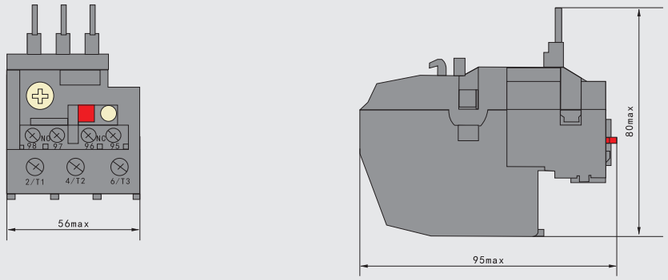
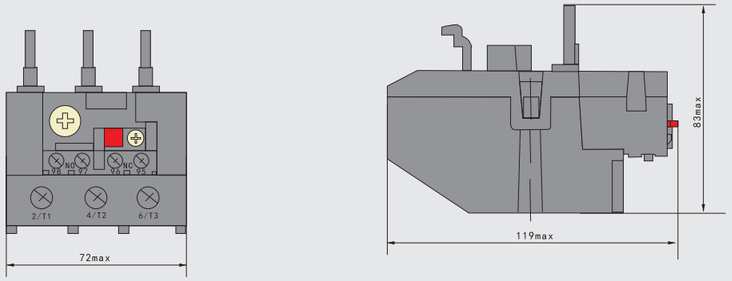
JRS1 Thermal Overload Relays

2、JR36-36/Z Outline and installation dimensions (mm)



3、JRS1-93/Z Outline and installation dimensions (mm)



CJX2 AC contactors

1、Application

CJX2-09-95 series AC contactor (hereinafter referred to as the contactor) applied to AC 50 hz or 60 hz, rated voltage 660 v, used in AC - 3 categories under the rated working voltage of 380 v, rated current - 95 - a circuit, for long-distance connected and breaking circuit, and with the appropriate composition of thermal overload relay electromagnetic starter to protect circuit overload operation may occur.This product conforms to GB14048.4, iec60947-4-1 and other standards。

2、Model and meaning

CJ X 2 – □□ □ □

- Normally closed (NC) auxiliary contact number
- Normally open (NO) auxiliary contact number
- Ac-3 rated operating current with rated operating voltage of 380V under service category (A)
- Design a sequence number
- Miniature
- AC contactor

1、Meaning of auxiliary contact

F1 – □ □

- NC number
- NO number
- Auxiliary contact Group

FC4 – □ □

- NC number
- NO number
- Side auxiliary contact group

2、Air delay head type meaning

LA□-D □□

- 20 means delay range 0.1 ~ 3s
- 22 means delay range 0.1 ~ 30s
- 24 means delay range 10 ~ 180s
- LA2-d means power-on delay
- LA3-d represents power failure delay

3、The contactor may assemble an auxiliary contact group with any of the accessories in the table

Model	F4-02	F4-11	F4-20	F4-22	F4-40	F4-04	F4-13	F4-31	FC4-02	FC4-11	FC4-20
Contact No.	2NC	NO+NC	2NO	2NO+2NC	4NO	4NC	1NO+3NC	3NO+1NC	2NC	NO+NC	2NO

4、Air delay head

Model	Delay range	The number of delay contacts
LA2-D20	0.1~3s	NO+NC
LA2-D22	0.1~30s	
LA2-D24	10~180s	
LA3-D20	0.1~3s	
LA3-D22	0.1~30s	
LA3-D24	10~180s	

3、 Normal operating conditions

1. Ambient air temperature: -5℃ ~ +40℃, the average value of which shall not exceed +35℃ within 24 hours;
2. Altitude: no more than 2000m;
3. Atmospheric conditions: the air relative humidity at the installation site is not more than 50% at +40℃, and higher relative humidity is allowed at lower temperature, such as 90% at 20℃, due to temperatureSpecial measures should be taken for condensation caused by occasional degree change.
4. Pollution level: level 3;
5. installation category: Ⅲ classes;
6. Installation conditions: the inclination between the installation surface and the vertical plane shall not be greater than ±5°;
7. Shock vibration: it is installed where there is no significant shaking, shock and vibration.
8. Transportation and storage: the contactor shall not be subjected to violent collision and vibration during transportation, and shall not be attacked by rain or snow during transportation and storage.Contactor suitable for -25℃ ~ +55℃It can be transported and stored at a temperature of +70℃ for a short time (within 24h).

