YCC6 series

AC CONTACTOR

OPERATION INSTRUCTION

Standard: IEC 60947-4-1

CNC Deliver Power For Better Life

⚠ Before installing and using this product, please read this instruction carefully and pay more attention to safety.

YCC6-09~95 AC Contactor
Instructions

Safety Notification

Please read this instructions carefully before installing,operating,running,main taining,testing. And installing and using the YCC6 AC Contactor according to the contents of this instruction.

⚠ Risks:

- Do not operate the contactor with wet hands.
- Do not touch the conductive parts during using.
- Maintenance must shut off power.

⚠ Attention:

- Installation and maintenance shall be operated by the person with expert certificate.
- Please confirm the voltage, current, frequency and utilization category of the product can meet the requirements.
- Please turn on the control circuit first, do no-load operation test, and then turn on the load without abnormal.
- Regularly tighten terminals, remove deposited dust.
- Do not let foreign matter fall into the product.
- If you need accessories, please select the accessories provided by our company.
- If the product is broken or has an abnormal noise when unpacking, should not use the item and contact the supplier.
- When products are scrapped. Please do in right way of waste disposal. Thanks for your cooperation.

Main technical parameters

Table 1

Model	Ith(A)	AC-3 utilization category						AC-4 utilization 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
YCC6-09	20	9	9	6.6	2.2	4	5.5	3.5	1.5	1.5	1.1
YCC6-12	20	12	12	8.9	3	5.5	7.5	5	2	2.2	1.5
YCC6-18	32	18	18	12	4	7.5	10	7.7	3.8	3.3	3
YCC6-25	40	25	25	18	5.5	11	15	8.5	4.4	4	3.7
YCC6-32	50	32	32	22	7.5	15	18.5	12	7.5	5.4	5.5
YCC6-38	50	38	38	22	9	18.5	18.5	14	8.9	5.5	6
YCC6-40	50	40	40	34	11	18.5	30	18.5	9	7.5	7.5

Model	Ith(A)	AC-3 utilization category						AC-4 utilization 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
YCC6-50	60	50	50	39	15	22	33	24	12	11	10
YCC6-65	80	65	65	42	18.5	30	37	28	14	15	11
YCC6-80	125	80	80	49	22	37	45	37	17.3	18.5	15
YCC6-95	125	95	95	49	25	45	45	44	21.3	22	18.5

ON-OFF cycle work, load factor is to 40% of rated operation frequency				
YCC6-09~25	AC-3	220/380V: 1200times/h 660V: 300times/h	AC-4	380V: 300times/h 660V: 120times/h
YCC6-32~95		220/380V: 600times/h 660V: 300times/h		

Type designation

YC C 6 - 09 / 1 1 220V

- Coil voltage
- Normally closed auxiliary
- Normally open auxiliary
- Rated current of the main contact
- Design number
- AC contactor
- Company

Conditions of normal use, installation and transport

- Normal use and installation conditions

(1) Ambient air temperature shall not be higher than 40℃, not lower than -5℃,the average value is less then +35℃ within 24h;
(2) The altitude of installation place is no more than 2000m;
temperature 40 ℃;
(3) The relative humidity of the atmosphere is less than 50% when the highest ambient
(4) The installation position should be vertical. The inclination in all directions shall not exceed ±22.5º;
(5) Installed in areas free from shock, vibration and rain;
(6) Pollution grade: 3;
(7) Installation category: III;
(8) Rated impulse withstand voltage Uimp: 6000V;
(9) Protection class: IP20.

• Normal storage and transport conditions

(1) Temperature: -25℃~+55℃, can be up to 70℃ for short time(24h);

(2) Relative temperature: ≤95%;

(3) Products should be handled with care and without inversion in transportation to avoid strong collision;

(4) Products should not be encroached by rain and snow when carrying and storage.

Install Product

• Contactor has two mounting methods: Screw mounting and rail mounting:

YCC6-09~38 must be installed with 35mm standard rail clamp;

YCC6-40~95 can be installed with 35mm or 75mm standard rail clamp;

Before mounting, please check rated voltage of coils, frequency should be same with control power. Do not use contactor when it is damaged or not fixed.

