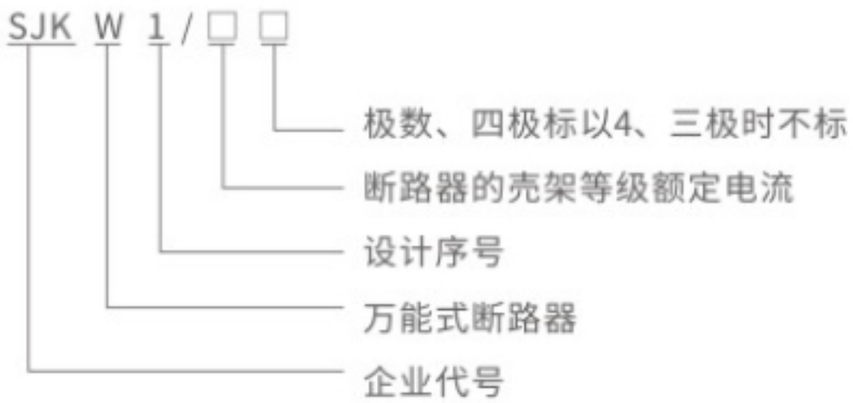
Scope of application

The SJKW1 series intelligent universal circuit breaker (hereinafter referred to as the circuit breaker) is suitable for distribution networks with AC 50Hz, rated voltage up to 660V (690V) and below, and rated current ranging from 200A to 6300A. It is used to distribute electrical energy and protect lines and power equipment from the hazards of overload, undervoltage, short circuit, single-phase grounding and other faults. Circuit breakers have intelligent protection functions and precise selective protection, This circuit breaker can improve power supply reliability, avoid unnecessary power outages, and has an open communication interface that can perform "four remote" operations to meet the requirements of control centers and automation systems. The circuit breaker has a pulse withstand voltage of 8000V at an altitude of 2000 meters (adjusted according to standards for different altitudes, with a maximum not exceeding 12000V). It does not come with an intelligent controller or sensor and can be used as an isolator. It is marked as a circuit breaker that complies with standards such as GB14048.2 "Low voltage switchgear and control equipment - Low voltage circuit breakers" and IEC60947-2 "Low voltage switchgear and control equipment circuit breakers"

型号及含义



◆ Category:

◇ Classified by installation method: a. Fixed type b. Drawer type

◇ Divided by operation mode: a. Electric operation b. Manual operation (for maintenance and repair purposes)

◆ Type of release:

Intelligent controller, undervoltage instantaneous (or delayed) release, shunt release

◇ Intelligent controller performance:

◇ It has overload long delay inverse time limit, short delay inverse time limit, timed limit, and instantaneous functions that can be set by the user to form the required protection characteristics

Intelligent controllers are divided into: H-type (communication), M-type (ordinary intelligent), and L-type (economical)

◇ Single phase grounding protection function

Display function: setting current display, action current display, main display of each line voltage (voltage display should be specified at the time of ordering)

◇ Alarm function: overload alarm

Self check function: overheat self check, microcomputer self diagnosis (optional)

Test function: Test the action characteristics of the controller

Normal working conditions and installation conditions

◆ Surrounding air temperature

The upper limit value shall not exceed+40 ℃, the lower limit value shall not be lower than -5 ℃, and the 24-hour average value shall not exceed+30C

Note: For working conditions with a lower limit of -10C or -25 ℃, users should declare it to our company

For working conditions where the upper limit exceeds+40 ℃ or the lower limit is below -10C or -25C, users should consult with our company

The altitude of the installation location shall not exceed 2000m

◆ Atmospheric conditions

The relative humidity of the atmosphere should not exceed 50% when the surrounding air is at+40 ℃, and higher relative humidity can be achieved at lower humidity. The average maximum relative humidity in the wettest month is 90%, and the average minimum temperature in that month is+25 ℃. Considering that condensation on the surface of the product due to temperature changes exceeds the specified requirements, consultation with our company should be conducted

◆ Protection level: IP30

Pollution level: III

◆ Usage category: Class B or A

Installation category: Circuit breakers with rated working voltage of 660V (690V) and below, as well as undervoltage release devices. The primary coil of the power transformer is used for installation category IV; The installation category for auxiliary circuits and control circuits is I1

The circuit breaker should be installed according to the requirements of this manual, and the vertical inclination of the circuit breaker should not exceed 5 degrees (the inclination of the mining circuit breaker should not exceed 15 degrees)

Structure Introduction

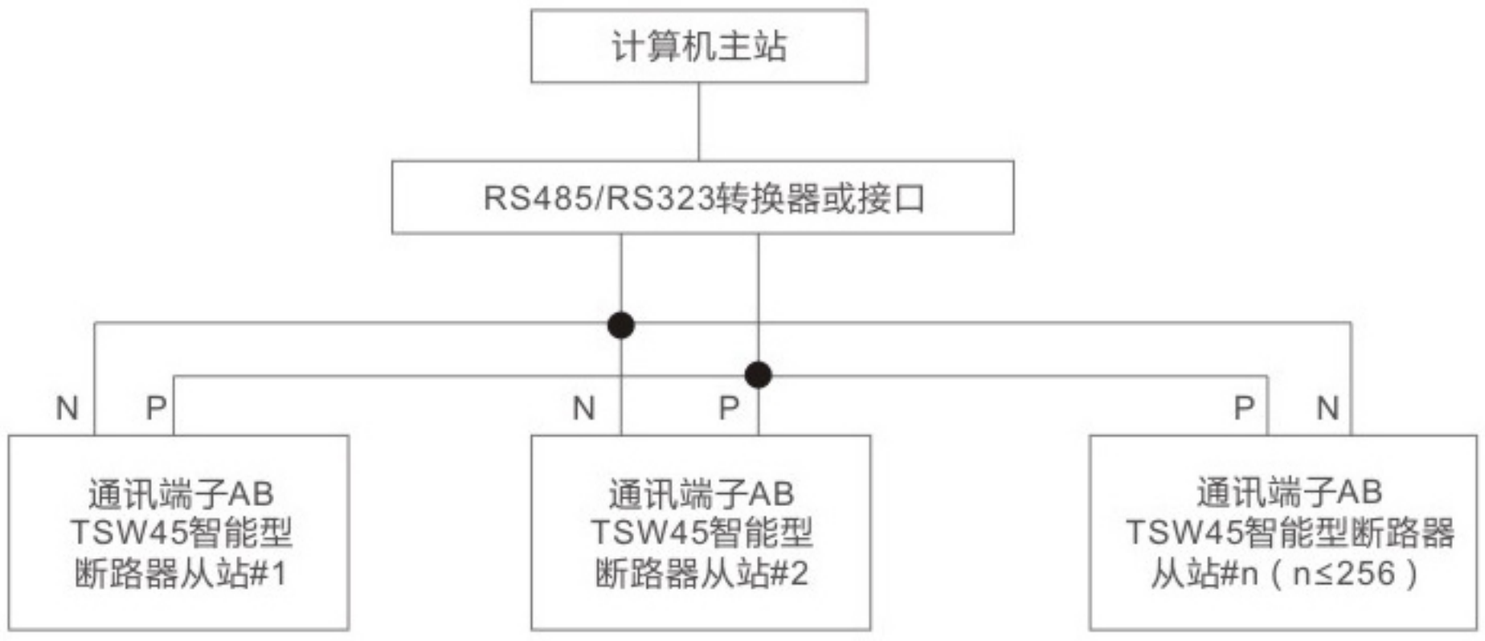
Front indication of circuit breaker

抽屉式断路器

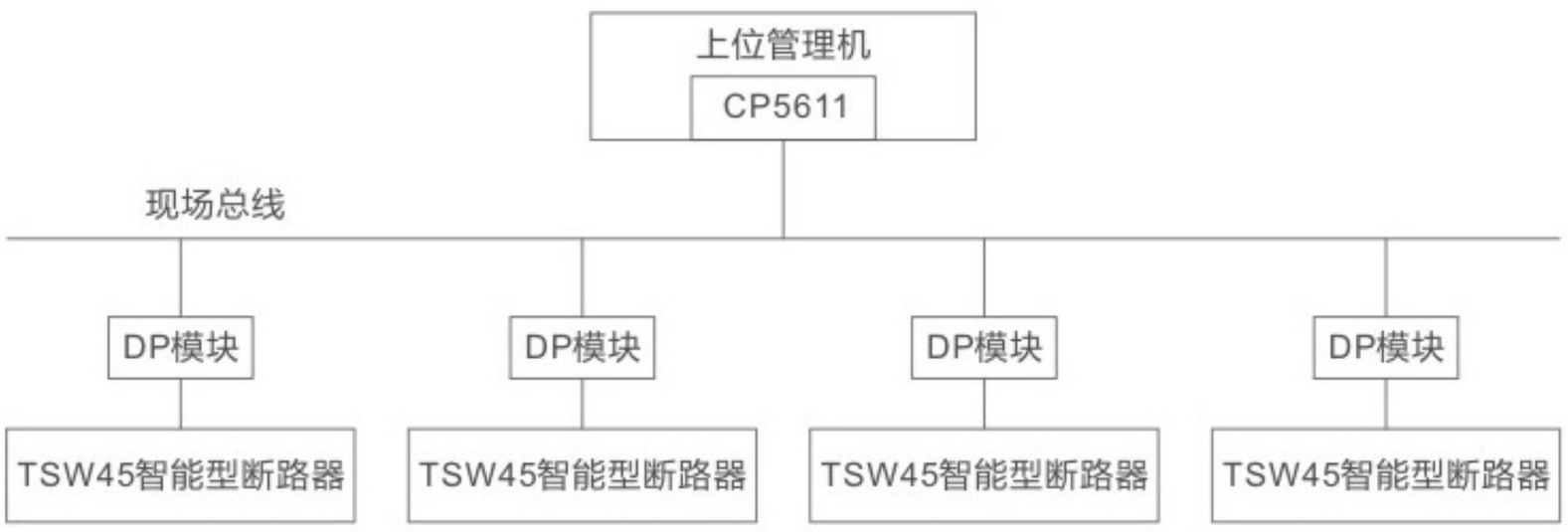
1、二次回路接线端子(静)
2、抽屉座
3、安全隔板
4、二次回路接线端子(动)
5、辅助触头
6、分励脱扣器
7、欠电压脱扣器
8、合闸电磁铁
9、操作机构
10、电动贮能机构
11、智能控制器
12、面板

H-type intelligent controller

In addition to having all the functions of M-type, it also has a serial communication interface, which can form a master-slave local area network system (hereinafter referred to as the system) through the communication interface. It consists of 1-2 computers as the master station and several intelligent circuit breakers or other communicable components as slave stations. The system network structure is shown in the following figure. For the circuit breaker unit, the system can achieve the "four remote" function at a long distance; monitor various grid parameters and operating parameters, monitor the current operating status of the intelligent circuit breaker, adjust and download various protection limit parameters, and control the opening and closing operation of the intelligent circuit breaker. The system is suitable for the construction and renovation of distribution monitoring systems for various power plants, power plants, small and medium-sized substations, industrial and mining enterprises, and buildings. Dedicated communication. The connection diagram of the protocol interface is as follows:



基于通用DP协议的断路器产品的连接关系图如下：



Composition of the system

The hardware structure of data communication network system The intelligent circuit breaker provides a standard RS485 communication interface, which is led out from the 10th and 11th output lines of the circuit breaker

Communication medium for system connection: Class A shielded twisted pair cable

Main characteristics of network structure

◇ Two way serial data transmission method, the product can provide multiple communication protocol methods: "Low voltage electrical data transmission communication protocol V1.0", PROFIBUS-DP, MODEBU, etc

Strict master-slave mode, where the master station is the initiator and controller of communication, and the slave stations can only communicate with the master station and cannot directly communicate with other slave stations

The communication baud rate is 9600bit/s. The communication distance is 1.2km, and for typical applications of PROFIBUS-DP communication baud rate, it can reach 187.5kbit/s

◆ Monitor drinks

YSS2000 configuration software can realize the configuration application of required monitoring and management software according to different engineering requirements. For intelligent circuit breakers, it can achieve operation monitoring and various daily management functions

◆ System Functions

◇ Remote control

Remote control refers to the operation and control of energy storage, closing, and opening of each slave circuit breaker in the system through the main station computer. The operator selects the corresponding object from the system interface, clicks the remote control button with the mouse, and the system provides the current operating status of the corresponding object. After entering the operation password, the operator can issue the remote control "close" or "open" command. The system transmits instructions to the corresponding circuit breaker slave station. Upon receiving the instructions, the slave station performs operations such as breaking, closing, and energy storage according to the predetermined timing, and reports the remote control results to the master station