4、 Structural features

Contact appliances have the characteristics of small size, light weight, low power consumption, high life, safety and reliability.It can be assembled into a variety of new products by adding accessories such as auxiliary contact group F4, side hanging auxiliary contact FC4, air delay head LA2\LA3 and so on.In addition to screws, contactors can also be installed with international standards of 35mm and 75mm clip rail.Contactor 9A, 12A, 25A, 40A, 50A, 65A, 80A, 95A, derivable quadrupole.

5、 Main technical parameters

1. Main technical parameters of contactor are shown in table 1.
2. Working voltage of contactor coil Us: ac 36V, 110V, 127V, 220V, 380V, and other specifications can be negotiated with the manufacturer;
3. Action characteristics: the suction voltage is 85% ~ 110%Us, and the release voltage is 20% ~ 75%Us;
4. The contactor body has a pair of normally open or normally closed auxiliary contacts at 32A or below, and a pair of normally open and normally closed auxiliary contacts at 40A or above. In addition, up to 8 pairs of auxiliary contacts can be addedThe basic parameters and performance of the auxiliary contact are shown in table 2.
5. The power consumption and energy efficiency levels of the contactor suction coil are shown in table 3;

Table 1

Model			CJX2-09	CJX2-12	CJX2-18	CJX2-25	CJX2-32	CJX2-40	CJX2-50	CJX2-65	CJX2-80	CJX2-95
Ui(V)			690	690	690	690	690	690	690	690	690	690
Ith(A)			20	20	32	40	50	60	80	80	125	125
rated current (A)	380V	AC-3	9	12	18	25	32	40	50	65	80	95
		AC-4	3.5	5	7.7	8.5	12	18.5	24	28	37	44
	660V	AC-3	6.6	8.9	12	18	21	34	39	42	49	55
		AC-4	1.5	2	3.8	4.4	7.5	9	12	14	17.3	21.3
Controllable three-phase squirrel-cage motor power (AC-3)k W	220V		2.2	3	4	5.5	7.5	11	15	18.5	22	22
	380V		4	5.5	7.5	11	15	18.5	22	30	37	45
	660V		5.5	7.5	9	15	18.5	30	30	37	45	55
Operational frequency (times/h)	AC-3		1200				600					
	AC-4		300									
Electrical life (ten thousand times)	AC-3		100				80				60	
	AC-4		20					15			10	
Mechanical life (ten thousand times)			1000				800				600	
Fuse type can be matched			NT00-16	NT00-20	NT00-25	NT00-32	NT00-50	NT00-63	NT00-63	NT00-80	NT00-100	NT00-125

Table 2

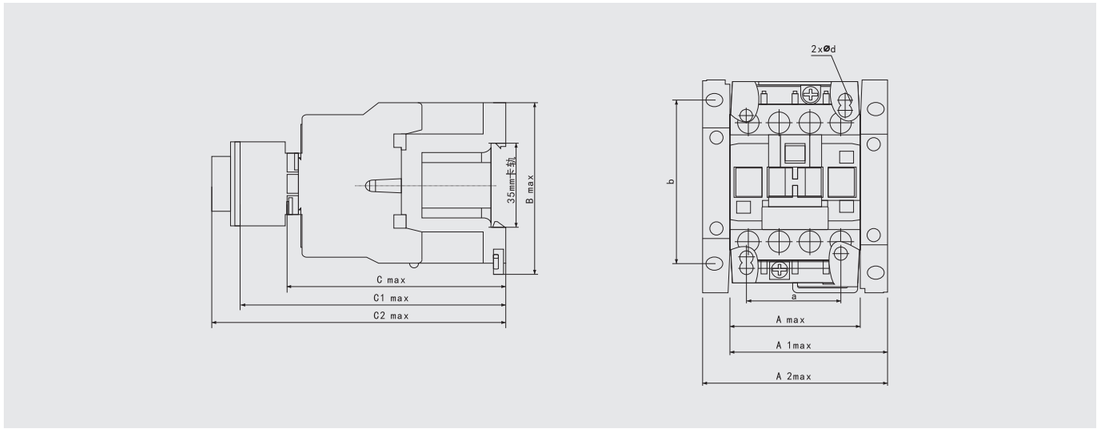
Usage	rated voltage(V)	Conventional thermal current(A)	rated current(A)	control capacity	
				switch on	breaking
AC-15	380	10	0.95	3600V A	360VA
DC-13	220		0.15	33W	33W

