  - 交流或直流储能操作型, 工作电流小于 2A, 停电后 2 小时内可做一次分、合、分操作;
  - 具有极高可靠性的操作控制电路模块, 在运行时可耐受雷击、电涌等严酷条件;
  - 通用性强, 安装尺寸与 ZN63、VS1 等系列产品兼容。
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- High reliability, long life, free maintenance and Low at first permanent magnetic operating mechanism and mechanical life of up to 100000 times;
  - Compared with the traditional operation mechanism, do not need to machine off, lock device, greatly reduce the number of component parts, work in only one shipment Moving parts, failure rate is extremely low;
  - Low performance of the operating mechanism and the arcing chamber open and close the required features extremely anastomosis;
  - Low, bistable switching operation and reliable;
  - Low with the jump function;
  - Low control from low voltage alarm function;
  - Low mechanical manual brake and electric brake speed is the same, in the second power failure cases, brake used in an emergency;
  - AC or DC energy storage operation, working current is less than 2 a, power outages can be done within 2 hours after a points, and operation;
  - Low operating control circuit module, high reliability at runtime can tolerance lightning, surge and other harsh conditions;
  - Low versatility, installation size compatible with ZN63, VS1, etc series products.

## 断路器型号、名称及含义

### Type of circuit breaker, the name and meaning



## 主要技术参数

### Mainly technical parameters

#### 断路器的主要技术参数 The main technical parameters of

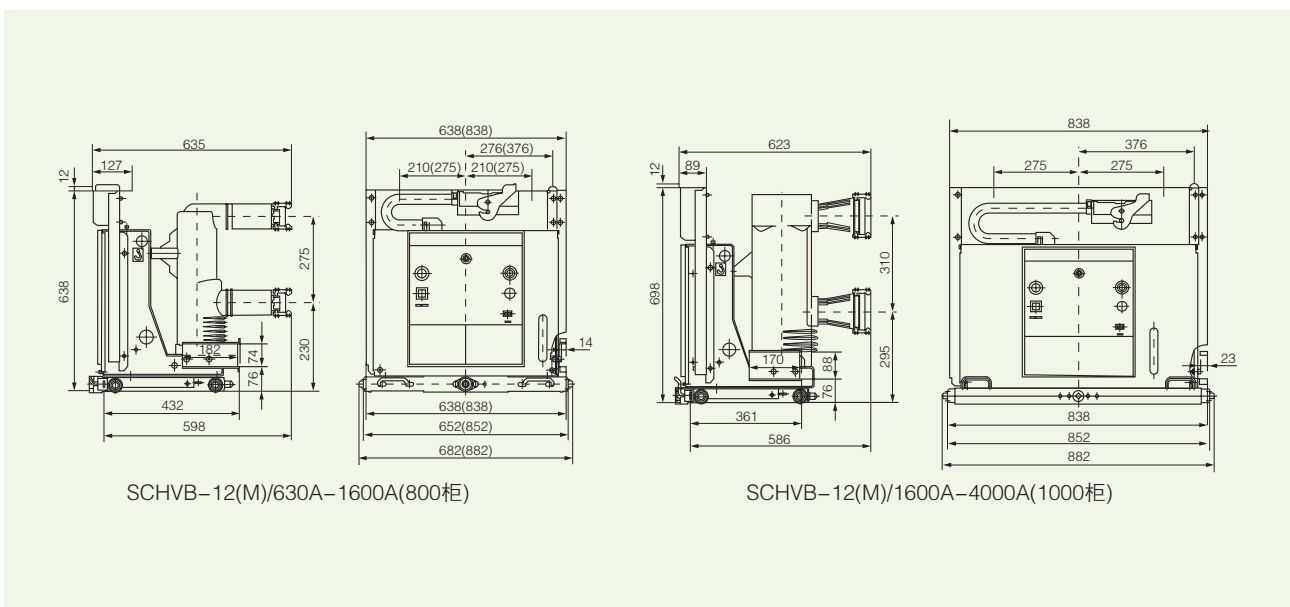
序号 No.	项目 Item	单位 Unit	数值 Number of values		
1	额定电压 Rated voltage	kV	12		
2	额定绝缘水平 Rated insulation level		1min 工频耐压 frequency	42(相间、对地)/48(断口)有效值	
		雷电冲击耐压(全波) Lightning shock compression (wave)	75(相间、对地)/85(断口)峰值		
3	额定电流 Rated current	A	630-1250	1250-3150	1250-4000*
4	额定短路开断电流 Rated short-circuit breaking current	kA	20/25	31.5	40
5	额定短路关合电流(峰值) Rated short-circuit current (peak)		50/63	80	100
6	额定动稳定电流(峰值) Rated dynamic current (peak)		50/63	80	100
7	额定热稳定电流(有效值) Rated thermal current (rms)		20/25	31.5	40
8	额定短路开断电流次数 Rated short-circuit breaking current times	次	100	50	30
9	额定热稳定时间 Rated thermal stabilization time	s	4		
10	额定操作顺序 Rated operating sequence		分-0.3s-合分 180s-合分	分-180s 合分	分-180s 合分
11	机械寿命 Mechanical life	次	50000		30000 **
12	永磁机构及传动部分机械寿命 Magnetic actuator and transmission parts mechanical life	次	100000		
13	额定单个电容组开断电流 Rated single capacitor bank breaking current	A	630		
14	额定电容器组开断电流		400		
15	额定开断电流	kA	12.6		16