Installation and disassemble method, see Fig. 1 and Fig.2

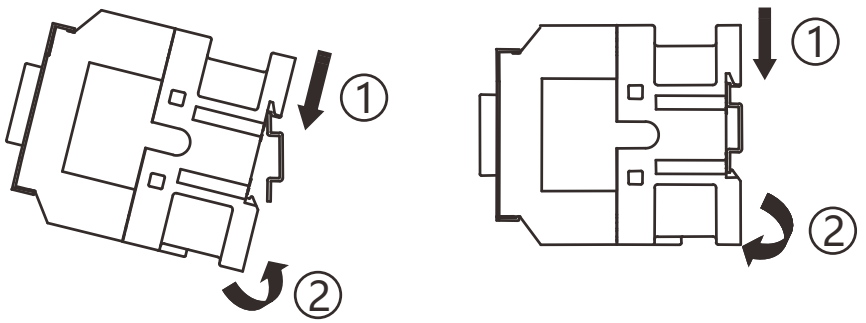


Fig.1 Installation and disassemble method of YCC6-09~38

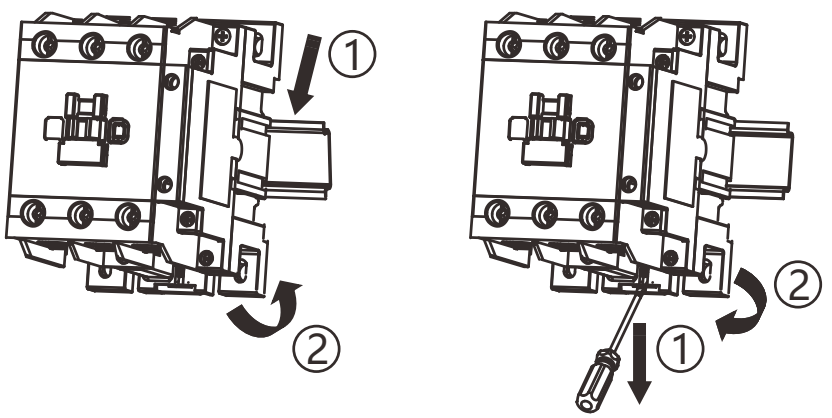


Fig.2 Installation and disassemble method of YCC6-40~95

● Product installation requirements, see Fig. 3

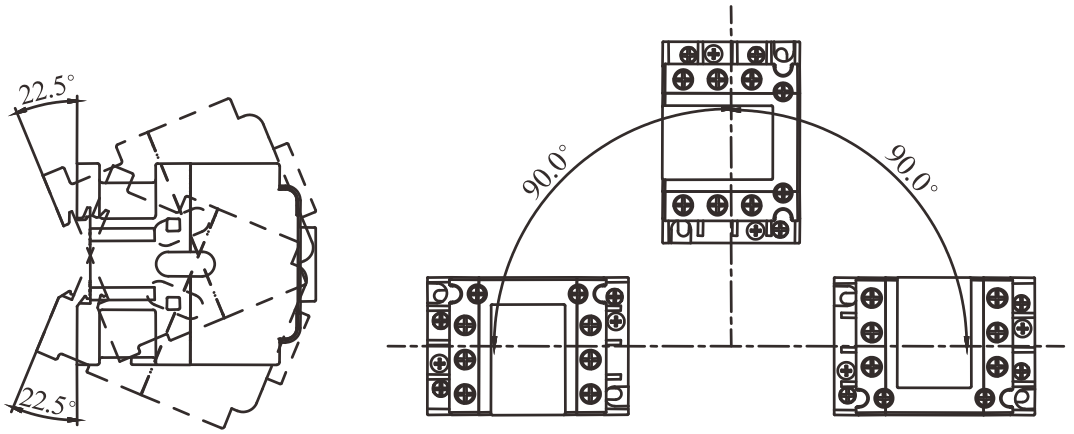


Fig.3 Installation requirements

● Contactor overall and installation see Fig. 4, Fig. 5 and Table 2