Table 3

Model	CJX2-09~12	CJX2-18	CJX2-25~32	CJX2-40~95	remark
starting power/VA	70	70	110	200	/
holding power/VA	9.0	9.5	14.0	36.6	accord with GB21518
Energy Efficiency Rate	3	3	3	2	

6、Outline overall and installing dimensions

1、CJX2-9~32 Outline and installation dimension drawing



2、CJX2-40~95 Outline and installation dimension drawing

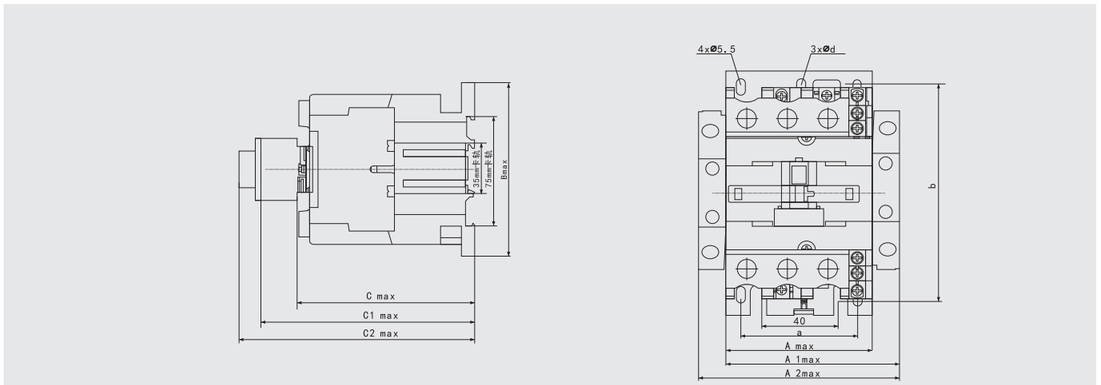


table 3、Product mounting dimensions

Model	Amax	A1max	A2max	Bmax	Cmax	C1max	C2max	a	b	d
CJX2-09~12	47	59.5	72	76	82	115	134	34/35	50/60	4.5
CJX2-18	47	59.5	72	76	87	120	139	34/35	50/60	4.5
CJX2-25	57	69.5	82	86	97	130	149	40	48	4.5
CJX2-32	57	69.5	82	86	102	135	154	40	48	4.5
CJX2-40~65	77	89.5	102	129	116	149	168	58.5	100/110	6.5
CJX2-80~95	87	99.5	115	129	127	160	179	66	100/110	6.5

Note: A1max- is contactor +FC4, A2max- is contactor +2 FC4 C1max- is contactor +F4 C2max- is contactor +LA2\LA3

7、Use and maintenance

1. Properly install the wiring. Please pay attention to the sign of the terminal when installing the contactors.
   The inlet end of normally open auxiliary contact is: 13, 23, 33, 43……
   The outgoing ends of normally open auxiliary contacts are: 14, 24, 34, 44……
   The inlet end of normally closed auxiliary contact is: 11, 21, 31, 41……
   The outgoing end of normally closed auxiliary contact is: 12, 22, 32, 42……
   Coil terminals are A1 and A2.
2. Before installation, check whether the technical data (such as rated voltage and frequency) on the coil are consistent with the power supply.
3. During installation, it shall be installed in accordance with the specified installation conditions. The symbol A1 of the contactor coil shall be upward, in line with people's visual habits.
4. The wiring screw shall be tightened. After checking the correct wiring, the suction coil shall be energized and closed several times before being put into use under the condition that the main contact is not live.
5. If abnormal noise is found during use, it may be dirt on the pole surface of the iron core, please wipe off the pole surface.
6. During use, all parts of the product shall be checked regularly. The movable parts shall not be stuck and the fasteners shall not be loosened.

1、Application

CJX2-F series AC contactor (hereinafter referred to as contactor), mainly used for ac 50Hz(or 60Hz), rated working voltage to 1000V, rated working current to 630A circuit, for long-distance connection and breaking and frequent starting control of ac motor. The contactor can also be conveniently equipped with auxiliary contact group or air delay class accessories, and can be combined with an appropriate thermal overload relay to form an electromagnetic starter.
This product conforms to GB14048.4, IEC60947-4-1 and other standards.

