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# **NDC3/NDC3GV/NDC3N-40~95 系列 接触器使用说明书 NDC3/NDC3GV/NDC3N-40~95 Series AC Contactor Using Instruction**

**Nader** 良信电器

## 1. 适用范围与用途

### 1. Application Scope and Purpose

NDC3(N, GV)-40(11、11S)/50(11、11S)/65(11、11S)/8011(11、11S)/95(11、11S)交流接触器主要用于交流 50/60Hz, 额定绝缘电压为 1000V, 在 AC-3 使用类别下额定电压为 415V 时额定工作电流为 40~95A 的交流电路中, 用于频繁启动和控制交流电动机; 可逆接触器可以控制电动机的正反转和反接制动; 并可以加装适当的过载继电器组成电磁起动器、以保护可能发生的过负荷电路。

The NDC3(N, GV)-40(11、11S)/50(11、11S)/65(11、11S)/8011(11、11S)/95(11、11S)AC contactors have the AC 50/60Hz and the rated insulation voltage of 1000V, and are mainly used for the AC circuit with the rated voltage of 415V and the rated working current of 40~95A as well as the AC-3 utilization category for frequently starting & controlling AC motors. Reversible contactors can control the forward and reverse braking of the motors; can be installed with the appropriate overload relays to form the magnetic starters, to protect the circuit in which overload may occur.

## 2. 应用范围

### 2. Scope of Application

#### (1)、适用环境

#### (1)、Applicable environment

标准使用环境温度:  $-25^{\circ}\text{C} \sim +60^{\circ}\text{C}$ ;

Standard operating ambient temperature:  $-25^{\circ}\text{C} \sim +60^{\circ}\text{C}$ ;

极限使用环境温度:  $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ;

Ultimate operating ambient temperature:  $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ;

存储温度:  $-60^{\circ}\text{C} \sim +80^{\circ}\text{C}$ ;

Storage temperature:  $-60^{\circ}\text{C} \sim +80^{\circ}\text{C}$ ;

正常使用海拔高度:  $\leq 3000$  米;

Normal operating altitude:  $\leq 3,000\text{m}$ ;

极限使用海拔高度:  $\leq 5000$  米;

Ultimate operating altitude:  $\leq 5,000\text{m}$ ;

3000~5000 米降容系数/3000~5000m Derating Factor

|                                   | 3500m | 4000m | 4500m | 5000m |
|-----------------------------------|-------|-------|-------|-------|
| 电压降容系数<br>Voltage Derating Factor | 0.9   | 0.8   | 0.7   | 0.6   |
| 电流降容系数<br>Current Derating Factor | 0.92  | 0.9   | 0.88  | 0.86  |

环境湿度要求:

Environmental humidity requirements:

最高温度为 $+40^{\circ}\text{C}$ 时, 空气的相对湿度不超过 50%, 在较低的温度下可以允许有较高的相对湿度, 对于温度变化偶尔产生的凝露应采取措施。

The relative air humidity at a maximum temperature of  $+40^{\circ}\text{C}$  should not exceed 50%. A higher relative humidity is allowed at a lower temperature. Measures should be taken to address occasional condensing due to temperature fluctuation.

