



SHTM3 系列塑料外壳式断路器

SHTM3Z 系列智能型断路器

SHTM3L 系列带剩余电流断路器

SHTM3 Series Moulded Case Circuit Breaker

SHTM3Z Series Intelligent Type Breaker

SHTM3L Series Residual Current Circuit Breaker



上海华通低压开关有限公司(原上海华通开关厂低空部)
SHANGHAI HUATONG LV ELECTRIC APPARATUS CO. LTD.
(SHANGHAI HUATONG SWITCHGEAR WORKS LV-DIVISION)

记事/NOTES

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企业简介 Enterprise Introduction

上海华通，历史悠久。

上海华通低压开关有限公司的前身是上海华通开关厂低压空气开关制造部(曾名塑壳车间)，经上级公司上海电气集团总公司批准于2001年8月整体转制后成立为股份制公司。

自1919年创立“华通电业机器厂”——解放后国有化的“上海华通开关厂”——2001年转制后的“上海华通低压开关有限公司”，已经走过了百年的风雨旅程。

上海华通低压开关有限公司在低压电器制造方面经历了从无到有、从小到大、从一般到高科技的不断发展过程。

上世纪50年代的中国第一代仿苏产品A3塑料外壳式断路器在我厂诞生，壳架等级达600A。60—70年代自力更生研发并大规模生产DZ10系列塑料外壳式断路器，产品畅销全国各地，并源源不断出口到中、西亚，及非洲地区。80年代从美国西屋公司引进了H系列塑料外壳式断路器及专有制造技术，最大壳架电流等级达3000A，为国内外之最。90年代先后开发完善了SHTW1(DW45)系列低压智能型万能式断路器、S(H)系列高性能塑料外壳式断路器等几大系列低压产品，以及SHTQ1、SHTQ3系列双电源自动转换开关电器，S(H)L系列剩余电流断路器，S(H)Z系列智能型塑料外壳式断路器。2013年成功开发了SHTW3系列低压智能型万能式断路器。2019年又成功开发了SHTM3系列及S(H)系列(升级版)塑料外壳式断路器以及WATSC702/802自动电源转换系统。同时与有关科研单位、企业集团及其他相关行业开展了全方位的合作，使我公司在产品设计开发、工艺制造、生产管理等方面迅速适应市场经济的发展需要，成为我国低压电器主要生产基地之一。目前除了仍延续生产原有几大系列产品外，还开发了智能化产品及SHTB系列微型断路器等新产品。

公司已获得了ISO9001: 2015质量体系认证，全部产品均获得国家强制性产品认证(CCC)证书，并已转化“CQC”证书。公司坚持不断发展，开拓创新，服务至上，争创品牌的理念，严格按照ISO9001国际质量体系进行质量管理。公司产品现已被广泛用于电力、煤炭、石油、化工、冶金、交通、通讯、建筑及城市基础设施等领域。

我公司以通过体制改革为契机，激活内部机制，更新观念，不断开发新产品，延续华通精湛的制造技术，以先进的工艺、优异的产品质量和周到的售后服务回报广大用户的 support and trust. 我们公司将一如既往，秉承百年“华通”的优良传统，以最新的技术、最快的速度、最优的质量为用户提供最佳的服务。

Shanghai huatong has a long history.

Shanghai huatong LV electric apparatus CO., LTD., formerly known as Shanghai huatong switchgear works LV electric apparatus manufacturing department (formerly known as plastic shell workshop), was established as a new company in August 2001 after the approval of the parent company Shanghai electric group company.

Since the establishment of "WHATUNG ELEC & GEN.ENG WORKS" in 1919 -- "Shanghai huatong switchingear works" nationalized after liberation -- "Shanghai huatong LV electric apparatus CO., LTD." after the transformation in 2001, "Shanghai huatong LV electric apparatus CO., LTD." has gone through the wind and rain journey for nearly a hundred years.

The manufacture of low voltage electrical apparatus of the company has experienced the continuous development process from scratch, from small to large, from general to high-tech. The manufacture of low voltage apparatus has experienced the continuous development process from scratch, from small to large, from general to high-tech.

In the 1950s, the first generation of imitation su product A3 moulded case circuit breaker was born in our factory, with a frame size of 600A. During the 1960s and 1970s, self-reliant r&d and mass production of DZ10 series moulded case circuit breakers have sold well all over the country and exported continuously to central, western Asia and Africa. In the 1980s, we introduced the H-series moulded case circuit breaker and proprietary manufacturing technology from Westinghouse company, with the maximum ampere frame size up to 3000A, the highest at home and abroad. In the 1990s, successively developed and improved ,SHTW1(DW45) series low-voltage intelligent air circuit breaker, S(H) series high performance moulded case circuit breaker and other series of low-voltage products , as well as SHTQ1 and SHTQ3 series automatic power supply switch system, S(H)L series residual current circuit breaker, S(H)Z series intelligent type breaker. In 2013, SHTW3 series of low-voltage intelligent air-operated circuit breakers were successfully developed, and in 2019, SHTM3 series , S(H) series (upgraded version) moulded case circuit breakers and WATSC702、WATSC802 automatic power transfer switching system were successfully developed . At the same time with the relevant scientific research units, enterprise groups and other related industries to carry out all-round cooperation, so that our company in product design and development, technology manufacturing, production management and other aspects quickly adapt to the needs of the development of the market economy, become one of the main production bases of China's low-voltage apparatus. At present, in addition to continuing to produce the original several series of products, we have also developed intelligent products and new products such as SHTB series miniature circuit breakers.

The company has obtained ISO9001:2015 quality system certification, all the products have obtained the national compulsory product certification (CCC) certificate, and be converted to “CQC” certification. The company adheres to the concept of continuous development, pioneering and innovation, service first and striving for a brand, and carries out quality management in strict accordance with ISO9001 international quality system. The company's products have been widely used in power, coal, petroleum, chemical, metallurgy, transportation, communications, construction and urban infrastructure and other fields.

Our company takes the opportunity through the system reform, activates the internal mechanism, updates the concept, develops the new product unceasingly, continues huatong exquisite manufacture technology, with the advanced craft, the outstanding product quality and the thoughtful after-sale service returns the general user's support and the trust. Our company will, as always, uphold the hundred years of "huatong" fine tradition, with the latest technology, the fastest speed, the best quality to provide users with the best service.

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产品特点

SHTM3系列塑料外壳式断路器是S(H)系列塑料外壳式断路器的升级型产品。

S(H)系列塑料外壳式断路器是上海华通开关厂和上海电器科学研究所(集团)有限公司联合开发完成的小型化，高分断，零飞弧塑料外壳式断路器，于1996年投放市场后深受用户青睐，并于2019年完成整个系列的升级，S(H)升级型产品保留S(H)型号，同时使用SHTM3型号。

● SHTM3系列塑料外壳式断路器具有以下特色：

- 全系列内部附件为嵌装式结构，方便现场加装或调整。
- 强大的AD驱弧技术，实现零飞弧。
- 新增160AF与100AF具有相同尺寸，630AF与400AF具有相同尺寸。
- 单位体积分断能力进一步提高。
- 额定绝缘电压提升至Ui=1000V。
- 发展出了过载报警不脱扣功能。

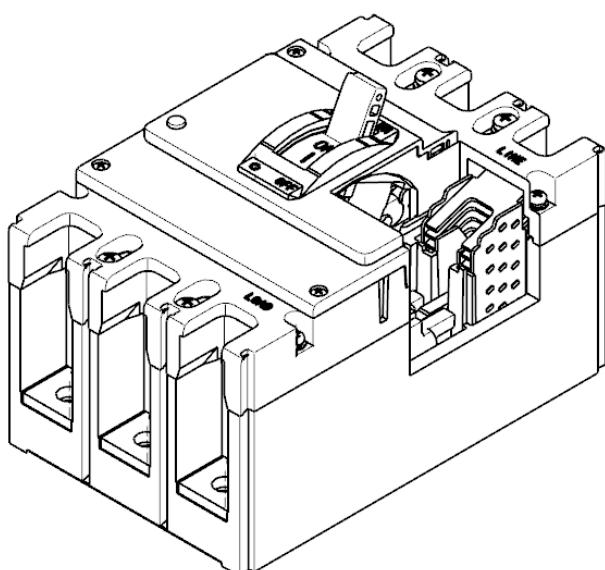
● SHTM3Z系列智能型断路器具有以下特点：

● 具有三段保护功能，使用类别为B的断路器与连接在同一电路中的其它短路保护装置在短路条件下具有选择性配合。

- 具有短路电磁式后备保护功能。
- 具有热记忆功能。
- 具有控制器自诊断功能。

● SHTM3L系列带剩余电流断路器具有以下特点：

- 使用可靠性高，剩余电流脱扣器用三相电源，任何一相失电时产生漏电故障能脱扣。
- 保护范围大，当电源电压降低到50V对中性线电压时，剩余电流脱扣器能脱扣。
- 有漏电发生时断路器不断开只报警(B型)和漏电发生时断路器断开并报警(T型)两种可选。



S(H)升级型/SHTM3系列

S(H) upgraded version/SHTM3 series

Product characteristics

SHTM3 series moulded case circuit breaker is S(H) series moulded case circuit breaker upgrade products.

S (H) series moulded case circuit breaker is the Shanghai huatong switchingear works and Shanghai electric apparatus research institute (group) Co.,Ltd. jointly developed the miniaturization, high level broken capacity, zero flashover moulded case circuit breaker, in 1996 after the market favored by users, and in 2019 to complete the entire series of upgrades, in addition to keep S (H) model, using SHTM3 model at the same time, the S (H) upgraded product.

●SHTM3 series moulded case circuit breaker has the following features:

●The whole series of internal accessories have plug-in structure, easy to install or adjust on site

●Strong AD arc drive technology, to achieve zero flashover.

●New 160AF and 100AF have the same size, 630AF have the same size as 400AF.

●Further improve the breaking capacity per unit volume.

●Rated insulation voltage up to $Ui=1000V$.

●Developed overload alarm not trip function.

●SHTM3Z series intelligent type breaker has the following features:

●With 3-section protection function, the use of class B circuit breaker and other short-circuit protection devices connected in the same circuit can be selectively matched under short-circuit conditions.

●With short circuit electromagnetic backup protection function.

●Hot memory function.

●With controller self-diagnosis function.

●SHTM3L series residual current circuit breakers have the following features:

●The use of high reliability, residual current tripping device with three-phase power supply, any phase loss of electricity leakage fault can be tripping.

●Large protection range, when the power supply voltage is reduced to 50V to the neutral line voltage, the residual current tripping device can tripping.

●There are two kinds of options: the circuit breaker continuously opens the alarm when electricity leakage occurs (type B) and the circuit breaker disconnects and alarms when electricity leakage occurs (type T).

A

适用范围及适用工作环境

SHTM3,SHTM3Z,SHTM3L系列塑料外壳式断路器适用于AC50/60Hz、额定绝缘电压1000V、额定工作电压AC400V/500V/690V，额定电流从16A至800A的电路中,作配电保护用,也可作为电动机保护用。

本断路器可作为线路不频繁转换及电动机不频繁启动之用，具有过载、短路、欠电压保护。

SHTM3断路器具有过载报警不脱扣功能，当线路过负荷时，安装带有此功能的断路器将不跳闸仅输出过负荷信号，保障供电连续性。

SHTM3L断路器可以作为人身间接接触保护和设备漏电保护,也可以用来防止设备绝缘损坏产生接地故障电流而引起火灾危险。

本额定剩余动作电流为30mA的SHTM3L断路器可对人提供直接接触附加保护。

SHTM3L断路器具有交流叠加脉动直流场合的A型剩余电流保护功能。

本断路器具有隔离功能,其相应的符号为“—/×”。

本断路器符合 IEC60947-1及GB/T14048.1《低压开关设备和控制设备总则》、IEC60947-2 及GB/T14048.2《低压开关设备和控制设备第二部分断路器》、IEC60947-4-1及GB/T14048.4低压开关设备和控制设备机电式接触器和电动机起动器(含电动机保护器)。

本断路器均获国家强制性产品“CCC”证书，并已转化“CQC”证书。

安装地点周围空气温度不高于+40℃和不低于-5℃，且24h的平均值不超过+35℃；注1：周围空气温度为-10℃或-25℃的工作条件，在订货时用户须向制造厂申明；注2：周围空气温度上限超过+40℃或下限低于-25℃的工作条件，用户应与制造厂商协商。

安装地点的海拔不超过2000m。

大气的相对湿度在周围最高温度+40℃时不超过50%；在较低的温度下可以有较高的湿度；在最湿月的月平均最低温度为+25℃时，该月的月平均最大相对湿度为90%，并考虑到因温度变化发生在产品表面上的凝露。

注：提供特殊产品：湿热带型（通过GB/T 2423.4 和GB/T 2423.18 的试验要求）

污染等级：断路器本体为3级，装于断路器内部的附件为2级。

断路器主电路及欠压脱扣器，过电压类别Ⅲ，辅助电路和控制电路，过电压类别Ⅱ。

断路器适用于电磁环境A；

断路器可以垂直安装(竖装),也可水平安装(横装)。

运输和存储温度：-25℃至+55℃之间，短时间内(24小时内)可达+70℃；

断路器应安装在无爆炸危险和无导电尘埃、无足以腐蚀金属和破坏绝缘的地方；

断路器应安装在没有雨雪侵袭的地方。

Applicable Scope and Applicable working environment

SHTM3,SHTM3Z,SHTM3L series moulded case circuit breaker suitable for with AC50/60Hz, rated insulation voltage 1000V,rated operational voltage AC400V/500v690V, rated current 16A~800A,it can be used for the protection of the power distribution, also can be used for the protection of the motor.

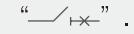
This circuit breaker can be used for the infrequent conversion of the circuit and the infrequent start of the motor. It has functions of overload ,short circuit, and lack voltage protection.

SHTM3 circuit breaker has the function of overload alarm and no tripping,when the circuit breaker is overloaded, the installation of the circuit breaker with this function will not trip and only output overload signal to ensure the continuity of power supply.

SHTM3L circuit breaker can be used as personal indirect contact protection and equipment leakage protection, and can also be used to prevent insulation damage of equipment from grounding fault current and fire hazard.

SHTM3L circuit breakers with rated residual operating current of 30mA provide additional direct contact protection to humans.

SHTM3L circuit breaker has A type A residual current protection function on ac superposition pulsating dc occasions.

This circuit breaker has the isolation function, the symbol for it is “” .

This circuit breaker conforms to IEC60947-1 and GB/T14048.1(General requirements for low voltage switchgear and controlgear), IEC60947-2 and GB/T14048.2(Low voltage switchgear and controlgear part 2: circuit-breakers), IEC60947-4-1 and GB/T14048.4(Low voltage switchgear and controlgear-Electromechanical contactors and motor-starters(including motor protector)).

This circuit breaker has "CCC" certification, and been converted to "CQC"certification.

The ambient air temperature of the installation location should be no higher than +40°C and no lower than -5°C, meanwhile the average of 24hours does not exceed +35°C.Note 1:When the ambient air temperature is -10°C or -25°C, the user needs to notify the manufacturer when ordering.Note2: When the ambient temperature is higher than +40°C or lower than -25°C, the user needs to consult with the manufacturer.

Altitude of the installation location should be no more than 2000m.

The relative humidity of the atmosphere is no more than 50% at the maximum temperature of +40°C,allowing a higher relative humidity at a lower temperature. The average maximum relative humidity is 90%, in the wettest month with lowest temperature of +25°C, taking into account the condensation on the product surface due to the temperature variation.Note: Can provide special product, Hot and humid zone type(Pass the GB/T2423.4 and GB/2423.18 test requirement).

Pollution level: this circuit breaker is third-class,
and the internal accessories installed in the circuit breaker is second-class.

Overvoltage category of the circuit breaker main circuit and undervoltage stripper is III,overvoltage category of auxiliary circuit and control circuit is II .

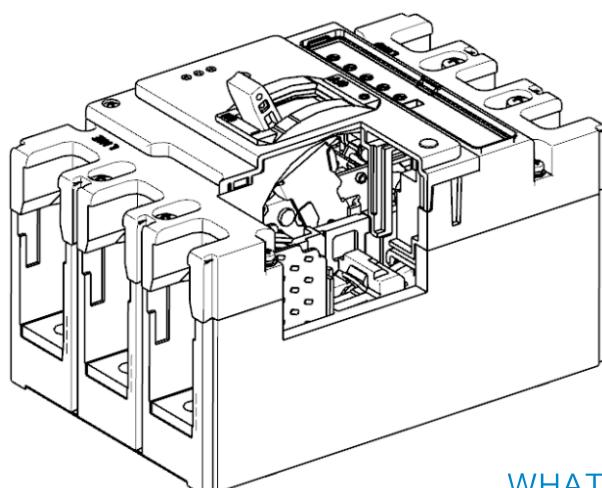
This circuit breaker can be used in electromagnetic environment A.

The circuit breaker can be installed vertically and horizontally.

Transportation and storage humidity:between -25°C and55°C and within short period(24hours) can be +70°C.

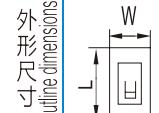
Circuit breaker should be installed in locations without explosion hazard, conductance dust, metal corrosion or insulation destruction.

Circuit breakers shall be installed in locations without rain or snow invasion.



Technical Parameters of Circuit Breaker

SHTM3系列 SHTM3 series

型号 Model	SHTM3-63	SHTM3-100				SHTM3-160				
外形 profile										
额定电流 Rated current In(A)	16,20,25,32,40,50,63	16,20,25,32,40,50,63,80,100				100,125,140,160				
极数 Pole number	3P/4P	3P/4P				3P/4P				
额定绝缘电压 Ui(V) Rated insulation voltage	1000	1000				1000				
额定工作电压 Ue(V) Rated operating voltage	AC400	AC400/AC500/AC690				AC400/AC500/AC690				
额定冲击耐受电压 Uimp(V) Rated impact tolerance voltage	8000	8000				8000				
机械寿命 mechanical life	免维护 maintenance-free	20000				20000				
电气寿命 electrical life	AC400V	8000				8000				
AC690V	-	1500				1500				
分断能力级别 Breaking ability level	N S	N S H R	N S H R	N S H R	N S H R	N S H R	N S H R	N S H R	N S H R	
额定极限短路分断能力 Icu(kA)	AC400V 35	50	42 50 70 100	42 50 70 100	42 50 70 100	42 50 70 100	42 50 70 100	42 50 70 100	42 50 70 100	
Rated ultimate short-circuit breaking capacity	AC500V -	-	40 40 40 40	40 40 40 40	40 40 40 40	40 40 40 40	40 40 40 40	40 40 40 40	40 40 40 40	
AC690V -	-	-	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	
额定运行短路分断能力 Ics(kA)	AC400V 35	35	42 50 70 70	42 50 70 70	42 50 70 70	42 50 70 70	42 50 70 70	42 50 70 70	42 50 70 70	
Rated service short-circuit breaking capacity	AC500V -	-	40 40 40 40	40 40 40 40	40 40 40 40	40 40 40 40	40 40 40 40	40 40 40 40	40 40 40 40	
AC690V -	-	-	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	10 10 10 10	
飞弧距离 Flashover distance(mm)	0		0				0			
外形尺寸 Dimensions		W 78(3p) 103(4p)	L 135	H 68(3P) 82(4P)	82	73(3P) 91(4P)	91	73(3P) 91(4P)	91	
分励脱扣器 shunt release	○	○	○	○	○	○	○	○	○	
欠电压脱扣器 Under-voltage release	○	○	○	○	○	○	○	○	○	
辅助触头 Auxiliary contact	○	○	○	○	○	○	○	○	○	
报警触头 Alarm contact	○	○	○	○	○	○	○	○	○	
过载报警不脱扣 Overload alarm not trip	○	○	○	○	○	○	○	○	○	
电动操作机构 Electric operating mechanism	○	○	○	○	○	○	○	○	○	
转动操作手柄机构 Rotation handle mechanism	○	○	○	○	○	○	○	○	○	
板前接线 Front connection	○	○	○	○	○	○	○	○	○	
板后接线 Rear connection	○	○	○	○	○	○	○	○	○	
插入式接线 Plug in connection	○	○	○	○	○	○	○	○	○	
抽出式接线 Drawout type wiring	-	-	-	-	-	-	-	-	-	

注：1.S(H)与SHTM3为双型号，其结构，性能完全相同，仅型号不一致，市场选用S(H)型号时仅需将样本中SHTM3替换成S(H)即可。

2.S(H)系列分断能力级别代号C,Y,J,G，升级后为N,S,H,R(63仍然为C,Y)

Note: 1.S(H) is a dual model with SHTM3, with the same structure and performance, Only the model is inconsistent. When the model S(H) is selected by the market, it is only necessary to replace the SHTM3 in the sample with S(H).
 2.S(H) series breaking ability level code C,Y,J,G, after upgrading to N,S,H,R(63 still Ran for C, Y)

SHTM3系列 SHTM3 series

SHTM3-250				SHTM3-400				SHTM3-630				SHTM3-800(630)			
															
