

Product introduction  
overview



Product overview

CDQ1F type automatic switching switch is composed of load isolation switch (no overload and short circuit protection mechanism) and intelligent controller. The switch adopts the excitation type conversion mechanism, the conversion speed is faster, can be switched on and off and carry more working current;At the same time, a new microcomputer control system is adopted to monitor and control more intelligent, electromagnetic compatibility is strong, can work continuously for a long time, stable and reliable.At the same time, the switch is equipped with LED/LCD display, simple operation, clear instructions, to provide users with a friendly human-machine interface.

Product characteristics

- More complete specifications
  - The product has 2P/3P/4P, covering 6~1600A;
  - A/B/C three controllers are available to meet customers' different requirements for economy and functionality;
  - Type C controller with RS485 communication, remote "four remote" more intelligent;
  - It has three operating modes: self-feed and self-recovery, self-feed and non-self-recovery, and mutual reserve, suitable for different occasions;
- Stronger performance
  - Exciting conversion system, II section switching speed up to less than 0.1s;
  - High quality silver alloy contact + arc extinguishing mechanism, longer service life;
  - Optional AC-33A/AC-33iA usage category for high sensing and frequent transition conditions;
  - Plug type arc extinguishing cover, timely control contact wear state;
- Easy to install, more beautiful
  - Integral, split two installation methods, smart combination;
  - Delixi family design, complete installation more beautiful;



Compliant standard

- GB 14048.1 General rules
- IEC 60947-1 General rules
- GB 14048.3 Switches, disconnectors, disconnecting switches and fuse combinations
- IEC 60947-3 Switches, disconnectors, disconnecting switches and fuse combinations
- GB/T 14048.11 Multi-function electrical conversion switch electrical appliances
- IEC 60947-6 Multi-function electrical conversion switch electrical appliances

Normal operation and installation conditions

- The elevation of the installation site is ≤2000m, and there is no rain or snow attack and obvious shaking, the installation category is Class IV;
- Operating temperature: -5℃ ~40℃.The 24-hour average value does not exceed +35℃; When the maximum temperature is +40℃, the relative humidity of the air does not exceed 50%.A higher relative humidity is allowed at lower temperatures, such as 90% at +20 ° C.Special measures should be taken for condensation caused by temperature changes;
- In a medium without explosion risk, and there is no gas and dust in the medium sufficient to corrode metal and destroy insulation;
- Pollution Level 3;

Technical parameters

Product name	Category of use	Frame grade	Number of poles	Rated working current	Place number	Controller class
CDQ1F		63	4P	16	II	A
	Default: AC-(63AF~800AF) AC-33iB (1250AF/1600AF) H: AC-33A (63AF/125AF) AC-33iA (250AF~800AF)	63: 63AF 125: 125AF 250: 250AF 630: 630AF 800: 800AF 1250: 1250AF 1600: 1600AF	4P: 4 3P: 3 2P: 2	6: 6A 10: 10A 16: 16A 20: 20A ----- 1250: 1250A 1600: 1600A	II :part II III:partIII	A : Type A controller (DIP) B : Type B controller (digital tube type) C: Type C controller (liquid crystal type)

Product model		63AF	125AF	250AF	630AF	800AF	1250AF	1600AF
Number of poles		2P、3P、4P			3P、4P			
Main contact position		Part II、Part III						partIII
Frame current（A）		63	125	250	630	800	1250	1600
Rated working current（A）Ie		6/10/16/20 /25/32/40 /50/63	16/20/25/32 /40/50/63/80 /100/125	100/125/160 /200/225/250	250/315/350 /400/500/630	630/700/800	800/1000 /1250	800/1000 /1250/1600
Rated operating voltage Ue		AC400V						
Rated insulation voltage Ui		AC800V						
Rated impulse withstand voltage Uimp		8kV						
On and off capability cosφ≤0.45		10Ie					6Ie	
Category of use	Conventional	AC-33B					AC-33iB	
	H	AC-33A		AC-33iA			-	
Rated limited short circuit current Iq （The fuse is protected）		100kA	100kA	100kA	120kA	120kA	120kA	120kA
Contact transition time	II	≤0.1s	≤0.1s	≤0.1s	≤0.2s	≤0.3s	≤0.3s	-
	III	≤0.5s	≤0.5s	≤0.5s	≤0.5s	≤0.6s	≤0.6s	≤0.6s
Electrical life (s)		10000	10000	10000	6000	6000	6000	6000
Mechanical life (times)		30000	30000	30000	20000	10000	10000	10000
Number of operation cycles (times/hour)		120	120	120	120	60	60	60
Connection mode		Front wiring				Backboard connection		
Electrical classification		PC						
Control type		A、B、C						
Control loop								
Rated insulation voltage Ui		250V						
Rated impulse withstand voltage Uimp		2.5kV						
Certification standard		GB14048.11-2016						
Certification certificate		CQC						