#### (2)、污染等级

#### (2)、Pollution grade

3 级

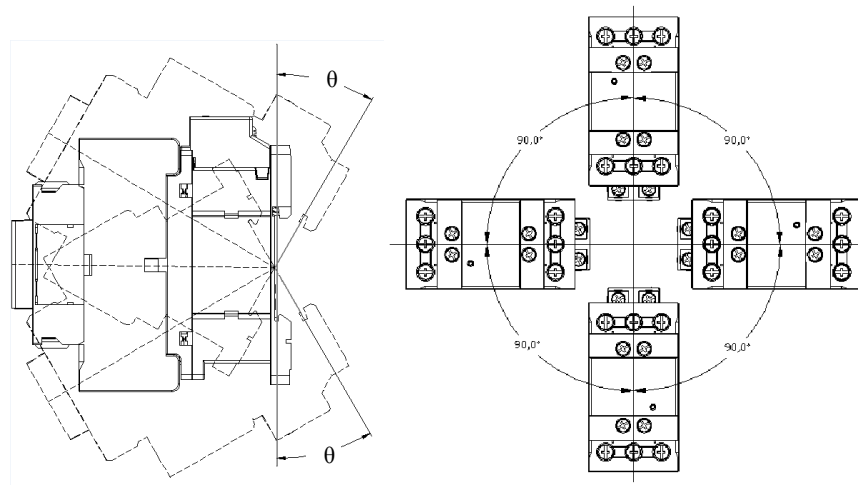
Grade 3

(3)、安装方向

(3)、Installation direction

垂直安装，安装面与垂直面的倾斜度为  $\theta$ ：标准安装  $\pm 5^\circ$ ，极限安装  $\pm 30^\circ$ 。

For vertical installation, the gradient between the installation surface and the vertical plane is  $\theta$ :  $\pm 5^\circ$  for the standard installation,  $\pm 30^\circ$  for the ultimate installation.



(4)、安装及拆卸方式

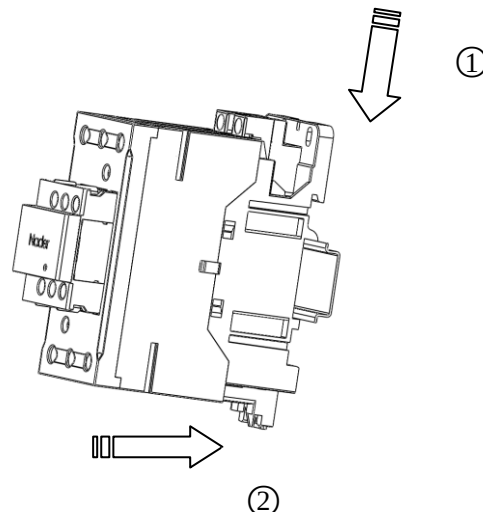
(4)、Installation and disassembling modes

●安装：

● Installation:

将接触器放在 TH35 或 TH75 标准卡轨上用力按下，当听到“啪”的响声时，说明接触器已经正确安装到卡轨上了，轻微摇晃并推动接触器，可以在卡轨上移动到适当位置。如果不用卡轨安装，也可以用螺钉将接触器固定在所需要的位置上。

Press the contactor hardly onto the TH35 or TH75 standard card rail. When you hear a “Click” sound, it indicates that the contactor has been properly installed onto the card rail. Gently shake and push the contactor to the appropriate position. If not installed with a card rail, the contactor can be fixed on the desired position with screws.

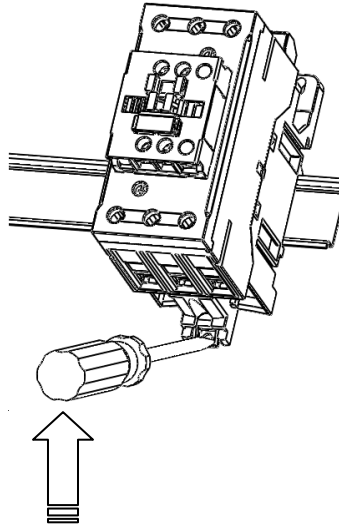


●拆卸:

● Dismantling:

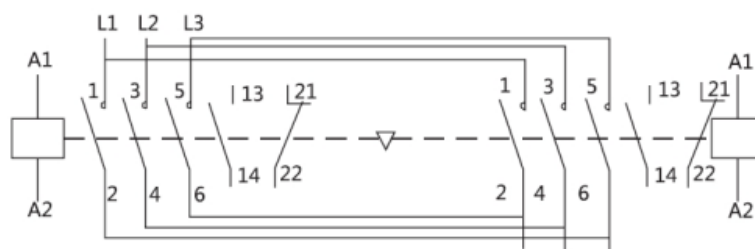
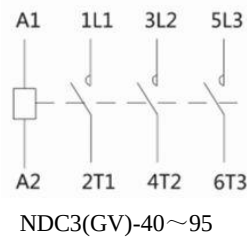
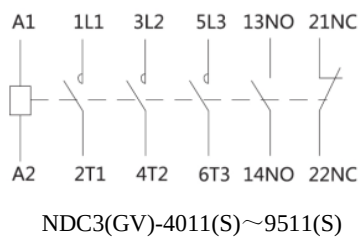
用一字螺丝刀将导轨限制件撬起, 即将接触器从卡轨上取下

Pry the guide rail limiter up with a flathead screwdriver to remove the contactor from the card rail