100,125,140,160,180,200,225,250				225,250,315,350,400				400,500,630				400,500,630,700,800			
3P/4P				3P/4P				3P/4P				3P/4P			
1000				1000				1000				1000			
AC400 / AC500 / AC690				AC400 / AC500 / AC690				AC400 / AC500 / AC690				AC400 / AC500 / AC690			
8000				8000				8000				8000			
20000				10000				10000				10000			
8000				7500				7500				7500			
1500				1000				1000				1000			
N	S	H	R	N	S	H	R	N	S	H	R	S	H	R	
42	50	70	100	42	50	70	100	42	50	70	100	50	70	100	
40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
10	10	10	10	15	15	15	15	15	15	15	15	15	15	15	
42	50	70	70	42	50	70	70	42	50	70	70	50	70	70	
40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
10	10	10	10	15	15	15	15	15	15	15	15	15	15	15	
0				0				0				0			
107(3P) 142(4P)				140(3P) 184(4P)				140(3P) 184(4P)				210(3P) 280(4P)			
165				257				257				275			
73(3P)91(4P)		91		103				103				103			
○				○				○				○			
○				○				○				○			
○				○				○				○			
○				○				○				○			
○				○				○				○			
○				○				○				○			
○				○				○				○			
○				○				○				○			
○				○				○				○			
○				○				○				○			
○				○				○				○			
-				○				○				○			

Technical Parameters of Circuit Breaker

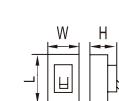
SHTM3Z系列 SHTM3Z series

型号 Model	SHTM3Z-100	SHTM3Z-250	SHTM3Z-400	SHTM3Z-630	SHTM3Z-800			
外型 profile								
额定电流 Rated current In(A)	32,100	160,250	400	630	800			
极数 Pole number	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P			
额定绝缘电压 Ui(V) Rated insulation voltage	1000	1000	1000	1000	1000			
额定工作电压 Ue(V) Rated operating voltage	AC400 / AC690	AC400 / AC690	AC400 / AC690	AC400 / AC690	AC400 / AC690			
额定冲击耐受电压 Uimp(V) Rated shock withstand voltage	8000	8000	8000	8000	8000			
机械寿命 mechanical life	免维护 maintenance-free 20000	20000	10000	10000	10000			
电气寿命 electrical life	AC400V 8000	8000	7500	7500	7500			
电气寿命 electrical life	AC690V 1500	1500	1000	1000	1000			
分断能力级别 Breaking ability level	S H R 50 70 100	S H R 50 70 100	S H R 50 70 100	S H R 50 70 100	S H R 50 70 100			
额定极限短路分断能力 Rated ultimate short-circuit breaking capacity Icu(kA)	AC400V 50	AC690V 10	AC400V 50	AC690V 10	AC400V 50			
额定运行短路分断能力 Rated service short-circuit breaking capacity Ics(kA)	AC400V 70	AC690V 10	AC400V 70	AC690V 10	AC400V 70			
额定短时耐受电流 Rated short-time withstand current Icw(KA)/1s	—	—	5	8	10			
使用类别 Use category	A	A	B	B	B			
飞弧距离 Flashover distance(mm)	0	0	0	0	0			
外形尺寸 outline dimensions		W 92(3p) 122(4p)	L 150	H 91	107(3p) 142(4p) 257 103	140(3p) 184(4p) 275 103	210(3p) 280(4p) 275	210(3p) 280(4p) 275
分励脱扣器 shunt release	○	○	○	○	○	○	○	○
欠电压脱扣器 Under-voltage release	○	○	○	○	○	○	○	○
辅助触头 Auxiliary contact	○	○	○	○	○	○	○	○
报警触头 Alarm contact	○	○	○	○	○	○	○	○
电动操作机构 Electric operating mechanism	○	○	○	○	○	○	○	○
转动操作手柄机构 Rotation handle mechanism	○	○	○	○	○	○	○	○
板前接线 Front connection	○	○	○	○	○	○	○	○
板后接线 Rear connection	○	○	○	○	○	○	○	○
插入式接线 Plug in connection	○	○	○	○	○	○	○	○
抽出式接线 Drawout type wiring	—	—	○	○	○	○	○	○

注: S(H)Z与SHTM3Z, S(H)L与SHTM3L的关系和B-1页备注中S(H)与SHTM3的关系一样

Note: The relationship between S(H)Z and SHTM3Z, S(H)L and SHTM3L as the same between S(H) and SHTM3 in B-1.

SHTM3L系列 SHTM3L series

型号 Model	SHTM3L-100	SHTM3L-250	SHTM3L-400	SHTM3L-630
外形 profile				
额定电流 Rated current In(A)	16,20,25,32,40 50,63,80,100	100,125,140,160 180,200,225,250	225,250,315 350,400	400,500,630
极数 Pole number	3P/4P	3P/4P	3P/4P	3P/4P
额定绝缘电压 Ui(V) Rated insulation voltage	1000	1000	1000	1000
额定工作电压 Ue(V) Rated operating voltage	AC400	AC400	AC400	AC400
额定冲击耐受电压 Uimp(V) Rated shock withstand voltage	8000	8000	7500	7500
机械寿命 mechanical life	免维护 maintenance-free	20000	20000	10000
电气寿命 electrical life	AC400V	8000	8000	8000
分断能力级别 Breaking ability level	S H R S H R S H R S H R			
额定极限短路分断能力(Icu)kA Rated ultimate short-circuit breaking capacity	AC400V 50 70 100 50 70 100 50 70 100	50 70 100 50 70 100 50 70 100	50 70 100 50 70 100 50 70 100	50 70 100 50 70 100 50 70 100
额定运行短路分断能力(Ics)kA Rated operating short-circuit breaking capacity	AC400V 50 70 70 50 70 70	50 70 70 50 70 70	50 70 70 50 70 70	50 70 70 50 70 70
额定剩余动作电流(I Δ n)mA(可OFF) Rated residual operating current (can OFF)	非延时型 Non-delay type 30,100,500可调 延时型 Delay type 100,300,500可调	30,100,500可调 100,300,500可调	100,300,500可调 100,300,500可调	100,300,500可调 100,300,500可调
额定剩余不动作电流(I Δ no)mA Rated residual non-operating current	1/2 I Δ n	1/2 I Δ n	1/2 I Δ n	1/2 I Δ n
额定剩余短路接通(分断)能力 (I Δ m) KA Rated residual short-circuit making (breaking) capacity	1/4 Icu	1/4 Icu	1/4 Icu	1/4 Icu
外形尺寸 outline dimensions	 W 92(3p) 122(4p) L 150 H 91	107(3p) 142(4p) 165	140(3p) 184(4p) 257	210(3p) 280(4p) 275 103 103
飞弧距离 Flashover distance(mm)	0	0	0	0
分励脱扣器 Shunt release	○	○	○	○
欠电压脱扣器 Under-voltage release	○	○	○	○
辅助触头 Auxiliary contact	○	○	○	○
报警触头 Alarm contact	○	○	○	○
漏电报警不脱扣 Leakage alarm not trips	○	○	○	○
电动操作机构 Electric operating mechanism	○	○	○	○
转动操作手柄机构 Rotation handle mechanism	○	○	○	○
板前接线 Front connection	○	○	○	○
板后接线 Rear connection	○	○	○	○
插入式接线 Plug in connection	○	○	○	○
抽出式接线 Drawout type wiring	-	-	○	○

B

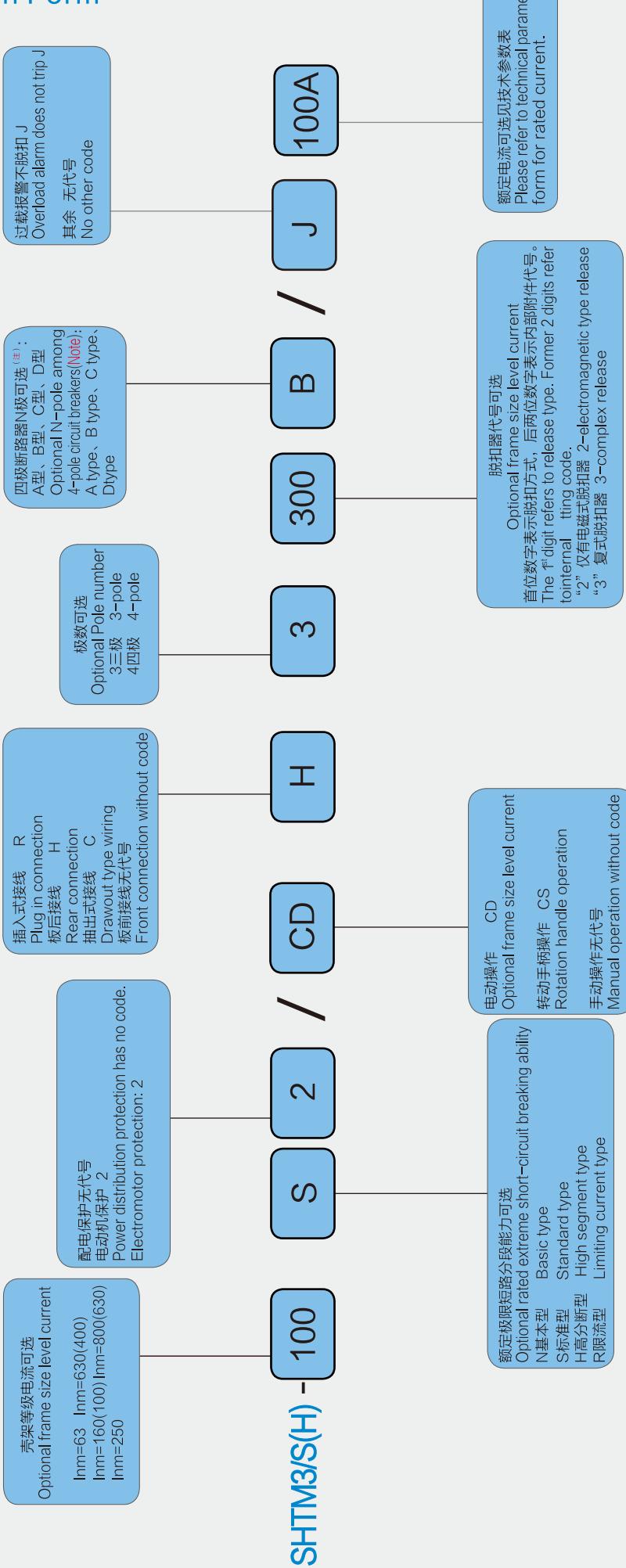
快速选型表

Fast Selection Form

www.huatong.net.cn

SHTM3系列 SHTM3 Series

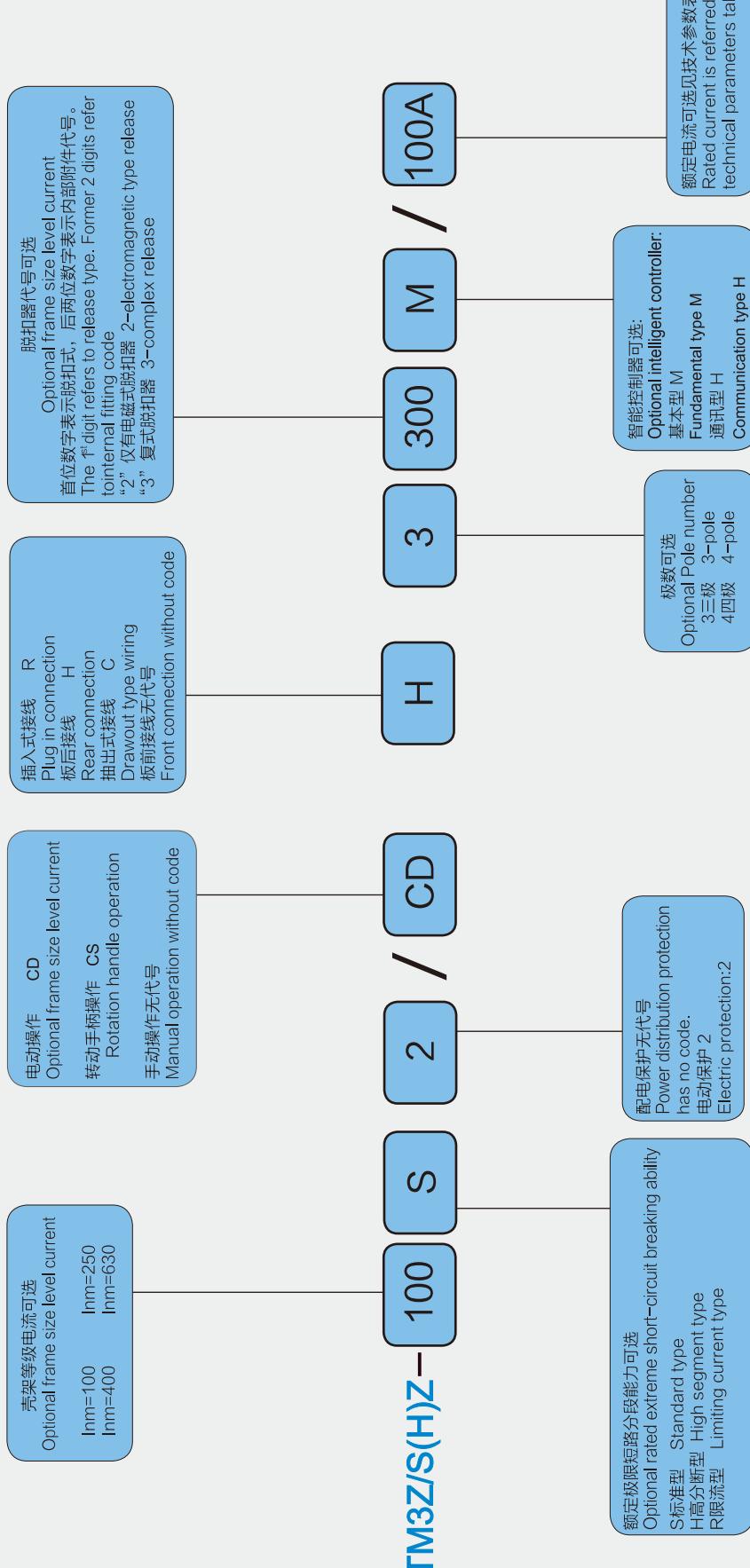
C



C-1

因产品技术不断改进, 所有数据以本公司最新数据为准, 如有变动, 恕不另行通知
All data shall be subject to the latest data of our company because of continuous improvement of product techniques without prior notice

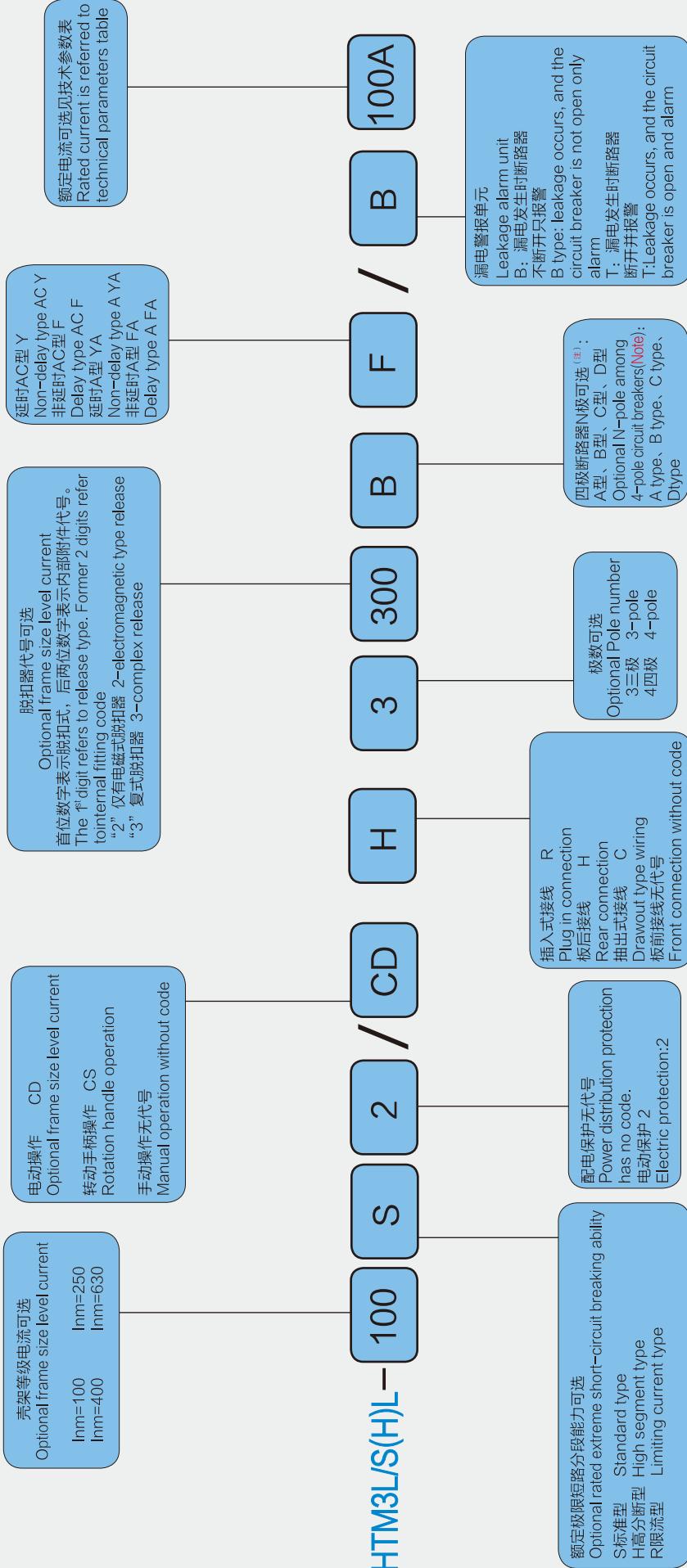
SHTM3Z系列 SHTM3Z Series



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SHTM3L系列 SHTM3L Series

C



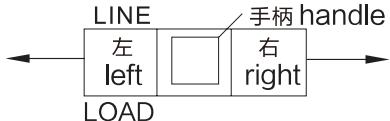
注:A型: N极不装过电流脱扣器,且N极始終接通,不与其他三极一起分合
B型: N极不装过电流脱扣器,且N极与其他三极一起分合
C型: N极装过电流脱扣器,且N极与其它三极一起分合
D型: N极装过电流脱扣器,且N极始終接通,不与其他三极一起分合

Note:A type:N pole is not fitted with current release.Beside,It is always connected without connection/disconnection to other 3 poles.
B type:N pole is not fitted with current release.Beside,It is always connection/disconnection to other 3 poles.
C type:N pole is not fitted with current release.Beside,It is always connection/disconnection to other 3 poles.
D type:N pole is not fitted with current release.Beside,It is always connected without connection/disconnection to other 3 poles.

