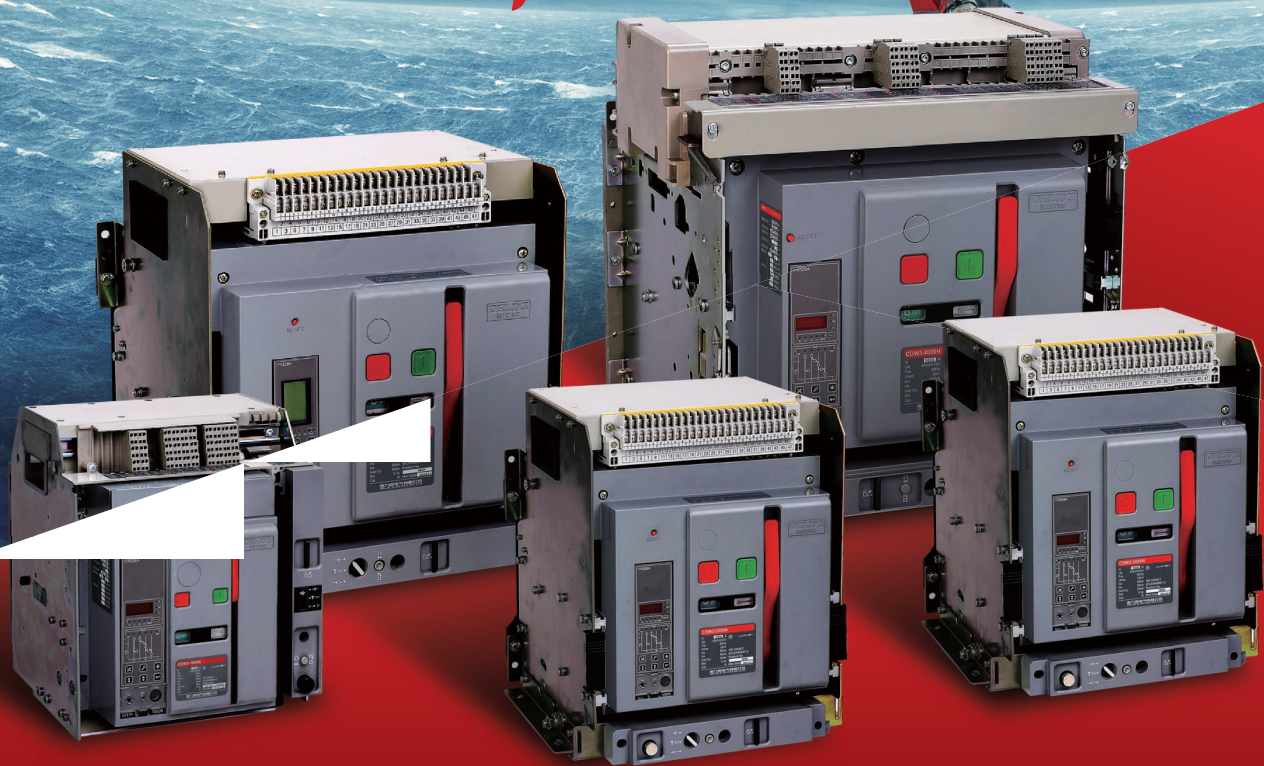


领航者系列
NAVIGATOR

CDW3
Air Circuit Breaker

新我新定义



DELIXI
ELECTRIC
德力西电气

时刻守护您的用电安全

打造行业先锋

领航者系列
NAVIGATOR

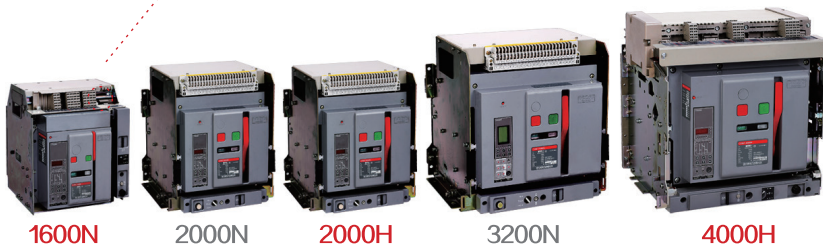
CDW3
Air circuit breaker



Innovative arc extinguishing chamber with multi-layer metal-net design, Real ZERO arc, More outstanding performance.



