



BMU SERIES MOULDED CASE CIRCUIT BREAKER

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About us

VEKON Global company is a leading provider of high-technology products and complex solutions in the fields of electrical engineering, automation, and engineering infrastructure.

We promote the VEKON brand and its values worldwide, ensuring easy access for our Customers to VEKON innovations through a wide product range, balanced commercial policies, and exceptional Customer service.

Our core manufacturing facility, Zhejiang VEKON Technology Co., Ltd., located in Yueqing Bay Power Technology Town, Zhejiang Province, China, is a technological leader in modular electrical equipment. Established in 2002, it produces a diverse range of products including RCCB/RCCBOs, MCBs, AFDDs, relays, contactors, and signaling and control devices. Manufactured on automated production lines, the facility boasts a daily output of 500,000 units. Our products are exported globally to Europe, the Americas, Southeast Asia, and Africa. Advanced technology, reliable equipment, guaranteed quality, and dedicated technical support have secured a substantial base of loyal customers worldwide. VEKON holds patents on its own designs and its products are CE, SEMKO, KEMA, and other internationally recognized certifications

compliant. Our manufacturing facilities maintain ISO 9001 certification.

In addition to Zhejiang VEKON Technology Co., Ltd., the VEKON brand encompasses over 30 other manufacturing sites across Mainland China.

We design, manufacture, and supply a comprehensive range of low – and medium-voltage electrical products (up to 35 kV), as well as a wide array of industrial automation and process control equipment.

VEKON's strategy is built on Partnerships. By collaborating with professional distributors, retailers, panel builders, installers, system integrators, and service centers, we strive to provide seamless customer proximity. At VEKON, responsibility and reputation are paramount. Our greatest reward is the establishment of long-term, mutually beneficial business and personal relationships with our Partners.

Customers and Partners who choose VEKON products can rely on our commitment to VEKON values throughout the entire product lifecycle – from ideation and innovation to manufacturing, reliable supply, comprehensive solution implementation, and comprehensive warranty and post-warranty services.

BMU6 系列塑料外壳式断路器 BMU6 series moulded case circuit breaker

主要用途与适用范围 Application Area



BMU6-250H/3P/4P



BMU6-630H/3P/4P



BMU6-250S/3P/4P



BMU6-1600H/3P/4P

BMU6 系列塑料外壳式断路器，是本公司综合采用国际先进技术设计开发并获多个专利的新型产品，具有小型紧凑、模块化、高分断、双断点、零飞弧、绿色环保等特点。适用于交流 50Hz、60Hz，额定工作电压 690V 及以下，额定电流 12.5A 至 1600A 的配电网中，用来分配电能和保护线路及电源设备免受过载、短路及欠电压等故障的危害。也可以作为线路在正常情况下的不频繁转换及电动机的不频繁起动之用。

BMU6 系列断路器还配备了智能型控制器，不但增加了整定电流的选择范围，同时还具有液晶显示、过载整定电流、短路延时电流、短路瞬时电流以及脱扣时间均可设置，短路瞬时三段保护及欠电压保护；具备 RS485 通信接口，MODBUS-RTU 协议；接入 MODBUS 通信模块，用户可根据具有需求进行选择。遥信：分断 / 合闸、脱扣、报警和故障状态指示；遥控：分断、合闸、复位；遥测：三相电流以及 N 相电流，接地电流，脱扣记忆功能，可查询最后三次脱扣记录参数等功能，进一步提高了供电的可靠性，连续性。本断路器还具备隔离功能 $\text{---} \diagup \diagdown \text{---}$ （可替代负荷开关使用）。

本系列产品符合 GB/T14048.2、GB/T 22710、IEC 60947-2 标准，通过了 3C、CE、TSE 认证。

BMU6 Series Plastic shell circuit Breaker, is the company's comprehensive use of international advanced technology design and development and obtained a number of patents of new products, with small compact, modular, high break, double breakpoints, 0 of flying arc, green environmental protection and other characteristics. Suitable for AC 50Hz, 60Hz, rated operating voltage 690V and below, rated current 12.5A to 1600A distribution network, used to distribute electrical energy and protection lines and power supply equipment from overload, short circuit and undervoltage failure hazards. It can also be used as a non-frequent conversion of the line under normal conditions and in the infrequent start of the motor.

BMU6 circuit breaker equips with intelligent controller as well, which not only makes its current adjustable but also grants protection against overload(long delay), short-circuit(short delay), short-circuit(instantaneous) & undervoltage. it'll certainly improve the entire power system's reliability, continuity & security. RS485 interface,MODBUS-RTU protocol.With MODBUS modul equipped,customers can choose options as below. Remote signal: Switching ON/OFF, tripping, alarm & malfunctional singal indication.

Remote control: Switching ON/OFF,reset.Remote test: 3-phase cuttent & N-pole current, grounding current.Remote adjustment: accept and execute remote command to debug remote control. Tripping unit menory recording function, last three time' tripping records can be well traced.SDM6 circuit breaker also obtains isolation funcion $\text{---} \diagup \diagdown \text{---}$ (Can be used as an alternative load switch).

SDM6 circuit breaker complies to GB/T14048.2, IEC60947-2 standards, with CCC,CE, TSE certificate approved.

正常工作 and 安装条件 Normal work and installation conditions

1. 安装地点的海拔高度不超过 2000m。
2. BMU6 热磁式周围介质的温度为 $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$ ，且 24h 的平均温度不大于 $+35^{\circ}\text{C}$ 。安装地点的空气相对湿度在最高温度为 $+40^{\circ}\text{C}$ 时不超过 50%；在较低的温度下，可以有较高的相对湿度；最湿月的平均最低温度不超过 $+25^{\circ}\text{C}$ 该月的平均最大相对湿度不超过 90%，并考虑因温度变化发生在产品表面上的凝露。
3. BMU6 智能液晶式周围温度为 $-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$ 。
4. 产品用在无爆炸危险介质中，且介质无足以腐蚀金属和破坏绝缘的气体 and 导电尘埃的地方。
5. 在有防雨设备及没有充满水蒸气的地方。
6. 安装类别为 III 类。
7. 污染等级为 3 级。
8. 断路器的基本安装方式为垂直安装（即竖装）、也可以水平安装（即横装）。
9. 进线方式为上进线、也可下进线。
10. 断路器可分为固定式、插入式。



BMU6-250S/3P/4P-5.0A



BMU6-630H/3P/4P-5.0A



BMU6-1600M/3P/4P



BMU6-630H/3P/4P 带剩余电流模块
With residual current module

1. The altitude of the installation site does not exceed 2000m;
2. The BMU6 thermomagnetic type with temperature of the surrounding medium is $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$, and the average temperature of 24 h is not more than $+35^{\circ}\text{C}$. The relative humidity of the air at the installation site does not exceed 50% at a maximum temperature of $+40^{\circ}\text{C}$; at lower temperatures, there may be a higher relative humidity; the average minimum temperature of the wettest month does not exceed $+25^{\circ}\text{C}$ for the average of the month. The maximum relative humidity is not more than 90%, and the condensation on the surface of the product due to temperature changes is considered.
3. BMU6 intelligent type with temperature of the surrounding medium is $-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$
4. The product is used in non-explosive hazardous media, and the media does not have enough to corrode metals and destroy insulating gases and conductive dust.
5. In places where there is rain protection and no water vapor.
6. The installation category is Class III.
7. The pollution level is level 3.
8. The basic installation of the circuit breaker is vertical (ie vertical) or horizontal (ie horizontal).
9. The incoming line is either the up line or the down line.
10. Circuit breakers can be divided into fixed and plug-in types.

型号及含义 Model Code

BMU6 □ □ □

- 极数：3 代表 3P、4 代表 4P Polar Number: 3 for 3P, 4 for 4P
- 分断能力代号：L: 经济型、M: 标准型、H: 较高分断型、S: 高分断型
Breaking capacity code: L: Economical、M: Standard、H: High Breaking type、S: High Break type
- 壳架电流：100、160、250、400、630、1250、1600
Shell Rack Current: 100, 160, 250, 400, 630, 1250, 1600
- BMU6 表示企业代号和设计序号
BMU6 Represents an enterprise code and design serial number

* 注：订货时其他要求需加文字说明

* Note: Other requirements at the time of ordering are subject to textual instructions

脱扣单元：

脱扣器类型分为：热磁式脱扣器和智能脱扣器

1. 热磁式脱扣器按保护类型分为两种：配电保护型代号：TM；电机（单磁）保护型代号：MA。
2. 智能型脱扣器按功能分为三种：普通型、液晶型和带电压检测型。
普通型代号按壳架区分：250 壳架：2.2。 630 壳架：2.3。 800/1600 壳架：2.0。
液晶型代号壳架均为：5.0A。 带电压检测型号代号壳架均为：5.0E。

Buckle unit:

The type of stripper is divided into: thermal magnetic stripper and Intelligent stripper

1. Thermal magnetic stripper is divided into two types according to protection type
Distribution Protection Code: TM; Motor (single-magnetic) protection Code: MA.
2. Intelligent stripper According to the function is divided into three kinds:
ordinary type, liquid crystal type and with voltage detection type.
The common code is differentiated by Shell frame: 250 Shell frame:
250 shell frame: 2.2. 630 shell frame: 2.3. 800/1600 shell frame: 2.0.
liquid crystal Code Shell frame are: 5.0A.
with voltage detection model code Shell The racks are: 5.0E.

