

Quick selection



Selection guide The technical specifications of this product are detailed on pages 678-687 of this sample.

Product name	Derived code	Frame current	Controller category	Controller rated current	Auxiliary contact category	Control voltage	Co-option function	Electric leakage Current value
CDK1	no	63	M	1	02	M	no	1
	no D D1 D2 J J2 Z	63:63A 125:125A	M:Digital tube	1:1A 3:3A 6:6A ... 125: 125A	02 06 0209 0609	M:220V Q:380V	No: basic F:fire fighting G: isolate L: electric leakage	1: 30mA 2: 50mA 3: 75mA 4: 100mA 5: 150mA 6: 200mA 7: 300mA 8: 500mA
	No :basic D:Low speed basic type + high speed fire type D1: both are basic models D2: all are fire fighting type J: Star Triangle depressor starter J2: High power star triangle decompression starter Z: starter Auto decompression starter				02: 2open+1close+1short circuit+1overload 06: 3open+3close+1short circuit+1overload 0209: 4open+2close+1short circuit+1overload 0609: 5open+4close+1short circuit+1overload			

Note: 1.The conventional default contact is 06
2.Fire type: overload alarm without tripping function.

CDK1 control and protection switch

- Power distribution and motor protection and control systems in metallurgy, coal mine, steel, petrochemical, port, ship, railway and other fields

CDK1 control and protection switch

Technical parameter



Parameters of the main circuit

The main circuit is mainly composed of the main body and the intelligent release device, which are the minimum configurations that constitute the CDK1 product that can be applied. The rated current of the main body I_n , the conventional heating current I_{th} , the rated insulation voltage U_i , the rated frequency, the rated operating voltage U_e , and the rated current I_e range or the control power range of the optional intelligent controller are shown in Table 2 and Table 3.

Table 2 Basic parameters of the main circuit

I_n m	Rated operating current of intelligent controller I_e (A)	I_{th} (A)	U_i (V)	rated frequency(Hz)	U_e (V)
63	1、3、6、10、16、32、45、63	63	690	50	380/690
125	45、63、100、125	125			

Table 3 Basic parameters of the main circuit

frame current I_n m	Rated operating current of the controller I_e	Long delay setting current I_r	short delay setting current I_s	380V control power kw	Main rated current I_n	Heating current I_{th}	Type of use
63	1	0.4~1	1.2~12	0.05~0.33	16	16	AC-44
	3	1.2~3	3.6~36	0.33~1.2	16	16	
	6	2.4~6	7.2~72	1~2.5	16	16	
	10	4~10	12~120	1.6~4	16	16	
	16	6.4~16	19.2~192	2.5~7.5	16	16	
	32	12.8~32	38.4~384	5.5~15	45	45	
125	45	18~45	54~540	7.5~22	45	45	AC-44
	63	25.2~63	75.6~756	11~30	63	63	
	45	18~45	54~540	7.5~22	100	100	
	63	25.2~63	75.6~756	11~30	100	100	
	100	40~100	120~1200	18.5~45	100	100	
	125	50~125	150~1500	22~55	125	125	

Note:

- ※ The short-circuit instantaneous protection parameter is $16I_n \pm 20\%$.
- ※ The short delay protection setting parameter of motor products is $8I_r \pm 10\%$.
- ※ The short-delay protection setting parameter of power distribution products is $3I_r \pm 10\%$.
- ※ The above power range refers to the technical parameters of Y series three-phase asynchronous motors.
- ※ If you have any special requirements, please contact the manufacturer.

