

BVE-12/M

型高压真空断路器
Type Vacuum Circuit Breaker



产品概述

BVE-12/M 型永磁式真空断路器是我公司最新研发的中压真空断路器，该产品采用性能卓越的固封极柱技术，配合控制精确稳定的模块化永磁机构，保证了断路器优越的电气性能。永磁机构是一种电磁操动永磁保持，电子控制的操动机构，与断路器使用的传统弹簧机构和电磁机构相比，工作时主要运动部件极少，无需机构脱、锁扣装置，故障源少，具有很高的可靠性和机械寿命。该型断路器符合 M2、E2、C2 级断路器的要求，符合断路器 GB、DL、JB、IEC 等标准规定，该产品代表中压断路器设计和制造的先进水平。

BVE-12/M 型永磁式真空断路器适用于三相交流 50（60）Hz、3.6~12kV 电力系统中，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。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。

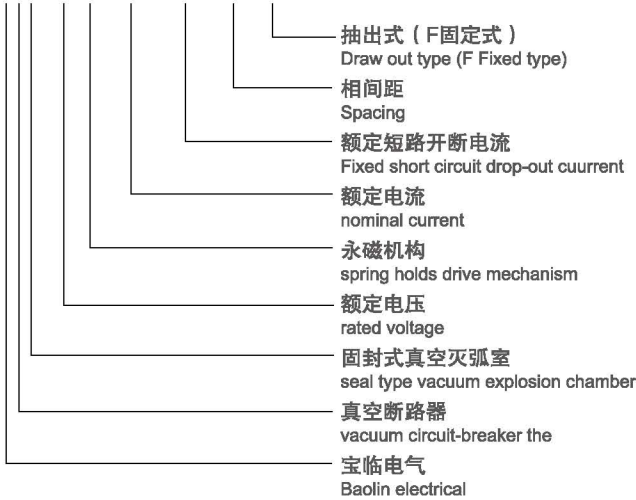
Product Summary

BVE-12/M vacuum circuit-breaker with permanent magnetic actuator mechanism is the latest medium-voltage vacuum circuit-breaker product of our company. With the introduction of embed poles technology, as well as modularized magnetic actuator technology which has accurate and stable control performance, vacuum circuit-breaker of BVE-12/M obtains extremely high electrical performance. Permanent magnetic actuator mechanism is actuated by electromagnetic, kept by permanent magnet and controlled by electronic. Compared to conventional spring-operated mechanism and electromagnetic operated mechanism, the permanent magnetic actuator mechanism has few moving parts failure source, extremely high reliability and long endurance while mechanical tripping and latching device is no longer necessary. The circuit-breaker complies with M2, E2, C2 level 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.

BVE-12/M 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

BVE-12/M 1250-31.5-210-D（F）



环境条件 Environmental Conditions

1. 正常使用环境温度：-15℃ ~+40℃，且在 24h 内测的平均值不超过 35℃。
 2. 海拔高度：设备安装地最高海拔高度≤ 1000m。
 3. 环境湿度：在 24h 内测得的相对湿度平均值≤ 95%；月相对湿度平均值≤ 90%；
 4. 地震烈度：设备安装地地震烈度≤ 8 度。
 5. 在 24h 内测得的水蒸气压力的平均值≤ 2.2kPa；月水蒸气压力平均值≤ 1.8kPa。
 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℃，No less than -15℃ . Average temperature no more than +35℃ 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	KV	12
2	额定短时工频耐受电压(1min) Rated power-frequency withstand voltage		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
11	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
12	分闸时间 (额定电压) Opening time	ms	20 ~ 50
13	合闸时间 (额定电压) Closing time		≤70
14	机械寿命 Mechanical endurance	次 times	50000
15	额定短路电流开断次数 Breaking number of rated short-circuit current	次 times	50 (40kA 为 20) 20 times in 40kA
16	动、静触头允许磨损累计厚度 Allowance abrasion cumulated thickness for movable and fixed contact.	mm	3
17	额定合闸操作电压 Rated close operating voltage	V	AC110/220
18	额定分闸操作电压 Rated open operating voltage		DC110/220
19	首次储能时间 Charging time	S	≤15
20	触头开距 Clearance between open contacts	mm	9±1
21	超行程 Contacting travel	mm	3.5±0.5
22	触头合闸弹跳时间 Contact closing pumping time	ms	≤2 (40kA≤3)
23	三相分、合闸不同期性 Three-phase opening and closing a synchronism	ms	≤2
24	平均分闸速度 (触头分开 ~6mm) Average opening speed(contact stroke~6mm)	m/s	1.1±0.2
25	平均合闸速度 Average closing velocity	m/s	0.6±0.2
26	触头分闸反弹幅值 Contact closing contacting pressure	mm	≤2
27	触头合闸接触压力 Contact closing contacting pressure	mm	2200±100(20kA、25kA)/3100±200(31.5kA) /4800±300(40kA)
28	额定操作顺序 Rated operating sequence	N	O-0.3s-CO-180s-CO (40kA； O-180s-CO-180s-CO)

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