3.接线图

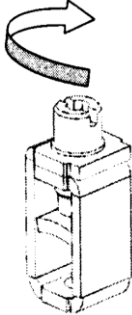
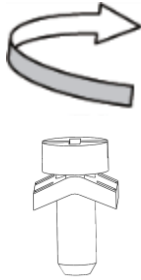
3. Wiring Diagram



NDC3N-4011~9511

#### 4.接线能力

#### 4. Connection Capacity

| 主端子<br>Main terminal                                                              | 辅助（线圈）端子<br>Auxiliary (coil) terminal                                                                                               | 硬线<br>Hard wire                                                                                         |                  | 软线<br>Soft wire                                                                                         |                  | 冷压端头软线<br>Cold-pressed end cord                                                                         |                  | 十字螺钉<br>Crosshead screwdriver                                                                    | 一字螺钉<br>Flathead screwdriver                                                                     | 六角螺钉<br>Hexagon screwdriver                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
|  |                                                    | 一根<br>One                                                                                               | 两根<br>Two        | 一根<br>One                                                                                               | 两根<br>Two        | 一根<br>One                                                                                               | 两根<br>Two        |                                                                                                  |                                                                                                  |                                                                                                 |
|                                                                                   |                                                                                                                                     | <br>[mm <sup>2</sup> ] |                  | <br>[mm <sup>2</sup> ] |                  | <br>[mm <sup>2</sup> ] |                  | <br>[#] [N.m] | <br>[Φ] [N.m] | <br>[#][N.m] |
| 主端子<br>Main terminal                                                              | NDC3(N, GV)-40(11, 11S)<br>NDC3(N, GV)-50(11, 11S)<br>NDC3(N, GV)-65(11, 11S)<br>NDC3(N, GV)-80(11, 11S)                            | 1-35                                                                                                    | 1-35<br>1-25     | 1-35                                                                                                    | 1-35<br>1-25     | 1-35                                                                                                    | 1-35<br>1-25     | —                                                                                                | —                                                                                                | 4#<br>4N.m                                                                                      |
|                                                                                   | NDC3(N, GV)-95(11, 11S)                                                                                                             | 2.5-70                                                                                                  | 2.5-70<br>2.5-50 | 2.5-70                                                                                                  | 2.5-70<br>2.5-50 | 2.5-70                                                                                                  | 2.5-70<br>2.5-50 | —                                                                                                | —                                                                                                | 4#<br>6N.m                                                                                      |
| 辅助（线圈）端子<br>Auxiliary (coil) terminal                                             | NDC3(N, GV)-40(11, 11S)<br>NDC3(N, GV)-50(11, 11S)<br>NDC3(N, GV)-65(11, 11S)<br>NDC3(N, GV)-80(11, 11S)<br>NDC3(N, GV)-95(11, 11S) | 1-4                                                                                                     |                  | 0.75-2.5                                                                                                |                  | 0.75-2.5                                                                                                |                  | 2#<br>1.2 N.m                                                                                    | Φ6<br>1.2 N.m                                                                                    | —                                                                                               |

#### 5.线圈特性

#### 5. Coil Characteristics

|                                                                                     |                                                                                                  |              |                                                                                      |                                                                                       |              |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------|
|  |                                                                                                  |              |  |  |              |
| 控制电压范围<br>Control voltage range                                                     |                                                                                                  |              | V                                                                                    | 24~440V 50/60Hz                                                                       | 24~250V      |
| 动作特性<br>Action characteristics                                                      | 吸合<br>Pull-in                                                                                    |              | V                                                                                    | 0.85Us~1.1Us                                                                          | 0.85Us~1.1Us |
|                                                                                     | 释放<br>Release                                                                                    |              | V                                                                                    | 0.2Us~0.6Us                                                                           | 0.1Us~0.6Us  |
| 功耗 20℃<br>Power consumption 20℃                                                     | NDC3(N、GV)-40(11、11S)<br>NDC3(N、GV)-50(11、11S)<br>NDC3(N、GV)-65(11、11S)<br>NDC3(N、GV)-80(11、11S) | 动作<br>Action |                                                                                      | ≤200VA                                                                                | ≤70W         |
|                                                                                     |                                                                                                  | 保持<br>Hold   |                                                                                      | ≤17VA                                                                                 | ≤3W          |
|                                                                                     | NDC3(N、GV)-95(11、11S)                                                                            | 动作<br>Action |                                                                                      | ≤300VA                                                                                | ≤90W         |
|                                                                                     |                                                                                                  | 保持<br>Hold   |                                                                                      | ≤29VA                                                                                 | ≤3W          |