Five frame types 1600N, 2000N, 2000H, 3200H, 4000H



1600N

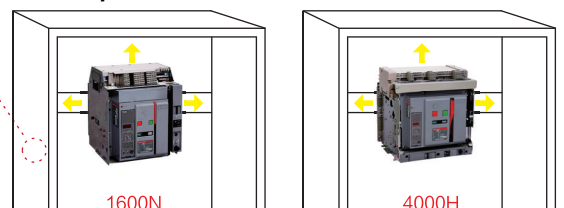
2000N

2000H

3200N

4000H

1600N, 4000H Compared with similar products, the volume is reduced by 20%.



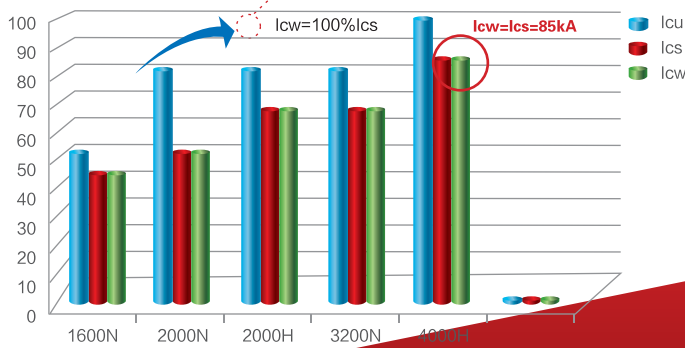
1600N

4000H

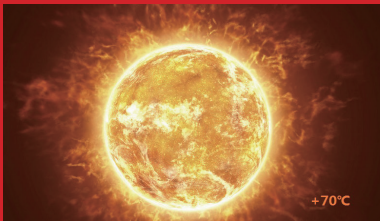
铸造至尊品质



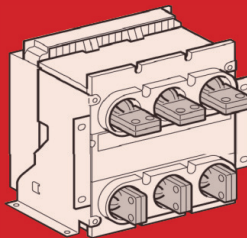
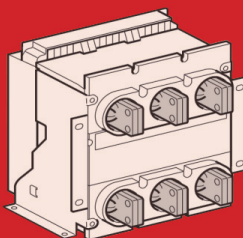
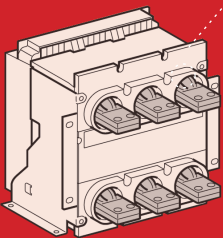
$I_{cw} = I_{cs}$, Max. I_{cs} 85kA, Max. I_{cu} 100kA



Ambient temperature $-40 \sim +70$ centigrade,
Altitude up to 4000m, Meet more harsh environments.



Horizontal / Vertical / Mixed types burbar connection



Horizontal connection

Vertical connection

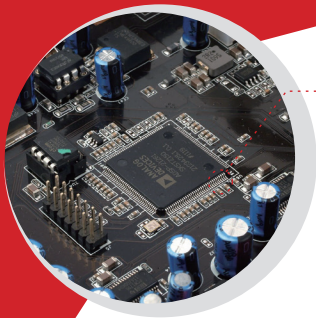
Mixed connection



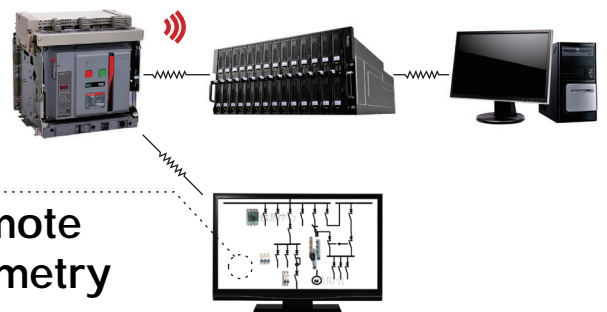
Three types intelligent controller,
Protection / Measure / Auxiliary
and Communication function



缔造智能掌控



DSP 32 bit high speed processing chip,
data processing speed is more efficient.



Full realization of remote control, remote
regulating, remote signaling and telemetry
function, the whole network can be monitored
more safety.