◇ Remote adjustment

Remote control refers to setting the protection settings of the slave station through the main station computer. In the main station calculation, there are protection setting tables for all slave stations. The operator selects the corresponding object from the system interface, clicks the remote adjustment button with the mouse, and the system provides the current settings of all fixed values for the corresponding object, as well as the protection setting table for that object. After entering the operation password, the operator can select the required parameters from the parameter table, and then click the corresponding button. The main station can download the parameters to the corresponding slave station and report the remote adjustment results. After receiving the command, the station will modify its own protection settings

◇ Telemetry

Telemetry refers to real-time monitoring of the operating parameters of the power grid at each substation through the main station computer. The communication substation reports the following working parameters to the upper computer:

Real time A, B, C, N phase current values of each substation, as well as electrical values of UAB, UBC, UCA, etc

◇ Fault records can record the following fault parameters

Record the current values of phases A, B, C, and N, voltage values of UAB, UBC, and UCA, fault type, and fault action time during the fault in the fault database

The computer displays the current real-time current and voltage of each substation in the form of bar charts, absolute value tables, etc., and displays the operating status of each node in real-time curves

◇ Remote communication

Remote communication refers to viewing the model, closed and open status, various protection settings, and operation and fault information status of the slave station through the main station computer. The parameters reported from the substation circuit breaker to the upper computer mainly include: switch model, switch status (closed/open), fault information, alarm information, various protection settings, etc

◇ Other system functions

In addition to the four remote control functions, the system can also perform various management functions: accident alarm (information screen, screen push, event printing, accident dialing, sound alarm), event recording, maintenance tagging, shift management, load trend analysis, printing of multiple reports, etc

◆ L-type intelligent controller

The L-type controller adopts a coding switch and toggle switch setting method, with four protection characteristics of overload long delay, short circuit short delay, instantaneous, and ground leakage, as well as functions such as fault status and load current light column indication. However, it does not have digital display and its functions are not as complete as the M and H types. For users to choose from in general situations

◆ 断路器的操作性能

断路器的操作性能用操作循环次数表示

壳架等级额定电流(A)	操作循环总次数
2000	10000
3200、4000	5000
6300	2000

◇ 断路器的分励脱扣器、欠电压脱扣器、电动操作机构、释能(合闸)电磁铁、智能控制器的工作电压及所需功率

项目 \ 额定工作电压 / 所需功率			交流(50Hz)		直流	
			220V	380V	110V	220V
分励脱扣器			24VA	36VA	24VA	24VA
欠电压脱扣器			24VA	36VA	-	-
合闸电磁铁			24VA	36VA	24VA	24VA
电动操作机构	断路器壳架等级额定电流	2000A	85VA	85VA	85VA	85VA
		3200A、4000A	110VA	110VA	110VA	110VA
		6300A	150VA	1 50VA	1 50VA	1 50VA
智能控制器电源电压			AC220V、AC380V、DC220V、DC11 0V			

注：分励脱扣器的可靠动作电压范围为70%～110%，合闸电磁铁和操作机构为80%～110%。

◆ M型或H型控制器

◇ 复位按钮。断路器脱扣后如果要再次闭合，需将复位按钮按一下，否则断路器不能闭合。

◇ 电流(电压)、时间显示，能显示电流(电压)或时间值。

◇ “选择”键。正常运行状态循环显示各项电流(电压)值，故障状态或故障检查状态能循环显示故障电流或时间值。

◇ LED发光指示，能指示各种状态及类别。

◇ “清灯”键。控制器整定、试验故障后或断路器闭合前必须按一下此键，使脱扣器处于正常运行状态。

◇ “设定”键。检查或设定各种保护特性电流或使用时间用。按此键可循环指示各状态。

◇ “故障检查”键，在控制器“清灯”后，按此键能显示和指示上次故障的状态和故障电流或时间值。故障电流或时间通过按“选择”键来循环检查

◇ “脱扣”“不脱扣”键，做试验功能时用。

◇ “贮存”、“+”“-”键，整定电流或时间用。

Ir4-接地保护电流整定值

Ir1-长延时电流整定值

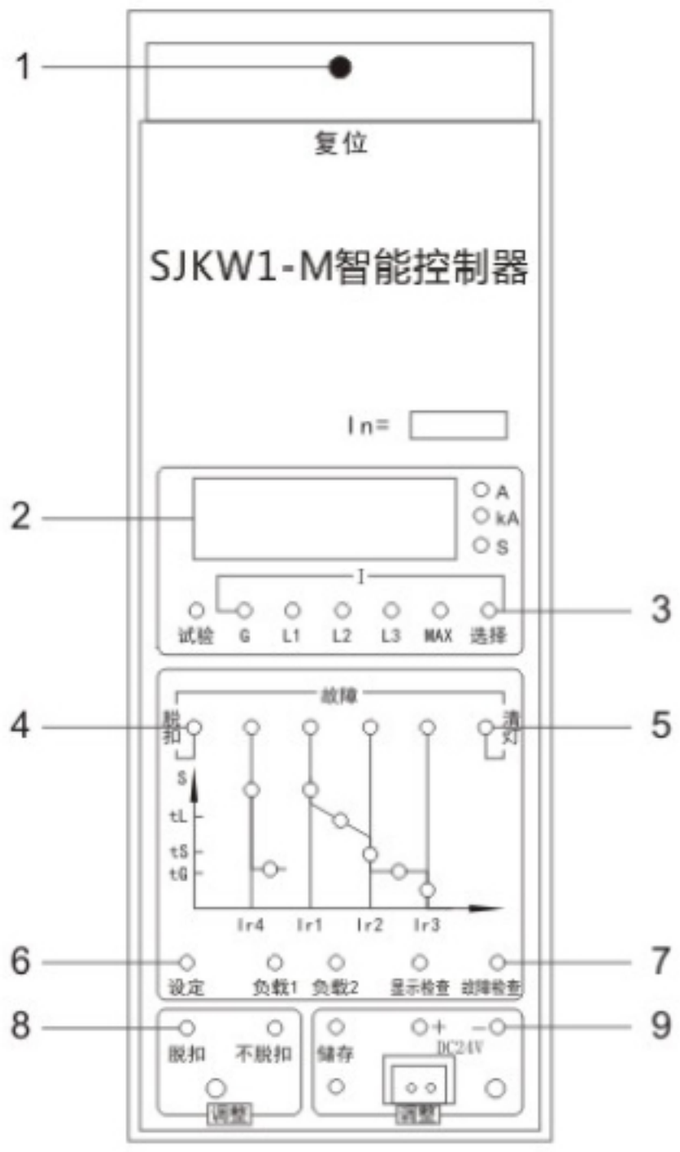
Ir2-短延时电流整定值

Ir3-瞬时电流整定值

TG-接地保护时间整定值

TL-长延时时间整定值

TS-短延时时间整定值



◆ L型控制器

◇ 复位按钮

断路器故障、试验脱扣后将此按钮按下，方可再次闭合断路器。

◇ 负载显示

显示过载长延时电流。

◇ 长延时、短延时、瞬时、接地保护电流整定旋钮按旋钮上刻度值来整定各保护的电流。

◇ 故障显示灯

指示故障类别。

◇ 长延时过载保护时间整定键

拨动开关位置调整时间。

◇ 短延时保护时间整定键

拨动开关位置调整时间。

◇ 接地故障保护的时间整定键

拨动开关位置调整时间。

◇ 清灯键

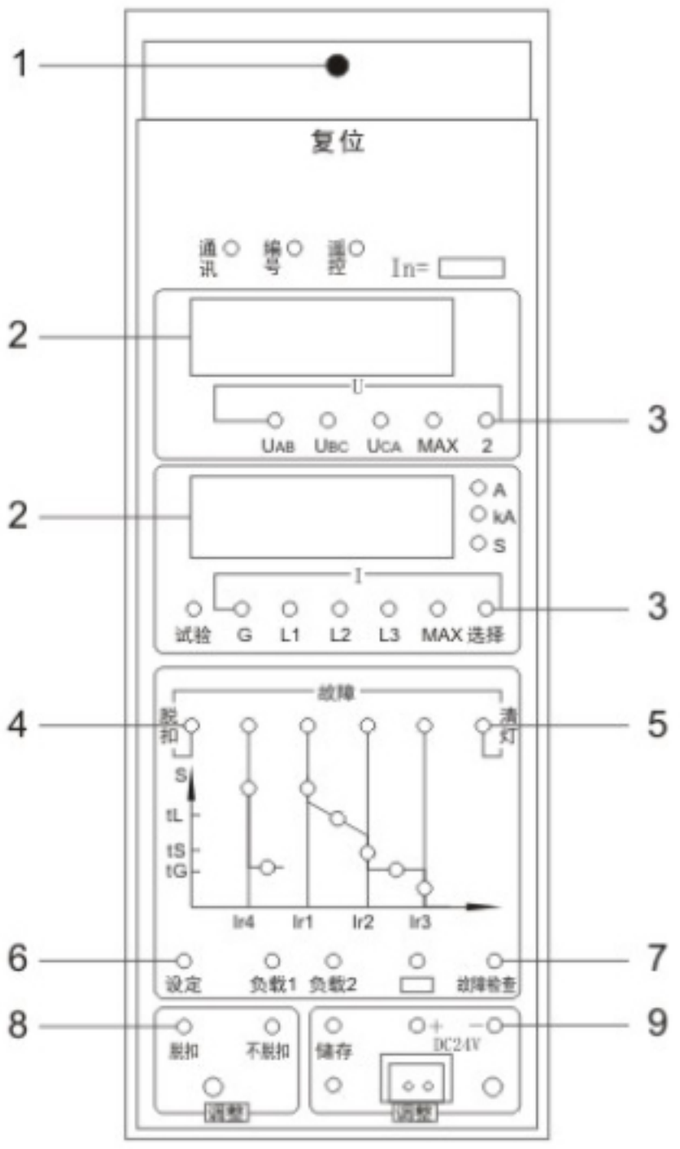
控制器整定、试验、故障后必须按此键，使脱扣器进行入正常运行状态。

◇ 故障检查键

断路器故障跳闸后按此键，可指示故障跳闸的原因，断电后仍具有故障记忆功能。

◇ 试验键

此键检查控制器与断路器的配合完好情况。



Technical Data and Performance

技术数据与性能

◆ 断路器的额定电流

壳架等级额定电流Inm A	额定电流In A
2000	200、250、315、400、500、630、800、1000、1250、1600、2000
3200	2000、2500、2900、3200
4000	3200、3600、4000
6300	4000、5000、6300

◆ 断路器的额定短路分断能力及短时耐受电流，断路器飞弧距离为"零"(即断路器外无飞弧)

额定等级额定电流InmA		2000	3200	4000	6300
额定极限短路分断能力 Icu (kA)O-CO	400V	80	100	100	120
	690V	50	65	65	80
额定短路接通能力 nxIcu (kA)/cosΦ	400V	176/0.2	220/0.2	220/0.2	264/0.2
	690V	105/0.25	143/0.2	143/0.2	187/0.2
额定运行短路分断能力 Ics(kA)O-C0-CO	400V	50	65	80	100
	690V	40	50	65	80
额定短时耐受电流 lcw(kA) 1s，延时 0.4s，O-CO	400V	50	65	65/80(MCR)	85/100(MCR)
	690V	40	50	50/65(MCR)	65/75(MCR)

注: 表中分断能力上下进线相同

◆ 断路器的最大耗损功率为360W、断路器在不同环境温度下额定持续电流变动

环境温度°C \ SJKW1	400A	630A	800A	1000A	1250A	1600A	2000A
40	400A	630A	800A	1000A	1250A	1600A	2000A
50	400A	630A	800A	1000A	1250A	1550A	1900A
60	400A	630A	800A	1000A	1250A	1550A	1800A

注:2500A及以上降容系数为0.9，其中6300A中的4000A不降容。

◆ 智能型过电流控制器保护特性和功能

过电流控制器保护特性

◇ 控制器的整定值Ir(I/In)及误差

长延时	短延时		瞬时		接地故障		
Ir1	Ir2	误差	误差		Ir4		误差
(0.4-1)In	(0.4-15)In	±10%	In~50KA(Inm=2000A) In~75KA(Inm=3200~4000A) In~100KA(Inm=6300A)	±15%	Inm=2000~4000A (0.2-0.8)In 最大1200A 最小1600A	Inm=6300A (0.2-0.1)In	±10%

注：当同时具有（要求）三段保护时，整定值不能交叉。

◇ 长延时过电流保护反时限动作特征I2TL=(1.5Ir1)^{2}tI，其（1.05~2.0)Ir1的动作时间见表，其时间误差±15%。

注：tL-长延时1.5Irs的整定时间，TL-长延时的动作时间。

1.05Ir1	1.3Ir1	1.5Ir1整定时间s	1.5	30	60	120	240	480
>2h不动作	<Ih动作	2.0Ir1动作时间s	8.4	16.9	33.7	67.5	135	270

