

SAIDE® 赛德电气



专注断路器二十余年

SDM6 系列塑壳断路器 / SDM7 系列电动机保护用断路器
Moulded Case Circuit Breaker / Motor Protection Circuit Breaker



扫一扫关注微信公众号

中国·赛德电气有限公司
CHINA SAIDE ELECTRIC CO.,LTD

赛无止境 德行天下

多年来，赛德电气秉承绿色能源的理念，
致力于创造一个更清洁、更智能、更高效的电气世界！



COMPANY PROFILE

企业简介

赛德电气有限公司创办于 1998 年，公司座落于柳市七里港工业园区，注册资金 5000 万元，是一家集研发、生产、销售于一体的低压电器专业生产商。经过二十多年的不断创新发展，目前公司具备成熟的工艺、先进的设备和自主研发设计保障能力。

公司通过 ISO9001、ISO18001、ISO14001 等三大体系认证，产品均通过中国强制 CCC 认证，出口 CB 认证，CE 认证等。我公司先后被评为“浙江省技术创新先进单位”、“市优秀企业”、“优秀明星企业”、“科技创新单位”、“优质出口产品”等荣誉称号。

公司秉承“一流的品质，一流的服务，一流的信誉”的价值理念与广大用户携手共进，创造美好电气新时代而努力奋斗！

Saide Electric Co.,Ltd. was founded in 1998, located in Qiligang industrial zone, Liushi, With a registered capital of 50 million RMB ,we are now a specialized low-voltage appliance manufacturer combined research, production and sales altogether. With a continuous development of more than twenty years, we obtain mature craftsmanship, advanced equipment & self-design capability now.

We've already got approved with ISO9001,ISO18001,ISO14001 quality system, products comply with certificate such as CCC(Chian), CE(Euripe), CB, etc. With years of outstanding performance, we've been awarded titles as "Stat corporation of province", "Tech innovation department", "Excellent exporting corporation", etc.

With core idea of "Top class quality, Top class service, Top class reputation", we welcome customers all voer the world with open arms to build a brand-new era of low voltage appliance together.



SDM6 系列塑料外壳式断路器 SDM6 series moulded case circuit breaker

主要用途与适用范围 Application Area



SDM6-250H/3P/4P



SDM6-630H/3P/4P



SDM6-250S/3P/4P



SDM6-1600H/3P/4P

SDM6 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启动之用。

SDM6 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。

SDM6 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.

SDM6 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 currect & N-pole current, grounding current. Remote adjustment: accept and execute remote command to debug remote control. Tripping unit memory 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. SDM6 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. SDM6 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和导电尘埃的地方。
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。



SDM6-250S/3P/4P-5.0A



SDM6-630H/3P/4P-5.0A



SDM6-1600M/3P/4P



SDM6-630H/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 SDM6 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. SDM6 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



* 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 (Isd) Short-circuit shorter delay tuning current (ISD)	短路短延时整定时间 (Tsd) Short-circuit shorter delay setting time (TSD)	短路瞬动整定电流 (Ii) Short-circuit transient tuning current (Ii)	接地保护整定电流 (Ig) Grounding Protection setting current (IG)	接地保护整定时间 (Tg) Grounding Protection Setting time (TG)	脱扣器类型 Type of Stripper
SDM6-100 SDM6-160 SDM6-250	(0.8 ~ 1)In	-	-	-	-	-	-	热磁式 (单可调) Thermal magnetic type (single adjustable)
	(0.4 ~ 1)In	-	(1.5 ~ 10)Ir	-	12In	-	-	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)
SDM6-160 SDM6-250	(0.8 ~ 1)In	-	-	-	(5 ~ 10)In	-	-	热磁式 (双可调) Thermal magnetic type (Dual adjustable)
SDM6-400 SDM6-630	(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	-	12In	-	-	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)
SDM6-1250 SDM6-1600	(0.4 ~ 1)In	-	(1.5 ~ 10)Ir	-	12In	-	-	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	%I _g	■
	相间不平衡电流值 Interphase Unbalanced Current value	%I _{avg}	■
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	%U _{avg} , %V _{avg}	■
	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 cosφ Power factors and measured	PF 和 cosφ, 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	■

测量值 Measurement values			显示 Show
电量需求 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	SDM6-100				SDM6-160				SDM6-250			
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		SDM6-100				SDM6-160				SDM6-250			
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	50			65	50			65	50			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	50			65	50			65	50			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	SDM6-400				SDM6-630				SDM6-1250/1600		
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	50			65	50			65	50	50
	AC690V	10		15	20	10		15	20	20	20
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	50			65	50			65	50	50
	AC690V	10		15	20	10		15	20	10	20
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		SDM6-400	SDM6-630	SDM6-1250/1600
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	1.05In	2h 内不脱扣 non-tripping	冷态开始 Initial	+40°C ±2°C
2	1.2In	2h 内脱扣 tripping	接序 1 进行 Following serial 1	
3	1.5In	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	7.2In	2 ~ 10s 脱扣 tripping	冷态开始 Initial	
5	12In±20%	9.6In	>0.2s 脱扣 tripping	任何合适温度 Any suitable temperature
6		14.4In	≤ 0.2s 脱扣 tripping	

表 6 Table 6

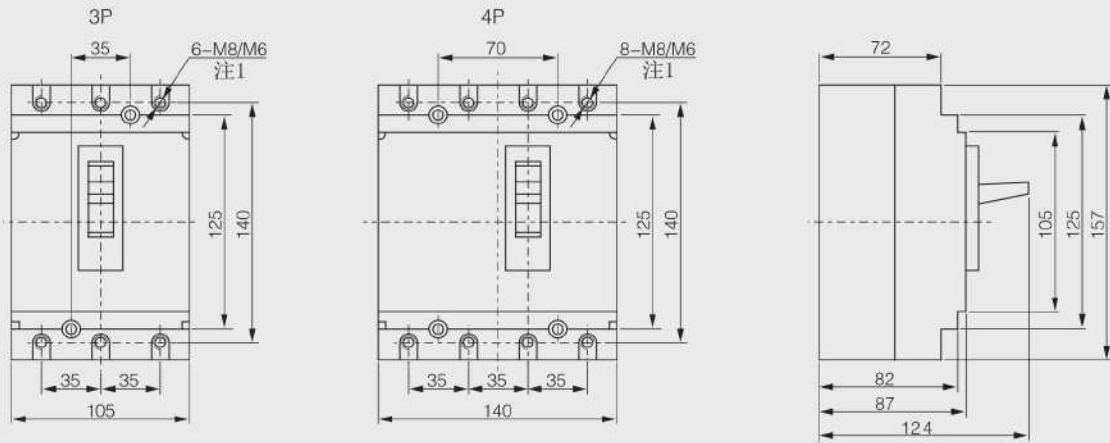
型号 type	过载长延时脱扣器电流值可调范围 Ir(A) Overload long delay release current value adjustable range Ir(A)	短路短延时脱扣器电流值可调范围 Isd(A) Short-circuit short-delay trip unit current value adjustable range Isd(A)	短路瞬时脱扣器电流值可调范围 Ii(A) Short-circuit instantaneous trip unit current value adjustable range Ii(A)	备注 Remarks
SDM6-100	0.8 ~ 1In	-	10In	热磁式 (单可调) Thermomagnetic (single adjustable)
SDM6-160	0.8 ~ 1In	-	10In	
SDM6-250	0.8 ~ 1In	-	10In	
SDM6-100	0.8 ~ 1In	-	10In	
SDM6-160	0.8 ~ 1In	-	(5~10)In	热磁式 (双可调) Thermomagnetic (double adjustable)
SDM6-250	0.8 ~ 1In	-	(5~10)In	
SDM6-100	0.4 ~ 1In	(1.5 ~ 10)Ir	12In	普通电子式 (2.2) Electronic
SDM6-160	0.4 ~ 1In	(1.5 ~ 10)Ir	12In	
SDM6-250	0.4 ~ 1In	(1.5 ~ 10)Ir	12In	
SDM6-100	0.4 ~ 1In	(1.5 ~ 12)Ir	(2 ~ 15)In	液晶智能电子式 (5.0A) Intelligent LCD display
SDM6-160	0.4 ~ 1In	(1.5 ~ 12)Ir	(2 ~ 15)In	
SDM6-250	0.4 ~ 1In	(1.5 ~ 12)Ir	(2 ~ 15)In	
SDM6-400	0.7 ~ 1In	-	(5 ~ 10)In	热磁式 (双可调) Thermomagnetic (double adjustable)
SDM6-600	0.7 ~ 1In	-	(5 ~ 10)In	
SDM6-400	0.4 ~ 1In	(1.5 ~ 10)Ir	12In	普通电子式 (2.3) Electronic
SDM6-400	0.4 ~ 1In	(2 ~ 10)Ir	12In	
SDM6-630	0.4 ~ 1In	(1.5 ~ 10)Ir	12In	
SDM6-630	0.4 ~ 1In	(2 ~ 10)Ir	12In	
SDM6-400	0.4 ~ 1In	(1.5 ~ 12)Ir	(2 ~ 15)In	液晶智能电子式 (5.0A) Intelligent LCD display
SDM6-630	0.4 ~ 1In	(1.5 ~ 12)Ir	(2 ~ 15)In	
SDM6-1250	0.4 ~ 1In	(1.5 ~ 10)Ir	12In	普通电子式 (2.0) Electronic
SDM6-1600	0.4 ~ 1In	(1.5 ~ 10)Ir	12In	
SDM6-1250	0.4 ~ 1In	(1.5 ~ 12)Ir	(2 ~ 15)In	液晶智能电子式 (5.0A) Intelligent LCD display
SDM6-1600	0.4 ~ 1In	(1.5 ~ 12)Ir	(2 ~ 15)In	

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.

