DELIXI ELECTRIC 德力西电气 | 领航者系列 NAVIGATOR

CDW3 Air Circuit Breaker

Delixi Electric , through a strong alliance with Schneider Electric , a Fortune 500 company , has introduced new international platform products , while also considering the most important cost-effectiveness and refinement needs of domestic customers . It has decided to combine and comprehensively improve with domestic platform products , forming the Navigator series of frame circuit breaker products;

Nowadays, on the basis of dual platforms, products have been comprehensively upgraded and upgraded. In addition to traditional circuit breaker features (drawer type, selectivity, and low maintenance), they also have higher parameters, more selective shell racks, and more complete accessories.

Advanced technology platform

As an advanced technology product platform, there are three types of frame ratings: 1000AF, 1600 AF, and 4000AF. The rated current is fully covered from 400A to 4000A, and the minimum current can be set to 160A. It is fully suitable for various applications that require high breaking capacity of circuit breakers, small volume requirements, and horizontal and vertical conversion of wiring strips. And it is fully suitable for various applications of the same type of products in the overseas and domestic markets.

Domestic innovation technology platform

As a cutting-edge technology platform dedicated to technological innovation, there are four types of shell frames available: 2000AF, 2500AF, 3200AF, and 6300AF. The rated current is fully covered from 630A to 6300A, and the minimum current can be set to 250A. The breaking performance is comprehensively improved on the original foundation , and the same platform products are widely used in China, fully suitable for various occasions with higher cost-effectiveness requirements.

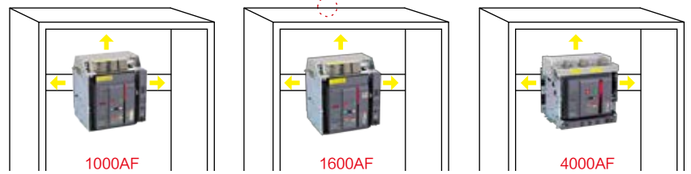
天生好表现

形好 价好 质更好

1000AF　1600AF　4000AF

- rated current：1000AF——400A、630A、800A、1000A
  1600AF——400A、630A、800A、 1000A、1250A、1600A
  4000AF——630A、800A、1000A、1250A、1600A、2000A、2500A、3200A、4000A
- Full coverage of current from 400A to 4000A, three frame levels, 10 rated current options available
- Wiring method: horizontal+vertical+mixed connection (1600AF, 4000AF)

The volume of 1000AF, 1600AF, and 4000AF is reduced by up to 20% compared to similar products, and the expansion space of the cabinet is more excellent



Innovative platform with stable performance

2000AF

2500AF

3200AF

6300AF

rated current：2000AF——630A、800A、1000A、1250A、1600A、2000A

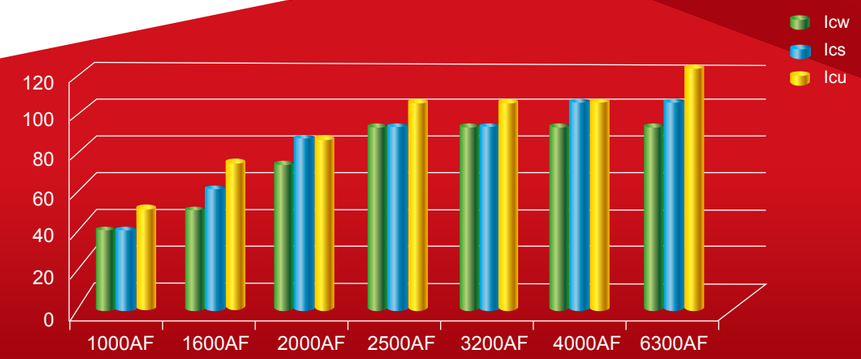
2500AF——630A、800A、1000A、1250A、1600A、2000A、2500A

3200AF——2000A、2500A、3200A

6300AF——4000A、5000A、6300A

- Full coverage of current from 630A to 6300A, four frame levels, 11 rated current options available
- Connection method: horizontal connection

Performance improvement, safety and reliability



Full coverage of rated voltage

Full coverage of 13 rated working voltages to meet the power supply system usage needs of various industries

Overview

Main Parameters

frame current	1000AF、1600AF、2000AF、2500AF、3200AF、4000AF、6300AF
breaking capacity level	N&H
rated current In（A）	400 ～ 6300
rated voltage AC Ue（V）	220V/230V/240V/380V/400V/415V/440V/480V/500V/525V/550V/660V/ 690V
poles Poles	3 & 4
Installation method	Fixed type & draw-out type
Connection	Horizontal rear connection, vertical rear connection

Smart Release

iTR326 type（basic type）	basic function，protection function（L，S，I & G）
iTR326A type (Standard type)	Basic protection Function Basic Measurement Functions Auxiliary Functions
iTR326H type (Advanced type)	Basic + Advanced Protection Function Various measurement Functions Auxiliary Functions Special Function Communication Function

iTR326 iTR326A iTR326H

Accessory

- Locking, interlocking and protection accessories: closing and opening button covers, mechanical interlocks, key locks, door interlocks, safety shutter locks
- Indication accessories: ready-to-close contact, three-position signal contact, fault indication contact, auxiliary contact
- Operating accessories: opening and closing coil, undervoltage coil, electric operating mechanism, electrical reset
- Circuit protection accessories: N-phase external transformer, grounding transformer, leakage transformer
- Connecting accessories: horizontal, vertical, extended busbar, extended busbar

1000AF 1600AF 2000AF 2500AF 3200AF 4000AF 6300AF

scope of application

The rated current of CDW3 series universal circuit breaker is from 400A to 6300A, and the rated voltage is AC 220V/230V/240V/380V/400V/415V/440V/480V/500V/525V/550V/660V/690V, suitable for AC 50/60Hz, mainly used in power distribution network to distribute electric energy, protect lines and power supply equipment from overload, undervoltage, short circuit, single-phase grounding and other faults.。

The circuit breaker can be widely used in power stations, factories, mines and modern high-rise buildings,

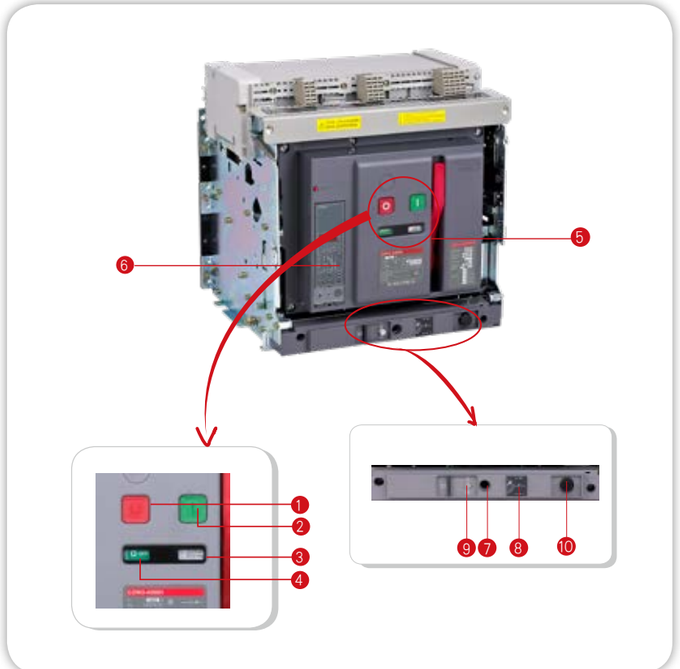
especially in power distribution systems in intelligent buildings.

compliant standard：GB/T14048.2 IEC/EN 60947—2

normal working conditions

ambient temperature	The ambient air temperature is -5℃~+40℃ (certified); the average value of 24 hours does not exceed +35° C. It can also be used in extreme temperature -40℃~+70℃ (iTR326, iTR326A type controller).
Altitude	4000m
electromagnetic interference	Suitable for environment A
pollution level	Pollution level 3 The installation position should be vertical and the inclination in each direction should not exceed 5°
installation level	The main circuit of the circuit breaker and the undervoltage release coil, the primary coil of the power transformer are class IV, and the auxiliary circuit and control circuit are class III
Shipping conditions	It should be moved with care, should not be placed upside down, and violent collision should be avoided as much as possible

认识正面



1. Open button（O）
2. Close button（I）
3. Energy Storage Mechanism Status Indicator
   - Energy storage, allow closing
     charged OK
   - Energy storage, not allowed to close
     charged ~~OK~~
   - release energy
     discharged
4. Main contact position indicator
   - open O OFF
   - clos I ON
5. Mechanical energy storage handle
6. Controllers
7. Rocking in (out) device
8. Connection, test and disconnection position indication
9. Connection, test and disconnection position limiters
10. joystick storage

Product Model

■ Noumenon Code

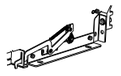
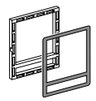
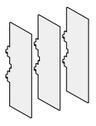
product name	Frame current	breaking capacity	rated current	poles	Installation method
W3	16	H	06	3	DH
	10：1000A（04—10） 16：1600A（04~16） 20：2000A（06~20） 25：2500A（06~25） 32：3200A（20~32） 40：4000A（06~40） 63：6300A（40~63）	N：N type H：H type 1000AF/6300AF only N Type	04：400A 06：630A 08：800A 10：1000A 12：1250A 16：1600A 20：2000A 25：2500A 32：3200A 40：4000A 50：5000A 63：6300A	3：3 poles 4：4 poles	DH：draw-out horizontal FH：fixed horizontal DV：draw-out vertical （only 1600AF/4000AF） FV：fixed vertical （only 1600AF/4000AF）

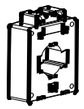
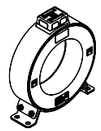
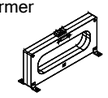
CDW3 default standard configuration accessories: shunt, closing, electric operation, 4 open 4 closed auxiliary contacts, door frame, phase barrier, power module, iTR326A

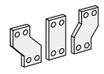
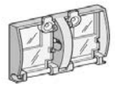
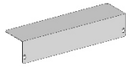
6300AF has no fixed type, 6300AF-6300A only has 3P draw-out type

■ Accessory code

	Accessory code	Accessory name
controller		
	CDW3TUL	controller iTR326
	CDW3TUM	controller iTR326A
	CDW3TUH	controller iTR326H
remote operation		
Shunt coil	W3MXS2A	Open coil AC220V/AC230V（CDW3—1000AF/1600AF/4000AF）
	W3MXS3A	Open coil AC380V/AC400V（CDW3—1000AF/1600AF/4000AF）
	W3MXS1D	Open coil DC220V（CDW3—1000AF/1600AF/4000AF）
	W3MXS2D	Open coil DC110V（CDW3—1000AF/1600AF/4000AF）
	W3MXD2A	Open coil AC220V/AC230V（CDW3—2000/2500/3200/6300AF）
	W3MXD3A	Open coil AC380V/AC400V（CDW3—2000/2500/3200/6300AF）
	W3MXD1D	Open coil DC220V（CDW3—2000/2500/3200/6300AF）
	W3MXD2D	Open coil DC110V（CDW3—2000/2500/3200/6300AF）
close coil	W3XFS2A	close coil AC220V/AC230V（CDW3—1000AF/1600AF/4000AF）
	W3XFS3A	close coil AC380V/AC400V（CDW3—1000AF/1600AF/4000AF）
	W3XFS1D	close coil DC220V（CDW3—1000AF/1600AF/4000AF）
	W3XFS2D	close coil DC110V（CDW3—1000AF/1600AF/4000AF）
	W3XFD2A	close coil AC220V/AC230V（CDW3—2000/2500/3200/6300AF）
	W3XFD3A	close coil AC380V/AC400V（CDW3—2000/2500/3200/6300AF）
	W3XFD1D	close coil DC220V（CDW3—2000/2500/3200/6300AF）
	W3XFD2D	close coil DC110V（CDW3—2000/2500/3200/6300AF）
Undervoltage coil	W3MNS2A	Undervoltage coil AC220V/AC230V（CDW3—1000AF/1600AF/4000AF）
	W3MNS3A	Undervoltage coil AC380V/AC400V（CDW3—1000AF/1600AF/4000AF）
	W3MND2A	Undervoltage coil AC230V（CDW3—2000AF/2500AF/3200AF）Assisted suction
	W3MND3A	Undervoltage coil AC400V（CDW3—2000AF/2500AF/3200AF）Assisted suction
	W3MNS2A63	Undervoltage coil AC230V（CDW3—2000AF/2500AF/3200AF/6300AF） self suction
	W3MNS3A63	Undervoltage coil AC400V（CDW3—2000AF/2500AF/3200AF/6300AF） self suction
Undervoltage delay coil	W3MNRS2A	Undervoltage delay coil AC220V/AC230V（CDW3—1000AF/1600AF/4000AF）
	W3MNRS3A	Undervoltage delay coil AC380V/AC400V（CDW3—1000AF/1600AF/4000AF）
	W3MNRD2A	Undervoltage delay coil AC220V/AC230V（CDW3—2000/2500/3200/6300AF）
	W3MNRD3A	Undervoltage delay coil AC380V/AC400V（CDW3—2000/2500/3200/6300AF）

	Accessory code	Accessory name
Key		
lock key	W3L1S16	one lock one key CDW3—1000AF/1600AF
	W3L1S40	one lock one key CDW3—4000AF
	W3L2S16	two lock one key CDW3—1000AF/1600AF
	W3L2S40	two lock one keyCDW3—4000AF
	W3L3S16	three lock two key CDW3—1000AF/1600AF
	W3L3S40	three lock one key CDW3—4000AF
	W3L1D	one lock one key CDW3—2000AF/2500AF/3200AF/6300AF
	W3L2D	two lock one key CDW3—2000AF/2500AF/3200AF/6300AF
	W3L3D	three lock two key CDW3—2000AF/2500AF/3200AF/6300AF
door interlock 	W320DLR	Draw-out type right door interlock CDW3—2000AF
	W325DLR	Draw-out type right door interlock CDW3—2500AF
	W332DLR	Draw-out type right door interlock CDW3—3200AF
	W363DLR	Draw-out type right door interlock CDW3—6300AF
	W316DLR	Draw-out type right door interlock CDW3—1000AF/1600AF
	W340DLR	Draw-out type right door interlock CDW3—4000AF
	W320DLL	Draw-out type left door interlock CDW3—2000AF
	W325DLL	Draw-out type left door interlock CDW3—2500AF
	W332DLL	Draw-out type left door interlock CDW3—3200AF
	W316DLL	Draw-out type left door interlock CDW3—1000AF/1600AF
	W363DLL	Draw-out type left door interlock CDW3—6300AF
	W340DLL	Draw-out type left door interlock CDW3—4000AF
Operation and Protection		
door frame 	W3DCDPS16	Draw-out type door frame CDW3—1000AF/1600AF
	W3FCDPS16	Fixed door type frame CDW3—1000AF/1600AF
	W3DCDPS40	Draw-out type door frame CDW3—4000AF
	W3FCDPS40	Fixed door type frame CDW3—4000AF
	W3DCDPD20	Draw-out type door frame CDW3—2000AF
	W3FCDPD20	Fixed door type frame CDW3—2000AF
	W3DCDPD32	Draw-out type door frame CDW3—2500/3200/6300AF
	W3FCDPD32	Fixed door type frame CDW3—2500/3200AF
phase barrier 	W3FDS103	Fixed type phase barrier 3PCDW3—1000AF
	W3DDS103	Draw-out type phase barrier 3PCDW3—1000AF
	W3FDS163	Fixed type phase barrier 3PCDW3—1600AF
	W3DDS163	Draw-out type phase barrier 3PCDW3—1600AF
	W3FDS403	Fixed type phase barrier 3PCDW3—4000AF（4000A无）
	W3DDS403	Draw-out type phase barrier 3PCDW3—4000AF（4000A无）
	W3FDS104	Fixed type phase barrier 4PCDW3—1000AF
	W3DDS104	Draw-out type phase barrier4PCDW3—1000AF
	W3FDS164	Fixed type phase barrier 4PCDW3—1600AF
	W3DDS164	Draw-out type phase barrier 4PCDW3—1600AF
	W3FDS404	Fixed type phase barrier 4PCDW3—4000AF（4000A无）
	W3DDS404	Draw-out type phase barrier 4PCDW3—4000AF（4000A无）
	W3FDD253	Draw-out type phase barrier 3PCDW3—2000/2500/3200/6300AF
	W3DDD253	Fixed type phase barrier 3PCDW3—2000/2500/3200AF
	W3FDD254	Fixed type phase barrier 4PCDW3—2000/2500/3200AF
	W3DDD254	Draw-out type phase barrier 4PCDW3—2000/2500/3200/6300AF

	Accessory code	Accessory name
Smart Controller Accessories		
N-phase external transformer 	CDW31604NCT	N-phase external transformer CDW3—1000AF/1600AF/400A
	CDW3160616NCT	N-phase external transformer CDW3—1000AF/1600AF/630—1600A
	CDW3200608NCT	N-phase external transformer CDW3—2000AF/630—800A
	CDW3201020NCT	N-phase external transformer CDW3—2000AF/1000—2000A
	CDW3250620NCT	N-phase external transformer CDW3—2500AF/630—1250A
	CDW32525NCT	N-phase external transformer CDW3—2500AF/1600—2500A
	CDW332NCT	N-phase external transformer CDW3—3200AF/2000—3200A
	CDW34012NCT	N-phase external transformer CDW3—4000AF/630—1250A
	CDW340NCT	N-phase external transformer CDW3—4000AF/1600—4000A
	CDW363NCT	N-phase external transformer CDW3—6300AF/4000—6300A
Grounding transformer 	W3ZT100400A	Grounding transformer CDW3—400A (For H-type controllers only)
	W3ZT100630A	Grounding transformer CDW3—630A (For H-type controllers only)
	W3ZT100800A	Grounding transformer CDW3—800A (For H-type controllers only)
	W3ZT1001000A	Grounding transformer CDW3—1000A (For H-type controllers only)
	W3ZT1001250A	Grounding transformer CDW3—1250A (For H-type controllers only)
	W3ZT1001600A	Grounding transformer CDW3—1600A (For H-type controllers only)
	W3ZT1002000A	Grounding transformer CDW3—2000A (For H-type controllers only)
	W3ZT1002500A	Grounding transformer CDW3—2500A (For H-type controllers only)
	W3ZT1003200A	Grounding transformer CDW3—3200A (For H-type controllers only)
	W3ZT1004000A	Grounding transformer CDW3—4000A (For H-type controllers only)
	W3ZT1005000A	Grounding transformer CDW3—5000A (For H-type controllers only)
	W3ZT1006300A	Grounding transformer CDW3—6300A (For H-type controllers only)
leakage transformer 	W3ZCT1	leakage transformer CDW3 (For H-type controllers only)
Signal conversion module	W3TR	CDW3 Signal conversion module (H-type communication, area interlocking, four remotes)
power module	W3AP	CDW3 AC power module (input AC230/400V, output DC24V)
	WDP3	CDW3 DC power module (input DC230/110V, output DC24V)
mechanical interlock		
cable interlock	W3FL2S16	Fixed Type cable interlock (two sets) CDW3—1000AF/1600AF
	W3DL2S16	draw-out Type cable interlock(two sets) CDW3—1000AF/1600AF
	W3FL2S40	Fixed Type cable interlock (two sets) CDW3—4000AF
	W3DL2S40	draw-out Type cable interlock(two sets) CDW3—4000AF
	W3FL2D	Fixed Type cable interlock (two sets) CDW3—2000AF/2500AF/3200AF
	W3DL2D	draw-out Type cable interlock(two sets) CDW3—2000AF/2500AF/3200AF/6300AF