目录 / CONTENT

Introduction

02-03

Main parameter
Intelligent controller
Accessory
Scope of application

Function and characteristics

04-14

Common characteristics of circuit breaker
Breaking capacity
Service life
iTR326 function and parameter
Accessory

Selection guide

15-20

Overall and installation dimensions

21-36

Other

37-41

Electrical schematic diagram

Tripping curve

Selection table

Product Introduction

CDW3 Air circuit breaker



Main parameter

- **Fame type** 1600N、2000N、2000H、3200N、4000H
- **Rated current** I_n (A): 400 ~ 4000
- **Rated voltage** AC U_e (V): 400/415
- **Poles** 3 & 4
- **Installation:** Fixed type & Drawout type
- **Connection:** Horizontal back connection, Vertical back connection



Intelligent controller

- **iTR326 basic type**
Basic function: Protection(L, S, I & G)
- **iTR326A standard type**
Basic protection
Basic measurement
Auxiliary function
- **iTR326H advanced type**
Basic+advance protection
Multiple measurement
Speical function
Auxiliary function
Communication



iTR326



iTR326A



iTR326H



Accessories

- **Remote operation:** Shunt-trip, Undervoltage, Closing electromagnet
- **Accessories of the control unit:** N-phase external CT, ground return CT, earth-leakage CT, Power module, signal conversion module
- **Lock:** opening keylock, door interlock
- **Mechanical interlock:** lever interlocks, cable interlocks
- **Operation and protection:** door frame, interphase barriers, safety shutters
- **Indication contacts:** Auxiliary contacts

Product Introduction

CDW3 Air circuit breaker

Applications

CDW3 series air circuit breaker covers from 400A to 4000A with the rated operation voltage AC400V/415V, 50Hz from overload, undervoltage, short-circuit and earth fault breakdowns.

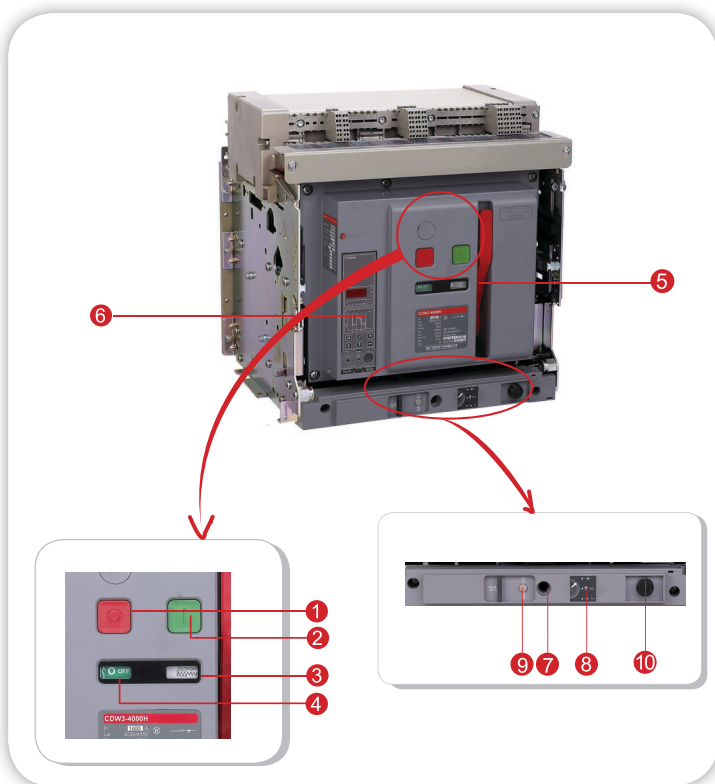
It is widely used in power stations, factories, mining and modern constructions, especially using in intelligent construction power distribution system.

Standard: GB/T14048.2 IEC/EN60947-2

Operation Condition

Environmental	-40°C~+70°C
Altitude	4000m
EMC	Applies to Environment A
Contamination class	Environment contamination class 3 Vertical with inclination with every direction not exceed 5°
Installation	IV class for the main circuit of the circuit breaker, under -voltage release, elementary coil of power transformer; III class for auxiliary circuit and control circuit
Transportation	Reverse placed and severe collision are forbidden

Identify the Mask



- ① Opening button (O)
- ② Closing button (I)
- ③ Energy storage status indicator
 - Charged, closing allowed

	charged
OK	
 - Charged, closing not allowed

	charged
OK	
 - Discharged

discharged
- ④ Main contacts position indicator
 - | | |
|---|-----|
| ⏏ | OFF |
|---|-----|

