

# BVS1-12/T

## 型真空断路器 Type Vacuum Circuit Breaker



### 产品概述

BVS1-12/T 型真空断路器是我公司最新开发的中压真空断路器，该产品整体结构为弹簧操动机构与断路器本体一体化设计，采用性能卓越的固封极柱技术，配合模块化弹簧操动机构，保证了断路器优越的电气性能与机械性能。该系列产品代表了中压断路器设计和制造的先进水平。

BVS1-12/T 型真空断路器是三相交流 50Hz、额定电压 3.6~12kV 户内高压开关设备，供工矿企业、发电厂及变电站作为控制和保护之用，并适用于频繁操作的场合。具备完善的机械及电气联锁功能，适配国内主流开关柜使用。该产品性能优异，广泛用于：工业：化工、冶金、建筑业、制造业；民用：住宅小区、医院、企业单位配电；交通：地铁、高速铁路等。

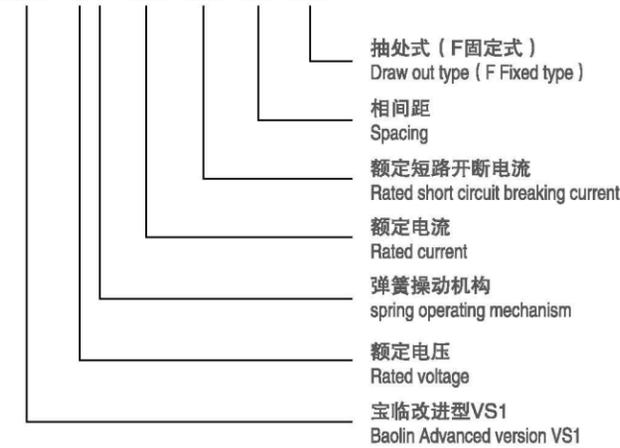
### Product Summary

BVS1-12/T vacuum circuit-breaker is the latest medium-voltage vacuum circuit-breaker product of our company. With the introduction of embed poles technology, and modular spring-operated mechanism, vacuum circuit-breaker of BVS1-12/T obtains performance. Modular spring-operated mechanism consists of closing module and opening module. Its simple structure facilitates maintenance, thus reduces the power-off time required for maintenance. Through professional assembly, testing, long-term grease lubrication, product quality will not decrease even after prolonged storage. Moreover, users don't need to adjust the mechanism after place with the spare parts. The BVS1-12/T circuit-breakers' requirements and conforms to GB, DL, JL, IEC and other related standards. It represents the current advanced level of medium-voltage circuit-breakers.

BVS1-12/T vacuum circuit-breaker with permanent magnetic actuator mechanism is a control and protect device that is applicable for 3phases, 50(60) Hz, 3.6~12kv rated power supply system. It can be used in power system of industrial and mining establishments, power plant, substations and other systems where the switching frequency in the operating current range is high. This product performance is outstanding, widely uses in: industry: Chemical industry, metallurgy, architecture industry, manufacturing industry. Civil: Residential district, hospital, Enterprise unit power distribution. Transportation: Subway, high speed railroad etc.

### 型号说明 Model Explanation

BVS1-12/T 1250-31.5-210-D(F)