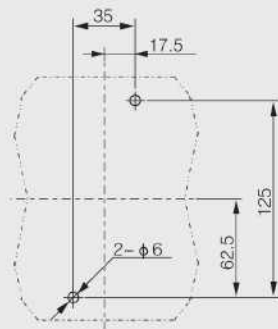
外形及安装尺寸 Shape and installation dimensions

SDM6-100,160,250 外形与安装尺寸 Shape and installation dimensions

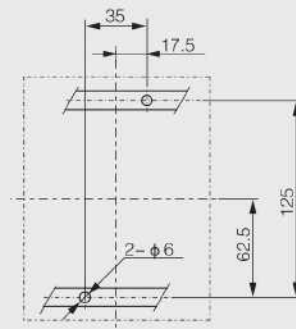


注1：当 $I_n > 100A$ 时接线螺栓为 M8，当 $I_n \leq 100A$ 时接线螺栓为 M6。

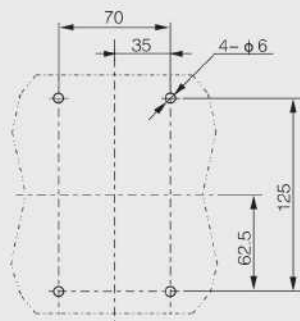
Attention1: when $I_n > 100A$, Fixing screw size should be M8, When $I_n \leq 100A$, fixing screw size should be M6.



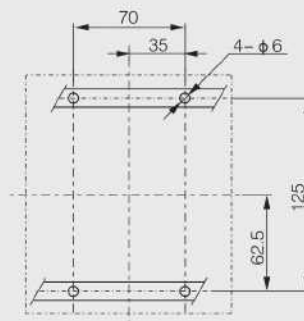
3P：安装在底板上 Installed on the panel



3P：安装在导轨上 Installed on leading rails



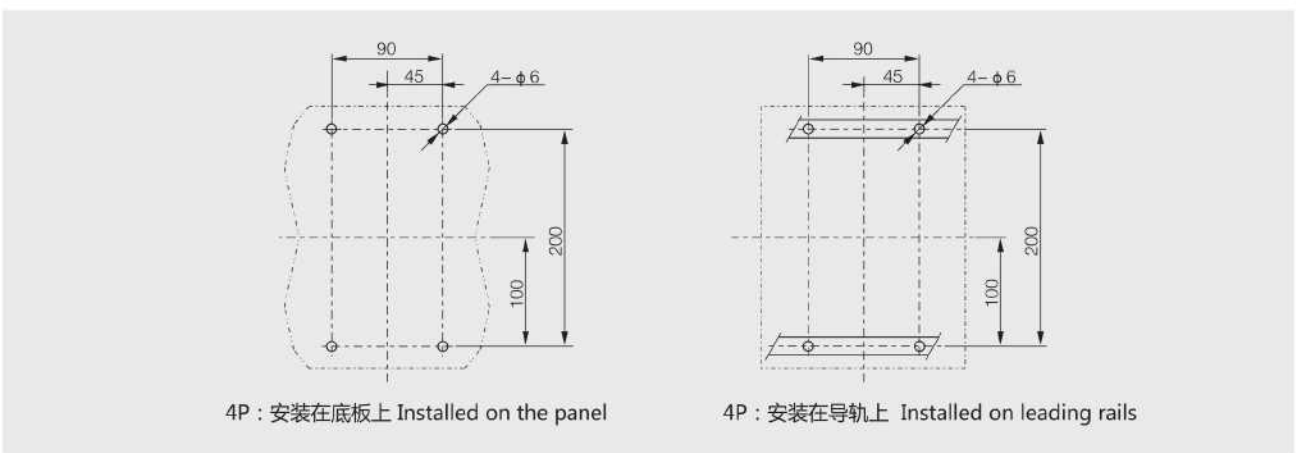
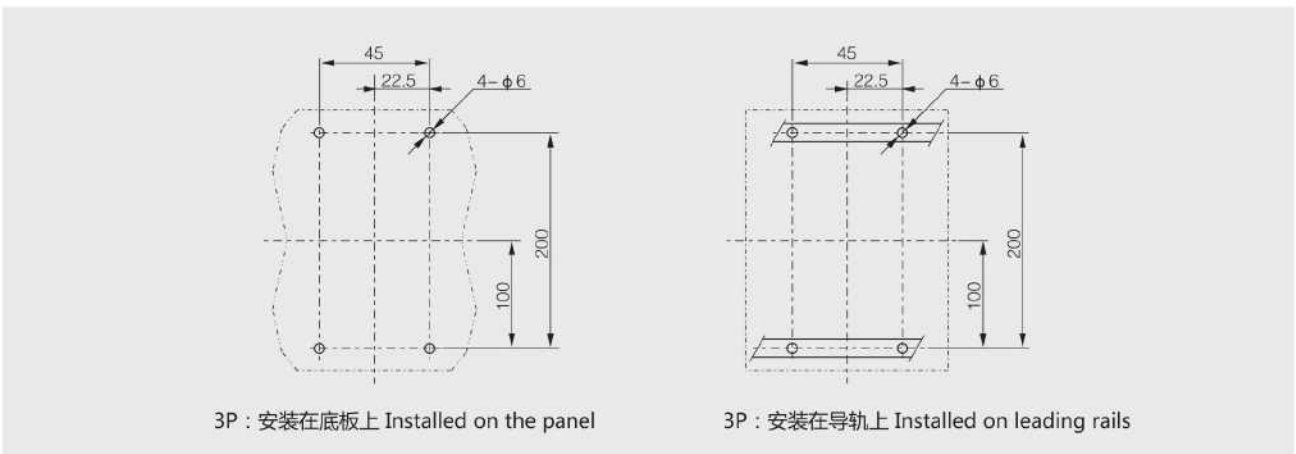
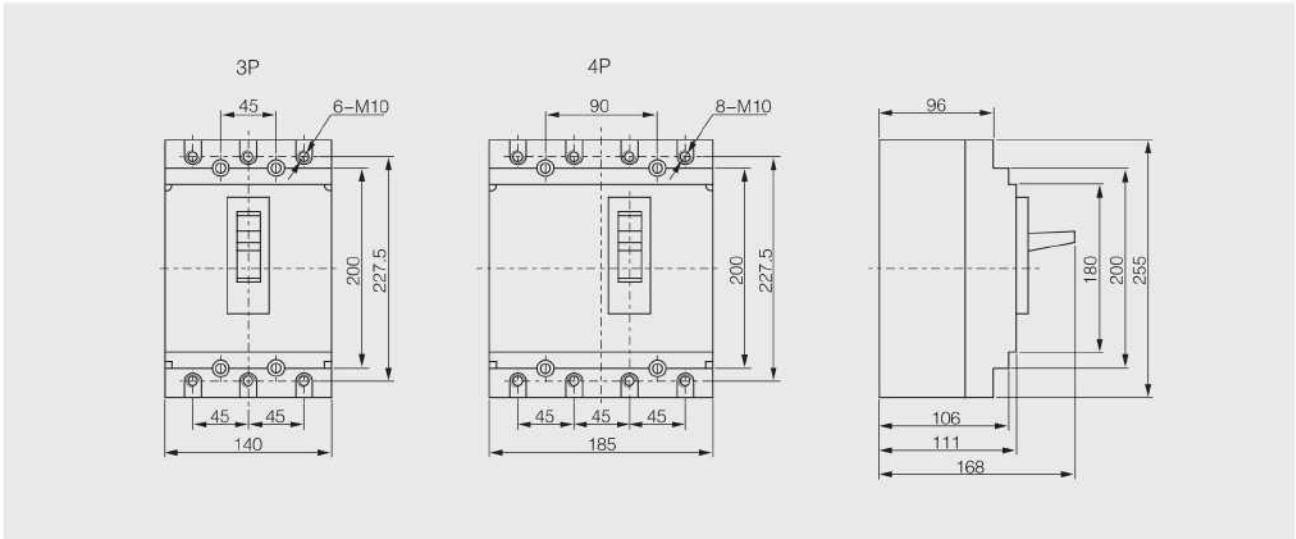
4P：安装在底板上 Installed on the panel



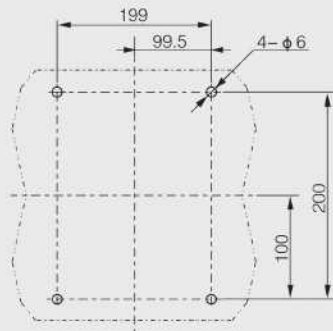
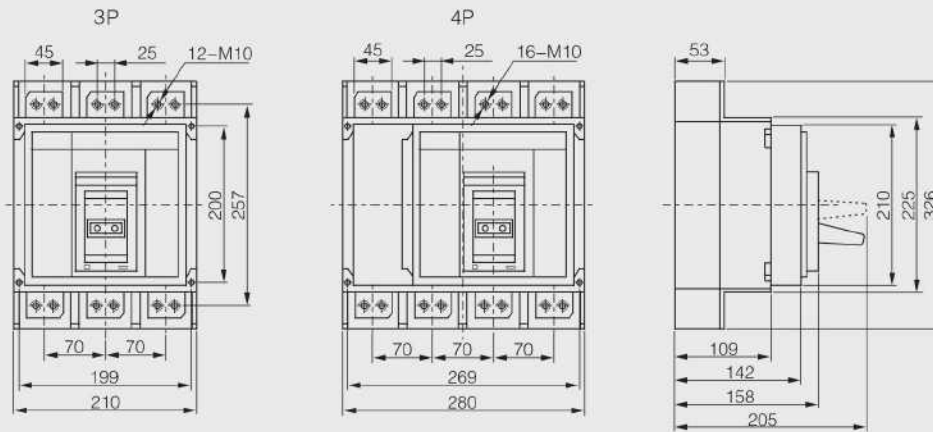
4P：安装在导轨上 Installed on leading rails