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 without prior notice

SHTM3系列脱扣器及附件代号、符号

SHTM3 series release and annex code and symbol



- 报警触头 alarm contact
- 辅助触头 auxiliary contact
- ▲ 欠电压脱扣器 under-voltage release
- △ 分励脱扣器 shunt release
- 辅助报警触头 auxiliary alarm contact
- 双辅助触头 double auxiliary contact
- 右边引线即右装式 right downlead, namely, right installation
- ← 左边引线即左装式 left downlead, namely, left installation

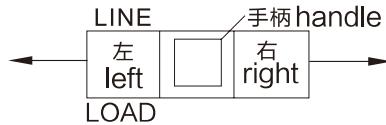
脱扣器及附件代号 Release and accessory code	附件名称 Accessory name	断路器型号 circuit breaker model	SHTM3-63	SHTM3-160(100)/250	SHTM3-400/630/800
			极数 Pole Number	3P、4P	3P、4P
200,300	无附件 without accessory	200-电磁式脱扣器 (仅有短路瞬时保护) 200-electromagnetic type release (of only short-circuit transient protection) 300-复式脱扣器 (兼有过载和短路瞬时保护) 300-complex release (of both over-load and short-circuit transient protection)			
208,308	报警触头 alarm contact	●○□	●○□	●○□	●○□
210,310	分励脱扣器 shunt release	□○△→	□○△→	□○△→	□○△→
220,320	辅助触头 (1NO1NC) auxiliary contact (1NO1NC)	○○□	○○□	○○□	○○□
202,302	辅助触头 (2NO2NC) auxiliary contact (2NO2NC)		○○□		
230,330	欠电压脱扣器 under-voltage release	□○▲→	▲○□	▲○□	▲○□
240,340	分励脱扣器,辅助触头 (1NO1NC) shunt release,auxiliary contact (1NO1NC)	○○△→	○○△→	○○△→	○○△→
212,312	分励脱扣器,辅助触头 (2NO2NC) shunt release,auxiliary contact (2NO2NC)		○○△→	○○△→	○○△→
250,350	分励脱扣器,欠电压脱扣器 shunt release,under-voltage release		▲○△→	▲○△→	▲○△→
260,360	二组辅助触头 (2NO2NC) 2 groups of auxiliary contacts (2NO2NC)	○○○→	○○○→	○○○→	○○○→
222,322	二组辅助触头 (3NO3NC) 2 groups of auxiliary contacts (3NO3NC)		○○○→	○○○→	○○○→
223,323	二组辅助触头 (4NO4NC) 2 groups of auxiliary contacts (4NO4NC)		○○○○→	○○○○→	○○○○→
270,370	欠压脱扣器,辅助触头 (1NO1NC) under-voltage release, auxiliary contact (1NO1NC)	○○▲→	▲○○→	▲○○→	▲○○→
232,332	欠压脱扣器,辅助触头 (2NO2NC) under-voltage release, auxiliary contact (2NO2NC)		▲○○→	▲○○→	▲○○→
218,318	分励脱扣器,报警触头 shunt release,alarm contact	●○△→	●○△→	●○△→	●○△→
228,328	辅助触头 (1NO1NC),报警触头 auxiliary contact (1NO1NC),alarm contact	●○□	●○□	●○□	●○□
238,338	欠压脱扣器,报警触头 under-voltage release, alarm contact	●○▲→	▲○●→	▲○●→	▲○●→
248,348	分励脱扣器,辅助触头 (1NO1NC),报警触头 shunt release,auxiliary contact (1NO1NC), alarm contact	○○△→	○○△→	○○△→	○○△→
268,368	二组辅助触头 (2NO2NC),报警触头 2 groups of auxiliary contact (2NO2NC), alarm contact	○○○→	○○○→	○○○→	○○○→
205,305	二组辅助触头 (3NO3NC),报警触头 2 groups of auxiliary contact (3NO3NC), alarm contact		○○○→	○○○→	○○○→
278,378	欠压脱扣器,辅助触头 (1NO1NC),报警触头 under-voltage release,auxiliary alarm contact (1NO1NC), alarm contact	●○▲→	▲○○→	▲○○→	▲○○→

C

Fast Selection Form

SHTM3Z系列脱扣器及附件代号、符号

SHTM3Z series release and annex code and symbol



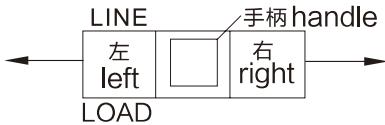
- 报警触头 alarm contact
- 辅助触头 auxiliary contact
- ▲ 欠电压脱扣器 under-voltage release
- △ 分励脱扣器 shunt release
- 辅助报警触头 auxiliary alarm contact
- 双辅助触头 double auxiliary contact
- 右边引线即右装式 right downlead, namely, right installation
- ← 左边引线即左装式 left downlead, namely, left installation

断路器型号 circuit breaker model	附件名称 Accessory name	极数Pole Number	SHTM3Z-100/250	SHTM3Z-400/630/800	
			3P	4P	3P、4P
200,300	无附件 without accessory		200-电磁式脱扣器 (仅有短路瞬时保护) 200-electromagnetic type release (of only short-circuit transient protection) 300-复式脱扣器 (兼有过载和短路瞬时保护) 300-complex release (of both over-load and short-circuit transient protection)		
208,308	报警触头 alarm contact		←●□	←●□	←●□
210,310	分励脱扣器 shunt release		←△□	←△□	□□△→
220,320	辅助触头 (1NO1NC) auxiliary contact (1NO1NC)		←○□	←○□	←○□
202,302	辅助触头 (2NO2NC) auxiliary contact (2NO2NC)		←○○□	←○○□	
230,330	欠电压脱扣器 under-voltage release		←▲□	←▲□	←▲□
240,340	分励脱扣器,辅助触头 (1NO1NC) shunt release,auxiliary contact (1NO1NC)		←○□△→	←△□○→	←○□△→
212,312	分励脱扣器,辅助触头 (2NO2NC) shunt release,auxiliary contact (2NO2NC)		←○○□△→	←△□○○→	←○○□△→
250,350	分励脱扣器,欠电压脱扣器 shunt release,under-voltage release		←▲□△→	←▲□○△→	←▲□△→
260,360	二组辅助触头 (2NO2NC) 2 groups of auxiliary contacts (2NO2NC)			←○□○→	←○○□
222,322	二组辅助触头 (3NO3NC) 2 groups of auxiliary contacts (3NO3NC)			←○○□○→	←○○□○→
223,323	二组辅助触头 (4NO4NC) 2 groups of auxiliary contacts (4NO4NC)			←○○□○○→	←○○□○○→
270,370	欠压脱扣器,辅助触头 (1NO1NC) under-voltage release, auxiliary contact (1NO1NC)			←▲□○→	←▲□○→
232,332	欠压脱扣器,辅助触头 (2NO2NC) under-voltage release, auxiliary contact (2NO2NC)			←▲□○○→	←▲□○○→
218,318	分励脱扣器,报警触头 shunt release,alarm contact		←●□△→	←△□●→	←●□△→
228,328	辅助触头 (1NO1NC),报警触头 auxiliary contact (1NO1NC),alarm contact		←●□	←●□	←●□
238,338	欠压脱扣器,报警触头 under-voltage release, alarm contact			←▲□●→	←●□
248,348	分励脱扣器,辅助触头 (1NO1NC),报警触头 shunt release, auxiliary contact (1NO1NC), alarm contact		←○○□△→	←△□○○→	←○○□△→
268,368	二组辅助触头 (2NO2NC),报警触头 2 groups of auxiliary contact (2NO2NC), alarm contact			←○○□○→	←○○□○→
205,305	二组辅助触头 (3NO3NC),报警触头 2 groups of auxiliary contact (3NO3NC), alarm contact			←○○□○○→	←○○□○○→
278,378	欠压脱扣器,辅助触头 (1NO1NC),报警触头 under-voltage release,auxiliary alarm contact (1NO1NC), alarm contact			←▲□○→	←●□

注：标红为外挂分励模块 Note: the red is the external dhunt module

SHTM3L系列脱扣器及附件代号、符号

SHTM3L series release and annex code and symbol



- 报警触头 alarm contact
- 辅助触头 auxiliary contact
- ▲ 欠电压脱扣器 under-voltage release
- △ 分励脱扣器 shunt release
- 辅助报警触头 auxiliary alarm contact
- 双辅助触头 double auxiliary contact
- 右边引线即右装式 right download, namely, right installation
- ← 左边引线即左装式 left download, namely, left installation

脱扣器及附件代号 Release and accessory code	附件名称 Accessory name	断路器型号 circuit breaker model	SHTM3L-100/250		SHTM3L-400/630	
			极数Pole Number	3P, 4P A/D型	4P B/C型	3P, 4P A/D型
200,300	无附件 without accessory	200-电磁式脱扣器 (仅有短路瞬时保护) 200-electromagnetic type release (of only short-circuit transient protection)		300-复式脱扣器 (兼有过载和短路瞬时保护) 300-complex release (of both over-load and short-circuit transient protection)		
208,308	报警触头 alarm contact	← ● ○	← ● ○	← ● ○	← ● ○	
210,310	分励脱扣器 shunt release	← △ ○	← △ ○	← △ ○	← △ ○	
220,320	辅助触头 (1NO1NC) auxiliary contact (1NO1NC)	← ○ ○	← ○ ○	← ○ ○	← ○ ○	
202,302	辅助触头 (2NO2NC) auxiliary contact (2NO2NC)	← ○○ ○	← ○○ ○			
230,330	欠电压脱扣器 under-voltage release	← ▲ ○	← ▲ ○	← ▲ ○	← ▲ ○	
240,340	分励脱扣器,辅助触头 (1NO1NC) shunt release,auxiliary contact (1NO1NC)		← △ ○○ →	← △ ○○ →	← △ ○○ →	
212,312	分励脱扣器,辅助触头 (2NO2NC) shunt release,auxiliary contact (2NO2NC)		← △ ○○○ →		← △ ○○○ →	
250,350	分励脱扣器,欠电压脱扣器 shunt release,under-voltage release		← ▲ ○△ →		← ▲ ○△ →	
260,360	二组辅助触头 (2NO2NC) 2 groups of auxiliary contacts (2NO2NC)		← ○ ○○ →	← ○ ○○ →	← ○ ○○ →	
222,322	二组辅助触头 (3NO3NC) 2 groups of auxiliary contacts (3NO3NC)		← ○○ ○○ →	← ○○ ○○ →	← ○○ ○○ →	
223,323	二组辅助触头 (4NO4NC) 2 groups of auxiliary contacts (4NO4NC)		← ○○ ○○○ →		← ○○ ○○○ →	
270,370	欠压脱扣器,辅助触头 (1NO1NC) under-voltage release, auxiliary contact (1NO1NC)		← ▲ ○○ →	← ▲ ○○ →	← ▲ ○○ →	
232,332	欠压脱扣器,辅助触头 (2NO2NC) under-voltage release, auxiliary contact (2NO2NC)		← ▲ ○○ →		← ▲ ○○ →	
218,318	分励脱扣器,报警触头 shunt release,alarm contact		← △ ○● →	← △ ○● →	← △ ○● →	
228,328	辅助触头 (1NO1NC),报警触头 auxiliary contact (1NO1NC),alarm contact	← ● ○	← ● ○	← ● ○	← ● ○	
238,338	欠压脱扣器,报警触头 under-voltage release, alarm contact		← ▲ ○● →	← ▲ ○● →	← ▲ ○● →	
248,348	分励脱扣器,辅助触头 (1NO1NC),报警触头 shunt release,auxiliary contact (1NO1NC), alarm contact		← △ ○○ →	← △ ○○ →	← △ ○○ →	
268,368	二组辅助触头 (2NO2NC),报警触头 2 groups of auxiliary contact (2NO2NC), alarm contact		← ○○ ○○ →	← ○○ ○○ →	← ○○ ○○ →	
205,305	二组辅助触头 (3NO3NC),报警触头 2 groups of auxiliary contact (3NO3NC), alarm contact		← ○○ ○○○ →	← ○○ ○○○ →	← ○○ ○○○ →	
278,378	欠压脱扣器, 辅助触头 (1NO1NC),报警触头 under-voltage release,auxiliary contact (1NO1NC), alarm contact		← ▲ ○○ →	← ▲ ○○ →	← ▲ ○○ →	

C

SHTM3系列保护特性 SHTM3 Series Protection Characteristics

过载(反时限动作)断开特性

Overload(inverse time limit)disconnecting characteristics.

	试验电流名称 Test current name	整定电流倍数 Multiple of set current	约定时间 Conventional period		起始状态 Start status
			$I_n \leq 63$	$I_n > 63$	
过载保护 (配电) Overload protection (power distribution)	约定不脱扣电流 Conventional non-release current	1.05	$\geq 1h$	$\geq 2h$	冷态 Cold status
	约定脱扣电流 Conventional release current	1.3	$< 1h$	$< 2h$	热态 Hot status
过载保护 (电动机) Overload protection (electromotor)	约定不脱扣电流 Conventional non-release current	1.0	$\geq 2h$		冷态 Cold status
	约定脱扣电流 Conventional release current	1.2	$< 2h$		热态 Hot status
		1.5	$\leq 2min(SHTM3-63)$ 脱扣级别5 $\leq 4min(SHTM3-100,160,250)$ 脱扣级别10 $\leq 8min(SHTM3-400,630)$ 脱扣级别20		热态 Hot status
		7.2	$0.5s < T_p \leq 5s$ (SHTM3-63) 脱扣级别5 $4s < T_p \leq 10s$ (SHTM3-100,160,250) 脱扣级别10 $6s < T_p \leq 20s$ (SHTM3-400,630) 脱扣级别20		冷态 Cold status

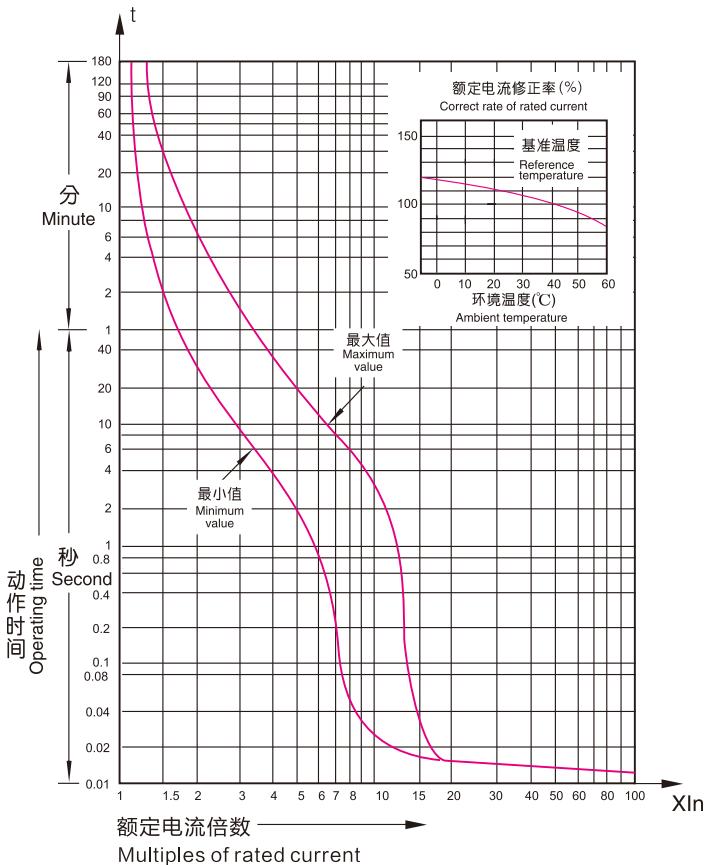
短路断开特性

Short-circuit disconnecting characteristics.

	额定电流 I_n Rated current	动作特性 performance characteristic
短路保护 (配电) Short-circuit protection (power distribution)	$\leq 32A$	$400A \pm 20\%$
	40~800A	$10I_n \pm 20\%$
短路保护 (电动机) Short-circuit protection (electromotor)	$\leq 32A$	$400A \pm 20\%$
	40~630A	$12I_n \pm 20\%$

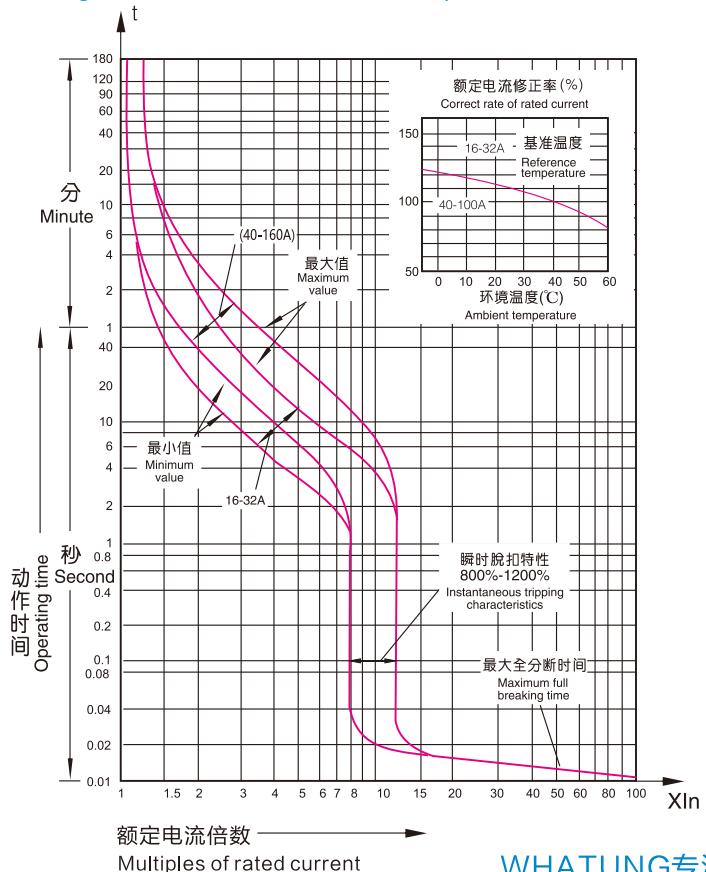
SHTM3-63动作特性曲线及温度校准曲线

Operating characteristic curve and temperature correction curve



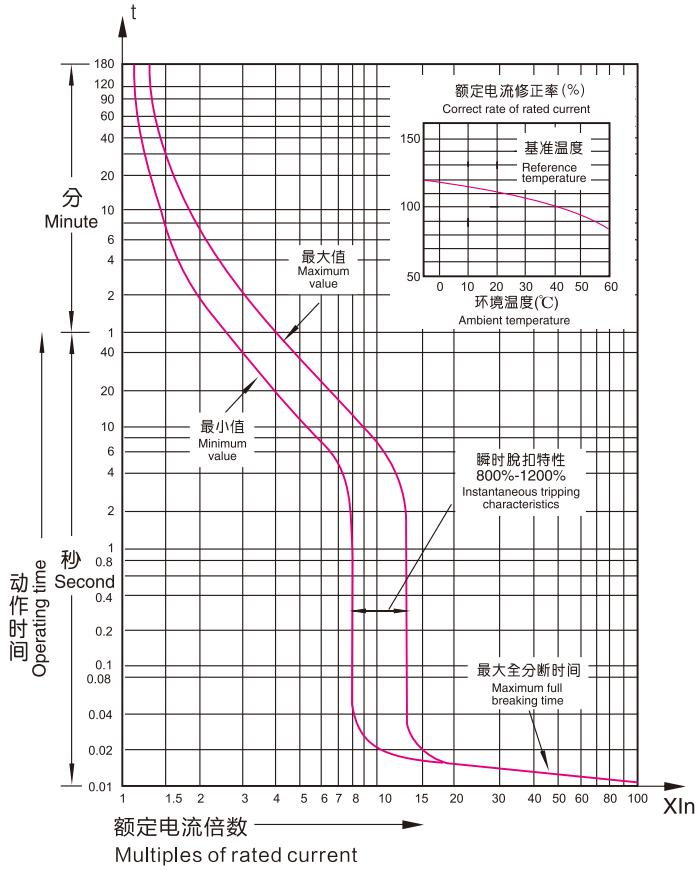
SHTM3-160(100)动作特性曲线及温度校准曲线

Operating characteristic curve and temperature correction curve



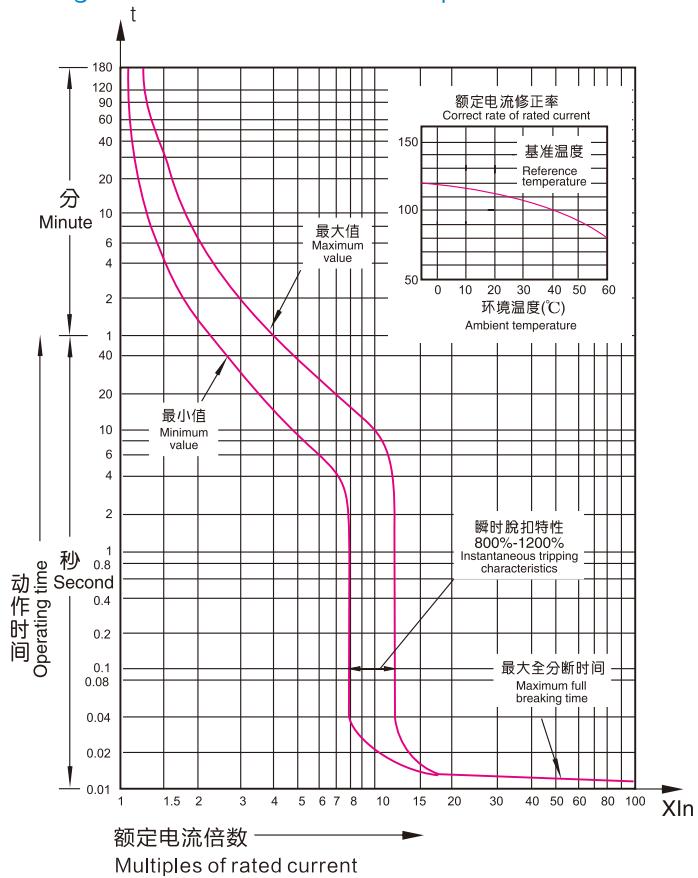
SHTM3-250动作特性曲线及温度校准曲线

Operating characteristic curve and temperature correction curve



SHTM3-630(400)动作特性曲线及温度校准曲线

Operating characteristic curve and temperature correction curve

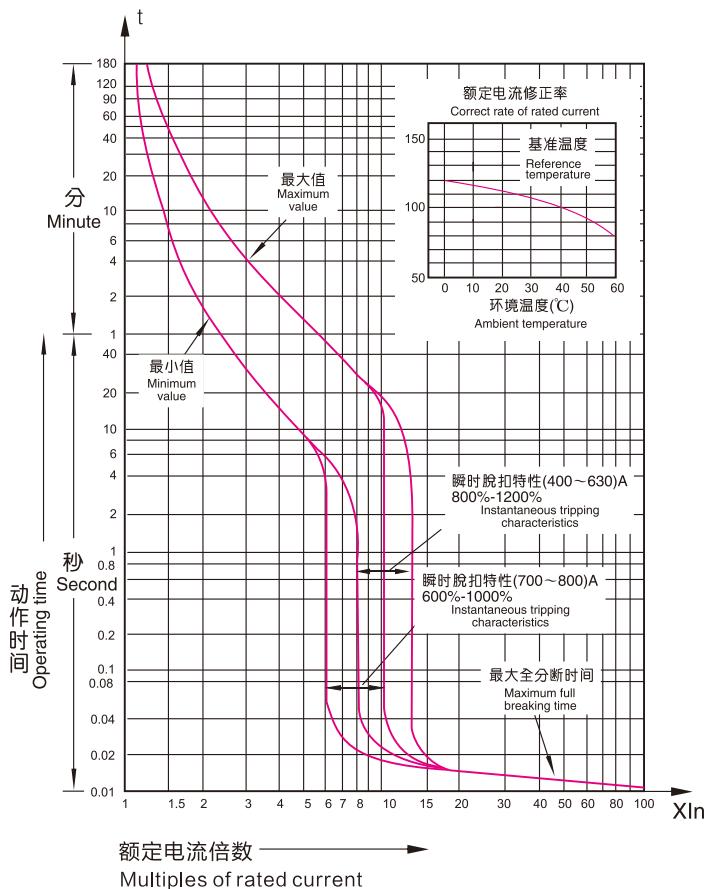


SHTM3系列塑料外壳式断路器

SHTM3 Series Moulded Case Circuit Breaker

SHTM3-800(630)动作特性曲线及温度校准曲线

Operating characteristic curve and temperature correction curve



D

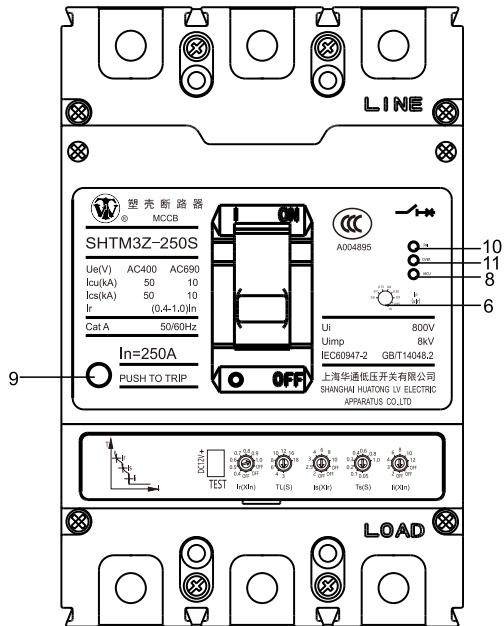
SHTM3Z系列智能型断路器

www.huatong.net.cn

SHTM3Z Series Intelligent Type Breaker

SHTM3Z-100、250系列正面指示

Front indication of SHTM3Z-100 and 250 series



SHTM3Z系列保护特性参数的设定

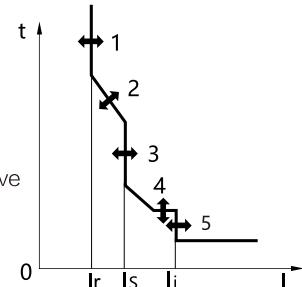
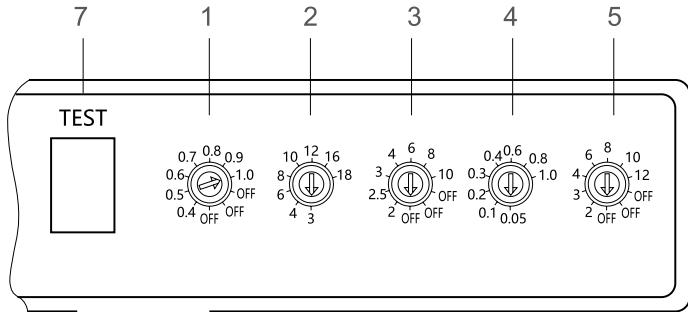
Setting of protection characteristic parameters of SHTM3Z series

注：用户可根据需求自行调整

Note: The users can adjust according to the demand.