2、Model and meaning

CJX 2 - F □ □ □

- Number of poles (2 or 4, not indicating 3)
- Derived code, N for reversible contactor
- Rated operating current A(AC-3,380 V)
- Improved
- Design Serial Number
- AC contactor

Note: body contactor is not equipped with auxiliary, it needs to be ordered separately.

F4 - □ □

- NC number
- NO number
- Auxiliary contact Group

LA□-D □□

- 20 means delay range 0.1 ~ 3s
- 22 means delay range 0.1 ~ 30s
- 24 means delay range 10 ~ 180s
- LA2-d means power-on delay
- LA3-d represents power failure delay

The contactor may assemble an auxiliary contact group with any of the accessories in the table

Model	F4-02	F4-11	F4-20	F4-22	F4-40	F4-04	F4-13	F4-31
Contact No.	2NC	1NO+1NC	2NO	2NO+2NC	4NO	4NC	1NO+3NC	3NO+1NC

Air delay head

Model	Delay range	The number of delay contacts
LA2-D20	0.1~3s	1NO + 1NC
LA2-D22	0.1~30s	
LA2-D24	10~180s	
LA3-D20	0.1~3s	
LA3-D22	0.1~30s	
LA3-D24	10~180s	

3、Normal operating conditions

3.1 ambient air temperature: -5℃~ +40℃.
The average value within 24 hours does not exceed +35℃.
3.2 altitude: no more than 2000m.
3.3 atmospheric conditions: the air relative humidity at the installation site shall not exceed 50% at +40℃, and a higher relative humidity is allowed at a lower temperature, such as 90% at 20℃
Special measures should be taken for condensation caused by occasional temperature changes.
3.4 pollution level: level 3.
3.5 installation category: Ⅲ class.
3.6 installation conditions: the installation surface and vertical inclination shall be no more than ±5°, and the control voltage at the coil end shall be no more than ±30° when the control voltage is no less than 85%Us.
3.7 shock vibration: contactors shall be installed and used where there is no significant shaking, shock and vibration.
3.8 transportation and storage: the contactor shall not be subjected to violent collision and vibration during transportation, and shall not be attacked by rain or snow during transportation and storage. Contactor suitable at -25℃ ~
It can be transported and stored at a temperature of +70℃ for a short time (within 24h) between +55℃.

4、Outline overall and installing dimensions

Specification			CJX2-F115	CJX2-F150	CJX2-F185	CJX2-F225	CJX2-F265	CJX2-F330	CJX2-F400	CJX2-F500	CJX2-F630
rated operational current Ie(A)	AC-3	380V	115	150	185	225	265	330	400	500	630
		660V	86	108	118	137	170	235	303	353	462
	AC-4	380V	52	60	79	85	105	117	138	147	188
		660V	49	57	69	82	98	107	135	145	170
Controllable threephase squirrel cage type machine maximum rated power rate Pe(Kw)	AC-3	380V	55	75	90	110	132	160	200	250	335
		660V	80	100	110	129	160	220	280	335	450
	AC-4	380V	25	30	40	45	55	63	75	80	100
		660V	45	51	63	75	90	100	129	140	160
IthA			200	200	275	275	315	380	450	630	800
Ue(V)			220、380、660								
Ui(V)			1000								
AC-3	Electrical life (ten thousand times)		80		50				30	20	
	Operating frequency /h		600				300				
Mechanical life (ten thousand times)			300				100				