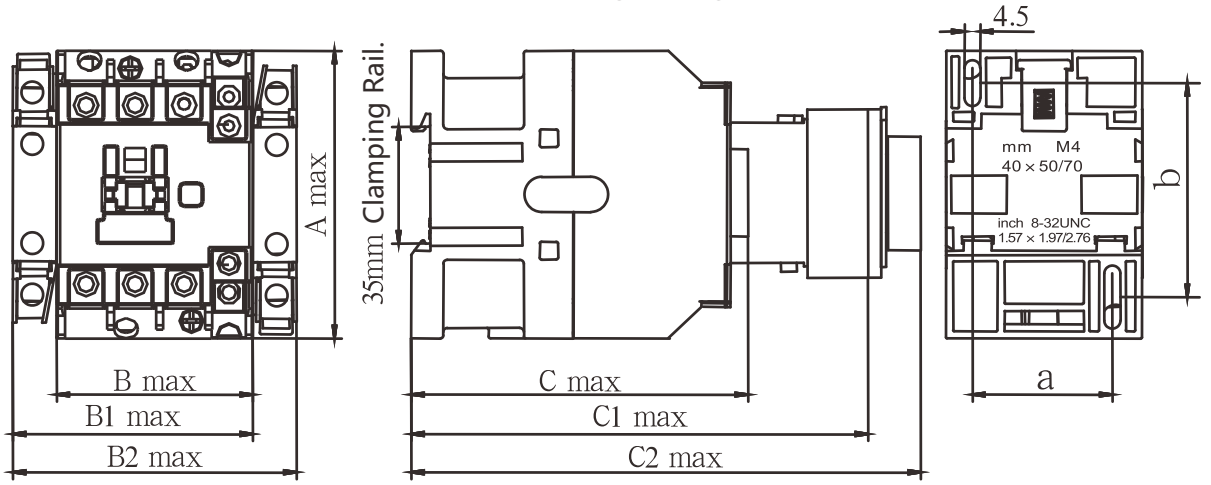


Fig. 4 YCC6-09~38

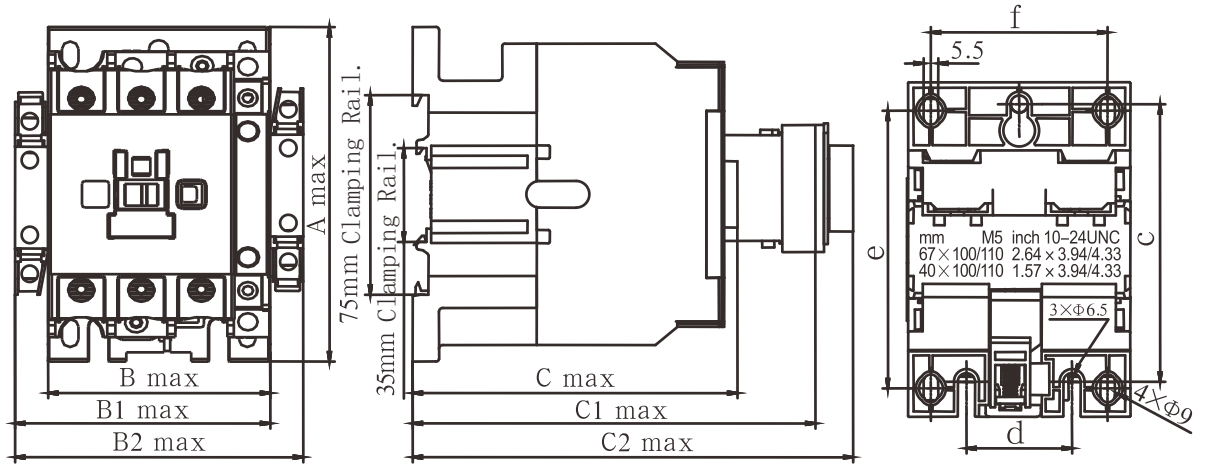


Fig.5 YCC6-40~95

Table 2: YCC6-09~95 AC contactor Overall and Mounting Unit: mm

Type	Auxiliary contact	Amax	Bmax	B1max	B2max	Cmax	C1max	C2max
YCC6-09, 12, 18	11	74.5	45.5	58	71	85.5	117.5	142.5
YCC6-25, 32, 38	11	83	56.5	69	82	97	129	154
YCC6-40, 50, 65	11	127.5	74.5	88	101	117	148.5	173.5
YCC6-80, 95	11	127.5	85.5	99	112	125.5	157	182

