

9 Maintenance, care and precautions

9.1 Maintenance

Daily dust removal; Check whether the screws of each terminal are loose and whether the wires are damaged or aged.
If the environmental conditions specified in the manual are met, please check the products stored or stopped for half a year before use.

9.2 Precautions

After the product is put into normal operation, the test shall be conducted once a month and the test records shall be made.
The company does not assume the responsibility of "three guarantees" for the quality problems caused by improper installation and use and the burning of terminal blocks caused by improper wiring.

10 Warranty period, environmental protection and other legal provisions

10.1 Warranty period

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

- 1) Damage caused by improper use, storage and maintenance of users;
- 2) Damage caused by organizations or personnel not designated by the company, or self disassembly and maintenance;
- 3) The product exceeds the warranty period;
- 4) Damage caused by force majeure.

10.2 Environmental protection

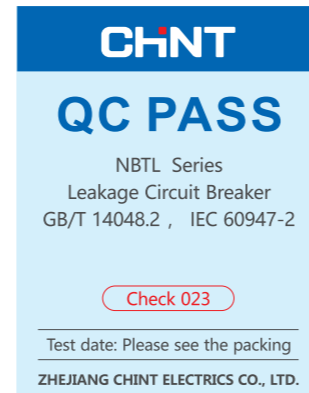
In order to protect the environment, when this product or its components are scrapped, please properly treat them as industrial wastes; Or it shall be handed over to the recycling station for classified disassembly, recycling and reuse according to relevant national regulations.

11 Instructions for Product Selection and Ordering

The product name, shell frame current, number of poles and quantity must be specified when ordering.

For example: residual current leakage circuit breaker, frame current 60A, pole number 2P, 100 pieces
NBTL-2P/60A 100 pcs

Tips: If the product fails, please contact our company directly and do not repair it yourself!



Manual of NBTL
French Series Leakage Circuit Breaker
User Instruction

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Manual of NBTL French Series Leakage Circuit Breaker User Instruction

Standard: GB/T 14048.2
IEC 60947-2

⚠ Safety Alert

- 1 It is strictly prohibited to install the product in an environment containing flammable and explosive gas and wet frost, and strictly operate the product by hand.
- 2 It is forbidden to touch the conductive part of the product during product operation.
- 3 When installing, maintaining and servicing the product, it must be ensured that the circuit is powered off and carried out by professionals.
- 4 Children are not allowed to play with products or packages.
- 5 Sufficient space and safety distance shall be reserved around the product installation.
- 6 Do not install in the place where the gas medium can corrode metal and damage insulation.
- 7 When the product is installed and used, the standard wires must be applied and the power supply and load that meet the requirements must be connected.
- 8 In order to avoid dangerous accidents, the installation and fixation of products shall be carried out in strict accordance with the requirements of the instructions.
- 9 After the package is removed, the product shall be checked for damage and the integrity of the items shall be checked.

1 Scope of application

NBTL circuit breaker with residual current protection is a high-performance adjustable circuit breaker with triple protection functions of leakage, overload and short circuit. It is applicable to AC 50/60Hz and rated voltage 230/240V. Places with rated current of 60A and below. It is mainly used for electric leakage, overload and short circuit protection of lighting, meter boxes, distribution lines and equipment of residential buildings, office buildings and similar buildings, and can also be used for infrequent operation and switching of lines under normal conditions.

2 The product standard

GB/T 14048.2 IEC 60947-2

3 Product features

Compact structure, multiple rated current ranges can be selected, which can solve the problem of frequent replacement of circuit breakers due to increasing load.

4 Main technical parameters

List 1						
Poles	Rated voltage (V)	Frequency (Hz)	Shell frame grade (A)	Rated current (A)	Breaking capacity (A)	Electrical life (times)
1P+N	230V/ 240V	50Hz/ 60Hz	60	15/5/10/15/ 30/10/15/20 /25/30 45/15/30/45 60/30/40/50 /60	6000	1500
						8500

Note: breaking capacity 6000A; rated operation breaking capacity Ics=rated limit breaking capacity Icu=6000A

List 2					
Residual current (mA)	Remaining protection electric life (times)	Setting value of short-circuit protection	Type of residual current release	Using type	Rated impulse withstand voltage (KV)
100, 300, 500	3000	10In	ELM	A	6
					AC

Note: ELM is the electromagnetic tripping type product used for the residual current release of the product; Type A, i.e. product short circuit protection is non delay protection; The AC type of residual current protection is used to protect AC leakage.

List 3			
Reference temperature	Current multiple	Current name	Action time
+40°C	non tripping current	1.05I _n	≥1h
	tripping current	1.3I _n	<1h

5 Series model specification and its meaning

NBTL-2P/□
NBTL: company model
2P: 1P+N
□: rated current

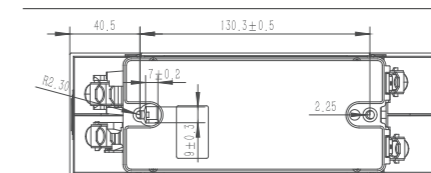
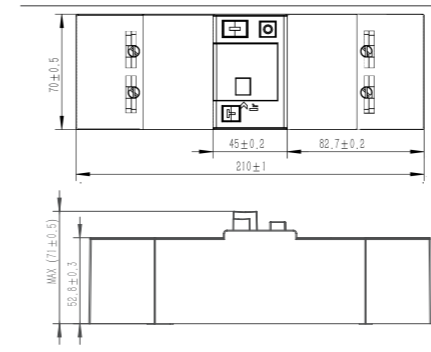
6 Normal installation and working conditions

- a) Working environment of NBTL products is -5°C~40 °C, humidity ≤ 95%;
- b) The altitude of the installation site shall not exceed 2000m; Note: If the altitude of the installation site exceeds 2000m, the use of the circuit breaker shall be negotiated with the manufacturer.
- c) Special measures shall be taken for occasional condensation due to temperature change;
- d) Installation position: no obvious shaking, impact vibration, explosive,

corrosive gas, rain and snow;

- e) Installation conditions: the external magnetic field of the installation site shall not exceed 5 times of the geomagnetic field in any direction;
- f) Installation category: II or III;
- g) Pollution level: 3;
- h) Transportation and storage conditions: the product storage and transportation environment shall be dry and ventilated, free from significant impact and vibration, direct sunlight, rain, dust, chemical gas corrosion, etc.

7 Boundary and installation dimensions (unit: mm)



M4 screws are recommended to be used as the mounting screws, and the mounting dimensions are shown in the dimension drawing above.

Table of sectional area of product wire connection

Rated current In/A	6A < In ≤ 13A	13A < In ≤ 20A	20A < In ≤ 25A	25A < In ≤ 32A	32A < In ≤ 50A	50A < In ≤ 63A
Sectional area of conductor mm ²	1	1.5	2.5	4	6	10

8 Instructions for changing rated current gear

- a. The default setting of the circuit breaker at the factory is the maximum current gear;
- b. When replacing the rated current gear, please ensure that the circuit breaker is disconnected;
- c. By observing the corresponding current indicating window, remove the gear screw at the inlet end with a slotted screwdriver (Fig. 1);
- d. Remove the protective cover of the incoming line end (Fig. 2);
- e. Remove the middle cover, select the required current gear, and adjust the current gear (Figure 3);
- f. Then install the middle cover and protective cover, and screw the gear screw to the corresponding position to ensure that the screw is tightened, otherwise the product will jump early