



CJX2s(K)-06~95
AC Contactor

NAVIGATOR
Series

User Manual



Please carefully read this User Manual before installing and operating the product, and keep this manual properly for future reference

Safety Notice

Please carefully read this instruction before the installation, operation, run, maintenance, and inspection, and follow the contents of the instruction to properly install and operate this product.



Danger:

- Do not operate the contactor with your wet hands;
- Do not touch the energized parts during operation;
- Mark sure that the product is de-energized during the maintenance and service;

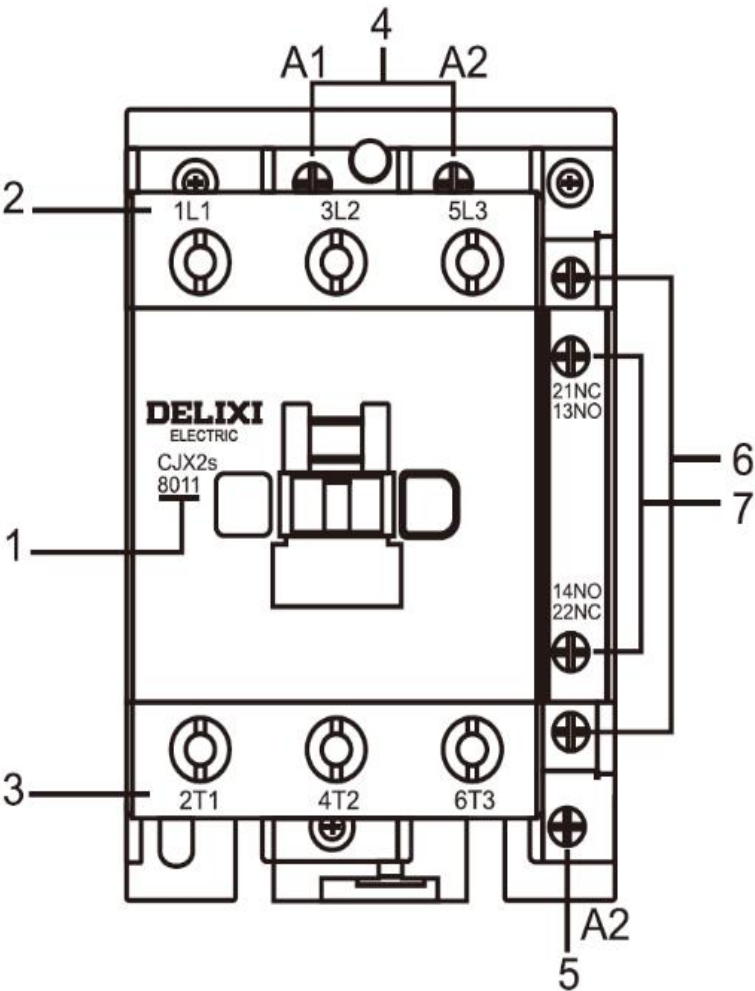


Caution:

- The installation, maintenance and service shall be performed by the qualified professional;
- Please confirm that the product voltage, current, frequency and utilization category of the product meet the operating requirements before use;
- Please connect the control circuit first, carry out the no-load operation test, and then connect the load if there is no abnormality;
- Please tighten the terminals regularly and remove the deposited dust;
- Do not let foreign objects fall into the product;
- If you need to purchase accessories, please choose the matching accessories provided by our company;
- If found damage or abnormal sound when unpacking, please stop the operation immediately and contact the supplier;
- When scrapping the product, please dispose the product waste properly. Thanks for your cooperation;
- The main contacts of the contactor are not recommended to be used when the AC load capacity is lower than 72VA or the DC load power is lower than 72W (such as direct control of PLC output, etc.). Head group, JZC4s contactor relay, CDZ9 small electromagnetic relay, etc. can achieve better results.

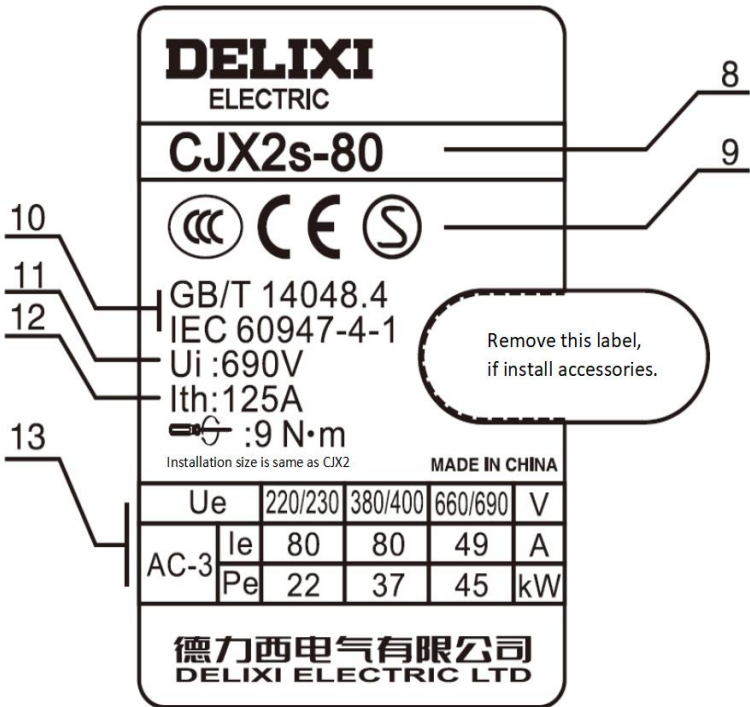
About CJX2s(K)-06-95 AC Contactor

● Panel Introduction



Legends:

- 1 Product model
- 2 Main circuit inlet 1/L1, 3/L2, 5/L3
- 3-Main circuit outlet 2/T1, 4/T2, 6/T3
- 4 Coil inlet terminal A1, Outlet terminal A2
- 5 Coil outlet terminal A2
- 6 NC auxiliary terminal
- 7 NO auxiliary terminal
- 8 Product model
- 9 Certification mark
- 10 Standard GB/T 14048.4, IEC 60947-4-1
- 11 Insulation voltage U_i : 690V
- 12 Agreed free air heating current
- 13 Rated operating current, voltage, power



