⚠ Warning

1. The product is strictly prohibited to be installed in an environment containing flammable and explosive gas, moisture condensation, and it is strictly prohibited to operate the product with wet hands.
2. When the product is working, it is strictly forbidden to touch the conductive part of the product.
3. When installing, repairing and maintaining the product, it must be carried out by professionals to ensure the line is powered off.
4. It is strictly forbidden for children to play with the product or packaging.
5. Sufficient space and safety distance should be reserved around the product installation.
6. Do not install it where the gas medium can corrode metal and damage insulation.
7. When the product is installed and used, the standard wire must be used and the power supply and load that meet the requirements must be connected.
8. In order to avoid dangerous accidents, the installation and fixing of the product must be carried out in strict accordance with the requirements of the manual.

9. After unpacking, check the product for damage and check the integrity of the item.
10. Installation and maintenance should be operated by personnel with professional qualifications.

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Catalog

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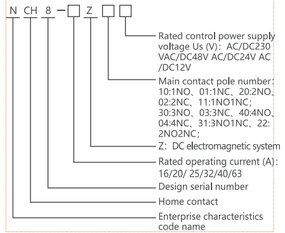
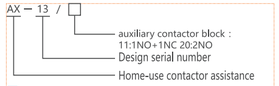
1 Main purpose and scope of application

NCH8-□Z series residential contactors (as contactors) are mainly suitable for AC and DC power systems with rated working voltage up to 400V and rated working current up to 63A,.under the AC-1/AC-7b utilization category (the Low-inductance load/resistance furnaces, household appliances and similar purposes) for remote switching and control circuits. The contactor is not used to break the short-circuit current, so it should be matched with short-circuit protection device when using it.

2 Series model specifications and their meaning





3 Normal use, installation and transportation conditions

3.1 Normal use conditions

- Ambient air temperature: the upper limit shall not exceed +50℃, and the lower limit shall not be lower than - 5 ℃. When the contactor is installed in the distribution box, spacers must be assembled on both sides to facilitate heat dissipation.
- Humidity: When the highest temperature is +40°C, the relative humidity of the air does not exceed 50%, and higher relative humidity is allowed at lower temperatures. When the monthly average minimum temperature is +20°C, the average maximum relative humidity of the month is 90%, and special measures should be taken for occasional condensation due to temperature changes.
- Operating conditions: When the ambient air temperature is -5°C~+40°C, the rated control power supply voltage Us is applied to the contactor attraction coil to make it heat up to a stable state, and the contactor should be at (85%~110%) It can be closed reliably at any voltage within the Us range; its release voltage is (20%~75%) Us

- Installation: the altitude does not exceed 2000 meters.
- Pollution grade: Class 2
- Installation category: Class II
- Protection grade: IP20

3.2 Installation conditions: TH35-7.5 type installation rail should be used for installation; vertical installation, the inclination between the installation surface and any direction should not exceed 5°; there should be no significant shock, vibration and conductive dust at the installation place.

3.3 Transportation conditions: The product storage and transportation environment should be dry and ventilated, without significant shock vibration, direct sunlight, rain, dust, chemical gas corrosion and other conditions.

4 Main technical parameters

Table 1 Main technical parameters

model		16A	20A	25A	32A	40A	63A
rated current In(A)	AC-7a/AC-1	16	20	25	32	40	63
	AC-7b/AC-3	6	7	9	12	18	25
Conventional heating current Ith(A)		32	32	32	32	63	63
Rated insulation voltage Ui(V)		500V					
Rated working voltage Ue (V)		250(1P、2P)/400(3P、4P)					
Number of main contacts	2P	1NO、1NC、1NO1NC、2NO、2NC					
	4P	3NO、3NC、2NO2NC、3NO1NC、4NO、4NC					