Note: B1 max-contactor + F8 B2 max-contactor + 2 PCS F8
C1 max-contactor + F4 C2 max-contactor + LA2/LA3

Type	Auxiliary contact	a	b	c	d	e	f
YCC6-09, 12, 18	11	35	50/60	-	-	-	-
YCC6-25, 32, 38	11	40	50/70	-	-	-	-
YCC6-40, 50, 65	11	-	-	105	40	100/110	59
YCC6-80, 95	11	-	-	105	40	100/110	67

- Reversing AC contactor Overall and Mounting dimension, see Fig. 6, Fig. 7 and Table 3.

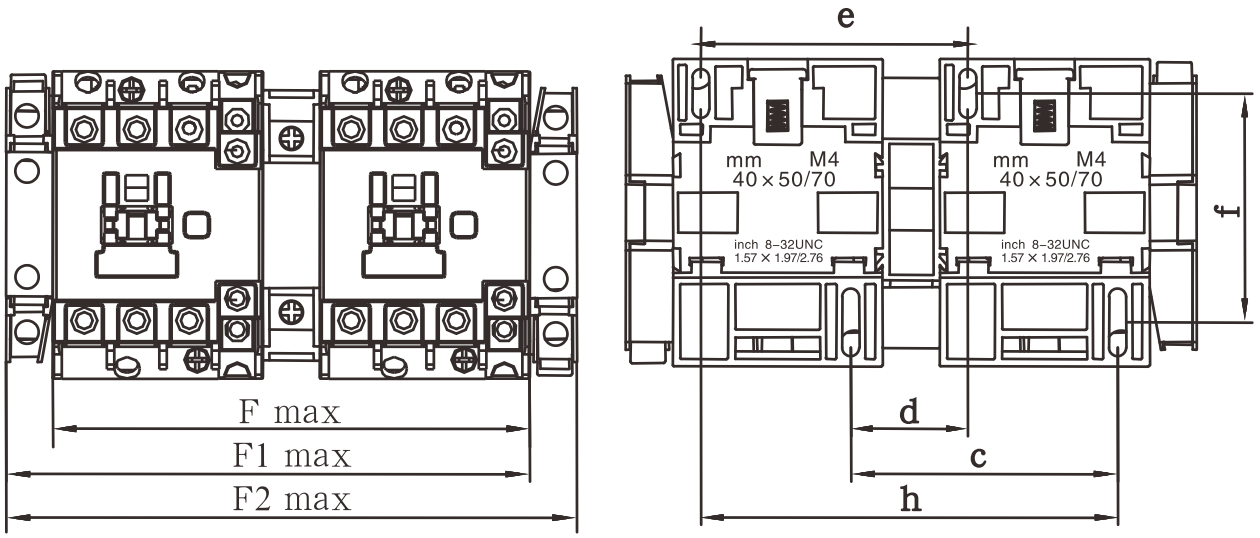


Fig. 6 YCC6-09N~38N

Table 3 YCC6 -09N~95N Interlocking AC contactor Overall and Mounting Unit: mm

Type	Fmax	F1max	F2max	c	d	e	f	h
YCC6-09N, 12N, 18N	107	120	131	60	25	60	50/60	95
YCC6-25N, 32N, 38N	129	142	153	71	31.5	71	50/60	111.5
YCC6-40N, 50N, 65N	163	180	193	-	50	90	100/110	130
YCC6-80N, 95N	186	202	215	-	60	100	100/110	140

