

## 1 概述 CHARACTERISTICS

VS1-12M型户内永磁真空断路器(以下简称断路器)是用于12kV电力系统的户内开关设备,作为电网设备、工矿企业动力设备的保护和控制单元。由于断路器采用专利产品CKY型永磁机构与直接传动结构设计,使其具有优异的性能,特别适用于频繁操作,或多次开断短路电流的场所。

断路器配用专用推进机构,组成手车单元。

VS1-12M type indoor permanent magnetic vacuum circuit breaker (hereinafter referred to as circuit breaker) is used for 12kV power system indoor switchgear, as a protection and control unit for power equipment of power grid equipment, industrial and mining enterprises. As the circuit breaker adopts the patented CKY type permanent magnetic mechanism with direct drive structure design, it has excellent performance and is especially suitable for frequent operation or multiple short-circuit current breaking places.

The circuit breaker is equipped with a special propulsion mechanism to form a hand truck unit.

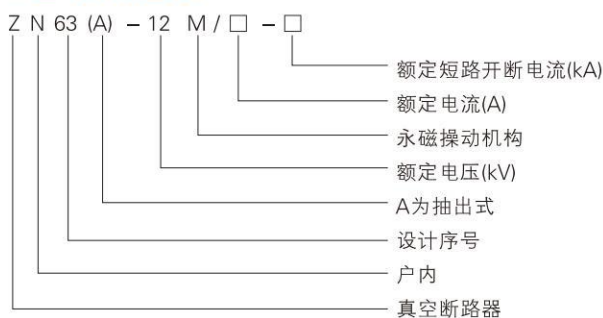


VS1-12M 永磁  
VS1-12M Permanent magnet



VS1-12M

## 2 型号及其含义



## 3 主要技术参数

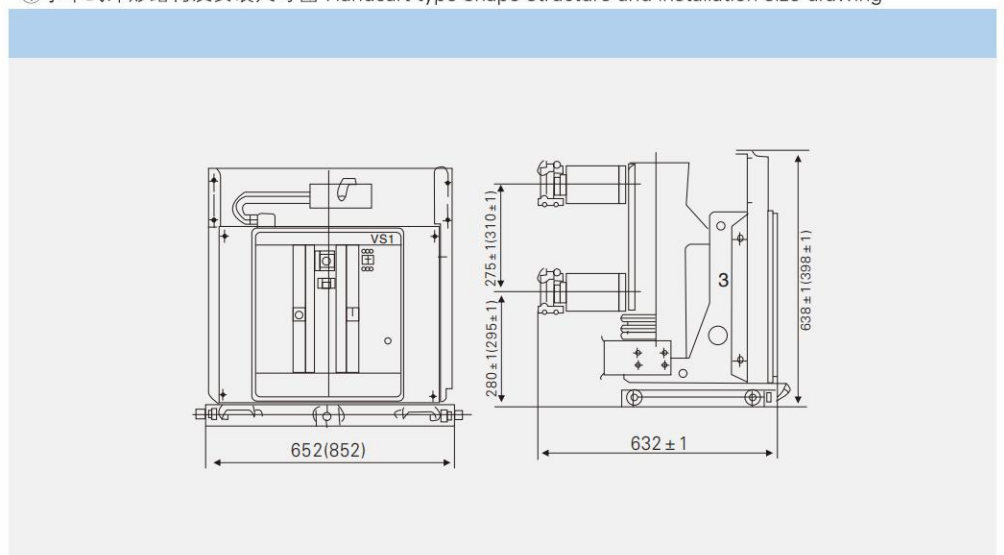
序号 No.	项目 Projects	单位 Unit	数据 Data					
1	额定电压 Rated voltage		12					
2	额定短时工频耐受电压(min) Rated short-time industrial frequency withstand voltage	kV	42					
3	额定雷电冲击耐受电压(峰值) Rated lightning surge withstand voltage(peak)		75					
4	额定频率 Rated frequency	Hz	50					
5	额定电流 Rated current	A	630 1250	630 1250	630 1600 2500	1250 2000 3150	1250 2000 3150	1600 2500 4000
6	额定短路开断电流 Rated short-circuit breaking current	kA	20	25	31.5	40		
7	额定短时耐受电流 Rated short-time withstand current	kA	20	25	31.5	40		
8	额定短路持续时间 Rated short-circuit duration	S	4					
9	额定峰值耐受电流 Rated peak withstand current	kA	50	63	80	100		
10	额定短路关合电流 Rated short-circuit closing current	kA	50	63	80	100		
11	二次回路工频耐受电压(1min) Secondary circuit frequency withstand voltage(1min)	V	2000					
12	额定单个/背对背电容器组开断电流 Rated single/back-to-back capacitor bank breaking current	A	630/400(40kA为800/400)					
13	额定电容器组关合涌流 Rated capacitor bank shutdown inrush current	kA	12.5(频率不大于100Hz)					