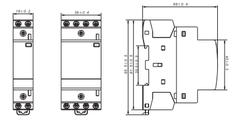
Continued Table 1

model			16A	20A	25A	32A	40A	63A
control power	AC-7a (AC-1)	250V	3.5	4.5	5.5	8	9	14
		400V	6	7.5	9.5	12	15	24
	AC-7b (AC-3)	250V	1.4	1.6	2	3	4	5.5
		400V	2.2	2.5	3.2	4.5	6	8
Rated control power supply voltage Us(V)			AC/DC12、24、48、110、230V					
Rated duty	intermittent work		30 times/h load factor 40%					
	eight-hour workday		Basic working system					
wiring (mm^2)	Control circuit	hard line	1.5~2.5			2×1.5		
		cord	1.5~2.5			2×2.5		
	Main circuit	hard line	1.5~6			6~25		
		cord	1.5~4			6~16		
torque (Nm)	Control circuit		0.8					
	Main circuit		0.8			3.5		

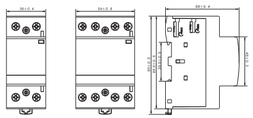
5 Structural features and working principle

When the coil is energized, the coil current generates a magnetic field, generating enough electromagnetic suction to grams Take the reaction force, engage the armature, and connect the contact, when the coil voltage disappears or the coil power The pressure is lowered to a certain value, that is, the magnetic flux generated due to the arture end face of the release voltage Reduce, the electromagnetic suction began to be less than the reaction spring, contact spring and other reaction force.

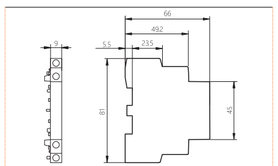
6 External and installation dimensions



Schematic diagram of NCH8-16Z, NCH8-20Z, NCH8-25Z, NCH8-32Z appearance and installation dimensions



Schematic diagram of NCH8-40Z, NCH8-63Z appearance and installation dimensions



AX-13/11 AX-13/20 Outline and Installation Dimension Diagram

7 Installation, commissioning and operation

7.1 Before installation, first check whether the actual use occasion meets the purpose and scope of application, technical parameters, normal working conditions and installation conditions of the contactor. When installing, pull down the stopper of the contactor, put the contactor on the installation rail, and then push the stopper up so that the contactor is fixed on the installation rail and cannot be loosened or dropped. When the contactor needs to be removed, the stopper can be pulled down to remove it.

7.2 Appropriate screwdrivers should be used when wiring the contactor. The wires should not be loosened or pulled out, and the exposed copper wires should not be exposed outside

the terminals. After checking that the wiring is correct, the coil should be powered on and off several times to check whether the product is reliable before it can be put into use.

8 Maintenance, maintenance, transportation and storage period

8.1 Maintenance and Maintenance

Remove dust daily; check whether the terminal screws are loose, and check whether the wires are damaged and aged.

Under the environmental conditions specified in the manual, please check before using the product that has been stored or stopped for half a year.

8.2 Transportation and storage period

The contactor shall not be attacked and dropped by rainwater during use, storage and transportation. Under the environmental conditions specified in the manual, please check before using the product that has been stored or stopped for half a year.

9 Warranty period and environmental protection and other laws and regulations

9.1 Warranty period

Under normal storage and transportation conditions and the product packaging or the product itself is intact, the warranty period of the product is 36 months from the date of production. The following situations are not covered by the warranty:

1) Damage caused by improper use, storage and maintenance by the user.

2) Damage caused by organizations or personnel not appointed by the company, or self-disassembly and maintenance.
3) The product has exceeded the warranty period.
4) Damage caused by force majeure.

9.2 ⚠ Environmental Protection

In order to protect the environment, when this product or its parts are scrapped, please dispose of it properly as industrial waste; or hand it over to a recycling station for classification, dismantling, recycling, etc. in accordance with relevant national regulations.

10 Product selection and ordering instructions

When selecting NCH8-□Z household contactor, the user should indicate the following content, if necessary, further indicate the conditions of use, or use requirements:

- Product name and model
- Rated operating current
- Number of main contacts
- Coil control supply voltage

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QC PASS

NCH8-□Z series
Residential Contactor
IEC/EN 60947-4-1

Check 01

Test date: Please see the packing

ZHEJIANG CHINT ELECTRICS CO.,LTD.

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NCH8-□Z series
Residential Contactor
User's Manual

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Standard: IEC/EN 60947-4-1