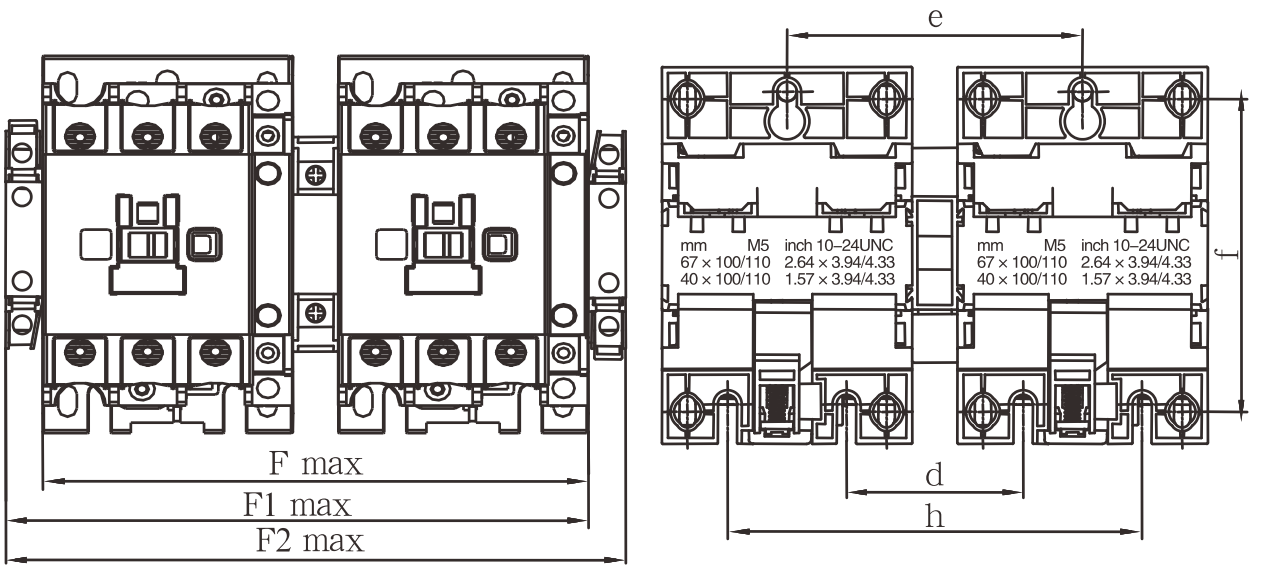


Fig. 7 YCC6-40N~95N

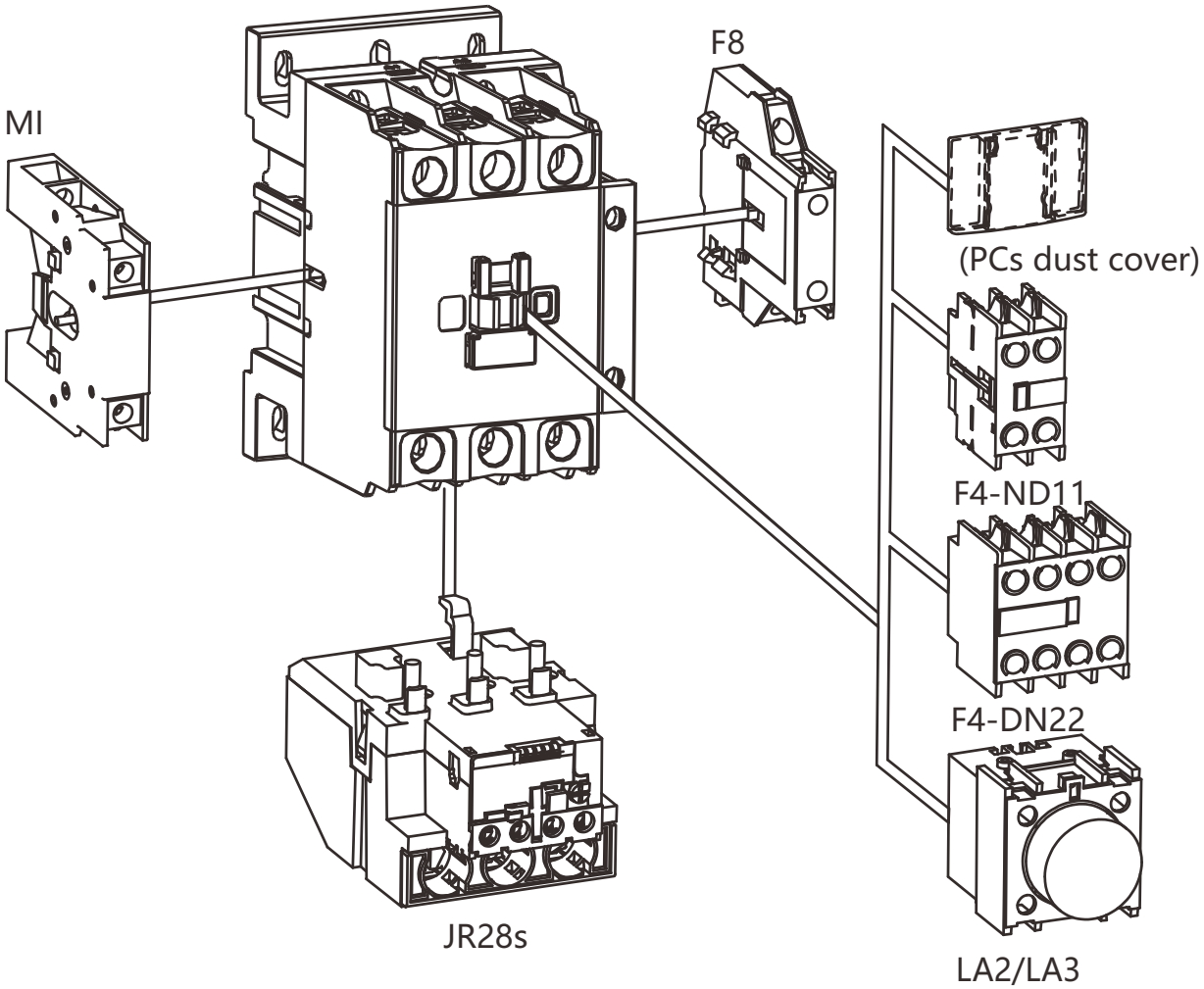


Fig. 8 Accessories installation drawings

(1) Auxiliary contact

YCC6-09~95 has a pair of normally open and a pair of normally closed auxiliary contact.

Table 4 Main parameters of auxiliary contacts

Using categories	Rated insulation voltage Ui	Convention free air heating current Ith	Control capacity		Rated operating current Ie	
			making	breaking	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. The model and specification and the combination of normal open and normal close are shown in Table 5. The installation method