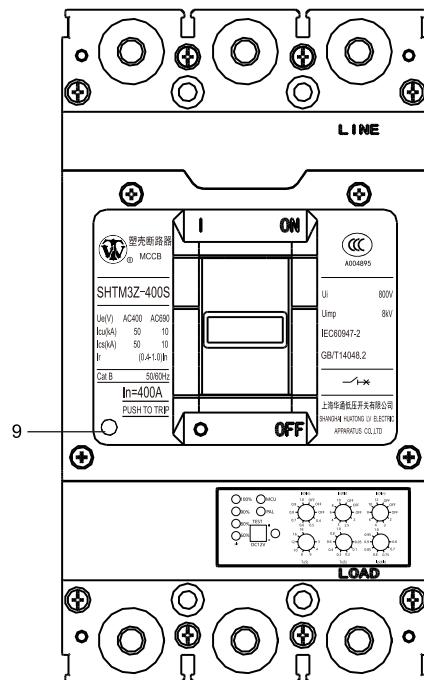
SHTM3Z-250, In=250A智能化断路器

SHTM3Z-250 intelligent circuit breakers of In=250A



SHTM3Z-400、630、800系列正面指示

Front indication of SHTM3Z-400、630 and 800 series



SHTM3Z系列保护特性参数的设定

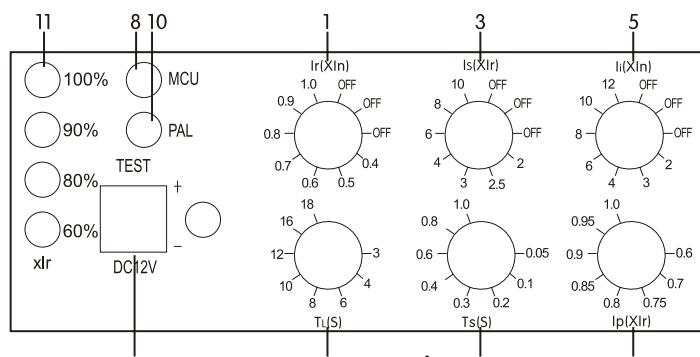
Setting of protection characteristic parameters of SHTM3Z series

注：用户可根据需求自行调整

Note: The users can adjust according to the demand.

SHTM3Z-400, In=400A智能化断路器

SHTM3Z-400 intelligent circuit breakers of In=400A



SHTM3Z系列保护功能

SHTM3Z Series Protection function

M型控制器：

1—过载长延时整定电流Ir,
 $Ir = (0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0) In + OFF$
 2—过载长延时整定时间TL,
 $TL = (3, 4, 6, 8, 10, 12, 16, 18) S$
 3—短路短延时整定电流Is,
 $Is = (2, 2.5, 3, 4, 6, 8, 10) Ir + OFF$
 4—短路短延时整定时间Ts,
 $Ts = (0.05, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0) S$
 5—短路瞬时整定电流Ii,
 $Ii = (2, 3, 4, 6, 8, 10, 12) Ir + OFF$
 6—预报警整定电流Ip,
 $Ip = (0.6, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95, 1.0) Ir$
 或接地保护整定电流Ig,
 $Ig = (0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.9, 1.0) Ir + OFF$
注：1.接地保护动作时间tg=0.4s，控制器出厂时设定
 2.增选接地保护功能时，预报警默认为0.9Ir；当Ir设定为OFF时，预报警默认为1.0In

M type controller:

1—Overload long-delay set current Ir,
 $Ir = (0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0) In + OFF$
 2—Overload long-delay set current TL,
 $TL = (3, 4, 6, 8, 10, 12, 16, 18) S$
 3—Short-circuit short-delay set current Is,
 $Is = (2, 2.5, 3, 4, 6, 8, 10) Ir + OFF$
 4—Short-circuit short-delay set current Ts,
 $Ts = (0.05, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0) S$
 5—Short-circuit transient set current Ii,
 $Ii = (2, 3, 4, 6, 8, 10, 12) Ir + OFF$
 6—Pre-alarm set current Ip,
 $Ip = (0.6, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95, 1.0) Ir$
 Or ground protection set current Ig,
 $Ig = (0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.9, 1.0) Ir + OFF$
Note: 1. Ground protection action time tg=0.4s, controller's Factory setting.
 2. When the ground protection fucntion is added, the default for the pre alarm is 0.9Ir; When the set of Ir is OFF, the pre alarm default is 1.0In.

H型控制器：

1—过载长延时整定电流Ir,
 $Ir = (0.4-1) In + OFF$, 步长1A
 2—过载长延时整定时间TL,
 $TL = 3-18s$, 步长1s
 3—短路短延时整定电流Is,
 $Is = (0.4-10) In$, 步长1A
 4—短路短延时整定时间Ts,
 $Ts = 0.05-1.0s$, 在0.6s 内步长为0.05s, 大于0.6s 步长为0.1s
 5—短路瞬时整定电流Ii,
 $Ii = (1-12) In + OFF$, 步长1A
 6—预报警整定电流Ip,
 $Ip = (0.2-1) In$, 步长1A
 或Ig= (0.2-1.0) In + OFF, 步长1A
注：1.预报警动作时间tp=0.1-1s, 步长0.1s
 2.接地保护动作时间tg=0.1-0.8s+OFF, 步长为0.1, 设置在OFF 时只报警不跳闸

H type controller:

1—Overload long-delay set current Ir,
 $Ir = (0.4-1) In + OFF$, step width is 1A
 2—Overload long-delay set current TL,
 $TL = 3-18s$, step width is 1s
 3—Short-circuit short-delay set current Is,
 $Is = (0.4-10) In$, step width is 1A
 4—Short-circuit short-delay set current Ts,
 $Ts = 0.05-1.0s$, within 0.6s step width is 0.05s, > 0.6s step width is 0.1 s
 5—Short-circuit transient set current Ii,
 $Ii = (1-12) In + OFF$, step width is 1A
 6—Pre-alarm set current Ip,
 $Ip = (0.2-1) In$, step width is 1A
 Or Ig= (0.2-1.0) In + OFF, step width is 1A
Note: 1.Pre alarm action time is tp=0.1-1s, step width is 0.1s.
 2. Ground protection action time tg=0.1-0.8s+OFF, step width is 0.1s, when the set is OFF, only alarm works, not trip.

辅助功能

Auxiliary function

7—测试端,可用直流电压检测脱扣器
 8—电源及自诊断指示
 9—紧急脱扣按钮
 10—预报警指示
 11—运行电流负载指示

7—Test end by using DC detection release
 8—Power and self-diagnosis indication
 9—Emergency release button
 10—Pre-alarm indication
 11—Operating current load indication

SHTM3Z系列控制器功能分类 SHTM3Z Series Controller function classify

功能 Function		控制器类型 Controller type	M型(基本型) Type M (Basic type)	H型(通讯型) Type H (Communication type)
保护功能 Protective Function	基本功能 Basic Function	过载长延时保护 (可OFF) Overload long delay protection (Can be OFF)	√	√
		短路短延时保护 (可OFF) Short circuit short delay protection (Can be OFF)	√	√
		短路瞬时保护 (可OFF) Short circuit instantaneous protection (Can be OFF)	√	√
		接地故障保护 (可OFF) Ground fault protection(Can be OFF)	○	○
	附加功能 Additional Function	过载预报警 (可OFF) Neutral pole protection(Can be OFF)	√	√
		热记忆功能 (可OFF) Thermal memory(Can be OFF)	√	√
		过载报警不脱扣Overload alarm, no tripping	○	○
	扩展功能 Extended Function	分励模块Shunt trip	○	○
		漏电保护Leakage protection	○	○
维护功能 Maintenance Function	指示功能 Indicating Function	预报警指示Pre-alarm indication	√	√
		过载指示Overload indication	√	√
		控制器自诊断指示 Controller self-diagnostic indication	√	√
		脱扣测试Tripping test	√	√
	历史记录 History record	故障记录查询Fault record searching	-	√
	通讯模块 Communication Function	标准RS485通信协议 Standard RS485 communication protocol	-	√
通讯功能 Communication Function	信号输出功能 Signal output Function	合闸、分闸信号输出 Closing and opening signal output	-	√
		接地触点输出Earthing contacts output	-	√
		故障触点输出Fault contacts output	-	√
		过载预报警触点输出 Overload alarm contacts output	-	√
	信号输入功能 Signal input Function	合分状态检测输入功能 Closing and opening status test input	-	√

“√” 表示必备功能， “○” 表示可选功能， “—” 表示无此功能。

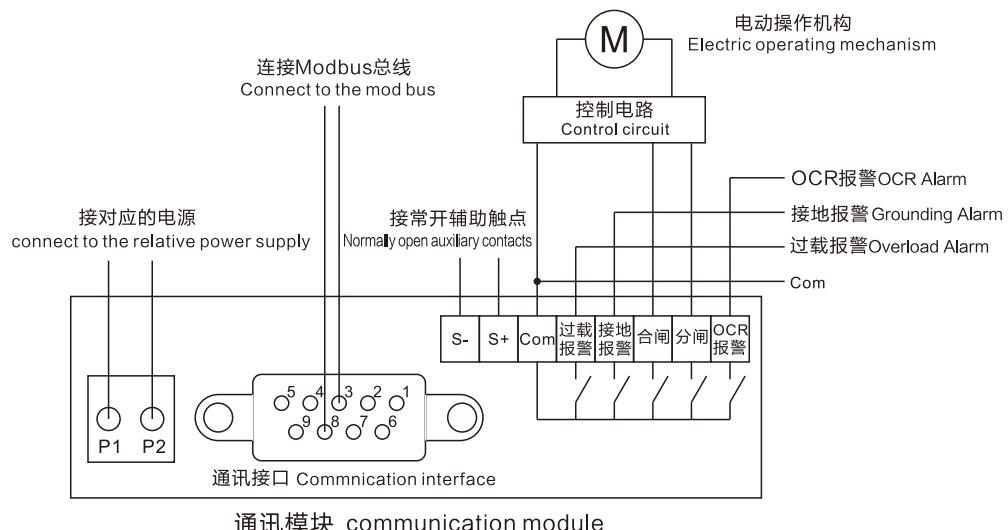
“√” indicates essential function, “○” indicates optional function, “—” indicates no this function.

SHTM3Z系列通讯功能 Series Communication function

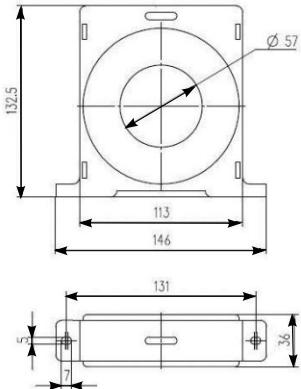
1. 电源接口：根据标牌标示的电源规格（AC220V、AC380V），在P1、P2端口施加对应的工作电源。
 2. 通讯接口：在通讯接口（DB9端子）的3、8脚分别接Modbus总线的Data+、Data-，实现Modbus组网。
 3. 开关状态检测：在S+、S-两个端子接入开关的常开触点（合闸状态下），使控制器及上位机可以识别塑壳断路器的工作状态。
 4. DO输出端口分别与Com端形成常开触点（AC220V/5A），满足触发条件时DO动作（对应的端口与公共端导通）。
- 使用合分闸触点输出控制电动操作机构实现断路器的合分闸。
注：在执行合闸操作时，控制器会先执行一次分闸操作，在执行合闸操作。

1. Power interface: according to the power specification (AC220V, AC380V) indicated on the label, apply corresponding working power to ports P1 and P2.
2. Communication interface: connect Data+ and Data- of Modbus to the 3 and 8 pins of the communication interface (DB9 terminal) to realize Modbus networking.
3. On-off status detection: the controller and the upper computer can recognize the working status of the molded case circuit breaker in the normal on-off and off-on state of the S+ and S- terminals access switch.
4. DO output port forms a normally open contact with Com terminal (AC220V/5A), and when the trigger condition is met, DO action (the corresponding port and the public terminal conduct).
The closing and opening of the circuit breaker is realized by using the electric operating mechanism to control the output of the closing and opening contact.
Note: when the closing operation is performed, the controller will first perform the opening operation and then the closing operation.

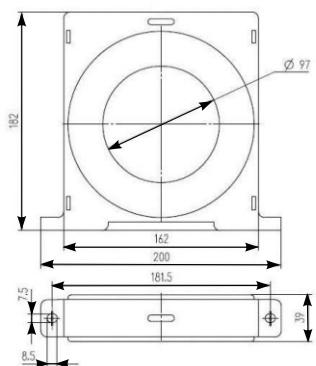
端口名称	Port Name	说明	Instruction	触发条件	Trigger Condition
过载报警	Overload Alarm	过载预报警触点输出 Overload warning contact output		负载电流大于预报警电流 Load current is greater than the warning current	
接地报警	Grounding Alarm	接地触点输出 Grounded contact output		有接地故障发生（产品具有接地功能时） Grounding fault occurs (when the product has grounding function)	
合闸	Closing	合闸触点输出 Closing contact output		远程控制合闸（见注） Remote control closing (see note)	
分闸	break-brake	分闸触点输出 Overload warning contact output		远程控制分闸（在合闸状态下） Remote control switching (in switching state)	
OCR报警	OCR Alarm	故障触点输出 Failure contact output		发生故障（长延时、短延时、瞬时） Failure (long delay, short delay, instantaneous)	
Com		公共端 Public side			



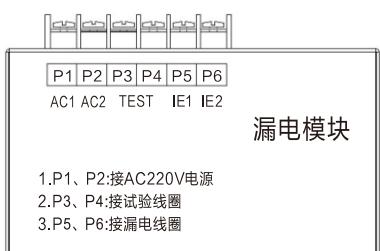
SHTM3Z系列漏电功能 Series Leakage function



SHTM3Z-100/250互感器外形及安装尺寸
The outline and installation dimension of
SHTM3Z-100/250 transformer



SHTM3Z-400/800 (630) 互感器外形及安装尺寸
The outline and installation dimension of
SHTM3Z-400/800 (630) transformer



漏电模块接线图

Wiring diagram of leakage module



SHTM3Z系列分励功能 Series Shunt trip function

断路器可通过外置零序电流互感器与漏电功能模块，以实现漏电功能。

1.漏电功能模块控制电源电压AC220V、AC380V两种；

2.外置零序电流互感器的外形及安装尺寸如左图；

3.断路器所有相需穿过外置式零序电流互感器，并注意进行绝缘处理。

Circuit breaker can realizes leakage function by external zero sequence current transformer and leakage fucntion module.

1.The control supply voltage of leakage function module is AC220V and AC380V two types.

2.The outline and intallaion dimension of the external zero sequence current transformer is as left:

3.All the phases of the circuit breaker need to be through external zero sequence current mutual inductor, and with insulation treatment.

SHTM3Z系列过载报警功能 Series Overload alarm function

断路器可外挂分励模块，以实现分励脱扣器相同的功能，分励模块控制电源电压分AC220V、AC380V 两种，其最低动作电压在70%以上（用户需考虑电压降）。

注意：分励模块不允许长时间通电，推荐在使用时在控制电源侧串接断路器辅助常开触点。

Circuit breaker can be out installed with Shut trip module, to realize the same function as shunt tripper. The control supply voltage for the shunt trip is AC220V,AC380V two types, and the lowest working voltage is above 70%. (The user needs to consider the reduce of the voltage).

Note: The shunt trip module should not be electrified for too long, so an auxiliary normally open contact connected in series with the control supply is suggested to use.

SHTM3Z系列功能模块外形尺寸 SeriesOutline dimension for the function module

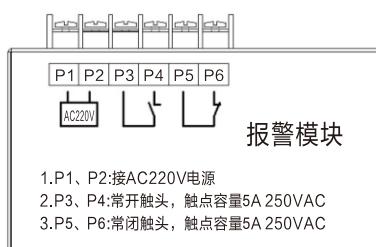
断路器可外挂过载报警模块，以实现过载报警不脱扣功能，过载报警模块控制电源电压分220V、380V两种，动作特性同过载长延时保护，断路器只报警不动作,提供常开,常闭触点，用于输出信号。触点容量：AC220V/5A。

Circuit breaker can be out installed with Overload alarm module, to realize the function of overload alarm but no trip. The control supply voltage for the overload alarm module is 220V and 380V two types.. Action characteristics is same as overload long delay protection, the circuit breaker alarms but no action, providing normally open, close contacts, for signal output. Contact capacity is AC220V/5A.