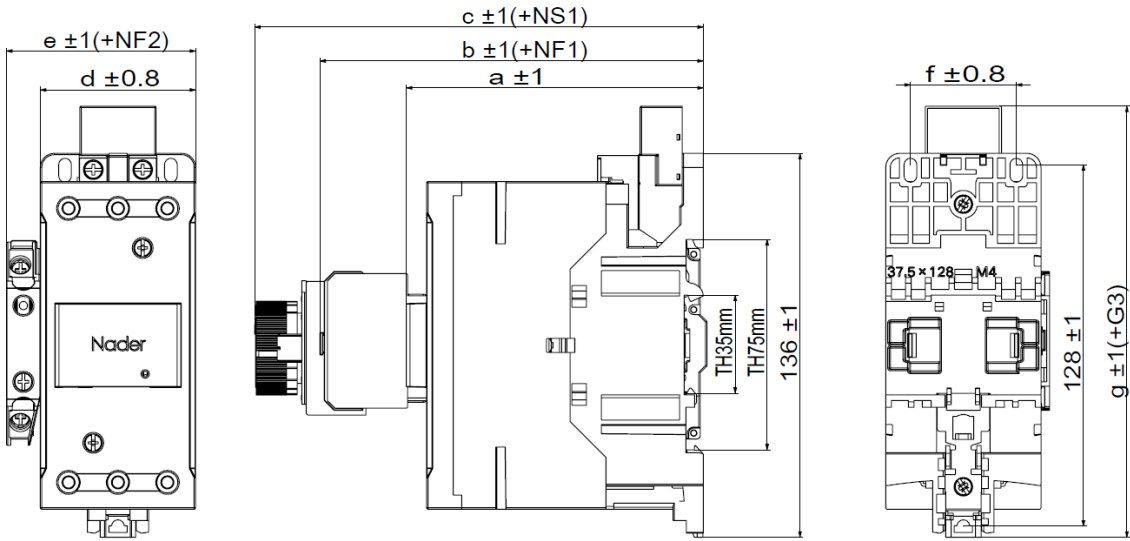
接触器能效等级见下表：

See the table below for the energy efficiency grades of the contactor:

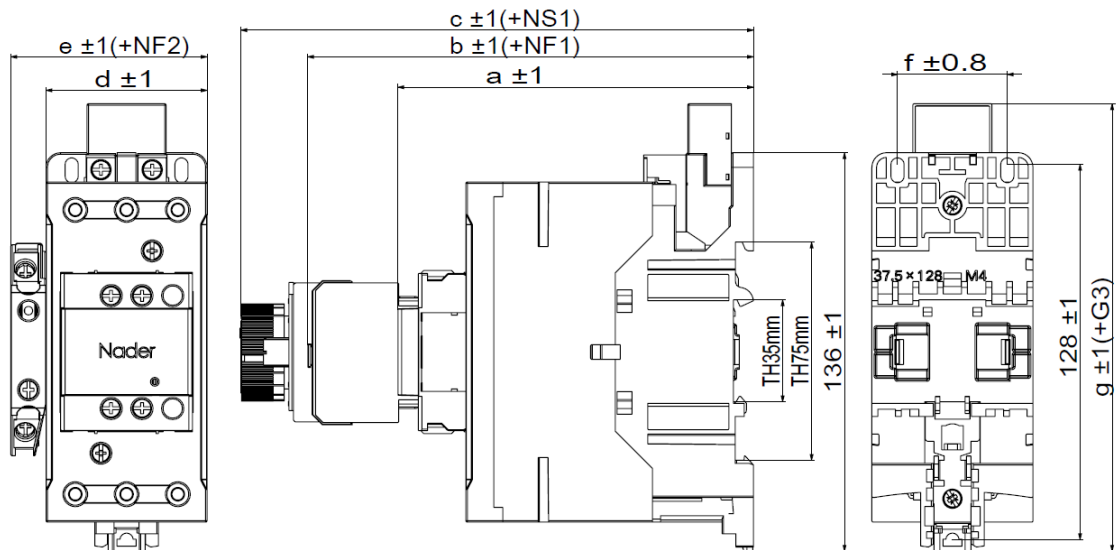
| 产品型号<br>Product model                                                                                 | 吸持功率<br>Pull-in power | 能效等级<br>Energy efficiency grades |
|-------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|
| NDC3(N)-40(11、11S)<br>NDC3(N)-50(11、11S)<br>NDC3(N)-65(11、11S)<br>NDC3(N)-80(11、11S)                  | 17VA                  | 2 级<br>Grade 2                   |
| NDC3(N)-95(11、11S)                                                                                    | 29VA                  | 2 级<br>Grade 2                   |
| NDC3GV-40(11、11S)<br>NDC3GV-50(11、11S)<br>NDC3GV-65(11、11S)<br>NDC3GV-80(11、11S)<br>NDC3GV-95(11、11S) | 3W                    | 2 级<br>Grade 2                   |