of FD6 is consistent with that of the air delay head, the installation and disassembly methods of FC6 are shown in Fig. 9 and Fig. 10.

Table 5 Auxiliary contact block

Type	F4-DN20	F4-DN11	F4-DN02	F4-DN40	F4-DN31	F4-DN22	F4-DN13	F4-DN04
Normally open (NO) numbers	2	1	0	4	3	2	1	0
Normally closed (NC) number	0	1	2	0	1	2	3	4

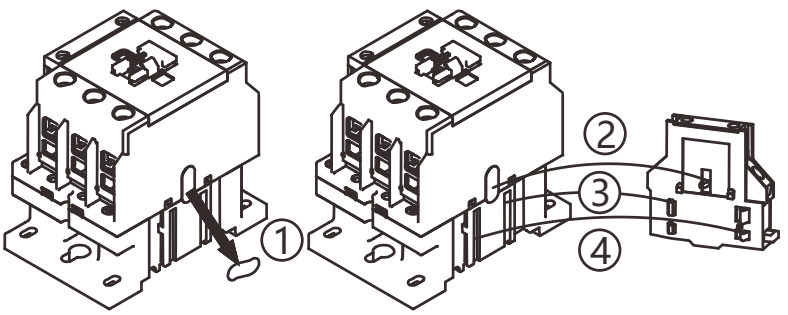


Fig. 9 Installation method for F8

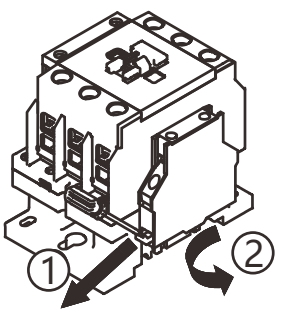


Fig. 10 Disassembly method for F8

(2) Time delay contact

The contactor can be combined with LA2/LA3 time delay contact into a delay contactor, and the delay range is shown in Table 6.

