

NF2 Series  
Switch-disconnector

---

# User Instruction

---

## 安全警示

---

- 1 It is strictly forbidden to install the product in the environment containing inflammable and explosive gas and wet condensation, and it is strictly forbidden to operate the product with wet hands.
- 2 It is strictly forbidden to touch the conductive part of the product during product operation.
- 3 When repairing and maintaining the product, make sure that the product is powered off.
- 4 Children are not allowed to play with products or packaging.
- 5 Sufficient space and safe distance should be reserved around the product installation.
- 6 Do not install in the place where the gas medium can corrode the metal and damage the 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 product must be installed and fixed in strict accordance with the requirements of the manual.
- 9 After the package is removed, the product should be checked for damage and the integrity of the items should be counted.
- 10 Installation, maintenance and repair should be operated by qualified personnel.
- 11 Pay attention to regularly tighten the terminal screw or bolt, and remove the dust deposited on the product.
- 12 Foreign matters should be prevented from falling into the product.

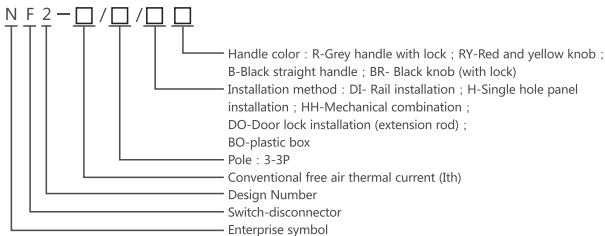
## 1 Main purpose and application

NF2 series switch-disconnector (hereinafter referred to as switch), which is mainly used in electrical circuits with AC 50Hz or 60Hz, rated operational voltage up to 690V, and rated operational current up to 125A. The switch main function is isolation and breaking. It can be used to isolate failure equipment or outage maintenance. It can be used as the main switch of machine tools, fans, and pumps, and can also be used as the start-stop switch of small power motors.

Standards compliant : IEC/EN 60947-3, GB/T 14048.3

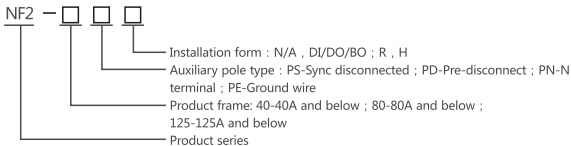
## 2 Model specifications and meaning

### 2.1 Load switch model and meaning

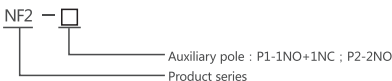


Note : 4-pole produced by means of 3 poles + Auxiliary Pole. s are realized

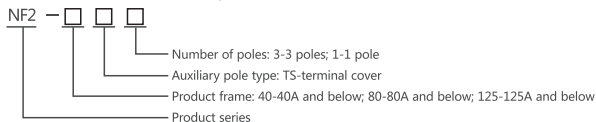
### 2.2 Auxiliary pole model and meaning



### 2.3 Auxiliary pole model and meaning



## 2.4 Terminal cover model and meaning



## 3 Normal using, installation, transportation and storage conditions

### 3.1 Normal using conditions

3.1.1 Ambient air temperature:  $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$ , and the average temperature within 24h cannot exceed  $+35^{\circ}\text{C}$ .

3.1.2 Altitude: The altitude of the installation site cannot exceed 2000m.

3.1.3 Humidity: When the highest temperature is  $+40^{\circ}\text{C}$ , the relative humidity of the air cannot exceed 50%, and higher relative humidity is allowed at lower temperatures. For example, if humidity reach 90% at  $20^{\circ}\text{C}$ , special handle should be taken for the occasional condensation due to temperature changes.