3. 断路器保护设置显示见表 1

Circuit breaker protection settings are shown in table 1

表 1 Table 1

型号 Type	过载长延时整定电流 (Ir) Overload long delay setting current (IR)	过载长延时 (6 · In) 整定脱扣时间 Overload long delay (6 · IN) Fix buckle time	短路短延时整定电流 (I _{sd}) Short-circuit shorter delay tuning current (ISD)	短路短延时整定时间 (T _{sd}) Short-circuit shorter delay setting time (TSD)	短路瞬动整定电流 (I _i) Short-circuit transient tuning current (Ii)	接地保护整定电流 (I _g) Grounding Protection setting current (IG)	接地保护整定时间 (T _g) Grounding Protection Setting time (TG)	脱扣器类型 Type of Stripper
BMU6-100 BMU6-160 BMU6-250	(0.8 ~ 1)In	-	-	-	-	-	-	热磁式 (单可调) Thermal magnetic type (single adjustable)
	(0.4 ~ 1)In	-	(1.5 ~ 10)Ir	-	10In	-	-	普通电子式 (2.2) General Electronic (2.2)
	(0.4 ~ 1)In	1.5 ~ 24s	(1.5 ~ 12)Ir	0s ~ 0.4s	(2 ~ 15)In	(30% ~ 100%) In	0s ~ 0.4s	液晶智能电子式 (5.0A) LCD Intelligent Electronic (5.0A)
	(0.4 ~ 1)In	1.5 ~ 24s	(1.5 ~ 12)Ir	0s ~ 0.4s	(2 ~ 15)In	(30% ~ 100%) In	0s ~ 0.4s	电压测量型 (5.0E) Voltage measurement type (5.0E)
BMU6-160 BMU6-250	(0.8 ~ 1)In	-	-	-	(5 ~ 10)In	-	-	热磁式 (双可调) Thermal magnetic type (Dual adjustable)
BMU6-400 BMU6-630	(0.8 ~ 1)In	-	-	-	(5 ~ 10)In	-	-	热磁式 (双可调) Thermal magnetic type (Dual adjustable)
	(0.4 ~ 1)In	-	(1.5 ~ 10)Ir	-	10In	-	-	普通电子式 (2.2) General Electronic (2.2)
	(0.4 ~ 1)In	1.5 ~ 24s	(1.5 ~ 12)Ir	0s ~ 0.4s	(2 ~ 15)In	(30% ~ 100%) In	0s ~ 0.4s	液晶智能电子式 (5.0A) LCD Intelligent Electronic (5.0A)
	(0.4 ~ 1)In	1.5 ~ 24s	(1.5 ~ 12)Ir	0s ~ 0.4s	(2 ~ 15)In	(30% ~ 100%) In	0s ~ 0.4s	电压测量型 (5.0E) Voltage measurement type (5.0E)
BMU6-1250 BMU6-1600	(0.4 ~ 1)In	-	(1.5 ~ 10)Ir	-	10In	-	-	普通电子式 (2.2) General Electronic (2.2)
	(0.4 ~ 1)In	0.5 ~ 24s	(1.5 ~ 12)Ir	0s ~ 0.4s	(2 ~ 15)In	(30% ~ 100%) In	0s ~ 0.4s	液晶智能电子式 (5.0A) LCD Intelligent Electronic (5.0A)
	(0.4 ~ 1)In	0.5 ~ 24s	(1.5 ~ 12)Ir	0s ~ 0.4s	(2 ~ 15)In	(30% ~ 100%) In	0s ~ 0.4s	电压测量型 (5.0E) Voltage measurement type (5.0E)

4. 智能型电压测量 (5.0E) 参数测量功能见表 2

Intelligent voltage Measurement (5.0E) parameter measurement function is shown in table 2

表 2 Table 2

测量值 Measurement values			显示 Show
瞬时真实有效测量值 Instantaneous real and effective measurement values			
电流 (A) Current (A)	相电流和中性线电流 Phase current and Neutral line current	I1, I2, I3, IN	■
	平均相电流 Average phase current	$I_{avg} = (I1 + I2 + I3) / 3$	■
	相电流和中性线电流最大值 The maximum value of phase current and neutral line current	Imax of I1, I2, I3, In	■
	接地故障百分比 Percentage of grounding faults	%Ig	■
	相间不平衡电流值 Interphase Unbalanced Current value	%Iavg	■
电压 (V) Voltage (V)	线电压 Line Voltage	U12, U23, U31	■
	相电压 Line Voltage	V1N, V2N, V3N	■
	平均线电压 Average line voltage	$U_{avg} = (U12 + U23 + U31) / 3$	■
	平均相电压 Average line voltage	$V_{avg} = (V1N + V2N + V3N) / 3$	■
	不平衡线电压、不平衡相电压 Unbalanced line voltage, unbalanced phase voltage	%Uavg, %Vavg	■
	相序 Phase sequence	1-2-3, 1-3-2	■
频率 (Hz) Frequency (Hz)	电力系统 Phase sequence	F	■
功率 Power	有功 Active	P, 三相 / 每相	■
	无功 Active	Q, 三相 / 每相	■
	视在 Seen in	S, 三相 / 每相	■
	功率因素和 $\cos\phi$ Power factors and measured	PF 和 $\cos\phi$, 三相和每相	■
最大值 / 最小值 Maximum/Minimum value			
	瞬时真实有效值测量 Instantaneous real effective value measurement	通过 Micrologic 复位 Reset via Micrologic	■
电量测量 Reset via Micrologic			
电量 Electricity	有功 (kWh)、无功 (kVARh)、视在 (kVAh) Active (kWh), reactive (kVARh), visual (kVAh)	自上次复位以来的总电流 绝对值模式或矢量模式① Total current absolute value mode or vector mode since the last reset ①	■
需量和最大需量 Requirements and maximum requirements			
电流需量 Current requirements	相电流 Phase current	所选窗口上的当前值自上次复位以来的最大需量 The maximum amount required for the current value on the selected window since the last reset	■

续表 2 Renew Table 2

测量值 Measurement values			显示 Show
电量需量 Battery requirement	有功 (kWh)、无功 (kVARh)、视在 (kVAh) Active (kWh), reactive (kVARh), visual (kVAh)	所选窗口上的当前值自上次复位以来的最大需量 The maximum amount required for the current value on the selected window since the last reset	■
计算窗口 Calculation window	滑动式、固定式或通信同步模式 Sliding, stationary, or communication synchronization mode	以 1 分钟为补偿, 可调范围为 5 至 60 分② 1 minutes to compensate, adjustable range of 5-60 minutes ②	□
电能质量 Power Quality			□
总谐波畸变率 (%) Total Harmonic distortion rate (%)	占电压值的比例 Proportion of voltage value	相电压 THD, 线电压 THD Phase voltage THD, line voltage THD	■
	电流真实有效值 Real effective value of current	相电流 THD Phase Current THD	■

技术数据及性能 Technical data and performance

1. 断路器的基本参数见表 3。
2. 断路器的过载长延时及短路瞬时保护动作特性见表 4、表 5。
3. 断路器的电流整定范围见表 6。

1. The basic parameters of the circuit breaker are shown in Table 3.
2. The overload delay and short-circuit transient protection action characteristics of the circuit breaker are shown in Table 4 and Table 5.
3. The current setting range of the circuit breaker is shown in Table 6.

表 3 Table 3

型号 type	BMU6-100				BMU6-160				BMU6-250			
极数 Number of poles	3P、4P				3P、4P				3P、4P			
壳架等级最大额定电流 Inm (A) Shell frame maximum rated current Inm(A)	100				160				250			
额定电流 In (A) Rated current In(A)	12.5/16/20 25/32/40 50/63/80/100	100			16/20/25/32 40/50/63/80 100/125/160	160			100/160/180 200/225/250			
额定绝缘电压 Ui (V) Rated insulation voltage Ui(V)	800				800				800			
额定冲击耐压电压 Uimp (kV) Rated impulse withstand voltage Uimp(kV)	8				8				8			
额定电压 Ue (V)50H-60Hz Rated voltage Ue(V)50H-60Hz	AC415/500/690				AC415/500/690				AC415/500/690			
飞弧距离 (mm) Flying arc Distance (mm)	0				0				0			
短路分断能力级别 Short circuit breaking capability level	L	M	H	S	L	M	H	S	L	M	H	S

续表 3 Renew Table 3

型号 type		BMU6-100				BMU6-160				BMU6-250			
额定极限短路 Rated limit Short circuit 分断能力 Icu(kA) Breaking capacity Icu(kA)	AC415V	50	85	100	150	50	85	100	150	50	85	100	150
	AC500V	35	50	60	65	35	50	60	65	35	50	60	65
	AC690V	6		8	10	6		8	10	6		8	10
额定运行短路 Rated running short circuit 分断能力 Ics(kA) Breaking capacity Ics(kA)	AC415V	50	85	100	150	50	85	100	150	50	85	100	150
	AC500V	35	50	60	65	35	50	60	65	35	50	60	65
	AC690V	6		8	10	6		8	10	6		8	10
使用类别 Working with categories		A				A				A			
额定短时耐受电流 Icw (kA) (1s) Rated short time resistant current ICW (kA) (1s)		/		3		/		3		/		3	
脱扣器类型 Type of Stripper		热磁式或单磁式 Thermal or single- magnetic	智能型 Intelligent type			热磁式或单磁式 Thermal or single- magnetic	智能型 Intelligent type			热磁式或单磁式 Thermal or single- magnetic	智能型 Intelligent type		
剩余电流保护 Remaining Current protection		附加剩余电流保护模块 (具体参数见 P15-16 EL6 剩余电流模块) Additional Residual current protection module (See P15-16 EL6 remaining current module for specific parameters)											
电气寿命测试 Electrical Life Test	AC415V	10000		10000		8000		8000		8000		8000	
	AC690V	1500		1500		1500		1500		1500		1500	
机械寿命次数 Number of mechanical life		20000		20000		20000		20000		20000		20000	
外形尺寸 Dimensions	宽 (3P/4P) Wide(3P/4P)	105/140				105/140				105/140			
	长 Long	161				161				161			
	高 High	86				86				86			
操作方式 Mode of operation	手动直接操作 Manual Direct operation	有 Yes				有 Yes				有 Yes			
	旋转手柄操作 Rotate handle operation	有 Yes				有 Yes				有 Yes			
	电动操作机构 Electric operating mechanism	有 Yes				有 Yes				有 Yes			
安装方式 Mounting method	固定式 (板前) Fixed type (front of plate)	有 Yes				有 Yes				有 Yes			
	固定式 (板后) Fixed type (rear of plate)	有 Yes				有 Yes				有 Yes			
	插入式 (板前) Plug-in (front of plate)	有 Yes				有 Yes				有 Yes			
	插入式 (板后) Plug-in (rear of board)	有 Yes				有 Yes				有 Yes			