Basic parameter

Coil control voltage	AC220V/AC380V
Coil insulation class	E grades
Rated impulse withstand voltage	U_{imp} 6KV
Rated operating breaking capacity	I_{cs} 15KA (Type 63) 、 25KA (Type125)
Arcing distance	no more than 50mm

Products are not available for IT systems

No.			remark
1	1.05	2h does not trip	cold
2	1.2		hot
3	1.5		cold
4	7.2		hot

type of use					remark
	A B	B	le<63A	le≥63A	
AC-40、AC-41	1.05	1.30	1	2	



▪ Overvoltage and undervoltage protection

Only the auxiliary power supply voltage is protected to ensure that the coil and the intelligent controller work properly ;

Overvoltage protection

time(s)	No.(F)	F 1	
1.0I _r		inaction	Tr – action time I _r – Rated working current I – running current t – 1.5I _r action time
1.5I _r action time t		48s	
≥1.1		$T=(I/1.5I_r)^2 \times t$	

CDK1 control and protection switch

■ Short circuit delay protection

When the working current reaches more than 8 times the rated current, the operation time is less than 0.2 seconds.

■ Leakage protection

Leakage protection value $I_{\Delta n}$ setting range: $I_{\Delta n}=30\text{mA}\sim 500\text{mA}+\text{OFF}$ (see table)

Leakage action current $I_n \pm 10\%$, leakage action time $T_n \leq 0.1\text{s}$

Set value serial number	L1	L2	L3	L4	L5	L6	L7	L8
leakage current value mA	30	50	75	100	150	200	300	500

The ability to turn on, carry and break short-circuit currents				
Ue (V)	Intelligent controller rating working current Ie(A)	Rated operating short-circuit breaking capacity Ics	The expected convention test current Icr(A)	Additional breaking capability Ic(A)
380	1, 3, 6, 10, 16, 32, 45, 63, 100, 125	15KA (type 63) 25KA (type 125)	20×100 (is 2000)	16×100×0.8 (is 1280)

The number of electrical life times of the main circuit and the conditions of making and breaking									
Ue (V)	Category of use	Electrical life			on-condition		breaking condition		
		New sample	Rated operation after short circuit test	After the expected conventional current test	I/Ie	U/Ue	Ic/Ie	Ur/Ue	cos φ
380	AC-43	100×10^4	1.5×10^4	3×10^3	6	1	1	0.17	0.35
	AC-44	2×10^4					6	1	

Mechanical life of the body and its modules	
Bracket grade code and module name	Mechanical life
main body	500×10^4
Auxiliary contact	
Signal alarm auxiliary contact	1×10^4
Operating mechanism	

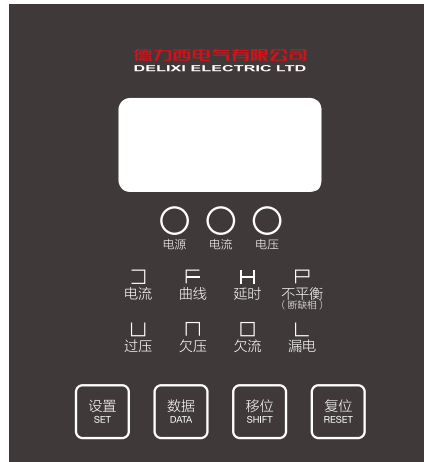
E7 Control and protection switch

CDK1 Control and protection switch

Protection function

1、Overload long delay protection				
Trip level (user set value)	F1		non-closing	Default Settings=1
Delay time(s)	$Tr(I=1.5I_r)$	48s		
2、Short circuit delay protection				
Trip current set value(A)	I_s	$I_s = (3\sim 12) \times I_r$	can be closed	Default Settings=8
Delay time(s)	t_s	$t_s = 0\sim 0.4S$		Default Settings=0.2s
3、Short circuit instantaneous protection				
Trip current set value(A)	I_i	$I_i = (8\sim 16) \times I_r$	can be closed	Default Settings=16
Delay time(s)	t_i	$t_i \leq 0.2s$		
4、Three-phase unbalance protection				
Set value	P	$P = 20\sim 80\%$	can be closed	Default Settings=30%
Delay time(s)	T	$T = 1\sim 64s$		Default Settings=10s
5.Undercurrent protection				
Set value(A)	I_{und}	$I_{und} = (0.15\sim 0.5)I_r$	can be closed	Default Settings=0.5I _r
Delay time(s)	T_{und}	$T_{und} = 1\sim 64s$		Default Settings=10s
6、Start delay protection				
Delay time(s)	T_{st}	$T_{st} = 1\sim 99s$	can be closed	Default Settings=5s
7、Over and under voltage protection				
Set value(V)	overvoltage V_{over}	$V_{over} = 240\sim 280V$	can be closed	Default Settings=264V
	undervoltage V_{und}	$V_{und} = 160\sim 200V$		Default Settings=187V
Delay time(s)	T_{over}	$T_{over} = 0\sim 99s$		Default Settings=10s
	T_{und}	$T_{und} = 0\sim 99s$		Default Settings=10s
8、Leakage protection				
Set value(A)	L	$L = (0.03\sim 0.5) A$	can be closed	Default Settings=0.1A
Delay time(s)	T	$T = 0.1s$		