	Accessory code	Accessory name
mechanical interlock		
Lever interlock	W3DG2S40	draw-out type Lever interlock (two sets) CDW3—4000AF
	W3DG2S16	draw-out type Lever interlock (two sets) CDW3—1600AF
	W3DG2D	draw-out type Lever interlock (two sets) CDW3—2000AF/2500AF/3200AF/6300AF
	W3FG2S16	Fixed type Lever interlock (two sets) CDW3—1600AF
	W3FG2S40	Fixed type Lever interlock (two sets) CDW3—4000AF
	W3FG2D	Fixed type Lever interlock (two sets) CDW3—2000AF/2500AF/3200AF
connecting accessory		
	W3V2030608	CDW3 Vertical L Adapter 3PW3—2000/630—800A
	W3V2031016	CDW3 Vertical L Adapter 3PW3—2000/1000—1600A
	W3V20320	CDW3 Vertical L Adapter 3PW3—2000/2000A
	W3V2040608	CDW3 Vertical L Adapter 4PW3—2000/630—800A
	W3V2041016	CDW3 Vertical L Adapter 4PW3—2000/1000—1600A
	W3V20420	CDW3 Vertical L Adapter 4PW3—2000/2000A
	W310S3	CDW3 Extension terminal 3P (1000AF)
	W310S4	CDW3 Extension terminal 4P (1000AF)
	W3S3	CDW3 Extension terminal 3P (1600N)
	W3S4	CDW3 Extension terminal 4P (1600N)
	CDW3ATSEC2	CDW3 Dual power controller (LCD type)
	CDW3ATSECM	CDW3 Bus tie type controller (LCD type)
Closing and opening button cover		
	W3VBPD16	CDW3 Closing and opening button cover 1000AF/1600AF
	W3VBPD40	CDW3 Closing and opening button cover 4000AF
	W3VBPD20	CDW3 Closing and opening 2000AF/2500/3200/6300AF
Secondary terminal dust cover		
	W3CBD163	draw-out type secondary terminal dust cover 3P CDW3—1600AF
	W3CBD203	draw-out type secondary terminal dust cover 3P CDW3—2000AF 47 loop
	W3CBD3	draw-out type secondary terminal dust cover 3P CDW3—2500/3200/6300AF 47 loop
	W3CBD403	draw-out type secondary terminal dust cover 3P CDW3—4000AF
	W3CBD163	draw-out type secondary terminal dust cover 4P CDW3—1600AF
	W3CBD204	draw-out type secondary terminal dust cover 4P CDW3—2000AF 47 loop
	W3CBD4	draw-out type secondary terminal dust cover 4P CDW3—2500/3200/6300AF 47 loop
	W3CBD404	draw-out type secondary terminal dust cover 4P CDW3—4000AF

Note: The standard wire for CDW3ATSEC2 is 2 m, and the standard wire for CDW3ATSECM is 4 m (applicable to three-phase four-wire products, control circuit voltage AC230V/AC380V), and there is an additional charge for each additional meter. Make three sets of mechanical interlocking requirements Communicate with the manufacturer in advance.

configuration table

Standard configuration	1000AF		1600AF		2000AF		2500AF		3200AF		4000AF		6300AF	
	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type
Circuit breaker body	■	■	■	■	■	■	■	■	■	■	■	■	■	
drawer seat	■		■		■		■		■		■		■	
iTR326A controller	■	■	■	■	■	■	■	■	■	■	■	■	■	
Shunt coil MX	■	■	■	■	■	■	■	■	■	■	■	■	■	
Closing coil XF	■	■	■	■	■	■	■	■	■	■	■	■	■	
Electric operation mechanism MCH	■	■	■	■	■	■	■	■	■	■	■	■	■	
auxiliary switch 4NO 4NC O F4	■	■	■	■	■	■	■	■	■	■	■	■	■	
fault indication contact SWT	■	■	■	■	■	■	■	■	■	■	■	■	■	
AC power module AP	■	■	■	■	■	■	■	■	■	■	■	■	■	
Drawer Position Locking Mechanism	■		■		■		■		■		■		■	
door frame CDP	■	■	■	■	■	■	■	■	■	■	■	■	■	
phase barrier DD/PD	■	■	■	■	■	■	■	■	■	■	■	■	■	
horizontal installation H	■	■	■	■	■	■	■	■	■	■	■	■	■	
safety barrier	■		■		■		■		■		■		■	

Optional	1000AF		1600AF		2000AF		2500AF		3200AF		4000AF		6300AF	
	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type
iTR326 controller	■	■	■	■	■	■	■	■	■	■	■	■		
iTR326H controller	■	■	■	■	■	■	■	■	■	■	■	■	■	
Undervoltage coil MN	■	■	■	■	■	■	■	■	■	■	■	■	■	
Undervoltage delay coil MNR	■	■	■	■	■	■	■	■	■	■	■	■	■	
auxiliary switch 6NO 6NC OF6					■	■	■	■	■	■	■	■	■	
auxiliary switch 8NO 8NC OF8											■	■		
auxiliary switch12NO 12NC OF12											■	■		
Closing ready indication contact PF(1*)	■	■	■	■	■	■	■	■	■	■	■	■	■	
Three-position indicating contact PI	■		■		■		■		■		■		■	
fault indication contact SWT2	■	■	■	■							■	■		
Remote reset contact Res	■	■	■	■							■	■		
drawer padlock (1*)	■		■		■		■		■		■		■	
Security bezel lock (1*)	■		■								■			
Close open button lock (1*)	■	■	■	■	■	■	■	■	■	■	■	■	■	
Opening lock L1	■	■	■	■	■	■	■	■	■	■	■	■	■	
door interlock (1*)	■		■		■		■		■		■		■	
Mechanical interlock (1*)	■	■	■	■	■	■	■	■	■	■	■	■	■	
Secondary terminal shield (2*)	■		■		■		■		■		■		■	
DC power module DP	■	■	■	■	■	■	■	■	■	■	■	■	■	
N-phase external transformer NCT	■	■	■	■	■	■	■	■	■	■	■	■	■	
Grounding transformer ZT100	■	■	■	■	■	■	■	■	■	■	■	■	■	
leakage transformer ZCT1	■	■	■	■	■	■	■	■	■	■	■	■	■	
Signal conversion module TR	■	■	■	■	■	■	■	■	■	■	■	■	■	
Dual Power - Two In - Out (1*)			■	■	■	■	■	■	■	■	■	■	■	
Dual power supply - Two In - bus connection (1*)			■	■	■	■	■	■	■	■	■	■	■	
Dual power supply - three-in-one — (1*)			■	■	■	■	■	■	■	■	■	■	■	
Rear Expansion busbar - Horizontal S3/4	■	■	■	■										
Secondary press terminal connector	■	■	■	■							■	■		
vertical installation V			■	■							■	■		
counter	■	■	■	■	■	■	■	■	■	■	■	■	■	

note (1*) : When customers purchase optional accessories, please contact the manufacturer for communication
note (2*) : 2000AF/2500AF/3200AF/6300AFThe protective cover of the secondary terminal block is used with loop 47 of the secondary terminal block. If it needs to be used in loop 51, please contact the manufacturer.

领航者 NAVIGATOR

Technical Parameters

Poles	3，4
Rated voltage AC Ue (V)	220V/230V/240V/380V/400V/415V/440V/480V/500V/525V/550V/660V/690V
Rated insulation voltage Ui (V)	1000
Rated impulse withstand voltage Uimp (kV)	12
rated frequency (Hz)	50/60
suitable for isolation	
Applicable standard	GB/T14048.2、IEC 60947-2
certification	CCC

Frame current

rated current In (A)	1000	1600		2000		2500		3200		4000		6300
400	●	●	●									
630	●	●	●	●	●	●	●			●	●	
800	●	●	●	●	●	●	●			●	●	
1000	●	●	●	●	●	●	●			●	●	
1250		●	●	●	●	●	●			●	●	
1600		●	●	●	●	●	●			●	●	
2000				●	●	●	●	●	●	●	●	
2500						●	●	●	●	●	●	
3200								●	●	●	●	
4000										●	●	●
5000												●
6300												●

Breaking capacity													
Breaking level		N	N	H	N	H	N	H	N	H	N	H	N
Rated ultimate short-circuit breaking capacity Icu (kA)	220V/230V/240V 380V/400V/415V	42	50	66	80	80	80	100	80	100	100	100	120
	440V/480V/500V/525V 550V/660V/690V	25	36	42	50	55	65	70	65	70	65	75	85
Rated operating short-circuit breaking capacity Ics (kA)	220V/230V/240V 380V/400V/415V	30	50	55	80	80	65	85	80	85	85	100	100
	440V/480V/500V/525V 550V/660V/690V	25	36	42	50	55	65	70	65	70	65	75	75
Rated short-time withstand current Icw (kA)	220V/230V/240V 380V/400V/415V	30	42	42	50	65	65	85	65	85	85	85	85
	440V/480V/500V/525V 550V/660V/690V	20	36	36	50	55	65	70	65	70	65	75	75
Rated short-circuit making capacity Icm (kA)	220V/230V/240V 380V/400V/415V	88.2	110	145	176	176	176	220	176	220	220	220	264
	440V/480V/500V/525V 550V/660V/690V	52.5	79	92	110	121	143	154	143	154	143	165	187
acting time													
acting time	total breaking time (ms)	⩽ 25											
	Closing time (ms)	⩽ 70											
service life													
service life	Electrical life	6500	8000		8000		7000		7000		6000		800
	Mechanical life (without maintenance)	15000	15000		15000		10000		10000		10000		2500
	Mechanical life (with maintenance)	30000	30000		30000		20000		20000		20000		5000

Size													
Dimensions (mm) height* width* depth	draw-out 3P	322×288×329	322×288×330		436×405×425		436×465×425		436×465×425		439×441×428.6		432×843×498
	draw-out 4P	322×358×329	322×358×330		436×500×425		436×580×425		436×580×425		439×556×428.6		432×958×498
	Fixed 3P	301×276×235	301×276×229		397×364×327		397×428×327		397×428×327		352×422×329.5		——
	Fixed 4P	301×346×235	301×346×229		397×459×327		397×543×327		397×543×327		352×537×329.5		——

Note: 1): 6300A of 6300N only has 3P draw-out type

Derating table for CDW3 at different temperatures

Frame	current / temp.	−5℃ ~+40℃	+45℃	+50℃	+55℃	+60℃	+70℃
CDW3−1000N	400	400	400	400	400	400	400
	630	630	630	630	630	550	500
	800	800	800	800	800	700	630
	1000	1000	1000	1000	950	900	820
CDW3−1600N&H	400	400	400	400	400	400	400
	630	630	630	630	630	550	500
	800	800	800	800	800	700	630
	1000	1000	1000	1000	950	900	850
	1250	1250	1200	1200	1150	1050	950
	1600	1600	1550	1500	1450	1350	1150
CDW3−2000N&H	630	630	630	630	630	630	630
	800	800	800	800	800	700	650
	1000	1000	1000	1000	1000	1000	900
	1250	1250	1250	1250	1250	1150	1000
	1600	1600	1600	1500	1500	1300	1200
	2000	2000	1900	1900	1800	1700	1500
CDW3−2500N&H	630	630	630	630	630	630	630
	800	800	800	800	800	800	800
	1000	1000	1000	1000	1000	1000	1000
	1250	1250	1250	1250	1250	1250	1250
	1600	1600	1600	1600	1600	1600	1600
	2000	2000	2000	2000	2000	2000	1900
	2500	2500	2400	2300	2200	2200	2000
CDW3−3200N&H	2000	2000	2000	2000	2000	2000	1900
	2500	2500	2400	2300	2200	2200	2000
	3200	3200	3000	3000	2800	2800	2500
CDW3−4000N&H	1600	1600	1600	1600	1600	1600	1500
	2000	2000	2000	2000	2000	2000	1700
	2500	2500	2500	2500	2500	2200	2000
	3200	3200	3200	3200	3000	2500	2200
	4000	4000	4000	3600	3400	3200	3000
CDW3−6300N	4000	4000	4000	4000	4000	4000	3600
	5000	5000	5000	5000	4800	4800	4200
	6300	6300	6000	5600	5400	5200	4600

Note: The derating factor and the technical parameters in the derating table are obtained from experiments and theoretical calculations, and are only used as a general selection guide.

High altitude derating factor table

Altitude below 2000 meters will not affect the performance of the circuit breaker. Above this height, a reduction in the air insulation properties and cooling capacity must be taken into account; the correction factors given in the table below apply for installations above 2000 m above sea level:

Altitude (m)	2000	2500	3000	3500	4000	4500	5000
insulation voltage Ui (V)	1000	910	910	830	830	770	770
Impulse withstand voltage Uimp (kV)	12	10.5	10.5	9.5	9.5	9	9
working voltage Ue (V)	690	690	690	660	600	600	550
Thermal rating at 40°C ambient In (A)	1In	0.98In	0.93In	0.91In	0.87In	0.84In	0.81In

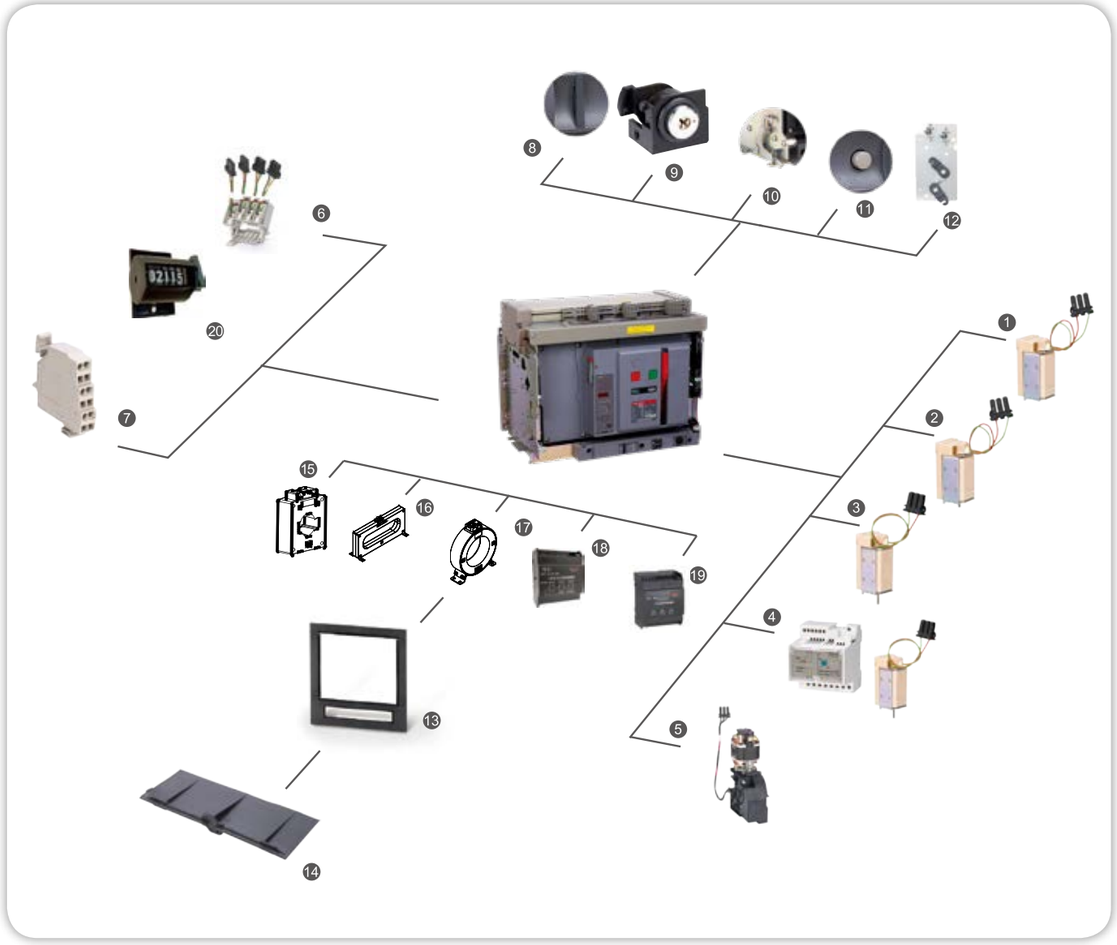
Note: In the plateau environment, the breaking capacity needs to be derated according to the corresponding rated working voltage, generally between 75% and 50%, which is inversely proportional to the altitude.

For details, please communicate with Delixi Electric Technology Department.

Refer to GB/T 20645 Special Environmental Conditions Technical Requirements for High Voltage Electrical Appliances.