6.外形及安装尺寸

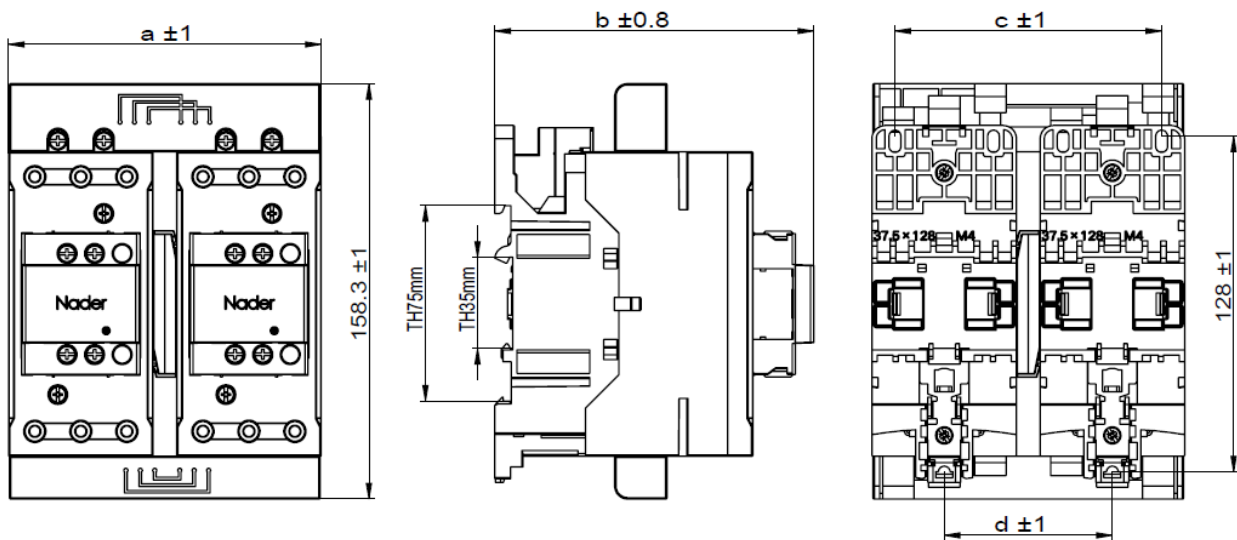
6. Outline and Installation Dimensions



| 型号           | a     | b     | c     | d  | e  | f    | g     |
|--------------|-------|-------|-------|----|----|------|-------|
| NDC3-40~80   | 105.2 | 136   | 159   | 55 | 67 | 37.5 | 152.7 |
| NDC3-95      | 115.5 | 146   | 169   | 70 | 82 | 60   | 152.7 |
| NDC3GV-40~80 | 111.7 | 142.4 | 165.5 | 55 | 67 | 37.5 | -     |
| NDC3GV-95    | 123.9 | 154.6 | 177.7 | 70 | 82 | 60   | -     |



