

VS1-12 (ZN63) 系列高压真空断路器
Series HV Vacuum Circuit Breaker



产品概述 General

VS1 (ZN63) 系列真空断路器为额定电压12kV，三相交流50Hz的高压户内开关设备，是引进瑞士ABB公司技术结合国内行业发展状况、生产能力开发制造的产品。该产品总体结构为开头本体与操动机构一体安装的形式，采用复合绝缘结构，无污染、无爆炸危险，绝缘水平高。
本系列产品的操动机构为弹簧储能式，可以用交流操作，亦可用手动操作。

VS1(ZN63) series vacuum circuit breakers for rated voltage 12kV, three-phase AC 50Hz high-voltage indoor switch equipment, is the introduction of Swiss ABB technology combined with the development of the domestic industry, production capacity development and manufacturing products. The overall structure of the product is in the form of integrated installation of the opening body and the operating mechanism. The compound insulation structure is adopted.
The operating mechanism of this series of products is spring energy storage type, which can be operated by AC or manual operation.

主要技术参数 Main technical parameters

项 目 Item		单 位 Unit	参 数 Paramerers			
额定电压 Rated voltage		kV	12			
额定绝缘水平 Rated insulation level	1 min 工频耐压 1 min line frequency withstand voltage	kV	42			
	额定雷电冲击耐受电压 Rated thunder impulse withstand voltage	kV	75			
额定电流 Rated current		A	630		1250	2500 3150 4000
额定短路开断电流 Rated short-circuit breaking current		kA	20	25	31.5	31.5 40
额定短路关合电流 Rated short-circuit making current		kA	50	63	80	100
额定峰值耐受电流 Rated peak withstand current		kA	63	63	80	100
额定短时耐受电流（有效值） Rated short-circuit withstand current(effective value)		kA	20	25	31.5	40
额定电流开断次数 Rated current breaking times		次 times	30	30	30	30
额定短路持续时间 Rated short-circuit duration		S	4			
额定操作顺序 Rated operating sequence			分-0.3s-合分-180s-合分 分-180S-合分-180S-合分（40kA）			
机械寿命 Mechanical life		次 times	20000 10000			
额定单个电容器组开断电流 Rated single apaccitor bank breaking current		A	630 800			
额定背对背电容器组开断电流 Rated opening voltage of operating mechanism(DC)		A	400 630			
触头开距 Contactor torque		mm	11±1			
接触行程 Contact storke		mm	3.3±0.6			
三相分闸同期性 Three-phase opening synchronization		ms	≤2			
合闸弹跳时间 Closing bouncing time		ms	≤2		≤3 (40kA)	
相间中心距 Phase-to-phase space		mm	210 1.5 (275 1.5)			

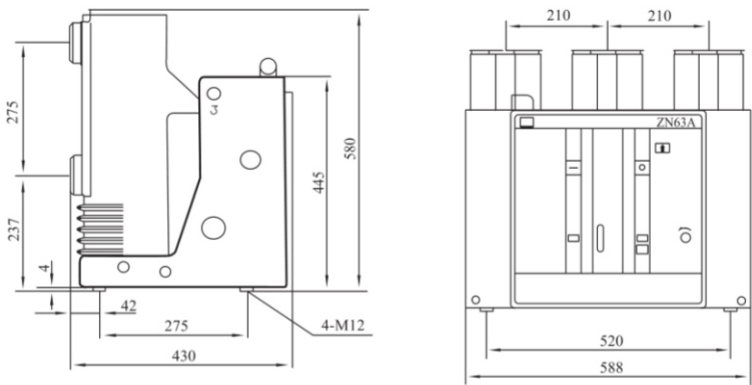
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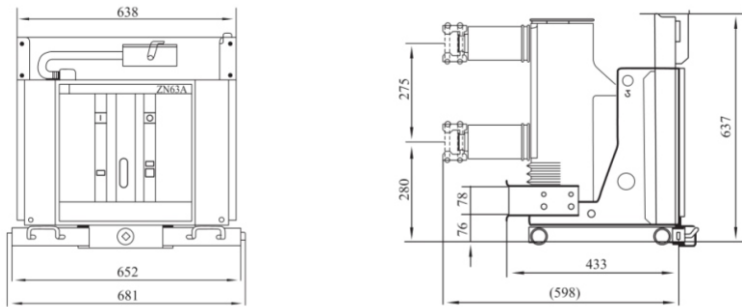
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项目 Item	单位 Unit	参数 Parameters
合闸触头接触压力 Contact pressure of closing contact	N	2000±200 (20kA) 2400±200 (25kA) 3100±200 (31.5kA) 4500±250 (40kA)
平均分闸速度 Average opening speed	m/s	1.1±0.2
平均合闸速度 Average closing brake speed	m/s	0.6±0.2
分闸时间 Opening brake time	ms	20~50
合闸时间 Closing brake time	ms	35~70
动静触头允许磨损累积厚度 Total thickness of permissible wear of moving and static contacts	mm	3

外形尺寸及安装尺寸 Outline and installation dimension



(固定式断路器外形尺寸图)
Drawing of external dimensions of fixed circuit breaker



(抽出式断路器外形尺寸图)
Drawing of the outline dimensions of the withdrawal circuit breaker