See Table 1 for specific parameters

Table 1

Model	Ith A	AC-3 Utilization Category						AC-4Utilization Category			
		Ie A			Pe kW			Ie A		Pe kW	
		220/ 230V	380/ 400V	660/ 690V	220/ 230V	380/ 400V	660/ 690V	380/ 400V	660/ 690V	380/ 400V	660/ 690V
CJX2s(K)-06	16	6	6	3.8	1.5	2.2	3	2.6	1	1.1	0.75
CJX2s(K)-09	25	9	9	6.6	2.2	4	5.5	3.5	1.5	1.5	1.1
CJX2s(K)-12		12	12	8.9	3	5.5	7.5	5	2	2.2	1.5
CJX2s(K)-16		16	16	8.9	3	7.5	7.5	5	2	2.2	1.5
CJX2s(K)-18	32	18	18	12	4	7.5	10	7.7	3.8	3.3	3
CJX2s(K)-22		22	22	14	5.5	11	11	7.7	3.8	3.3	3
CJX2s(K)-25	40	25	25	18	5.5	11	15	8.5	4.4	4	3.7
CJX2s(K)-32	50	32	32	22	7.5	15	18.5	12	7.5	5.4	5.5
CJX2s(K)-38		38	38	22	9	18.5	18.5	14	8.9	5.5	6
CJX2s(K)-40	60	40	40	34	11	18.5	30	18.5	9	7.5	7.5
CJX2s(K)-50	80	50	50	39	15	22	33	24	12	11	10
CJX2s(K)-65	80	65	65	42	18.5	30	37	28	14	15	11
CJX2s(K)-80	125	80	80	49	22	37	45	37	17.3	18.5	15
CJX2s(K)-95		95	95	49	25	45	45	44	21.3	22	18.5
Intermittent cycle duty, load factor 40% of rated operating frequency											
CJX2s(K)- 06 ~ 25	AC -3	220/380V: 1200次/h 660V: 300次/h					AC -4	380V: 300次/h 660V: 120次/h			
CJX2s(K)- 32 ~ 95		220/380V: 600次/h 660V: 300次/h									

See Table 2 for the allowed use categories and codes of the main circuit and auxiliary circuit of the contactor

Table 2 Use categories and codes of contactor main circuit and auxiliary circuit

Model	Utilization Category	Typical Use Example
Main circuit	AC-1	Non-inductive or micro-inductive load, resistance furnace
	AC-2	Starting and breaking of wound induction motor
	AC-3	Starting and running breaking of cage induction motor
	AC-4	Starting, reverse braking or reverse running, inching of cage induction motor
Auxiliary circuit	AC-15	Controlling AC Solenoid Loads
	DC-13	Controlling DC Solenoid Loads

Normal Operation, Installation and Transport Conditions

●Normal Operation and Installation Conditions

- (1) The ambient air temperature is not higher than +40°C, and is not below -5°C, and the average value within 24 hours does not exceed +35°C;
- (2) The altitude of the installation site does not exceed 2000m;
- (3) Atmospheric conditions
The relative humidity of the atmosphere does not exceed 50% when the highest ambient temperature is +40°C, and a higher relative humidity is allowed at lower temperatures, such as 90% at 20°C. Protective measures shall be taken for condensation occasionally occurred due to temperature changes.
- (4) The installation position shall be vertical, and the inclination angle at each direction shall not exceed 22.5°;
- (5) Installed at a place where there is no impact, vibration, and rain or snow erosion;
- (6) Pollution level: Level 3;
- (7) Installation category: Class III;
- (8) Rated impact withstand voltage U_{imp} :6000V;
- (9) Rated frequency :50Hz;
- (10) Protection grade: IP20(except wiring terminals);
- (11) Suitable for 8h working system, intermittent cycle working system, uninterrupted working system and short-time working system.

● Normal Storage and Transport Conditions

- (1) Temperature: -25°C~+55°C, +70°C in a short time (24h);
- (2) Relative humidity : $\leq 95\%$;
- (3) During the transport, please handle the product gently, and do not upside it down, and prevent the product from harsh collision;
- (4) The product shall not be attacked by rain or snow during transportation and storage.

Installation products

- The contactor has two installation methods: screw installation and rail installation. CJX2s(K)-06~38 can be installed with 35mm standard rail, and CJX2s(K)-40~95 can be installed with 35mm or 75mm standard rail. Before installation, check that the rated voltage and frequency of the coil are consistent with the control power supply, and the contactor is damaged. Or it is forbidden to use when the assembly is not firm. See Figure 2 and Figure 3 for installation and disassembly methods.