外形及安装尺寸 Shape and installation dimensions

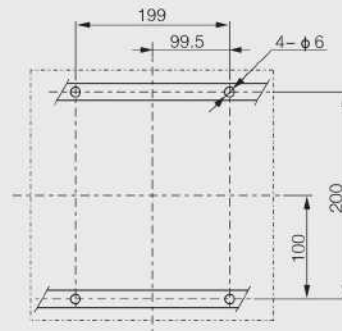
SDM6-400、630 外形与安装尺寸 Shape and installation dimensions



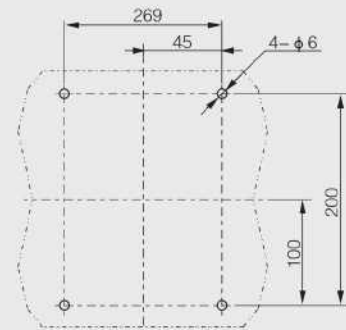
SDM6-1250、1600 外形与安装尺寸 Shape and installation dimensions



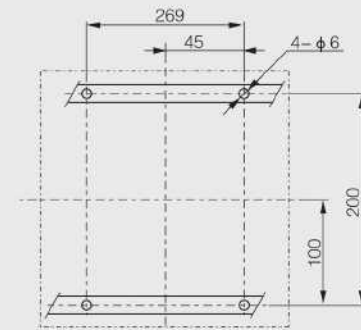
3P : 安装在底板上 Installed on the panel



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



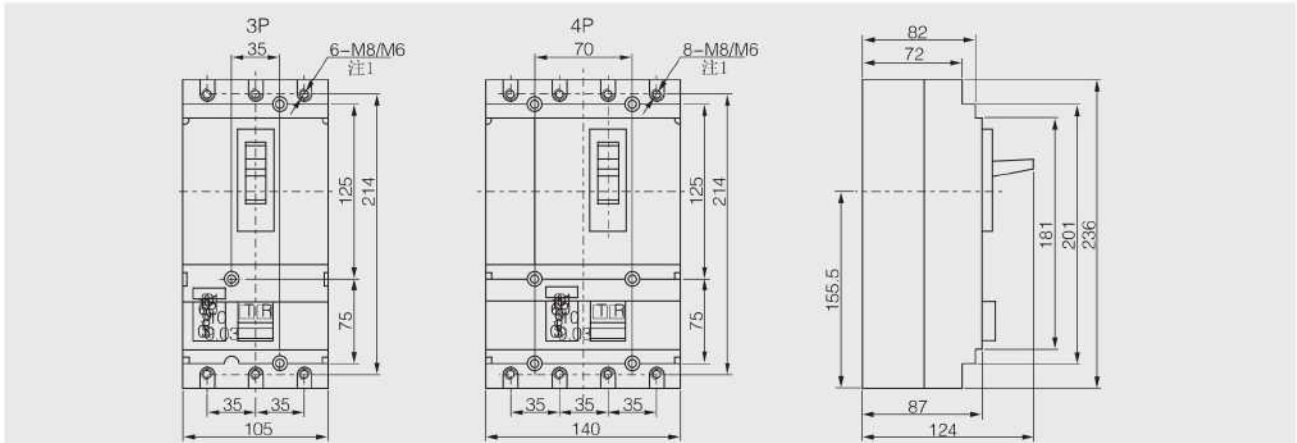
4P : 安装在底板上 Installed on the panel



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

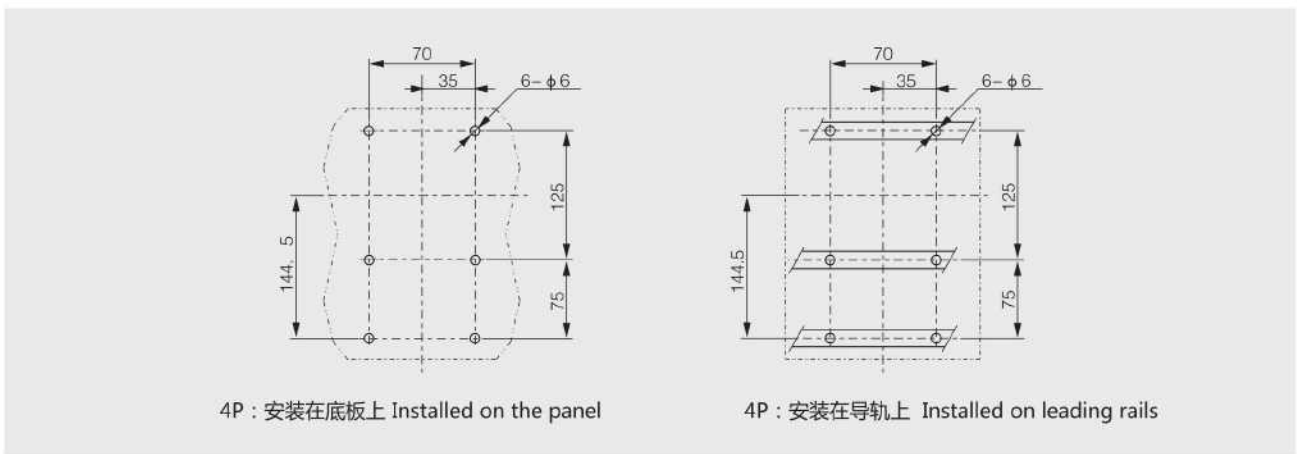
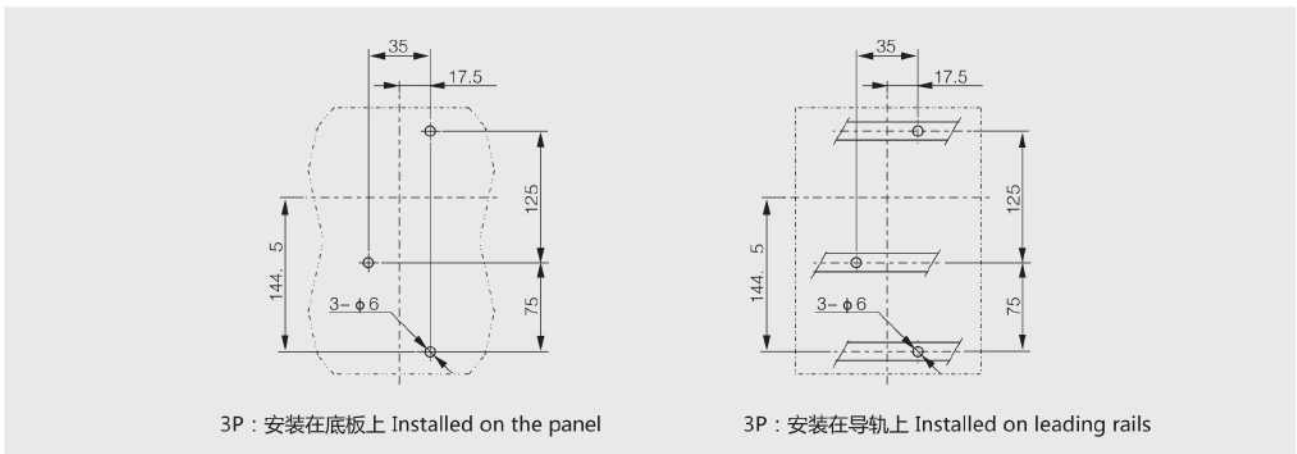
外形及安装尺寸 Shape and installation dimensions

SDM6-100、160、250(带剩余电流模块)外形与安装尺寸 (with residual current module) Shape and installation dimensions

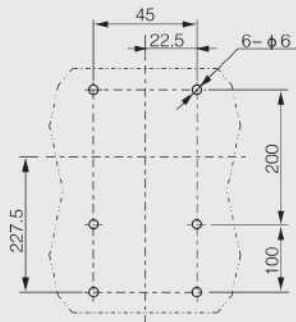
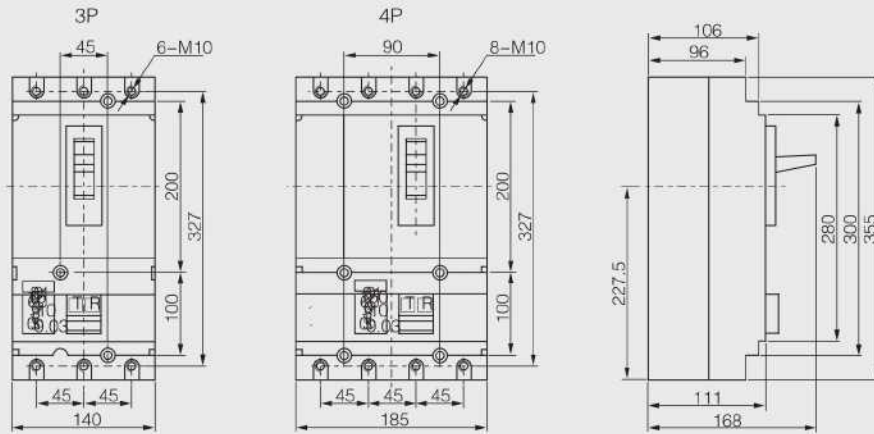


注1: 当 $I_n > 100A$ 时接线螺栓为 M8, 当 $I_n \leq 100A$ 时接线螺栓为 M6。

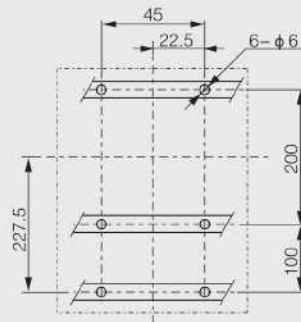
Attention1: when $I_n > 100A$, Fixing screw size should be M8, When $I_n \leq 100A$, fixing screw size should be M6.