### 环境条件 Environmental Conditions

1. 正常使用环境温度:  $-15^{\circ}\text{C} \sim +40^{\circ}\text{C}$ ，且在 24h 内测的平均值不超过  $35^{\circ}\text{C}$ 。
  2. 海拔高度: 设备安装地最高海拔高度  $\leq 1000\text{m}$ 。
  3. 环境温度: 在 24h 内测得的相对湿度平均值  $\leq 95\%$ ；月相对湿度平均值  $\leq 90\%$ ；
  4. 地震烈度: 设备安装地地震烈度  $\leq 8$  度。
  5. 在 24h 内测得的水蒸气压力的平均值  $\leq 2.2\text{kPa}$ ；月水蒸气压力平均值  $\leq 1.8\text{kPa}$ 。
  6. 特殊环境: 周围空气没有明显地受到尘埃、烟、腐蚀性或可燃性气体、蒸气或盐雾的污染。
1. Ambient Temperature: No more than  $+40^{\circ}\text{C}$ , No less than  $-15^{\circ}\text{C}$ . Average temperature no more than  $+35^{\circ}\text{C}$  within 24 hours.
2. Altitude: No more than 1000m.
3. Relative Humidity: Average humidity no more than 95% within one day, Average humidity no more than 90% within one month.
4. Earthquake Intensity: No more than 8 degrees.
5. Vapor Pressure: Average pressure no more than 2.2kPa within one day, Average pressure no more than 1.8kPa within one month.
6. No fire, explosion danger, serious dirt, chemical corrosion and violent vibration for product installed place.

### 技术参数

### Technical Parameters

序号 Sr.	项目 Item	单位 Unit	数值 Value
1	额定电压 Rated voltage		12
2	额定短时工频耐受电压 (1min) Rated power-frequency withstand voltage	KV	42
3	额定雷电冲击耐受电压 (峰值) Rated lightning impulse withstand voltage		75
4	额定频率 Rated frequency	HZ	50
5	额定电流 Rated current	A	630~4000
6	额定短路开断电流 Rated short-circuit breaking current	kA	20/25/31.5/40/50
7	额定短时耐受电流 (4s) Rated short-time withstand current		20/25/31.5/40/50
8	额定峰值耐受电流 Rated withstand current	kA	50/63/80/100/125
9	额定短路关合电流 Rated short-circuit making current		50/63/80/100/125
10	二次回路工频耐受电压 (1min) Power frequency withstand voltage for secondary circuits(1min)	V	2000
8	额定单个 / 背对背电容器组开合电流 Rated switching current for single unit/back-to-back connected capacitor bands	A	630/400
9	分闸时间 (额定电压) Opening time	ms	20 ~ 50
10	合闸时间 (额定电压) Closing time		35 ~ 70
11	机械寿命 Mechanical endurance	次 / Times	30000 (40kA、50kA 为 10000) (10000 times in 40kA, 50kA)
12	额定短路电流开断次数 Breaking number of rated short-circuit current	次 / Times	50 (40kA 为 20、50kA 为 12) (20 times in 40kA, and 12 in 50kA)
13	动、静触头允许磨损累计厚度 Allowance abrasion cumulated thickness for movable and fixed contact.	mm	3
14	额定合闸操作电压 Rated close operating voltage	V	AC110/220
15	额定分闸操作电压 Rated open operating voltage		DC110/220
16	储能电机额定电压 Rated voltage for charging motor	V	AC110/220 DC110/220
17	储能电机额定功率 Rated power for charging motor	W	80
18	储能时间 Charging time	S	$\leq 10$
19	触头开距 Clearance between open contacts	mm	$9 \pm 1$
20	超行程 Contacting travel	mm	$3.5 \pm 0.5$
21	触头合闸弹跳时间 Contact closing pumping time	ms	$\leq 2$ (40kA、50kA $\leq 3$ )
22	三相分、合闸不同期性 Three-phase opening and closing a synchronism	ms	$\leq 2$
23	平均分闸速度 (触头分开 $\sim 6\text{mm}$ ) Average opening speed(contact stroke $\sim 6\text{mm}$ )	m/s	$1.2 \pm 0.3$
24	平均分闸速度 Average closing velocity	m/s	$0.7 \pm 0.2$
25	触头分闸反弹幅值 Contact closing contacting pressure	mm	$\leq 2$
26	触头合闸接触压力 Contact closing contacting pressure	mm	$2200 \pm 100$ (20kA、25kA) $3100 \pm 200$ (31.5kA) $4800 \pm 300$ (40kA)
27	额定操作顺序 Rated operating sequence	N	O-0.3s-CO-180s-CO O-180s-CO-180s-CO

注: 4000A 需强制风冷。 Note: Air cooling is necessary when in 4000A.