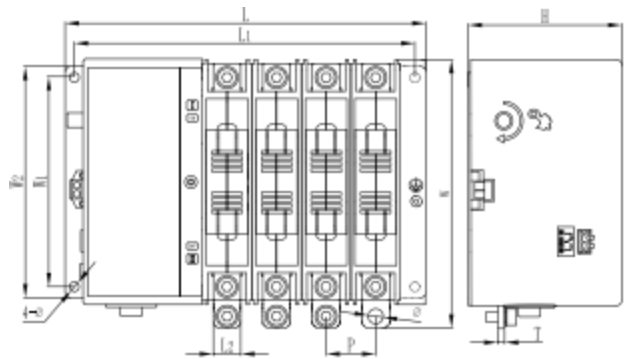
## Technical parameter

controller	type A	typeB	type C
Installation mode	unitary		unitary/ split
rated working voltage	AC220V	AC220V	AC220V
Rated operating frequency	50/60Hz	50/60Hz	50/60Hz
Working position			
Common power supply closure	■	■	■
Backup power off	■	■	■
Two power supply disconnected (III section only)	■	■	■
Operating mode			
Auto operation	■	■	■
Manual operation	■	■	■
Key operation	■	■	■
RS485 Communication (four remote)	-	-	■
Controller key operation			
Key conversion to Common	■	■	■
Press Switch to Standby	■	■	■
Key conversion to double division (III section only)	■	■	■
Commonly used monitoring overvoltage	A/B/C three phase ■	A/B/C three phase■	A/B/C three phase■
Monitoring of common undervoltage	A/B/C three phase ■	A/B/C three phase■	A/B/C three phase■
Monitoring of common loss of pressure	A/B/C three phase■	A/B/C three phase■	A/B/C three phase■
Lack of phase is commonly monitored	A/B/C three phase■	A/B/C three phase■	A/B/C three phase■
Monitor standby overpressure	A phase■	A phase■	A/B/C three phase■
Monitor standby undervoltage	A phase■	A phase ■	A/B/C three phase■
Monitor standby loss of pressure	A phase■	A phase ■	A/B/C three phase■
Monitor the standby broken phase	A phase■	A phase■	A/B/C three phase■
Mains power - Mains power	■	■	■
Mains power - generator	■	■	■
Fire protection (III section only)	■	■	■
Throw oneself in and restore oneself	■	■	■
Self-propelled not self-propelled	■	■	■
Mutual standby	-	-	■
display			
Display mode	Light-emitting diode	LED digital tube	LCD Liquid crystal display
Regular backup power supply	■	■	■
Commonly used power supply closing	■	■	■
Standby power switch off	■	■	■
Common supply voltage	-	■	■
Standby supply voltage	-	■	■
Delay time display	■	■	■
Fault alarm display	■	■	■
Double split status display	■	■	■
Fire feedback (III stage only)	-	■	■
Parameter setting			
Standby undervoltage value setting (V)	Default value 170V	Default value 170V (Adjustable range 130~200V)	
Standby overvoltage Settings (V)	Default value 265V	Default value 265V (Adjustable range 250~300V)	
Convert the delay time Settings	0-5s	0-90s	0-90s
Double residence time (III section only) setting	0~90s	0~99s	0~255s
Return to the delay setting	0-5s	0-90s	0-90s
Electromagnetic compatibility environment	B	B	B