3.1.4 Pollution level: Level 3.

### 3.2 Installation conditions

3.2.1 Install in a place where there is no significant shaking, shock and vibration, and no rain or snow; without explosion risk; without risk of sufficient to corrode metal and damage insulation (including conductive dust);

3.2.2 Installation category: Class III.

### 3.3 Transport and storage conditions

3.3.1 The following temperature ranges are suitable for transportation and storage: between  $-25^{\circ}\text{C}$  and  $+55^{\circ}\text{C}$ , and up to  $+70^{\circ}\text{C}$  in a short time (24h)

Note: When the above-mentioned normal use, installation, transportation and storage conditions are exceeded, the user should reach a special agreement with the company.

## 4 Main technical parameters and performance

4.1 The main parameters of the switch are shown in Table 1 and Table 2;

**Table 1 Main technical parameters**

Model		NF2						
Frame grade		NF2-40		NF2-80		NF2-125		
Rated insulation voltage $U_i$ (V)		800						
Rated impulse withstand voltage $U_{imp}$ (kV)		8						
Conventional free air thermal current $I_{th}$ (A)		25	32	40	63	80	100	125
Rated operational current $I_e$ (A, AC-23A)	415V	25	32	40	63	80	100	125
	500V	25	25	25	63	63	80	100
	690V	25	25	25	40	40	63	63

Table 1 (Continued)

Model	NF2		
Rated short-time withstand current $I_{cw}$ , 1s (kA)	1.26	1.5	2.75
Rated short-time withstand current $I_{cm}$ (kA)	1.8	2.1	3.9
Number of poles	3P、3P+N		
Wiring capacity (hard wire, cross-sectional area) (mm <sup>2</sup> )	1.5~16	2.5~35	10~70
Tightening torque of terminal screws (N.m)	1.2~1.4	2.5~2.8	3.5~4
Electrical life (times)	2000		
Mechanical life (times)	100000		
Protection level	IP20 , IP65 ( With protective shell )		

Table 2 Main technical parameters of HH mechanical assembly

Model	NF2-HH (mechanical combination)									
specification	IM2 mechanical combination system: use 6-8 pole combination			IM31 mechanical interlocking structure: for 3/4 pole I-II-II-II			IM32 mechanical interlocking mechanism: used for 3/4 pole I-O-II conversion			
Rated insulation voltage $U_i$ (V)	800									
Rated impulse withstand voltage $U_{imp}$ (kV)	8									
Conventional free air thermal current $I_{th}$ (A)	63	80	100	63	80	100	63	80	100	
Rated operational current $I_e$ ( A , AC-23A )	415V	63	80	80	63	80	80	63	80	80
	500V	63	63	63	63	63	63	63	63	63
	690V	40	40	40	40	40	40	40	40	40
Rated short-time withstand current $I_{cm}$ (kA)	1.5									
Number of poles	6、8									
Wiring capacity (hard wire, cross-sectional area) (mm <sup>2</sup> )	2.5~35									
Tightening torque of terminal screws (N.m)	2.5~2.8									
Electrical life (times)	2000									
Mechanical life (times)	100000									

## 5 Structural features and working principle

5.1 The switch is mainly composed of a handle, an operating mechanism, a contact system, a shell, and accessories. The operating mechanism adopts spring energy storage, the connection and breaking speed has nothing to do with the speed of the operating handle, ensuring the connection and breaking capacity of the product; the contact system adopts a double-breakpoint bridge structure; the wiring method adopts the wire frame method; the installation method adopts the front panel Installation (rail installation, screw installation), panel installation; the shell is made of flame-retardant reinforced polyamide material, which has good flame-retardant performance, dielectric performance and carbonization resistance.

5.2 The switch 3-pole body adds some standard accessories and can be combined into a 6/8-pole load switch or 3/4-pole transfer switch, and a neutral pole, grounding pole or auxiliary contact can also be added;

## 6 Shape and installation dimensions and weight

The outline and installation dimensions of the switch are shown in Figure 1 to Figure 25. See the box sticker for model specifications and weight.