Table 6 Time delay contact

Type	Delay range	Number of delayed contacts	Delay type
LA2-DT0	0.1~3s	1NO+1NC	ON delay
LA2-DT2	0.1~30s		
LA2-DT4	10~180s		
LA3-DR0	0.1~3s		OFF delay
LA3-DR2	0.1~30s		
LA3-DR4	10~180s		
Note: It is adjusted minimum value in factory.			

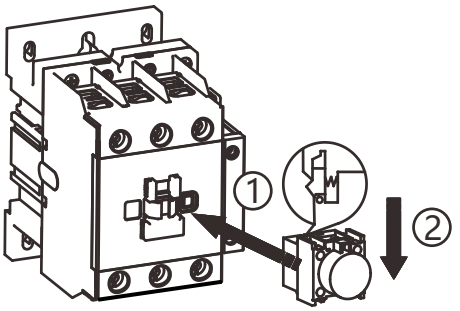


Fig. 11 Installation method of time delay contact

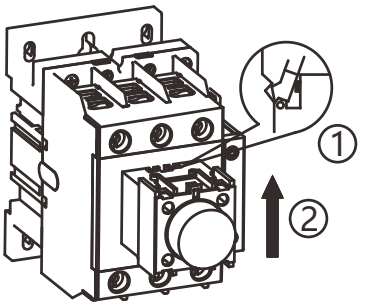


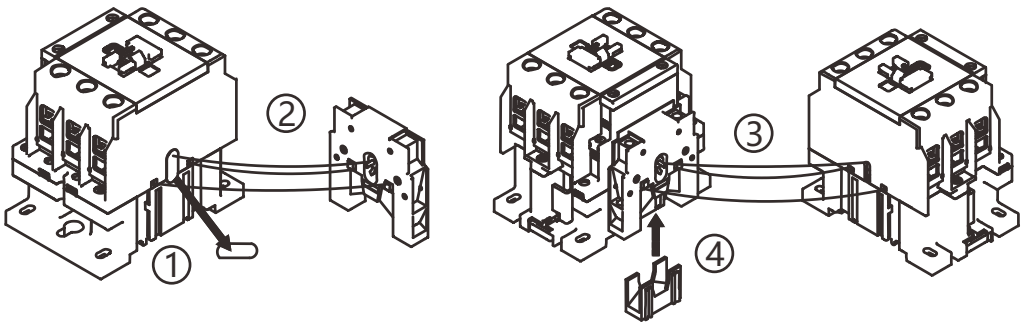
Fig. 12 Disassemble method of time delay contact

Installation and disassemble method of time delay contact head as shown in Fig. 11, Fig. 12

Installation: ① Align the chute with the contactor chute;
② Push down until the buckle automatically sticks;

Disassemble: ① The buckle is lifted upward; ② Push up along the chute and remove

(3) The installation method of FR6 mechanical interlock is shown in Fig. 13, YCC6-09~38A only needs to be completed Step ① to ④, YCC6-40~95A also needs to install the fixed connecting plate:



① Tear off the dustproof paste ③ Install another contactor as shown in the figure
② Install Mechanical interlocking 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 figure

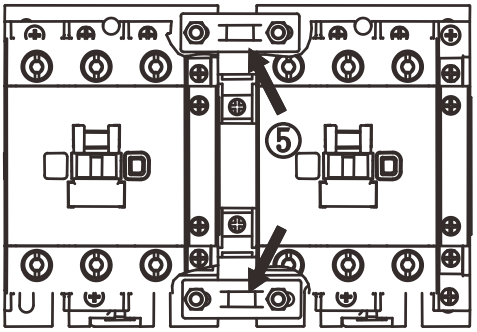


Fig. 13 mechanical interlocking MI installation method

(4) Electro magnetic starter

The contactor can becom bined withthe JR28s series the rmalover load relay to for manelectro magne ticstarter.

Debuggingandoperation

- Check whether the technical parameters of the product meet the use requirements;
- Switch on the control loop first, carry out no-load operation test, and then connect the load after there is no abnormality;
- Do not let foreign matter fall into the product;
- SCPD is recommended to be selected according to type 1 coordination protection,rated limited short circuit current LQ: 20kA(corresponding test voltage 400V), and the fuse type is shown in Table 7.

