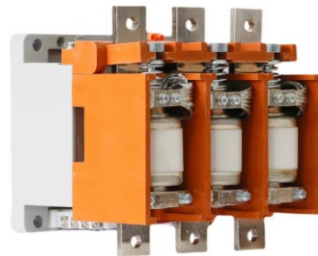


CKJ5 series vacuum AC contactor

1 Applicable scope

CKJ5 series vacuum AC contactors (hereinafter referred to as contactors) are mainly used in circuits with AC 50Hz, rated working voltage up to 1140V, and rated working current up to 630A. They are used for long-distance connection and disconnection of circuits, and can be combined with appropriate thermal overload relays or electronic protectors to form vacuum electromagnetic starters. They are particularly suitable for forming isolated vacuum electromagnetic starters.



2 Model and meaning



3 Normal working and installation conditions

- 3.1 The ambient air temperature is -5 °C~+40 °C, and its average value within 24 hours does not exceed +35 °C.
- 3.2 Altitude not exceeding +2000m.
- 3.3 Atmospheric conditions: 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. Special measures should be taken for occasional condensation caused by temperature changes.
- 3.4 Pollution level: Level 3.
- 3.5 Installation category: Class III.
- 3.6 Installation conditions: Vertical installation, with an inclination of no more than ± 5 ° between the installation surface and the horizontal or vertical plane.
- 3.7 Impact vibration: The product should be installed and used in a place without significant shaking, impact, and vibration.

4 Main parameters and technical performance

- 4.1 Main specifications:
 - 4.1.1 Divided by current grade : 125、160、250、400、630 ;
 - 4.1.2 According to the contactor coil rated control power supply voltage U_s divided : exchange 50Hz : 36V、110V、127V、220V、380V。
- 4.2 Technical parameters:
 - 4.2.1 The rated working voltage (U_e) and rated insulation voltage (U_i) of the contactor are 1140V;
 - 4.2.2 The main parameters and technical performance indicators of the contactor are shown in Table 1.

Table 1

Contactor model	CKJ5-125	CKJ5-160	CKJ5-250	CKJ5-400	CKJ5-630	
Agreed free air heating current I_{th} (A)	125	160	250	400	630	
Rated operational voltage U_e (V)	380/660/1140					
The maximum power (kW) of a controllable three-phase squirrel cage motor under the AC-3 usage category	380V	62	80	125	200	315
	660V	110	140	220	350	560
Rated working current I_e (A)	1140V	185	235	370	590	930
	1140V AC-3	125	160	250	400	630
Mechanical life	1140V AC-4	100	130	200	330	500
	Operating frequency (times/h)	1200	1200	1200	1200	1200
Electrical lifespan (400V)	Number of times ($\times 10^4$)	300	300	300	300	300
	Operating frequency (times/h)	600	600	600	120	120
Coil power (W)	Number of times ($\times 10^4$)	60	60	60	60	60
	Suction power \leq	287	287	430	703	1212
Number of wires	Holding power \leq	16	16	19	21	41
	Number of wires	1~2	1~2	1~2	1~2	2
Wire cross-sectional area (mm ²)	25~50	35~70	70~120	150~240	150~200	
Copper Bar (mm ²)	-	-	-	-	40×5	
Connecting bolts (mm)	M8	M8	M10	M10	M12	
Tightening torque (N·m)	6	6	10	10	14	
Matched SCPD	NT3 315A	NT3 315A	NT3 400A	NT3 500A	NT3 630A	
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 can be used with two normally open and one normally closed CKJ5-250~400 can be four normally open and three normally closed CKJ5-630 can be three normally open and two normally closed					

Note: The auxiliary contacts of CKJ5-125-400 products connected to the coil are the first set of normally closed auxiliary contacts of NK2-1 (A) type auxiliary contact group. The auxiliary contacts of CKJ5-630 connected to the coil are the first set of normally closed auxiliary contacts of the auxiliary contact group and cannot be replaced. CKJ5-125-160 can be equipped with an additional set of two normally open and two normally closed auxiliary contacts, which need to be specially customized and specified.

4.3 Action range: The suction voltage is between 85% U_s and 110% U_s ; The release voltage is between 10% U_s and 75% U_s .

5 Structural characteristics

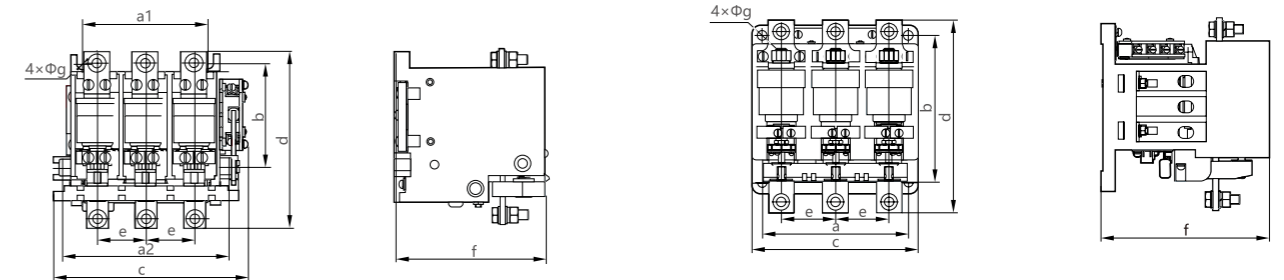
The contactor consists of an electromagnetic system, a contact system, and auxiliary contacts. The CKJ5-125~400 contactor is arranged in a three-dimensional structure, with the upper part being the contact system and the lower part being the electromagnetic system. The electromagnetic system consists of a coil, iron core, and rectifier device, installed in a base made of cast aluminum alloy or DMC. The CKJ5-630 contactor is arranged in a flat structure, with a contact system on the left and an electromagnetic system on the right. The contact system consists of dynamic and static contacts and a vacuum arc extinguishing chamber, installed in a base made of insulating materials. The electromagnetic system adopts an energy-saving scheme of DC dual coil and dual winding. The vacuum arc extinguishing chamber adopts a new type of contact material for one-time sealing and discharging. The product has a compact structure, making it easy to assemble explosion-proof electromagnetic starters and switchgear.

6 Appearance and installation dimensions

The appearance and installation dimensions are shown in Figures 1 to 4 and Table 2.

Figure 1 CKJ5-125~160 Appearance and Installation Dimensions

Figure 2 CKJ5-250 Appearance and Installation Dimensions



Motor Control & Protection

CKJ5-125~630 Series vacuum AC contactor

Figure 3 CKJ5-400 Appearance and Installation Dimensions

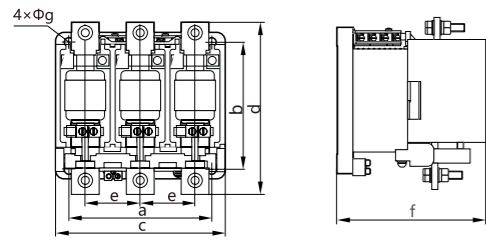


Figure 4 CKJ5-630 Appearance and Installation Dimensions

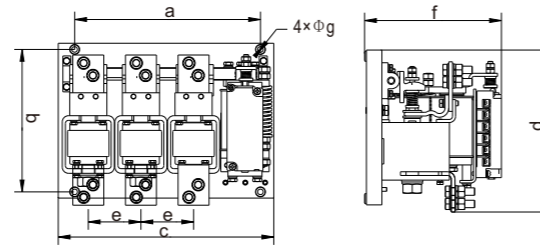


Table 2

Parameter Model	a	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