续表 3 Renew Table 3

型号 type		BMU6-400				BMU6-630				BMU6-1250/1600	
极数 Number of poles		3P、4P				3P、4P				3P、4P	
壳架等级最大额定电流 Inm(A) Shell frame maximum rated current Inm(A)		400				630				1250/1600	
额定电流 In (A) Rated current In(A)		250/315/ 350/400	400			400/500/ 600/630	630			/	800/1000/ 1250/1600
额定绝缘电压 Ui (V) Rated insulation voltage Ui(V)		1000				1000				1000	
额定冲击耐压电压 Uimp (kV) Rated impulse withstand voltage Uimp(kV)		8				8				8	
额定电压 Ue (V)50Hz/60hz Rated voltage Ue(V)50Hz/60hz		AC415/500/690				AC415/500/690				AC415/500/690	
飞弧距离 (mm)Flying arc Distance (mm)		0				0				0	
短路分断能力级别 Short circuit breaking capability level		L	M	H	S	L	M	H	S	M	H
额定极限短路 Rated limit Short circuit 分断能力 Icu (kA) Breaking capacity Icu(kA)	AC415V	50	85	100	150	50	85	100	150	50	65
	AC500V	35	50	60	65	35	50	60	65	35	45
	AC690V	10		15	20	10		15	20	20	30
额定运行短路 Rated running short circuit 分断能力 Ics (kA) Breaking capacity Ics(kA)	AC415V	50	85	100	150	50	85	100	150	50	65
	AC500V	35	50	60	65	35	50	60	65	35	45
	AC690V	10		15	20	10		15	20	20	30
使用类别 Working with categories		A		B		A		B		B	
额定短时耐受电流 Icw (kA) (1s) Rated short time resistant current ICW (kA) (1s)		/		5		/		8		/ 20	
脱扣器类型 Type of Stripper		热磁式或单磁式 Thermal or single-magnetic		智能型 Intelligent type		热磁式或单磁式 Thermal or single-magnetic		智能型 Intelligent type		智能型 Intelligent type	
剩余电流保护 Remaining Current protection		附加剩余电流保护模块 (具体参数见 P15-16 EL6 剩余电流模块) Additional Residual current protection module (See P15-16 EL6 remaining current module for specific parameters)									
电气寿命测试 Electrical Life Test	AC415V	6000		6000		5000		5000		1500	
	AC690V	1000		1000		1000		1000		1000	1000
机械寿命次数 Number of mechanical life		10000		10000		10000		10000		10000	10000

续表 3 Renew Table 3

型号 type		BMU6-400	BMU6-630	BMU6-1250/1600
外形尺寸 Dimensions	宽 (3P , 4P) Wide (3P , 4P)	140/185	140/185	210/280
	长 Long	255	255	327
	高 High	110	110	147
操作方式 Mode of operation	手动直接操作 Manual Direct operation	有 Yes	有 Yes	有 Yes
	旋转手柄操作 Rotate handle operation	有 Yes	有 Yes	有 Yes
	电动操作机构 Electric operating mechanism	有 Yes	有 Yes	有 Yes
安装方式 Mounting method	固定式 (板前) Fixed type (front of plate)	有 Yes	有 Yes	有 Yes
	固定式 (板后) Fixed type (rear of plate)	有 Yes	有 Yes	有 Yes
	插入式 (板前) Plug-in (front of plate)	有 Yes	有 Yes	有 Yes
	插入式 (板后) Plug-in (rear of board)	有 Yes	有 Yes	有 Yes

表 4 Table 4

序号 Serial number	配电用断路器 Distribution breaker			周围空气温度 Circumstance temperature
	试验电流倍数 Test current (times)	动作时间 Tripping time	起始状态 Status	
1	1.05In	1h 内不脱扣 (In ≤ 63A) 2h 内不脱扣 (In > 63A) 1h non-tripping (In ≤ 63A) 2h non-tripping (In ≤ 63A)	冷态开始 Initial	+40°C ±2°C
2	1.3In	1h 内脱扣 (In ≤ 63A) 2h 内脱扣 (In > 63A) 1h tripping (In ≤ 63A) 2h tripping (In > 63A)	接序 1 进行 Following serial 1	
3	10In±20%	8In	> 0.2s 脱扣 Tripping	任何合适温度 Any suitable temperature
4		12In	≤ 0.2s 脱扣 Tripping	

技术数据及性能 Technical data and performance

表 5 Table 5

序号 Serial number	电动机保护用断路器 Motor protection breaker			周围空气温度 Circumstance temperature
	试验电流倍数 Testing current(times)	动作时间 Tripping time	起始状态 State	
1	1.05I _n	2h 内不脱扣 non-tripping	冷态开始 Initial	+40°C ±2°C
2	1.2I _n	2h 内脱扣 tripping	接序 1 进行 Following serial 1	
3	1.5I _n	4min 内脱扣 tripping	接序 1 电流达到热平衡后开始 The order 1 current reaches the thermal equilibrium and begins	
4	7.2I _n	2 ~ 10s 脱扣 tripping	冷态开始 Initial	
5	12I _n ±20%	9.6I _n	>0.2s 脱扣 tripping	任何合适温度 Any suitable temperature
6		14.4I _n	≤ 0.2s 脱扣 tripping	

表 6 Table 6

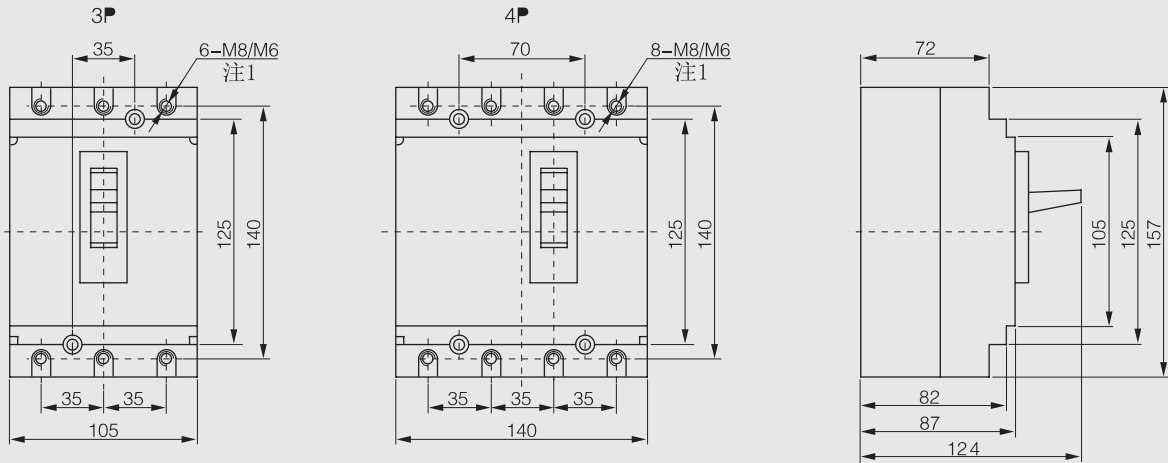
型号 type	过载长延时脱扣器电流 值可调范围 Ir(A) Overload long delay release current value adjustable range Ir(A)	短路短延时脱扣器电流值 可调范围 Isd(A) Short-circuit short-delay trip unit current value adjustable range Isd(A)	短路瞬时脱扣器电流值 可调范围 Ii(A) Short-circuit instantaneous trip unit current value adjustable range Ii(A)	备注 Remarks
BMU6-100	0.8 ~ 1I _n	-	10I _n	热磁式 (单可调) Thermomagnetic (single adjustable)
BMU6-160	0.8 ~ 1I _n	-	10I _n	
BMU6-250	0.8 ~ 1I _n	-	10I _n	
BMU6-100	0.8 ~ 1I _n	-	10I _n	热磁式 (双可调) Thermomagnetic (double adjustable)
BMU6-160	0.8 ~ 1I _n	-	(5~10)I _n	
BMU6-250	0.8 ~ 1I _n	-	(5~10)I _n	普通电子式 (2.2) Electronic
BMU6-100	0.4 ~ 1I _n	(1.5 ~ 10)Ir	10I _n	
BMU6-160	0.4 ~ 1I _n	(1.5 ~ 10)Ir	10I _n	
BMU6-250	0.4 ~ 1I _n	(1.5 ~ 10)Ir	10I _n	液晶智能电子式 (5.0A) Intelligent LCD display
BMU6-100	0.4 ~ 1I _n	(1.5 ~ 12)Ir	(2 ~ 15)I _n	
BMU6-160	0.4 ~ 1I _n	(1.5 ~ 12)Ir	(2 ~ 15)I _n	
BMU6-400	0.7 ~ 1I _n	-	(5 ~ 10)I _n	热磁式 (双可调) Thermomagnetic (double adjustable)
BMU6-600	0.7 ~ 1I _n	-	(5 ~ 10)I _n	
BMU6-400	0.4 ~ 1I _n	(1.5 ~ 10)Ir	10I _n	普通电子式 (2.3) Electronic
BMU6-400	0.4 ~ 1I _n	(2 ~ 10)Ir	10I _n	
BMU6-630	0.4 ~ 1I _n	(1.5 ~ 10)Ir	10I _n	
BMU6-630	0.4 ~ 1I _n	(2 ~ 10)Ir	10I _n	液晶智能电子式 (5.0A) Intelligent LCD display
BMU6-400	0.4 ~ 1I _n	(1.5 ~ 12)Ir	(2 ~ 15)I _n	
BMU6-630	0.4 ~ 1I _n	(1.5 ~ 12)Ir	(2 ~ 15)I _n	普通电子式 (2.0) Electronic
BMU6-1250	0.4 ~ 1I _n	(1.5 ~ 10)Ir	10I _n	
BMU6-1600	0.4 ~ 1I _n	(1.5 ~ 10)Ir	10I _n	液晶智能电子式 (5.0A) Intelligent LCD display
BMU6-1250	0.4 ~ 1I _n	(1.5 ~ 12)Ir	(2 ~ 15)I _n	
BMU6-1600	0.4 ~ 1I _n	(1.5 ~ 12)Ir	(2 ~ 15)I _n	

注：常规产品只提供二段保护，如客户需要三段保护时订货时注明见表 6。

Note: Regular products only provide two-segment protection, if the customer needs three protection when the order is indicated in table 6.