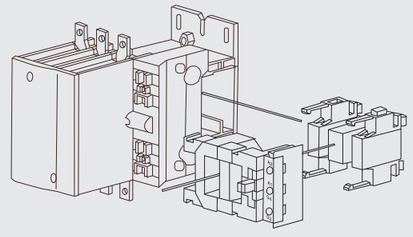
Coil specification

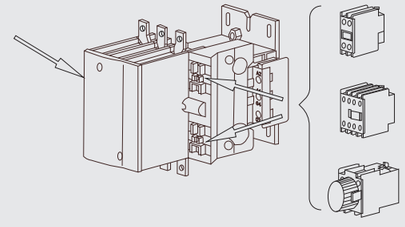
Model CJX2-F	 50-60 Hz～	 VA[1]	 VA[1]	 40/400 Hz～	 VA[2]	 VA[2]	 — — —	 W	 W
115	LX1-FF***	550-660	45-55	LX9-FF***	690-855	6.6-8.1	LX4-FF***	543-665	3.94-4.83
150									
185*225	LX1-FG***	805-970	55-66	LX9-FG***	950-1180	8.9-10.9	LX4-FG***	737-902	4.13-5.07
225									
265	LX1-FH***	1180-1420	84-100	LX1-FH***2	600-800	8-11	LX4-FH***	655-803	3.68-4.53
330*400	individual coil								
400				LX1-FJ***	1000-1150	12-15	LX4-FJ***	920-1140	4-7.5
500				LX1-FK***	1050-1150	16-20	LX4-FK***	990-1220	4.5-8
630				LX1-FL***	1500-1730	20-25	LX4-FL***	1420-1920	6.5-12.5

1)50Hz, θ=20℃ 2):50/60Hz, θ=20℃. ***: Control coil voltage specification

	50Hz	40-400Hz	— — —	special environment
Coil specification Us[3]	24、36、48、110、127、220 240、380	36、48、110、127、220 240、380、500	24、48、110、220	AC,DC general,wide voltage range AC/DC 48~132V,AC/DC100~250V, PLC control,active main power supply control, power supply control

3): Contactor suction voltage: 85% Us: 110% Us: Release voltage: ac 20%Us~75% Us, DC 10% Us~75% Us. Schematic diagram of coil and auxiliary assembly

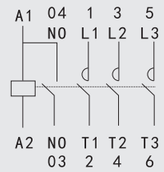




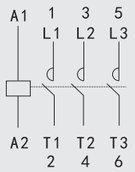
The following auxiliary blocks are recommended:
auxiliary contact group:
2: F4-11 02 20
4: F4-22 13 04 31 40

Air delay head:
Actuation delay: LA2-D20 LA2-D22 LA2-D24
Release time delay: LA3-D20 LA3-D22 LA3-D24