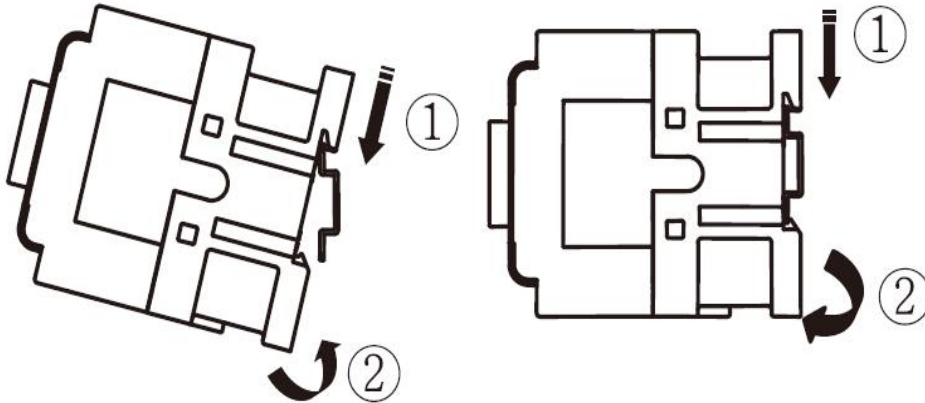


Fig. 2 CJX2s(K)-06~38
Installation and
disassembly methods

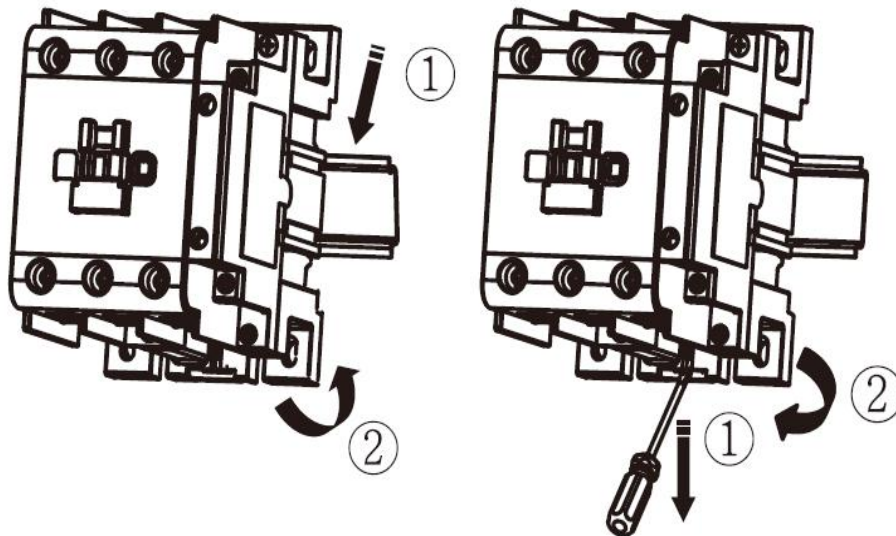


Fig. 3 CJX2s(K)-40~95
Installation and
disassembly methods

- Product installation requirements are shown in Figure 4.

