

CKJ5 series


Vacuum AC Contactor

OPERATION INSTRUCTION

Standard: IEC 60947-4-1

CNC

Deliver
Power For Better Life

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



Safety Warning

1. The product is strictly prohibited from being installed in environments containing flammable and explosive gases, damp condensation, and wet hands are strictly prohibited from operating the product.
2. During product operation, it is strictly prohibited to touch the conductive parts of the product.
3. When installing, maintaining, and maintaining products, it is necessary to ensure that the circuit is powered off.
4. Children are strictly prohibited from playing with products or packaging.
5. Sufficient space and safe distance should be reserved around the installation of the product.
6. Do not install in areas where gas media can corrode metals and damage insulation.
7. When installing and using the product, standard wires must be used and connected to the required power supply and load.
8. To avoid dangerous accidents, the installation and fixation of the product must strictly follow the requirements of the manual.
9. After dismantling the packaging, the product should be checked for damage and the integrity of the items should be checked.

1 Main technical parameters and performance

1.1 The main technical parameters and performance indicators of the main circuit are shown in Table 1.

Table 1 Main parameters and technical performance indicators of the main circuit

Contactor model		CKJ5-125	CKJ5-160	CKJ5-250	CKJ5-400	CKJ5-630
Agreed free air heating current (Ith (A))		125	160	250	400	630
Rated working voltage (Ue (V))		380/660/1140				
Rated frequency (Hz)		AC50				
Rated working current Ie (A)	AC-3	125	160	250	400	630
	AC-4	100	130	200	330	500
Rated insulation voltage (Ui(V))		1140				
Controllable three-phase motor power (kW)	380V	62	80	125	200	315
	660V	110	140	220	350	560
	1140V	185	235	370	590	930
Rated working hours		Eight hour working system, uninterrupted working system short-term working system, intermittent working system (load factor of 40%)				
Rated impulse withstand voltage (Uimp(kV))		12				
Rated limiting short-circuit current (Iq(kA))		50(660V)				
Shell protection level		IP00				
Wire cross-sectional area (mm ²)		25~50	35~70	70~120	150~240	150~200
Number of wires		1~2	1~2	1~2	1~2	2
Connecting bolts(mm)		M8	M8	M10	M10	M12
Tightening torque of connecting bolts(N·m)		6	6	10	10	14
Polar impedance (Ω)		≤0.01				
Equipped with fuse model		NT3 315A	NT3 315A	NT3 400A	NT3 500A	NT3 630A
Fuse rated current(A)		315	315	400	500	630
Coordination and cooperation types		*2" type coordination and cooperation				
Mechanical lifespan	Operation frequency (times/h)	1200	1200	1200	1200	1200
	frequency(×10 ⁴)	300	300	300	300	300
Electrical lifespan (400V)	Operation frequency (times/h)	600	600	600	120	120
	frequency(×10 ⁴)	60	60	60	60	60
Surrounding air temperature		Normal working temperature -5 °C~+40 °C, with an average temperature value within 24 hours not exceeding+35 °C				
humidity		When the maximum temperature is +40 °C, the relative humidity of the air does not exceed 50%. Higher relative humidity can be allowed at lower temperatures, such as reaching 90% at +20 °C				
altitude		The altitude of the installation site shall not exceed 2000m				
Pollution level		Level 3				
Installation conditions		Installation category: III. The inclination between the installation surface and the vertical surface shall not exceed ± 5 °				
Transportation and storage conditions		The applicable temperature range for transportation and storage is between -35 °C and +70 °C. The storage area should be ventilated, dry, and not affected by rain, snow, or direct sunlight				

1.2 The main parameters and technical performance indicators of the control circuit are shown in Table 2

Table 2 Main parameters and technical performance indicators of control circuit

Contactor model	CKJ5-125	CKJ5-160	CKJ5-250	CKJ5-400	CKJ5-630	
Action range	pull-in voltage(85%~110%)Us; Release voltage(10%~75%)Us					
Basic parameters of auxiliary contacts	AC-15:380V/1.9A; DC-13:220V/0.31A; $U_i=690V$, $I_{th}=10A$, $U_{imp}=6kV$					
Number of auxiliary contacts	CKJ5-125~160:Two normally open and one normally closed; CKJ5-250~400:Four normally open and three normally closed; CKJ5-630:Three normally open and two normally closed. notes : CKJ5-125~400 The auxiliary contact for connecting the coil of the product is NK2-1(A) type The first set of normally closed auxiliary contacts of the auxiliary contact group,CKJ5-630 The auxiliary contact connected to the coil is the first set of normally closed auxiliary contacts in the auxiliary contact group and cannot be replaced.					
Wiring capability	Maximum conductor 1.5mm ² , Connect up to 1 cable; Minimum wire 0.75 mm ² ,Connect up to 2 wires. The insulation length removed from the wires is 8mm;Wiring screw M4, tightening torque 1.2N · m.					
SCPD used	gG16					
Coil power (VA)	Suction power≤	287	287	430	703	1212
	Suction holding power≤	16	16	19	21	41