SHTM3Z系列功能模块外形尺寸 SeriesOutline dimension for the function module

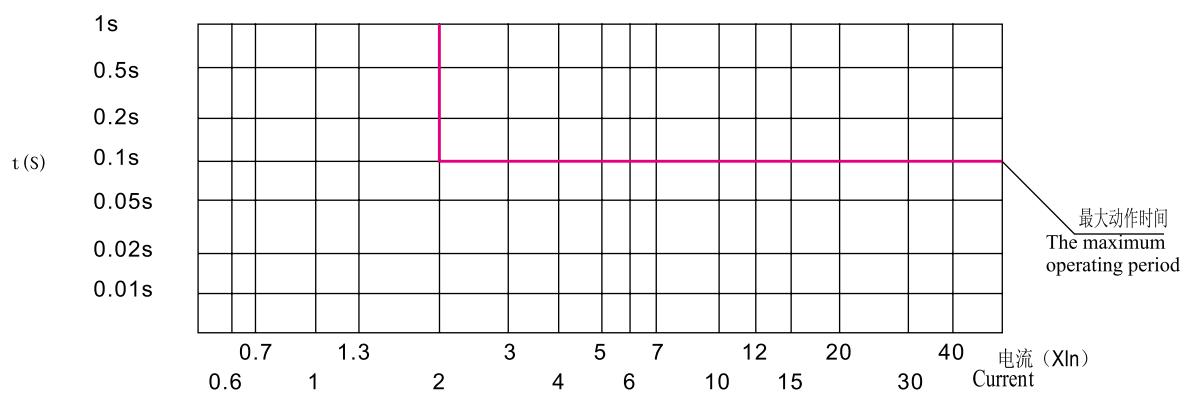
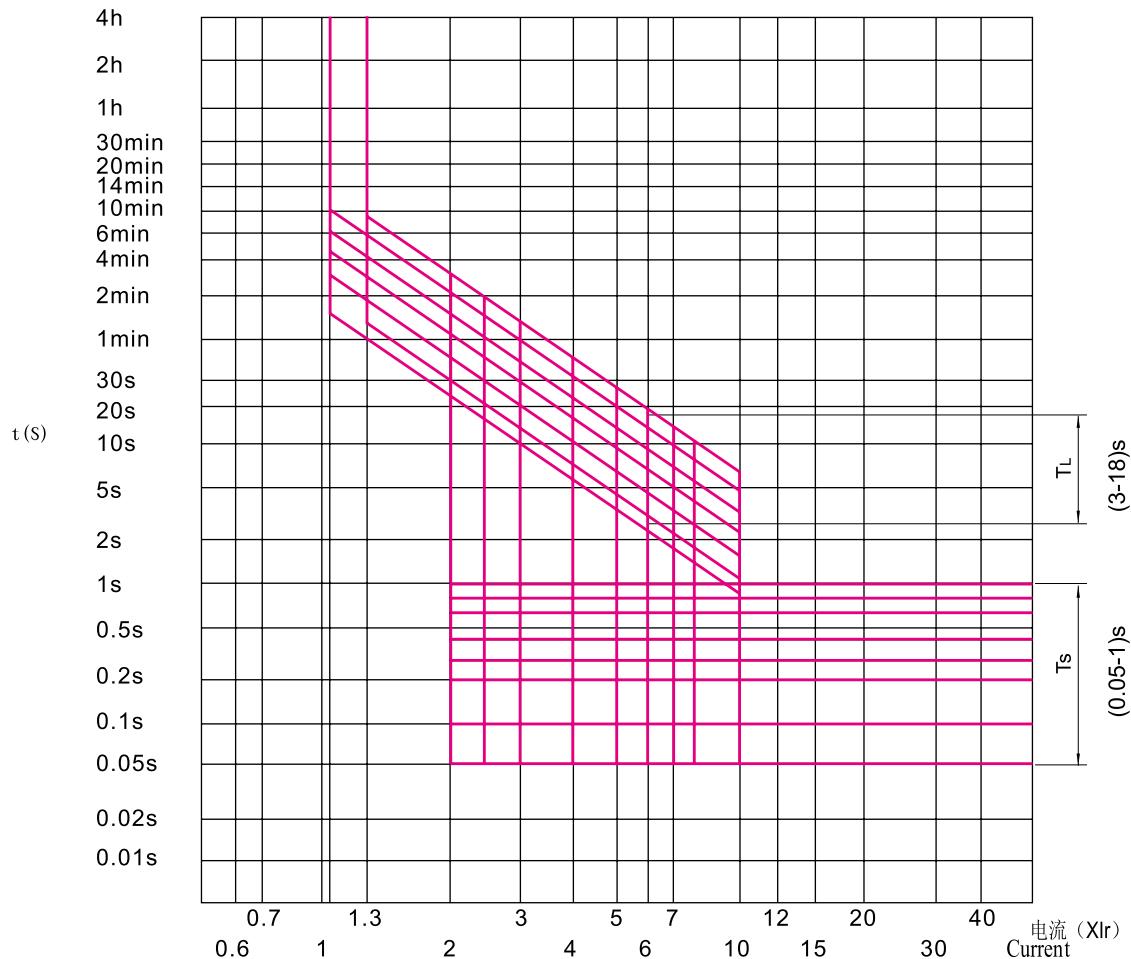
所有功能模块包括通讯模块、漏电模块、分励模块、过载报警模块，外形尺寸均一致，如左图：

The outline dimensions for all the function modules including communication module,leadkage module, shunt trip module, overload alarm module are the same as left:



过载报警模块 Overload alarm module

SHTM3Z系列动作特性曲线图 Series ZOperating characteristic curve diagram



SHTM3L系列保护特性 SHTM3L Series Protection Characteristics

过载(反时限动作)断开特性 Overload(inverse time limit) disconnecting characteristics

	试验电流名称 Test current name	整定电流倍数 Multiple of set current	约定时间 Conventional period		起始状态 Start status
			In≤63	In>63	
过载保护 (配电) Overload protection (power distribution)	约定不脱扣电流 Conventional non-release current	1.05	≥1h	≥2h	冷态 Cold status
	约定脱扣电流 Conventional release current	1.3	<1h	<2h	热态 Hot status
	约定不脱扣电流 Conventional non-release current	1.0		≥2h	冷态 Cold status
过载保护 (电动机) Overload protection (electromotor)		1.2		<2h	热态 Hot status
	约定脱扣电流 Conventional release current	1.5	≤4min(SHTM3L-100,250)脱扣级别10 ≤8min(SHTM3L-400,630)脱扣级别20		热态 Hot status
		7.2	4s<Tp≤10s(SHTM3L-100,250)脱扣级别10 6s<Tp≤20s(SHTM3L-400,630)脱扣级别20		冷态 Cold status

短路断开特性 Short-circuit disconnecting characteristics

	额定电流In Rated current	动作特性 performance characteristic
短路保护 (配电) Short-circuit protection (power distribution)	≤32A	400A ± 20%
	≥40A	10In ± 20%
短路保护 (电动机) Short-circuit protection (electromotor)	≤32A	400A ± 20%
	≥40A	12In ± 20%

漏电报警单元 Leakage alarm unit

B型:

漏电发生时断路器不断开只报警注：B型为满足特殊场合需要，用户在采用此功能保护电器时请谨慎考虑。

T型：

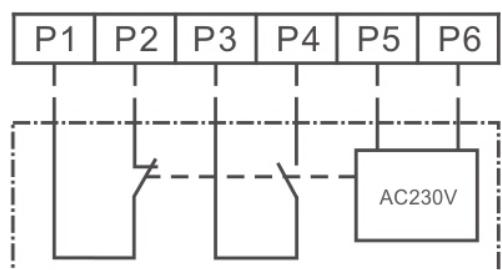
漏电发生时断路器断开并报警漏电报警单元模块上带有漏电报警指示灯及报警解除按钮。

B type:

leakage occurs, and the circuit breaker is not open only alarm note:B type is to meet the special needs of the occasion. When users use this function to protect the electrical appliances,please consider carefully.

T type:

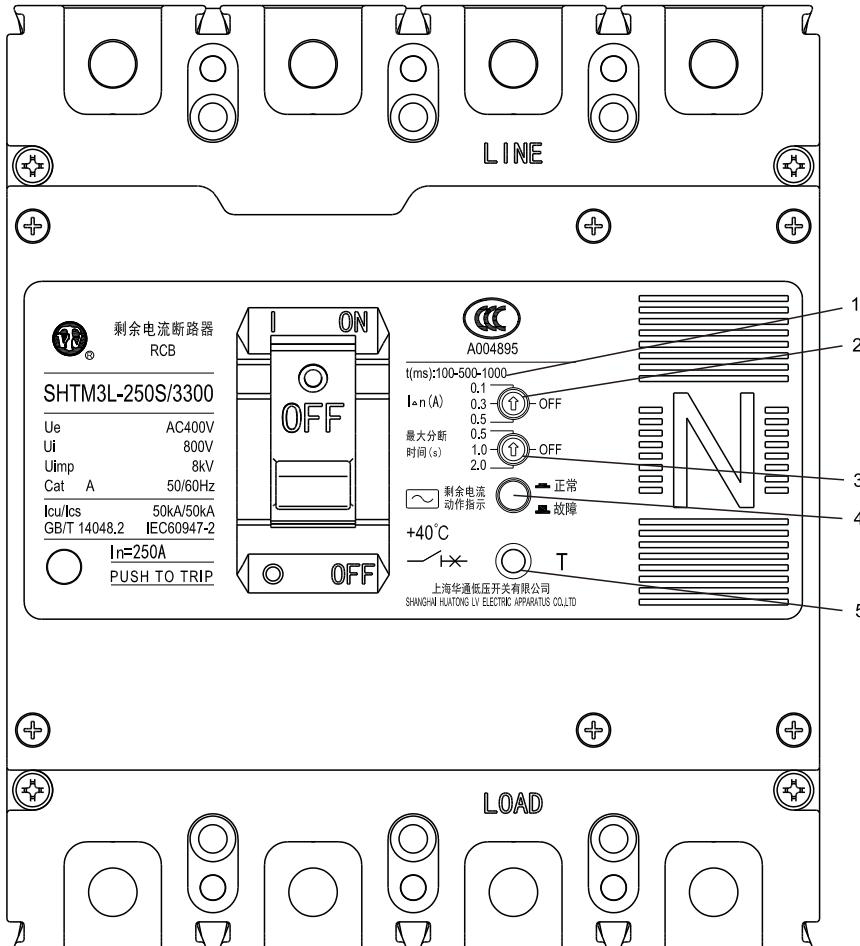
leakage occurs, and the circuit breaker is open and alarmLeakage alarm unit module with a leakage alarm indicator and alarm release button.



- 1.P1、P2为常闭触头，P3、P4为常开触头，触点容量：0.5A 250VAC
1.P1、P2 is normally closed contact,P3、P4 is normally open contact, contact capacity:0.5A 250VAC
- 2.P5、P6接电源AC230V
2.P5、P6 connected to ac230v
- 3.产品合闸之前务必接通模块工作电源
3.Be sure to switch on the module power before closing the product

SHTM3L-100、250、400、630系列正面指示

Front indication of SHTM3Z-100、250、400、630 series



延时型剩余电流断路器：

- 1—极限不驱动时间，
=(0.1、0.5、1) S, 详见F-3页表格
2—剩余电流，
=(0.1、0.3、0.5) A+OFF, 详见F-3页表格
3—最大分断时间，
=(0.5、1.0、2.0) S+OFF, 详见F-3页表格
4—剩余电流动作指示，
正常使用时指示按钮与上盖齐平, 剩余电流动作后指示按钮凸出
5—测试按钮，
测试断路器漏电功能是否正常
- 非延时型剩余电流断路器：
- 1—极限不驱动时间，
无
2—剩余电流，
=(0.03、0.1、0.5) A+OFF, 详见F-3页表格
3—最大分断时间，
=0.2S, 详见F-3页表格
4—剩余电流动作指示，
正常使用时指示按钮与上盖齐平, 剩余电流动作后指示按钮凸出
5—测试按钮，
测试断路器漏电功能是否正常

Delay type residual current circuit breaker:

- 1—Limit non drive time,
=(0.1, 0.5, 1) S, see the table on page F-3 for details
2—residual current,
=(0.1, 0.3, 0.5) A+OFF, see the table on page F-3 for details
3—Maximum breaking time,
=(0.5, 1.0, 2.0) S+OFF, see table on page F-3 for details
4—Residual current action indication,
When in normal use, the indicator button is flush with the top cover, and the indicator button protrudes after the remaining current action
5—Test button,
Test whether the circuit breaker leakage function is normal
- Non-delay residual current circuit breaker:
- 1—Limit non drive time,
There is no
2—residual current,
=(0.03, 0.1, 0.5) A+OFF, see the table on page F-3 for details
3—Maximum breaking time,
=0.2s, see the table on page F-3 for details
4—Residual current action indication,
When in normal use, the indicator button is flush with the top cover, and the indicator button protrudes after the remaining current action
5—Test button,
Test whether the circuit breaker leakage function is normal

延时型剩余电流断路器的剩余电流动作的分断时间

Breaking time of residual current acting on delay type residual current circuit breaker

剩余电流 Residual current	$I_{\Delta n}$	$2I_{\Delta n}$	$5I_{\Delta n}$	$10I_{\Delta n}$
最大分断时间 Maximum break time	0.5	0.5	0.3	0.3
极限不驱动时间 Limit non drive time	—	0.1	—	—
最大分断时间 Maximum break time	1.15	1.0	0.9	0.9
极限不驱动时间 Limit non drive time	—	0.5	—	—
最大分断时间 Maximum break time	2.15	2.0	1.9	1.9
极限不驱动时间 Limit non drive time	—	1.0	—	—

注：剩余电流动作时间可OFF。

Note: Residual current operating time can be OFF.

非延时型剩余电流断路器剩余电流动作的分断时间

Breaking time of residual current for non-delay residual current circuit breakers

剩余电流 Residual current	$I_{\Delta n}$	$2I_{\Delta n}$	$5I_{\Delta n}$	$10I_{\Delta n}$
最大分断时间 Maximum Breaking time	0.2	0.1	0.04	0.04

注：

对 $I_{\Delta n} \leq 30mA$ 剩余电流断路器用0.25A代替 $5I_{\Delta n}$ 对 $I_{\Delta n} \leq 30mA$ 剩余电流断路器用0.5A代替 $10I_{\Delta n}$

Note:

Replace the $5I_{\Delta n}$ residual current circuit breaker with 0.25A for $I_{\Delta n} \leq 30mA$ Replace the $10I_{\Delta n}$ residual current circuit breaker with 0.5A for $I_{\Delta n} \leq 30mA$

在剩余电流含直流分量情况下剩余电流断路器脱扣电流范围

Release current scope of the residual current circuit breaker when residual current has AC in it.

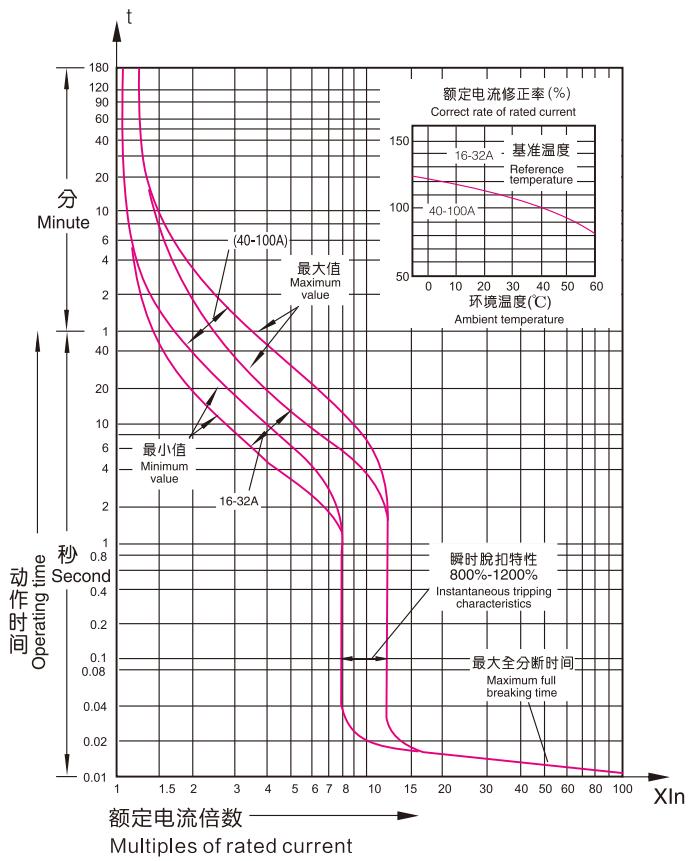
脱扣电流/A Release current/A		
角度 α Angle	下限 MIN.	上限 MAX.
0°	0.35 $I_{\Delta n}$	1.4 $I_{\Delta n}$
90°	0.25 $I_{\Delta n}$	1.4 $I_{\Delta n}$
135°	0.11 $I_{\Delta n}$	1.4 $I_{\Delta n}$

SHTM3L系列带剩余电流断路器

SHTM3L Series Residual Current Circuit Breaker

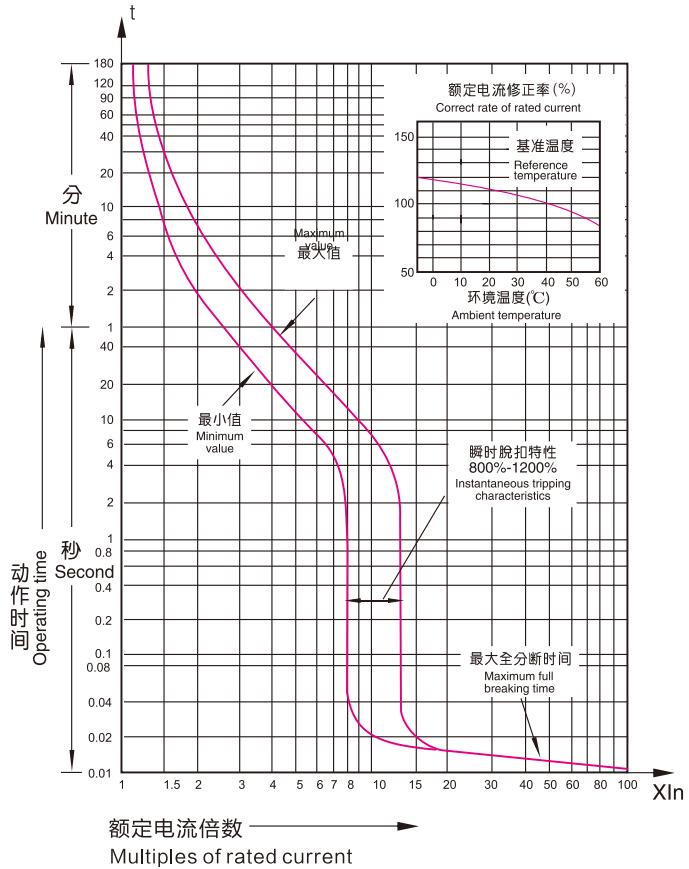
SHTM3L-100动作特性曲线及温度校准曲线

Operating characteristic curve and temperature correction curve



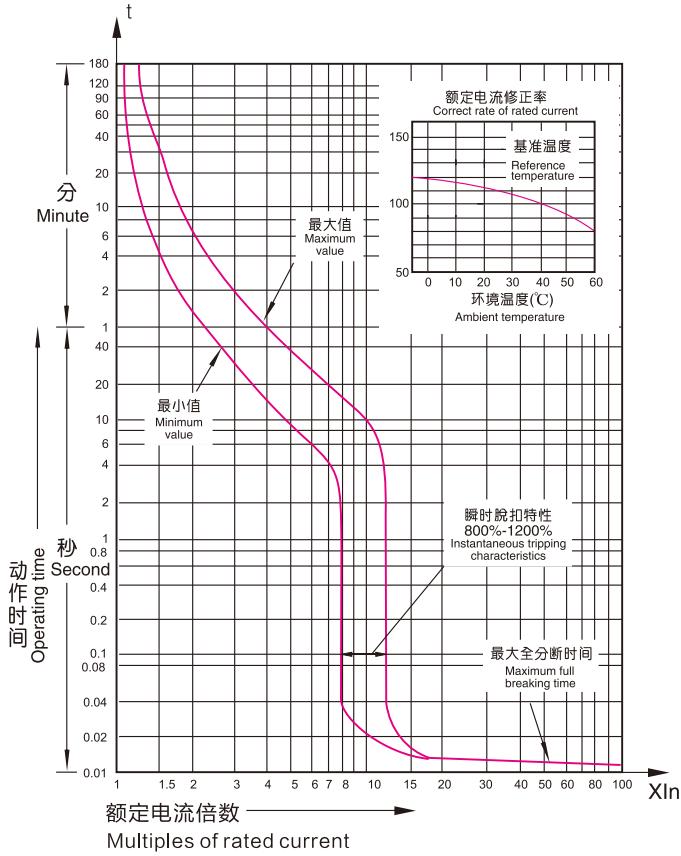
SHTM3L-250动作特性曲线及温度校准曲线

Operating characteristic curve and temperature correction curve



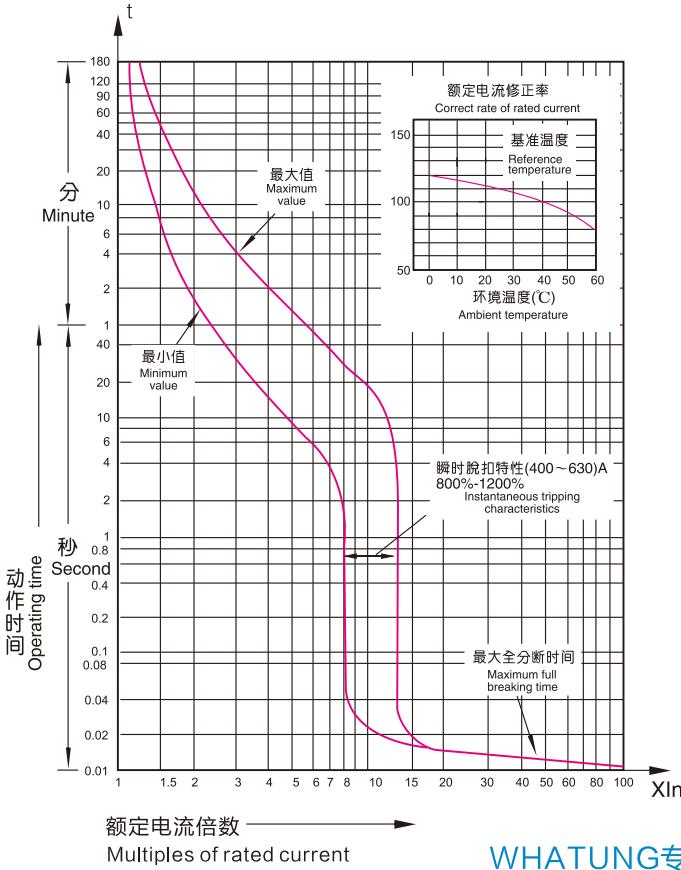
SHTM3L-400动作特性曲线及温度校准曲线

Operating characteristic curve and temperature correction curve



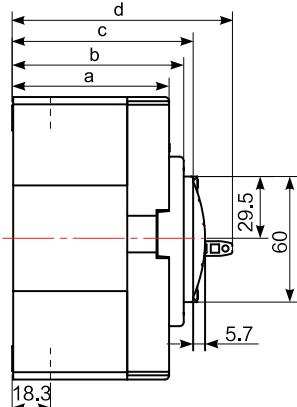
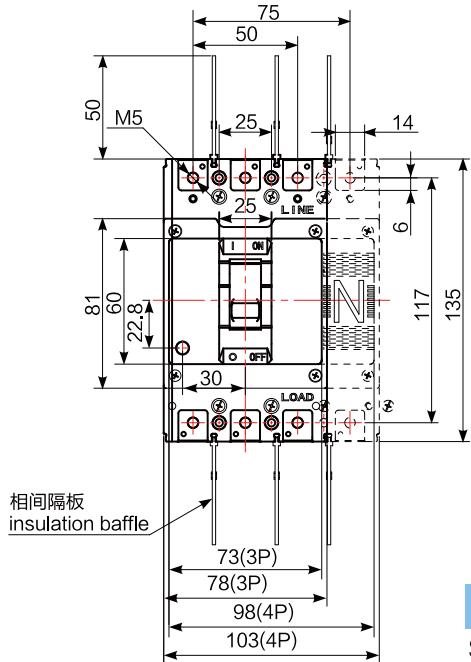
SHTM3L-630动作特性曲线及温度校准曲线