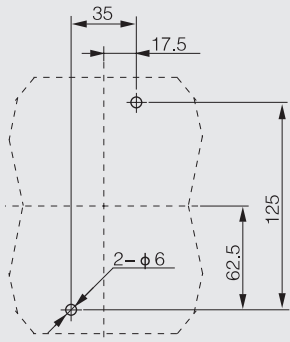
外形及安装尺寸 Shape and installation dimensions

BMU6-100,160,250 外形与安装尺寸 Shape and installation dimensions

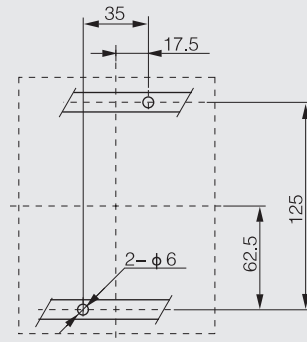


注 1 : 当 $I_n > 100A$ 时接线螺栓为 M8 , 当 $I_n \leq 100A$ 时接线螺栓为 M6.

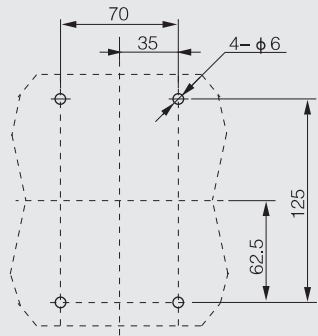
Attention1: when $I_n > 100A$, Fixing screw size should be M8, When $I_n \leq 100A$, fixing screw size should be M6.



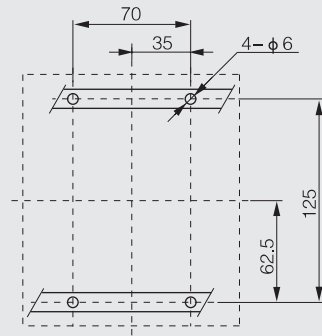
3P : 安装在底板上 Installed on the panel



3P : 安装在导轨上 Installed on leading rails



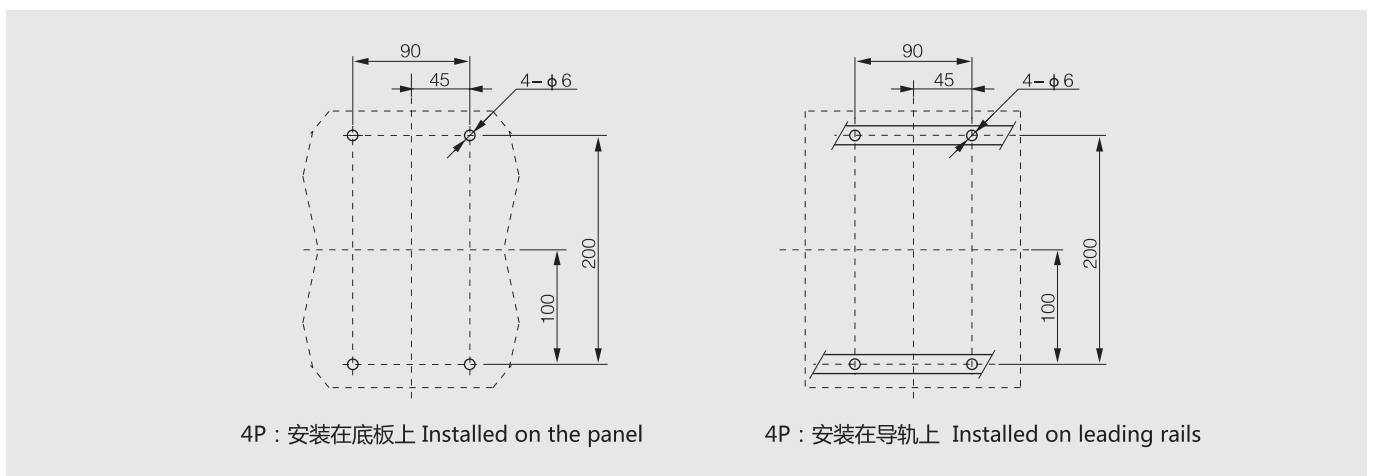
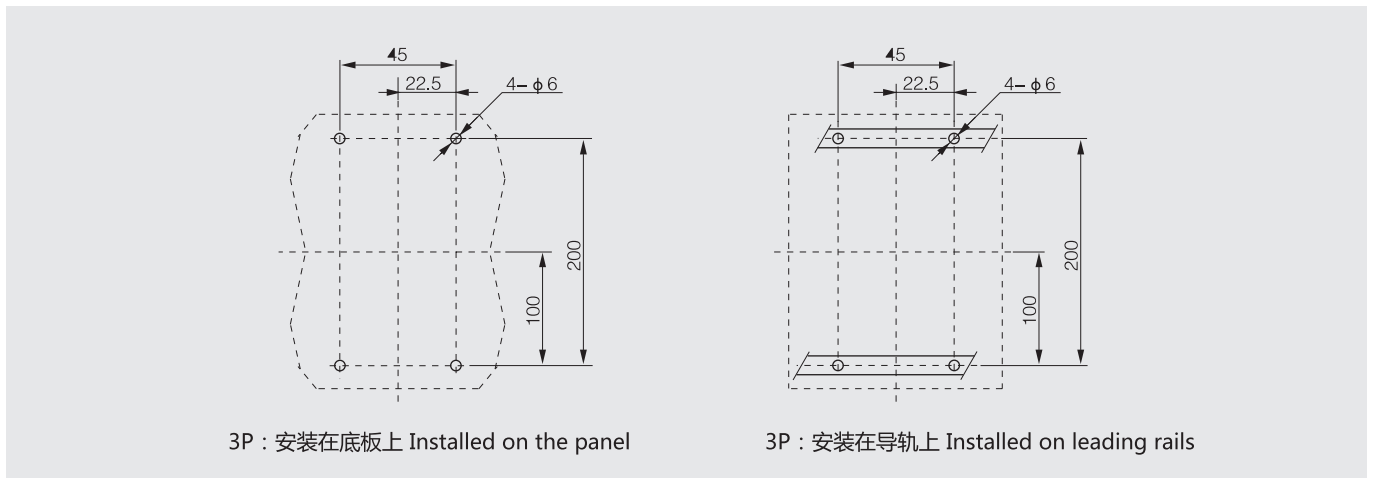
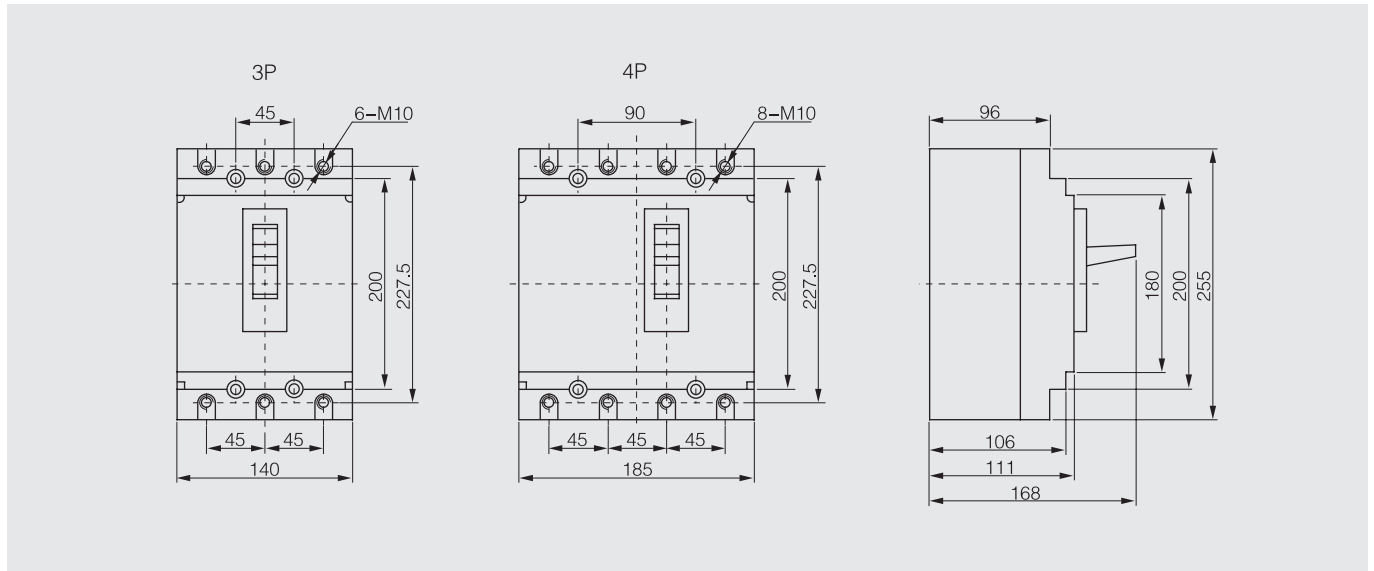
4P : 安装在底板上 Installed on the panel