续上表 Continue

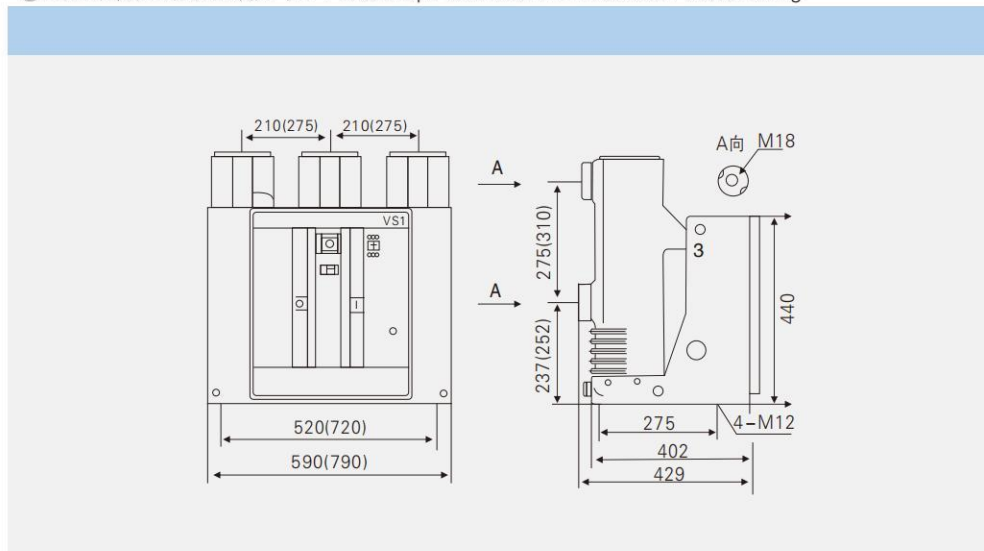
序号 No.	项目 Projects	单位 Unit	数据 Data
14	分闸时间 Breaking time	ms	≤50
15	合闸时间 Closing time	ms	≤70
16	机械寿命 Mechanical life		30000
17	额定电流开断次数 Rated current opening times	次 Times	30000
18	额定短路电流开断次数 Rated short-circuit current opening and closing times		50(kA为30)
19	动、静触头允许磨损累计厚度 Permitted wear accumulated thickness of dynamic and static contacts		3
20	□□□□ Contact opening distance	mm	9 ± (1600A以上11 ± 1)
21	超行程 Overtravel		3.5 ± 0.5
22	触头合闸弹跳时间 Contact closing bounce time	ms	≤2(40kA≤3)
23	三相分、合闸不同期性 Three-phase splitting and closing is not simultaneous	ms	≤2
24	平均分闸速度 Average gate breaking speed	m/s	0.9~1.2
25	平均合闸速度 Average closing speed	m/s	0.5~0.8
26	触头分闸反弹幅值 Contact split bounce amplitude	mm	0
27	主导电回路电阻 Main electrical circuit resistance	μΩ	≤40(1250A以下) ≤35(1600~2000A)≤25(2500以上)
28	触头合闸接触压力 Contact closing contact pressure	N	2000 ± 200(20kA)2400 ± 200(25kA) 3100 ± 200(31.5kA)4300 ± 200(40kA)
29	额定操作顺序 Rated operating sequence		分-0.3S-合分-180S-合分

#### 4 外形及安装尺寸 OUTLINE DIMENSION DRAWING

①手车式外形结构及安装尺寸图 Handcart type shape structure and installation size drawing



②固定式外形结构及安装尺寸图 Fixed shape structure and installation size drawing



## 5、订货须知 Ordering Instructions

- 1、断路器名称、型号以及订购数量；
  - 2、断路器的额定电流及额定短路开断电流；
  - 3、所配操作机构的型号、名称、操作电压及脱扣器型式；
  - 4、运转车及其它备品，备件的数量；
  - 5、用户若有其他特殊要求，订货时协商。
- 1, the name and model of the circuit breaker and the quantity ordered;
  - 2, the rated current and rated short-circuit breaking current of the circuit breaker;
  - 3, the type, name, operating voltage and type of decoupler of the operating mechanism;
  - 4, the operation of the car and other spare parts, the number of spare parts;
  - 5, If the user has other special requirements, consult when ordering.