◇ 短延时过电流保护特性

短延时过电流保护为定时限，如要求低倍数为反时限时，其特性按：I2Ts=(8Ir1)2ts，ts为一般延时设计时间；当过载电流>8Ir1时，自动转换为定时限特性，其定时限特性见表。时限误差为±15°C。

延时时间s				可返回时间s			
0.1	0.2	0.3	0.4	0.06	0.14	0.23	0.35

◆ 断路器的欠电压脱扣器性能

类别	欠电压脱扣器	欠电压脱扣器
脱扣器动作时间	延时1.3.5s	瞬时
35%~75%Ue	断路器可靠断开	
≤35%Ue	断路器不能闭合	
(85~110%) Ue	断路器能可靠闭合	
在1/2延时时间内,如果电源回复到85%ue时	断路器不断开	
注:延时时间精确度为±10%		

◆ 辅助触头的性能

◇ 辅助触头的约定发热电流为6A。

◇ 辅助触头的形式：六常开六常闭

◆辅助触头的非正常接通与分断能力

◇辅助触头按使用所确定的非正常使用条件下的接通分断能力

使用类别	接通			分断			通断操作循环次数和操作频率		
	I/Ie	U/Ue	CosΦ或T0.95	I/Ie	U/Ue	CosΦ或T0.95	操作循环次数	每分钟操作循环次数	通电时间(S)
AC-15	1.1	1.0	0.3	1.1	1.0	0.3	10	6(或与主回路操作频率同)	0.05
DC-13	1.1	1.1	6Pe	1.1	1.1	6Pe			

◆辅助触头正常条件下的接通与分断能力

使用类别	接通			分断		
	I/Ie	U/Ue	cosΦ或T0.95	I/Ie	U/Ue	cosΦ或T0.95
AC-15	10	1.1	0.3	10	1.1	0.3
DC-13	1.1	1.1	6Pe	1.1	1.1	6Pe

◆断开位置钥匙锁

◇断路器具有“断开位置钥匙锁”附件（按订货要求供）。能将断路器锁定在断开位置。此时无论用合闸按钮或释能（合闸）电磁铁均不能使断路器闭合。

Structure Overview

The fixed circuit breaker mainly consists of a contact system, an intelligent controller, a manual operating mechanism, an electric operating mechanism, and an installation board

The drawer type circuit breaker is mainly composed of a contact system, an intelligent controller, a manual operating mechanism, an electric operating mechanism, and a drawer seat

The circuit breaker is arranged in a three-dimensional form, with the characteristics of compact structure and small volume. The contact system is enclosed in an insulating base plate, and each phase of the contact is also separated by an insulating plate, forming small chambers. The intelligent controller, manual operating mechanism, and electric operating mechanism are arranged in front of each other to form independent units. If one of the units is broken, it can be completely removed and replaced with a new one

The drawer type circuit breaker consists of an inserted circuit breaker and a drawer seat. The guide rail inside the drawer seat can be pulled in and out, and the circuit breaker can be inserted and placed on the guide rail to enter and exit the drawer. The main circuit is connected by inserting the busbar on the circuit breaker and the bridge contact on the drawer seat

The drawer type circuit breaker has three working positions: "connection" position, "test" position, and "separation" position. The position change is achieved by rotating the handle in or out. The indication of three positions is displayed through pointers on the crossbeam of the drawer base

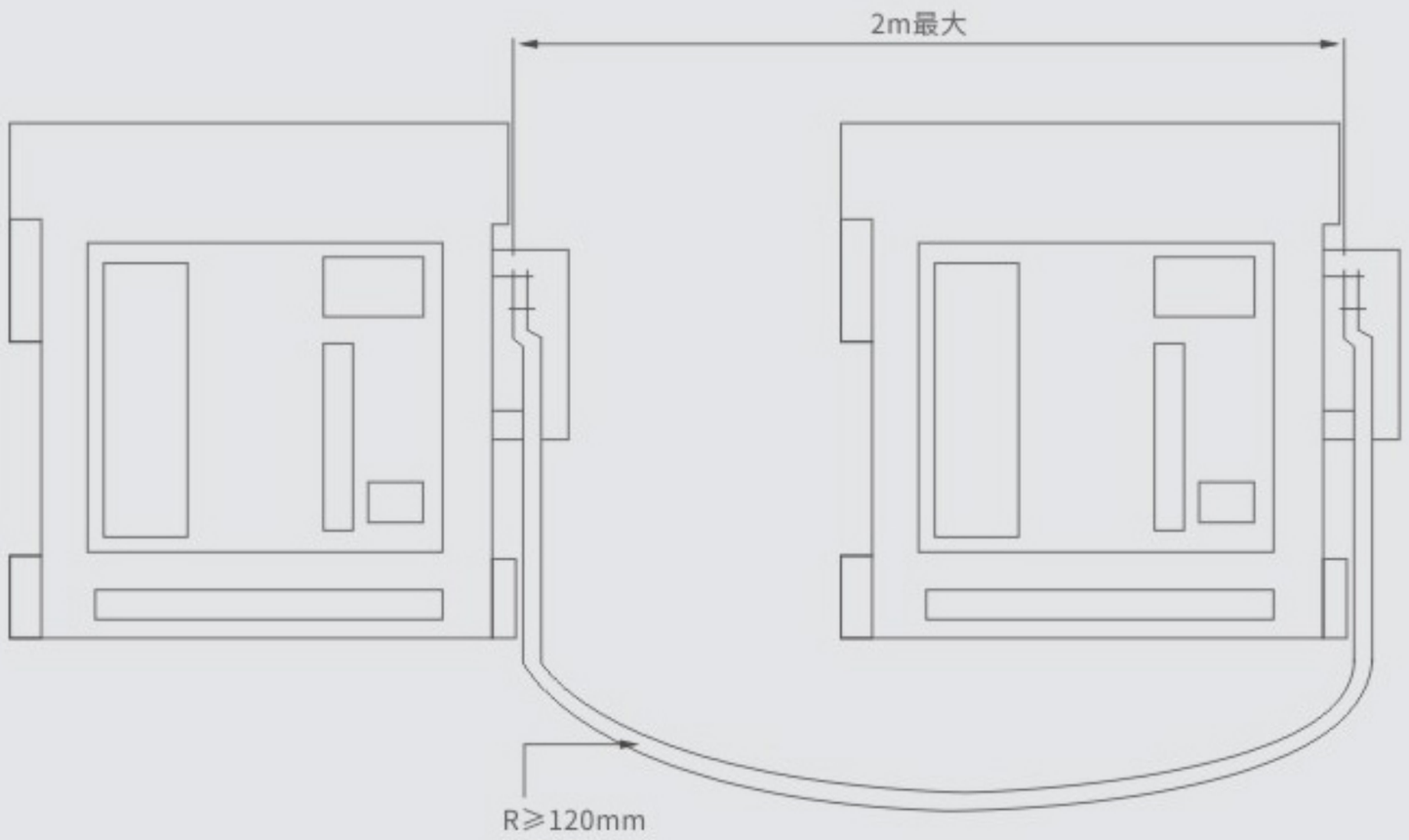
When in the "connected" position, both the main circuit and the secondary circuit are connected; When in the "test" position, the main circuit is disconnected and separated by an insulating partition, only the secondary circuit is connected, and some necessary action tests can be carried out; When in the "separated" position, both the main circuit and the secondary circuit are disconnected. And the drawer type circuit breaker has a mechanical interlocking position. The circuit breaker can only be closed in the connection position or test position, and cannot be closed in the middle position between connection and test

◆断路器的联锁机构（适用抽屉式、固定式）

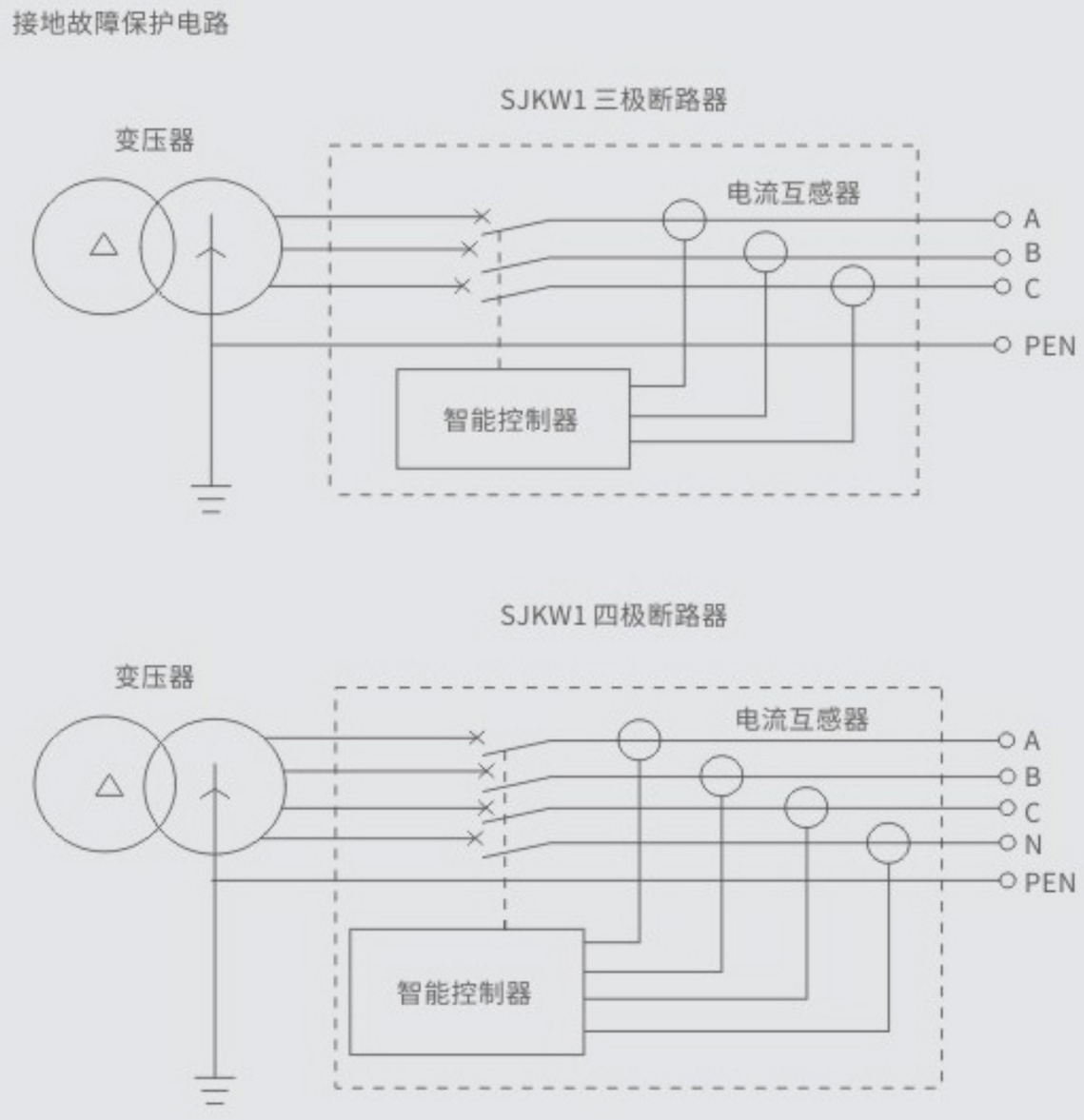
扛杆联锁

用杠杆联锁的3个垂直安装断路器。如2个断路器联锁只需去除最上面的断路器。

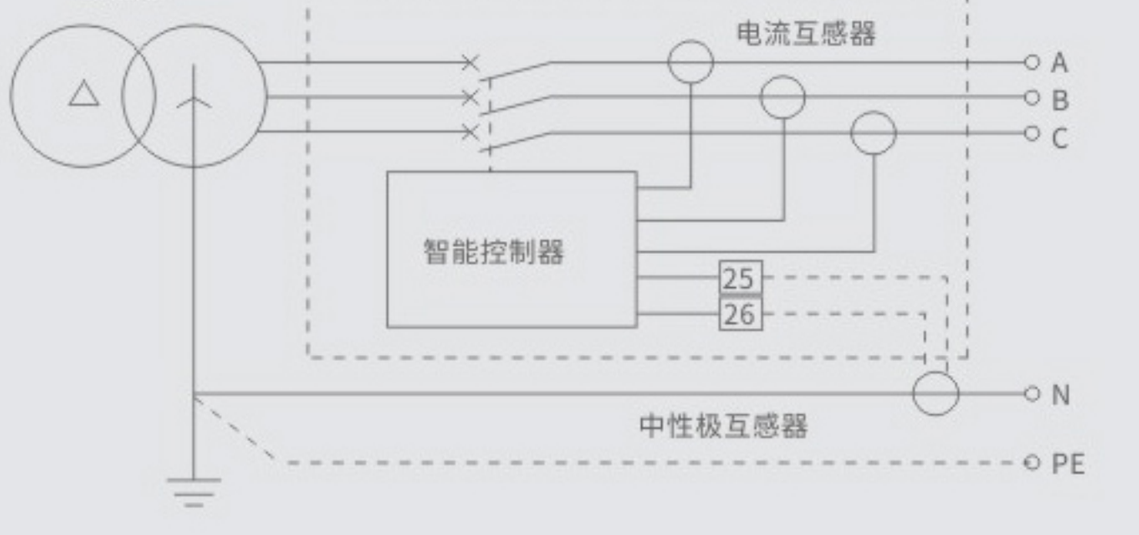
◆软联锁（水平、垂直均可带）



内部接线方式



3PT型
差值型接地故障保护，
信号只取三相电流的
矢量和(三相不平衡)