Note: "■"Standard function "□"Optional function "—"Without this feature

## Installation and dimensions

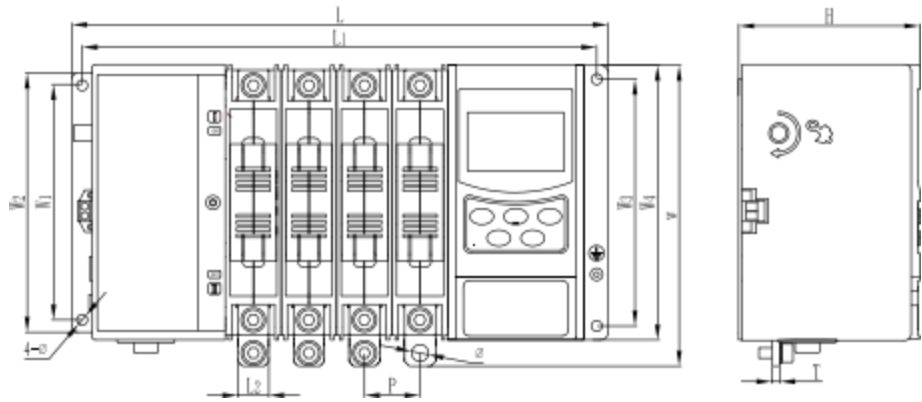
### II -section shape and mounting dimensions CDQ1F-63~630AF/A, B type switch appearance, installation size



unit: mm

规格	尺寸	外形尺寸						安装尺寸					螺栓				
		L			W	W2	H	L1			W1	4-Φ	L2	T	P	Φ	
		2P	3P	4P				2P	3P	4P							
CDQ1F-63 II A/B型		170	194	218	1 96	168	112	156	180	204	152	7	12	2	24	6.5	
CDQ1F-125 II A/B型		180	210	240	1 96	168	112	166	196	226	152	7	15	5	30	8.5	
CDQ1F-250 II A/B型		192	228	264	1 96	168	112	178	214	250	152	7	20	4	36	8.5	
CDQ1F-630 II A/B型		297	357	417	2 84	226	138	276	336	396	206	9	40	5	60	13	

### CDQ1F-63~630AF/C type switch appearance, installation size



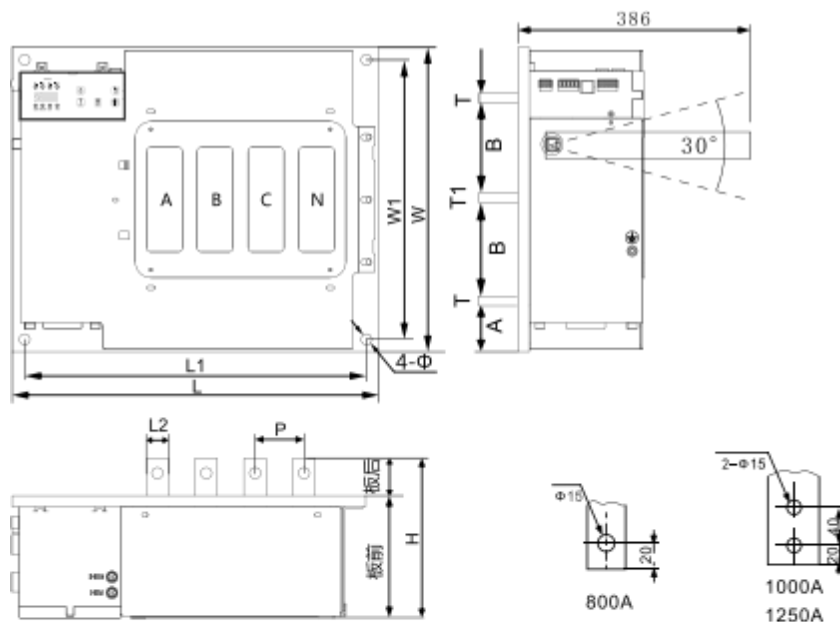
unit: mm

Specifica tion	size	W						L1			W1	W3	4-Φ	L2	T	P	Φ	
		L				W2	W4	H										
		2P	3P	4P					2P	3P	4P							
CDQ1F-63II C		256	280	304		168	170	112	242	266	290	152	152	7	12	2	24	6.5
		266	296	326		168	170	112	252	282	312	152	152	7	15	2.5	30	8.5
CDQ1F-125II C		278	314	350		168	170	112	264	300	336	152	152	7	20	4	36	8.5
CDQ1F-250II C		388	449	510		226	226	143	368	429	490	206	206	9	40	5	60	13