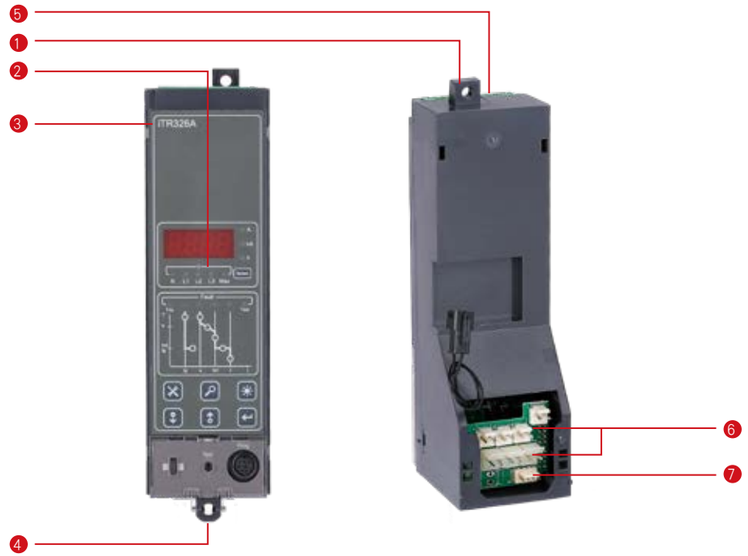
Accessory

accessory Instruction



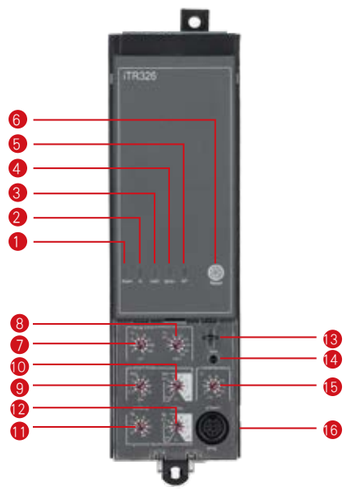
remote operation	Indicating contacts	locks and connections	Operation and Protection	Controller Accessories
1 shunt coil	6 Auxiliary switch OF	8 padlock	13 door frame	15 N-phase external transformer
2 close coil	7 Secondary terminal	9 key lock	14 phase barrier	16 leakage transformer
3 undervoltage coil	20 counter	10 door interlock		17 Grounding transformer
4 Undervoltage delay coil		11 Connection, separation, test position locking mechanism		18 power module
5 motor operating mechanism		12 mechanical interlock		19 Signal conversion module

■ Key Description



1. top fixed
2. LED indicator
3. Controller label
4. bottom fixed
5. External connection terminal
6. Transformer connection port
7. Flux / Jogging Connections

L Type (basic type)



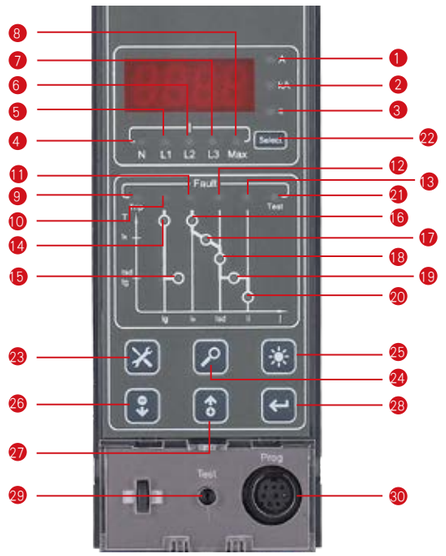
Key instructions

1. warning light
2. Long-time trip indication
3. Short-time or instantaneous trip indication
4. Ground or leakage fault trip indication
5. advanced protection
6. reset button

Button Description Adjustment Panel

7. Long time delay current setting I_R
8. Long-time trip delay t_R
9. short delay trip Isd
10. Short delay trip delay tsd
11. Ground fault trip Ig
12. Ground-fault trip delay
13. tg Padlock position
14. test button
15. Instantaneous trip current
16. test port

M type (standard type)



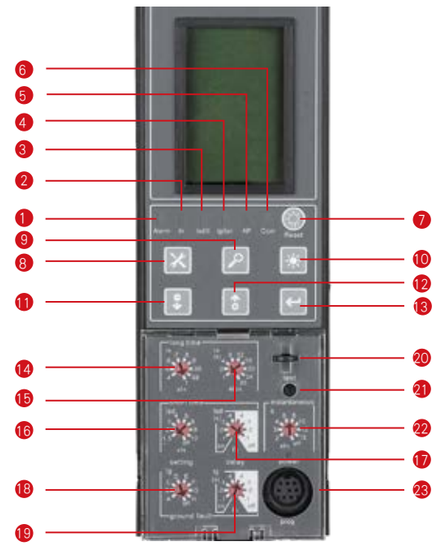
Indicator light description

1. current unit A
2. current unit kA
3. time unit S N
4. phase current
5. A phase current
6. B phase current
7. C phase current
8. Maximu current
9. trip indication
10. Ground protection
11. long delay protection
12. short delay protection
13. Instant protection
14. Ground current setting value
15. Ground Time setting value
16. Long time delay current setting value
17. Long time delay time setting value
18. Short delay current setting value
19. Short delay time setting value
20. Instantaneous current setting value
21. Test action state

Navigation key description

22. toggle key
23. set key
24. query key
25. Back/Clear lights
26. −/page down
27. +/ page up
28. OK key
29. TEST key
30. debug port

H type (advanced type)



Key instructions

1. warning light
2. Long-time trip indication
3. Short-time or instantaneous trip indication
4. Ground or leakage fault trip indication
5. advanced protection
6. communication function
7. reset button

Navigation key description

8. set key
9. query key
10. Back / clear lights
11. -/page down
12. +/page up
13. OK key

Button Description Adjustment Panel

14. Long time delay current setting I_R
15. Long-time trip delay t_R
16. short delay trip Isd
17. Short delay trip delay tsd
18. Ground fault trip Ig
19. Ground fault trip delay tg
20. padlock position
21. test button
22. Instantaneous trip current
23. test port

Features

	iTR326	iTR326A	iTR326H
	L	M	H
Protective function	long time protection L	long time protection L	long time protection L
	short delay protection S	short delay protection S	short delay protection S
	Instant protection I	Instant protection I	Instant protection I
	Ground protection G	Ground protection G	Ground protection G
	MCR protection	MCR protection	MCR protection
	HSISC protection	HSISC protection	HSISC protection
			Low Voltage Protection/Alarm
			Overvoltage Protection/Alarm
			Voltage unbalance (phase loss) protection / alarm
			Phase sequence protection/alarm
			Low Frequency Protection/Alarm
			High Frequency Protection/Alarm
			Reverse Power Protection/Alarm
Measurement function		current measurement	current measurement
			voltage measurement
			power measurement
			frequency measurement
			Harmonic measurement
Accessibility	Pre-alarm	Pre-alarm	Pre-alarm
	Fault History	self-diagnosis function	self-diagnosis function
	test function	Fault History	Fault History
		test function	test function
display function		LED digital tube display	LCD liquid crystal display
special function			load monitoring
			Regional interlocking
communication function			Modbus

Product Features

Protection features of intelligent controllers

- The protection characteristics of the intelligent controller include inverse time limit and definite time limit. When the fault current exceeds the set value of inverse time limit, the controller delays protection according to the definite time limit.
- Inverse time curve fits characteristic curve I^2t

Overload long time delay protection feature

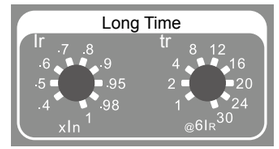
- Overload long-time protection action threshold

＜ 1.05 I_R：＞ 2h no action；

＞ 1.2 I_R：＜ 1h action；

⩾ 1.2 I_R：delayed action；

I_R Current setting range：0.4In、0.5In、0.6In、0.7In、0.8In、0.9In、 0.95In、0.98In、1.0In



Inverse time action characteristics	$I^2t.t=(6/N)^2*t^R$								
Setting current multiple	action time s								
1.5 I_R	16s	32s	64s	128s	192s	256s	320s	384s	480s
2 I_R	9s	18s	36s	72s	108s	144s	180s	216s	270s
6 I_R	1s	2s	4s	8s	12s	16s	20s	24s	30s

Note: N ---- the fault current divided by the multiple of the set current I/IR

t ———— Fault Action Delay Time

t_R————Long delay time setting value

Action time tolerance ±10%

Short-circuit short-time delay protection characteristics

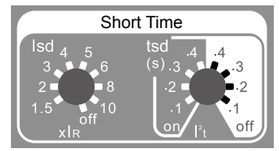
- Action threshold of short-circuit short-time delay protection

＜ 0.9 Isd：no action；

＞ 1.1 Isd：action；

⩾ 1.1 Isd：delayed action；

Isd Current setting range 1.5 I_R 、2 I_R 、3 I_R、4 I_R、5 I_R、6 I_R、8 I_R、10 I_R+OFF



current	action time					
Isd<I ⩽ 8I_R	inverse time limit	Action characteristics	$I^2t=(8I_R)^2tsd$			
		settling time s	0.1、0.2、0.3、0.4			
I ⩾ 1.1Isd	Definite time, the minimum time is the return time	settling time s	0.1	0.2	0.3	0.4
		minimum s	0.08	0.14	0.23	0.35
		maximum s	0.14	0.2	0.32	0.5

注：Isd——— short delay current setting I———— fault current value I_R———— long delay setting t———— Fault Action Delay Time tsd———— Short delay inverse time setpoint

Action time tolerance ±20%

Short-circuit instantaneous protection characteristics

- Action threshold of short-circuit instantaneous protection

＜ 0.85 Ii：no action；

＞ 1.15 Ii：action；

Instantaneous action current setting 2In 、3In 、4In、6In、8In、10In、12In、15In+OFF

Note: action time error ⩽ 50ms.

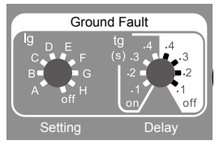
Action characteristics of ground fault protection

- Ground fault protection action threshold

＜ 0.9 Ig：no action

＞ 1.1 Ig：action

⩾ 1.1 Ig：Delay action



Current setting	A	B	C	D	E	F	G	H	OFF
In<1250	0.2In	0.3In	0.4In	0.5In	0.6In	0.8In	0.9In	In	
In ⩾ 1250	500A	600A	700A	800A	900A	1000A	1100A	1200A	

tg (s)	inverse time limit				
		$t = \frac{(I_J)^2}{I^2} \times tg$			
Definite time, minimum time is return time	Set time (s)	0.1、0.2、0.3、0.4			
	Set time (s)	0.1	0.2	0.3	0.4
	minimum (s)	0.08	0.14	0.23	0.35
	maximum (s)	0.14	0.2	0.32	0.5

note：I_J Ground protection setting value, when In≥1250A I_J=1200A, when In<1250A I_J=In

I ———— Fault current value　　T ———— Fault Action Delay Time　　tg ———— Ground inverse time setting value

Inverse time limit action time allowable error ±20%

Factory setting of intelligent controller

	long delay		short delay		instant	Ground Fault		hot memory
Trip curve I^2t	I_R	t_R	Isd	ts	Ii	Ig	tg	
	1In	30s	6In	0.2s	10In	G gear	0.4s	20min

■ remote operation（The picture on the left applies 1000AF／1600AF／4000AF The picture on the right applies 2000AF／2500AF／3200AF／6300AF）

Shunt coil MX

- After the circuit breaker is stored energy, the shunt coil can disconnect the circuit breaker instantaneously under the specified power supply voltage, which can be operated remotely
- Rated control power supply voltage：AC220／AC230V／AC380V／AC400V／DC110V／DC220V
- Action voltage (0.7–1.1) Us
- breaking time：50±10ms

Closing coil XF

- After the circuit breaker is stored energy, the closing coil can close the circuit breaker under the specified power supply voltage, which can be operated remotely
- Rated control power supply voltage：AC220／AC230V／AC380V／AC400V／DC110V／DC220V
- Action voltage 0.　−1.1) Us
- closing time：55±10ms

Undervoltage coil MN

- The undervoltage coil is divided into two types: undervoltage instantaneous and undervoltage delay
- The circuit breaker can only be closed again after the supply voltage of the undervoltage coil has recovered to 85% of the rated voltage

  After the circuit breaker is closed, when the voltage of the circuit breaker drops to 70%-35% of the rated voltage, it can act to open the circuit breaker.
- Rated control power supply voltage： AC220／AC230V／AC380V／AC400V
- Operating voltage：(0.35–0.7) Ue
- Reliable closing voltage：(0.85–1.1) Ue
- Unable to close voltage：⩽ 0.35Ue
- delay time：Disconnect after 0.5s, 1s, 1.5s, 3s (supported by 1000AF/1600AF/4000AF)
- Delay time: disconnect after 0.5s, 1s, 1.5s, 3s, 5s, 7.5s (supported by 2000AF/2500AF/3200AF/6300AF)

  The maximum delay time is 7.5s, which can be set by dialing according to the actual situation.

motor operating mechanism MCH

- When the circuit breaker is disconnected and there is power supply, the motor operating mechanism can automatically store energy for the circuit breaker, so that the circuit breaker can be opened or closed under the action of the shunt coil, undervoltage coil and closing coil
- When there is no power, the manual handle can be used to charge the circuit breaker
- Rated control power supply voltage：AC220／AC230V／AC380V／AC400V／DC110V／DC220V
- Operating voltage (0.85–1.1) Us
- power consumption：75W／180W（1000AF、1600AF）、85W（2000AF）、110W（2500AF、3200AF）、180W（4000AF）、150W（6300AF）
- Energy storage time：<5s
- use category：AC15、DC13

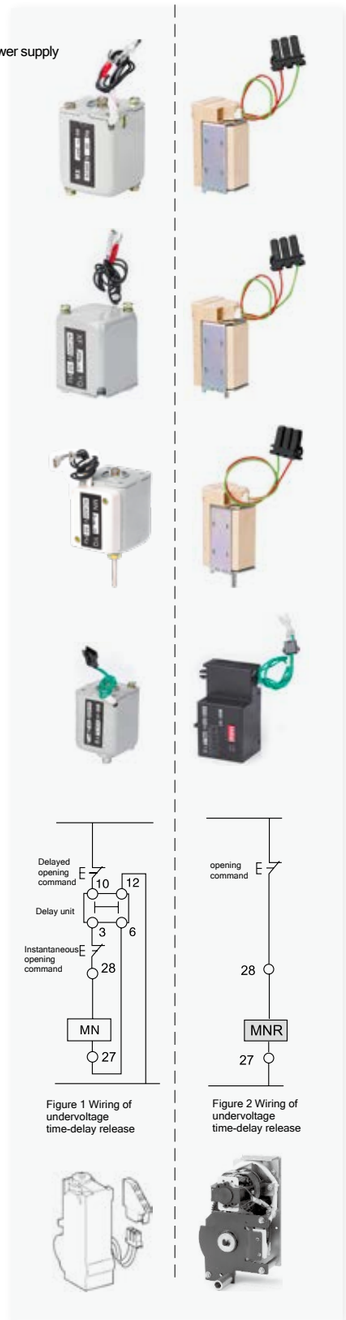


Figure 1 Wiring of undervoltage time-delay release

Figure 2 Wiring of undervoltage time-delay release

■ Indication contacts: (the left picture is suitable for 1000AF/1600AF/4000AF, the right picture is suitable for 2000AF/2500AF/3200AF/6300AF)

auxiliary switch OF

- Used to monitor the status of the circuit breaker, such as connecting the circuit breaker position signal light, disconnecting indicator light, etc.
- Default 4 open 4 closed
- 2000AF/2500AF/3200AF/6300AF Available with 6 open and 6 closed
- 4000AF Available with 6 openings and 6 closings, 8 openings and 8 closings, 12 openings and 12 closings
- Rated working current

1000AF/1600AF/4000AF:AC-12：AC250V6A、AC-15：AC380V1A、
DC-12：DC250V0.3A

2000AF/2500AF/3200AF/6300AF:AC-15：AC230V 1.5A、AC400V 0.9A、
DC-13：DC110V 0.55A、DC220V 0.27A

Closing ready indication contact PF

- Consisting of a mechanical indication contact and changeover contact, it sends a closing signal and can indicate conditions:
  1. The circuit breaker is open
  2. The circuit breaker is charged;
  3. No continuous opening order

  See Figure 3 (frame 1000&1600&4000) and Figure 4 (frame 2000&2500&3200&6300) for the wiring diagram, and the dotted lines are to be connected by the user
- Rated working current：AC-12 AC400V 3A、DC-12 DC220V 0.15A（1000&1600&4000 Frame）
- Rated working current：AC-12 AC250V 3A（2000&2500&3200&6300 Frame）

SWT Fault trip indication contact：SWT2 only supports （1000AF/1600AF/4000AF）

- When electrical failure occurs, a set of fault signal output is provided
- Can be fitted with a second SWT2

Res Remote reset contact：（Only support 1000AF/1600AF/4000AF）

- After an electrical fault occurs and the circuit breaker is disconnected, the device allows the circuit breaker fault lockout device to be remotely reset
- This contact is not compatible with SWT2 fault trip contacts

Connect (CE), disconnect (CD), test (CT) three-position indication contacts

- Drawer optional accessories. 1000 frame and 1600 frame can provide 2 separate indicating contacts (CD), 1 test indicating contact (CT),

  3 CE indication contacts; the 4000 frame can provide 3 CD, 3 CT, and 3 CE; but it needs to be ordered separately, and the numbers are shown in Figure 6.
- The three-position indication contact is installed on the drawer to indicate the position of the circuit breaker in the drawer
- When the circuit breaker is in the connected position, see Figure 5 for the wiring diagram (the dotted line is connected by the user); see Figure 6 for multiple groups of three-position indication signals