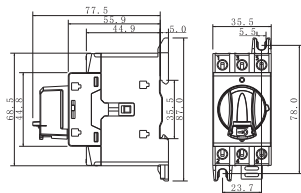


figure 1 NF2-40/DI

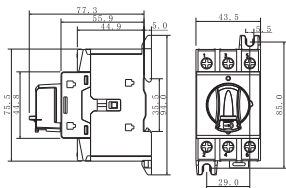


figure 2 NF2-80/DI

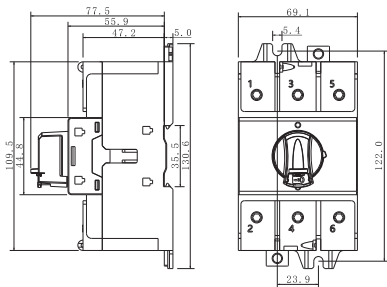


figure 3 NF2-125/DI

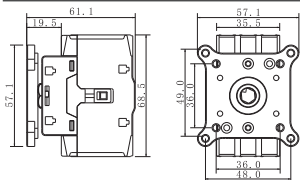


figure 4 NF2-40/H

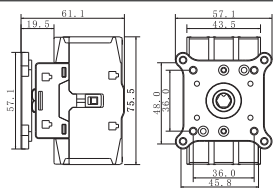


figure 5 NF2-80/H

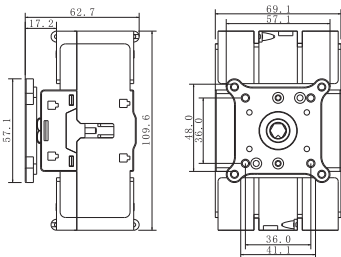


figure 6 NF2-125/H

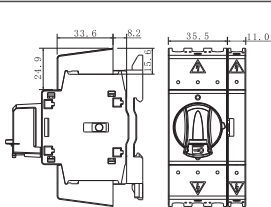


figure 7 NF2-40/TS

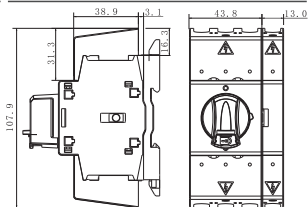
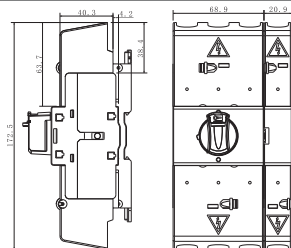
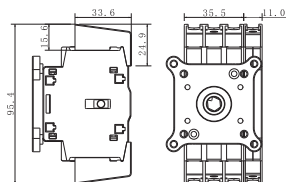