## Installation and dimensions

### II section shape and mounting size

CDQ1F-800~1250AF/A、B、C type switch appearance, installation size



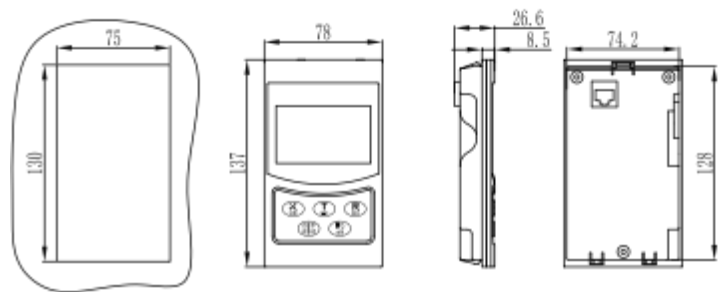
铜排连接开孔尺寸

Dimensions of copper bar connection holes

unit: mm

规格	size	外形尺寸				安装尺寸						铜排尺寸							
		L		W	H	L1		W1	4-Φ	板前	板后	A	B	L2	T	T1	P		
		3P	4P			3P	4P											A-B	粗 C-N
C	F 80	406	470	390	1	373	438	0	368	14	164	50	60	117	30	12	15	65	
C	F 12	450	530	390	5	418	498	0	358	14	164	90	58	117	50	12	15	80	

### CDQ1F-63~1250AF/C 型控制器外形、安装尺寸

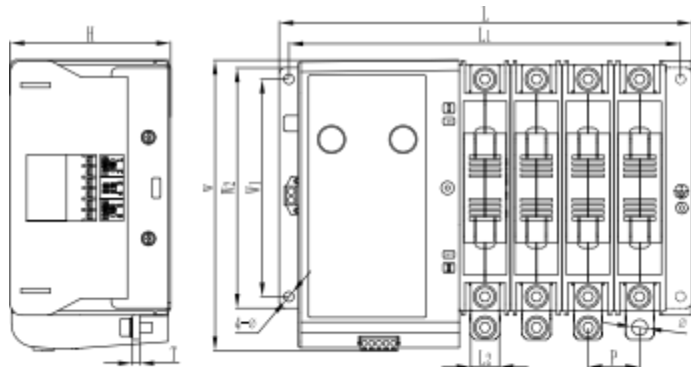


C Dimensions of the C-type split controller holes: 130\*75

## Installation and dimensions

### III section shape and mounting size

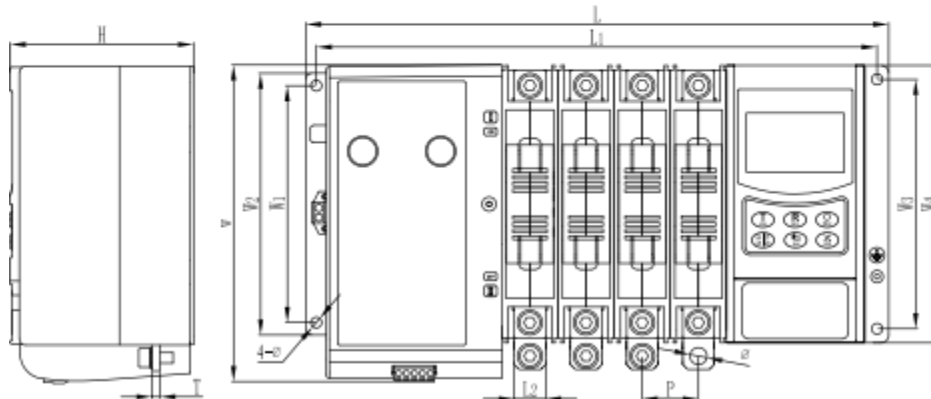
CDQ1F-63~630AF/A、B type switch appearance, installation size



单位: mm

规格	尺寸	外形尺寸				安装尺寸				铜排尺寸							
		2P	3P	4P	W	W2	H	2P	3P	4P	W1	4-Φ	L2	T	P	Φ	尺寸
CDQ1F-63III A/B型		196	220	244	2	03	168	112	182	206	230	152	7	12	2	24	6.5
CDQ1F-125 III A/B型		206	236	266	2	03	168	112	192	222	252	152	7	15	2.5	30	8.5
CDQ1F-250 III A/B型		218	254	290	2	03	168	112	204	240	276	152	7	20	4	36	8.5
CDQ1F-630 III A/B型		297	357	417	2	84	226	138	276	336	396	206	9	40	5	60	13