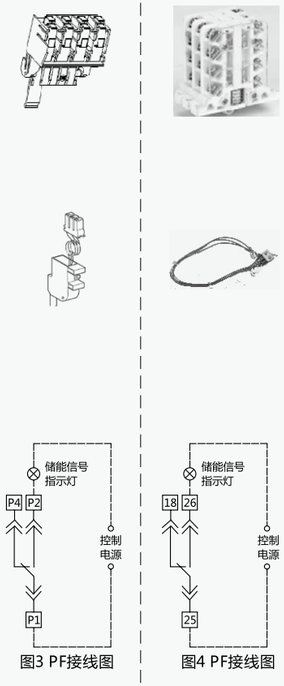


图3 PF接线图

图4 PF接线图

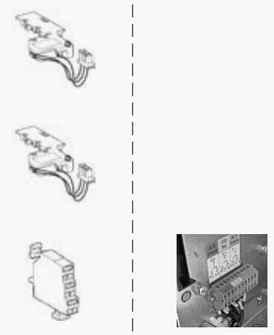


Figure 5
Wiring diagram of three-position indication signal

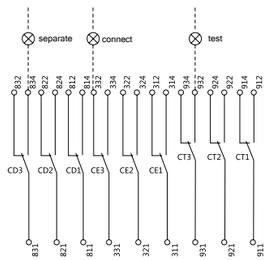


Figure 6
Multiple groups of three-position indication signals (1000AF/1600AF/4000AF only)

■ Lock: (The picture on the left is suitable for 1000AF/1600AF, the picture on the right is suitable for 2000AF/2500 AF/3200AF/4000AF/6300AF)

Cradle padlock

- If a padlock is selected, when the circuit breaker is in the "disengagement" position, pull out the padlock piece, after locking, the rocker will not be inserted
- User-supplied padlock

Opening lock

- The opening lock can lock the circuit breaker in the off position, and the circuit breaker can be closed only when the lock is opened by the key and the key is not pulled out
- There are three commonly used opening locks (two locks and three locks are used in the power distribution system with two incoming lines and one connection)
- one lock one key
- Two locks and one key
- Three locks and two keys
- Cross-shell frame can be locked

Drawer Position Locking Mechanism

- In the drawer type circuit breaker, the locking device of the circuit breaker "connection", "test" and "disconnection" positions, the three positions of the circuit breaker are displayed through the indicator window, the forward and backward handle is locked at the exact position, and the lock can be unlocked through the reset button

Door interlock

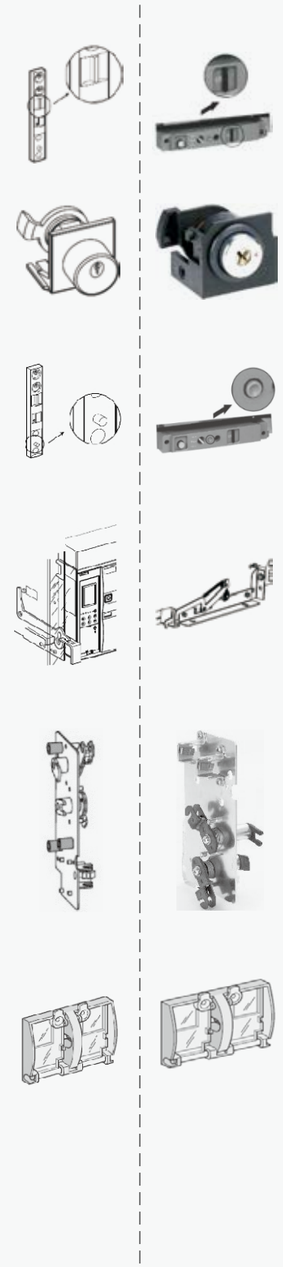
- In the drawer type circuit breaker, it is installed on the side of the circuit breaker, and the cabinet door of the power distribution cabinet is linked. When the circuit breaker is in the "connected" or "test" position, the cabinet door cannot be opened. When the circuit breaker is in the disconnected position, the cabinet door can be opened. , can prevent the circuit breaker from slipping and other situations, causing damage
- Left door interlock or right door interlock can be provided, but after the 2000&2500&3200&6300 frame chooses the right door interlock, the three-position indicating contact cannot be selected

mechanical interlock

- There are two kinds of lever interlock and cable interlock
- Using lever interlocking, two or three circuit breakers can only be installed vertically, using cable interlocking, circuit breakers can be installed horizontally or vertically
- Used in the power distribution system with two incoming lines and one connection
- Two circuit breakers can be connected to make them linkage, when any one of them is closed, the linkage will make the other one open
- Interlocking between different frames can be realized
- Cross-shell frame can be locked

button lock

- Prevents misoperation of closing or opening buttons
- Padlock Prepared by the user, the diameter of the lock rod is φ5~φ8mm



■ Protection (left picture is suitable for 1000AF/1600AF, right picture is suitable for 2000AF/2500AF/3200AF/4000AF/6300AF)

Door frame

- Door frame mounted on switchboard door
- IP rating increased from IP20 to IP40
- Both drawer type and fixed type are applicable

phase barrier

- Insulation plate installed in the middle of circuit breaker busbar
- Can increase creepage distance and improve insulation capacity

Safety bezel: (standard configuration)

- Installed in drawer-type circuit breaker drawer, when the body is in the "separation" or "test" position, the protective contact is connected to the row, and when the body is removed from the drawer, it prevents contact with live parts

Safety bezel lock: (only support 1000AF/1600AF/4000AF)

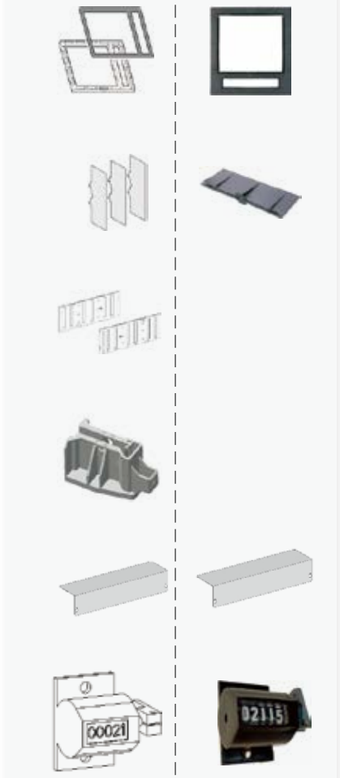
- Used for customer inspection or maintenance. The 1000 frame and 1600 frame have lock holes on the drawer baffle, and the 4000 frame needs to be ordered separately
- The baffle lock needs to be prepared by the customer, the diameter of the lock rod is φ5~φ8mm

Secondary terminal shield

- After customer wiring, prevent foreign objects or dust from falling on the secondary terminals
- Only available with drawers

counter

- Counts once when the energy storage is completed, cannot be cleared, and displays the total number of operations
- 1600AF/4000AF is installed on the mechanism, and other frames are installed on the motor



■ Controller accessories: (the left picture is suitable for 1000AF/1600AF, the right picture is suitable for 2000AF/2500AF/3200AF/4000AF/6300AF)

N-phase external transformer

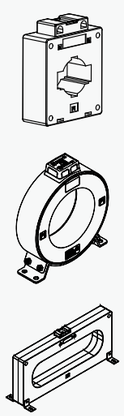
- In the 3P+N grounding method, the external transformer used to measure the neutral phase current is set on the wiring busbar by the user
- Choose one of three with grounding transformer and leakage transformer

Grounding transformer

- The special external transformer used to measure the neutral phase current can protect the upper and lower ground faults of the circuit breaker at the same time
- The grounding method is ground current return type
- For iTR326H controller only
- Choose one of three with N-phase external transformer and leakage transformer

leakage transformer

- When the grounding protection is leakage type, additional special rectangular transformer
- For iTR326H controller only
- Choose one of the three options with N-phase external transformer and grounding transformer



领航者系列
NAVIGATOR

power module

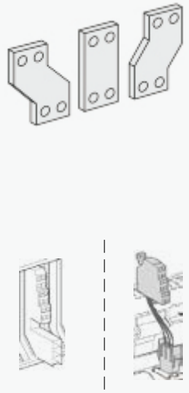
- It can provide auxiliary power for intelligent controllers in AC220V/AC230V/AC380V/AC400V/DC110V/DC220V circuits
- The input is AC220V/AC230V/AC380V/AC400V/DC110V/DC220V, the input fluctuation range is ±20%
- The output is DC24V, the output fluctuation range is ±5%
- Output 3 sets of DC24V: total power 7W
- Before each switch is powered on, check whether it is connected to the power module to avoid damage to the intelligent controller after powering on

Signal conversion module

- The output signal unit is used for communication functions, such as area interlocking, signal processing of four remote functions, or for fault alarm or indication, etc.
- For iTR326H controller only

■ Attachment

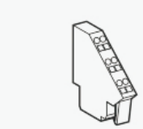
- Extension terminal: only applicable to 1600AF
- L-type adapter: only for 2000AF



■ Configuration accessories: (the left picture is suitable for 1000AF/1600AF, the right picture is suitable for 4000AF)

Secondary Terminal Connector

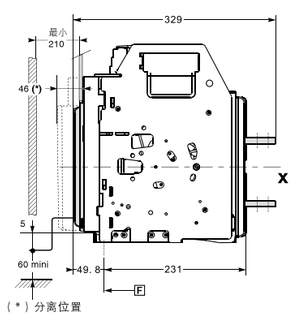
- Used for wiring the internal accessories of the circuit breaker and the external power supply
- Only for 1000AF/1600AF/4000AF
- Drawer type: 1000AF/1600AF and 4000AF are not common (as shown in the left and right pictures)
- Fixed type: common to 1000AF/1600AF and 4000AF (as shown in the picture)

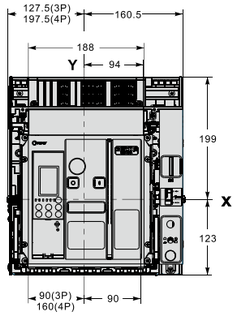


Shape and installation dimensions

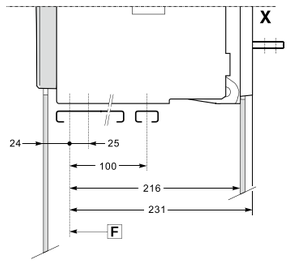
■ CDW3–1000AF Draw Type 3-pole and 4-pole

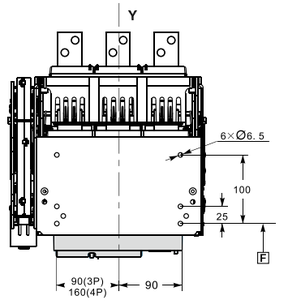
Size

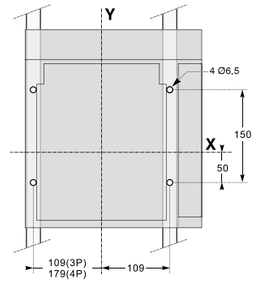




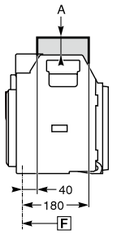
Fixed horizontally (on base plate or rail)

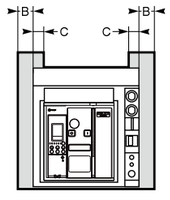




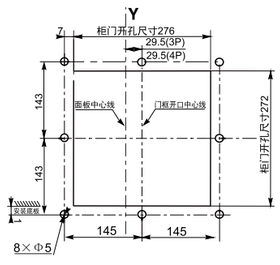


safety distance





door opening size



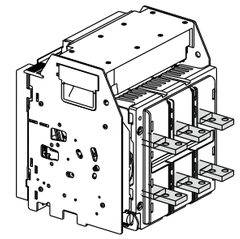
safe distance（mm）	draw-out type		
	A	B	C
insulation	0	10	0
Metal	0	10	0
live conductor	30	60	30

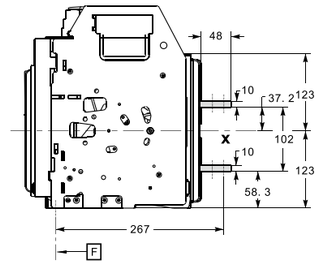
~~Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker shall prevail in kindNote 1: The safety distance diagram is a schematic diagram, and the circuit breaker shall prevail in kind~~

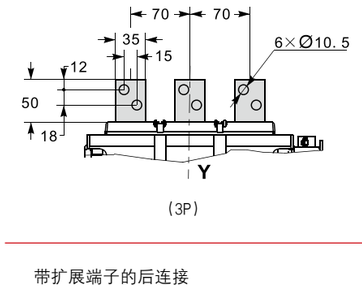
~~注~~ 2、3 极断路器 X 轴和 Y 轴是与断路器本体前~~面罩对称的~~

连接

水平后连接







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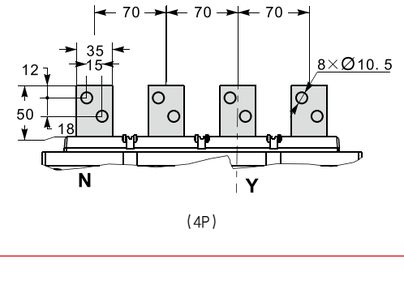

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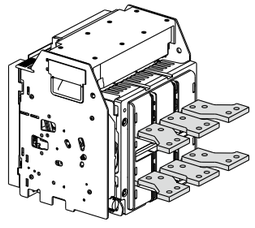
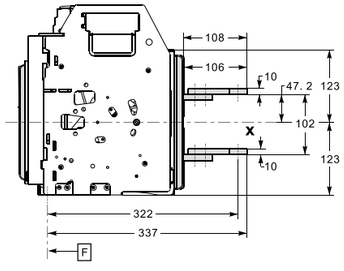
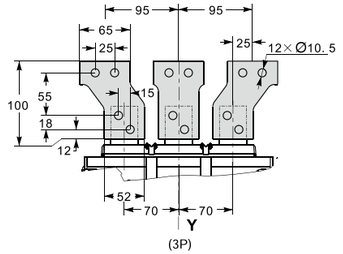
带扩展端子的后连接







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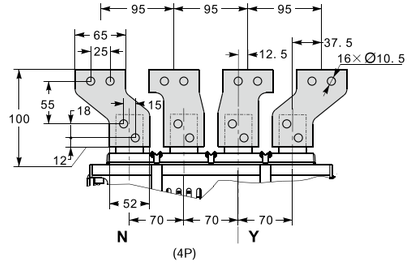

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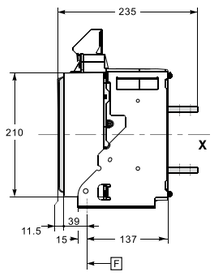
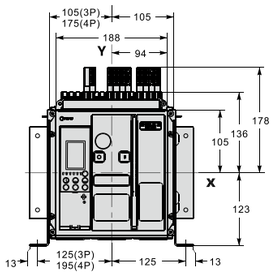
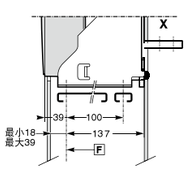
■ CDW3–1000AF Fixed 3-pole and 4-pole

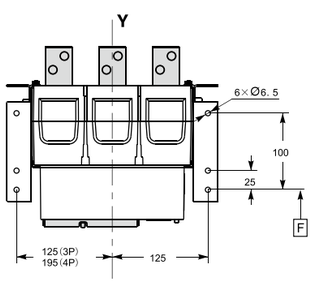
Size



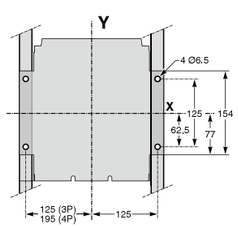


Fixed horizontally (on base plate or rail)

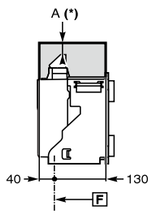


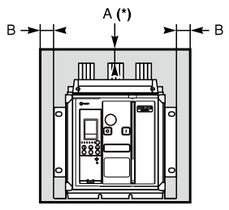


Vertical mounting details (on backplane or rack)

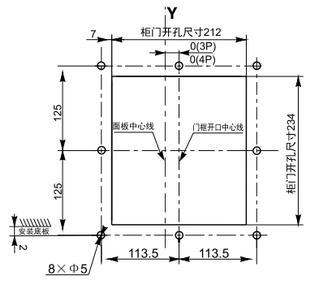


safety distance





door opening size



safe distance（mm）	fixed	
	A	B
insulation	0	0
Metal	0	0
live conductor	100	60

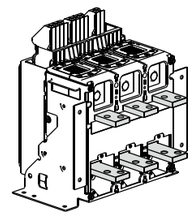
Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

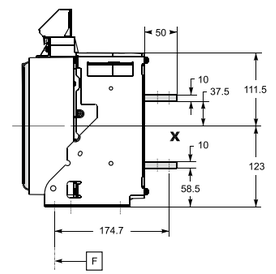
Note 2: The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

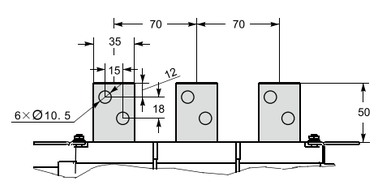
Note 3: (*) The safety distance is 50mm when removing the arc chute, and the safety distance is 20mm when removing the terminal block

连接

水平后连接







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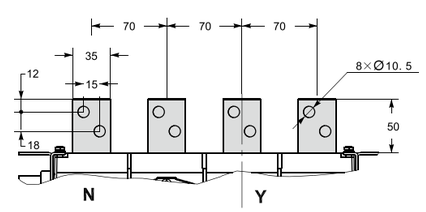

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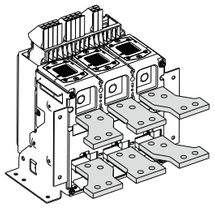
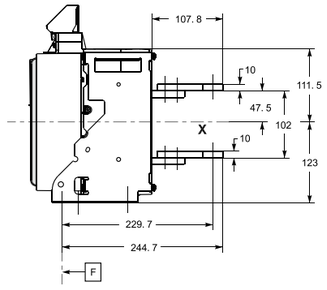
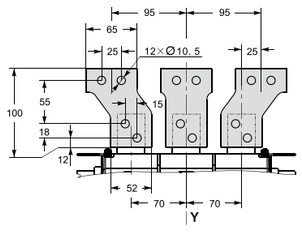
Rear connection with extension terminals