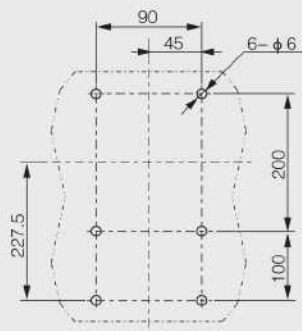
SDM6-400、630(带剩余电流模块)外形与安装尺寸 (with residual current module)Shape and installation dimensions



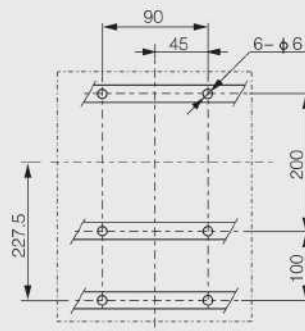
3P : 安装在底板上 Installed on the panel



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

外部附件安装尺寸需求, 请联系本公司 Tel : 086-577-62755267 62750108

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 SDM6-100 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 SDM6-100 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.



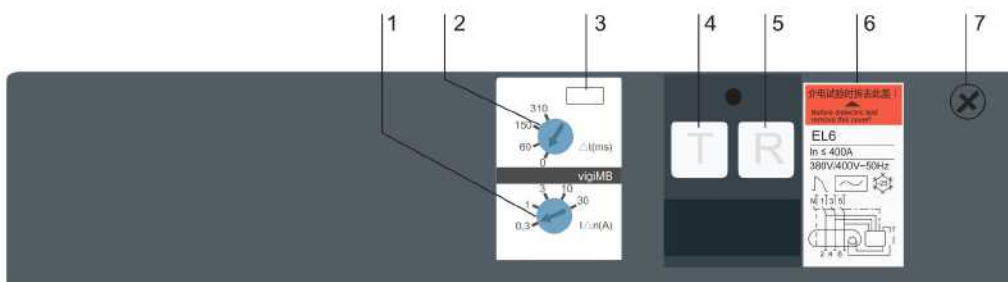
EL6 模块的选型 Selection of EL6 modules

型号 Model	EL6-ME	EL6-MH	EL6-MB
极数 Polar number	3、4 ⁰¹	3、4 ⁰¹	3、4 ⁰¹
SDM6-100	有 Yes	有 Yes	无 No
SDM6-160	有 Yes	有 Yes	无 No
SDM6-250	无 No	有 Yes	无 No
SDM6-400	无 No	无 No	有 Yes
SDM6-630	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 _{Δn} (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 ⁰⁰ -150 ⁰⁰ -310 ⁰⁰	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:

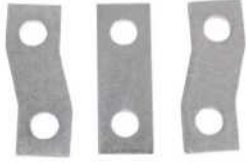
The internal accessories of the circuit breaker are installed in the inner cavity of the cover plate, and the shunt release, undervoltage release, auxiliary contact and alarm contact are all made into separate modules. Therefore, the installation is simple, convenient, safe and reliable, and the user 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>	AC220/230V AC380/400V DC220V DC110V	SDM6-100 SDM6-160 SDM6-250 SDM6-400 SDM6-630
	AC220/230V AC380/400V DC220V DC110V	SDM6-1250/1600
 <p>MU 欠压脱扣器 Undervoltage release</p>	AC220/230V AC380/400V	SDM6-100 SDM6-160 SDM6-250 SDM6-400 SDM6-630
	AC220/230V AC380/400V	SDM6-1250/1600
 <p>AX 辅助触头 Auxiliary contact</p>	AC220/230V AC380/400V DC220V DC110V	所有壳架 All shells
 <p>AL 报警触头 Alarm contact</p>	AC220/230V AC380/400V DC220V DC110V	所有壳架 All shells

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>SDM6-100 SDM6-160 SDM6-250</p> <hr/> <p>SDM6-400 SDM6-630</p>
 <p>P 电动操作机构 Electric operating mechanism</p>	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>SDM6-100 SDM6-160 SDM6-250</p>
 <p>P 电动操作机构 Electric operating mechanism</p>	<p>AC220/230V AC380/400V DC220V DC110V</p>	<p>SDM6-400 SDM6-630</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>SDM6-100 SDM6-160 SDM6-250 SDM6-400 SDM6-630</p>	 <p>直接旋转手柄 Rotate the handle directly</p>	<p>SDM6-100 SDM6-160 SDM6-250 SDM6-400 SDM6-630</p>
 <p>加长旋转手柄 Extended rotating handle</p>	<p>SDM6-100 SDM6-160 SDM6-250 SDM6-400 SDM6-630</p>	 <p>直接旋转手柄 Rotate the handle directly</p>	<p>SDM6-1600/1250</p>

断路器附件 Circuit breaker accessories



1. SDM6-100、160、250
外连接板 Outer connecting plate



2. SDM6-400、630
外连接板 Outer connecting plate



3. SDM6-1250、1600
外连接板 Outer connecting plate

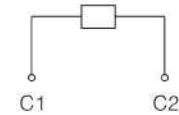
注：热磁式与电子式的外形尺寸、安装尺寸及附件完全一致。

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 ($\leq 5s$)。

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 ($\leq 5s$).

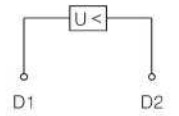


接线圈 Coupling coil

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。

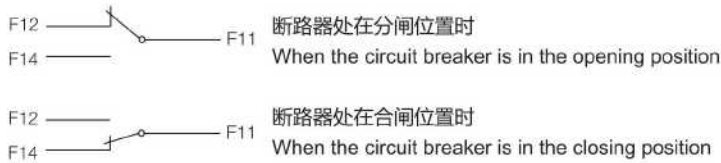
When the control voltage drops to 35% to 70%, the undervoltage release should trip and the circuit breaker should be reliably disconnected. When the control voltage is greater than or equal to 85%, the circuit breaker should be reliably closed. When the control voltage is less than 35%, it should be 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.



接线圈 Coupling coil

报警触头 Alarm contact

功能：指示断路器脱扣的可能原因

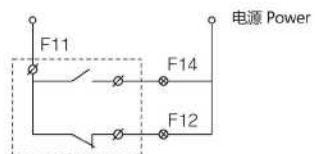
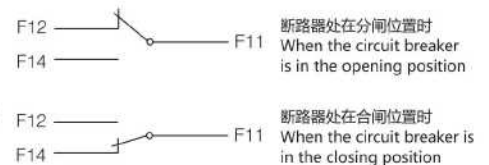
a: 过载； b: 短路； c: 接地故障； d: 欠压脱扣的操作； e: 自由脱扣。

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.



接线圈 Coupling coil

SDM6 DC 直流断路器 SDM6 DC Circuit Breaker

主要用途与适用范围 Application Area

SDM6 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。

SDM6 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。

SDM6 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.

SDM6- 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.



SDM6-250DC/4P



SDM6-630DC/4P

型号及含义 Model Code

SDM6 □ □ DC □

极数 Number of poles (1、2、3、4P)

直流专用 DC dedicated

短路分断能力 Short circuit breaking capacity (kA)

壳架电流 Shell current(A) : 250A、600A

SDM6 表示企业代号和设计序号

SDM6 Represents an enterprise code and design serial number

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 $-25^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ，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；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 and 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。