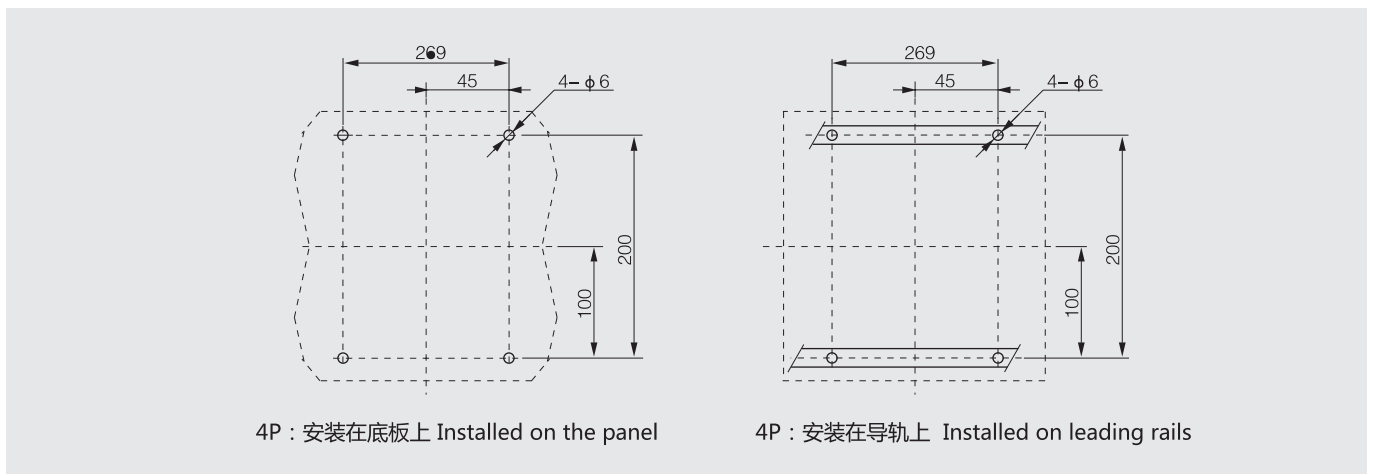
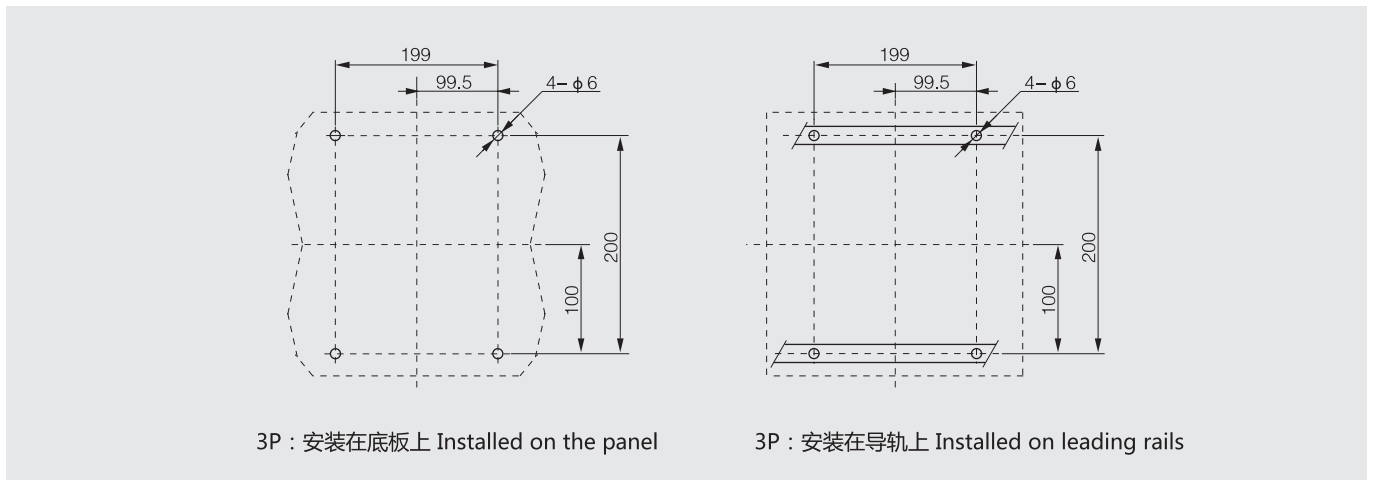
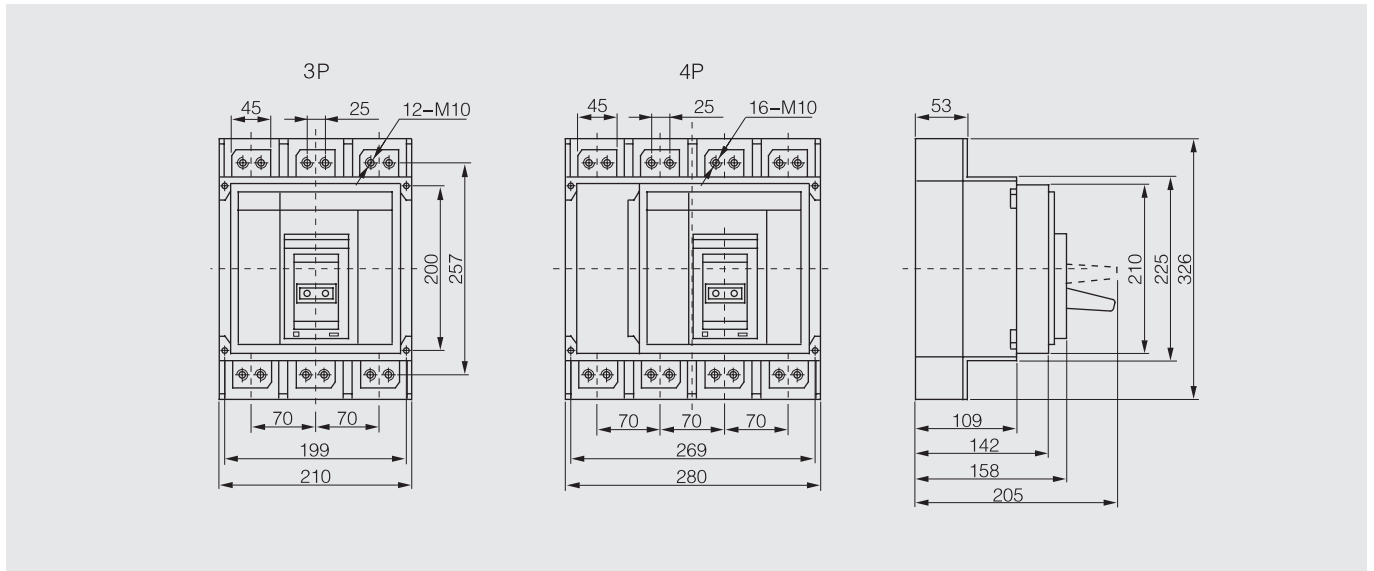
4P : 安装在导轨上 Installed on leading rails

外形及安装尺寸 Shape and installation dimensions

BMU6-400、630 外形与安装尺寸 Shape and installation dimensions

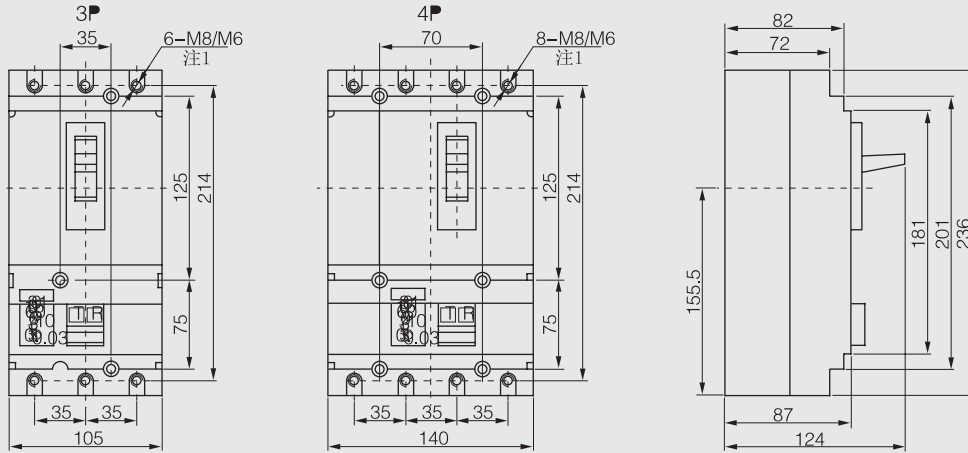


BMU6-1250、1600 外形与安装尺寸 Shape and installation dimensions

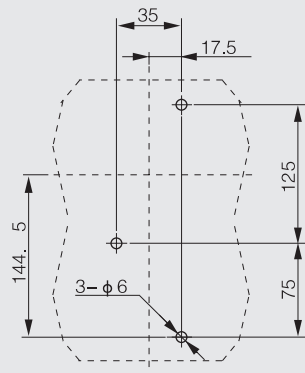


外形及安装尺寸 Shape and installation dimensions

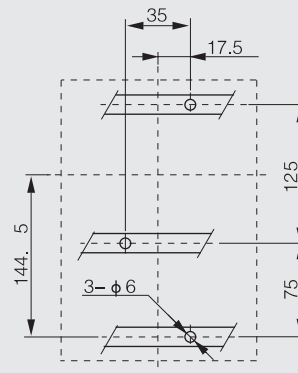
BMU6-100、160、250(带剩余电流模块)外形与安装尺寸 (with residual current module)Shape and installation dimensions



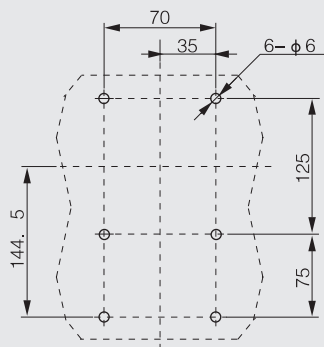
注1 : 当 $I_n > 100A$ 时接线螺栓为 M8, 当 $I_n \leq 100A$ 时接线螺栓为 M6.
 Attention1: when $I_n > 100A$, Fixing screw size should be M8, When $I_n \leq 100A$, fixing screw size should be M6.