4PT型
差值型接地故障保护，
信号取三相电流及N
相电流的矢量和

(3P+N) T型
外接中性极互感器
差值型接地故障保护，
信号只取三相电流及N
相电流的矢量和

(3P+N) W型
外接地电流互感器

地电流型接地故障
保护，信号直接取
主电源的中性点与
地之间

◆ External single-phase grounding protection function

External transformers (neutral pole transformers or ground current transformers) are provided to users as accessories. The user shall insert it into the busbar by themselves and connect the wire (length of 2m) to the secondary wiring terminals # 25 and # 26 of the circuit breaker

The size of the center opening of the external transformer (maximum allowable for the through-hole busbar) is as follows:

型号	宽度	局度
SJKW1-2000 SJKW1-4000/4	61	21
SJKW1-3200及以上 (除SJKW1-4000/4外)	87	31

◆ Wiring Terminal

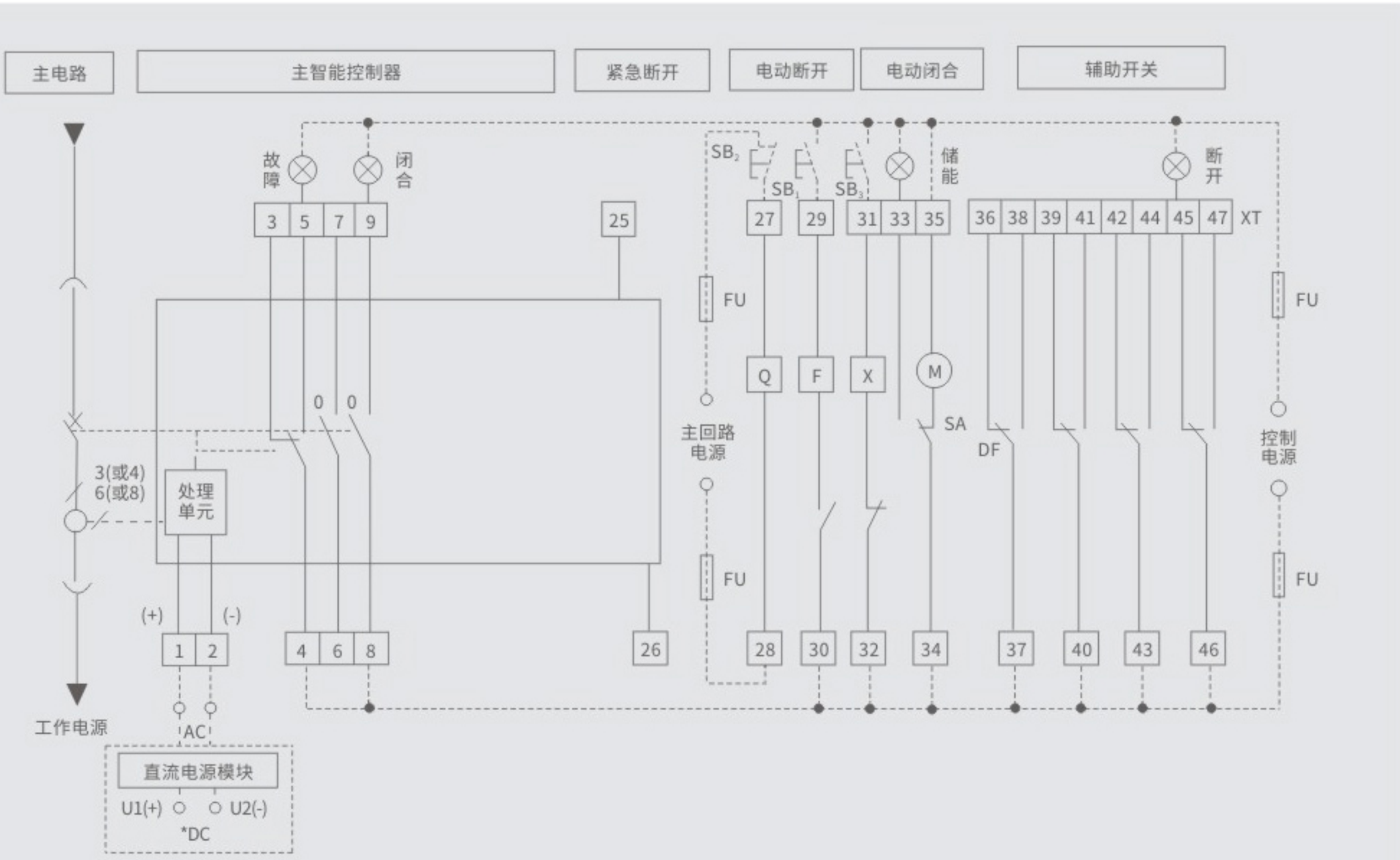
The circuit breaker has a total of 47 wiring terminals, which are simple to connect and easy for users to use. The wiring diagram is shown in the figure

◆ (Controller with M-type or L-type basic functions)

◇ Other wiring of intelligent controller

◇ # 1 and # 2 AC working power input (input from DC power modules U1 and U2 in DC mode)

◇ # 25, # 2 external neutral or ground current transformer input



Note:

If the control power voltages of F, X, and M are different, they should be connected to different power sources separately

Terminal # 35 can be directly connected to the power supply (automatic pre energy storage), or connected in series with a normally open button and then connected to the power supply (manual pre energy storage)

If requested by the user, terminals # 6~# 7 can output normally closed contacts

In addition, the attachment should be provided by the user themselves

DC110V or 220V is input from U1 (+) and U2 (-), and the two output terminals of the DC power module are respectively connected to the secondary terminal block terminals 1 (+) and 2 (-)

SB1分励接钮（用户自备）　X合闸电磁铁　DF辅助触头　Q欠压脱扣器或欠压延时脱扣器

SB2欠压按钮（用户自备）　M储能电机　F分励脱扣器　O常开触点（3A/AC380V）

SB3合闸按钮（用户自备）　XT接线端子　SA电机微动开关　⊗信号灯（用户自备）

◆ 控制器为L型带附加功能

智能控制器其他接线：

#1、#2交流工作电流输入（直流时从直流电源模块U1、U2输入）

#12过载预报警讯号输出

#14瞬时短延时脱扣讯号输出

#15长延时脱扣讯号输出

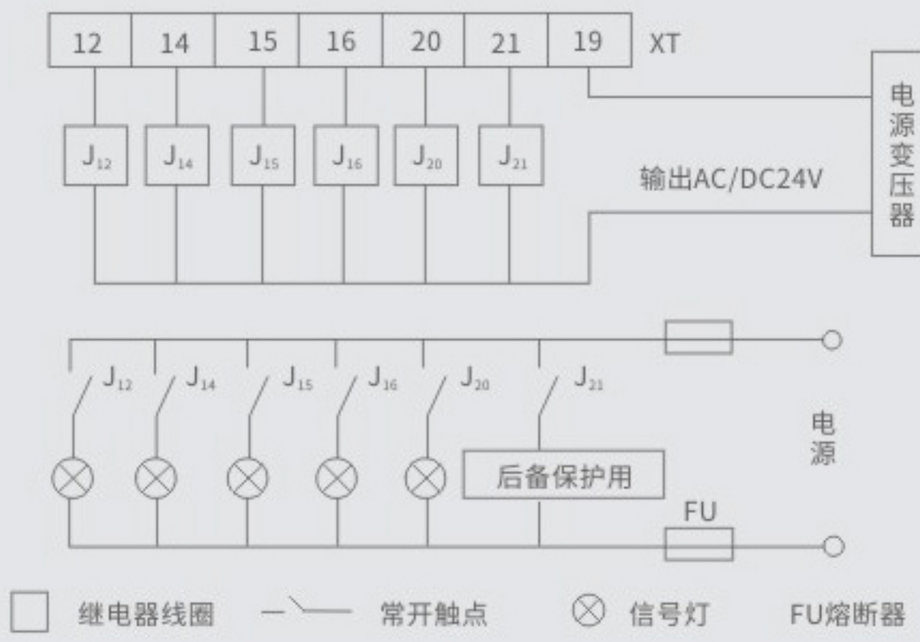
#16接地（或接零）故障脱扣讯号输出

#19讯号输出公共线

#20自诊断讯号输出

#21脱扣讯号（可供分励或欠压执行元件）

#25、26外接中性级或地电流互感器输入



断路器附加功能用继电器接线图

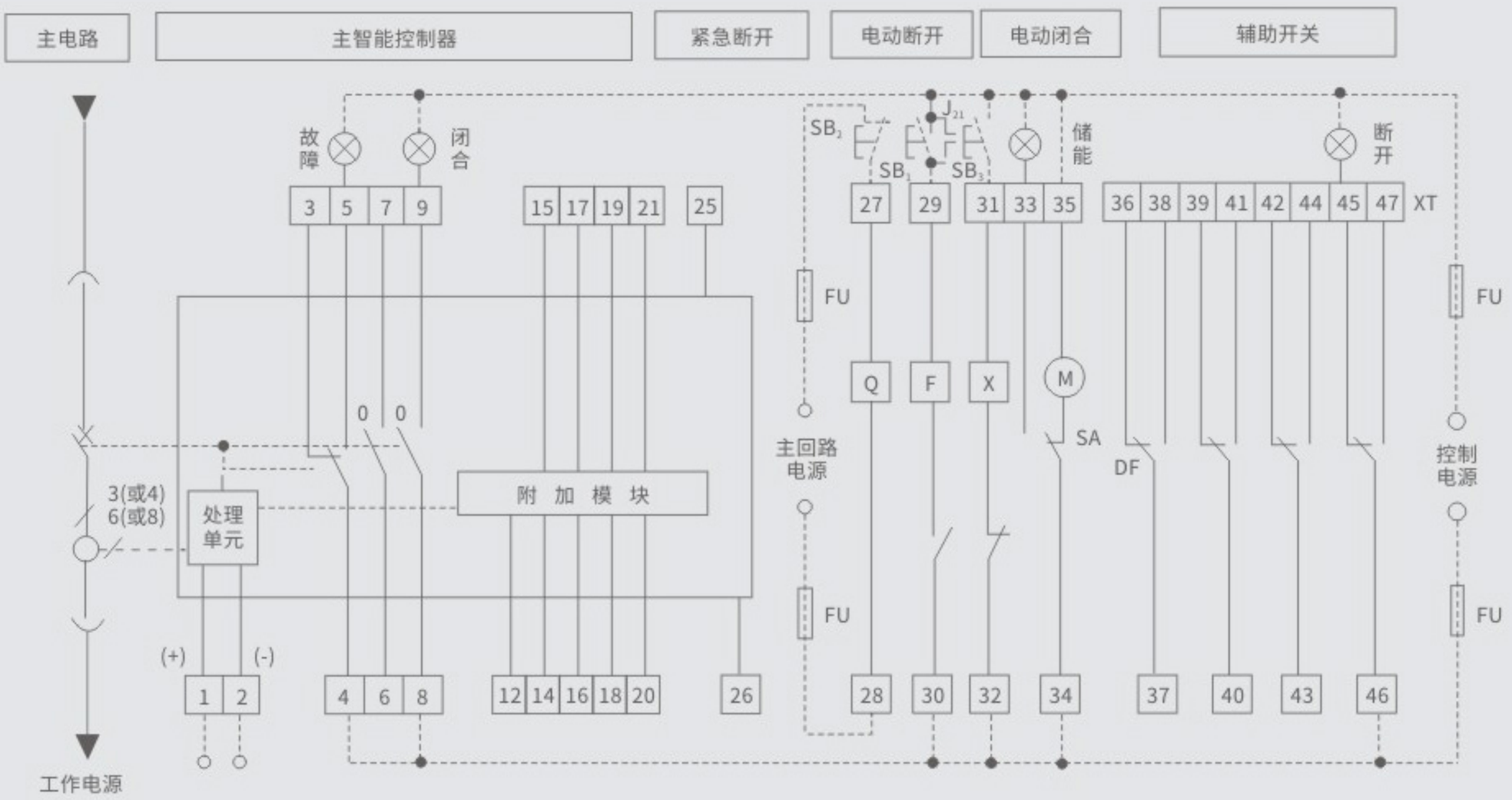
The controller signal output drives the external relay J to output contact action signals through terminals 12, 14-16, 20, and 21