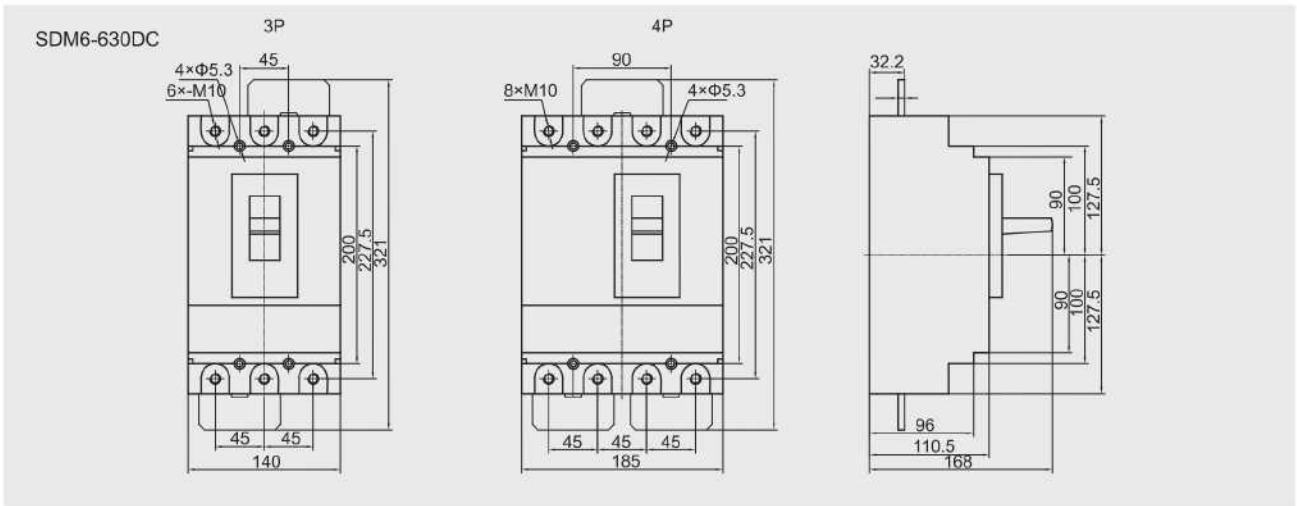
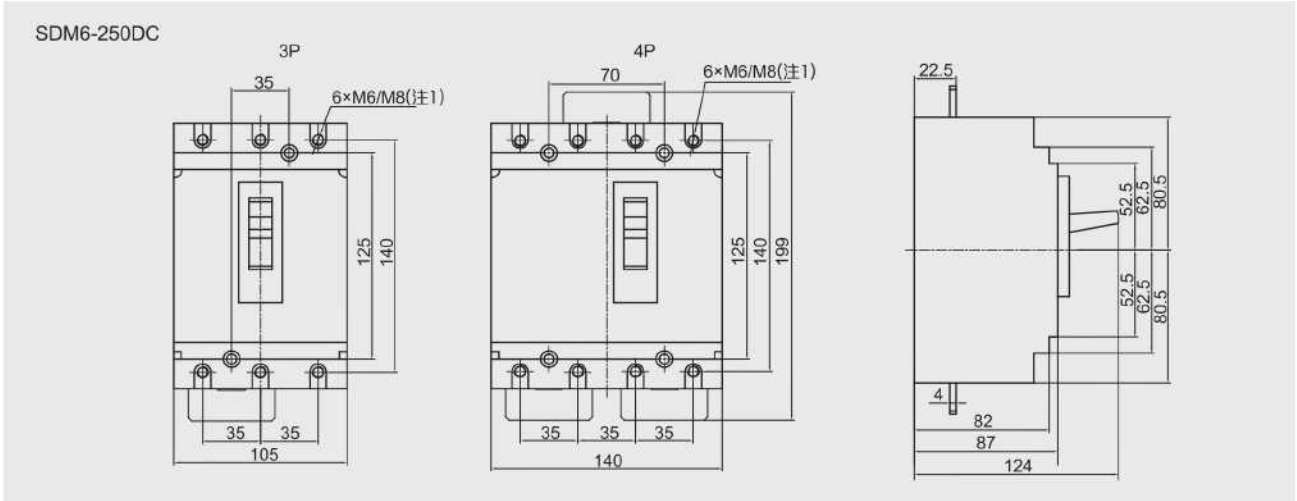
1. The altitude of the installation site does not exceed 2000m.
2. The temperature of the surrounding medium is -25 °C ~ +70 °C , The relative humidity of the air at the installation site does not exceed 50% at a maximum temperature of +40°C ; at lower temperatures, there may be a higher relative humidity; 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

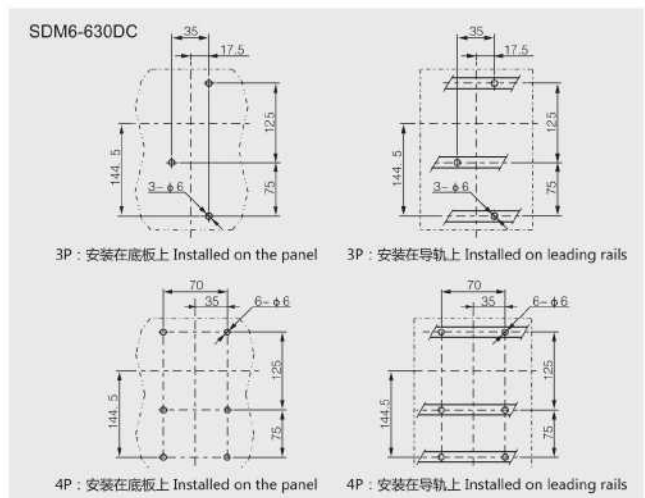
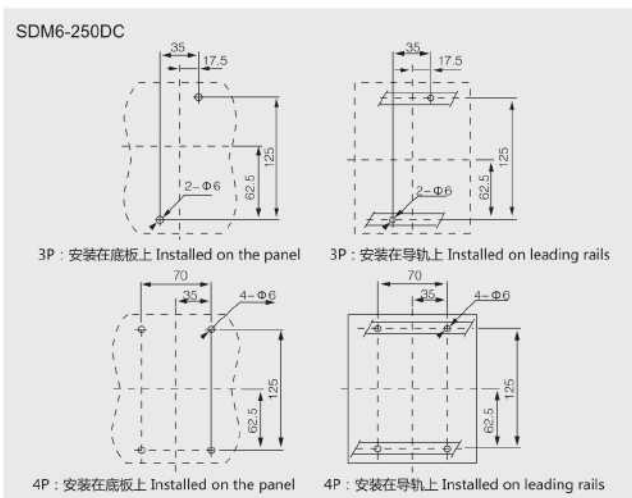
额定电压 Rated voltage(V)	24 ~ 1500 DC	额定绝缘电压 Rated insulation voltage (V)	1000
壳架电流 (A)Shell Rack Current(A)	100、160、250、400、500、600	脱扣方式 Tripping method	热磁式
极数 Number of poles(P)	1、2、3、4	电气寿命 (次)Electrical life (times)	2000
分断能力 Breaking capacity(kA)	20	额定冲击电压 Rated impulse voltage(kV)	8
符合标准 Standards compliant	IEC/EN60947-2 GB 14048.2		
降容 Derating	<p>当环境温度超过 40°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 ° 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(°C)	-25 ~ +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.



SDM7 系列电动机保护用断路器 SDM7 Series motor protection circuit breaker

主要用途与适用范围 Application Area

SDM7 系列电动机保护用断路器 (另称 : 马达保护器或电动机起动器 , 以下简称 “ 断路器 ”) 适用于交流电压至 690V , 最高电流至 80A 的电路中 , 是将隔离开关、断路器、热继电器功能集于一体的断路器。具有隔离保护、过载保护、温度补偿、断相保护、短路保护 ; 应用范围 : 三相鼠笼型异步电动机直接起动和控制、配电线路保护和频繁的负载转换。

该系列产品符合 GB/T 14048.2、GB/T 14048.4、IEC60947-2、60947-4-1 标准。

SDM7 Series Motor protection circuit breaker (also known as: Motor Protector or Motor starter, hereinafter referred to as "circuit breaker") is suitable for AC voltage to 690V, the highest current to 80A circuit, is the isolation switch, circuit breaker, thermal relay function set one circuit breaker. It has isolation protection, overload protection, temperature compensation, phase break protection, short circuit protection, application range: three-phase mouse cage asynchronous motor direct start and control, distribution line protection and infrequent load conversion.

SDM7 circuit breaker complies to GB/T 14048.2, GB/T 14048.4, IEC60947-2, 60947-4-1 standards.

型号及含义 Model Code

SDM7 - □ / □ □

无 : 普通型 None: Normal type

X: 高端型 (只适用 32A 壳架) High-end type (32A shell rack only)

脱扣器整定电流 (A) Trip unit setting current (A)

壳架等级额定电流 Rack rated current: 32A、80A

SDM7 表示企业代号和设计序号

SDM7 Represents an enterprise code and design serial number



SDM7-32



SDM7-32X



SDM7-80

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

1. 安装地点的海拔一般不超过 2000m。
2. 周围空气温度下限一般不低于 -5℃ , 上限一般不高于 +40℃。
3. 空气相对湿度在温度为 +40℃ 时相对湿度不大于 50% , 在最湿月的月平均最低温度在 25℃ , 时月平均最大相对湿度不大于 90%。
4. 周围环境污染等级为 3 级。
5. 起动器的安装类别为 III。
6. 安装面与垂直面倾斜度不大于 ±5°。
7. 额定工作制 : 不间断工作制、断续工作制。

1. The altitude of the installation site is generally not more than 2000m.
2. The lower limit of ambient air temperature is generally not lower than -5 ° C, and the upper limit is generally not higher than +40 ° C.
3. The relative humidity of the air is not more than 50% when the temperature is +40 ° C, and the minimum monthly temperature of the wettest month is 25 ° C, and the monthly average maximum relative humidity is not more than 90%.
4. The surrounding environment pollution level is 3.
5. Starter installation categories are III.
6. The inclination of the mounting surface and the vertical plane is not more than ±5°.
7. Rated work system: uninterrupted work system , Intermittent working system.