Operating characteristic curve and temperature correction curve

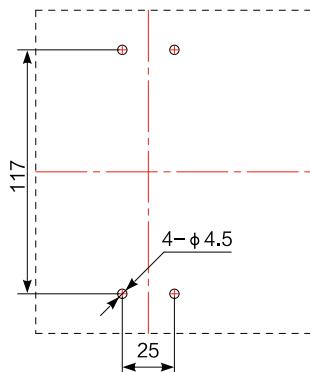


SHTM3-63 板前接线

Front connection



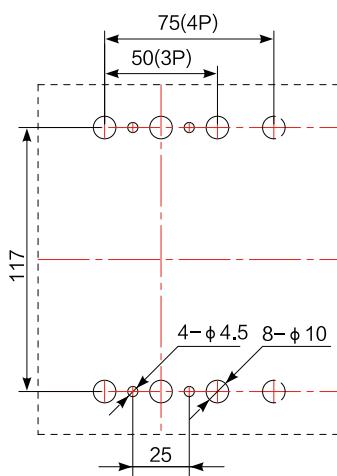
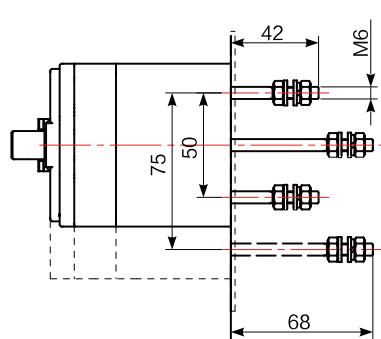
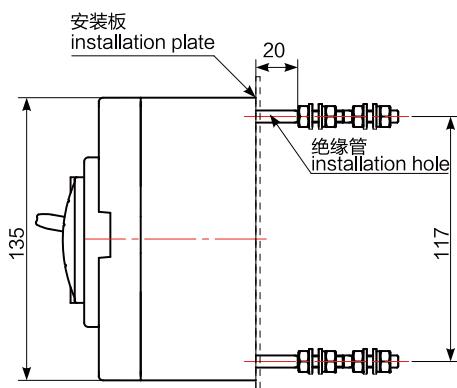
板前接线安装板开孔尺寸
installation hole dimensions for the Board connection



型号	a	b	c	d
SHTM3-63N/3P	61	68	72.5	91
SHTM3-63N/4P	75	82	86.5	105
SHTM3-63S	75	82	86.5	105

SHTM3-63 板后接线

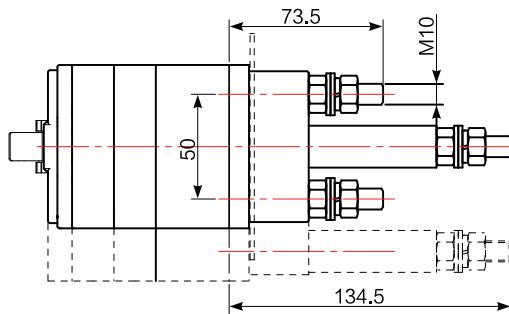
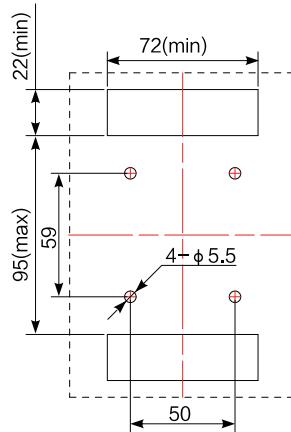
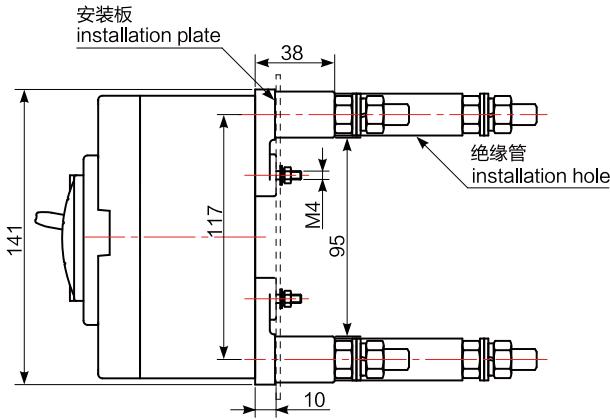
Rear connection



板后接线安装板开孔尺寸
installation hole dimensions for the Back panel connection

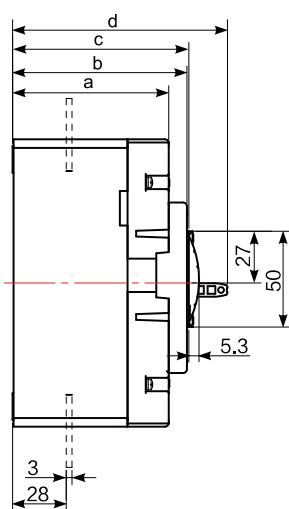
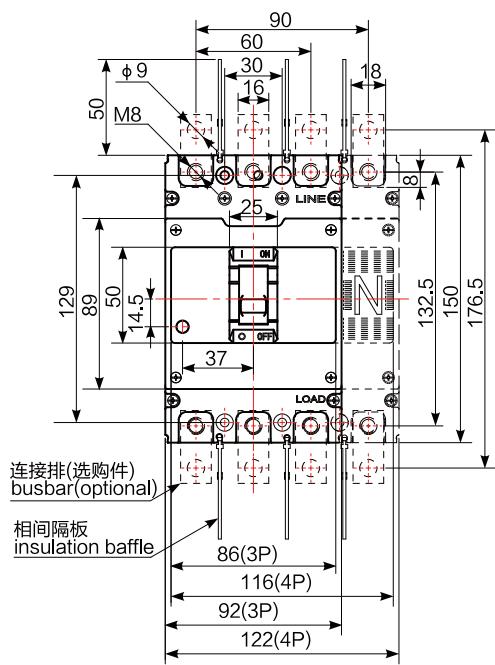
Outline and Installation Dimensions

SHTM3-63 插入式接线 Plug in connection

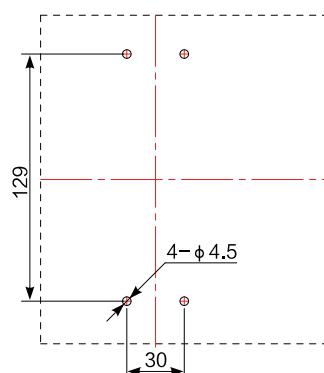


插入式板后接线安装板开孔尺寸
installation hole dimensions for the Plugin connection

SHTM3Z,SHTM3L-100,SHTM3-160(100)板前接线 Front connection



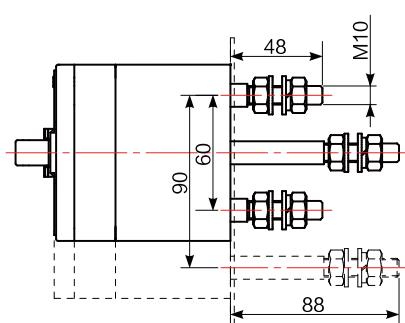
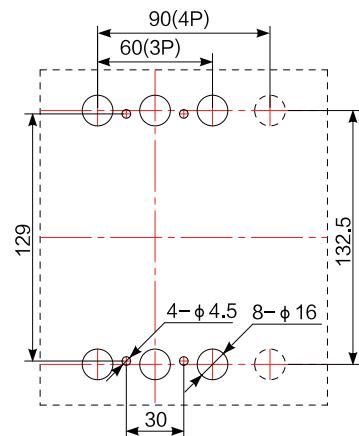
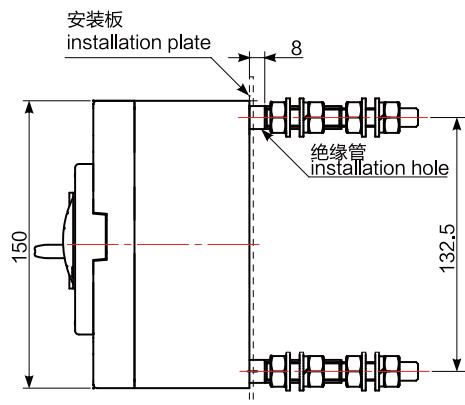
板前接线安装板开孔尺寸
installation hole dimensions for the Board connection



型号	a	b	c	d
SHTM3-160(100)N,S,H/3P	63.5	73	74	95
SHTM3-160(100)N,S,H/4P	81.5	91	92	113
SHTM3-160(100)R	81.5	91	92	113
SHTM3Z-100S,H,R	81.5	91	92	113
SHTM3L-100S,H,R	81.5	91	92	113

SHTM3Z,SHTM3L-100,SHTM3-160(100)板后接线

Rear connection

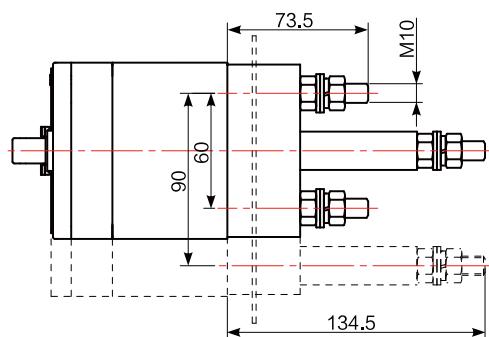
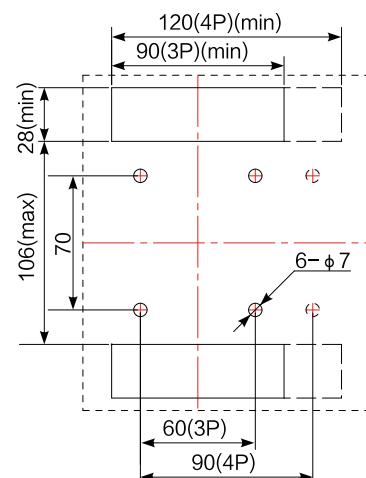
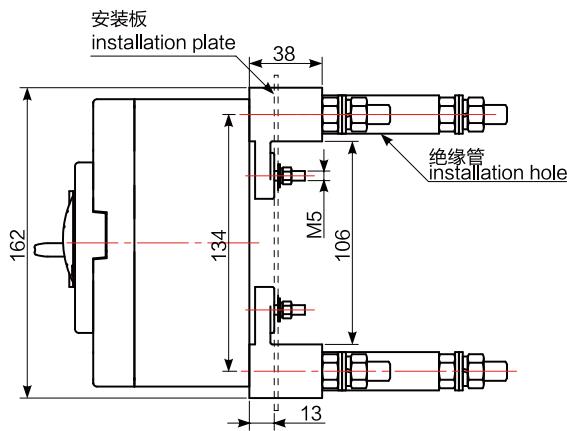


板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection

SHTM3Z,SHTM3L-100,SHTM3-160(100)插入式接线

Plug in connection

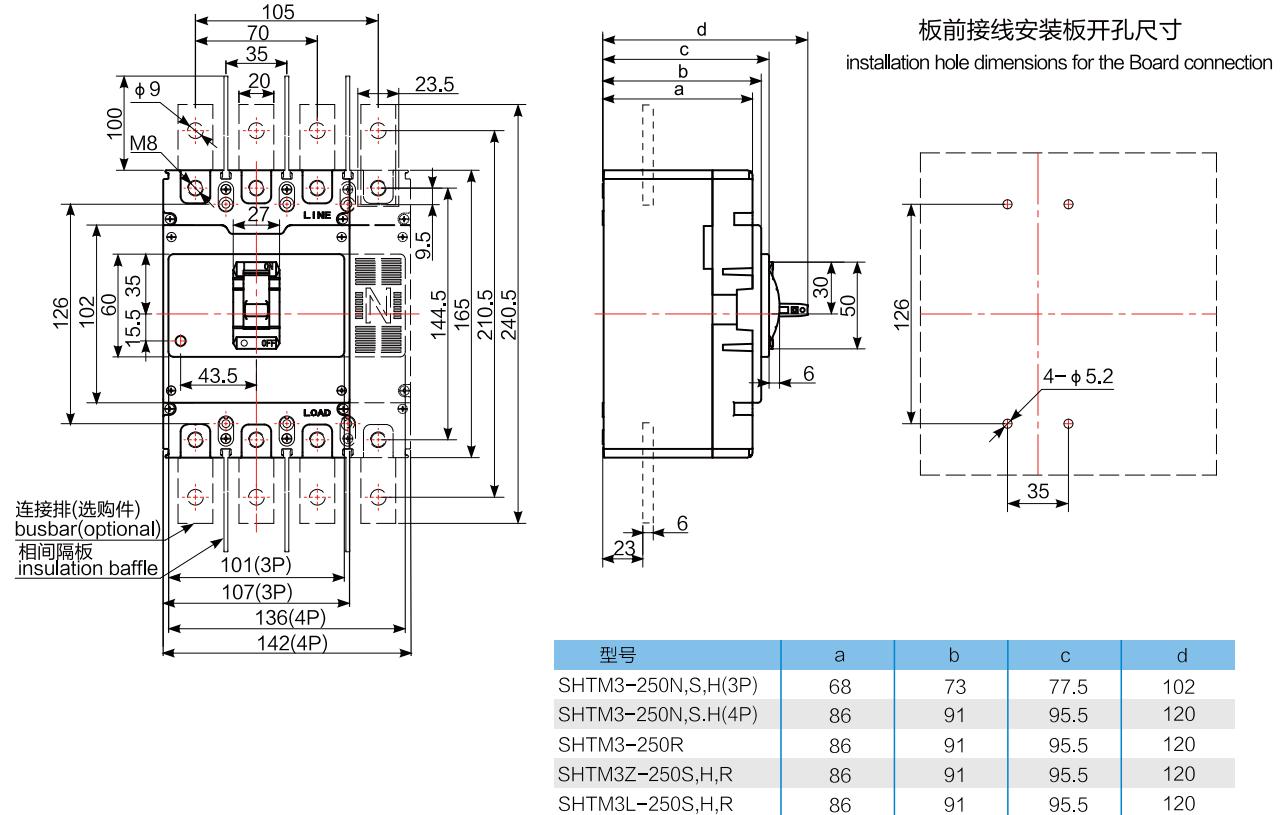


插入式板后接线安装板开孔尺寸

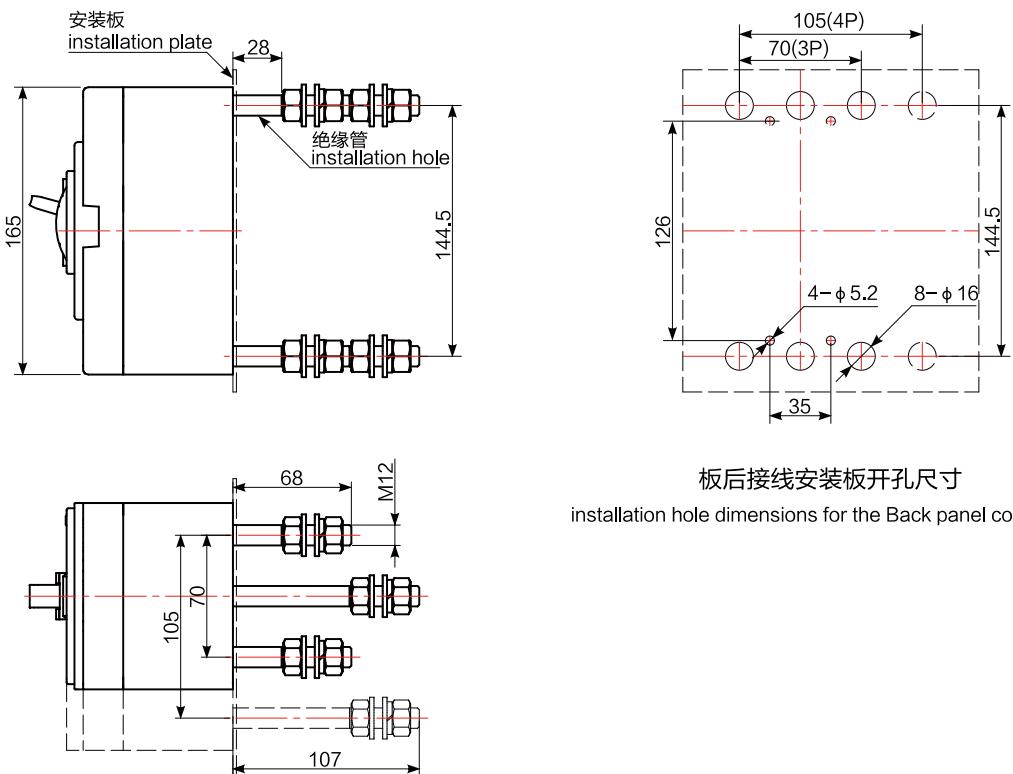
installation hole dimensions for the Plugin connection

Outline and Installation Dimensions

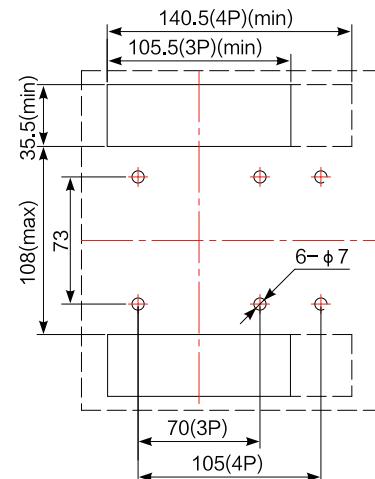
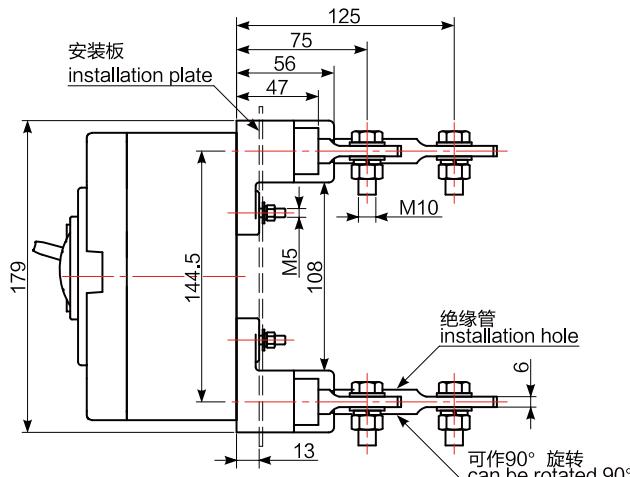
SHTM3,SHTM3Z,SHTM3L-250 板前接线 Front connection



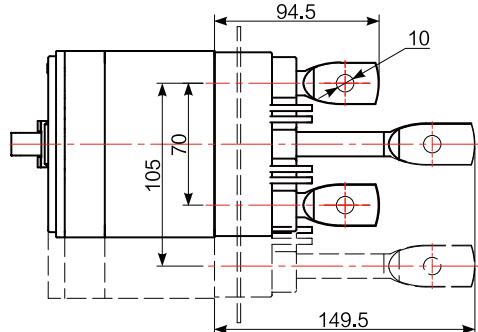
SHTM3,SHTM3Z,SHTM3L-250 板后接线 Rear connection



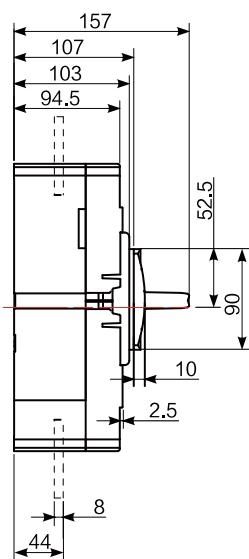
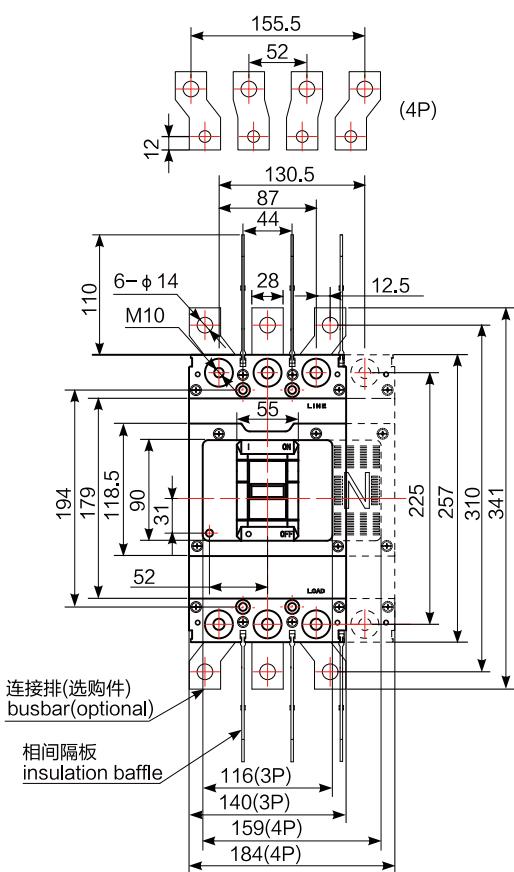
SHTM3,SHTM3Z,SHTM3L-250 插入式接线 Plug in connection