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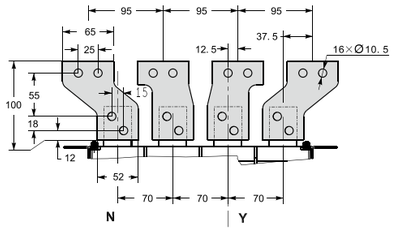
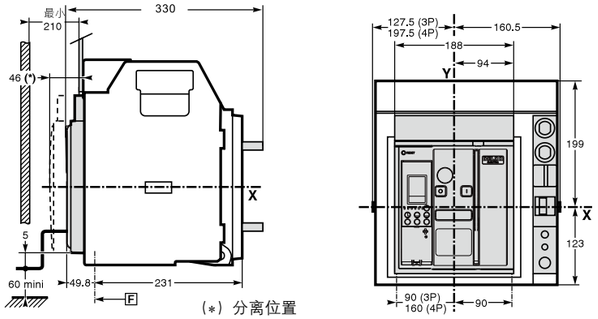
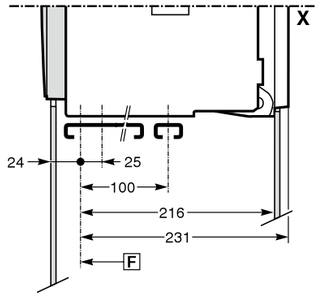


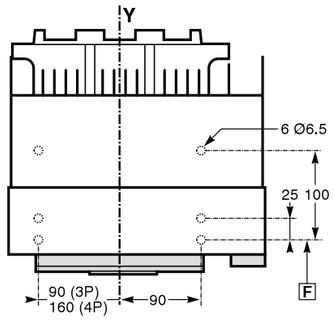
（4P）

■ CDW3–1600AF Draw-out Type 3 poles and 4 poles
Size

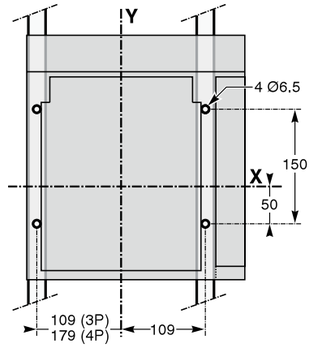


Fixed horizontally (on base plate or rail)

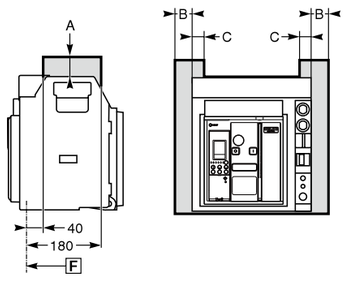




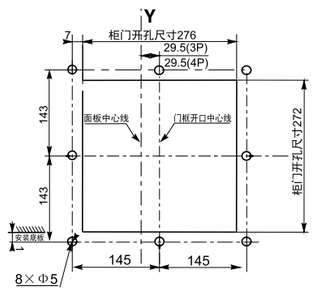
Vertical mounting details (on backplane or rack)



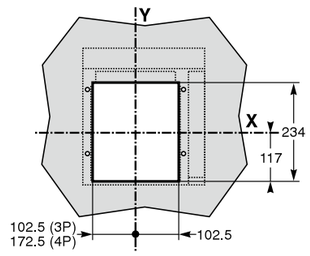
safety distance



door opening size



Rear panel opening size

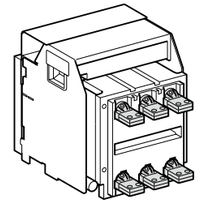


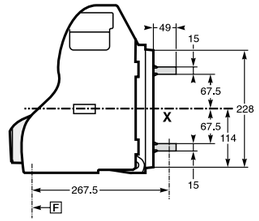
safe distance （mm）	Draw-out type		
	A	B	C
insulation	0	10	0
Metal	0	10	0
live conductor	30	60	30

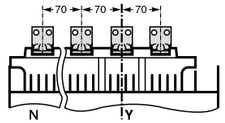
note 1 :The safety distance diagram is a schematic diagram, and the actual circuit breaker shall prevail
note 2:The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

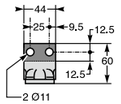
Connect

horizontal rear connection

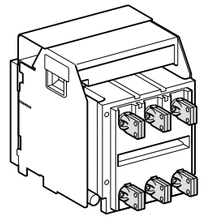


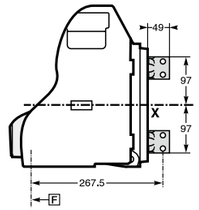


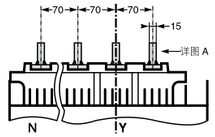


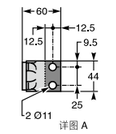


vertical rear connection

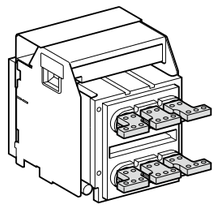


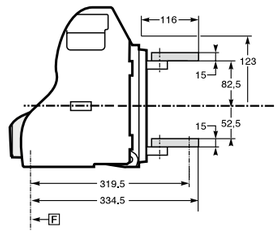


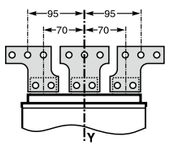


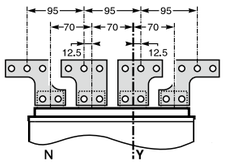


Rear connection with extension terminals



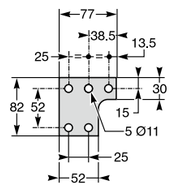




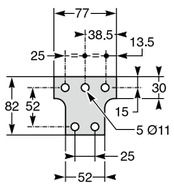


Refer to "Rear connection with extension terminals" for installation

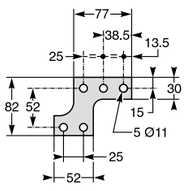
4 pole center left or right extension terminal



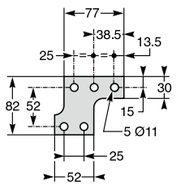
3 pole middle extension terminal



4-pole left or right extension terminal



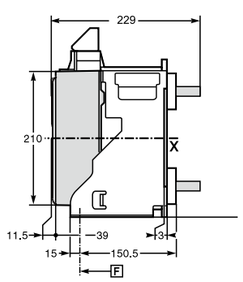
3 pole left or right extension terminal

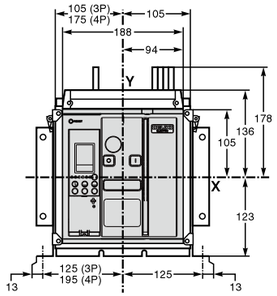


Note: The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

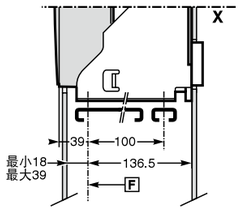
■ CDW3–1600AF Fixed 3-pole and 4-pole

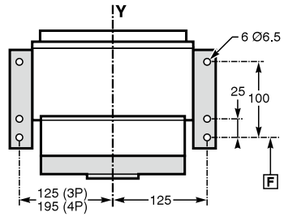
Size



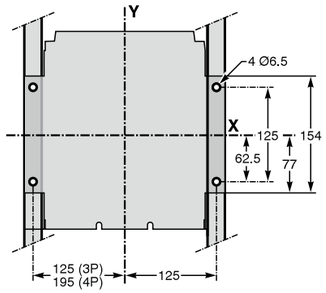


Fixed horizontally (on base plate or rail)

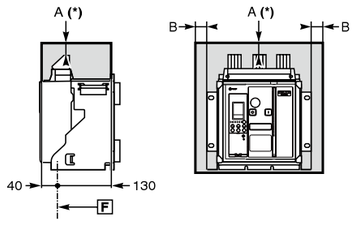




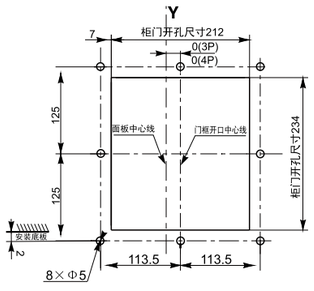
Vertical mounting details (on backplane or rack)



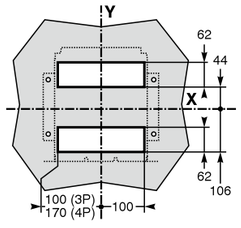
safety distance



door opening size



Rear panel opening size



safe distance (mm)	fixed	
	A	B
insulation	0	0
Metal	0	0
live conductor	100	60

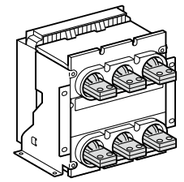
Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

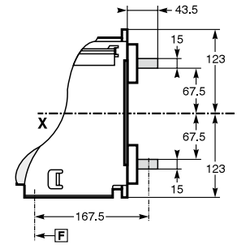
Note 2: The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

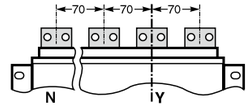
Note 3: (*) The safety distance is 50mm when removing the arc chute , and the safety distance is 20mm when removing the terminal block

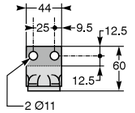
Connect

horizontal rear connection

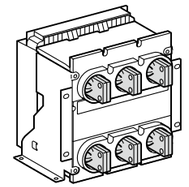


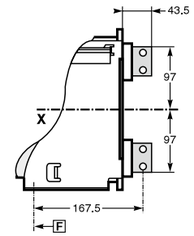


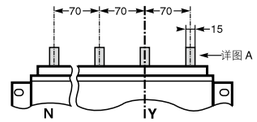


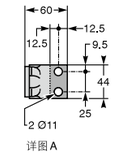


vertical rear connection

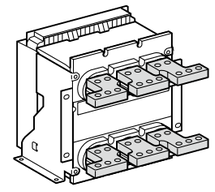


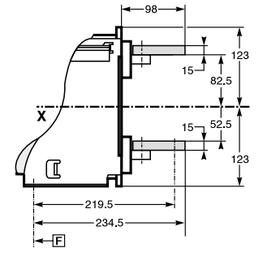


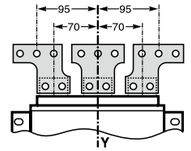


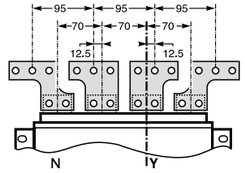


Rear connection with extension terminals



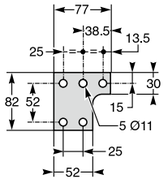




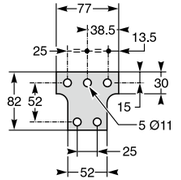


Refer to "Rear connection with extension terminals" for installation

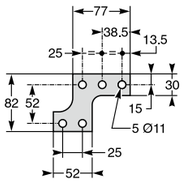
4 pole center left or right extension terminal



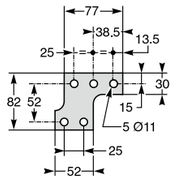
3 pole middle extension terminal



4-pole left or right extension terminal



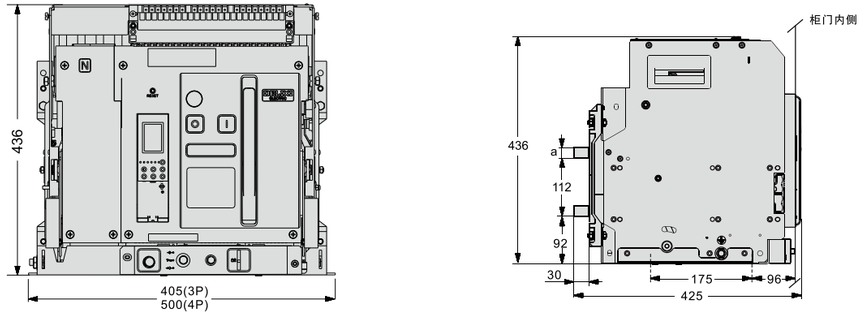
3 pole left or right extension terminal



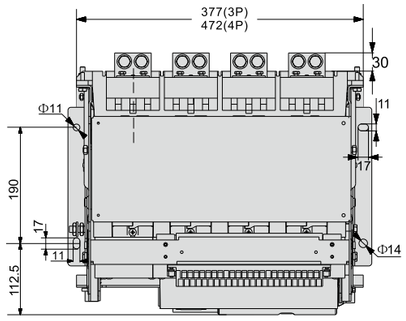
Note: The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

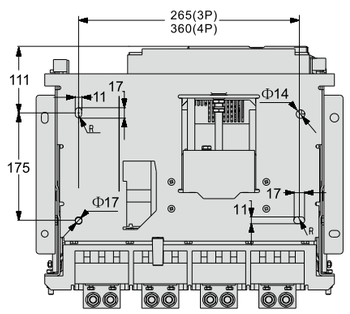
■ CDW3–2000AF draw-out type 3-pole and 4-pole

Size

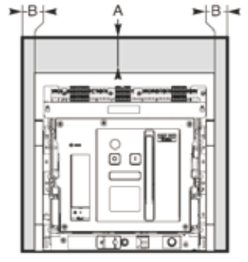


Fixed horizontally (on base plate or rail)* Mask protruding 5mm from door frame is suitable



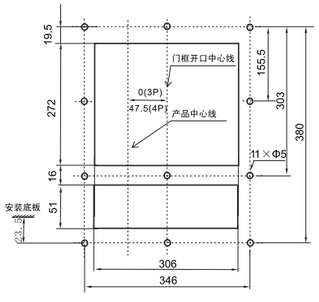


safety distance

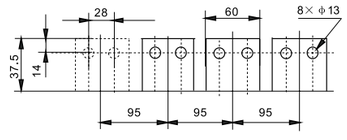


safe distance （mm）	draw-out type	
	A	B
Insulation	0	0
Metal	0	0
live conductor	100	60

door opening size



busbar size

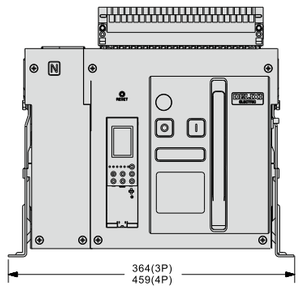


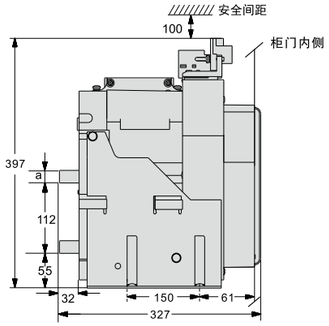
In （A）	a （mm）
630–800	10
1000–1600	15
2000	20

Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

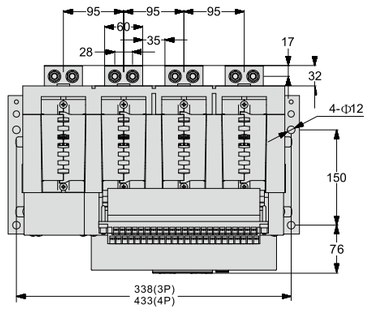
■ CDW3–2000AF Fixed type 3-pole and 4-pole

Size

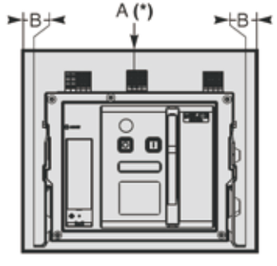




Fixed horizontally (on base plate or rail)* Mask protruding 5mm from door frame is suitable

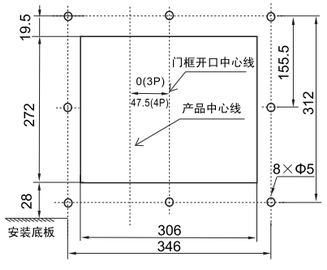


safety distance

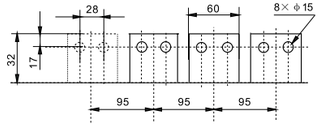


safe distance （mm）	Fixed type	
	A	B
Insulation	0	0
Metal	0	0
live conductor	100	60

door opening size



busbar size

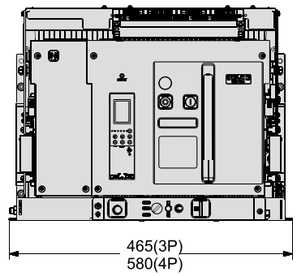


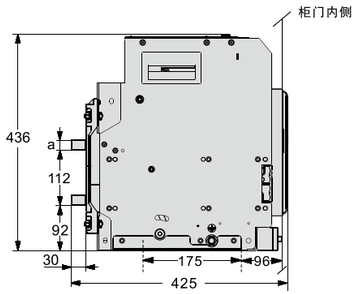
In （A）	a （mm）
630–800	10
1000–1600	15
2000	20

Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

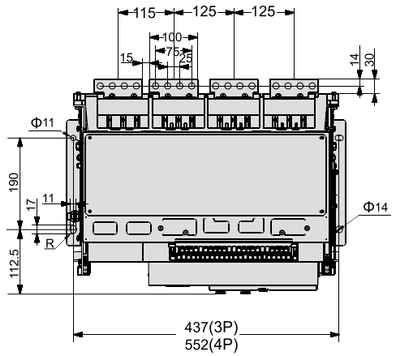
Note 2: (*) The safety distance should consider the space 110mm required when removing the arc extinguisher, and the safety distance is 20mm when removing the terminal block

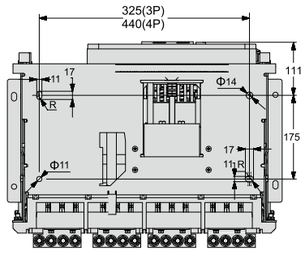
■ CDW3–2500AF draw-out type 3-pole and 4-pole
Size



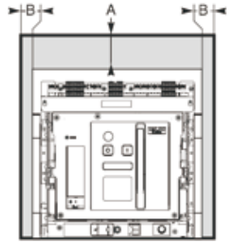


Fixed horizontally (on base plate or rail)* Mask protruding 5mm from door frame is suitable