The power transformer (the user needs to specify the input voltage value in the ordering specification) is provided by the manufacturing company. The power transformer can be inserted into the standard guide rail together with the relay base, and the user can install it in the appropriate position of the switchgear

Relay model: HH62P, AC/DC24V, to be provided by the user

◆ Self diagnostic signal output conditions: A. Controller internal>80; B、 The chip is not working properly; C、 Controller loses power

Users can choose to connect J12 according to their actual needs J14~J16、J20、J21。



Note:

If the control power voltages of F, X, and M are different, they should be connected to different power sources separately

Terminal # 35 can be directly connected to a power source (automatic pre energy storage) or connected in series with different power sources

If requested by the user, terminals # 6~# 7 can output normally closed contacts

◆ Additional user provided items

When the working power supply of the intelligent controller is DC power supply, a DC power supply module must be added (at this time, terminals # 1 and # 2 cannot be directly connected to AC power supply). The secondary wiring is shown in the diagram The DC power supply DC110V or 220V is input from U1 (+) and U2 (-), and the two output terminals of the DC power module are respectively connected to the secondary terminal block terminals 1 (+) and 2 (-)

◇ SB1 shunt connection button (user provided) X closing electromagnet DF auxiliary contact Q undervoltage release or undervoltage delay release

◇ SB2 undervoltage button (user provided) M energy storage motor F shunt release O normally open contact (3A/AC380V)

◇ SB3 closing button (user provided) XT wiring terminal SA motor micro switch signal light (user provided)

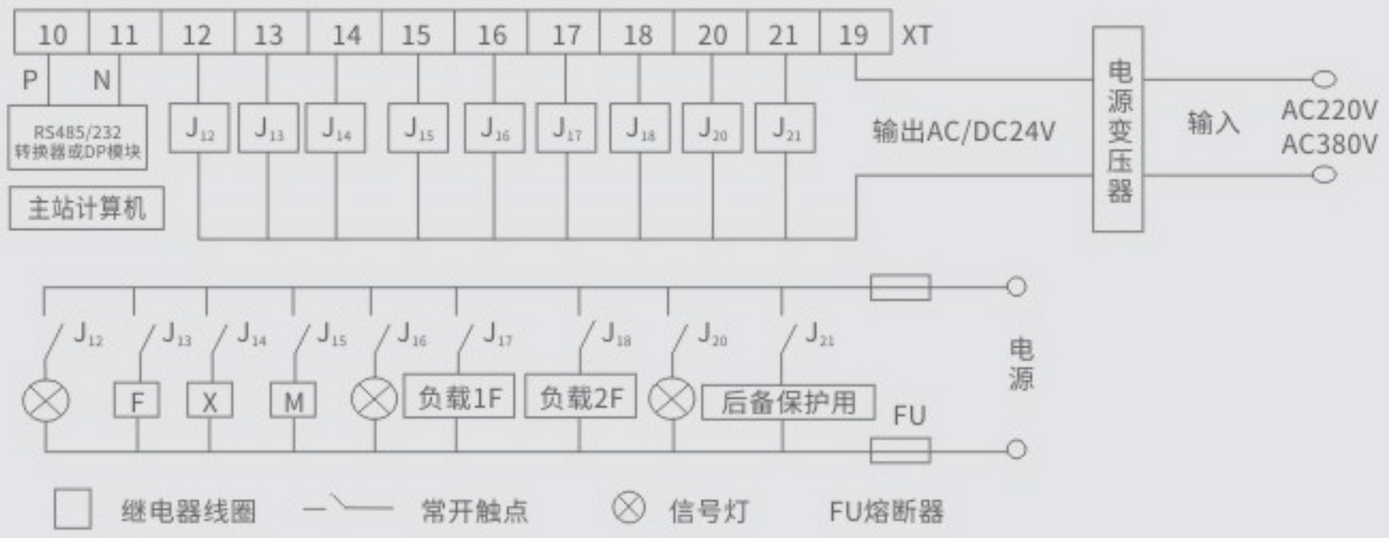
The controller is M-type with additional functions or H-type

Other wiring of intelligent controller:

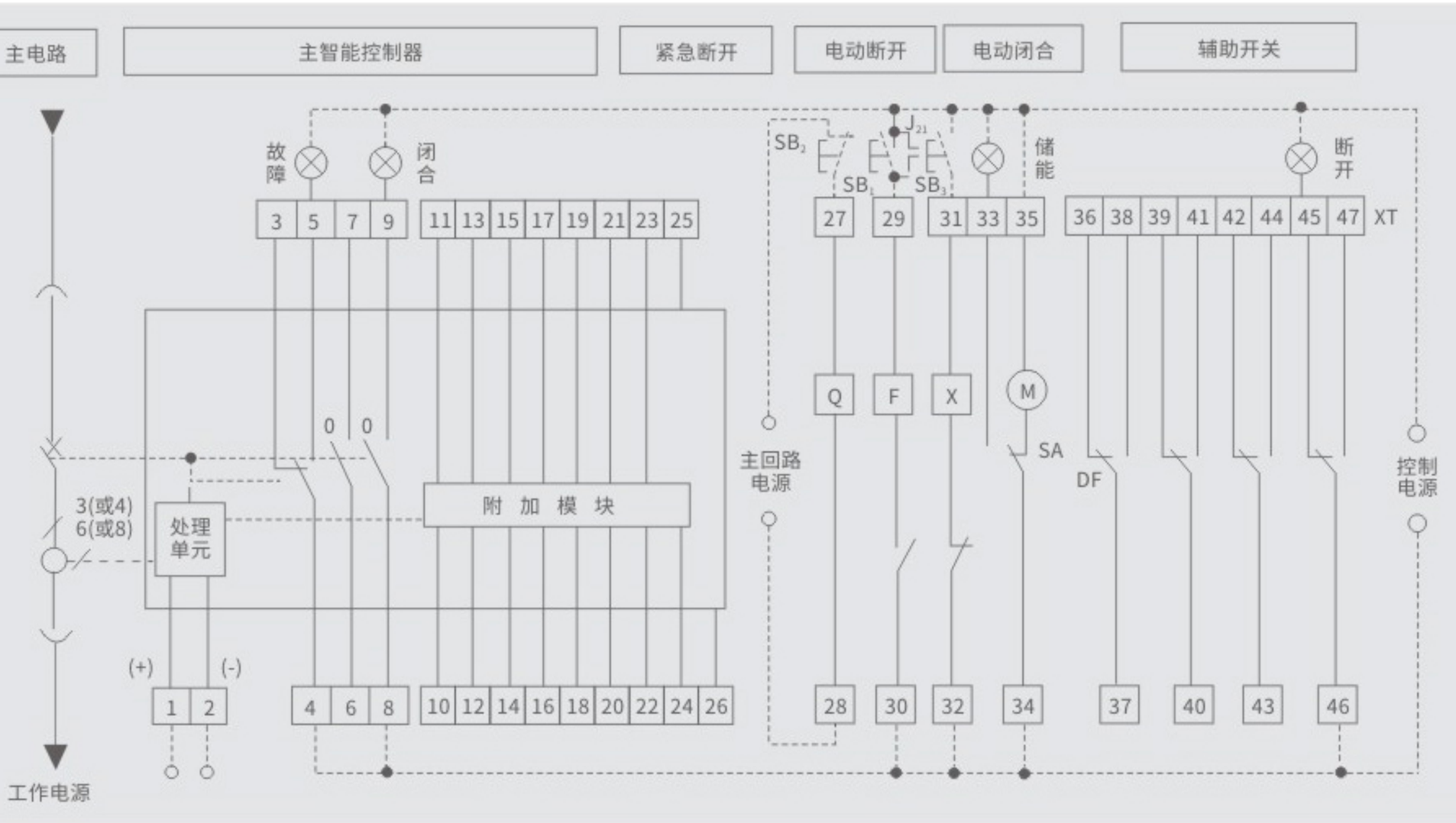
◇ # 1, # 2 AC working current input (input from DC power supply module U1, U2 in DC mode)

◇ # 10RS485 communication P terminal (simplex) remote adjustment and remote communication

◇ # 11RS485 communication N terminal (simplex) remote control telemetry, etc.



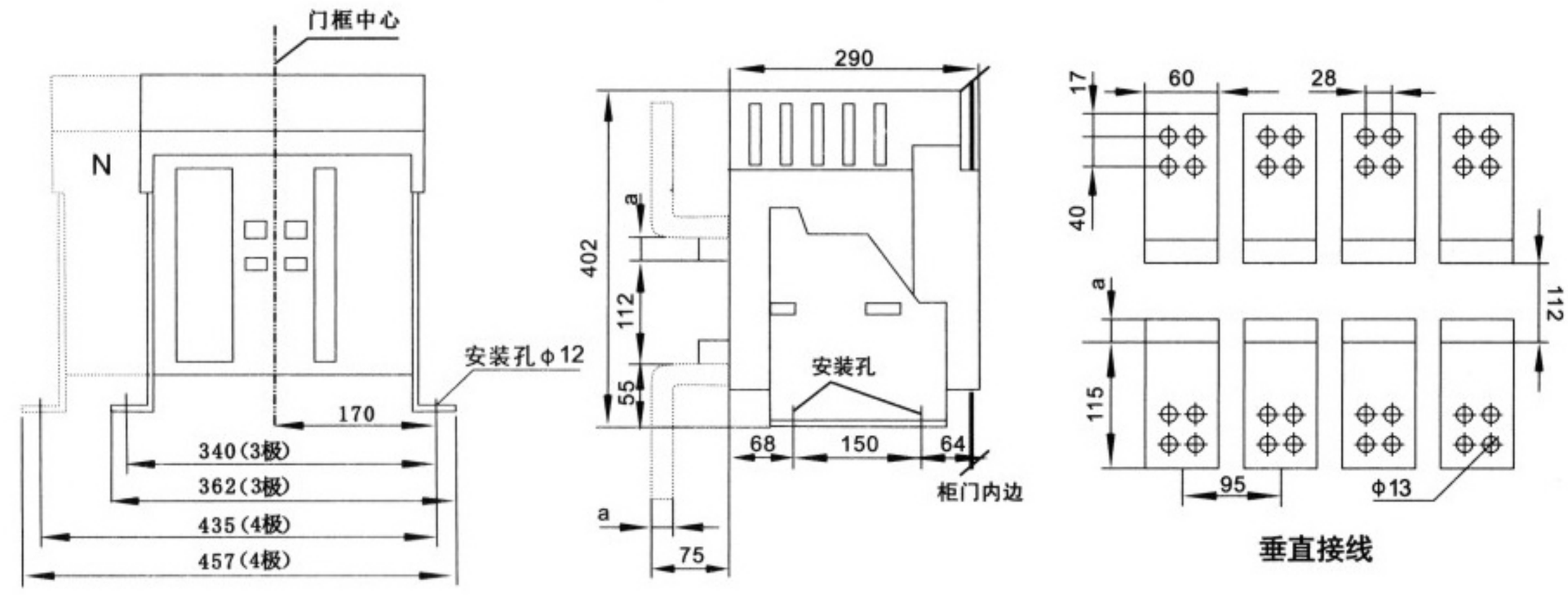
断路器附加功能用继电器接线图

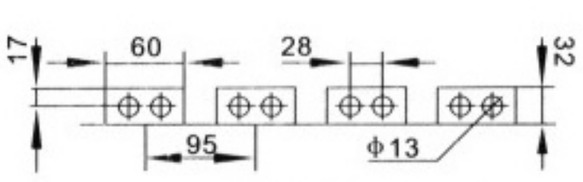


#12 overload warning signal output
#13 Communication remote control shunt trip output
#14 instantaneous short delay tripping signal output or communication remote control closing output
#15 long delay trip signal output or communication remote control energy storage output
#16 Ground (or neutral) fault trip signal output
#17 Unloading Load 1 Signal Output
#18 unloading load 2 signal output
#19 signal output common line
#20 Self diagnosis and diagnosis output
#21 trip signal (available for shunt or undervoltage actuators)
#22 Voltage Signal Phase A
#23 Voltage signal B phase
#24 voltage signal C phase
#25, 26 external neutral or ground current transformer input
The controller signal output drives the external circuit breaker J to output contact action signals through terminals 12-18, 20, and 21
The RS485/232 converter, DP module, and current transformer (the user needs to specify the input voltage value in the ordering specification) are provided by the manufacturing company. The power transformer can be inserted into the standard guide rail together with the bottom seat of the circuit breaker and installed by the user at a suitable position in the switchgear
◆ Breaker model: HH62P, AC/DC24V, to be provided by the user
◆ Main station computer user provided
The output of terminals 13~15 can be used for communication remote control opening, closing, and energy storage. The disengagement signals of corresponding terminals 14 and 15 are no longer output at this time. The normally open contacts of the corresponding relays are connected in parallel with the corresponding manual control buttons to achieve remote control. If remote control function is not required, terminals 14 and 15 can be connected in series to two signal lights through the normally open contacts of relays J14 and J15 to remotely output the corresponding signals. Please indicate whether remote control function is required in the ordering specifications, and the manufacturer will decide the corresponding functions of terminals 14 and 15 based on this. The output of terminal 21 can be used as backup protection after pushing relay J21
On the condition of self diagnosis signal output: a. The internal temperature of the controller is greater than 80 ° C; b、 The chip is not working properly; c、 Controller loses power
Users can choose J12 according to their actual needs J14~J16、J20、J21。
Note:
If the control power voltages of F, X, and M are different, they should be connected to different power sources separately
Terminal # 35 can be directly connected to the power supply (automatic pre energy storage), or connected in series with a normally open button and then connected to the power supply (manual pre energy storage)
If requested by the user, terminals # 6~# 7 can output normally closed contacts
◇ In addition, additional user provided items
When the working power supply of the intelligent controller is DC power supply, a DC power supply module must be added (at this time, terminals # 1 and # 2 cannot be directly connected to AC power supply). The secondary wiring is shown in the diagram. The DC power supply DC110V or 220V is input from U1 (+) and U2 (-), and the two output terminals of the DC power module are respectively connected to the secondary wiring socket terminals 1 (+) and 2 (-)