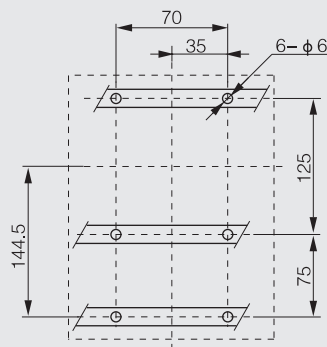
3P : 安装在底板上 Installed on the panel



3P : 安装在导轨上 Installed on leading rails

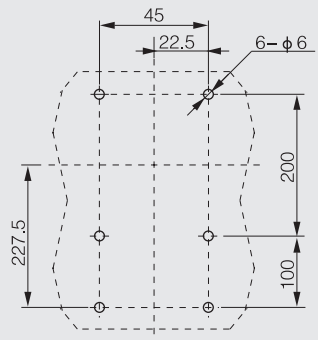
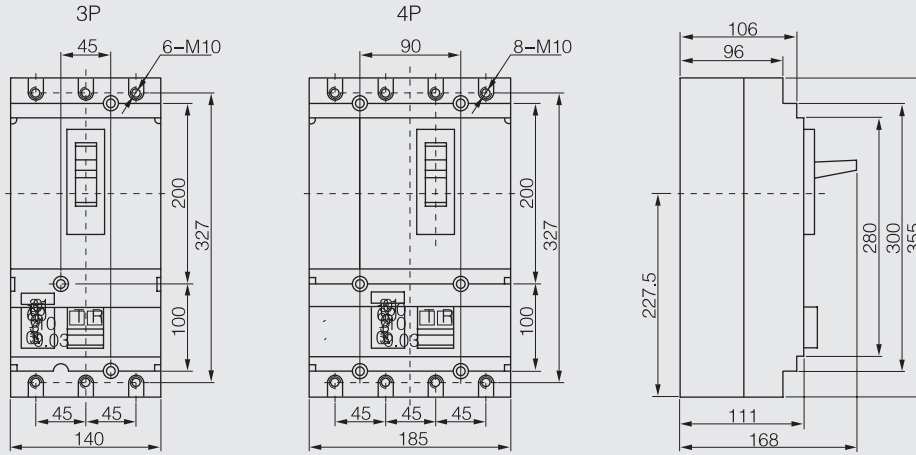


4P : 安装在底板上 Installed on the panel

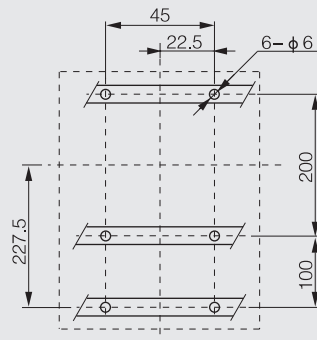


4P : 安装在导轨上 Installed on leading rails

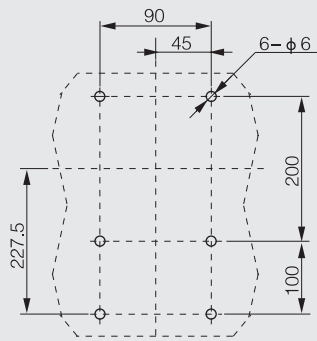
BMU6-400、630(带剩余电流模块)外形与安装尺寸 (with residual current module)Shape and installation dimensions



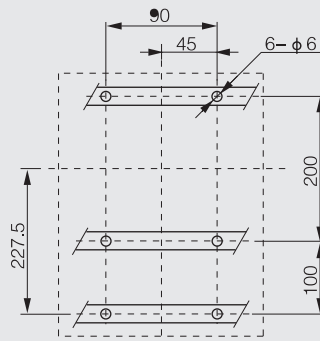
3P : 安装在底板上 Installed on the panel



3P : 安装在导轨上 Installed on leading rails



4P : 安装在底板上 Installed on the panel



4P : 安装在导轨上 Installed on leading rails

EL6 剩余电流装置模块 Remaining Current device module

EL6 剩余电流动作保护装置模块 (漏电保护模块)

EL6 Residual current Action Protection device module(Leakage protection module)

为所有三极或四极 BMU6-100 至 630 断路器提供漏电保护。带有 EL6 剩余电流保护模块的断路器，在保持断路器总体特性的前提下，实现漏电保护功能，EL6 模块能够直接作用于脱扣单元。

Provides leakage protection for all three-pole or quadropole BMU6-100 to 630 circuit breakers. The circuit breaker with EL6 residual current protection module realizes the leakage protection function under the premise of maintaining the overall characteristics of the circuit breaker, and the EL6 module can directly act on the stripping unit.

EL6 剩余电流装置模块介绍

Introduction of EL6 remaining current device module

遵循标准：

- 1.GB/T 14048.2, 附录 M。
- 2.GB/T 14598, 具有抗瞬时过电压, 雷电, 操作过电压, 静电放电, 射频干扰的能力。

远程指示：

EL6 模块可装一个辅助触头, 可远程传送有漏电故障引起的脱扣。

电源：

EL6 模块可由配电系统自行供电, 因而无需任何外部电源。即使在仅 AC 两相供电的情况下, 也能够继续运行。

Adherence to standards:

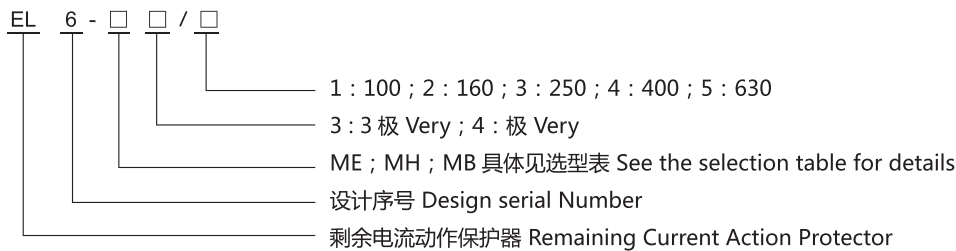
- 1.GB/T 14048.2, Appendix M.
- 2.GB/T 14598, with anti-instantaneous overvoltage, lightning, operating overvoltage, electrostatic discharge, RF interference ability.

Remote indication:

The EL6 module can be fitted with an auxiliary contact, which can remotely transmit the buckle caused by leakage fault.

Power:

The EL6 module can be powered by the power distribution system itself, eliminating the need for any external power supply. It can continue to operate even with AC two-phase power supply.



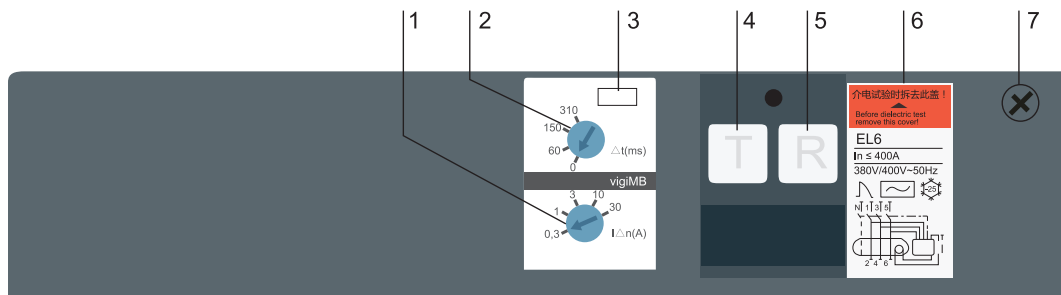
EL6 模块的选型 Selection of EL6 modules

型号 Model	EL6-ME	EL6-MH	EL6-MB
极数 Polar number	3、4 ⁽¹⁾	3、4 ⁽¹⁾	3、4 ⁽¹⁾
BMU6-100	有 Yes	有 Yes	无 No
BMU6-160	有 Yes	有 Yes	无 No
BMU6-250	无 No	有 Yes	无 No
BMU6-400	无 No	无 No	有 Yes
BMU6-630	无 No	无 No	有 Yes

型号 Model	EL6-ME	EL6-MH	EL6-MB
保护特性 Protective features			
灵敏度 Sensitivity I Δ n(A)	固定 Fixed 0.3	可调 Adjustable 0.03-0.3-1-3-10	可调 Adjustable 0.3-1-3-10-30
延时是否可调 Whether the delay is adjustable	固定 Fixed	可调 Adjustable	可调 Adjustable
延时设定 Delay settings	<40	0-60 ⁽⁹⁾ -150 ⁽⁹⁾ -310 ⁽⁹⁾	0-60-150-310
最大分断时间 (ms) Maximum break time (ms)	<40	<40<140<300<800	<40<140<300<800
额定电压 Rated voltage AC50V/60Hz	200...440	200...440-440...500	200...440-440...500

如果灵敏度设为 30mA, 脱扣器瞬时脱扣。

If the sensitivity is set to 30mA, the stripper is instantaneous clasp.



1. 灵敏度设置
2. 延时设置 (用于选择性漏电保护)
3. 整定值铅封套
4. 测试按钮——用来模拟漏电故障, 以定期检查漏电保护功能
5. 复位按钮 (漏电故障脱扣后须进行复位)
6. 铭牌
7. 辅助触点的位置

1. Sensitivity setting
2. Delay setting (for selective leakage protection)
3. Calibration of the seal Sleeve
4. Test button-used to simulate leakage failure, to periodically check leakage protection function
5. Reset button (after leakage fault buckle must be reset)
6. Nameplate
7. Location of secondary contacts

操作安全 Operational safety







EL6 模块式一种用户安全型装置, 用户需要定期检测 (每 6 个月测试一次)




EL6 Modular A user-friendly device that requires regular testing by the user (tested every 6 months)





断路器附件 Circuit breaker accessories

断路器的内部附件装设在盖板的内腔内，分励脱扣器、欠压脱扣器、辅助触头和报警触头，均制成单独的模块。因此安装简捷，方便、使用安全、可靠，用户可自行装入断路器的相应位置。附件如下图：

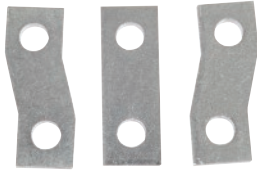
The internal accessories of the circuit breaker are installed in the inner cavity of the cover plate, and the shunt release, undervoltage release, auxiliary contact and alarm contact are all made into separate modules. Therefore, the installation is simple, convenient, safe and reliable, and the user can install the corresponding position of the circuit breaker by himself. The attached picture is as follows:

附件名称 Accessory name	额定工作电压 Rated operating voltage	适用壳架 Applicable shell frame
 <p>MX 分励脱扣器 Shunt release</p>	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>BMU6-100 BMU6-160 BMU6-250 BMU6-400 BMU6-630</p>
	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>BMU6-1250/1600</p>
 <p>MU 欠压脱扣器 Undervoltage release</p>	<p>AC220/230V AC380/400V</p>	<p>BMU6-100 BMU6-160 BMU6-250 BMU6-400 BMU6-630</p>
	<p>AC220/230V AC380/400V</p>	<p>BMU6-1250/1600</p>
 <p>AX 辅助触头 Auxiliary contact</p>	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>所有壳架 All shells</p>
 <p>AL 报警触头 Alarm contact</p>	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>所有壳架 All shells</p>