### CDQ1F-63~630AF/C 型开关外形、安装尺寸



单位: mm

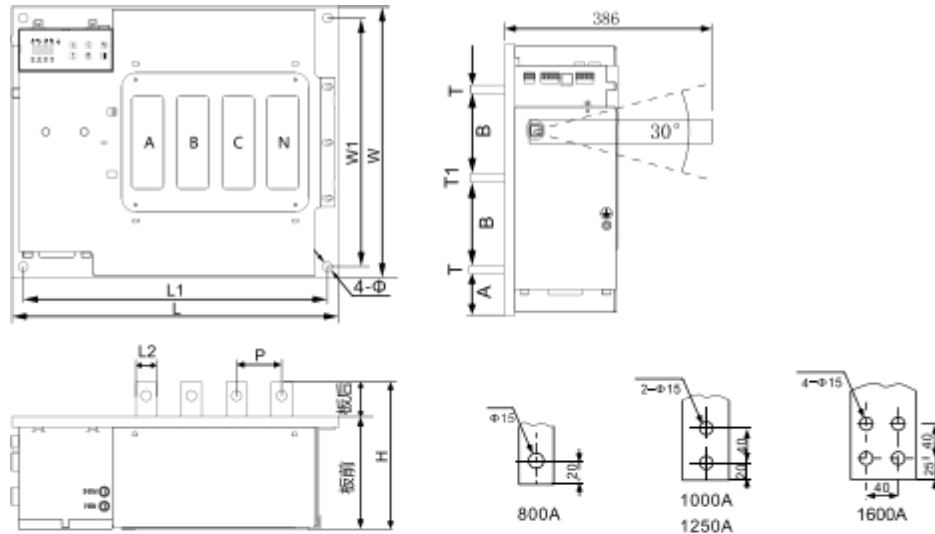
规格	尺寸	外形尺寸							安装尺寸						铜排尺寸			
		L			W	W2	W4	H	L1			W1	W3	4-Φ	L2	T	P	Φ
		2P	3P	4P					2P	3P	4P							
CDQ1F-63ⅢC 型		282	306	330	203	168	170	118	268	292	316	152	152	7	12	2	24	6.5
CDQ1F-125ⅢC 型		292	322	352	203	168	170	118	278	308	338	152	152	7	15	2.5	30	8.5
CDQ1F-250ⅢC 型		304	340	376	203	168	170	118	290	326	362	152	152	7	20	4	36	8.5
CDQ1F-630ⅢC 型		388	449	510	284	226	226	143	368	429	490	206	206	9	40	5	60	13

## Installation and dimensions

### III section shape and mounting size

#### CDQ1F-800~1600AF/A, B, C type switch appearance, installation size

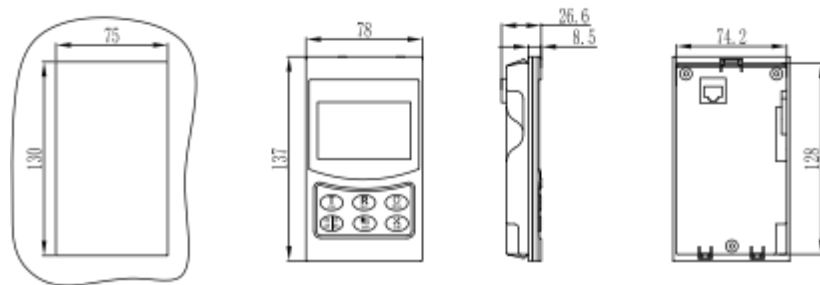
Right side of the product:



单位: mm

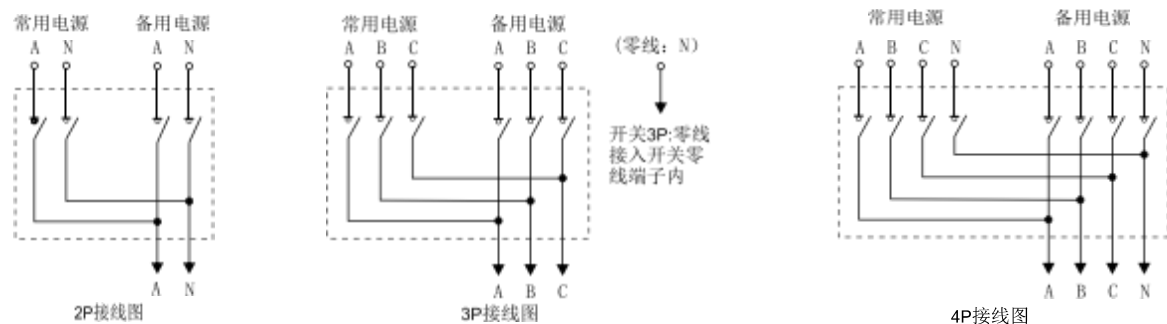
规格	尺寸	外形尺寸				安装尺寸						排列尺寸							
		L		W	H	L1		W1	4-Φ	板前	板后	A	B	L2	T	T1	P		
		3P	4P			3P	4P										A-B相 C-N相	B、C相	
CDQ1F-800AF		405	470	390	210	373	438	358	14	164	50	60	117	30	12	15	65	65	
CDQ1F-1250AF		450	530	390	250	418	498	358	14	164	90	58	117	50	12	15	80	80	
CDQ1F-1600AF		509	610	390	255	477	578	358	14	164	95	55	117	75	15	15	101	101	

#### CDQ1F-63~1600AF/ C-type controller outline and mounting dimensions



Dimensions of the C-type split controller holes: 130\*75

### Main loop connection



Note: When the switch is connected, do not misconnect the phase sequence. When the switch is 3P, the wiring terminal of the switch neutral line must be connected to the neutral line, otherwise the switch will not work.

## Method of application

### Secondary terminal -- II segment type

#### CDQ1F-63~630AF/Secondary terminal of type A and B controllers



II合闸指示 (无源)	消防 反馈	I合闸指示 (无源)
6 5	4 3	2 1

1, 2 wiring ports: commonly used (I) power supply closing indication, passive contact output

3, 4 connection port: empty (two-stage product without fire feedback function)

5, 6 wiring port: standby (II) power supply closing indication, passive contact output

Left side of the product:



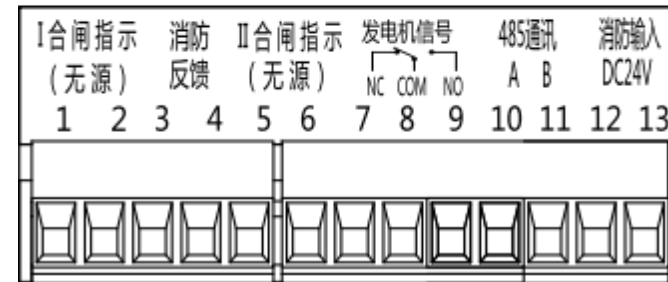
Terminals 7, 8, 9: Generator signal (passive)

NC is the normally closed cable port of the generator

COM is the common cable port of the generator

NO indicates the normally open cable port of the generator

#### CDQ1F-63~630AF/Type C controller secondary terminal



1, 2 wiring ports: common (I) Power closing indicator: passive contact output

3, 4 connection port: empty (Note: two-stage product without fire function)

5, 6 Wiring ports: standby (II) power supply closing indication, passive contact output

7, 8, 9 connection ports: Generator signal, NC is the normally closed wiring port of the generator

COM is the common cable port of the generator

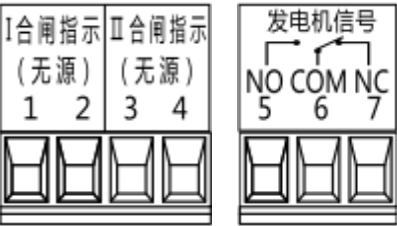
NO indicates the normally open cable port of the generator

10, 11 Connection port: 485 communication A, B

12, 13 connection port: empty (Note: two-stage product without fire function)

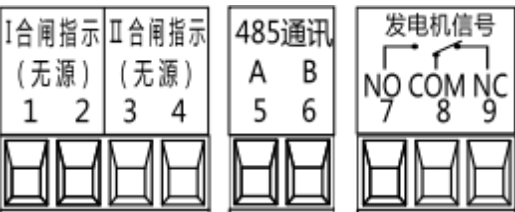
method of application

CDQ1F-800~1250AF/Secondary terminal of type A and B controllers



1, 2 wiring ports: commonly used (I) power supply closing indication, passive contact output  
3, 4 wiring ports: standby (II) power supply closing indication, passive contact output  
5, 6, and 7 Cable ports: Generator signal, NC is the normally closed wiring port of the generator  
COM is the common cable port of the generator  
NO indicates the normally open cable port of the generator