 Opening
 - | | |
|--|----|
| | ON |
|--|----|

 Closing
- ⑤ Mechanic energy storage handle
- ⑥ Intelligent Control Unit (short for controller)
- ⑦ Waving in (out) device
- ⑧ "Connection", "testing" and "separation" position indicator
- ⑨ "Connection", "testing" and "separation" position interlock
- ⑩ Rocker storage

Function and Characteristic

CDW3 Air circuit breaker



Technical parameter

Common Characteristic

Pole	3, 4
Rated operational voltage AC Ue(V)	400 / 415
Rated insulation voltage Ui(V)	1000
Rated impulse withstand voltage Uimp(kV)	12
Rated frequency(Hz)	50

Apply to isolating



Conforming GB/T14048.2 / IEC60947-2 characteristics

Frame current

In Frame (A)	1600N	2000N	2000H	3200N	4000H
400	●				
630	●	●	●		
800	●	●	●		
1000	●	●	●		
1250	●	●	●		
1600	●	●	●		●
2000		●	●	●	●
2500				●	●
3200				●	●
4000					●

分断能力

Icu(kA)	50	80	80	80	100
Ics(kA)	42	50	65	65	85
Icw(1s)(kA)	42	50	65	65	85

使用寿命

Electric(400V)	6500	6500	6500	6500	6500
Mechanical (with maint.)	25000	30000	30000	20000	20000
(without maint.)	12500	15000	15000	10000	10000

尺寸 (mm) 高 × 宽 × 深

draw-out	3P	322×288×330	436×405×425	436×405×425	436×465×425	439×441×428.6
	4P	322×358×330	436×500×425	436×500×425	436×580×425	439×556×428.6
fixed	3P	301×276×229	397×364×327	397×364×327	397×428×327	352×422×329.5
	4P	301×346×229	397×459×327	397×459×327	397×543×327	352×537×329.5

降容使用

The technical parameter will change when used for 2000m above sealevel

Altitude(m)	2000	3000	4000		
Dielectric resistance voltage(V)	3500	3150	2500		
Average isolation level(V)	1000	900	700		
Maxi utilisation voltage(V)	415	415	415		
Average thermal current40°C	1XIn	0.99XIn	0.87XIn ¹⁾		

Contact with factory when used above 4000m

1) : CDW3-1600N is 0.8×In, CDW3-3200N is 0.7×In

Function and Characteristic

CDW3 Air circuit breaker



CDW3-1600N



CDW3-2000N&H



CDW3-3200N



CDW3-4000H

CDW3 不同温度下的降容表

环境温度	-5℃ ~+40℃	+45℃	+50℃	+55℃	+60℃
CDW3-1600N	400	400	400	400	400
	630	630	630	630	550
	800	800	800	800	700
	1000	1000	1000	950	900
	1250	1200	1200	1150	1050
	1600	1550	1500	1450	1350
CDW3-2000N&H	630	630	630	630	630
	800	800	800	800	700
	1000	1000	1000	1000	1000
	1250	1250	1250	1250	1150
	1600	1600	1500	1500	1300
	2000	1900	1900	1800	1700
CDW3-3200N	2000	2000	2000	2000	2000
	2500	2400	2300	2200	2200
	3200	3000	3000	2800	2800
CDW3-4000H	1600	1600	1600	1600	1600
	2000	2000	2000	2000	2000
	2500	2500	2500	2500	2200
	3200	3200	3200	3000	2500
	4000	4000	3600	3400	3200