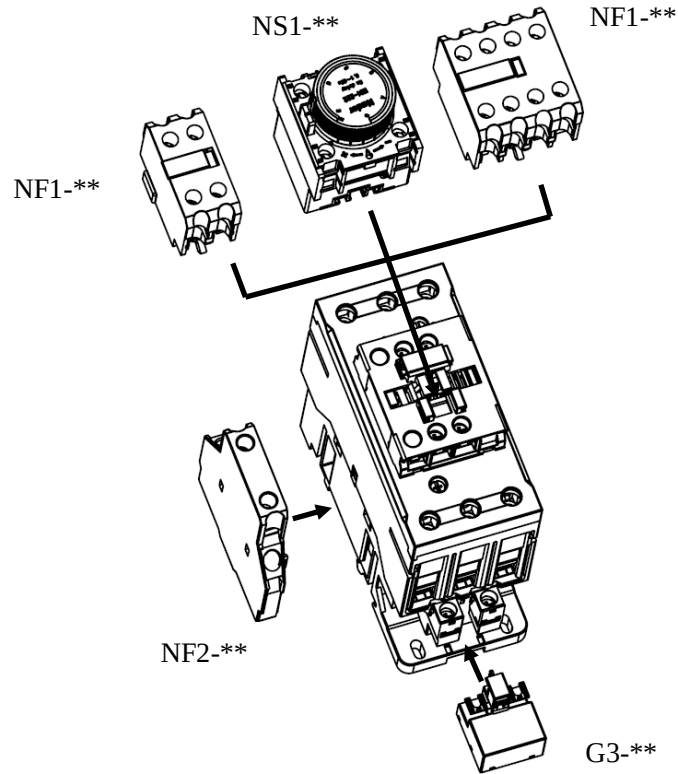
| 型号                     | a     | b     | c     | d  | e  | f    | g     |
|------------------------|-------|-------|-------|----|----|------|-------|
| NDC3-4011(S)~8011(S)   | 121.5 | 152   | 175   | 55 | 67 | 37.5 | 152.7 |
| NDC3-9511(S)           | 132   | 163   | 186   | 70 | 82 | 60   | 152.7 |
| NDC3GV-4011(S)~8011(S) | 127.9 | 158.7 | 181.8 | 55 | 67 | 37.5 | -     |
| NDC3GV-9511(S)         | 140.6 | 171.4 | 194.5 | 70 | 82 | 60   | -     |



| 型号              | a   | b     | c     | D  |
|-----------------|-----|-------|-------|----|
| NDC3N-4011~8011 | 119 | 121.4 | 101.5 | 64 |
| NDC3N-9511      | 149 | 132   | 139   | 79 |

## 7.附件

### 7. Accessories



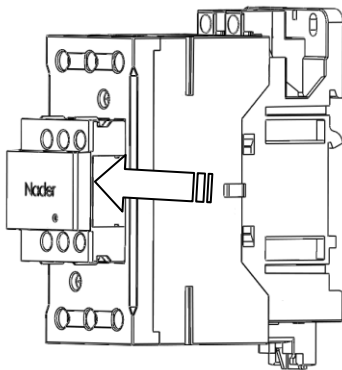
|              |         |             |
|--------------|---------|-------------|
| NF1-02       |         | 2"NC"       |
| NF1-11       |         | 1"NO"+1"NC" |
| NF1-20       |         | 2"NO"       |
| NF1-04       |         | 4"NC"       |
| NF1-13       |         | 1"NO"+3"NC" |
| NF1-22       |         | 2"NO"+2"NC" |
| NF1-31       |         | 3"NO"+1"NC" |
| NF1-40       |         | 4"NO"       |
| NF2-11       |         | 1"NO"+1"NC" |
| NF2-20       |         | 2"NO"       |
| NS1-220      | 0.1~3S  | On-delay    |
| NS1-222      | 0.1~30S | On-delay    |
| NS1-224      | 10~180S | On-delay    |
| NS1-320      | 0.1~3S  | Off-delay   |
| NS1-322      | 0.1~30S | Off-delay   |
| NS1-324      | 10~180S | Off-delay   |
| G3-01R/C3-40 |         | AC24~48V    |
| G3-03R/C3-40 |         | AC110~230V  |
| G3-04R/C3-40 |         | AC380~415V  |
| G3-10R/C3-40 |         | AC440V      |
| G3-01K/C3-40 |         | AC24~48V    |
| G3-03K/C3-40 |         | AC110~230V  |



|              |            |
|--------------|------------|
| G3-11K/C3-40 | AC380~440V |
| G3-01R/C3-95 | AC24~48V   |
| G3-03R/C3-95 | AC110~230V |
| G3-04R/C3-95 | AC380~415V |
| G3-10R/C3-95 | AC440V     |
| G3-01K/C3-95 | AC24~48V   |
| G3-03K/C3-95 | AC110~230V |
| G3-11K/C3-95 | AC380~440V |