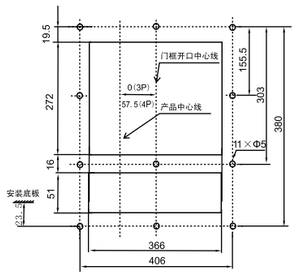




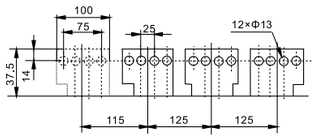
safety distance



door opening size



busbar size

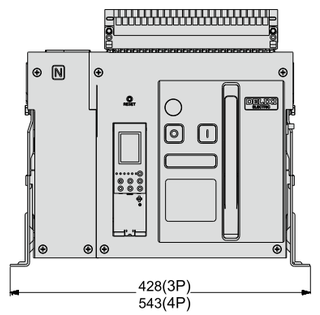


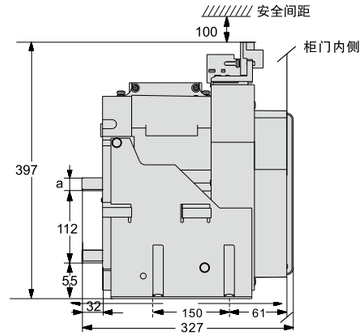
safe distance （mm）	draw-out type	
	A	B
insulation	0	0
Metal	0	0
live conductor	100	60

In（A）	a （mm）
630–2500	20

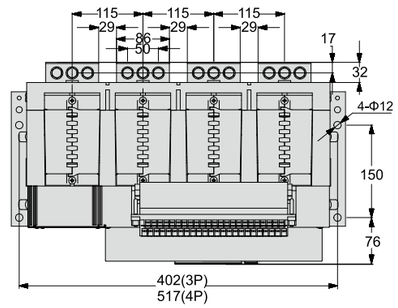
Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

■ CDW3–2500AF Fixed 3-pole and 4-pole
Size

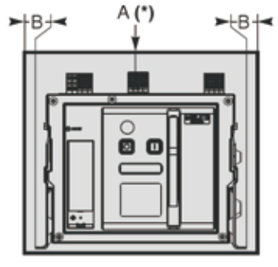




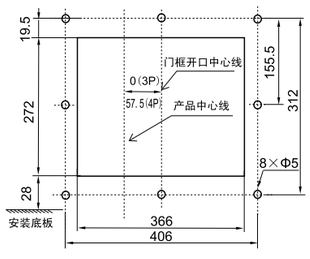
Fixed horizontally (on base plate or rail)* Mask protruding 5mm from door frame is suitable



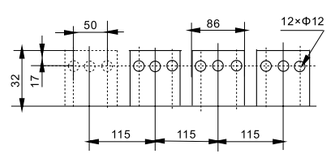
safety distance



door opening size



busbar size



safe distance （mm）	fixed type	
	A	B
insulation	0	0
Metal	0	0
live conductor	100	60

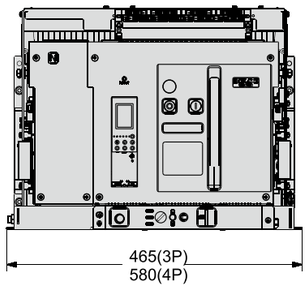
In（A）	a （mm）
630–2500	20

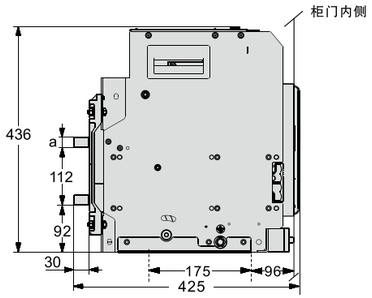
Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

Note 2: (*) The safety distance should consider the space 110mm required when removing the arc extinguisher, and the safety distance is 20mm when removing the terminal block

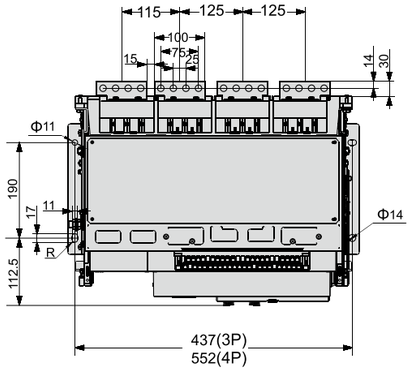
■ CDW3–3200AF ~~draw-out type 3-pole and 4-pole~~

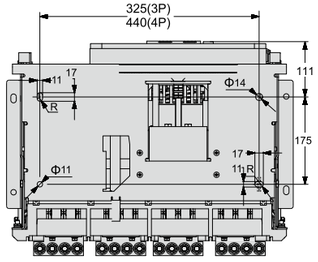
~~Size~~



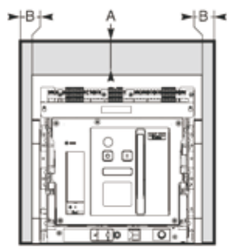


Fixed horizontally (on base plate or rail)* Mask protruding 5mm from door frame is suitable

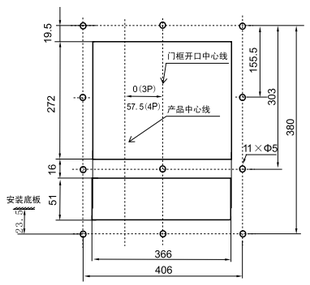




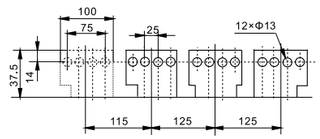
safety distance



door opening size



busbar size



safe distance （mm）	Draw-out type	
	A	B
insulation	0	0
Metal	0	0
live conductor	100	60

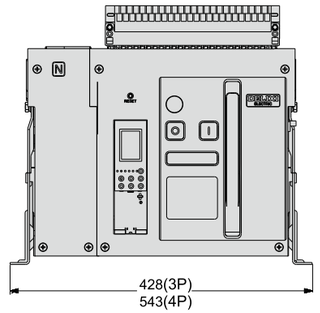
In （A）	a （mm）
2000–2500	20
3200	30

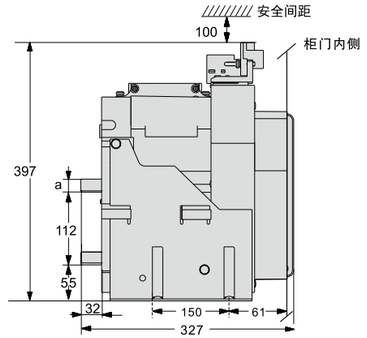
Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

领航者系列
NAVIGATOR

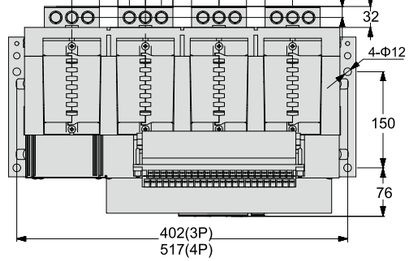
■ CDW3–3200AF ~~Fixed Type 3-pole and 4-pole~~

~~Size~~

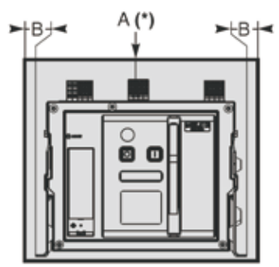




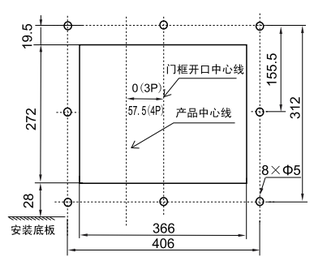
Fixed horizontally (on base plate or rail)* Mask protruding 5mm from door frame is suitable



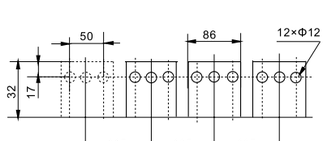
safety distance



door opening size



busbar size



safe distance （mm）	Fixed type	
	A	B
insulation	0	0
Metal	0	0
live conductor	100	60

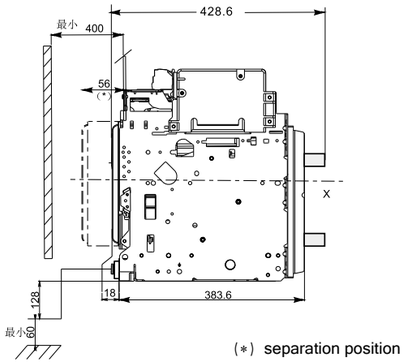
In （A）	a （mm）
2000–2500	20
3200	30

Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

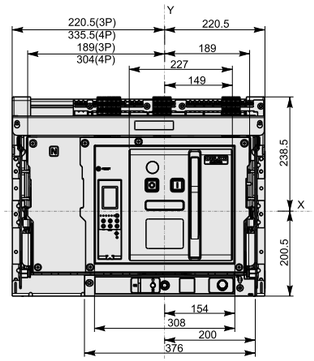
Note 2: (*) The safety distance should consider the space 110mm required when removing the arc extinguisher, and the safety distance is 20mm when removing the terminal block

■ CDW3—4000AF draw-out type 3-pole and 4-pole

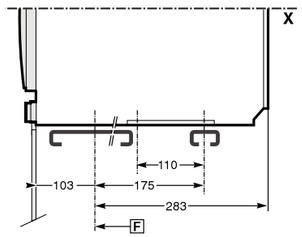
Size

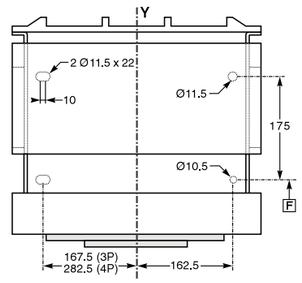


(*) separation position

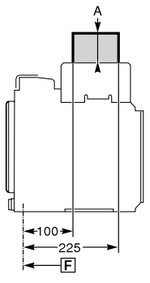


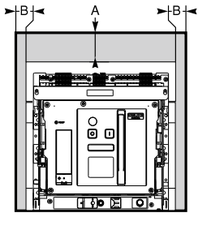
Fixed horizontally (on base plate or rail)





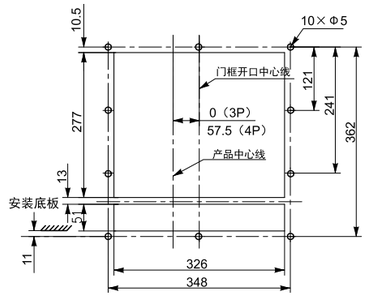
safety distance





safe distance (mm)	draw-out type	
	A	B
insulation	0	0
Metal	0	0
live conductor	100	60

door opening size

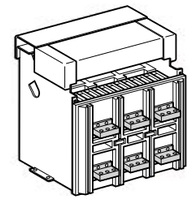


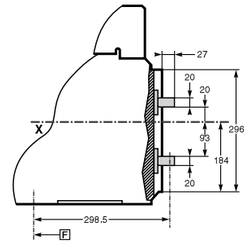
Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

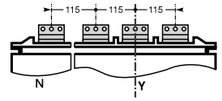
Connect

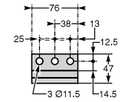
- 1600A—3200A

horizontal rear connection

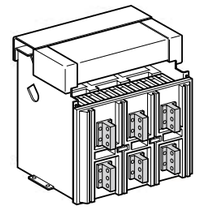


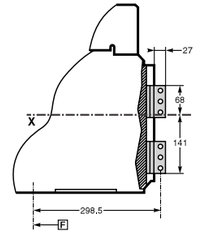


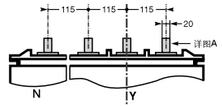


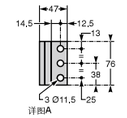


vertical rear connection



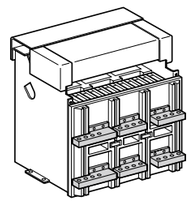


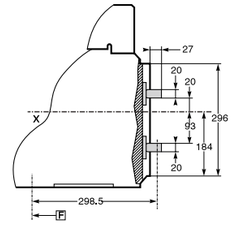


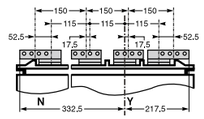


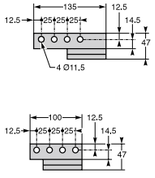
- 4000A

horizontal rear connection

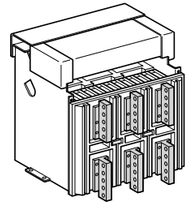


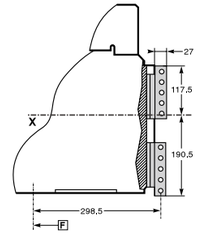


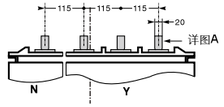


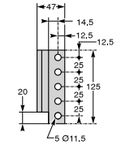


vertical rear connection







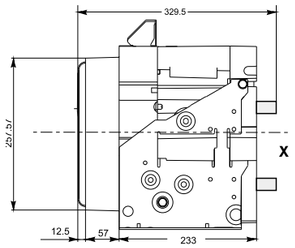


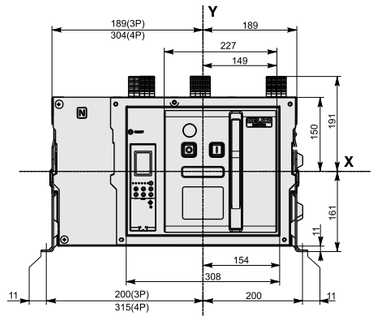
详图A

Note: The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

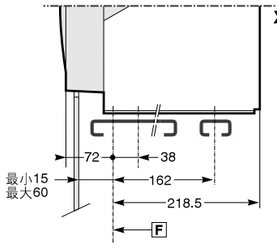
■ CDW3–4000AF Fixed Type 3 pole and 4 pole

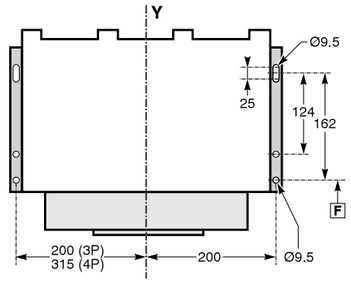
Size



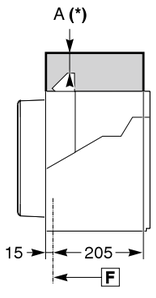


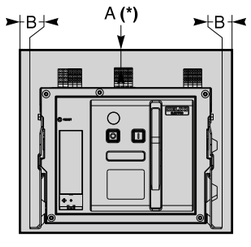
Fixed horizontally (on base plate or rail)





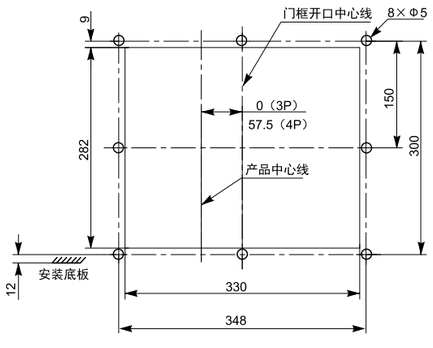
safety distance





safe distance （mm）	Fixed type	
	A	B
insulation	0	0
Metal	0	0
live conductor	100	60

door opening size



Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

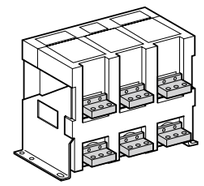
Note 2: The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

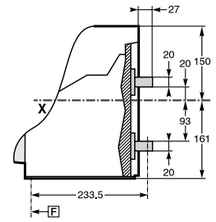
Note 3: (*) The safety distance should consider the space 110mm required when removing the arc chute, and the safety distance is 20mm when removing the terminal block

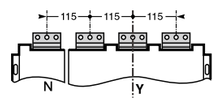
Connection

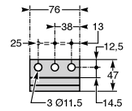
- 1600A–3200A

horizontal rear connection

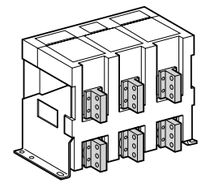


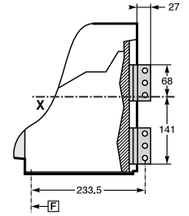


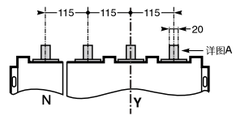


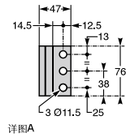


vertical rear connection



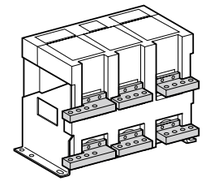


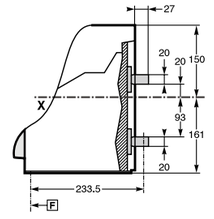


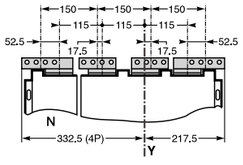


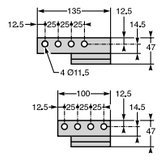
- 4000A

horizontal rear connection

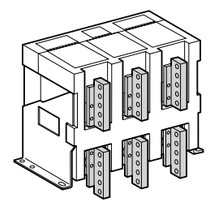


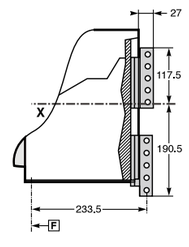


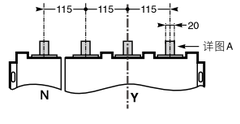


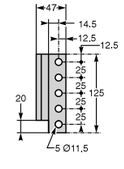


vertical rear connection





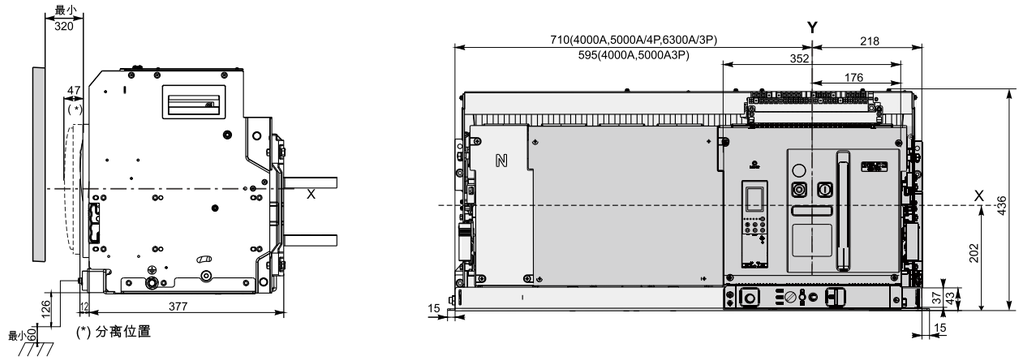




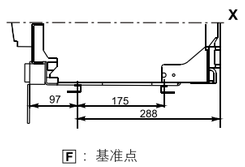
Note: The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