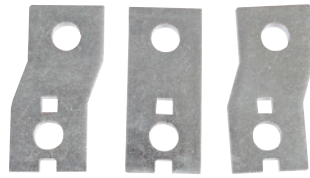
附件名称 Accessory name	额定工作电压 Rated operating voltage	适用壳架 Applicable shell frame
 <p>EL6 剩余电流保护模块 Remaining Current protection module</p>	<p>灵敏度 $I_{\Delta n}$ (A) 可调范围 0.03, 0.3, 1, 3, 10。 注：用户需要时，断路器可以提供为 只报警不脱扣。 Sensitivity $I_{\Delta n}$(A) adjustable range 0.03, 0.3, 1, 3, 10. Note: The circuit breaker can be provided as needed by the user. Only the alarm does not trip.</p>	<p>BMU6-100 BMU6-160 BMU6-250</p> <hr/> <p>BMU6-400 BMU6-630</p>
 <p>P 电动操作机构 Electric operating mechanism</p>	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>BMU6-100 BMU6-160 BMU6-250</p>
 <p>P 电动操作机构 Electric operating mechanism</p>	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>BMU6-400 BMU6-630</p>

附件名称 Accessory name	适用壳架 Applicable shell frame	附件名称 Accessory name	适用壳架 Applicable shell frame
 <p>经济型加长旋转手柄 Economical extended rotating handle</p>	<p>BMU6-100 BMU6-160 BMU6-250 BMU6-400 BMU6-630</p>	 <p>直接旋转手柄 Rotate the handle directly</p>	<p>BMU6-100 BMU6-160 BMU6-250 BMU6-400 BMU6-630</p>
 <p>加长旋转手柄 Extended rotating handle</p>	<p>BMU6-100 BMU6-160 BMU6-250 BMU6-400 BMU6-630</p>	 <p>直接旋转手柄 Rotate the handle directly</p>	<p>BMU6-1600/1250</p>

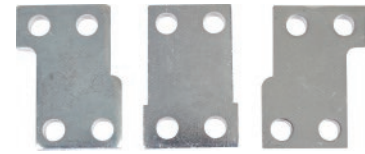
断路器附件 Circuit breaker accessories



1. BMU6-100、160、250
外连接板 Outer connecting plate



2. BMU6-400、630
外连接板 Outer connecting plate



3. BMU6-1250、1600
外连接板 Outer connecting plate

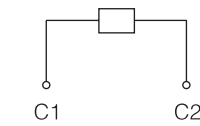
注：热磁式与电子式的外形尺寸、安装尺寸及附件完全一致。

Note: Thermomagnetic and electronic dimensions, mounting dimensions and accessories are identical.

分励脱扣器 Shunt release

用于远距离控制断路器的分闸，分励脱扣器在 70% ~ 110%US 之间能可靠地断开断路器。分励脱扣器应禁止长时间通电 (≤ 5s)。

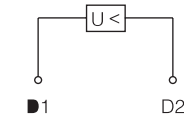
For remote control of the circuit breaker opening, the shunt release can reliably open the circuit breaker between 70% and 110% US. The shunt release should be prohibited from being energized for a long time (≤ 5s).



接线圈 Coupling coil

欠压脱扣器 Undervoltage release

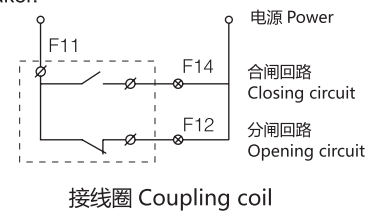
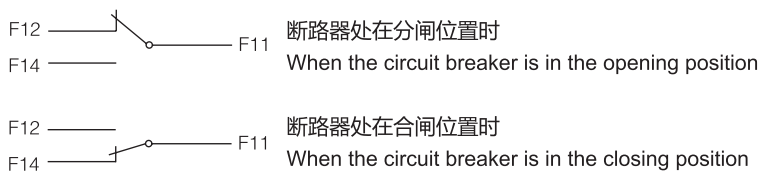
当控制电压下降到 35% ~ 70% 时，欠压脱扣器应脱扣，断路器可靠断开。当控制电压大于或等于 85% 时，应能保证断路器可靠合闸。当控制电压小于 35% 时，应能防止断路器合闸。When the control voltage drops to 35% to 70%, the undervoltage release should trip and the circuit breaker should be reliably disconnected. When the control voltage is greater than or equal to 85%, the circuit breaker should be reliably closed. When the control voltage is less than 35%, it should be able to prevent the circuit breaker from closing.



接线圈 Coupling coil

辅助触头 Contact contact

功能：指示断路器的分合闸状态。Function: Indicates the opening and closing state of the circuit breaker.



报警触头 Alarm contact

功能：指示断路器脱扣的可能原因

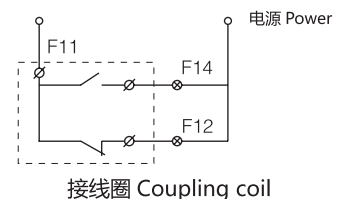
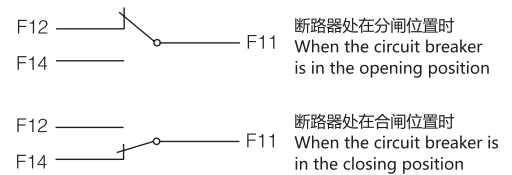
a：过载； b：短路； c：接地故障； d：欠压脱扣的操作； e：自由脱扣。

断路器正常合闸、分闸时，报警触头不动作，只有在自由脱扣或故障跳闸后才报警。触头位置才发生改变，即常开变成常闭，常闭变成常开。当断路器再扣后，报警触头恢复原始位置。

Function: Indicates the possible cause of tripping of the circuit breaker

a: overload ; b: short circuit ; c: ground fault ; d: undervoltage trip operation ; e: free trip.

When the circuit breaker is normally closed or opened, the alarm contact does not move, and only after the free trip or fault trip occurs. The position of the contact changes, that is, the normally open becomes normally closed, and the normally closed becomes normally open. When the circuit breaker is buckled again, the alarm contact returns to its original position.



BMU6 DC 直流断路器 BMU6 DC Circuit Breaker

主要用途与适用范围 Application Area



BMU6-250DC/4P

BMU6 DC 系列直流塑壳断路器，适用于额定电流 600A 及以下，直流额定电压至 1500V 的光伏发电配电网中，本断路器具有过载长延时保护、短路瞬时保护功能，可用于分配光伏电能和保护线路及用电设备免受过载、短路等故障的危害。

BMU6 DC 型断路器的额定分断能力为 20kA, 使用类别为 A, $I_{cs}=100\%I_{cu}$, 满足客户全部需求，广泛应用于汇流箱、直流屏等设备。

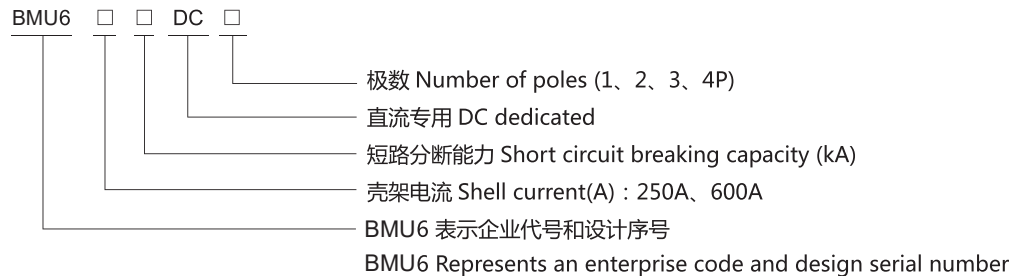
BMU6 DC series DC molded case circuit breaker is suitable for photovoltaic power distribution lines with rated current of 600A and below and DC rated voltage to 1500V. The circuit breaker has overload long delay protection. Short-circuit transient protection function, can be used to distribute photovoltaic energy and protect the line and electrical equipment from the danger of overload, short circuit and other faults.

BMU6- DC type circuit breaker has a rated breaking capacity of 20kA, and its use category is A, $I_{cs}=100\%I_{cu}$, which meets all customer needs and is widely used in equipment such as combiner box and DC screen.



BMU6-630DC/4P

型号及含义 Model Code



正常工作和安装条件 Normal work and installation conditions

1. 安装地点的海拔高度不超过 2000m。
2. 周围介质的温度为 -25°C ~ +70°C，安装地点的空气相对湿度在最高温度为 +40°C 时不超过 50%；在较低的温度下，可以有较高的相对湿度；该月的平均最大相对湿度不超过 90%，并考虑因温度变化发生在产品表面上的凝露。
3. 产品用在无爆炸危险介质中，且介质无足以腐蚀金属和破坏绝缘的气体和导电尘埃的地方。
4. 在有防雨设备及没有充满水蒸气的地方。
5. 在无显著摇动、冲击和振动的地方。
6. 安装类别为 III 类。
7. 污染等级为 3 级。
8. 断路器的基本安装方式为垂直安装（即竖装）、水平安装（即横装）。
9. 进线方式为上进线、下进线。
10. 断路器可分为固定式、插入式。