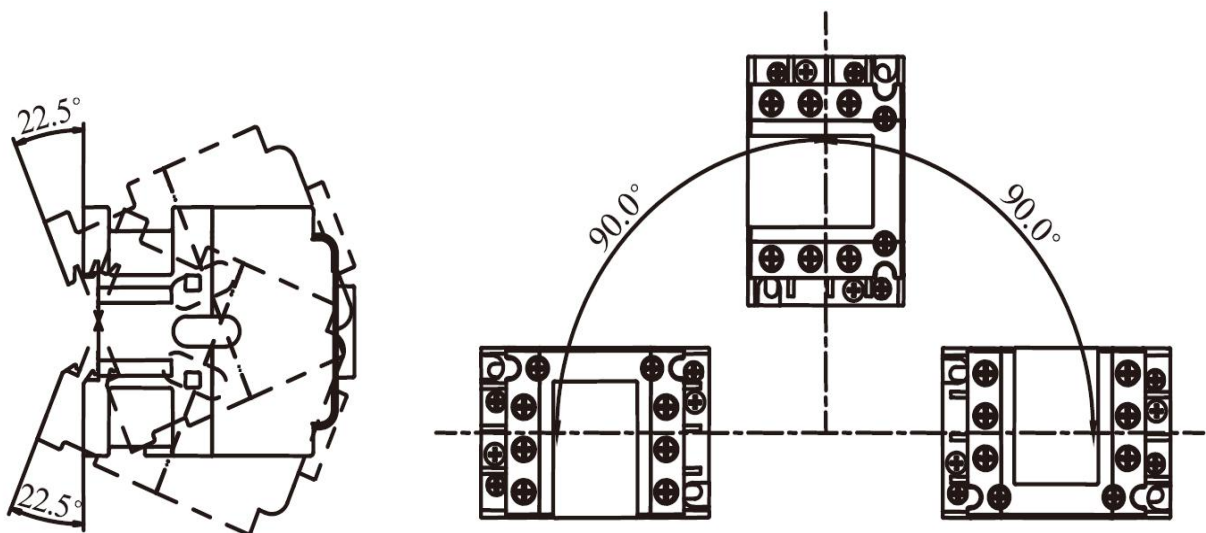


Figure 4. Installation requirements

- Contactor outline and installation size in Figure 5, Figure 6 and Table 3

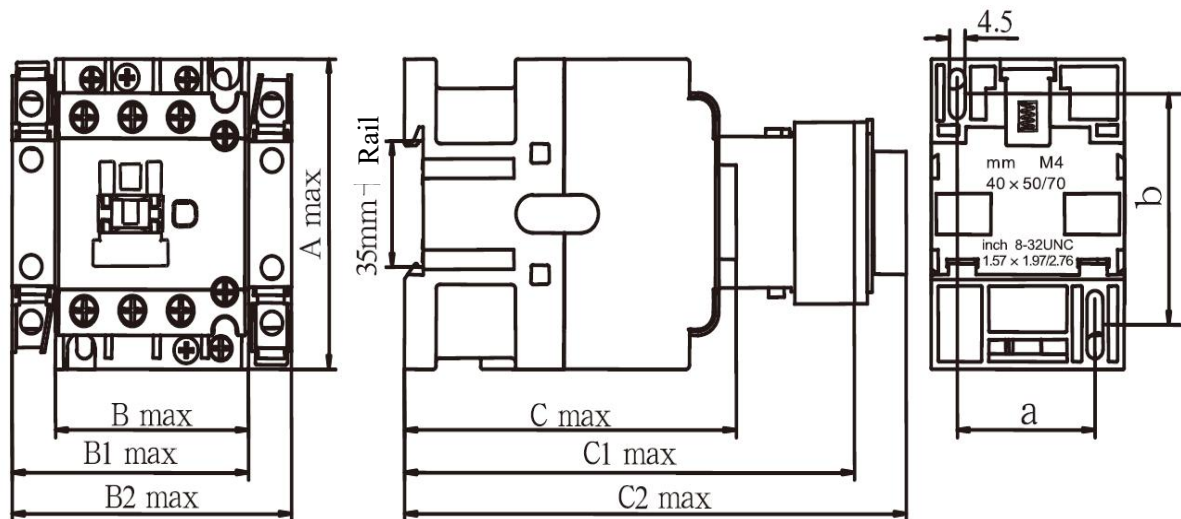


Figure 5 CJX2s(K)-06~38

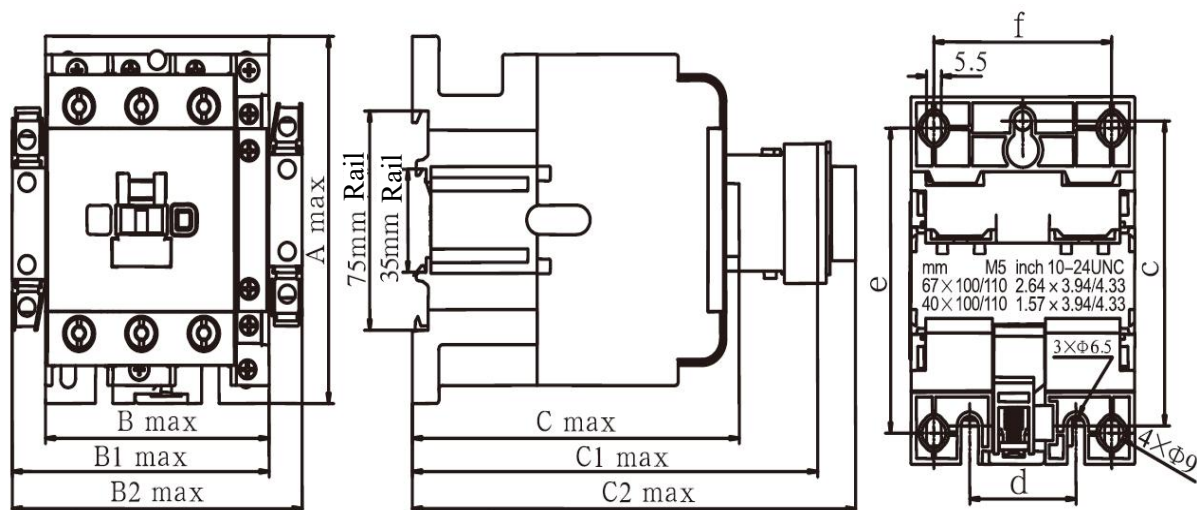


Figure 6 CJX2s(K)-40~95

Table 3 CJX2s(K)-06~95 Contactor outline and installation size

Unit: mm

Model	Auxiliary contact	Amax	Bmax	B1max	B2max	Cmax	C1max	C2max
CJX2s(K) - 06	01、10	74.5	45.5	—	—	75	107	132
CJX2s(K) - 09,12,16,18,22	01、10	74.5	45.5	58	71	82.5	114.5	139.5
	11	74.5	45.5	58	71	85.5	117.5	142.5
CJX2s(K) - 25,32,38	01、10、11	83	56.5	69	82	97	129	154
CJX2s(K) - 40,50,65	11	127.5	74.5	88	101	117	148.5	173.5
CJX2s(K) - 80,95	11	127.5	85.5	99	112	125.5	157	182
注: B1max—Contactor+FC6 B2max—Contactor+2个FC6 C1max—Contactor+FD6 C2max—Contactor+2个FT6 CJX2s(K)-0911, 1211, 1611, 1811 and 2211 are 3mm higher than CJX2s(K)-09, 12, 16, 18 and 22.								
Model	Auxiliary contact	a	b	c	d	e	f	
CJX2s(K) - 06	01、10	35	50 / 60	—	—	—	—	
CJX2s(K) - 09,12,16,18,22	01、10、11	35	50 / 60	—	—	—	—	
CJX2s(K) - 25,32,38	01、10、11	40	50 / 70	—	—	—	—	
CJX2s(K) - 40,50,65	11	—	—	105	40	100 / 110	59	
CJX2s(K) - 80,95	11	—	—	105	40	100 / 110	67	

- Outline and installation size of the reversible AC contactor are shown in Figure 7, Figure 8 and Table 4