■ CDW3–6300AF draw-out type 3 pole and 4 pole

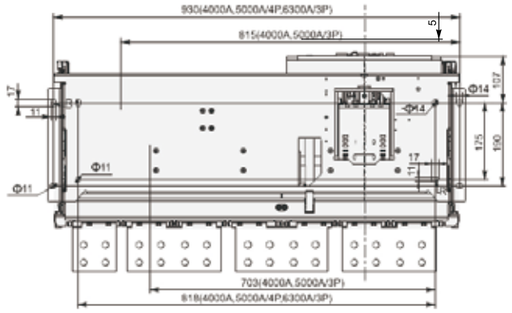
Size



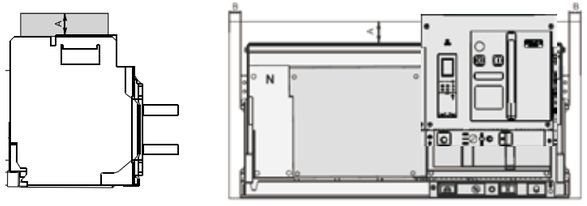
Fixed horizontally (on base plate or rail)* Mask protruding 5mm from door frame is suitable



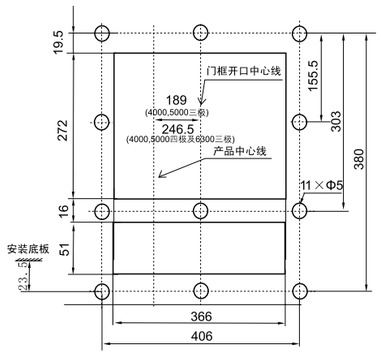
F：基准点



safety distance



door opening size



safe distance（mm）	draw-out type	
	A	B
insulation	0	0
Metal	0	0
live conductor	100	60

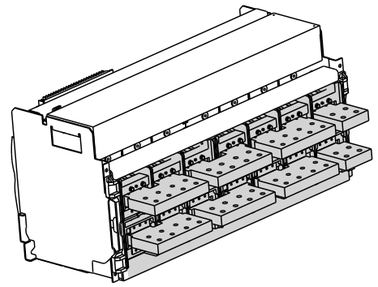
Note 1: The safety distance diagram is a schematic diagram, and the circuit breaker is subject to the actual product

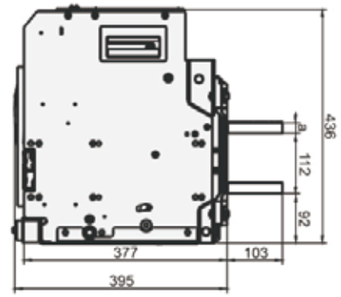
Note 2: The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

Connection

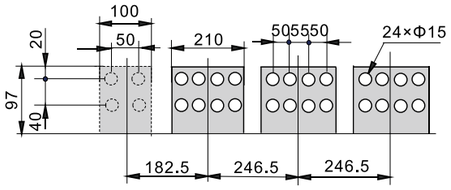
- 4000A–6300A

horizontal rear connection

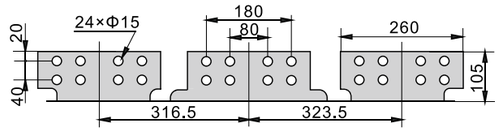




In=4000A／5000A



In=6300A



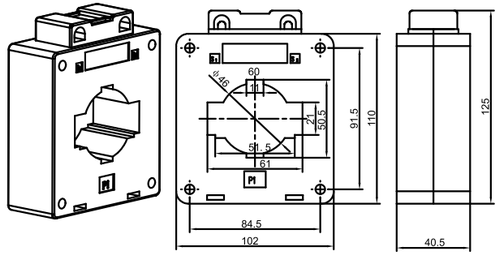
In（A）	a（mm）
4000	20
5000	30
6300	30

Note: The X-axis and Y-axis of the 3-pole circuit breaker are symmetrical to the front cover of the circuit breaker body

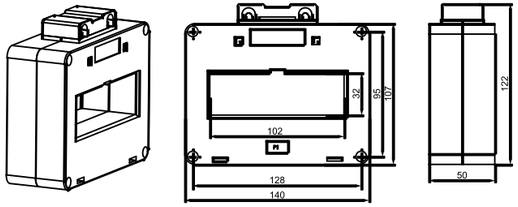
■ ~~External transformer installation size~~

~~N-phase external transformer~~

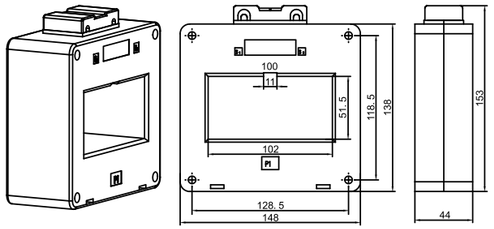
1000AF／1600AF



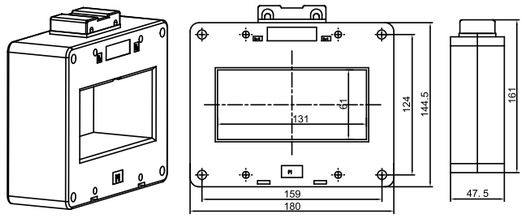
2000AF



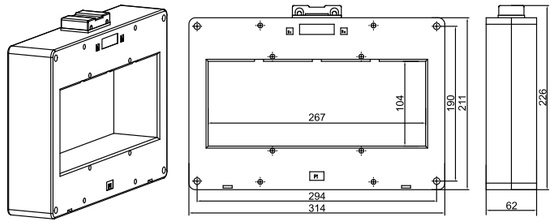
2500AF 3200AF



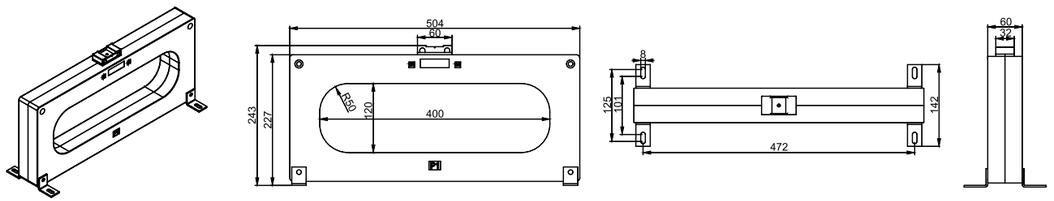
4000AF



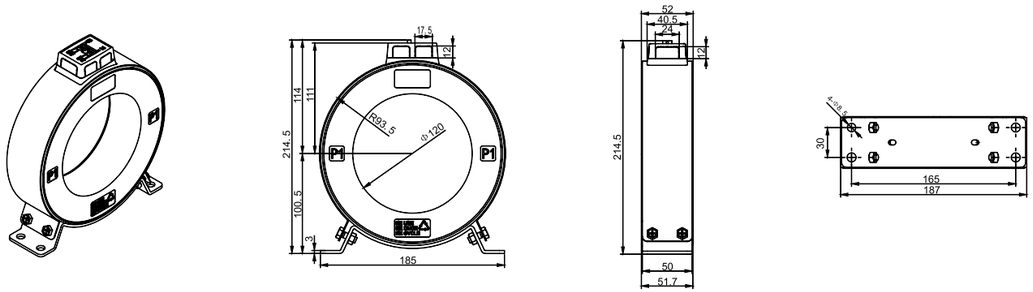
6300AF



leakage transformer

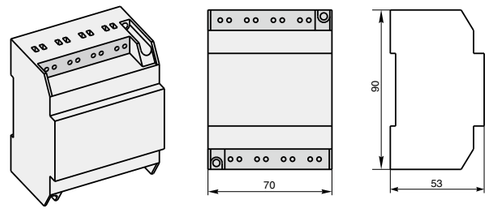


Ground current transformer

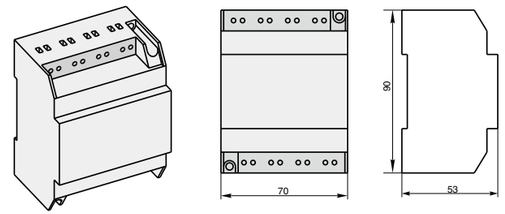


Power module, signal conversion module size

Power module



Signal conversion module

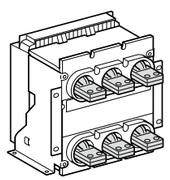


busbar size

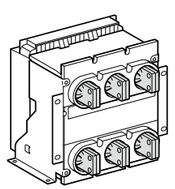
rated current In(A)	number	size(mm×mm) cross-sectional area (mm2) Ti=40 C		number	size(mm×mm) cross-sectional area (mm2) Ti=50 C		number	size(mm×mm) cross-sectional area (mm2) Ti=60 C	
630	2	40×5	400	2	40×5	400	2	40×5	400
800	2	50×5	500	2	50×5	500	2	50×5	500
1000	2	60×5	600	3	50×5	750	3	60×5	900
1250	2	80×5	800	2	80×5	800	3	60×5	900
1600	2	100×5	1000	3	80×5	1200	3	80×5	1200
2000	3	100×5	1500	3	100×5	1500	3	100×5	1500
2500	4	100×5	2000	4	100×5	2000	4	100×5	2000
3200	3	100×10	3000	3	100×10	3000	4	100×10	4000
4000	5	100×10	5000	5	100×10	5000	6	100×10	6000
5000	5	120×10	6000	6	120×10	7200			
6300	5	120×10	7200	7	120×10	8400			

Rear connection

- Horizontal



- vertical



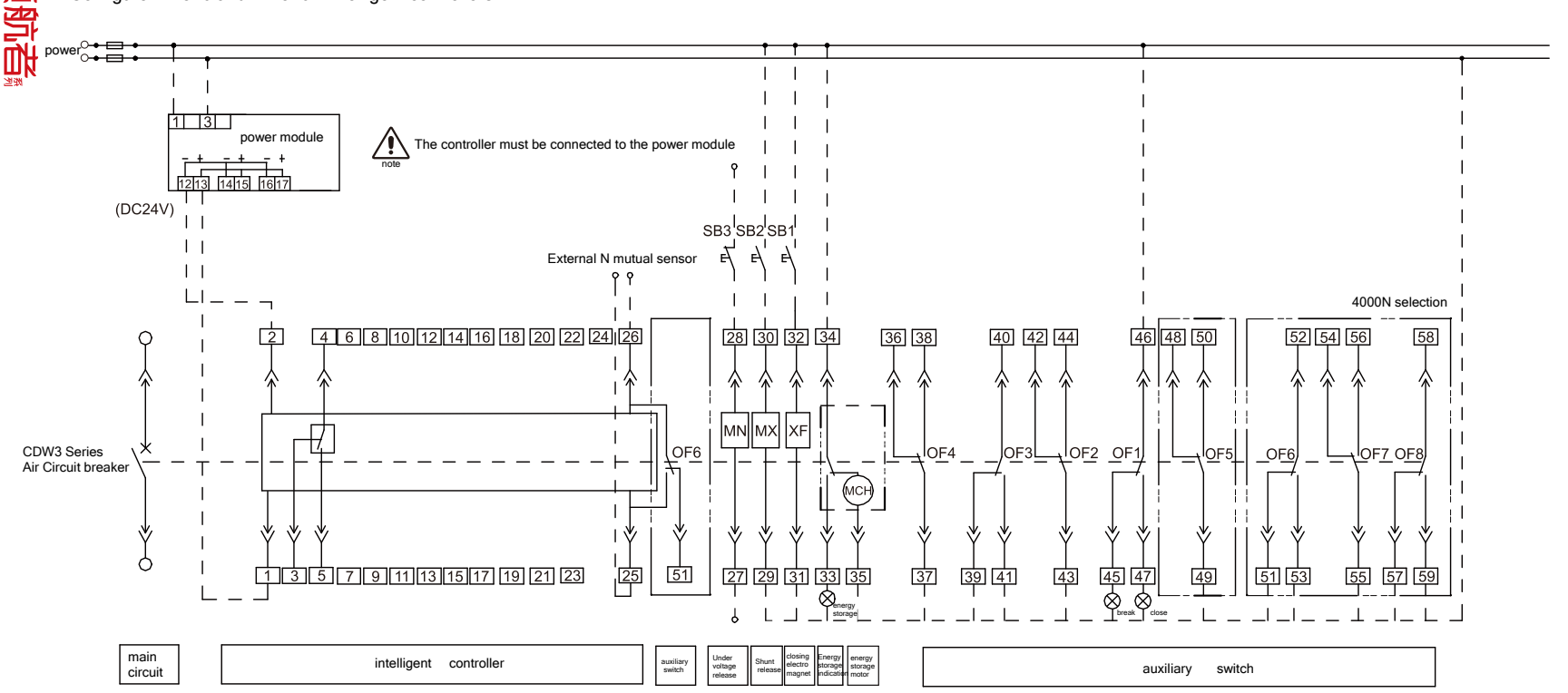
illustrate:

1. All frames provide horizontal connection, only 1600AF&4000AF provide vertical connection

2. The horizontal and vertical connection of 1600AF/4000AF can be realized by rotating the busbar

3. 2000AF can realize vertical connection through optional vertical L-shaped adapter, only below 2000A

Configure iTR326 and iTR326A intelligent controllers



Controller Wiring Notes:

UM: input for voltage test signal

21# (UN), 22# (UA), 23# (UB), 24# (UC) are the input terminals of N, A, B, C phase voltage

POW: DC24V power input, connected to the dedicated power module for the controller
1# (V1+), 2# (V2-), DC24V power input terminal, 1# (V1+) is the positive pole in DC, and it is used to supply power to the controller

SWT: fault trip contact input

3# (S2), 4# (S1), 5# (S3): fault trip contact output (4# (S1) is the common terminal), contact capacity: AC400V, 5A

CT: external transformer

25#-26#: input for external transformer

Component: MN-undervoltage release

MX-Shunt release

XF-closing electromagnet

MCH-Electric Operating Mechanism

OF1-OF8-auxiliary switch

SB1-closing button

SB2-opening button

SB3-Emergency disconnect button

Intelligent controller 1# and 2# must be connected to the DC24V terminal of the controller dedicated power module, otherwise the controller will fail or be damaged

Note 1: MN undervoltage release 27#, 28#, wiring on the main circuit; wiring with undervoltage delay unit:
a, 1000/1600/4000 frame 27# and 28# connected to the delay unit 3# and 6# of the delay unit, 10# and 12# of the delay unit are connected to the main circuit. For the wiring diagram, see Figure 1 on page 42; /28#, wiring on the main circuit, see Figure 2 on page 42 for wiring diagram

Note 2: If the control power supply voltages of MN, MX, XF and MCH are different, they can be connected to different power supplies respectively

Note 3: Auxiliary switch 1000/1600 frame only provides 4a4b; 2000/2500/3200/6300 frame can provide 4a4b, 6a6b; 4000 frame can provide 4a4b, 6a6b, 8a8b; among them, 4a4b is the standard configuration, others need to be ordered separately by the user Buy

Note 4: Terminal 35# can be directly connected to the power supply (automatic pre-storage), or connected in series with the normally open button and then connected to the power supply (manual control pre-storage)

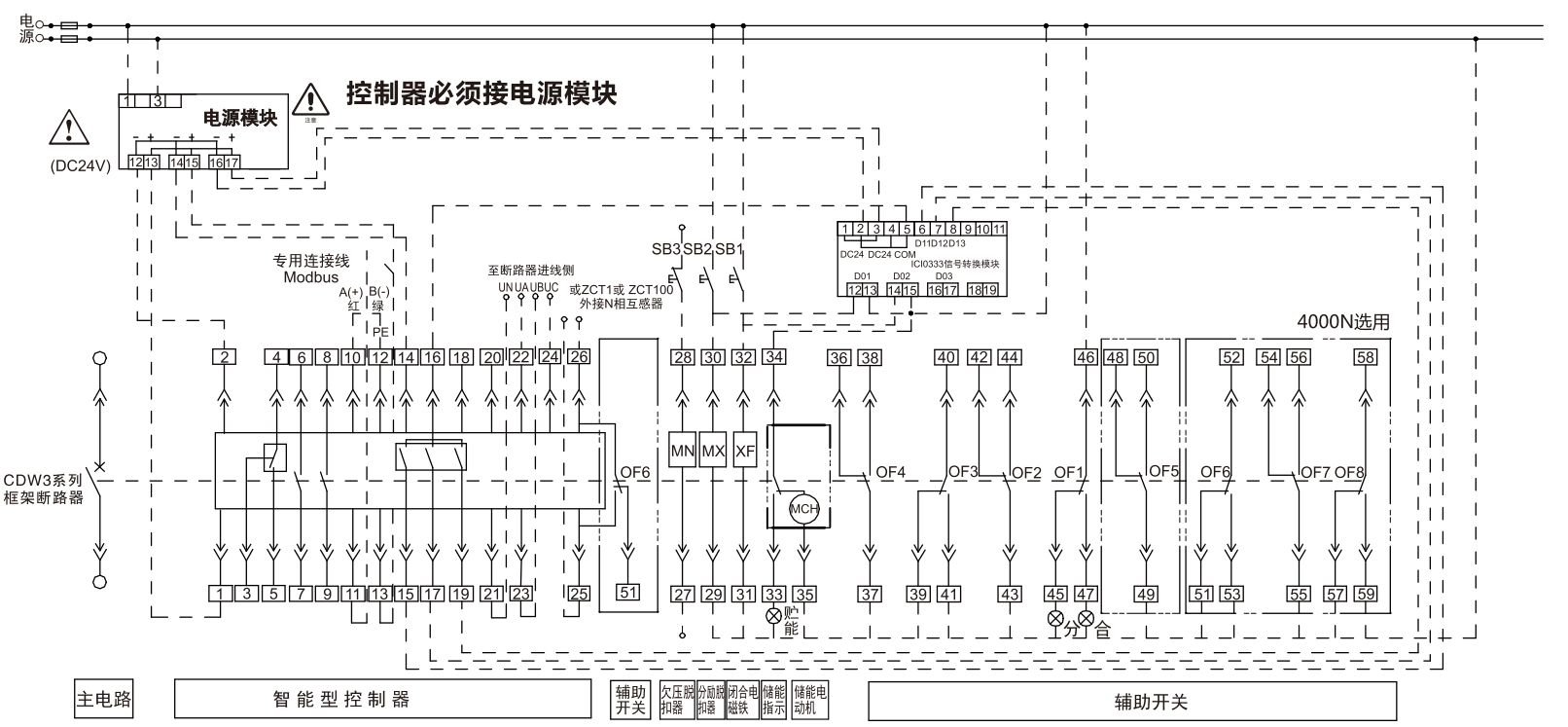
Note 5: The controller must be connected to the power module