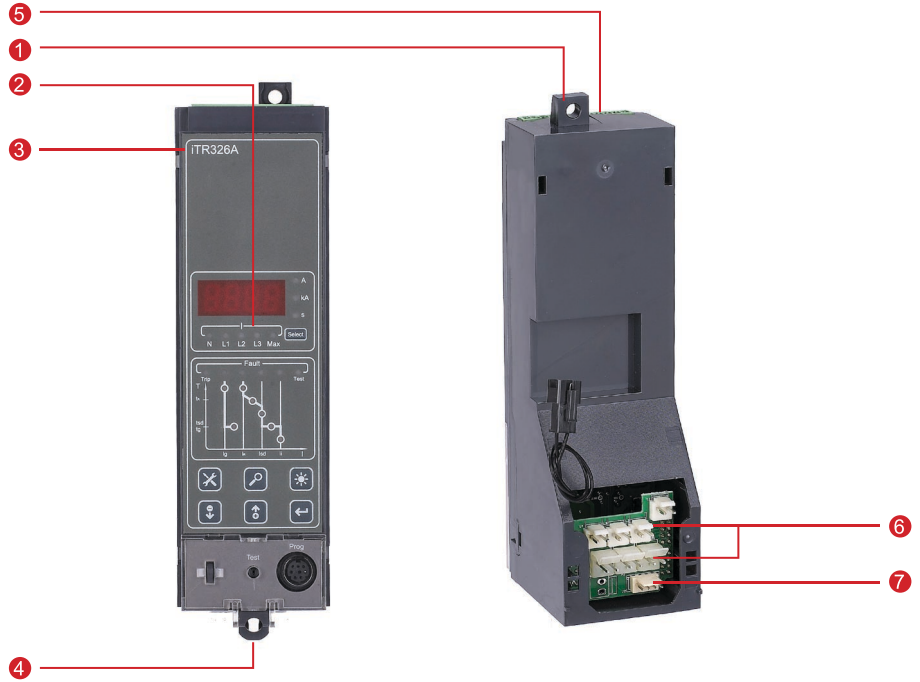
注：降容系数及降容表中的技术参数是从试验和理论计算得出，仅作为一般选型指导用。

Function and Characteristic

iTR326 Controller

Overall view

- ① Top fix
- ② LED indicator light
- ③ Controller label
- ④ Bottom
- ⑤ Terminal connector
- ⑥ CT connector
- ⑦ Magnetic flow/micro switch



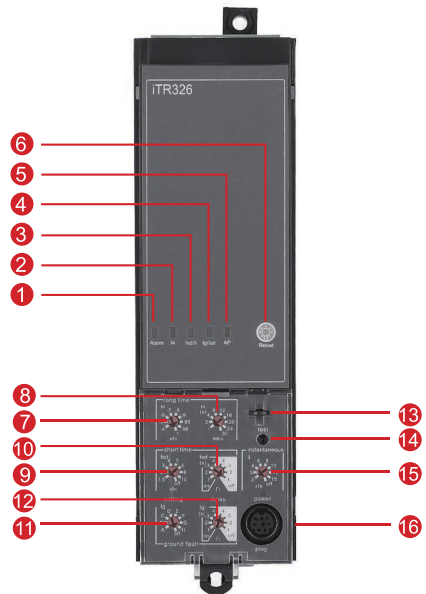
L type (basic type)

Direction

- ① Alarm LED
- ② Long-time LED
- ③ Short/instantaneous LED
- ④ Leakage LED
- ⑤ Advanced protect LED
- ⑥ Reset

Control Panel

- ⑦ Long time-current setting
- ⑧ Long time-time setting
- ⑨ Short time-current setting I_{sd}
- ⑩ Short time-time setting t_{sd}
- ⑪ Ground fault-current setting I_g
- ⑫ Ground fault-time setting t_g
- ⑬ Padlock
- ⑭ Test
- ⑮ instantaneous current setting
- ⑯ Test port



Function and Characteristic

iTR326 Controller

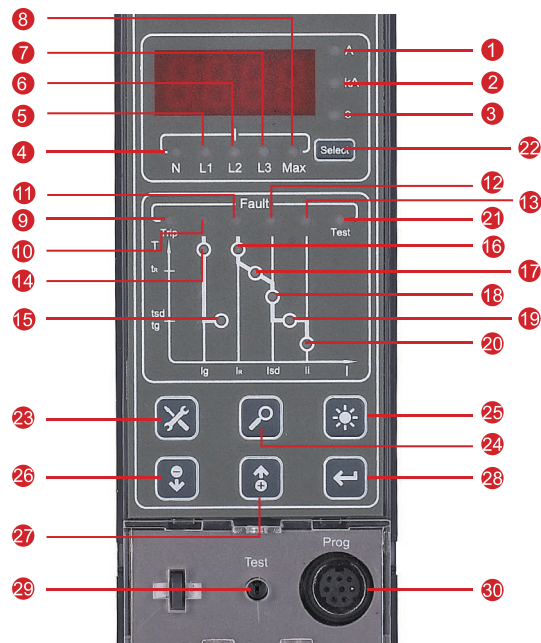
M type (Standard type)