主要技术参数 The main technical parameters

- | | |
|---|--|
| 1. 额定绝缘电压 $U_i(V)$: 690 | 1. Rated insulation voltage $U_i(V)$: 690 |
| 2. 额定冲击耐受电压 $U_{imp}(kV)$: 8 | 2. Rated impulse withstand voltage $U_{imp}(kV)$: 8 |
| 3. 额定工作电压 $U_e(V)$:
230/240、400/415、440、500、690 | 3. Rated operating voltage $U_e(V)$:
230/240, 400/415, 440, 500, 690 |
| 4. 额定频率 (Hz) : 50、60 | 4. Rated frequency (Hz): 50, 60 |
| 5. 壳架等级额定电流 $I_{nm}(A)$: 32A、80A | 5. Frame rated current $I_{nm}(A)$: 32A, 80A |
| 6. 额定电流 $I_n(A)$: 见表 1 | 6. Rated current $I_n(A)$: see Table 1 |

7. 热元件整定电流调节范围：额定极限和额定运行短路分断能力见表 1。

7. Hot component setting current adjustment range: rated limit and rated operating short-circuit breaking capacity see Table 1.

表 1 Table 1

型号 Model	脱扣器额定电流 In(A) Fastener rated current In (A)	整定电流调节范围 (A) Tuning current adjustment range (A)	额定极限短路分断能力 Icu、额定运行短路分断能力 Ics kA Rated limit short-circuit breaking capability ICU, rated operation short-circuit breaking capability Ics kA				飞弧距离 (mm)
			400/415V		690V		
			Icu	Ics	Icu	Ics	
SDM7-32	0.16	0.1~0.16	100	100	100	100	40
SDM7-32	0.25	0.16~0.25	100	100	100	100	40
SDM7-32	0.4	0.25~0.4	100	100	100	100	40
SDM7-32	0.63	0.4~0.63	100	100	100	100	40
SDM7-32	1	0.63~1	100	100	100	100	40
SDM7-32	1.6	1~1.6	100	100	100	100	40
SDM7-32	2.5	1.6~2.5	100	100	3	2.25	40
SDM7-32	4	2.5~4	100	100	3	2.25	40
SDM7-32	6.3	4~6.3	100	100	3	2.25	40
SDM7-32	10	6~10	100	100	3	2.25	40
SDM7-32	14	9~14	15	7.5	3	2.25	40
SDM7-32	18	13~18	15	7.5	3	2.25	40
SDM7-32	23	17~23	15	6	3	2.25	40
SDM7-32	25	20~25	15	6	3	2.25	40
SDM7-32	32	24~32	10	6	3	2.25	40
SDM7-80	25	20~25	50	17.5	4	2	50
SDM7-80	32	23~32	50	17.5	4	2	50
SDM7-80	40	30~40	50	17.5	4	2	50
SDM7-80	50	37~50	50	17.5	4	2	50
SDM7-80	65	48~65	50	17.5	4	2	50
SDM7-80	80	63~80	50	17.5	4	2	50

8. 断路器所控制三相电动机标准额定功率见表 2。

8. The standard rated power of the three-phase motor controlled by the circuit breaker is shown in table 2.

表 2 Table 2

型号 Model	脱扣器额定电流 In(A) Fastener rated current In (A)	整定电流调节范围 (A) Tuning current adjustment range (A)	三相电动机标准额定功率 (kw) Standard rated power of three-phase motor (kw)					
			AC-3,50Hz/60Hz					
			230/240V	400V	415V	440V	500V	690V
SDM7-32	0.16	0.1~0.16	-	-	-	-	-	-
SDM7-32	0.25	0.16~0.25	-	-	-	-	-	-
SDM7-32	0.4	0.25~0.4	-	-	-	-	-	-
SDM7-32	0.63	0.4~0.63	-	-	-	-	-	0.37
SDM7-32	1	0.63~1	-	-	-	0.37	0.37	0.55
SDM7-32	1.6	1~1.6	-	0.37	-	0.55	0.75	1.1
SDM7-32	2.5	1.6~2.5	0.37	0.75	0.75	1.1	1.1	1.5
SDM7-32	4	2.5~4	0.75	1.5	1.5	1.5	2.2	3
SDM7-32	6.3	4~6.3	1.1	2.2	2.2	3	3.7	4
SDM7-32	10	6~10	2.2	4	4	4	5.5	7.5
SDM7-32	14	9~14	3	5.5	5.5	7.5	7.5	9
SDM7-32	18	13~18	4	7.5	9	9	9	11
SDM7-32	23	17~23	5.5	11	11	11	11	15
SDM7-32	25	20~25	5.5	11	11	11	15	18.5
SDM7-32	32	24~32	7.5	15	15	15	18.5	25

续表 2 Renew Table 2

型号 Model	脱扣器额定电流 In(A) Fastener rated current In (A)	整定电流调节范围 (A) Tuning current adjustment range (A)	三相电动机标准额定功率 (kw) Standard rated power of three-phase motor (kw)					
			AC-3,50Hz/60Hz					
			230/240V	400V	415V	440V	500V	690V
SDM7-80	25	20~25	-	11	11	-	-	18.5
SDM7-80	32	23~32	-	15	15	-	-	22
SDM7-80	40	30~40	-	18.5	18.5	-	-	37
SDM7-80	50	37~50	-	22	22	-	-	45
SDM7-80	65	48~65	-	30	30	-	-	55
SDM7-80	80	63~80	-	37	37	-	-	63

9. 外壳防护等级为 IP20。 9. The enclosure protection class is IP20.
 10. 断路器的操作性能见表 3。 10. The operating performance of the circuit breaker is shown in Table 3.

表 3 Table 3

型号 Type	壳架等级额定电流 Inm A Rack rated current Inm A	每小时操作循环次数 Hourly operation cycles	操作循环次数 Operation cycle number	
			电气寿命 Electrical life	机械寿命 Mechanical Life
SDM7- 32	32	120	10000	100000
SDM7- 80	80	120	1500	8500

过电流动作保护特性

11. 断路器各相平衡及不平衡负载时的动作特性见表 4、表 5、表 6。

Overcurrent action protection

- 11.The action characteristics of the circuit breaker when each phase equilibrium and unbalanced load are shown in table 4, table 5, table 6.

表 4 断路器各相平衡负载时的动作特性 (配电保护)

Table 4 Operating characteristics of the circuit breaker when the phases are balanced (Distribution protection)

表 4 Table 4

型号 Type	配电用断路器 Distribution breaker			周围空气温度 Circumstance temperature
	整定电流倍数 Setting current multiple	动作时间 Tripping time	起始状态 Status	
SDM7- 32	1.05	1h 内不动作 1h non-tripping	冷态开始 Initial	+20°C ±2°C
SDM7- 80	1.3	1h 内动作 1h tripping	接序 1 进行 Following serial 1	
	1.5	< 2min 动作 < 2min tripping		

表 5 断路器各相平衡负载时的动作特性 (电动机保护)

Table 5 Action characteristics of balanced load of each phase of the circuit breaker (Motor protection)

表 5 Table 5

型号 Type	保护电动机用断路器 Circuit breaker for protecting electric motor				周围空气温度 Circumstance temperature
	序号 Serial number	整定电流倍数 Setting current multiple	动作时间 Tripping time	起始状态 Status	
SDM7- 32	1	1.05	2h 内不动作 2h non-tripping	冷态开始 Initial	+20°C ±2°C
	2	1.2	2h 内动作 2h tripping	接序 1 进行 Following serial 1	
SDM7- 80	3	1.5	2min 内动作 Action within 2 minutes		
	4	7.2	2 ~ 10s 动作 2~10s 2h tripping	冷态开始 Initial	

表 6 断路器各相负载不平衡时 (断相) 的动作特征

Table 6 The action characteristics of the circuit breaker when the load is unbalanced (phase break)

表 6 Table 6

型号 Type	整定电流倍数 Setting current multiple		起始状态 Start status	规定时间 Specified time	预期结果 Expected results	周围空气温度 Circumstance temperature
	任意二相 Any two-phase	第三相 Third phase				
SDM7- 32	1.0	0.9	冷态 Cold state	t ≥ 2h	不脱扣	+20°C ±2°C
SDM7- 80	1.15	0	热态 (紧接序 1 进行) Thermal state (In immediate order 1.)	t < 2h	脱扣	

12. 短路器瞬时电磁脱扣动作特性, 见表 7

The instantaneous electromagnetic buckle action characteristics of short circuit device are shown in table 7

表 7 Table 7

型号 Type	试验电流 Test current	起始状态 Start status	规定时间 Specified time	预期结果 Expected results	周围空气温度 Circumstance temperature
SDM7- 32	0.8×12×In	冷态	t ≥ 0.2s	不脱扣	+20°C ±5°C
SDM7- 80	1.2×12×In	冷态	t < 0.2s	脱扣	+20°C ±5°C

13. 后备熔断器的选用：

当安装地点预期短路电流大于起动机预定极限短路分断能力时，后备短路保护熔断器的型式及熔体电流规格见下表 8。

例如可选用使用类别为 gG 型的熔断器 RT16(NT00)。

Selection of backup fuse:

When the expected short-circuit current at the installation site is greater than the starter's predetermined limit short-circuit breaking capacity, the type and melt current specifications of the backup short-circuit protection fuse are shown in table 8 below.

For example, you can choose to use a type of gG fuse RT16 (NT00).