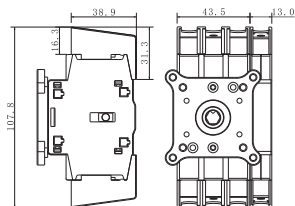
figure 8 NF2-80/TS



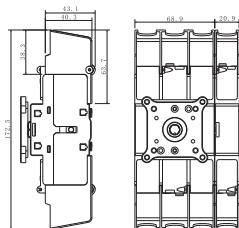
**figure 9 NF2-125/TS**



**figure 10 NF2-40/HTS**



**figure 11 NF2-80/HTS**



**figure 12 NF2-125/HTS**



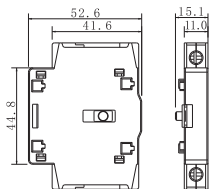


figure 13 NF2-40/PN\PS\PD\PE

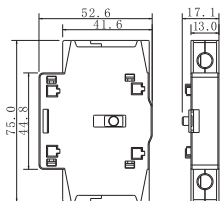


figure 14 NF2-80/PN\PS\PD\PE

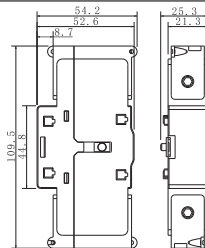


figure15 NF2-125/PN\PS\PD\PE

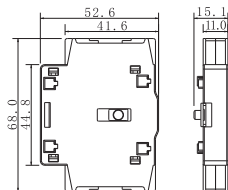


figure16 NF2-40/PNR\PSR\PDR\PER

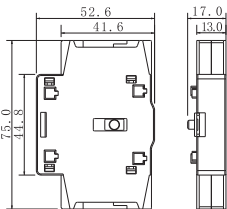


figure17 NF2-40/PNR\PSR\PDR\PER

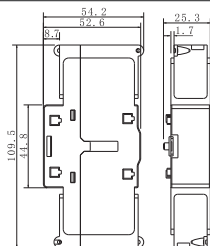


figure 18 NF2-125/PSR/PDR/PER

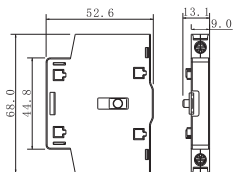


figure 19 NF2-P1, P2

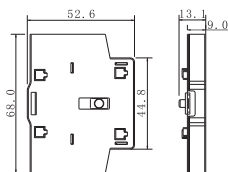


figure 20 NF2-P1R, P2R

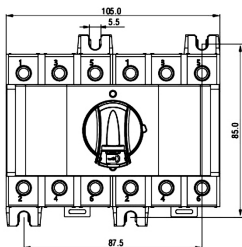


figure 21 NF2-HH

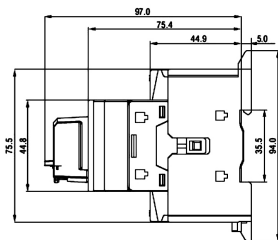


figure 22 NF2-HH

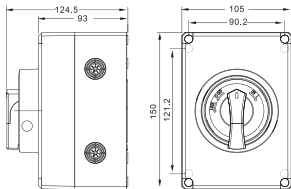


figure 23 NF2-40/BO

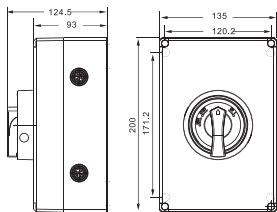


figure 24 NF2-80/BO

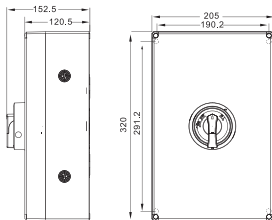


figure 25 NF2-125/BO

## 7 Installation, commissioning and operation

### 7.1 Check before installation

7.1.1 The technical data on the nameplate meets actual requirements.

7.1.2 Appearance: clean, intact parts, no loose fasteners.

7.1.3 Check the operating performance: perform 3 times of closing and opening operations, the product action is flexible and reliable; the handle points to the "ON" position, all contacts are in the on state; the handle points to the "OFF" position, and all the contacts are in the off state .

### 7.2 Installation method and precautions

7.2.1 Screw installation: confirm that the switch is in the off state → open a hole on the mounting plate and tap the screw → connect the switch and the mounting plate with screws and tighten

7.2.2 Guide rail installation: confirm that the switch is off → the guide rail is fixed in the cabinet → install the switch as shown in Figure 26

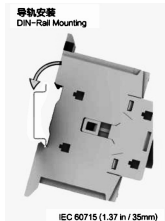


Figure 26 Guide rail installation sketch

7.2.3 Panel installation: confirm that the switch is in the off state → the mounting plate is open → the screw assembly connects the body, the installation panel and the installation plate → the name plate → the cover → the handle → tighten the screw. As shown in Figure 27