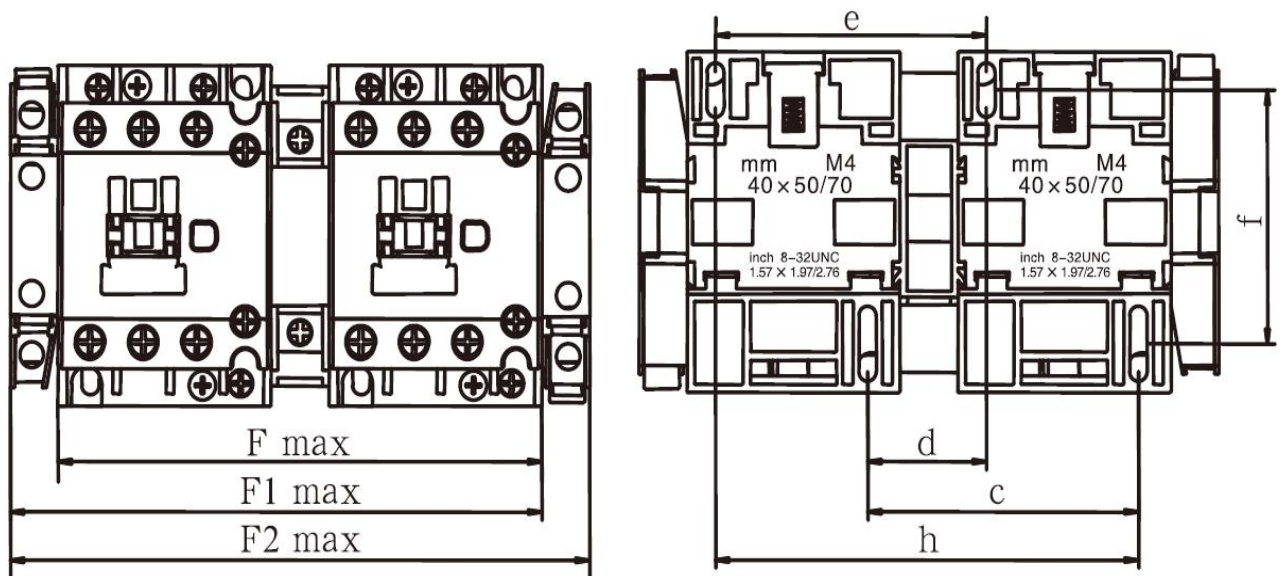


Figure 7 CjX2s(K)-09N~38N

Table 4 CjX2s(K)-09N~38N reversible AC Contactor outline and installation size

Unit: mm

Model	Fmax	F1max	F2max	c	d	e	f	h
CjX2s(K) - 09N, 12N, 16N, 18N, 22N	107	120	131	60	25	60	50 / 60	95
CjX2s(K) - 25N, 32N, 38N	129	142	153	71	31.5	71	50 / 60	111.5
CjX2s(K) - 40N, 50N, 65N	163	180	193	—	50	90	100 / 110	130
CjX2s(K) - 80N, 95N	186	202	215	—	60	100	100 / 110	140