断路器的主要机械参数 The main mechanical parameters of the circuit breaker

序号 No.	参数名称 Parameter name	单位 Unit	数值 Number of values			
1	触头开距 Contact opening distance	mm	11 ± 1 *			
2	接触行程 Contact itinerary		3.5 ± 0.5			
3	三相合闸周期性 Three-phase closing Bureau of sexual	ms	≤ 2			
4	合闸触头弹跳时间 Closing contact bounce time		≤ 2	≤ 3(40kA)		
5	相间中心距 White center distance	mm	210 ± 2/275 ± 2			
6	合闸触头压力 Closing contact pressure	N	20kA 2000 ± 200	25kA 2400 ± 200	31.5kA 3100 ± 200	40kA 4700 ± 300
7	主导电回路电阻 Resistance of main circuit	UΩ	60		45	30
8	平均分闸速度 Average opening speed	m/s	0.9~1.3			
9	平均合闸速度 Average closing speed		0.5~0.9		0.6~1.0	
10	分闸时间 Sub-gate Time	ms	30~60			
11	合闸时间 Closing time		50~100			
12	动、静触头累积允许磨损厚度 Dynamic and static contact cumulative permissible wear thickness	mm	3			

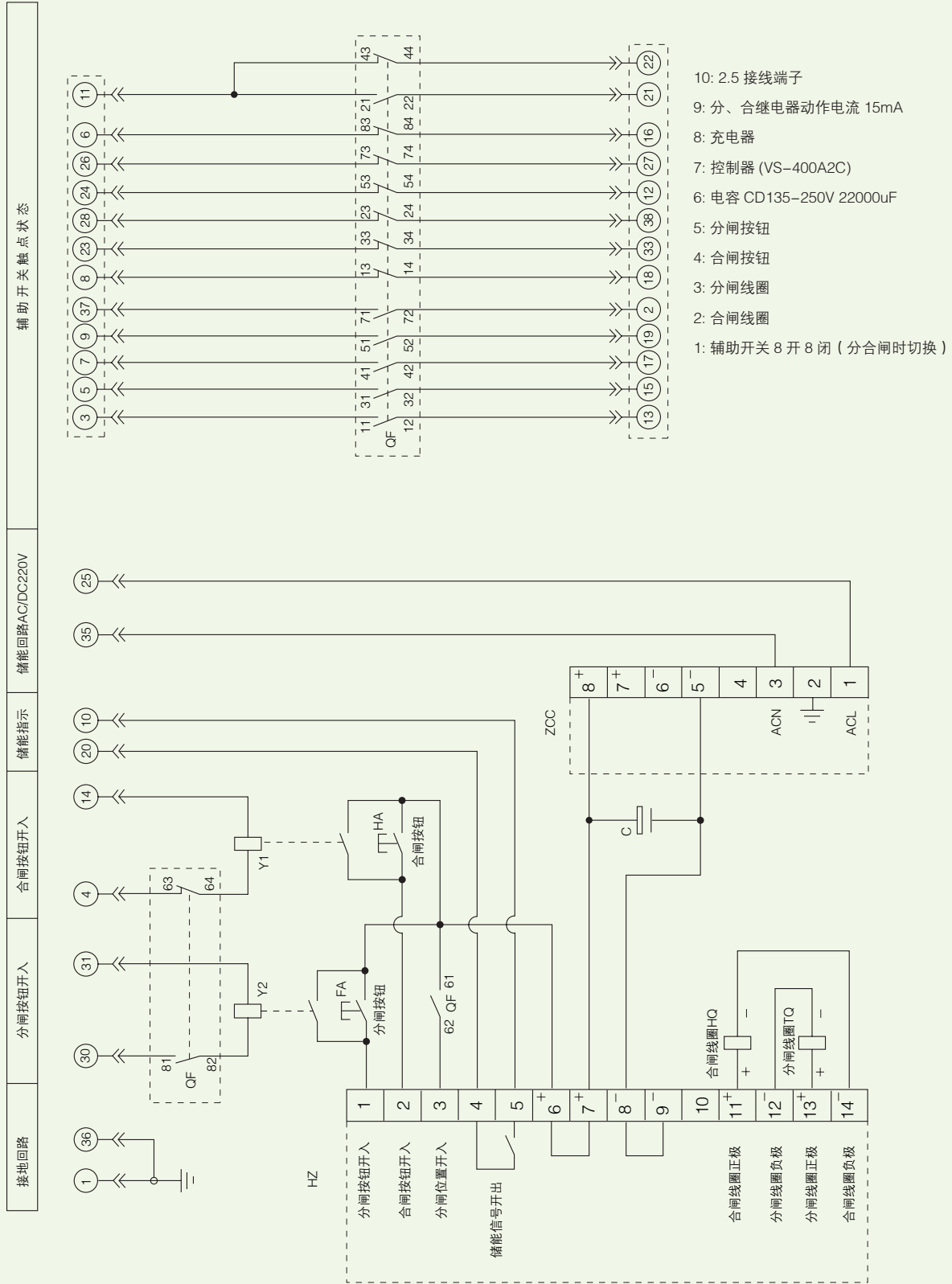
外形及安装尺寸

General structure drawing and installation size



# 固定式二次原理图

## Fixed second principle diagram



# 手车式二次原理图

## Handcart secondary schematics