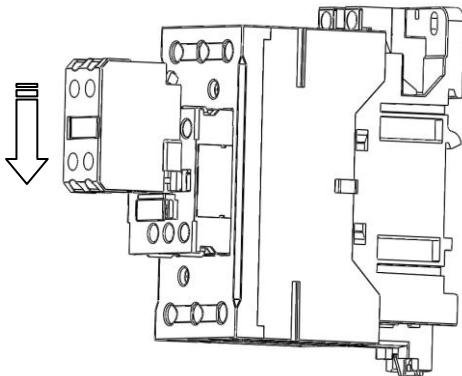
## 8. 附件安装

### 8. Installation of Accessories



当要在顶部安装附件时透明防护罩必须取掉；

To install accessories at the top, be sure to remove the transparent protective cover;



安装 NF1/NS1 系列辅助触头组：

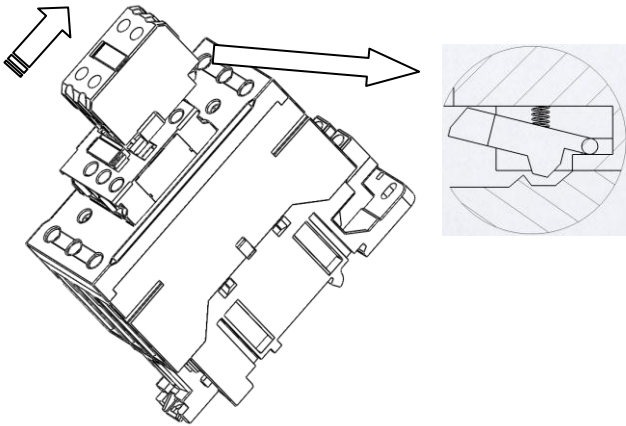
To install the NF1/NS1 series auxiliary contact set:

① NF1/NS1 放在接触器面板相应的挂钩处；

① Place the NF1/NS1 on the corresponding hood of the contactor panel;

② 将 NF1/NS1 沿接触器本体方向向下移动，直到听到“啪”的响声。

② Move the NF1/NS1 downward in the direction of the contactor body until you hear a “Click” sound.



NF1/NS1 辅助触头组的拆卸:

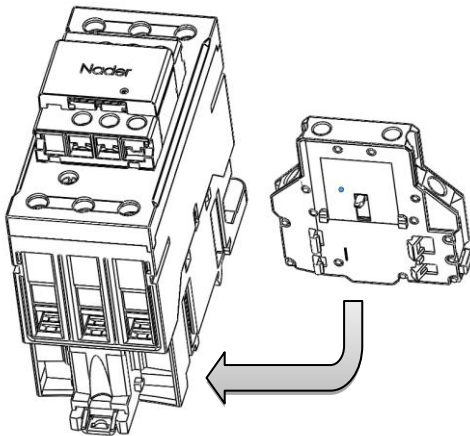
To remove the NF1/NS1 auxiliary contact set:

①按下 NF1/NS1 下面的白色卡块使其解除与接触器的连接;

① Press the white card block underneath the NF1/NS1 to disconnect from the contactor;

②沿接触器面板向上移动 NF1/NS1 直到与接触器分离。

② Move the NF1/NS1 upward along the contactor panel until it detaches from the contactor.

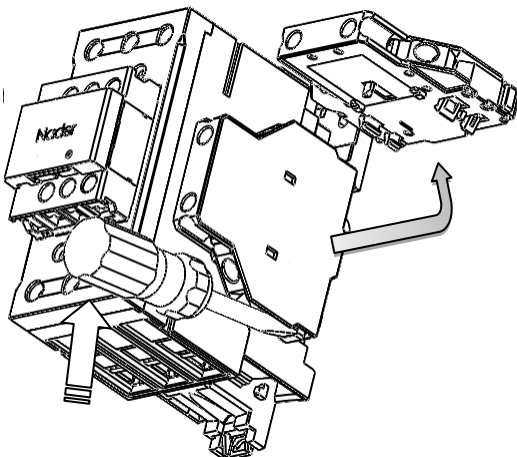


安装 NF2 辅助触头组的方法:

To install the NF2 auxiliary contact set:

首先将 NF2 有挂钩一侧放到接触器相应位置, 然后挂上一侧的挂钩后用力按 NF2 使其与接触器本体接触并直到挂钩挂到位。

First place NF2 onto the corresponding position of the contactor with the hook side, and press NF2 hardly to make it in contact with the contactor body until it is hooked in place.