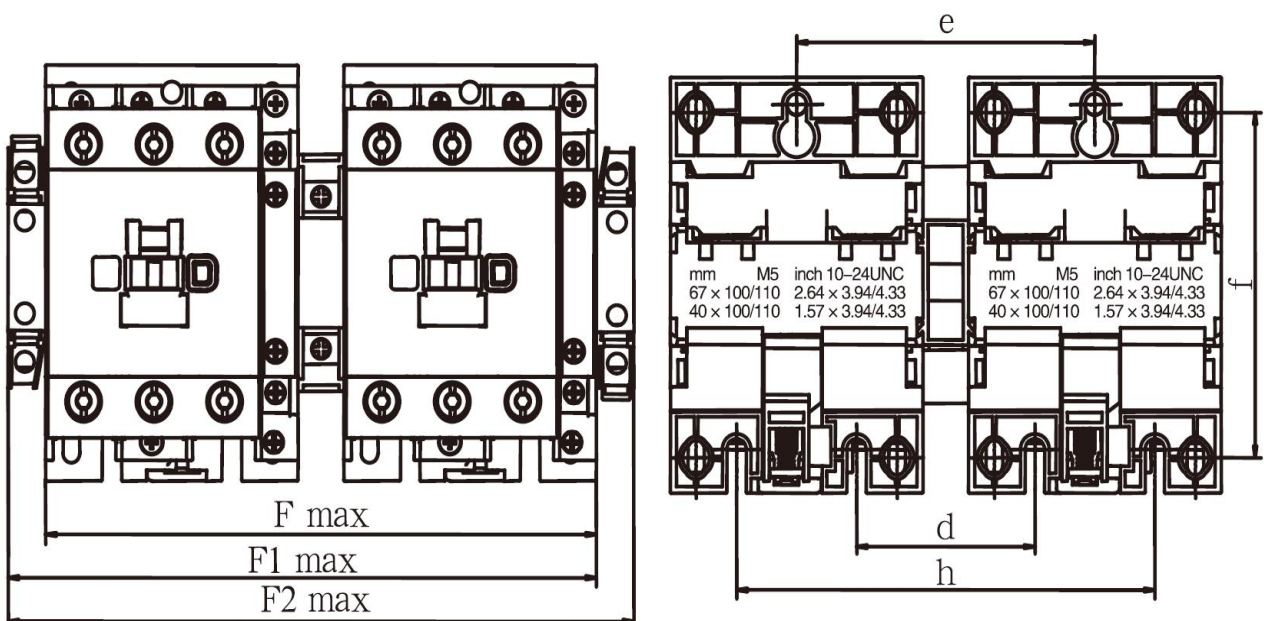


Figure 8 CjX2s(K)-40N~95N

● Accessories installation

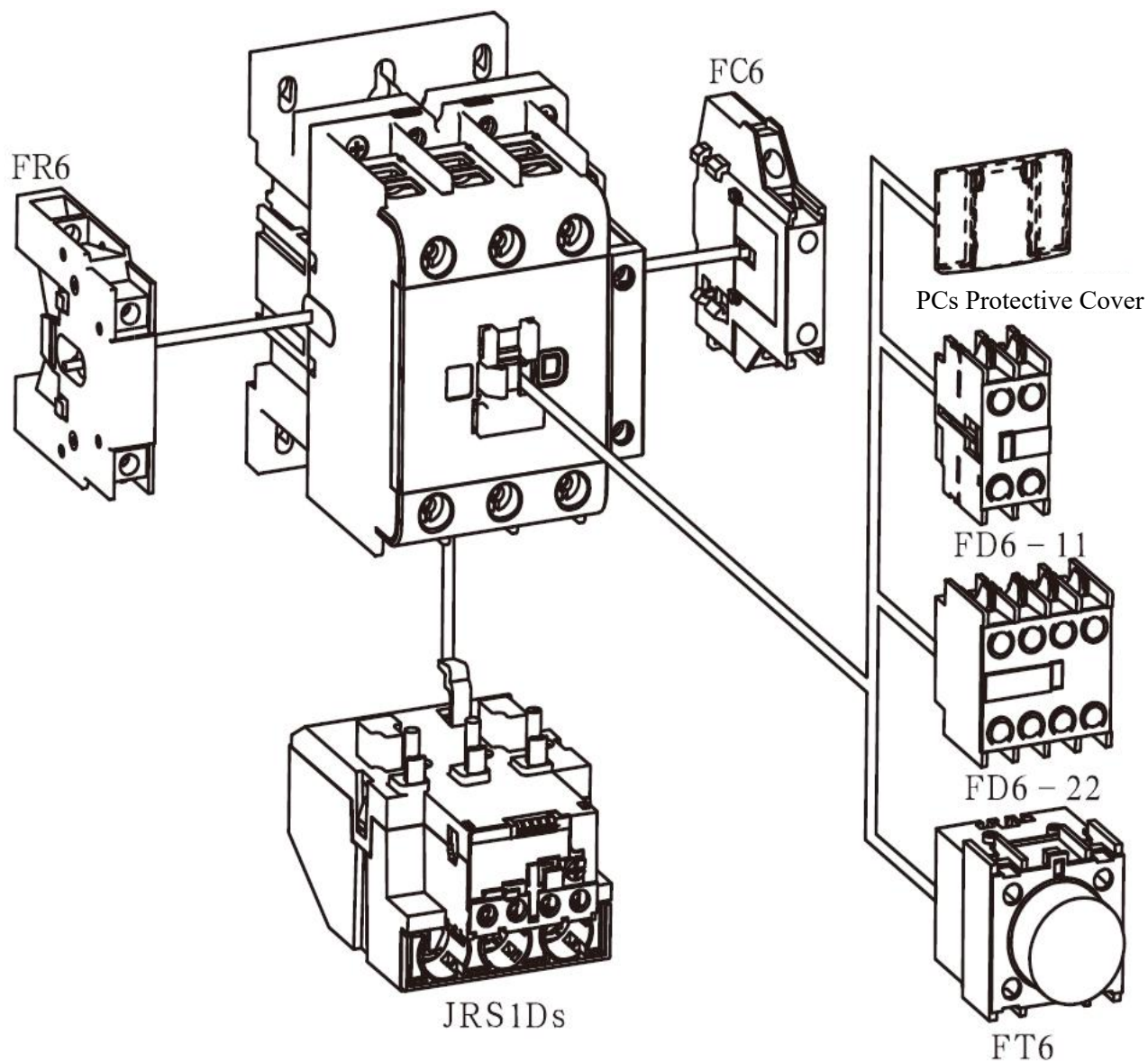


Figure 9 Accessories installation

(1) Auxiliary contact

The CJX2s(K)-06 contactor body has a pair of normally open or normally closed auxiliary contact groups, and the CJX2s(K)-09~38 contactor body has a pair of normally open or normally closed auxiliary contact groups or A pair of normally open and a pair of normally closed auxiliary contact groups, CJX2s(K)-40~95 contactor body has a pair of normally open and a pair of normally closed auxiliary contact groups, its main parameters are shown in Table 5;

Table 5 Main parameters of auxiliary contact

Utilization category	Rated insulation voltage U_i	Conventional free air heating current I_{th}	Control capacity		Rated operating current I_e	
			Make	Break	220V	380V
AC-15	690V	10A	3600VA	360VA	1.6A	0.95A
DC-13			33W		0.15A	-

The contactor can be equipped with an independent auxiliary contact module. Its model specification and combination of NO and NC are shown in Table 6. The installation method of FD6 is the same as that of the air delay head. The installation and removal methods of FC6 are shown in Figure 10 and Figure 11.

Table 6 Auxiliary contact combination

Model	FD6-20	FD6-11	FD6-02	FD6-40	FD6-31	FD6-22	FD6-13	FD6-04
NO	2	1	0	4	3	2	1	0
NC	0	1	2	0	1	2	3	4

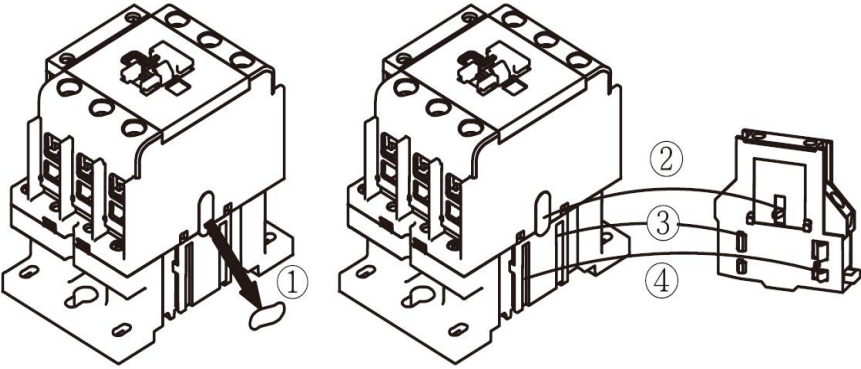


Figure 10 FC6 Installation methods

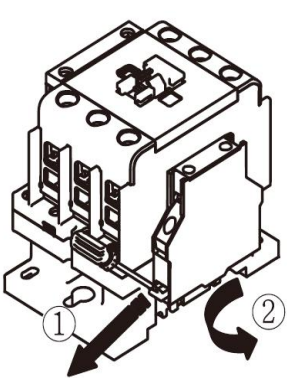


Figure 11 FC6 Disassembly methods

(2) Air delay head (Pneumatic timer)

The contactor can be combined with SK4 (or FT6) air delay head to form a delay contactor. The delay range is shown in Table 7.

Table 7 Air delay head

Model	Time Range	Contact	Delay type
SK4-20(FT6-20)	0.1~3s	1NO + 1NC	Power-on delay
SK4-22(FT6-22)	0.1~30s		
SK4-24(FT6-24)	10~180s		
SK4-30(FT6-30)	0.1~3s		Power-off delay
SK4-32(FT6-32)	0.1~30s		
SK4-34(FT6-34)	10~180s		
Note: The air delay head is adjusted to the minimum value when delivery.			