2 Appearance, installation dimensions

The product appearance and installation dimensions are shown in Figures 1-4 and Table 3

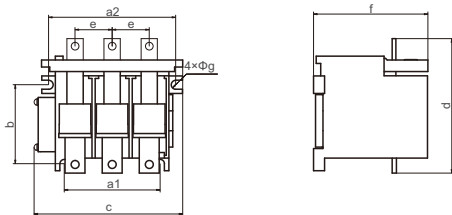


Figure 1 CKJ5-125-160 Appearance and Installation Dimensions

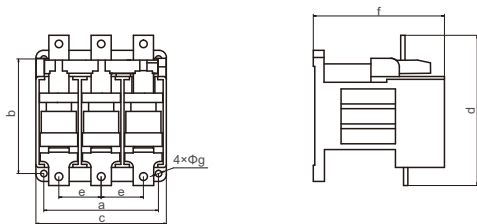


Figure 2 CKJ5-250 Appearance and Installation Dimensions

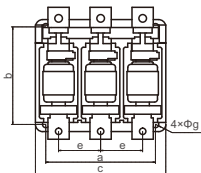


Figure 3 CKJ5-400 Appearance and Installation Dimensions

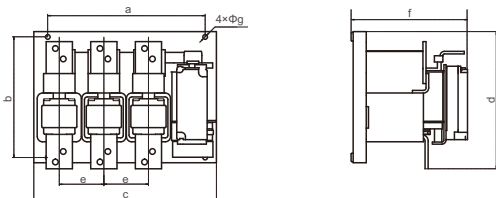


Figure 4 CKJ5-630 Appearance and Installation Dimensions

Table 3 Product Appearance and Installation Dimensions

unit: mm

parameter model	a1/a2	b	c(max)	d(max)	e	f(max)	g
CKJ5-125	106±0.36 137±0.46	87±0.36	173	150	41	130	9
CKJ5-160	106±0.36 137±0.46	87±0.36	173	150	41	130	9
CKJ5-250	160±0.51	160±0.51	183	213	59	186	12
CKJ5-400	180±0.7	160±0.51	216	221	70	192	11
CKJ5-630	300±0.8	230±0.8	353	265	85	225	9

3 Installation, debugging, and operation use

- 3.1 Please identify the registered trademark of our company before installation: **CNC**
- 3.2 Check if the voltage U_s of the contactor coil control power supply matches the actual control voltage of the power supply.
- 3.3 Please install under the specified installation conditions.
- 3.4 Refer to the product body, and label the wiring terminals 1, 3, and 5 as the main circuit incoming terminal, and label 2, 4, and 6 as the main circuit outgoing terminal.
- 3.5 After tightening the wiring screws and checking the correctness of the wiring, the coil should be energized with the rated control power supply voltage while the main circuit is not live. It can only be put into use after the test action is reliable.

4 Maintenance, upkeep, and storage precautions

4.1 For the vacuum arc extinguishing chamber in use, it is recommended to check it every six months using the power frequency withstand voltage method. When the breakdown voltage is below 6000V (effective value) after three pressurizations, please contact after-sales service to replace the vacuum arc extinguishing chamber using the power frequency withstand voltage method. When the breakdown voltage is below 6000V (effective value) after three pressurizations, please contact after-sales service to replace the vacuum arc extinguishing chamber.

4.2 For contactors in use, it is recommended to check the auxiliary switch every six months. When the product is energized and the normally closed contact of the auxiliary switch experiences long-term arcing, the auxiliary switch or arc extinguishing capacitor must be replaced.

4.3 Any of the following situations should be checked and adjusted for the contactor:

- 1) After being put into operation for six months.
- 2) After every 100000 operations in places with frequent usage.
- 3) When it is found that the contact distance of the vacuum arc extinguishing chamber is less than 1.4mm or the overtravel is less than 0.4mm.
- 4) When there is an abnormality in mechanical operation.

4.4 Inspection and adjustment of contactors:

- 1) Contact opening distance and overtravel.
- 2) Action voltage.
- 3) Power frequency withstand voltage.
- 4) Whether the components are damaged.
- 5) Check if the auxiliary contact contacts are in good contact.
- 6) Check if there is a prolonged arcing phenomenon at the auxiliary contact points.
- 7) Check if all fasteners are loose.

5 Warranty period, environmental protection, and other legal provisions

5.1 Warranty period

Under normal storage and transportation conditions, if the product packaging or product itself is intact, the warranty period for the product from the date of production is 18 months. The following situations are not covered by the warranty:

- 1) Damage caused by improper user use, storage, and maintenance.
- 2) Damage caused by unauthorized organization or personnel, or self disassembly and repair by users.
- 3) The product has exceeded the warranty period.
- 4) Damage caused by force majeure factors.

5.2 Environmental Protection

In order to protect the environment, when this product or its components are scrapped, please dispose of them properly as industrial waste; Or it can be handed over to the recycling station for classification, disassembly, recycling, and reuse in accordance with relevant national regulations.