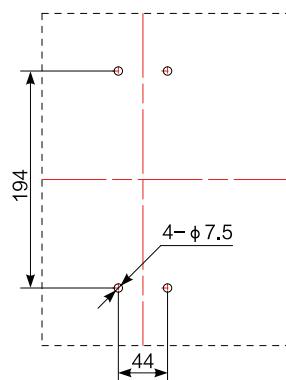
插入式板后接线安装板开孔尺寸
installation hole dimensions for the Plugin connection



SHTM3Z,SHTM3L-400,SHTM3-630(400) 板前接线 Front connection



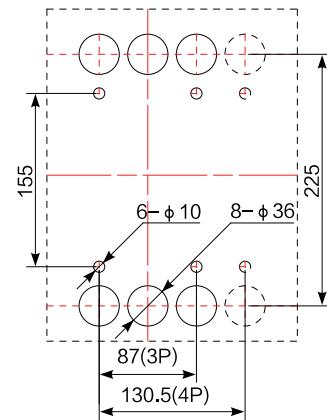
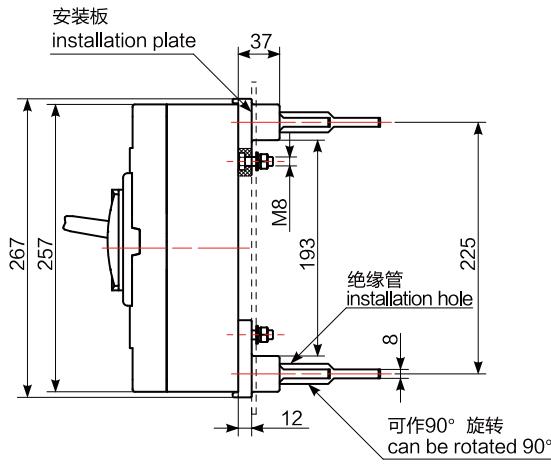
板前接线安装板开孔尺寸
installation hole dimensions for the Board connection



Outline and Installation Dimensions

SHTM3Z,SHTM3L-400,SHTM3-630(400) 板后接线

Rear connection

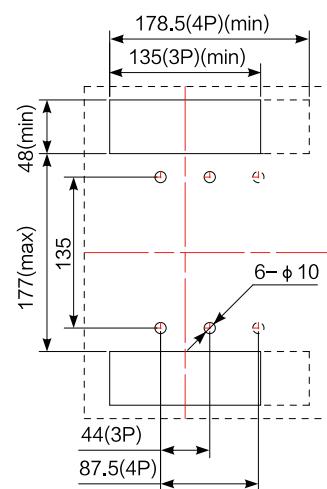
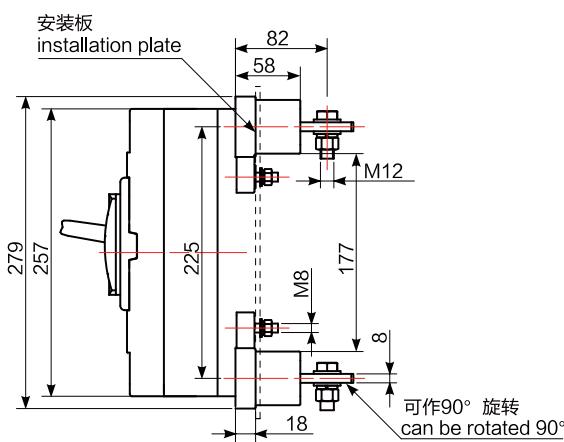


板后接线安装板开孔尺寸

installation hole dimensions for the Back panel connection

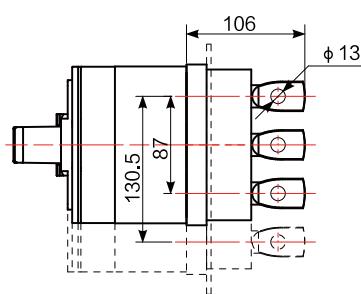
SHTM3Z,SHTM3L-400,SHTM3-630(400) 插入式接线

Plug in connection



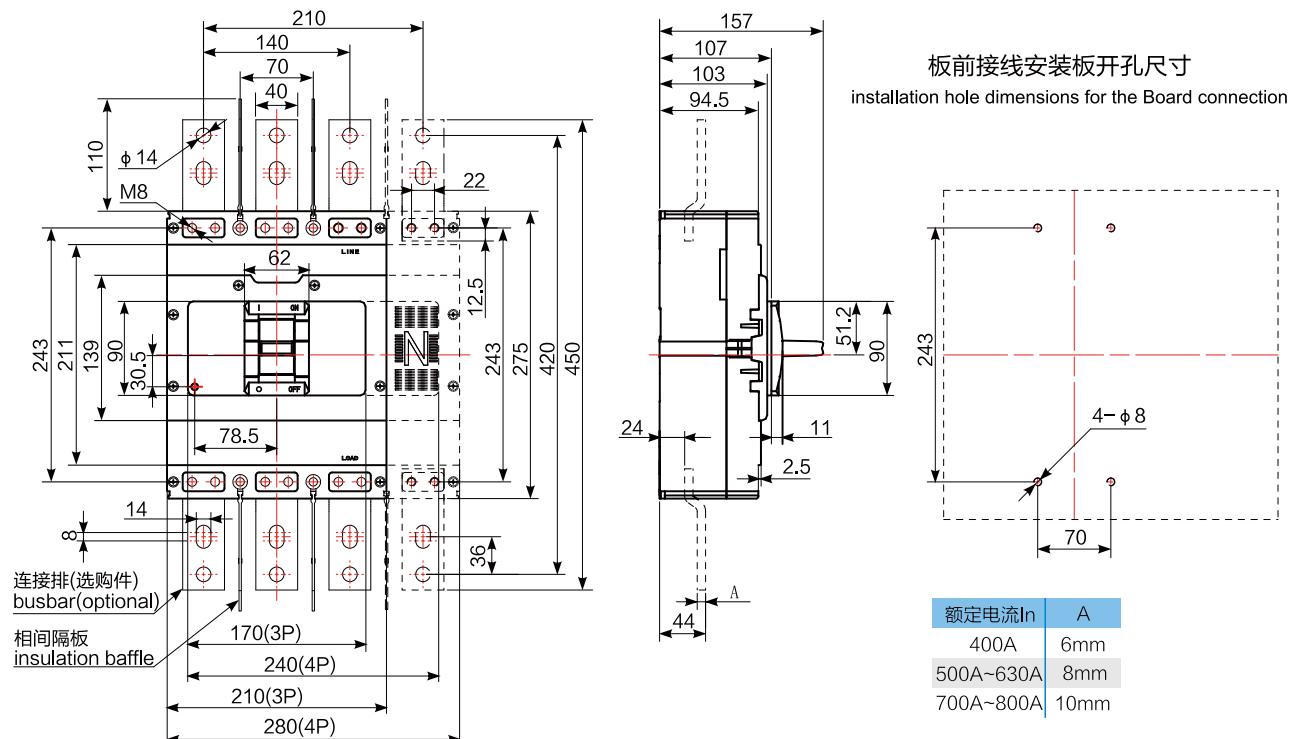
插入式板后接线安装板开孔尺寸

installation hole dimensions for the Plugin connection



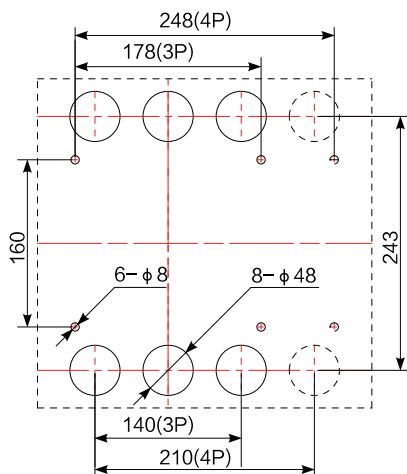
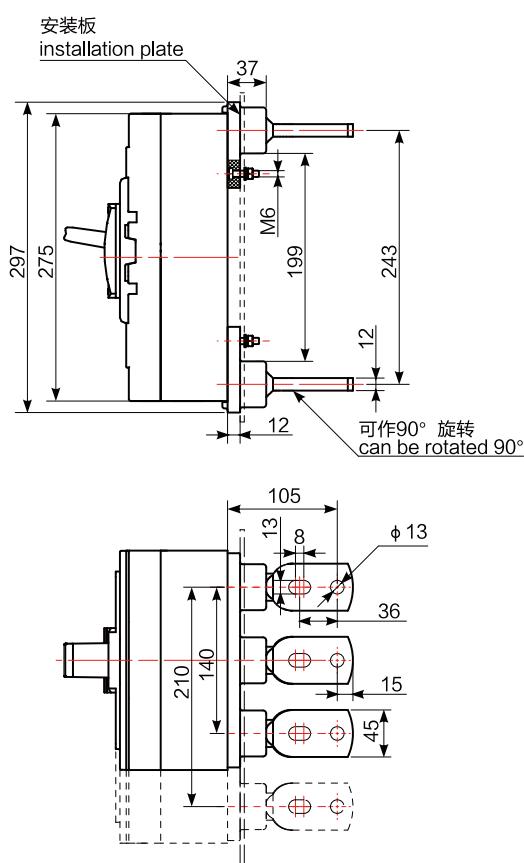
SHTM3L-630,SHTM3,SHTM3Z-800(630) 板前接线

Front connection



SHTM3L-630,SHTM3,SHTM3Z-800(630) 板后接线

Rear connection

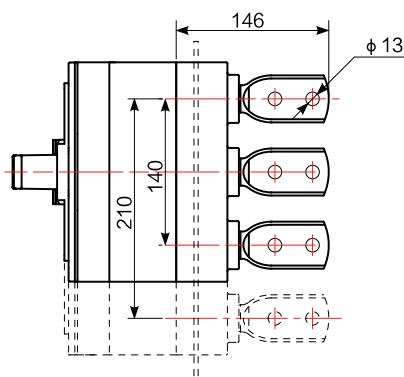
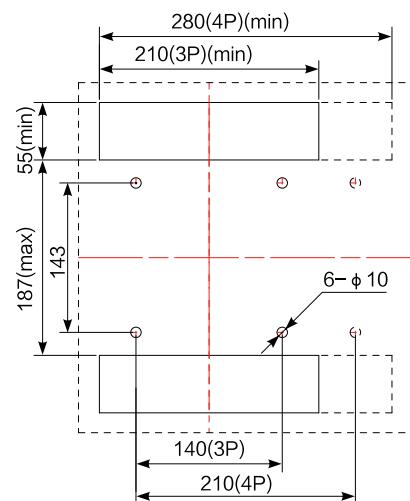
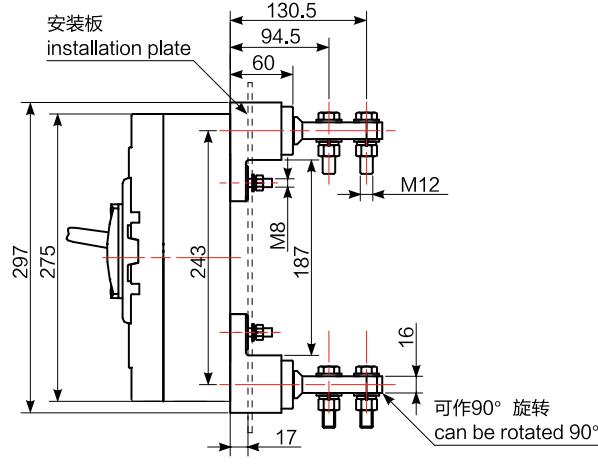


板后接线安装板开孔尺寸
installation hole dimensions for the Back panel connection

Outline and Installation Dimensions

SHTM3L-630,SHTM3,SHTM3Z-800(630) 插入式接线

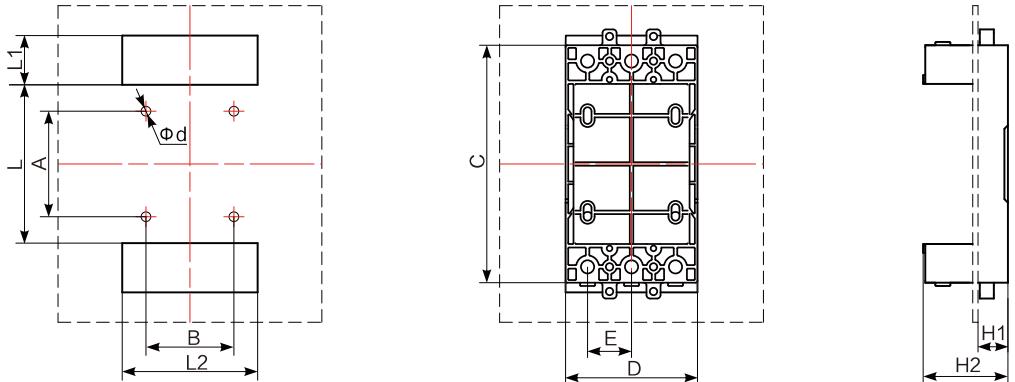
Plug in connection



插入式板后接线安装板开孔尺寸
installation hole dimensions for the Plugin connection

插入式接线（整体式） Plug in connection (integrated type)

板后安装 Rear installation



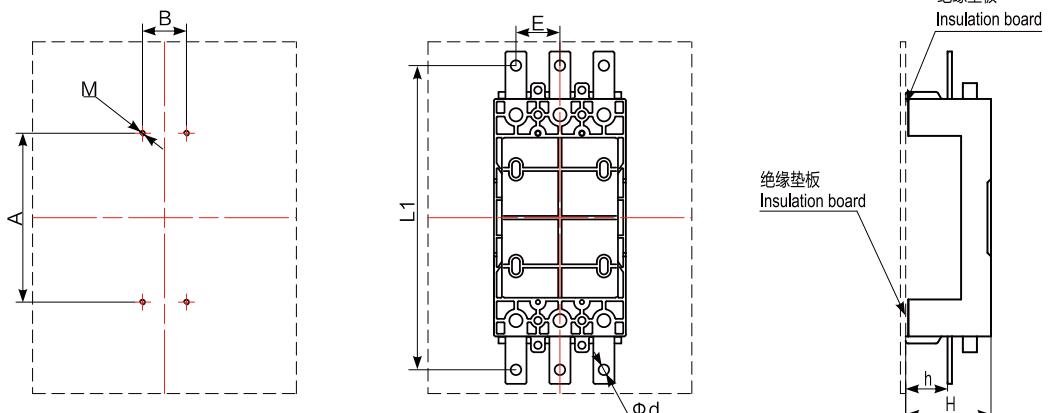
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline &Installation dimensions										
		A	B	L	L1	L2	Φd	C	D	E	H1	H2
SHTM3-63	MZ3-63/SHTM3	60	50	90	38	79	5.5	135	75	25	17	48.2
SHTM3-160(100)	MZ3-100/SHTM3	65	60	90	51	94	6.5	160	90	30	20	56.2
SHTM3-250	MZ3-250/SHTM3	74	70	100	55	110	6.5	179	105	35	27	73.2
SHTM3-630(400)	MZ3-400/SHTM3	141	88	178	70	135	7	275	132	44	45	85
SHTM3-800(630)	MZ3-800/SHTM3	143	140	181	87	213	7	311	210	70	50	125

注：当四极开关时，尺寸B, L2, D均增加相距E

Note: for four pole breakers ,Dimension B,L2,D should be added with phase distance E

板前安装 Board connection

(警告：板前安装必须垫绝缘垫板)
(Warning:Insulation board must be installed)



型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline &Installation dimensions							
		A	B	L1	E	d	M	H	h
SHTM3-63	MZ3-63/SHTM3	96	25	173	25	6	M3	49	23
SHTM3-160(100)	MZ3-100/SHTM3	110	30	198	30	6.5	M4	57	28
SHTM3-250	MZ3-250/SHTM3	150	35	223	35	8.5	M4	74	32
SHTM3-630(400)	MZ3-400/SHTM3	245	44	326	44	10.5	M5	85	36
SHTM3-800(630)	MZ3-800/SHTM3	283	70	363	70	12.5	M6	125	67

注：当四极开关时，尺寸B均增加相距E

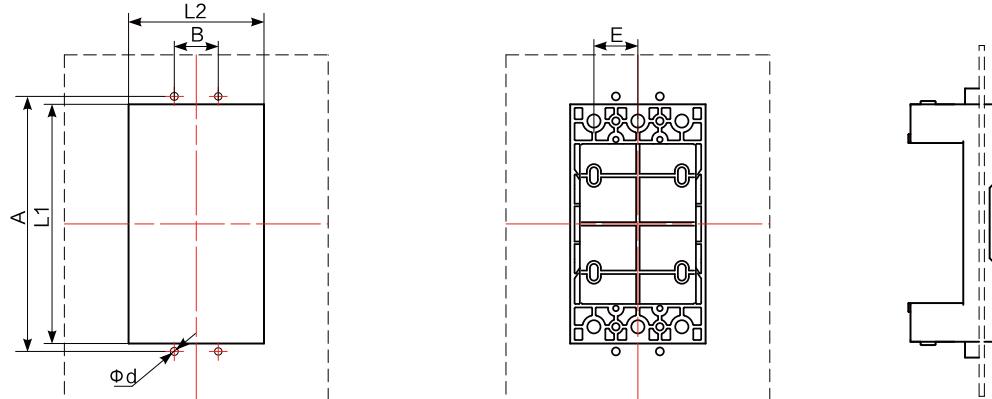
Note: for four pole breakers , Dimension B should be added with Phase distance E

Outline and Installation Dimensions

插入式接线（整体式） Plug in connection (integrated type)

大开孔式板后安装

Rear installation for the type with big holes



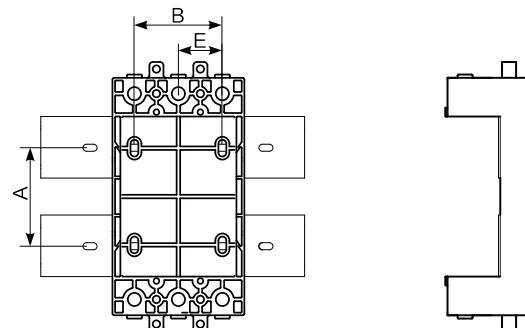
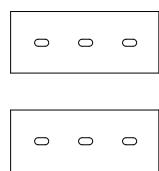
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline &Installation dimensions					
		A	B	L1	L2	Φd	E
SHTM3-63	MZ3-63/SHTM3	157	25	137	77	4	25
SHTM3-160(100)	MZ3-100/SHTM3	170	30	161	92	5	30
SHTM3-250	MZ3-250/SHTM3	191	35	180	107	5	35
SHTM3-630(400)	MZ3-400/SHTM3	291	44	277	134	6	44
SHTM3-800(630)	MZ3-800/SHTM3	327	70	313	212	6	70

注：当四极开关时，250A及以下时尺寸B, L2均增加相距E；开关是400A及以上时尺寸B不变，L2向增加的N相方向增加相距E

Note: for four pole breakers ,when it's 250A, Dimension B and L2 should be added with Phase distance E; When it's 400A or above, Dimension B remains the same,L2 should be added with Phase distance E

条架式板后安装

Rear installation for the bar-type



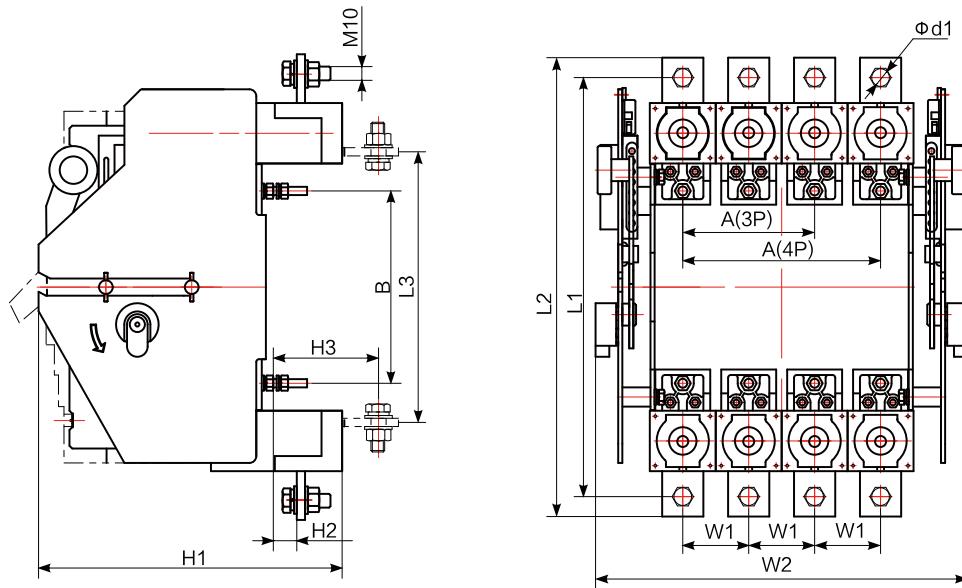
型号规格 Model and dimensions	选用插入式型号 Optional Plug in type	外形&安装尺寸 Outline &Installation dimensions		
		A	B	E
SHTM3-63	MZ3-63/SHTM3	56	50	25
SHTM3-160(100)	MZ3-100/SHTM3	65	60	30
SHTM3-250	MZ3-250/SHTM3	74	70	35
SHTM3-630(400)	MZ3-400/SHTM3	141	88	44
SHTM3-800(630)	MZ3-800/SHTM3	143	140	70