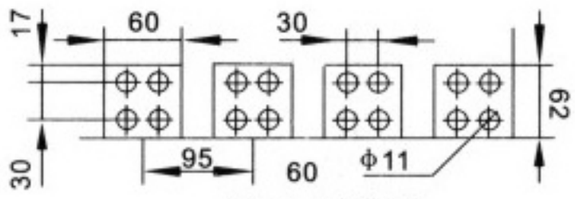
Appearance and installation dimensions

The installation dimensions and external dimensions of the fixed circuit breaker are shown in Figures 1 and 2





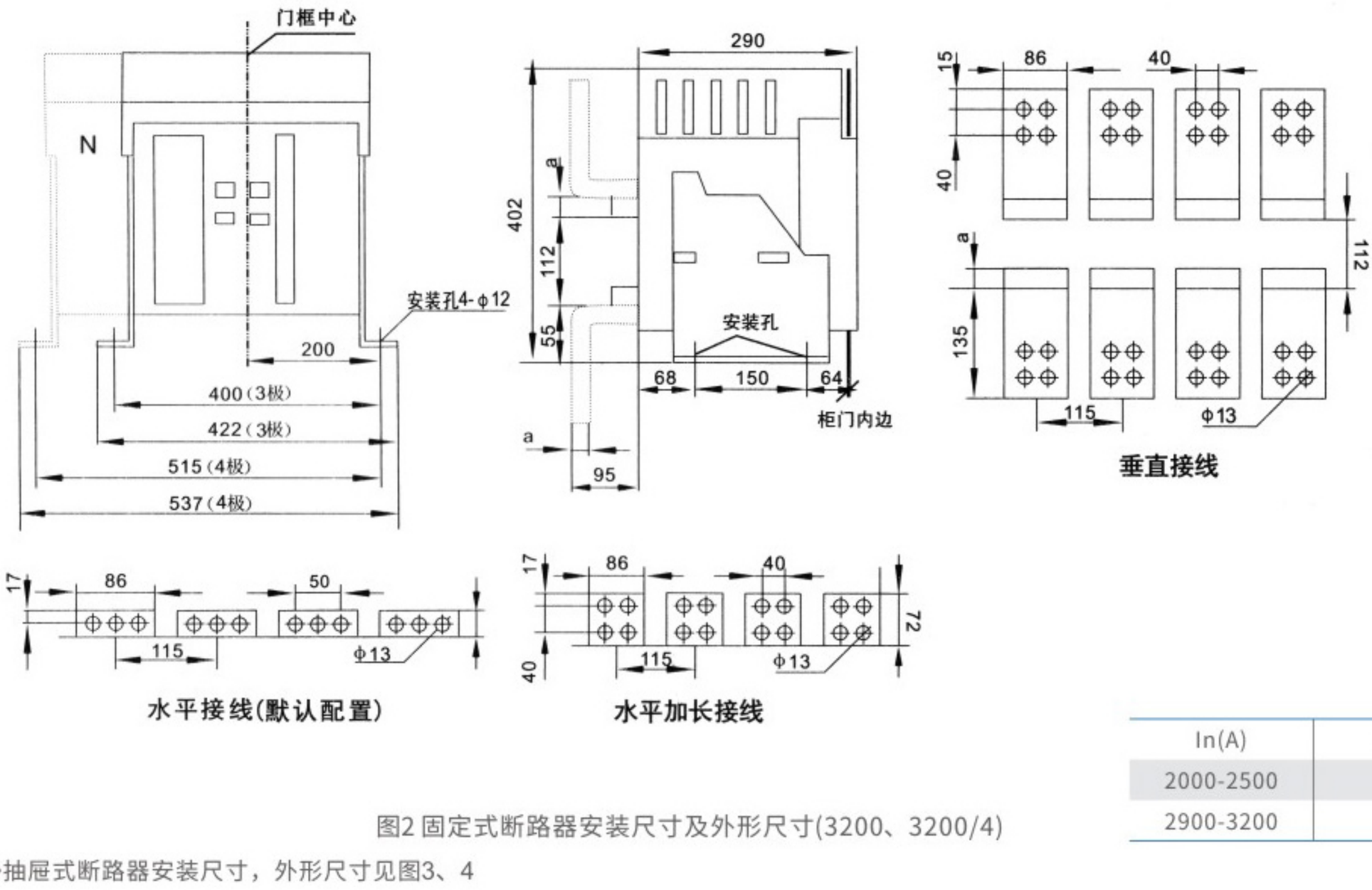
水平接线(默认配置)



水平加长接线

In(A)	a(mm)
400-800	10
1000-1600	15
2000	20

图1 固定式断路器安装尺寸及外形尺寸(2000、2000/4)



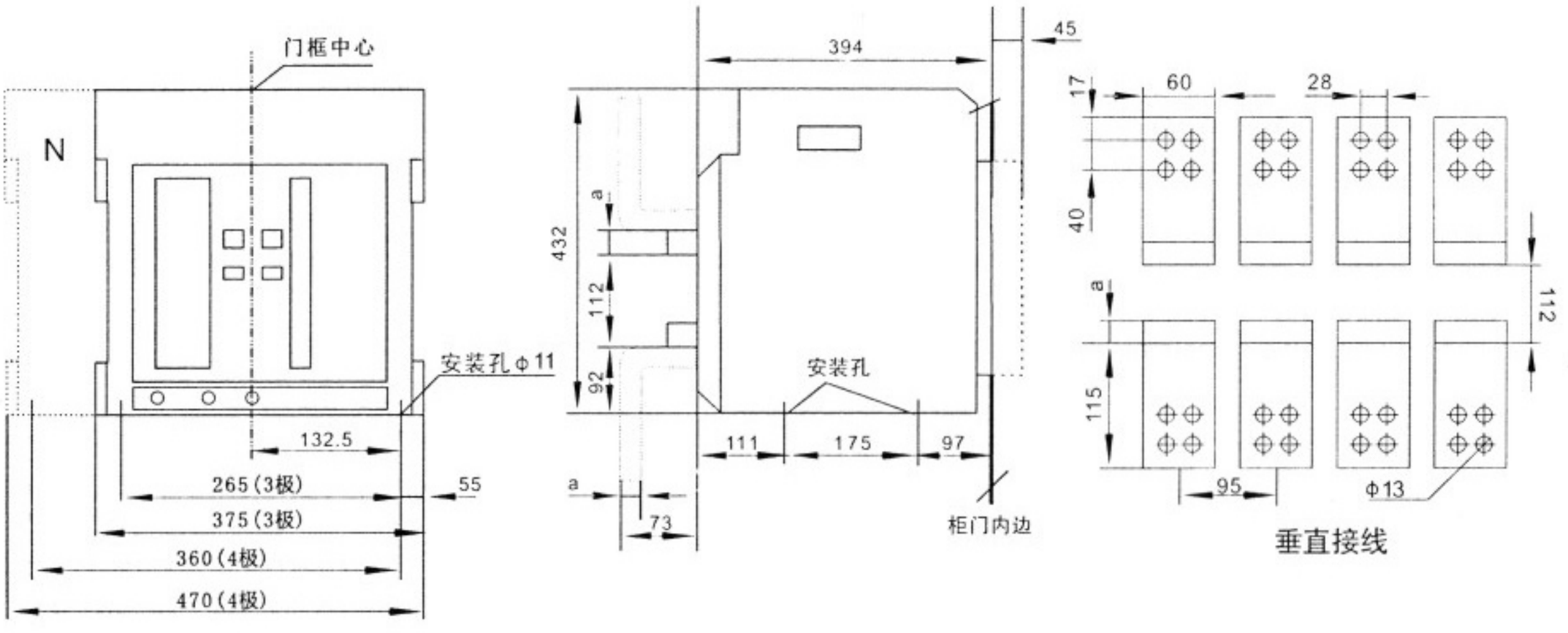
水平接线(默认配置)

水平加长接线

In(A)	a(mm)
2000-2500	20
2900-3200	30

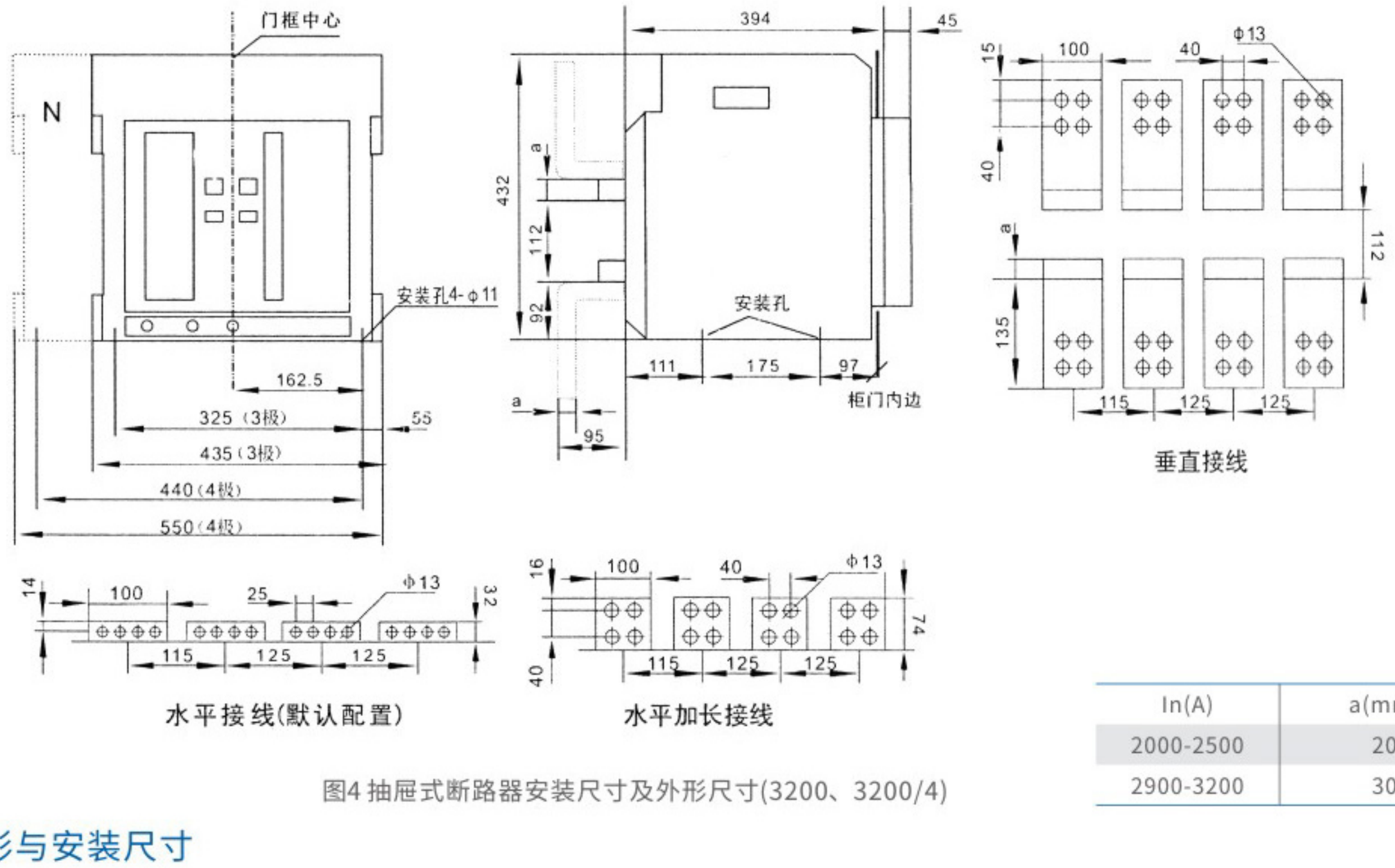
图2 固定式断路器安装尺寸及外形尺寸(3200、3200/4)