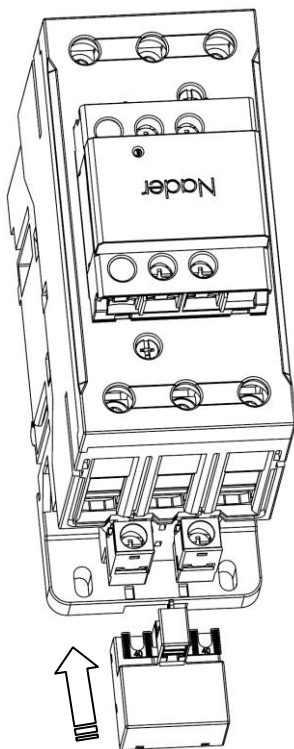


NF2 辅助触头组的拆卸:

To remove the NF2 auxiliary contact set:

用螺丝刀将 NF2 的固定挂钩撬起, 然后移动 NF2 与接触器分离。

Pry the fixing hook of NF2 up with a screwdriver, and then move NF2 to detach from the contactor.

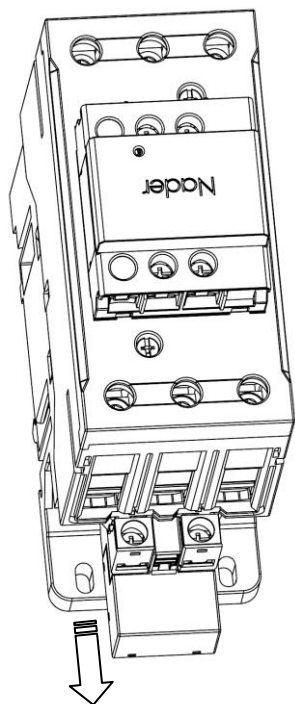


安装 G3 线圈浪涌抑制模块:

To install the G3 coil surge suppression module:

在线圈接线端子松开状态下, 将 G3 引脚插入接触器线圈接线端。

When the coil terminal is loosened, insert the G3 pin into the coil wiring terminal of the contactor.



拆卸 G3 线圈浪涌抑制模块:

To remove the G3 coil surge suppression module;

松开线圈端子螺钉, 用力拔 G3 即可。

Undo the terminal screws to pull G3 out hardly.

## 9. 订货须知

### 9. Order Notes

订货时应指明

When ordering, indicate

(1). 接触器的全部型号及名称;

(1). All models and name of the contactor;

(2). 控制线圈频率及电压;

(2). Frequency and voltage of the control coil;

(3). 订货数量

(3). Order quantity

例如: NDC3-4011 AC220V 50/60Hz 交流接触器 10 台;

For example: 10 sets of NDC3-4011 AC220V 50/60Hz AC contactors;

表示: 额定工作电流为 40A 交流接触器, 控制电压的频率为 50/60Hz, 电压为 220V, 订货数量 10 台。

It represents that for the AC contactor with the rated operating current of 40A, it features the control voltage frequency of 50/60Hz and the voltage of 220V with the order quantity of 10 sets.

(4). 特殊电压规格产品, 如客户需要可特殊订货。

(4). Products with the special voltage specifications can be specially ordered upon customers' requests.



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[www.sh-liangxin.com](http://www.sh-liangxin.com)

# Nader 良信电器

上海良信电器股份有限公司

Shanghai Liangxin Electrical CO., LTD.

上海浦东新区申江南路 2000 号

No.2000 South ShenJiang Road. Pudong New District

Shanghai, 201206

T/ 021-68586699 F/ 010-80115555-569675

E/ [liangxin@sh-liangxin.com](mailto:liangxin@sh-liangxin.com)

<http://www.Sh-liangxin.com>