CDQ1F-800~1250AF/Type C controller secondary terminal

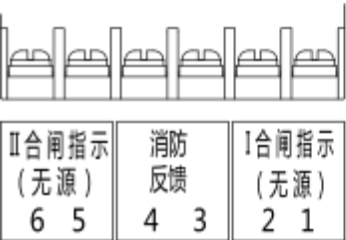


3, 4 wiring ports: standby (II) power supply closing indication, passive contact output  
1, 2 wiring ports: commonly used (I) power supply closing indication, passive contact output  
5, 6 Connection port: 485 communication A, B  
7, 8, and 9 Cable ports: Generator signal, NC is the normally closed wiring port of the generator  
COM is the common cable port of the generator  
NO indicates the normally open terminal of the generator

Method of application

Secondary terminal -- III section type  
CDQ1F-63~630AF/Secondary terminal of type A and B controllers

Product right:



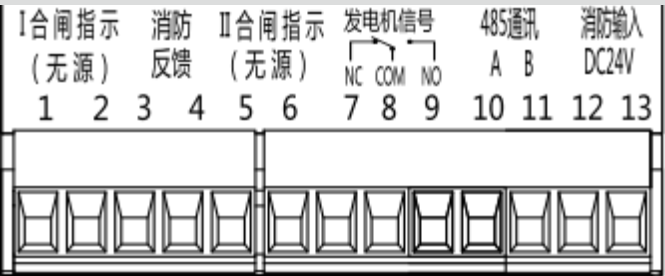
1, 2 wiring ports: commonly used (I) power supply closing indication, passive contact output  
3, 4 wiring port: fire feedback signal, passive contact output  
5, 6 Wiring ports: standby (II) power supply closing indication, passive contact output

Lower left side of product:



7, 8 wiring port fire input DC24V (regardless of positive and negative poles)  
Wiring port No. 9 is NC at the normally closed end of the generator  
Port 10 is the common COM of the generator  
Port 11 is the generator usually start NO

CDQ1F-63~630AF/Type C controller secondary terminal



1, 2 wiring ports: commonly used (I) power supply closing indication, passive contact output  
3, 4 wiring port: fire feedback signal, passive contact output  
5, 6 Wiring ports: standby (II) power supply closing indication, passive contact output  
7, 8, and 9 Cable ports: Generator signal, NC is the normally closed wiring port of the generator  
COM is the common cable port of the generator  
NO indicates the normally open cable port of the generator  
10, 11 Connection port: 485 communication A, B  
12, 13 Wiring port: fire input DC24V (regardless of positive and negative poles)



# Method of application

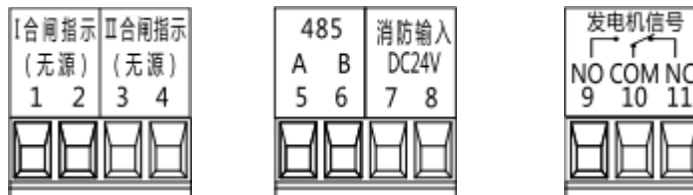
## CDQ1F-800~1600AF/Secondary terminal of type A and B controllers



- 1, 2 wiring ports: commonly used (I) power supply closing indication, passive contact output  
3, 4 wiring ports: standby (II) power supply closing indication, passive contact output  
5, 6 Wiring ports: fire input DC24V (regardless of positive and negative poles)  
7, 8, and 9 Cable ports: Generator signal, NO is the normally open wiring port of the generator

COM is the common cable port of the generator  
NC is the normally closed cable port of the generator

## CDQ1F-800~1600AF/Type C controller secondary terminal



- 1, 2 wiring ports: commonly used (I) power supply closing indication, passive contact output  
3, 4 wiring ports: standby (II) power supply closing indication, passive contact output  
5, 6 Connection port: 485 communication A, B  
7, 8 Wiring port: fire input DC24V (regardless of positive and negative)  
9, 10, and 11 connection ports: Generator signal, NO is the normally open wiring port of the generator

COM is the common cable port of the generator  
NC is the normally closed cable port of the generator