The installation and removal of the air delay head is shown in Figure 12 and Figure 13,

When installing: ① Align the chute with the contactor slide rail,

②Push down until the buckle locks automatically;

When disassembling: ① Lift the buckle upwards, ② Push it up along the chute to remove it

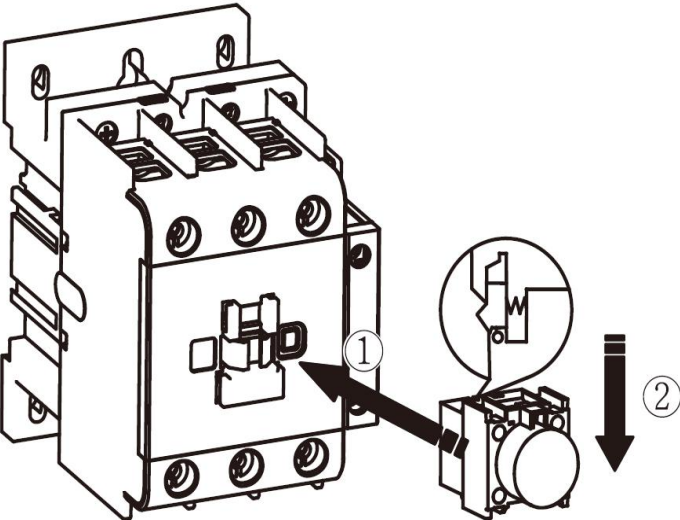


Figure 12 Installation methods

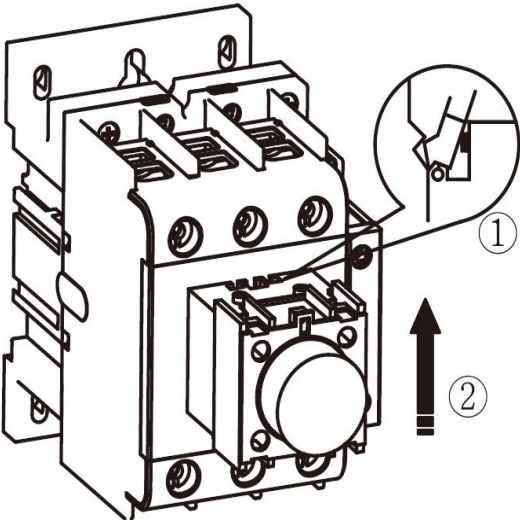


Figure 13 Disassembly methods

(3) The installation method of FR6 mechanical interlocking is shown in Figure 14, where CJX2s(K)-09~38A only needs to complete steps ① to ④, and CJX2s(K)-40~95A also needs to install a fixed connection plate:

- ① Tear off the dust-proof sticker
- ② Install FR6
- ③ Install another contactor as shown in the picture
- ④ Install the fixed module as shown in the picture
- ⑤ Fix the two contactors with fastening screws, nuts and connecting plates as shown in the picture

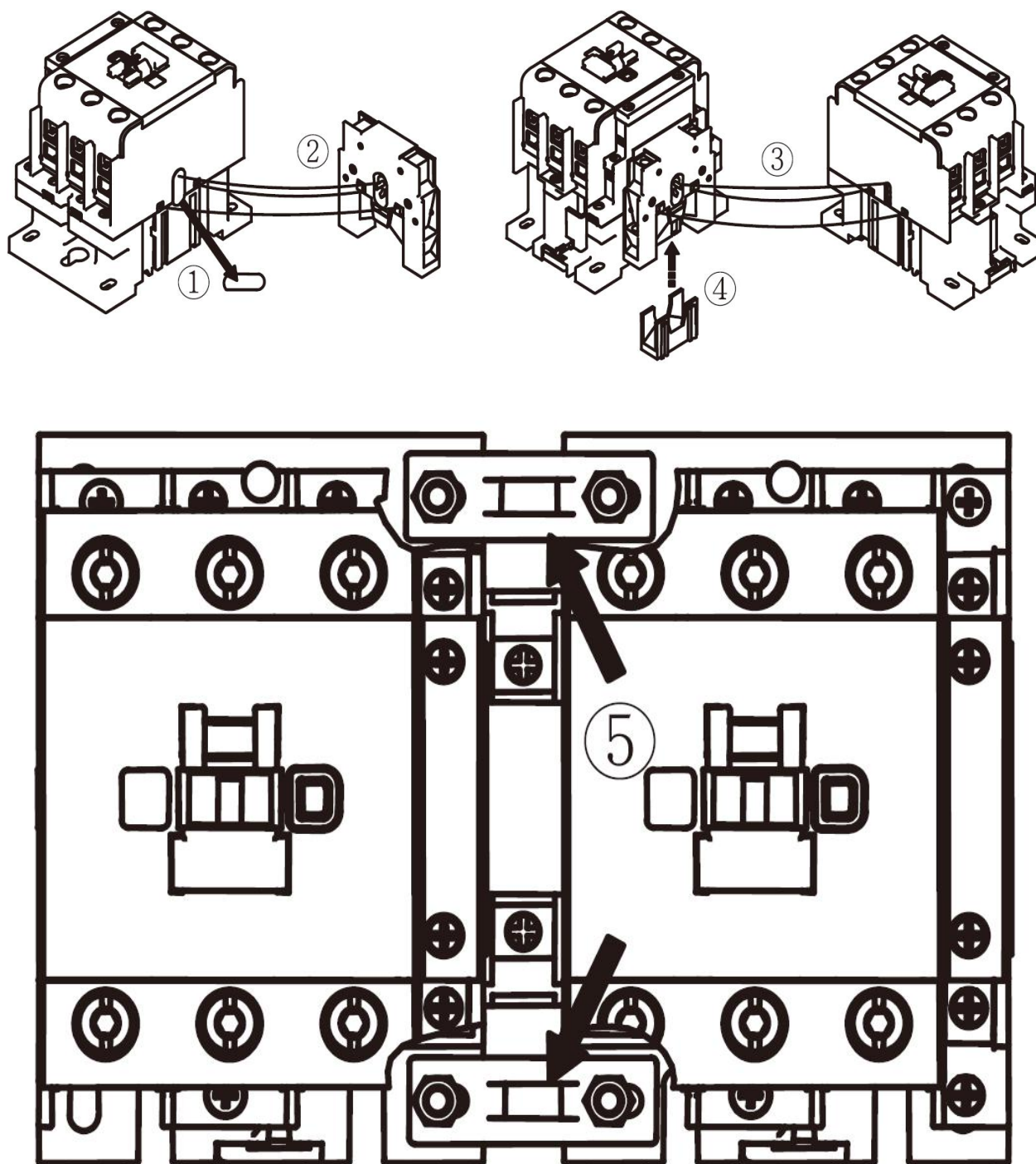


Figure 14 The installation method of FR6 mechanical interlocking

(4) Electromagnetic starter

The contactor can be installed and combined with JRSIDs series thermal overload relay to form an electromagnetic starter.