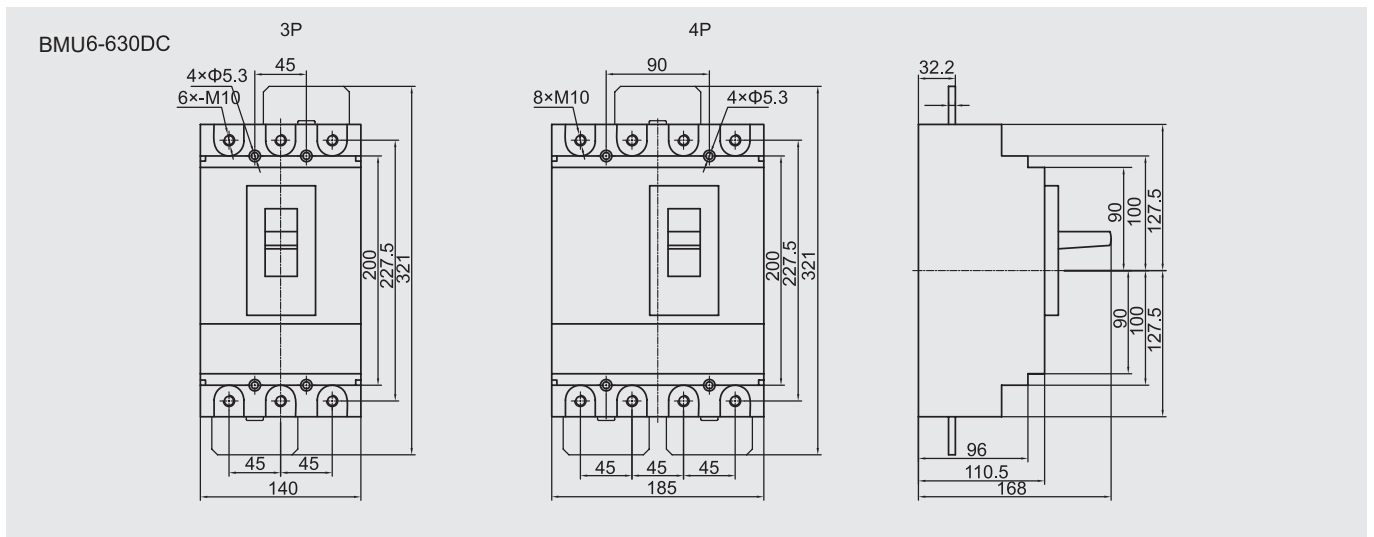
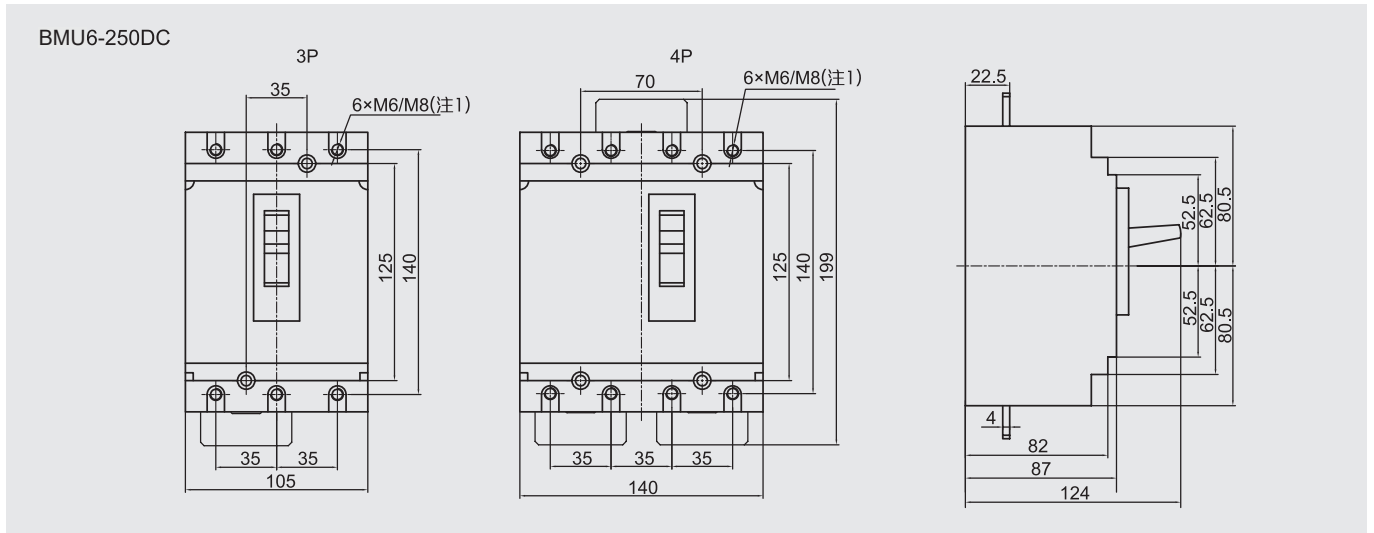
1. The altitude of the installation site does not exceed 2000m.
2. The temperature of the surrounding medium is $-25\text{ }^{\circ}\text{C} \sim +70\text{ }^{\circ}\text{C}$, The relative humidity of the air at the installation site does not exceed 50% at a maximum temperature of $+40\text{ }^{\circ}\text{C}$; at lower temperatures, there may be a higher relative humidity; The maximum relative humidity is not more than 90%, and the condensation on the surface of the product due to temperature changes is considered.
3. The product is used in non-explosive hazardous media, and the media does not have enough to corrode metals and destroy insulating gases and conductive dust.
4. In places where there is rain protection and no water vapor.
5. In places where there is no significant shaking, shock and vibration.
6. The installation category is Class III.
7. The pollution level is level 3.
8. The basic installation of the circuit breaker is vertical (ie vertical) or horizontal (ie horizontal).
9. The incoming line is either the up line or the down line.
10. Circuit breakers can be divided into fixed and plug-in types.

技术数据及性能 Technical data and performance

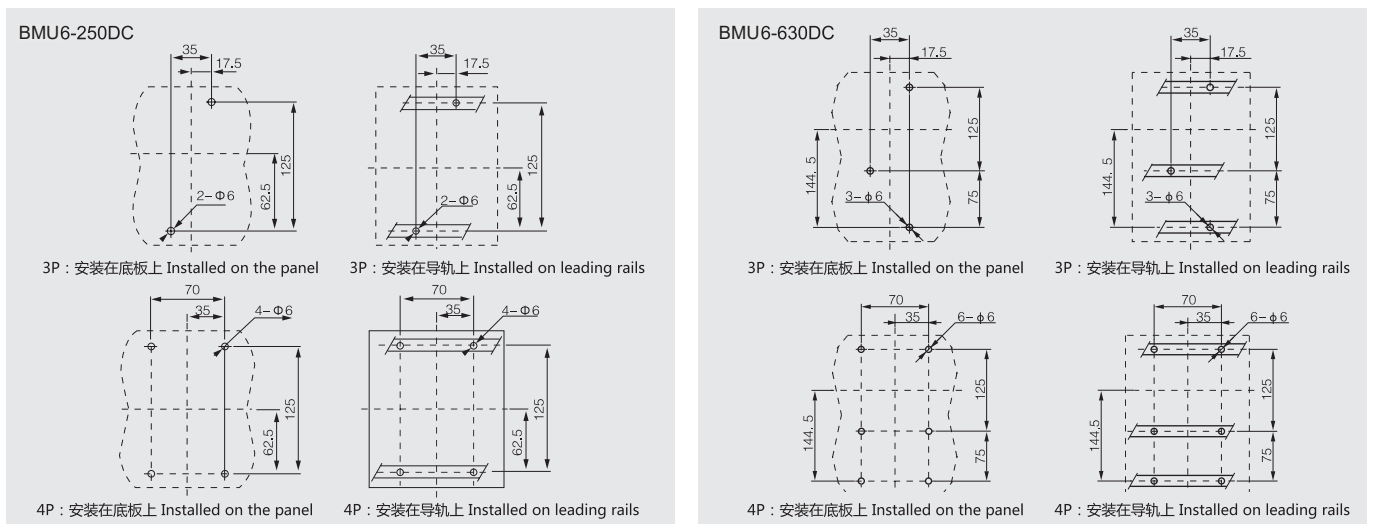
额定电压 Rated voltage(V)	24 ~ 1500 DC	额定绝缘电压 Rated insulation voltage (V)	1000
壳架电流 (A)Shell Rack Current(A)	100、160、250、400、500、600	脱扣方式 Tripping method	热磁式
极数 Number of poles(P)	1、2、3、4	电气寿命 (次)Electrical life (times)	2000
分断能力 Breaking capacity(kA)	20	额定冲击电压 Rated impulse voltage(kV)	8
符合标准 Standards compliant	IEC/EN60947-2 GB 14048.2		
降容 Derating	<p>当环境温度超过 $40\text{ }^{\circ}\text{C}$ 时，产品的过载保护特性会随着温度发生很小的变化，需要对 Ir 进行整定，才能保证在高温环境下使用。当海拔在 2000m 以上时，需考虑介电强度的改变和空气温度下降的因素，所以也需降容。</p> <p>When the ambient temperature exceeds $40\text{ }^{\circ}\text{C}$, the overload protection characteristics of the product will change little with temperature, and Ir needs to be set to ensure the use in high temperature environment.</p> <p>When the altitude is above 2000m, it is necessary to consider the change of dielectric strength and the factor of air temperature drop, so derating is also required.</p>		
温度 Temperature	不超过 50% No more than 50%		
污染等级 Pollution level	3		
环境温度 Ambient temperature($^{\circ}\text{C}$)	$-25 \sim +70$		
海拔 Altitude(m)	2000		
接线方式 Wiring	串、并联 Series Parallel		
产品附件 Product accessories	辅助触点 (OF、SD、SDE)，脱扣线圈 (MX、MN) 等 Auxiliary contacts (OF, SD, SDE), trip coils (MX, MN), etc.		
安装方式 Installation method	固定式、插入式、抽出式 Fixed, plug-in, draw-out		
安装方向 Installation direction	水平或垂直 Horizontal or vertical		
触头结构 Contact structure	双断点 Double breakpoint		
产品极性 Product polarity	无极性 Non-polar		
使用类别 Use category	A		

注：固定式安装（1、2、3、4P），插入式与抽出式（3、4P） Note: Fixed installation (1, 2, 3, 4P), plug-in and pull-out (3, 4P)

外形及安装尺寸 Shape and installation dimensions



注1: 当 $I_n > 100A$ 时接线螺栓为 M8, 当 $I_n \leq 100A$ 时接线螺栓为 M6.
 Attention1: when $I_n > 100A$, Fixing screw size should be M8, When $I_n \leq 100A$, fixing screw size should be M6.





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