CDK1 c



set key:

shift key:

data key:

reset key:

When the motor starts and runs, do not press the set key to avoid error or failure of the chip program;
No-load operation CDK1; Press "Set Key" to select the setting type, press "Shift key" successively, select data shift, and press "Data key" to modify the data

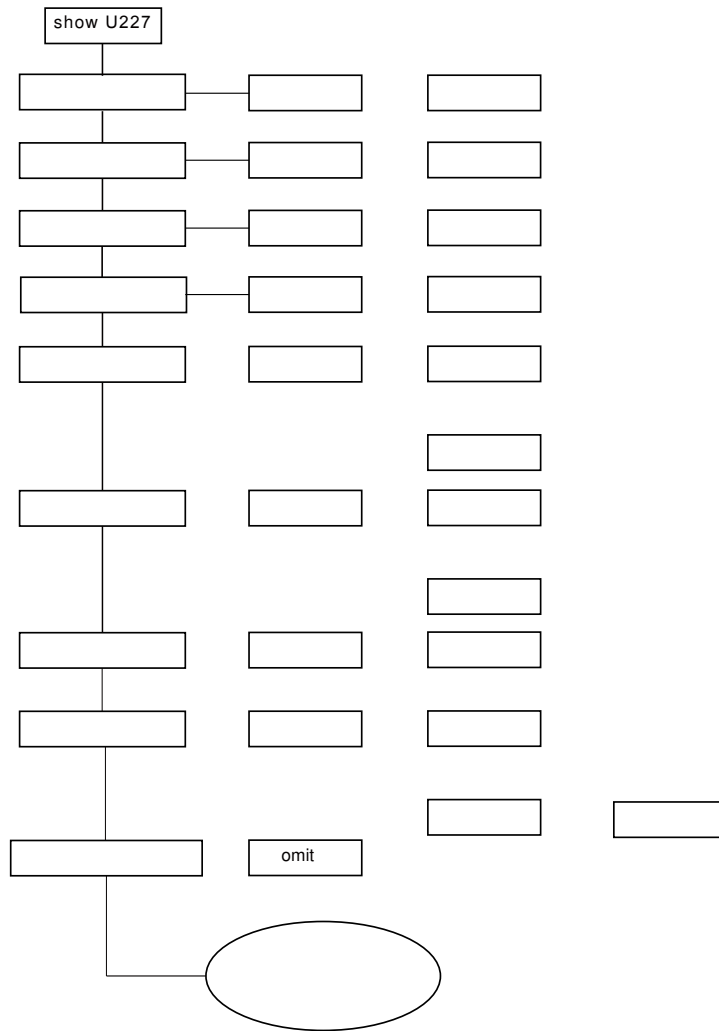
	J000	rated current	
	H05		
	F2		
	P30		
	u		0~999
	n		0~999
	L		
	o		0~999,

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For example

- CDK1-63/16A
 - Electric machine 5.5KW, I=12A (The current varies with the power factor of the motor)
 - require
- I_e=12A · Percentage value of three-phase current unbalance=30 · Undercurrent value=80%
· Leakage current value=300mA (Corresponding serial number 7) · Number of the overcurrent inverse time protection action=3 · Undervoltage value=198V · Overpressure value=253V · Start-up delay T=6s

First, switch on the power supply and run the CDK1 control protector unloaded.



run stop