Table 7 Models with fuses

Model	YCC6-09	YCC6-12	YCC6-18	YCC6-25	YCC6-32
Main Loop	RT16-00 20A	RT16-00 20A	RT16-00 32A	RT16-00 40A	RT16-00 50A
Model	YCC6-40	YCC6-50	YCC6-65	YCC6-80	YCC6-95
Main Loop	RT16-00 63A	RT16-00 80A	RT16-00 80A	RT16-00 100A	RT16-00 125A
Auxiliary Loop	RT16-00 10A				

- Wiring capacity and fastening torqueares hownin Table8

Table8 Wiring capacity and fastening twist

Current speci fication			09/12/18	25/32/38	40/50/65	80/90
Main loop wiring						
Soft wire without connect terminal	1 wire	mm²	1...4	1.5...10	4...25	6...50
	2 wire	mm²	1...4	1.5...6	4...16	6...25
Soft wire with connect terminal	1 wire	mm²	1...4	1...6	4...25	6...50
	2 wire	mm²	1...2.5	1...4	4...10	6...16
Hard wire without connect terminal	1 wire	mm²	1...4	1.5...6	4...25	6...50
	2 wire	mm²	1...4	1.5...6	4...10	6...25
Tightening Torque		N·m	1.2	1.8	5	9

Current speci fication			09/12/18	25/32/38	40/50/65	80/90
Control and auxiliary loop wiring						
Soft wire without connect terminal	1 wire	mm²	1...4			
	2 wire	mm²				
Soft wire with connect terminal	1 wire	mm²	1...2.5			
	2 wire	mm²				
Hard wire without connect terminal	1 wire	mm²	1...4			
	2 wire	mm²				
Tightening Torque		N·m	1.2			

Maintenance

- Contactors should regularly tighten the terminals, remove the terminals,remove the deposited dust and so on, otherwise there will be fire and short circuit risk;
- Small metal particles sprayed around the contact or on the cover of the contactor should be removed, and the contactor should be stopped using when contact surface burns to expose the base material.

Fault analysis and treatment

Table 9 Common fault analysis and treatment

Fault Performance	Cause Analysis	Treatment Measures
The iron core cannot be sucked in or the suction is insufficient(that is, the contact is closed but the iron core has not been completely sucked in)	1.The power supply voltage is too low or fluctuates too much; 2. Insufficient power supply capacity of the operating circuit or occurrence of disconnection, incorrect wiring and poor contact of control contacts; 3. The technical parameters of the coil do not match the conditions of use; 4. The product itself is damaged (e.g. the coil is broken or burned, the movable part of the machine is stuck,etc.)	1.Increase the power supply voltage; 2. Increase the power supply capacity, replace the circuit, repair the control contact; 3. Replace the contactor; 4. Eliminate stuck faults and repair damaged parts.
No release or slow release	1. Contact welding; 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 contactors; 2. Eliminate the stuck fault; 3. Clean up the pole surface of the iron core.
The coil is overheated or burned	1. The power supply voltage is too high or too low; 2. The technical parameters of the coil (such as rated voltage, frequency,continuity rate of energization, and working system, etc.) are not consistent with actual use; 3. The moving part is stuck; 4. The surface of the iron core is uneven or the dust sticks.	1. Adjust the power supply voltage; 2. Replace the contactor; 3. Eliminate mechanical jam failure; 4. Clear up pole surface of the iron core.
Electromagnet (AC) Very noisy	1. The power supply voltage is too low; 2.mechanically jammed, so that the iron core cannot be flattened; 3. The surface of the iron core is rusty or foreign matter penetrates the surface of the iron core; 4. The short-circuit ring is broken or the surface of the iron core is excessively worn and uneven.	1. Increase the operating circuit voltage: 2. Adjust the magnetic system or eliminate mechanical jam failure; 3. Clean up pole surface of the iron core; 4. Replace the contactor.
Contact welding	1. The operating frequency is too high or the product is overloaded; 2. Short circuit on the load side.	1.Replace with the appropriate contactor; 2.Eliminate short-circuit faults.

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CERTIFICATE

Product Model: YCC6-09-95 series

Standard: IEC 60947-4-1

Inspector: CNC006

Production date: Printed on the product or package.

This product is qualified according to the delivery inspection

CNC ELECTRIC

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