When the power supply voltage is AC220V-400V, use the iAPU334 power supply module
When the power supply voltage is DC110V/220V, use the iAPU332D power module

Note 6: When the 2000/2500/3200/6300 frame is 47 circuits, the auxiliary switch is 4a4b
When the 2000/2500/3200/6300 frame is 51 circuits, the auxiliary switch is 6a6b (5a5b): 25#, 26#, 51#
After the normally open and normally closed contacts are formed, the transformer cannot be connected externally

Note 7: The dotted line in the figure is connected by the user

配置iTR326H型智能控制器的二次回路接线图



控制器接线注释：

UM： 电压测试信号的输入

21#（UN）、22#（UA）、23#（UB）、24#（UC）为N、A、B、C相电压的输入端

POW：DC24V电源输入，接控制器专用电源模块

1#（V1+）、2#（V2-），DC24V电源输入端，直流时1#（V1+）为正极，给控制器供电用

SWT： 故障跳闸触点输出

3#（S2）、4#（S1）、5#（S3）：故障跳闸触点输出（4#（S1）为公共端），触点容量：AC400V，5A

CT： 外接互感器，包括外接N相互感器或ZT100或ZCT1（三选一），其中

25#–26#：用于外接互感器的输入25#–26#：用于外接接地互感器ZT100的输入

25#–26#：用于外接漏电互感器ZCT1的输入

ZSI： 区域选择性联锁

13#（Z+）、14#（Z-）为区域联锁保护的输入DC24V

16#（Z11）、15#（Z1）、17#（Z2）、19#（Z3）为3DO的输出,采用光耦输出,其中16#（Z11）为公共端

COM：通讯输出

10#、11#分别为RS485A（485+）、RS485B（485-）通讯引出线，12#为PE线，屏蔽地线

元件： MN–欠压脱扣器 MX–分励脱扣器 XF–闭合电磁铁 MCH–电动操作机构
OF1–OF8–辅助开关 SB1–合闸按钮 SB2–分闸按钮 SB3–紧急断开按钮

注1：MN欠压脱扣器27#、28#，接线于主回路上；对带有欠压延时单元的接线为：a、1000/1600/4000壳架27#和28#接延时单元的3#和6#，延时单元的10#、12#接于主回路，接线图详见42页的图1；
b、2000/2500/3200/6300壳架MNR欠压脱扣器27#/28#，接线于主回路上，接线图详见42页图2

注2：若MN、MX、XF、MCH的控制电源电压不同时可分别接不同电源

注3：辅助开关1000/1600壳架只提供4a4b；2000/2500/3200/6300壳架可提供4a4b、6a6b；4000壳架可提供4a4b、6a6b、8a8b；其中4a4b为标准配置，其他需用户另行购买

注4：端子35#可直接接电源（自动预储能），也可串接常开按钮后接电源（手控预储能）

注5：控制器必须接电源模块

当电源电压为AC220V~400V时，采用iAPU334电源模块
当电源电压为DC110V/220V时，采用iAPU332D电源模块

注6：当2000/2500/3200/6300壳架为47回路时，辅助开关为4a4b
当2000/2500/3200/6300壳架为51回路时，辅助开关为6a6b（5a5b）：25#、26#、51#组成常开常闭触点后，不能再接外接互感器

注7：远程控制时，需要增加iCIO333信号转换模块，信号转换模块触点容量AC240V，10A

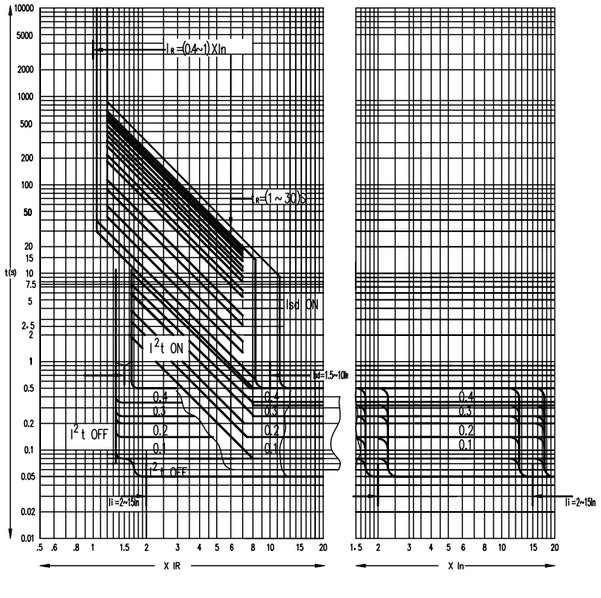
注8：通讯协议为Modbus，如果用Profibus或Devicenet协议，需订购iCAU486或iCAU485模块，模块使用DC24V供电，输入端连接到二次回路10#（485+）、11#（485-）端子，输出端连接到相应的协议总线

注9：图中虚线部分由用户自接

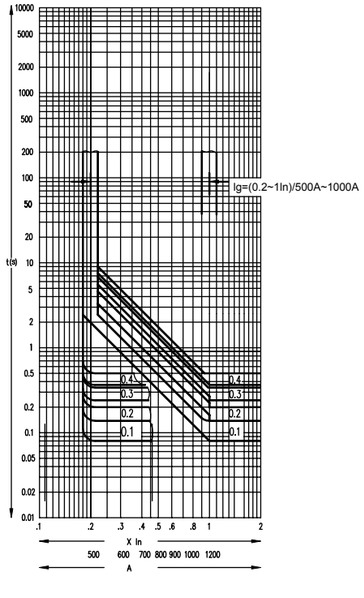
智能控制器1#、2#必须接至控制器专用电源模块的DC24V端，否则会导致控制器失效或损坏

Tripping curve

Three stages of protection



Ground protection



Overview

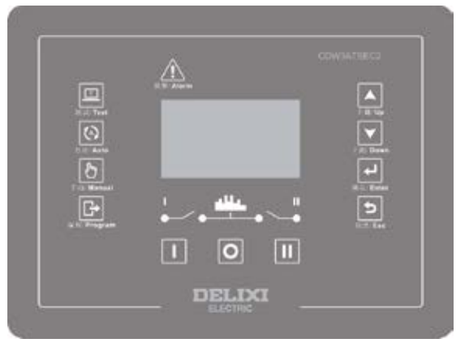
The CDW3 Frame Dual Supply Controller is a programmable , automated measurement , LCD menu

It shows that the intelligent dual power switching product integrated with digital communication can automatically realize the measurement of electrical parameters such as voltage , frequency and phase , and carry out automatic control according to the setting strategy , which can reduce human operation errors, and is an ideal product for dual power switching.

The CDW3 frame dual power controller is composed of a microprocessor as the core, which can accurately detect two-way three-phase

Voltage, to make accurate measurement of voltage anomalies (overvoltage , undervoltage , phase loss, overfrequency, underfrequency)

Judge and output the passive control switch value . It has compact structure , advanced circuit , simple wiring and high reliability , and can be widely used in electrical equipment , automatic control and two-way power supply systems in industries and departments such as electric power , post and telecommunications , petroleum , coal , metallurgy , railway , municipal administration, and intelligent buildings. .



Dual Power Controller Models

CDW3ATSEC2

1600AF/2000AF/2500AF/3200AF/4000AF/6300AF

NAVIGATOR

installation conditions

The two universal circuit breakers of the dual power supply system are installed horizontally in two adjacent power distribution cabinets. The maximum distance between the left panels of the two circuit breakers does not exceed 2m. Lock Perform mechanical interlock installation . Thetwo universal circuit breakers of the dual power supply system are installed up and down in a power distribution cabinet. The maximum distance between the bottom plates of the two circuit breakers does not exceed 0.9m. The cable interlock or lever can be installed between the two circuit breakers. interlock.

The dual power supply controller is installed on the panel, and is connected to the circuit breaker through a special connection cable.AC380V), when the user places an order, the user can choose an extension cable according to the actual length of the cable (one meter per length).

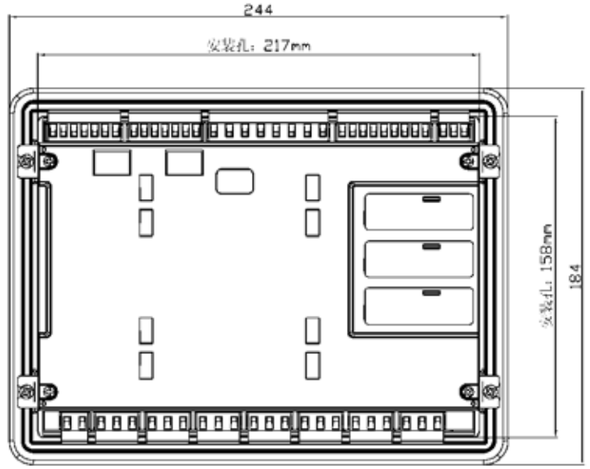
Environmental requirements

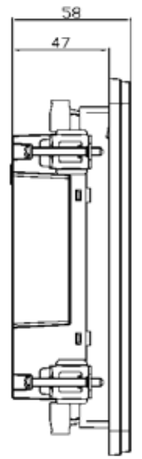
ambient temperature：−25℃～+70℃
Altitude：⩽2000 m

Precautions

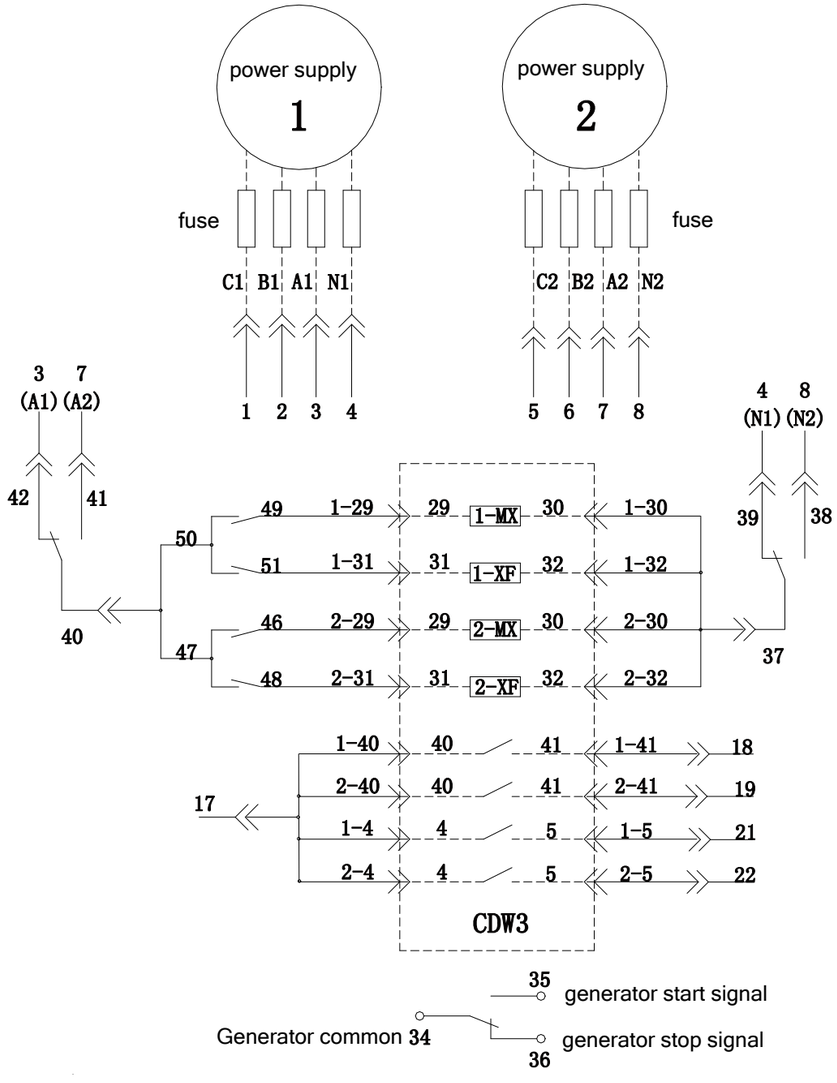
- Steel cable mechanical interlock must be ordered with CDW3 dual power controller
- The circuit breaker has 4 sets of transfer contacts, the dual power controller needs to use 1 set of transfer contacts, and the user actually only has 3 sets of transfer contacts available
- The length of the dedicated cable for the dual power supply controller is 2m, if it needs to be extended or has special requirements, it needs to be specified when ordering
- For circuit breakers with dual power controllers, it is absolutely forbidden to have a key lock, otherwise it will cause damage to the internal components of the circuit breaker
- The circuit breaker with dual power supply controller cannot be interlocked with the opening and closing state door
- When the circuit breaker of the dual power controller is equipped with an H-type controller, the remote control circuit breaker can not be used for closing and opening functions.
- The dual power supply controller already has undervoltage and overvoltage protection functions, and the circuit breaker should not use an undervoltage release

Shape and installation dimensions





■ CDW3 Wiring diagram of dual power supply controller (three-phase four-wire wiring diagram)



Note:
1. MX--Shunt release XF--Close electromagnet
2. When the circuit breaker is equipped with an H-type controller, it is forbidden to remotely control the circuit breaker to close and open
3. It is forbidden to install undervoltage release and key lock, and it is forbidden to use
4. Dual power controllers must be used with mechanical interlocking
5. The dotted line is wired by the user, 4.5 The fault signal is occupied by the controller. If it needs to be connected externally, please consult the manufacturer to order

■ Selection table

QTY. _____

Circuit breaker body (required)							
Frame current	1000AF □	1600AF □	2000AF □	2500AF □	3200AF □	4000AF □	6300AF □
breaking capacity		N □	H □	Note: 1000AF/6300AF has no H type			
rated current	400A □	400A □	630A □	630A □	2000A □	630A □	4000A □
	630A □	630A □	800A □	800A □	2500A □	800A □	5000A □
	800A □	800A □	1000A □	1000A □	3200A □	1000A □	6300A □
	1000A □	1000A □	1250A □	1250A □		1250A □	
		1250A □	1600A □	1600A □		1600A □	
		1600A □	2000A □	2000A □		2000A □	
				2500A □		2500A □	
						3200A □	
						4000A □	
pole	3P □	4P □					
frequency	50Hz □	60Hz □					
installation method	draw-out horizontal □	draw-out vertical □	Fixed horizontal □	Fixed vertical □			
Note: vertical wiring is limited to 1600AF&2000AF&4000AF, 2000AF needs to add vertical wiring			Note: 6300AF has no fixed type				
controller	iTR326 □	iTR326A (Standard) □	iTR326H □	Note: 6300AF has no iTR326			
		Modbus (default) □	Profibus □	Devicenet □			
remote operation							
Shunt coil	AC220V/AC230V □	AC380V/AC400V □	DC110V □	DC220V □			
Closing coil	AC220V/AC230V □	AC380V/AC400V □	DC110V □	DC220V □			
Electric operating mechanism	AC220V/AC230V □	AC380V/AC400V □	DC110V □	DC220V □			
Undervoltage coil	No power failure □	AC220V/AC230V □	AC380V/AC400V □				
Provide delay seconds (applicable to 1000AF/1600AF/4000AF)	0.5s □	1s □	1.5s □	3s □			
Provide delay seconds (applicable to 2000AF/2500AF/3200AF/6300AF)	0.5s □	1s □	1.5s □	3s □	5s □	7.5s □	

Indicating contacts					
auxiliary switch	Frame	auxiliary switch			
	1000N	4 open 4 closed □			
	1600N&H	4 open 4 closed □			
	2000N&H	4 open 4 closed □	6 open 6 closed □		
Note: The default configuration is 4 open and 4 closed	2500N&H	4 open 4 closed □	6 open 6 closed □		
	3200N&H	4 open 4 closed □	6 open 6 closed □		
	4000N&H	4 open 4 closed □	6 open 6 closed □	8 open 8 closed □	12 open 12 closed □
	6300N	4 open 4 closed □	6 open 6 closed □	Note: Please contact the manufacturer for 12 open and 12 closed, all auxiliary switches have common points	
Three-position indicating contact □	Closing ready indication contact □	counter □			

Commonly used accessories - lock					
Opening lock:	one lock one key □	mechanical interlock :	cable interlock □	Cross-frame mechanical interlocking □	button lock □
	two lock one key □		Lever interlock □	Draw-out door interlock □	
	three lock two key □		2 set □		
	spell key lock □		3 set □		

Note: 1000AF/1600AF without cable interlock (3 units) and lever interlock (3 units)

Note: Select key lock and mechanical interlock. If you choose combination lock, the product is used together with the previously selected key lock and mechanical interlock.

Commonly used accessories - controller accessories			
External transformer:	power module □	Grounding transformer □	N-phase external transformer □
	Signal conversion module □	leakage transformer □	

Note: The power module is a standard accessory

Note: N-phase external transformer is only applicable to 3P+N

Note: The leakage transformer, grounding transformer and signal conversion module are only applicable to iTR326H controller

Common accessories - protection and connection accessories					
Interphase barriers (standard) □	(4000A in 4000AF is not equipped with a Interphase barriers)	Vertical L Adapter □	Only for 2000AF	security door lock □	Only for 4000AF
Door frame (standard) □	Extension terminal	□	Only for 1600AF	Secondary terminal shield □	

manual		
Power Module Installation Instructions □	Undervoltage delay unit installation manual □	Mechanical Interlock Installation Instructions □

Remarks: In general applications, the following standard configurations can be used: shunt coil, closing coil, electric operating mechanism, phase partition, door frame, power module, auxiliary switch 4 on and 4 off, iTR326A controller. If you need other special application accessories, please check in the selection table and configuration table