Debugging, operation

- Check whether the technical parameters of the product meet the requirements for use;
- Connect the control circuit first, conduct a no-load operation test, and then connect the load if there is no abnormality;
- Do not let foreign objects fall into the product;
- It is recommended to select SCPD according to type 1 coordinated protection, rated limited short-circuit current I_q : 20KA (corresponding to test voltage 400V), and its fuse type is shown in Table 8.

Table 8 Matching fuse model

Model	CJX2s(K)-06	CJX2s(K)-09	CJX2s(K)-12	CJX2s(K)-16	CJX2s(K)-18	CJX2s(K)-22	CJX2s(K)-25
Main circuit	RT16-00 16A	RT16-00 20A	RT16-00 20A	RT16-00 20A	RT16-00 32A	RT16-00 32A	RT16-00 40A
Model	CJX2s(K)-32	CJX2s(K)-38	CJX2s(K)-40	CJX2s(K)-50	CJX2s(K)-65	CJX2s(K)-80	CJX2s(K)-95
Main circuit	RT16-00 50A	RT16-00 63A	RT16-00 63A	RT16-00 80A	RT16-00 80A	RT16-00 100A	RT16-00 125A
Auxiliary circuit	RT16-00 10A						

Current			06/09/12/16/18/22	25/32/38	40/50/65	80/95
Main circuit wiring						
Flexible wire without terminals	1 pce wire	mm^2	1...4	1.5...10	4...25	6...50
	2 pcs wire	mm^2	1...4	1.5...6	4...16	6...25
Flexible wire with terminals	1 pce wire	mm^2	1...4	1...6	4...25	6...50
	2 pcs wire	mm^2	1...2.5	1...4	4...10	6...16
Hard wire without terminals	1 pce wire	mm^2	1...4	1.5...6	4...25	6...50
	2 pcs wire	mm^2	1...4	1.5...6	4...10	6...25
Tightening torque		$\text{N}\cdot\text{m}$	1.2	1.8	5	9
Control and auxiliary circuit wiring						
Flexible wire without terminals	1 pce wire	mm^2	1...4			
	2 pcs wire	mm^2				
Flexible wire with terminals	1 pce wire	mm^2	1...2.5			
	2 pcs wire	mm^2				
Hard wire without terminals	1 pce wire	mm^2	1...4			
	2 pcs wire	mm^2				
Tightening torque		$\text{N}\cdot\text{m}$	1.2			

● Maintenance

The contactor should be tightened regularly, remove the deposited dust and other operations, otherwise there will be a risk of fire and short circuit;

The small metal particles splashed around the contacts of the contactor or on the arc cover should be removed, and the contact surface should be stopped when the surface of the contact is burned to expose the base material.

Fault Analysis and Treatment

See Table 10 for common fault analysis and handling.

Table 10 Analysis and treatment of common faults

Fault	Cause Analysis	Treatment measures
The iron core cannot be closed or the suction force is insufficient (that is, the contact has been closed but the iron core has not been fully attracted)	1. The power supply voltage is too low or fluctuates too much; 2. The power supply capacity of the operating circuit is insufficient or disconnection, wiring errors and poor contact of the control contacts; 3. The technical parameters of the coil do not match the conditions of use; 4. The product itself is damaged (Such as coil disconnection or burnout, mechanical movable parts stuck, etc.)	1. Increase the power supply voltage; 2. Increase the power supply capacity, replace the circuit, and repair the control contacts; 3. Replace the contactor; 4. Eliminate stuck faults and repair damaged parts.
no release or slow release	1. The contact is welded; 2. The movable part of the machine is stuck; 3. There is oil or dust on the pole surface of the iron core.	1. Eliminate welding faults, repair or replace the contactor; 2. Eliminate stuck faults; 3. Clean the pole surface of the iron core.
Coil overheating or burning out	1. The power supply voltage is too high or too low; 2. The technical parameters of the coil (such as rated voltage, frequency, energization duration and applicable working system, etc.) do not match the actual use; 3. The moving part is stuck; 4. The pole surface of the iron core is uneven or dust sticking.	1. Adjust the power supply voltage; 2. Replace the contactor; 3. Eliminate mechanical jamming; 4. Clear the pole surface.
Electromagnet (AC) is noisy	1. The power supply voltage is too low; 2. The magnetic system is skewed or mechanically stuck, so that the iron core cannot be sucked flat; 3. The pole surface of the iron core is rusted or foreign matter invades the pole surface of the iron core; 4. The short-circuit ring is broken or the pole of the iron core is broken. The surface is excessively worn and uneven	1. Increase the voltage of the operating circuit; 2. Adjust the magnetic system or eliminate mechanical jamming; 3. Clean the pole surface; 4. Replace the contactor.
Contact welding	1. The operating frequency is too high or the product is overloaded; 2. The load side is short-circuited;	1. Replace the appropriate contactor; 2. Eliminate the short circuit fault.

Company Commitment

Under the condition that users follow the use and storage conditions and the product are well sealed, within 24 months from the production date, our company will provide repair and replacement service free of charge for any damage or abnormal operation due to poor manufacture quality. A paid repair will be provided if the warranty period expires. For any damage due to one of the following situations, a paid repair will be given even if within the warranty period:

- (1) Improper operation, maintenance, or storage;
- (2) Modified and improper repair without permission;
- (3) Damage due to falling off or found during installation after purchase;
- (4) Force majeure such as earthquakes, fires, lightning strikes, abnormal voltages, and secondary disasters; If you have any question, please contact the dealer or our company's customer service department.

DELIXI
ELECTRIC
德力西电气

Certificate

DELIXI ELECTRIC LTD

Name: AC Contactor

Model: CJX2s(K)-06~95

This product passes the inspection and is allowed to be shipped.

Standard: GB/T 14048.4

Inspector: Check 06

Production date: See label on inner box

www.cn-delixi.com

The first edition of this manual was issued on Feb., 2023.