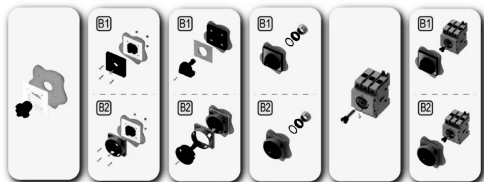


Figure 27 Panel installation sketch

7.2.4 Terminal cover and lock installation: as shown in Figure 28, 29



Figure 28 Installation diagram of terminal cover

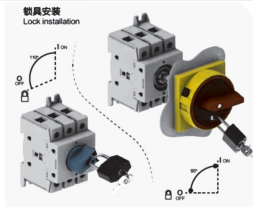


Figure 29: Schematic diagram of lock installation

7.2.5 Additional auxiliary contact/additional fourth pole installation: as shown in Figure 30, 31

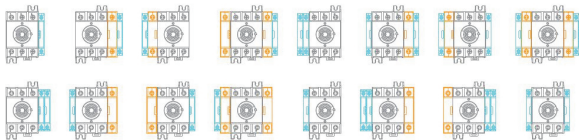


Figure 30 Schematic diagram of accessory pole/auxiliary contact matching

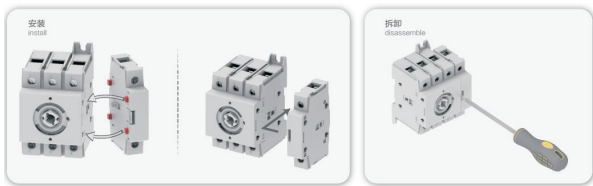


Figure 31 Schematic diagram of attachment pole installation

## 8 Precautions for maintenance, maintenance and storage period

### 8.1 Daily maintenance

Take appropriate measures to remove dust, water vapor, conductive dust and corrosive substances. Non-professionals of the company are not allowed to disassemble and repair.

### 8.2 Maintenance and maintenance during operation

8.2.1 Confirm that the wiring terminals are in good contact, there is no looseness, and the wire connection is reliable.

8.2.2 During use, all parts of the product should be checked frequently to ensure that no moving parts are stuck and fasteners are not loosened to ensure safety and reliability. If the parts are damaged, they should be replaced in time.

### 8.3 Maintenance cycle

It is recommended to check and maintain it once a month.

### 8.4 Long-term use and storage period

The product should be disconnected when not in use, and should be stored in a ventilated, dry, non-corrosive gas warehouse. The product or packaging should not be placed directly on the ground to avoid damage.

## **9** Warranty period and environmental protection and other legal regulations

### **9.1** Warranty period

Under normal storage and transportation conditions, the product packaging or the product itself is intact, and the product has a warranty period of 24 months from the date of production. The following conditions are not covered by the warranty:

- 1) Damage caused by improper use, storage and maintenance by the user.
- 2) Damage caused by the organization or personnel not designated by the company, or the user's disassembly, assembly 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 components are scrapped, please dispose of them properly as industrial waste; or hand them to a recycling station for classification, disassembly, recycling, etc. in accordance with relevant national regulations.

## **10** Ordering instructions

**10.1** State the model, number, delivery time, place, unit and consignee when ordering;

**10.2** Order example: NF2-25/3HRY 10 units. NF2-25 3-pole single-hole panel mounting 10 sets of red and yellow knobs.

10.2.1 If you need to order a 4-pole product, it should include the main body + additional poles: such as NF2-25/3DIR 10 sets + NF2-40PS 10 sets. NF2-25 3-pole guide rail installation Blue knob 10 sets +40 frame frame Synchronously disconnect 10 sets of additional poles.

10.2.2 If you need to order a 4-pole product + auxiliary, it should include the main body + additional pole + auxiliary pole: such as NF2-32/3DOB 10 sets + NF2-40PD 10 sets + NF2-P1 10 sets. NF2-25 3-pole door lock installation Black straight handle 10 sets +40 shell frame 10 sets of pre-disconnected additional poles + 10 sets of NO1NC auxiliary.

---

**CHNT**

**QC PASS**

NF2 Series  
Switch-disconnector  
IEC 60947-3

**Check 08**

---

Test date: Please see the packing

---

**ZHEJIANG CHINT ELECTRICS CO., LTD.**

---

**CHINT**

CHINT ELECTRICS

NF2 Series  
Switch-disconnector  
User Instruction

**Zhejiang Chint Electrics Co., Ltd.**

Add: No.1, CHINT Road, CHINT Industrial Zone, North Baixiang,  
Yueqing, Zhejiang 325603, P.R.China

E-mail: [global-sales@chint.com](mailto:global-sales@chint.com)

Website: <http://en.chint.com>