◆抽屉式断路器安装尺寸，外形尺寸见图3、4



In(A)	a(mm)
400-800	10
1000-1600	15
2000	20

图3 抽屉式断路器安装尺寸及外形尺寸(1000、2000/3、4)

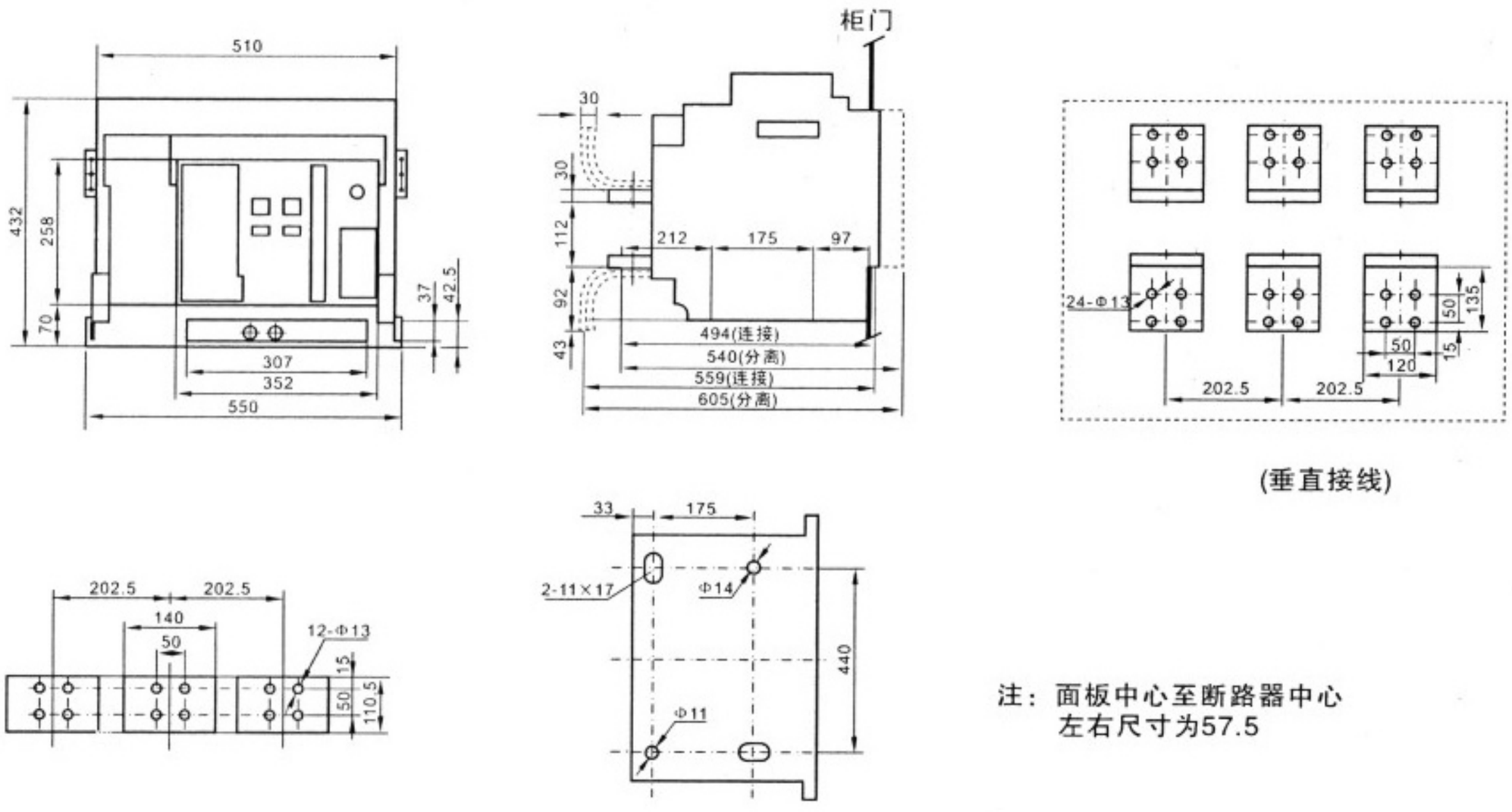


In(A)	a(mm)
2000-2500	20
2900-3200	30

图4 抽屉式断路器安装尺寸及外形尺寸(3200、3200/4)

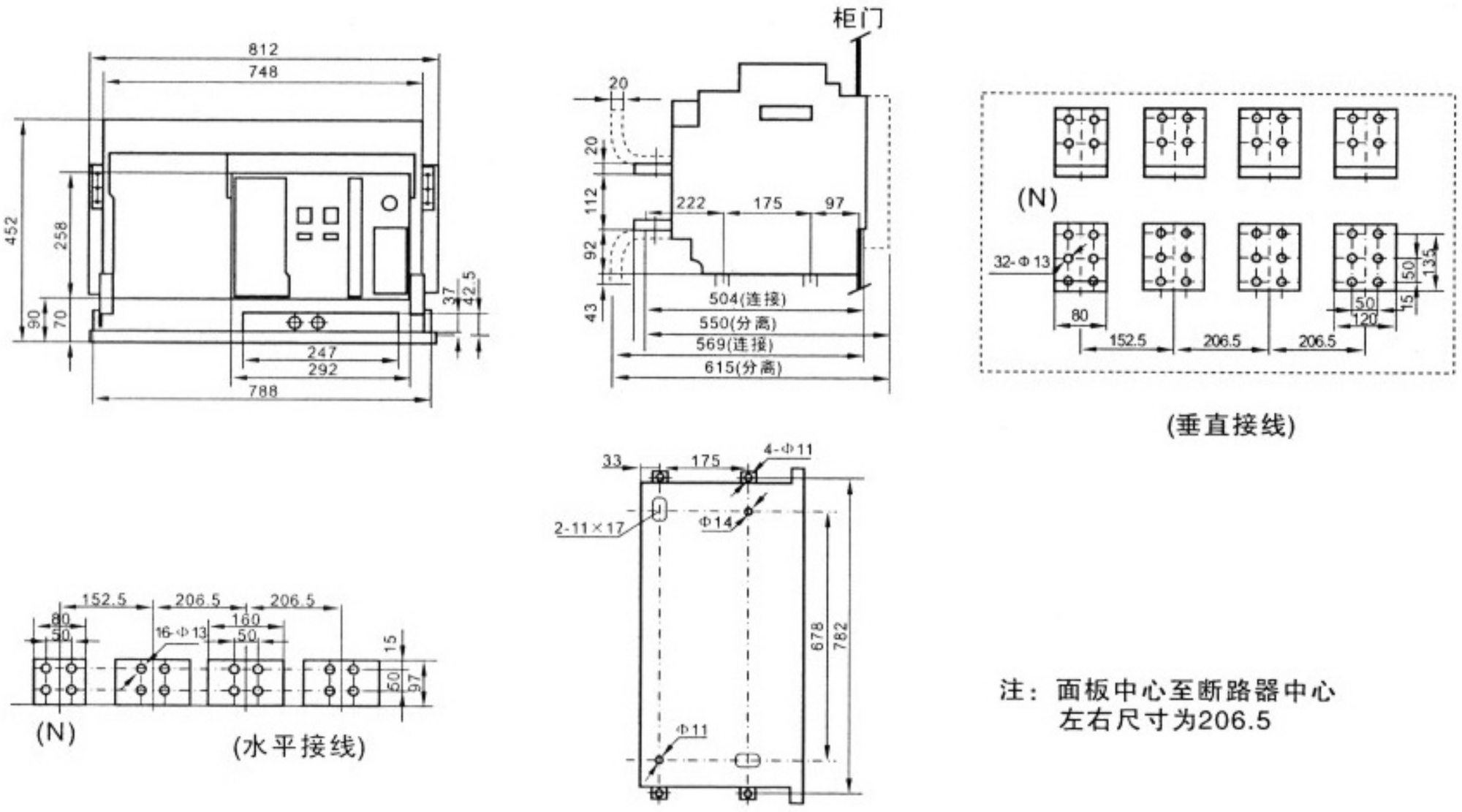
外形与安装尺寸

◆抽屉式断路器安装尺寸，外形尺寸见图5、6、7、8



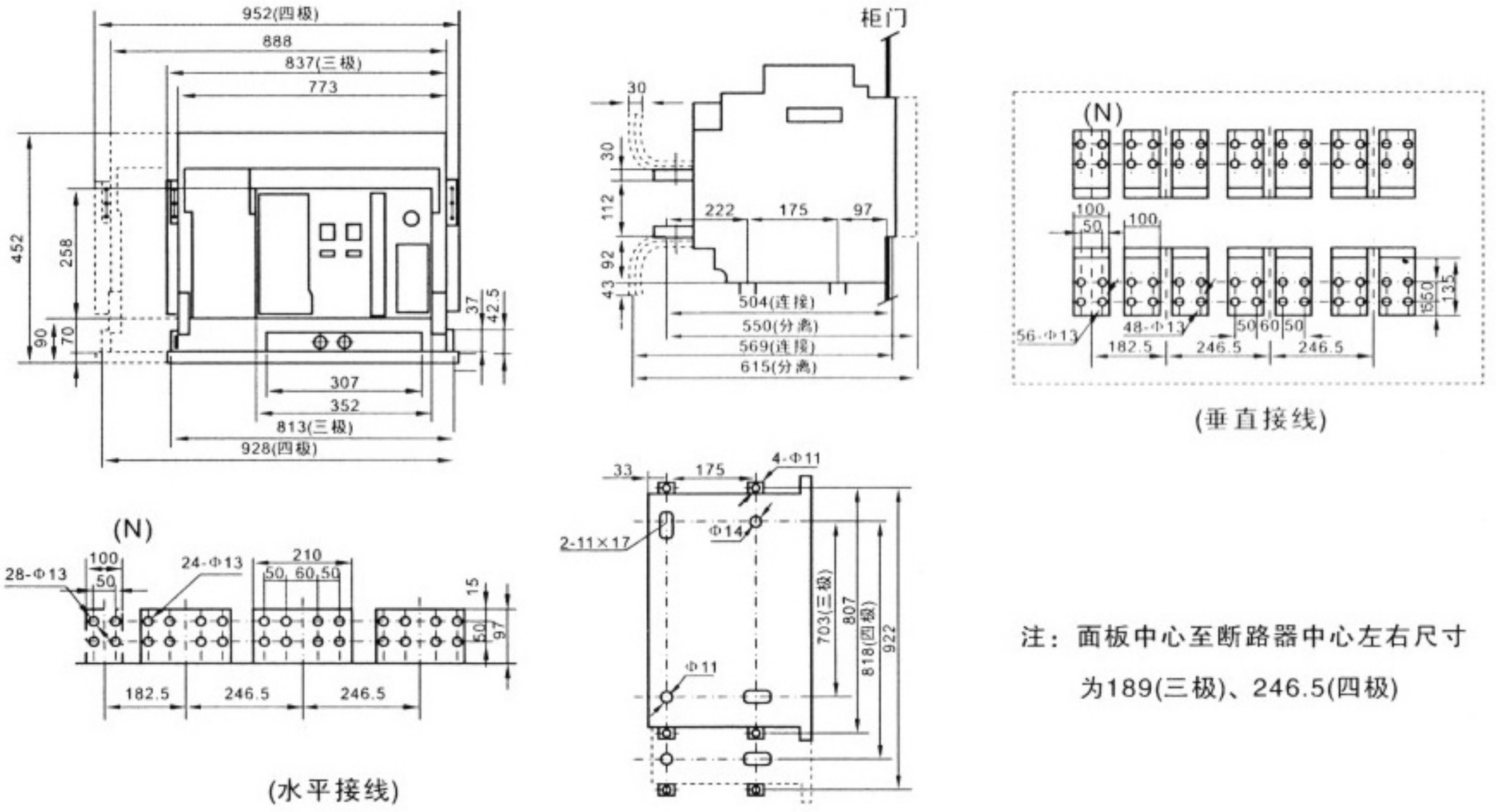
注：面板中心至断路器中心
左右尺寸为57.5

图5 抽屉式断路器安装尺寸及外形尺寸(4000)