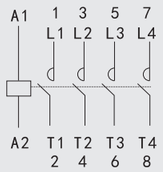
5、Wiring diagram



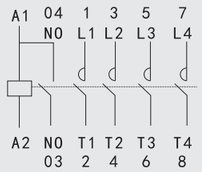
CJX2-F115、150、185、225、400、500、630



CJX2-F265、330



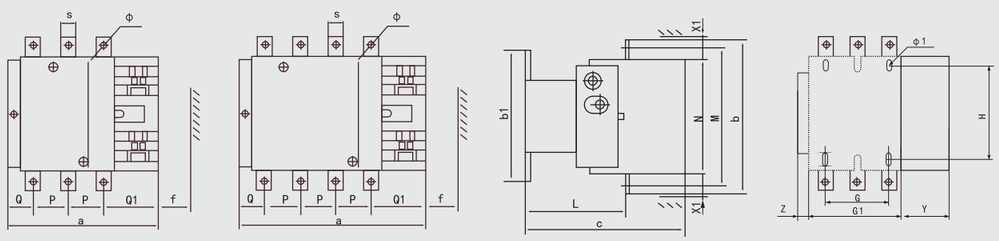
CJX2-F1154、1504、1854、2254、2654、3304



CJX2-F4004、5004、6304

6、Outline overall and installing dimensions

CJX2-F115~330 Outinge and installing dimension

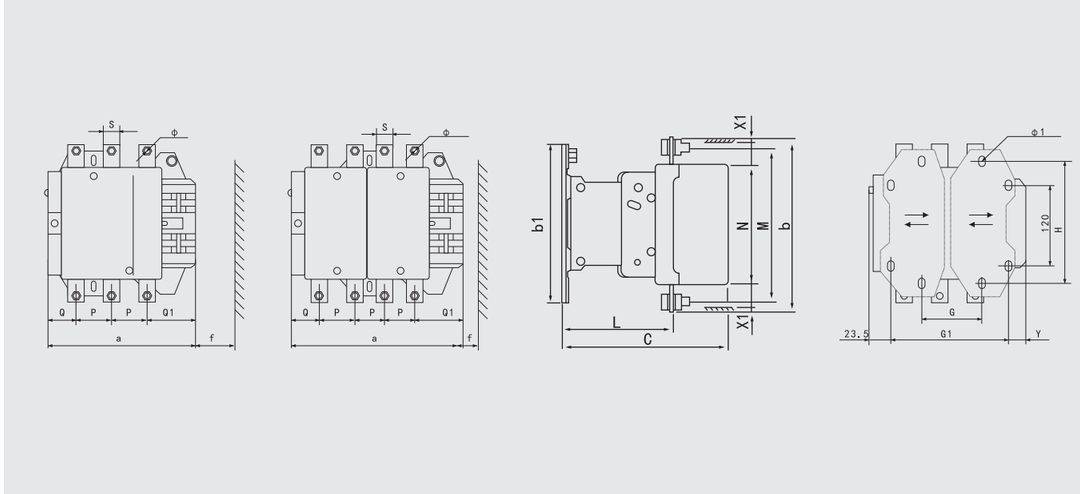


Unit: mm

CJX2-F	a	p	Q	Q1	S	Φ	f	b	b1	M	N	C	L	G	H	Φ1	G1	Z	Y	X1	
																				500V≤	>500V
115	163.5	37	29.5	60	15	M6	109	162	137	147	124	171	107	80	120-106	6.5	106	13.5	44	10	15
1154	200.5	37	29.5	60	15	M6	109	162	137	147	124	171	107	80	120-106	6.5	143	13.5	44	10	15
150	163.5	40	26.5	57	20	M8	109	170	137	150	124	171	107	80	120-106	6.5	106	13.5	44	10	15
1504	200.5	40	25	55.5	20	M8	109	170	137	150	124	171	107	80	120-106	6.5	143	13.5	44	10	15
185	168.5	40	29	59.5	20	M8	117	174	137	154	127	181	113.5	80	120-106	6.5	111	13.5	44	10	15
1854	208.5	40	29	59.9	20	M8	117	174	137	154	127	181	113.5	80	120-106	6.5	151	13.5	44	10	15
225	168.5	48	21	51.5	25	M10	117	197	137	172	127	181	113.5	80	120-106	6.5	111	13.5	44	10	15
2254	208.5	48	17	47.5	25	M10	117	197	137	172	127	181	113.5	80	120-106	6.5	151	20.5	44	10	15
265	201.5	48	39	66.5	25	M10	143	203	145	178	147	213	141	96	120-106	6.5	140	20.5	38	10	15
2654	244.5	48	34	66.5	25	M10	143	203	145	178	147	213	141	96	120-106	6.5	186	20.5	38	10	15
330	213	48	43	74	25	M10	143	206	145	181	158	219	145	96	120-106	6.5	154.5	20.5	38	10	15
3304	261	48	43	74	25	M10	143	206	145	181	158	219	145	96	120-106	6.5	202.5	20.5	38	10	15

Note: F is the space needed to replace the coil, X1 is the minimum electrical clearance (arc distance), the same as below。

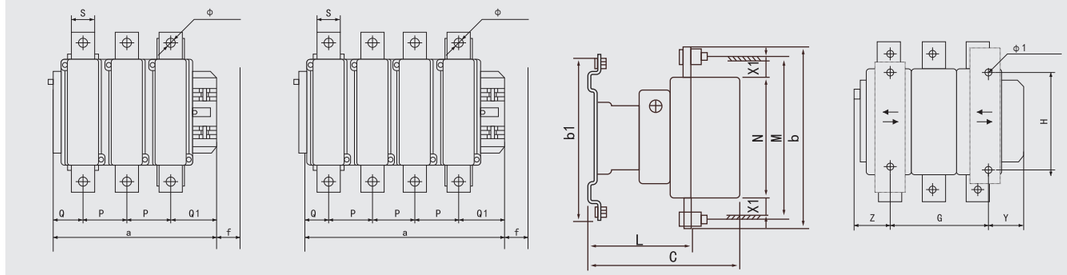
CJX2-F400、500 outline overall and installing dimensions



Unit: mm

CJX2-F	a	p	Q	Q1	S	Φ	f	b	b1	M	N	C	L	G	G1	Φ1	H	Y	X1	
																			500V≤	>500V
400	213	48	43	74	25	M10	151	206	209	181	158	219	145	80	170	8.5	170～180	19.5	15	20
4004	261	48	43	74	25	M10	151	206	209	181	158	219	145	80	170	8.5	170～180	67.5	15	20
500	233	55	46	77	30	M10	169	238	209	208	172	232	146	80	170	8.5	170～180	39.5	15	20
5004	288	55	46	77	30	M10	169	238	209	208	172	232	146	140	230	8.5	170～180	34.5	15	20