Direction

- ① Current A
- ② Current KA
- ③ Time S
- ④ N phase's current
- ⑤ A phase's current
- ⑥ B phase's current
- ⑦ C phase's current
- ⑧ Max.current
- ⑨ Tripping indicator
- ⑩ Earth protection
- ⑪ Long time protection
- ⑫ Short time protection
- ⑬ Instantaneous protection
- ⑭ Earth current setting
- ⑮ Earth time setting
- ⑯ Long time-current setting
- ⑰ Long time setting
- ⑱ Short time-current setting
- ⑲ Short time setting
- ⑳ Instantaneous current setting
- ㉑ Test status

Key

- ㉒ Toggle key
- ㉓ Setting key
- ㉔ Query key
- ㉕ Return/Cancel
- ㉖ -/ Next page
- ㉗ +/- up page
- ㉘ Enter key
- ㉙ Test key
- ㉚ Test port



H type (Advanced type)

Direction

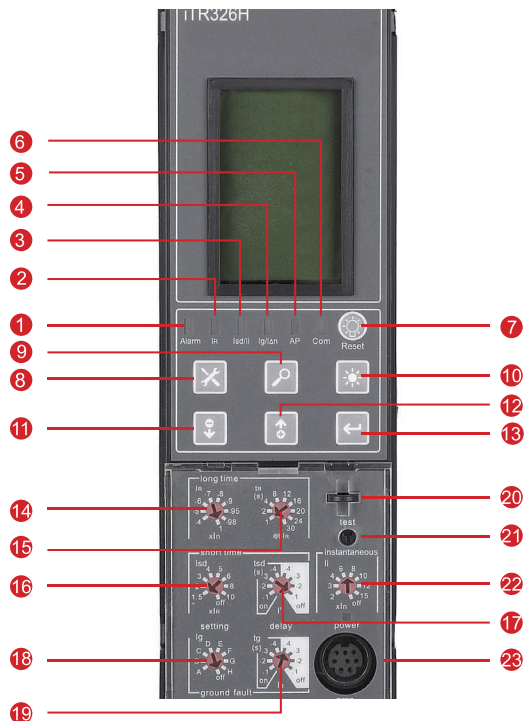
- ① Alarm LED
- ② Long-time LED
- ③ Short/instantaneous LED
- ④ Earth,Leakage fault LED
- ⑤ Advanced protect LED
- ⑥ Communication function
- ⑦ Reset

Control Panel

- ⑭ Long time-current setting
- ⑮ Long time-time setting
- ⑯ Short time-current setting Isd
- ⑰ Short time-time setting tsd
- ⑱ Ground fault-current setting Ig
- ⑲ Ground fault-time setting tg
- ㉒ Padlock
- ㉓ Test
- ㉔ instantaneous current setting
- ㉕ Test port

Key

- ⑧ Setting key
- ⑨ Query key
- ⑩ Return/Cancel
- ⑪ -/ Next page
- ⑫ +/- up page
- ⑬ Enter key



Function and Characteristic

iTR326 Controller

Function introduction

iTR326

iTR326A

iTR326H



L



M



H

Protection

Long time-L
Short time-S
Instantaneous-I
Ground fault-G
MCR
HSISC

Long time-L
Short time-S
Instantaneous-I
Ground fault-G
MCR
HSISC

Long time-L
Short time-S
Instantaneous-I
Ground fault-G
MCR
HSISC
Under-voltage/alarm
Over-voltage/alarm
3-phase imbalance/alarm
Phase sequence/alarm
Under-frequency/alarm
Over-frequency/alarm
Inverse power protection/alarm

Measurement

Current

Current
Voltage
Power
Frequency
Harmonic

Assistant

Pre-Alarm
Fault history record
Test function

Pre-Alarm
Self-diagnose
Fault history record
Test function

Pre-Alarm
Self-diagnose
Fault history record
Test function

Display

LED display

LCD display

Special

Load monitor
ZSI

Communication

Modbus