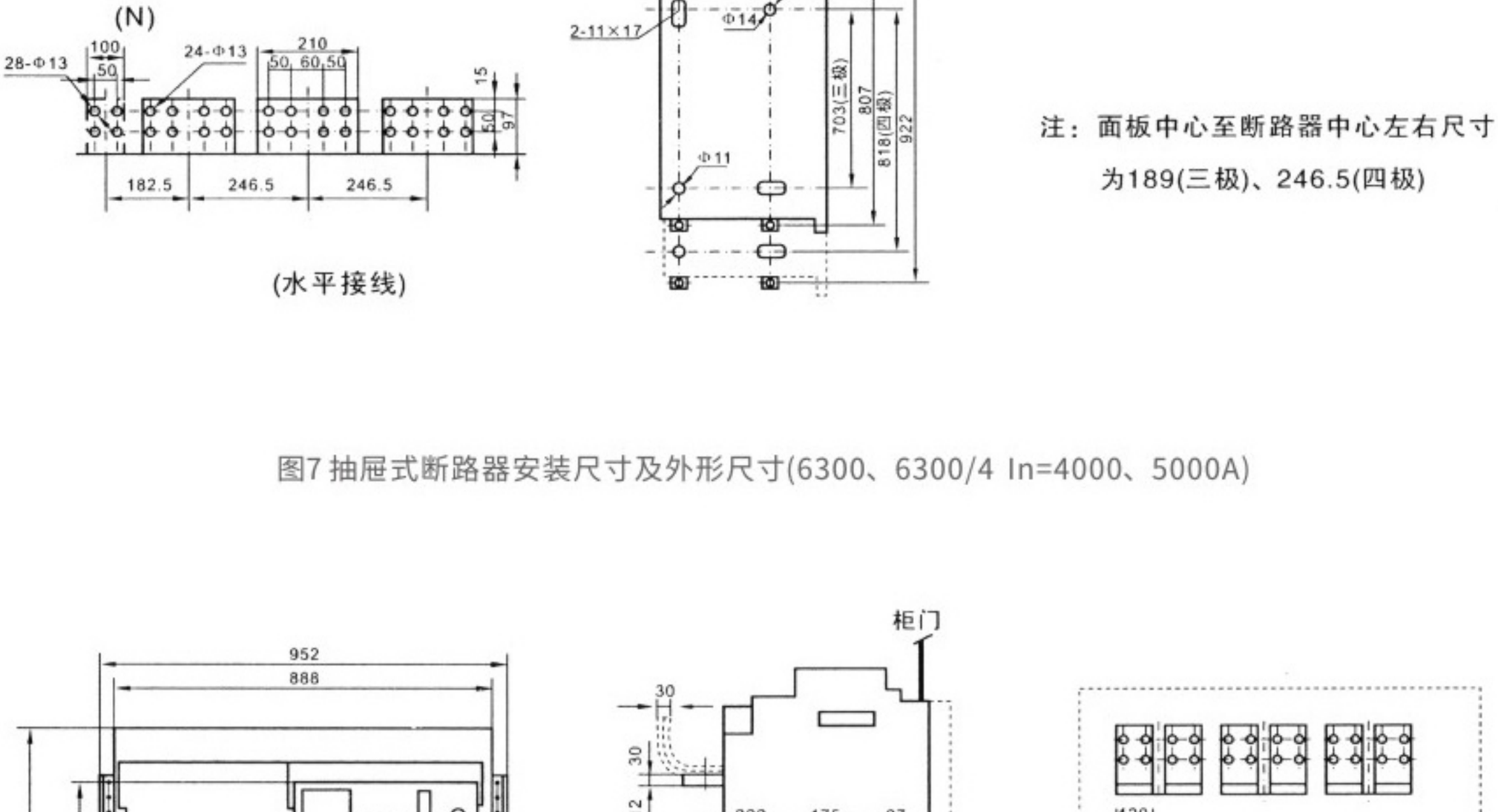
注：面板中心至断路器中心
左右尺寸为206.5

图6 抽屉式断路器安装尺寸及外形尺寸(4000/4)



注：面板中心至断路器中心左右尺寸
为189(三极)、246.5(四极)

图7 抽屉式断路器安装尺寸及外形尺寸(6300、6300/4 In=4000、5000A)

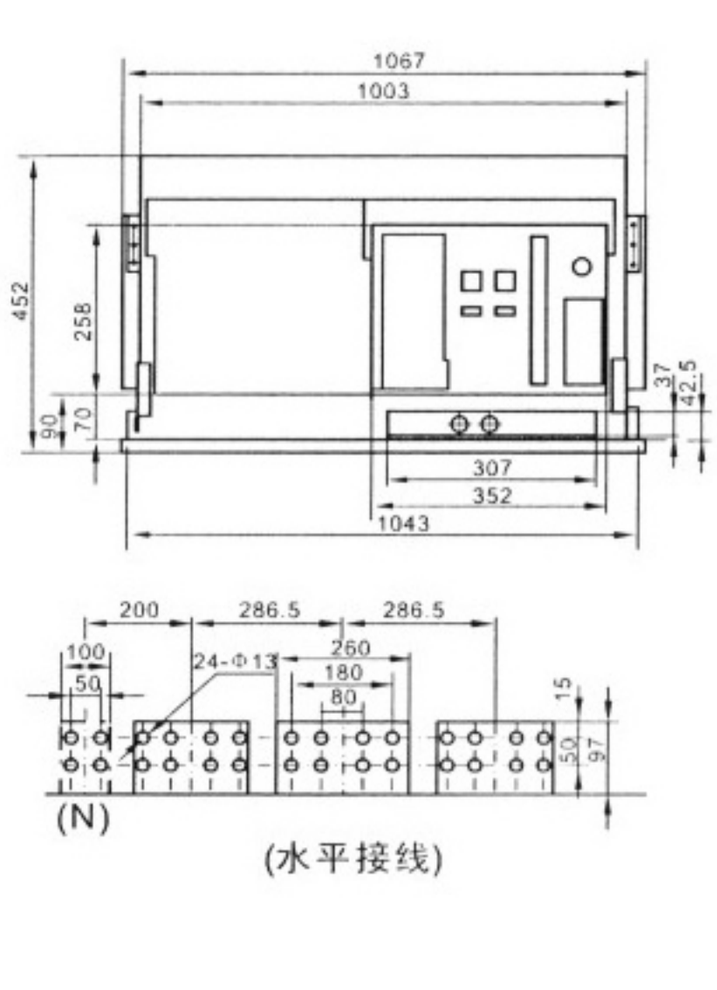


注：面板中心至断路器中心左右尺寸
为246.5

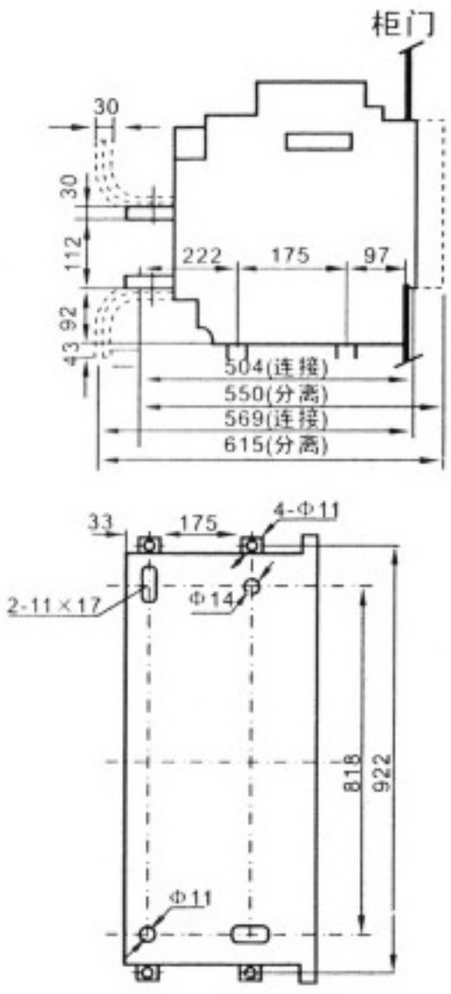
图8 抽屉式断路器安装尺寸及外形尺寸(6300 In=6300A)

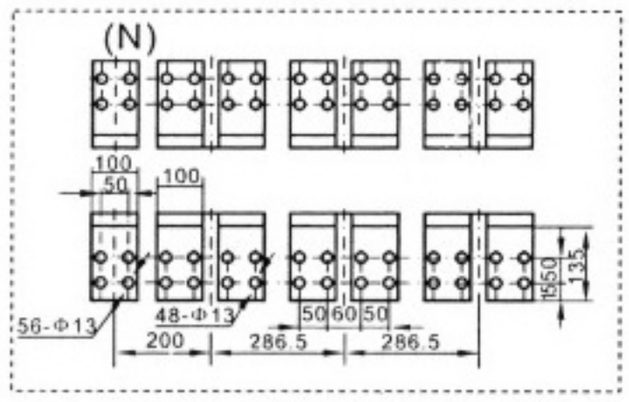
外形与安装尺寸

◆抽屉式断路器安装尺寸，外形尺寸见图9



(水平接线)





(垂直接线)

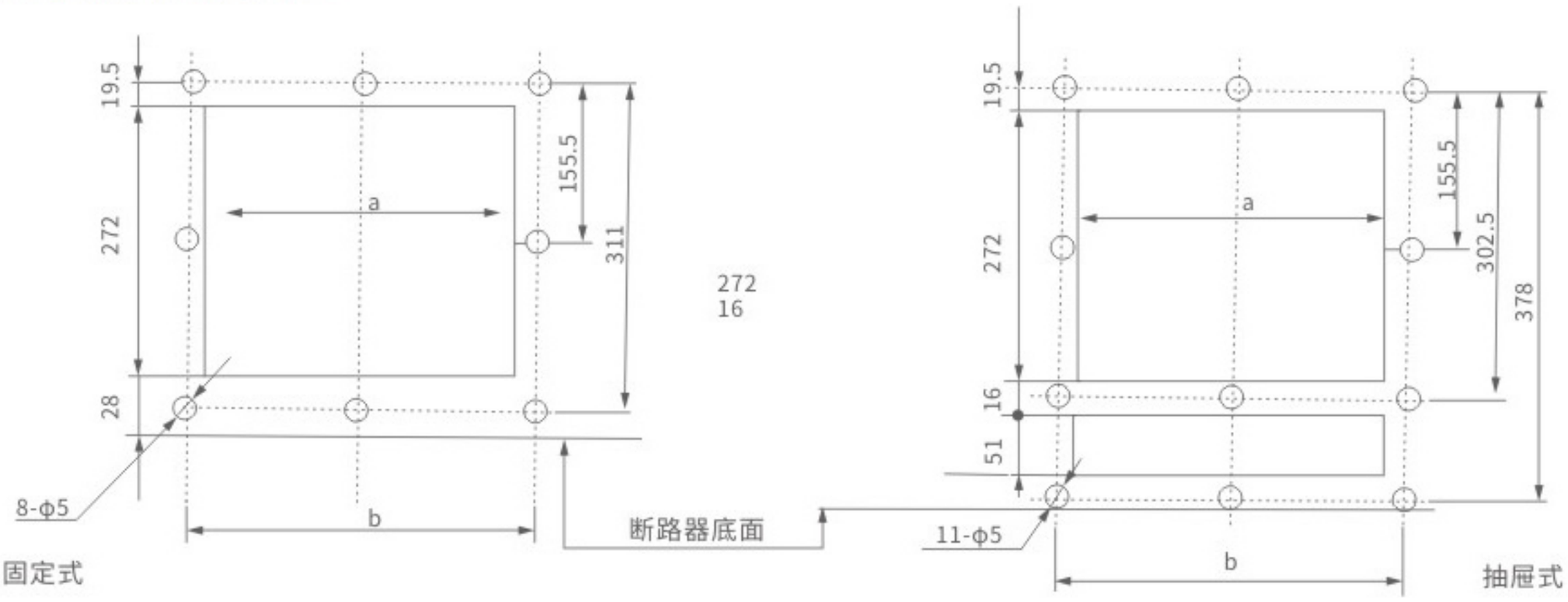
注：面板中心至断路器中心左右尺寸为304

图9 抽屉式断路器安装尺寸及外形尺寸(6300 In=6300A)

◆用户连接铜排规格、数量见下表

额定电流	外接铜排规格	每极根数	额定电流	外接铜排规格	每极根数
630A	40×5	2	2900A	100×10	3
800A	50×5	2	3200A	120×10	3
1000A	60×5	2	3600A	120×10	4
1250A	80×5	2	4000A	120×10	4
1600A	100×5	2	5000A	120×10	5
2000A	100×5	3	6300A	120×10	6
2500A	100×5	4	-	-	-

门框尺寸及安装孔孔距



In	a(mm)	b(mm)
2000	306	345
3200、4000/3	366	405
4000/4	306	345
6300	366	405

◆固定式断路器安装尺寸及外形尺寸(6300、5000、4000 In)