表 8 Table 8

型号 Type	脱扣器额定电流 In(A) Fastener rated current in (A)	整定电流调节范围 (A) Tuning current adjustment range (A)	只有当预期短路电流 $I_{cc} > I_{cu}$ 额定极限短路分断能力时需要备用熔断器的熔体电流规格 The melt current specification of the spare fuse is required only if the expected short-circuit current $I_{cc} > I_{cu}$ The rated limit short-circuit breaking capacity									
			230/240V		400/415V		400V		500V		690V	
			aM A	gL/gG A	aM A	gL/gG A	aM A	gL/gG A	aM A	gL/gG A	aM A	gL/gG A
SDM7-32	0.16	0.1~0.16	★	★	★	★	★	★	★	★	★	★
SDM7-32	0.25	0.16~0.25	★	★	★	★	★	★	★	★	★	★
SDM7-32	0.4	0.25~0.4	★	★	★	★	★	★	★	★	★	★
SDM7-32	0.63	0.4~0.63	★	★	★	★	★	★	★	★	★	★
SDM7-32	1	0.63~1	★	★	★	★	★	★	★	★	★	★
SDM7-32	1.6	1~1.6	★	★	★	★	★	★	★	★	★	★
SDM7-32	2.5	1.6~2.5	★	★	★	★	★	★	★	★	16	20
SDM7-32	4	2.5~4	★	★	★	★	★	★	★	★	25	32
SDM7-32	6.3	4~6.3	★	★	★	★	50	63	50	63	32	40
SDM7-32	10	6~10	★	★	★	★	50	63	50	63	32	40
SDM7-32	14	9~14	★	★	63	80	50	63	50	63	40	50
SDM7-32	18	13~18	★	★	63	80	50	63	50	63	40	50
SDM7-32	23	17~23	80	100	80	100	63	80	50	63	40	50
SDM7-32	25	20~25	80	100	80	100	63	80	50	63	40	50
SDM7-32	32	24~32	80	100	80	100	63	80	50	63	40	50
SDM7-80	25	20~25	-	-	250	315	-	-	-	-	160	200
SDM7-80	32	23~32	-	-	250	315	-	-	-	-	160	200
SDM7-80	40	30~40	-	-	250	315	-	-	-	-	160	200
SDM7-80	50	37~50	-	-	315	400	-	-	-	-	200	250
SDM7-80	65	48~65	-	-	315	400	-	-	-	-	200	250
SDM7-80	80	63~80	-	-	315	400	-	-	-	-	200	250

其他附件 Other Accessories

1. 断路器的附件 Accessories for starters

1.1 附件种类，型号及规格见下表 Annex types, models and specifications are shown in the table below

附件名称 Attachment Name	SDM7-32 (X) 适用 Apply	SDM-80 适用 Apply	附件规格 Accessory Specifications
欠压脱扣器 Undervoltage Stripper	SDM7-AU110	-	110~150V , 50Hz ; 127V,60Hz
	SDM7-AU220	-	220~240V,50Hz
	SDM7-AU380	-	380~400V,50Hz ; 440V,60Hz
分励脱扣器 Split excitation Stripper	SDM7-AS110	-	110~150V , 50Hz ; 127V,60Hz
	SDM7-AS220	-	220~240V,50Hz
	SDM7-AS380	-	380~400V,50Hz ; 440V,60Hz
瞬时辅助触头 (前挂) Instantaneous auxiliary contacts (front hanging)	SDM7-AE20	-	2NO
	SDM7-AE11	-	1NO+1NC
瞬时辅助触头 (侧挂) Instantaneous auxiliary contacts (side hanging)	SDM7-AN20	SDM7-AN20(SDM7-80)	2NO
	SDM7-AN11	SDM7-AN11(SDM7-80)	1NO+1NC
故障信号触头 及瞬时辅助触头 Fault signal contacts and instantaneous auxiliary contacts	SDM7-AD0110	-	-
	SDM7-AD0101	-	-
	SDM7-AD1010	-	-
	SDM7-AD1001	-	-
防水安装盒 Waterproof mounting box	SDM7 防水安装盒 Waterproof mounting box	-	-
带急停按钮的防水安装盒 Waterproof mounting box with emergency stop button	SDM7 带急停按钮的防水安装盒 Waterproof mounting box with emergency stop button	-	-

注：如需订购 SDM7-80 配套的 SDM7-AN 时，需注明为 SDM7-80 专用，如 SDM7-AN11(SDM7-80)。

Note: If you want to order SDM7-80 matching SDM7-AN, you need to indicate that SDM7-80 is dedicated, such as SDM7-AN11 (SDM7-80).

1.2 欠压脱扣器 SDM2-AU110,AU220,AU380 的性能：

a. 额定绝缘电压 $U_i(V)$ ：690。

b. 动作特性：

当电压下降到额定电压的 70% 和 35% 范围内，欠压脱扣器应动作；欠压脱扣器在电源电压低于脱扣器额定电压的 35% 时，欠压脱扣器应能防止启动器闭合；电源电压等于或大于脱扣器额定电压的 85% 时，欠压脱扣器应能保证启动器闭合。

1.2 Performance of the SDM2-AU110,AU220,AU380 of the Undervoltage stripper:

a. Rated insulated voltage $U_i (V)$: 690.

b. Motion Characteristics:

When the voltage drops to the range of 70% and 35% of the rated voltage, the undervoltage stripper shall act; The Undervoltage stripper shall be able to prevent the starter from closing when the supply voltage is less than 35% of the rated voltage of the stripper, and the undervoltage stripper shall be able to ensure the closure of the starter when the supply voltage is equal to or greater than 85% of the rated voltage



欠压脱扣器
Undervoltage release
Au115,Au225, Au385

1.3 分励脱扣器 SDM7-AS110,AS220,AS380 的性能：

- a. 额定绝缘电压 $U_i(V)$: 690
- b. 动作特性：分励脱扣器的动作电压范围为额定工作电压的 70%~110%。

1.3Performance of the SDM7-AS110,AS220,AS380 of the split-excitation stripper:

- a.Rated insulated voltage $U_i(V)$: 690
- b.Motion characteristics: The operating voltage range of the split-excitation stripper is 70%~110% of the rated operating voltage.



分励脱扣器 Shunt release
AS 115, AS225, AS 385

1.4 瞬时辅助触头 SDM7-AE20 , AE11(前挂) 的性能：

- a. 额定绝缘电压 $U_i(V)$: 250 ;
- b. 约定发热电流 $I_{th}(A)$: 2.5 ;
- c. 瞬时辅助触头的使用类别,额定工作电压及额定工作电流见下表。

1.4Performance of instantaneous auxiliary contact SDM7-AE20,AE11 (front hanging):

- a.Rated insulated voltage $U_i(V)$: 250;
- b.Agreed heating current $I_{th}(A)$: 2.5;
- c.The use category of instantaneous auxiliary contacts, rated operating voltage and rated operating current are shown in the table below.



瞬时辅助触头
Upper auxiliary
AE-11, AE-20

使用类别 Working with categories	AC-15				DC-13		
	额定工作电压 $U_e(V)$ Rated operating voltage $U_e(V)$	24	48	110/127	230/240	24	48
额定工作电流 $I_e(A)$ Rated operating current $I_e(A)$	2	1.25	1	0.5	1	0.3	0.15
正常工作功率 $P(W)$ Normal working power $P(W)$	48	60	127	120	24	15	9

1.5 瞬时辅助触头 SDM7-AN20 , AN11(侧挂) 的性能：

- a. 额定绝缘电压 $U_i(V)$: 690 ;
- b. 约定发热电流 $I_{th}(A)$: 6 ;
- c. 瞬时辅助触头的使用类别,额定工作电压及额定工作电流见下表。

1.5Performance of instantaneous auxiliary contact SDM7-AN20,AN11 (side hanging):

- a.Rated insulated voltage $U_i(V)$: 690;
- b.Agreed heating current $I_{th}(A)$: 6;
- c.The use category of instantaneous auxiliary contacts, rated operating voltage and rated operating current are shown in the table below.



辅助触头 Side auxiliary
AN-11, AN-20

使用类别 Working with categories	AC-15							DC-13				
	额定工作电压 $U_e(V)$ Rated operating voltage $U_e(V)$	48	100/127	230/240	380/415	440	500	690	24	48	60	110
额定工作电流 $I_e(A)$ Rated operating current $I_e(A)$	6	4.5	3.3	2.2	1.5	1	0.6	6	5	3	1.3	0.5
正常工作功率 $P(W)$ Normal working power $P(W)$	300	500	720	850	650	500	400	140	240	180	140	120

1.6 故障信号触头及瞬时辅助触头 SDM7-AD 的性能：

故障信号触头及瞬时辅助触头 SDM7-AD 由故障信号触头和瞬时辅助触头组成，其使用类别和性能有所不同。

- a. 额定绝缘电压 $U_i(V)$:690;
- b. 瞬时辅助触头的约定发热电流 $I_{th}(A)$: 6 ; 故障信号触头的约定发热电流 $I_{th}(A)$: 2.5 ;
- c. 瞬时辅助触头的使用类别，额定工作电压及额定工作电流见上表，与 SDM7-AN 瞬时辅助触头的性能相同；故障信号触头的使用类别，额定工作电压及额定工作电流见下表。



报警 + 辅助触头
Fault signal+Instantaneous auxiliary
AD1001, AD1010
AD0101, AD0110

1.6 Performance of fault signal contacts and instantaneous auxiliary contacts SDM7-AD:

Fault signal contacts and instantaneous auxiliary contacts SDM7-AD consist of fault signal contacts and instantaneous auxiliary contacts, and their use categories and performance are different.