注：当四极开关时，尺寸B均增加相距E

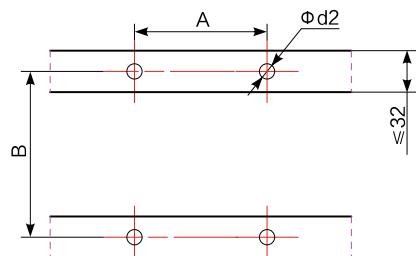
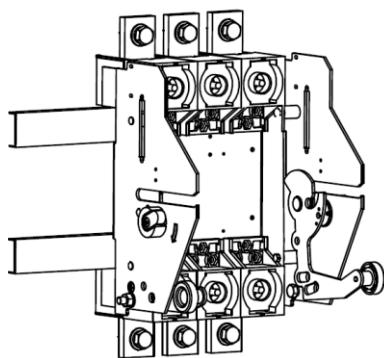
Note: for four pole breakers , Dimension B should be added with Phase distance E

抽出式接线 Drawout Type Wiring

外形尺寸 Outline dimensions



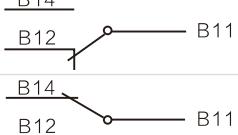
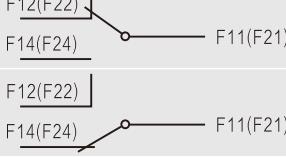
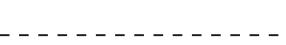
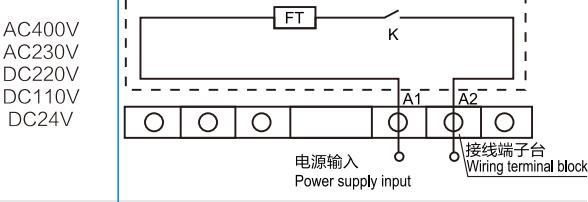
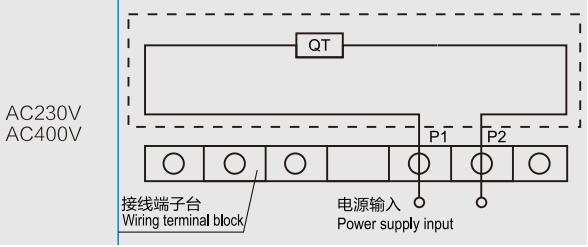
安装尺寸 Installation dimensions



型号规格 Model and dimensions	选用抽出式型号 Selected extraction type model	极数 Pole number	外形尺寸 Outline dimensions									安装尺寸 Installation dimensions		
			L1	L2	L3	H1	H2	H3	W1	W2	Φd1	A	B	Φd2
SHTM3-630(400)	CH2-400/SHTM3	3P	311	340	197	227	17.5	77	44	219	11	88	141	6.5
		4P	311	340	197	227	17.5	77	44	263	11	132	141	6.5
SHTM3-800(630)	CH2-630/SHTM3	3P	368	411	231	213	24	74	70	297	13	140	131	6.5
		4P	368	411	231	213	24	74	70	367	13	210	131	6.5

Internal Accessories

附件类型 Accessory type

附件名称 Accessory name	功能 Function	电压可选 Voltage optional	接线图 Wiring diagram
报警触头 alarm contact	指示断路器处于“分”“合”位置 It indicates circuit breaker is OFF and ON.		
	指示断路器已脱扣 It indicates release circuit breaker.		
辅助触头 auxiliary contact	指示断路器处于断开位置 It indicates circuit breaker is OFF.		
	指示断路器处于闭合位置 It indicates circuit breaker is ON.		
分励脱扣器 shunt release	在额定控制电源电压70%~110%之间时，应可靠使断路器脱扣 Circuit breaker shall release within scope of 70% to 110% of rated control power voltage.	AC400V AC230V DC220V DC110V DC24V	
欠电压脱扣器 under-voltage release	在额定工作电压的85%~110%时 欠压脱扣器应保证断路器能可靠闭合。在额定工作电压的35%~75%时，欠压脱扣器应可靠使断路器脱扣，在额定工作电压低于35%时欠压脱扣器应能防止断路器合闸。 Under-voltage release shall guarantee reliable connection of circuit breaker within scope of 85% to 110% of rated operating voltage. It shall release circuit breaker reliably within scope of 35% to 75% of rated operating voltage. It shall avoid connection of circuit breaker when voltage is less than 35% of rated operating voltage.	AC230V AC400V	

注：欠电压脱扣器必须先通电后才能进行断路器的操作，否则将损坏断路器。

Note: Circuit breaker cannot be operated until power supply of under-voltage release or it may be damaged.

辅助触头和报警触头的技术参数 Technical parameters of auxiliary contact and alarm contact

额定发热电流(I _{th}) Rated heating current	额定工作电流(I _e) Rated operating current	
	AC-14	DC-13
AC400V		DC220V
3	0.3	0.15

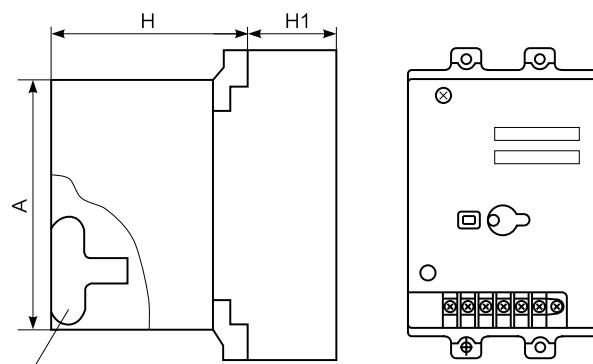
DC3系列电动操作机构技术参数

DC3 Technical parameters of electric mechanism

电动操作机构型号 Model of electric operating mechanism	配用断路器 Sorted circuit breaker	功率 (W) Operating current	操作时间 Operating time	电压可选 Operating voltage	动作电流 Operating current
DC3-63/SHTM3	SHTM3-63	≤14			
DC3-100/SHTM3	SHTM3-160(100) SHTM3Z-100 SHTM3L-100 SHTM3-250	≤14		AC400V AC230V DC220V AC110V DC110V	≤2A
DC3-250/SHTM3	SHTM3Z-250 SHTM3L-250 SHTM3-630(400)	≤14	≤0.7s		
DC3-400/SHTM3	SHTM3Z-400 SHTM3L-400	≤35			
DC3-630/SHTM3	SHTM3Z-800(630) SHTM3L-800(630) SHTM3L-630	≤35		DC24V	≤3A

DC3系列电动操作机构外形尺寸

DC3 Outline dimensions of electric mechanism

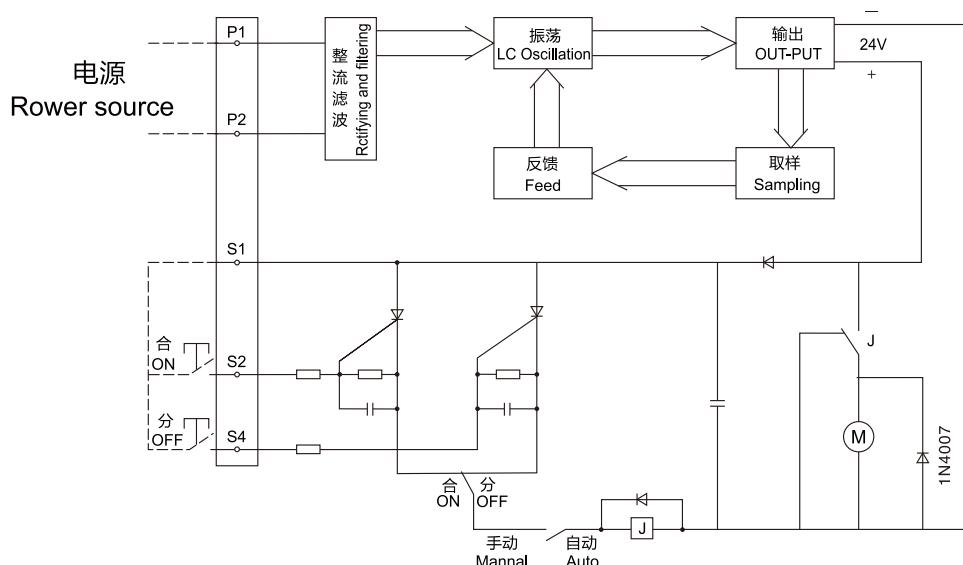


型号规格 Type specification	A	H	H1
DC3-63/SHTM3	102	95	见G1页尺寸a
DC3-100/SHTM3	117	97	见G2页尺寸a
DC3-250/SHTM3	117	97	见G4页尺寸a
DC3-400/SHTM3	176	151	94.5
DC3-630/SHTM3	176	153	94.5

DC3系列电动操作机构控制线路图

DC3 wiring diagrams of electric mechanism

DC3交流、直流
DC3(AC supply, DC supply)



转动手柄操作机构

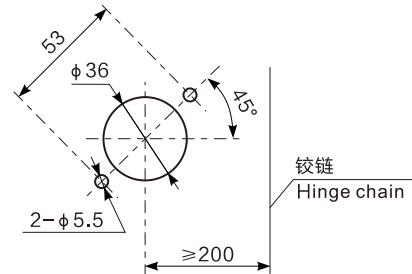
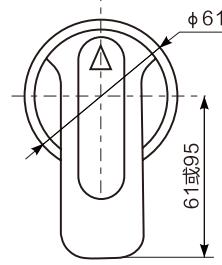
Rotation handle operating mechanism

手柄: SHTM3系列塑料外壳式断路器转动手柄有三种可选,分别为“A”型、“F1”型、“F2”型

Handle: A, F1 and F2 kinds of rotation handles of SHTM3 series of moulded case type circuit breakers can be selected.

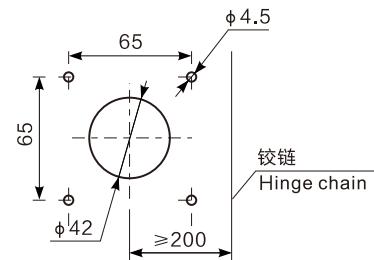
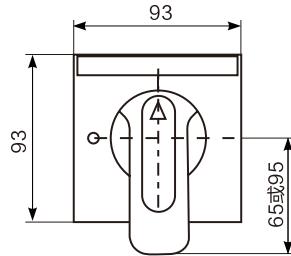
开孔尺寸: A型

Perforation dimensions: A type



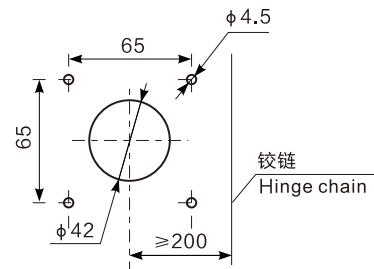
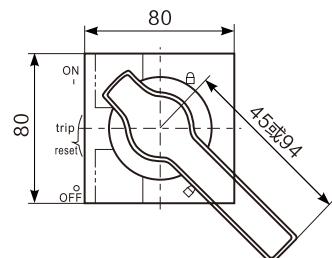
开孔尺寸: F1型

Perforation dimensions: F1 type



开孔尺寸: F2型

Perforation dimensions: F2 type

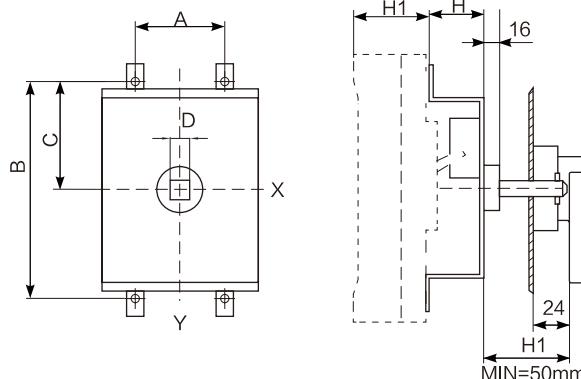


操作机构: 有“中心式转动手柄操作机构”，“偏心式转动手柄操作机构”

Operation handle: “Centered rotary-handle mechanism”, “Acentric rotary-handle mechanism”

中心式转动手柄操作机构

Centered rotary-handle mechanism



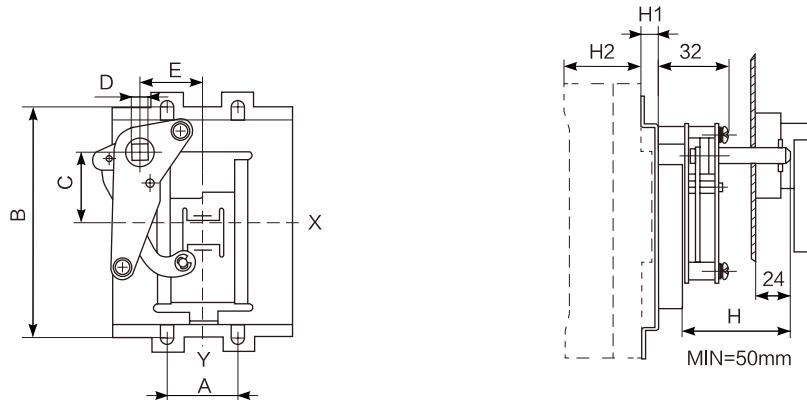
型号规格 Model and dimensions	配用断路器 Sorted circuit breaker	A	B	C	D	H	H1	操作手柄相对于断路器中心Y值 Deviation (Y value) of operation handles from circuit breaker center
SC1-63/SHTM3	SHTM3-63	25	117	58.5	8	41	见G1页尺寸a	0
SC1-100/SHTM3	SHTM3-160(100),SHTM3Z-100,SHTM3L-100	30	132	66	8	46	见G2页尺寸a	0
SC1-250/SHTM3	SHTM3-250,SHTM3Z-250,SHTM3L-250	35	126	63	8	46	见G4页尺寸a	0
SC1-400/SHTM3	SHTM3-630(400),SHTM3Z-400,SHTM3L-400	128	195	97.5	10	76	94.5	0
SC1-630/SHTM3	SHTM3-800(630),SHTM3Z-800(630),SHTM3L-630	198	243	121.5	10	76	94.5	0

注: X, Y轴为对应断路器的中心

Note: X and Y axles are centers of corresponding circuit breakers

偏心式转动手柄操作机构

Acentric rotary-handle mechanism



型号规格 Model and dimensions	配用断路器 Sorted circuit breaker	A	B	C	D	H	H1	H2	操作手柄相对于断路器中心Y值 Deviation (Y value) of operation handles from circuit breaker center
SC2-63/SHTM3	SHTM3-63	25	117	32	8	0	14	见G1页尺寸a	0
SC2-100/SHTM3	SHTM3-160(100),SHTM3Z-100,SHTM3L-100	30	132	32	8	11	14	见G2页尺寸a	0
SC2-250/SHTM3	SHTM3-250,SHTM3Z-250,SHTM3L-250	35	126	40	8	11	14	见G4页尺寸a	0
SC2-400/SHTM3	SHTM3-630(400),SHTM3Z-400,SHTM3L-400	128	195	60	10	15	29	94.5	0
SC2-630/SHTM3	SHTM3-800(630),SHTM3Z-800(630),SHTM3L-630	198	243	60	10	15	29	94.5	0

注: X, Y轴为对应断路器的中心

Note: X and Y axles are centers of corresponding circuit breakers

- 1.断路器特性和附件的动作值已经由制造厂调整好，用户在使用中不应随意开盖及调节。
- 2.使用中应注意周围清洁，有机会停电维修时，应把进线端积尘清除，检查铜排螺钉是否松动等。
- 3.断路器手柄可以处于三种状态，分别表示闭合、断开、自由脱扣三个位置。当手柄处于自由脱扣位置时合闸，应将手柄用力推向断开位置使断路器再扣才能进行闭合操作。
- 4.在用户遵守保管和使用条件下，自制造厂发货之日起18个月内断路器封签完好，产品因制造质量问题而产生的损坏或不能正常使用时，本公司承诺无偿更换或修理。
- 5.断路器的额定剩余动作电流和最大断开时间,用户可根据实际需要进行调整(专业人员进行)。
- 6.在主电路通电情况下，对额定剩余动作时间型式为非延时型的断路器,手按模拟剩余电流动作试验按钮断路器应立即脱扣,对延时型,手按试验按钮应保持所调的延时时间值后,断路器才能脱扣。
- 7.断路器漏电脱扣后,面板上漏电指示按钮向外突出。
- 8.带漏电报警单元模块的断路器，当发生漏电报警后，必须对模块上的复位按钮进行复位,断路器漏电保护模块才能正常工作。

- 1.Characteristics of circuit breaker and operating values of accessories have been adjusted by manufacturer. User cannot uncover or adjust randomly during use.
- 2.Pay attention to surrounding cleanliness during use. Collect dust in incoming wire end and check if copper bar screws are loose or not once power failure repair.
- 3.Circuit breaker handles can be under 3 states, namely,closing, disconnection and free release positions respectively. Push handle to disconnection position for closing and circuit breaker re-release when handle is in free release position.
- 4.Our company does not commit free replacement or repair for damage or abnormal use of products because of manufacturing quality problem unless users abide by storage and use conditions and circuit breaker seal is perfect within 18 months since delivery date of manufacturer.
- 5.The rated residual operating current and the maximum disconnection time of the circuit breaker can be adjusted according to the actual needs (professional personnel).
- 6.In the case of the main circuit power, the rated residual operating time type is non-delay type circuit breaker, pressing test button of analog residual current action, and circuit breaker should be immediately tripped. For the delay type, pressing the test button should be maintained after the delay time, and the circuit breaker can trip.
- 7.After the circuit breaker leakage tripping, the touchout button on the panel protrudes outward.
- 8.When the circuit breaker with the leakage alarm unit module occur leakage alarm, it must be on the mold: block reset button on the reset, and protection module of circuit breaker leakage can work properly.



资质证书 Qualification certificate



公司主要业绩

Main achievements of the company

www.huatong.net.cn

巴基斯坦电厂

Pakistan Power Plant

秦山核电站

Qinshan Nuclear Power Plant

广东佛山供电局

Guangdong Foshan Power Supply Bureau

上海市供电局

Shanghai Power Supply Bureau

中国核工业连云港核电项目

China Nuclear Industry Lianyungang Nuclear Power Project

福建晋江五十万伏变电站

500,000 volt substation in Jinjiang, Fujian

上海飞机制造厂

Shanghai aircraft factory

江西省江中制药厂

Jiangzhong Pharmaceutical Factory in Jiangxi Province

北京东方化工厂

Beijing Dongfang Chemical Plant

南京钢铁厂

Nanjing Iron and Steel Plant

上海金山石化

Shanghai Jinshan Petrochemical

云南玉溪卷烟厂

Yunnan Yuxi Cigarette Factory

烟台卷烟厂

Yantai Cigarette Factory

上海宝钢

Shanghai Baosteel

北京首都钢铁公司日电 NEC 工程

NEC Engineering of Beijing Capital Iron and Steel Company

青岛卷烟厂

Qingdao Cigarette Factory

大连钢厂

Dalian Steel Works

马鞍山钢铁公司

Maanshan Iron and Steel Company

南京城南水厂

Nanjing Chengnan Water Plant

武汉钢铁公司

Wuhan Iron and Steel Company

云南电解铝厂

Yunnan Electrolytic Aluminum Factory

贵州省电力科研试验办公楼

Guizhou Electric Power Research Office

浙江省国贸中心

Zhejiang International Trade Center

宝钢集团上海第一钢铁有限公司

Baosteel Group Shanghai First Iron and Steel Co., Ltd.

北京电力设备总厂

Beijing Power Equipment General Plant

上海东方明珠电视塔

Shanghai Oriental Pearl TV Tower

上海振华港机股份有限公司

Shanghai Zhenhua Port Machinery Co., Ltd.

上海船厂

Shanghai Shipyard

青岛监狱

Qingdao prison

云南昆明机场

Kunming Airport, Yunnan

山西省太原机场

Taiyuan Airport of Shanxi Province

广东白云机场

Guangdong Baiyun Airport

青岛港

Qingdao Port

宁波港

Ningbo Port

北京首都机场

Beijing Capital Airport

上海虹桥机场

Shanghai hongqiao airport

南京市政综合大厦

Nanjing Municipal Comprehensive Building

四川省成都市人民政府大楼

Chengdu People's Government Building, Sichuan Province

北京加拿大驻华使馆

Canadian Embassy Beijing

北京国家电网控制中心

Beijing National Grid Control Center

北京人民大会堂

Beijing Great Hall of the People

北京广播电视剧

Beijing Radio and TV Series

国家广播电视台大厦

National Radio and Television Building

深圳国宾馆

Shenzhen State Guest House

上海地铁

Shanghai Metro

北京地铁

Beijing subway

北京西客站

Beijing West Railway Station

伊朗得黑兰地铁

Tehran Metro, Iran

上海磁悬浮工程

Shanghai Maglev Project

江苏扬州火车站

Jiangsu Yangzhou Railway Station



- ① 秦山核电站
Qinshan Nuclear Power Plant
- ② 巴基斯坦电厂
Pakistan Power Plant
- ③ 上海东方明珠电视塔
Shanghai Oriental Pearl TV Tower
- ④ 上海地铁
Shanghai Metro
- ⑤ 广东佛山供电局
Guangdong Foshan Power Supply Bureau





销售中心
Sales Center



研发中心
R & D Center



ACB生产线
ACB assembly line



MCCB生产线
MCCB assembly line



K
冲压工序
Stamping process



温升试验
Temperature rise test

记事/NOTES



鉴于样本中所涉及的标准，材料，技术要求，电气线路以及安装尺寸随着时间的推移都在不断地发展，因此这些技术条件均要以本厂最新的确认为准。

Due to the continuous development of Standards as well as of materials, the characteristics, electrical diagrams and reference only on confirmation from Hua Tong.

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