CJX2-F630 outline overall and installing dimensions



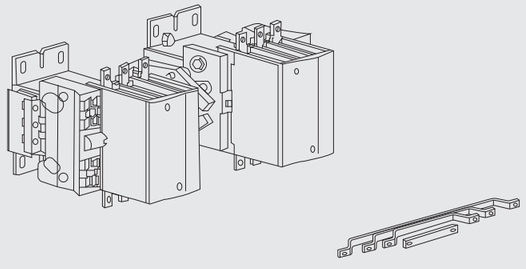
unit: mm

CJX2-F	a	p	Q	Q1	S	Φ	f	b	b1	M	N	C	L	G	H	Φ1	Z	Y	X1	
																			500V≤	>500V
630	309	80	60	89	40	M12	201	304	280	264	202	255	155	180	180～190	10.5	60.5	68.5	20	30
6304	389	80	60	89	40	M12	201	304	280	264	202	255	155	240	180～190	10.5	60.5	68.5	20	30

7、Combination

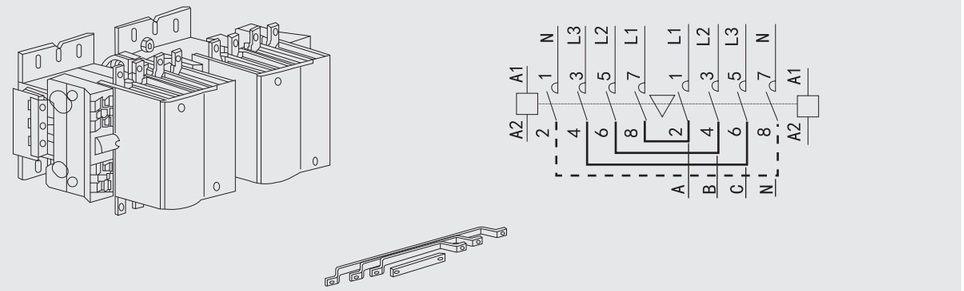
Reversible mechanical interlock contactor

CJX2-F115N~630N

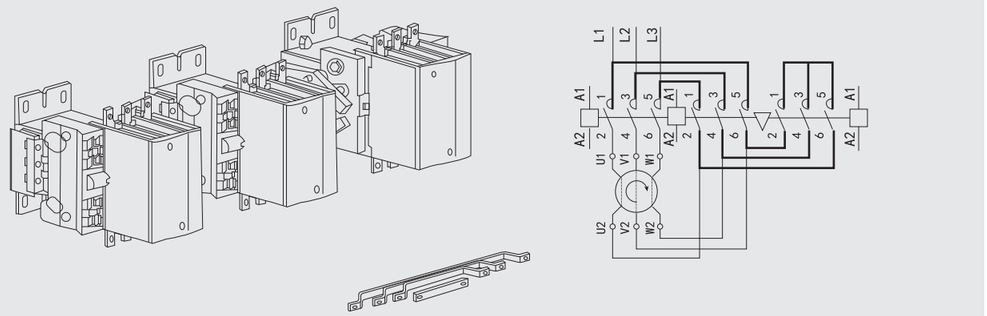


Mechanical interlocking transfer contactor for distribution

CJX2-F115Z~630Z



Star delta starter CJX2-F115Y~330Y



8、Caution

8.1 installation shall be conducted in accordance with the specified conditions and operating environment;

8.2 before installation, check whether the stanchion data of the coil is consistent with the control power supply;

8.3 the wiring bolts of the main circuit and the wiring screws of the coil should be tightened;

8.4 if the main circuit is not electrified, the movable part of the rotating contactor shall not be stuck first, and then the coil shall be energized and closed several times;

8.5 the arc extinguisher shall not be put into use until it is properly installed;

8.6 internal blackening of contacts and arc extinguishers is normal after contactor operation, and will not affect product performance. Don't try to remove the black with sandpaper or other tools;

8.7 in case of emergency, professional personnel should be invited to check and maintain.

Live maintenance will cause serious casualties!