- a. Rated insulated voltage $U_i (V)$: 690;
- b. The agreed heating current of the instantaneous auxiliary contact $I_{th} (A)$: 6;
The agreed heating current of the fault signal contact $I_{th} (A)$: 2.5;
- c. The use category of instantaneous auxiliary contacts, rated operating voltage and rated operating current are shown in the table above, with the same performance as the SDM7-AN instantaneous auxiliary contact; The use category of the fault signal contact, the rated operating voltage and the rated operating current are shown in the table below.

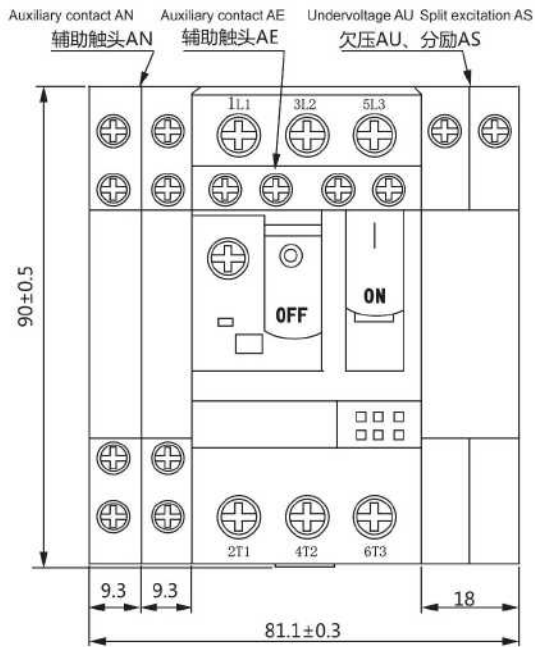
使用类别 Working with categories	AC-14				DC-13		
	额定工作电压 Rated operating voltage $U_e(V)$	24	48	110/127	230/240	24	48
额定工作电流 $I_e(A)$ Rated operating current $I_e (A)$	1.5	1	0.5	0.3	1	0.3	0.15
正常工作功率 $P(W)$ Normal working power $P (W)$	36	48	72	72	24	15	9
操作性能 (次) Operating Performance (Times)	1000	1000	1000	1000	1000	1000	1000

1.7 故障信号触头与瞬时辅助触头的非正常接通与分断能力见下表

1.7 The abnormal connection and breaking ability of fault signal contacts and instantaneous auxiliary contacts are shown in the following table

使用类别 Working with categories	接通 Connected			分断 Division			通断操作循环次数和操作频率 Number of cycles and operating frequencies of the pass-through operation		
	I/I_e	U/U_e	$\cos\Phi$ 或 or T0.95	I/I_e	U/U_e	$\cos\Phi$ 或 or T0.95	操作循环次数 Number of Operation Loops	每分钟操作 循环次数 Number of operation cycles per minute	通电时间 Electrified time
AC-14	6	1.1	0.7	6	1.1	0.7	10	2	0.05
AC-15	10	1.1	0.3	10	1.1	0.3	10	2	0.05
DC-13	1.1	1.1	6Pe	1.1	1.1	6Pe	10	2	0.05

1.8 附件安装位置和外形尺寸 Accessory mounting position and dimensions

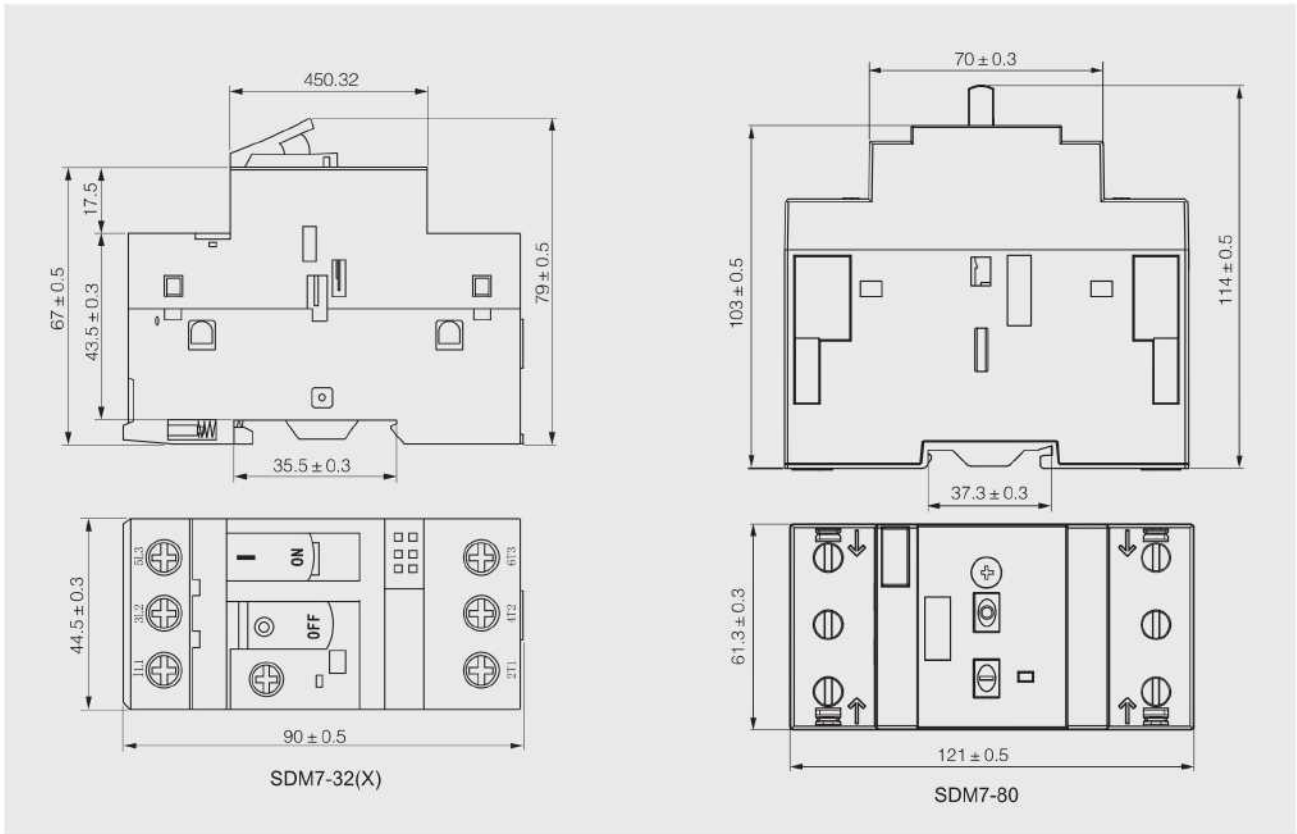


1.9 SDM7-32 防水安装盒 Waterproof mounting box

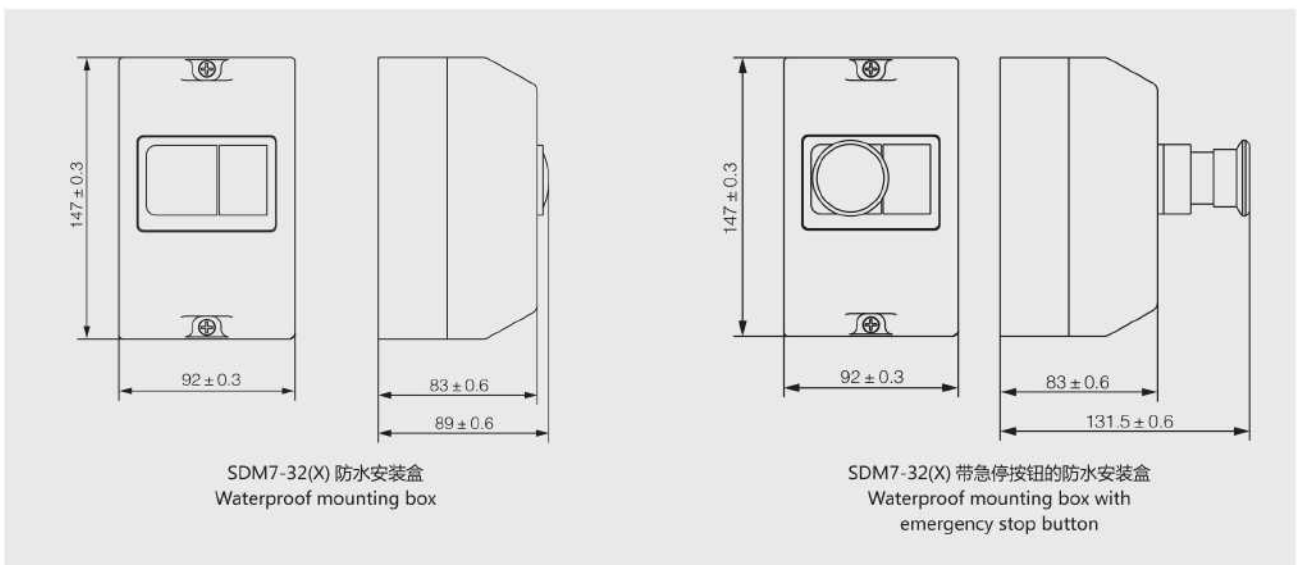
	附件名称 Attachment Name	防护等级 Protection class
	SDM7-32(X) 防水安装盒 Waterproof mounting box	IP55
	SDM7-32(X) 带急停按钮的防水安装盒 Waterproof mounting box with emergency stop button	IP55

外形及安装尺寸 Shape and installation dimensions

1 产品外形尺寸及安装尺寸 Product Dimensions and mounting dimensions



2 防水盒外形尺寸 Waterproof box Dimensions



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