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NDC1-4000系列 交流接触器使用说明书 NDC1-4000 series AC contactor Using Instruction

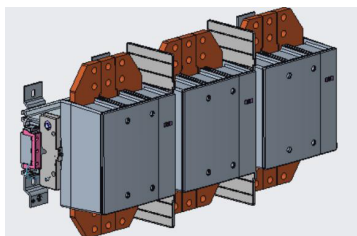
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一、适用范围与用途/Application range and purpose

NDC1-4000 系列交流接触器（以下简称接触器）主要用于 AC-1 使用类别下，交流 50/60Hz，额定工作电压为 690V，额定工作电流为 4000A 的交流电路中，供远距离接通与分断电路。

NDC1-4000 series alternating current contactor (hereinafter referred to as contactor) which can be applied to the alternating current circuit with the alternating current of 50Hz (or 60Hz), the rated operational voltage of 690V and rated working current from 4000A in AC-1 utilisation type. In order to connect and break the circuit remotely.

二、产品外观（仅供参考）/The appearance of product(for reference only)



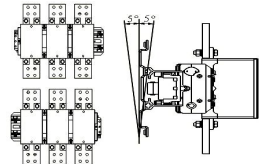
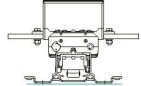
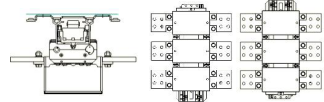
NDC1-4000~4500

三、正常的使用、安装及运输条件和用途（见表 1）

The normal use, installation, transportation condition and application (see table 1)

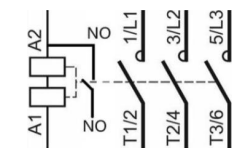
表 1/table1

环境温度 Ambient Temperature	-40 ~ +70℃, 24 小时极端高温不超过 +70℃。 -40 ~ +70℃, the high temperature at the pole tip cannot exceed +70 degree centigrade for 24 hours.
海拔高度 The altitude	不超过 3000m/Should be no more than 3000m;
大气条件 Atmospheric Conditions	在 +40℃ 时，大气相对湿度不超过 50%，在较低温度下可以有较高的相对湿度；在月平均温度 +25℃ 时，月平均最大相对湿度不超过 95%，并考虑到发生在产品表面上的凝露。 The relative atmospheric temperature should be no more than 50% at 40 degree centigrade; a higher relative humidity is allowable under lower temperature; when the monthly average temperature is +25 degree centigrade, the maximum average relative humidity is no more than 90% and the frost on the product surface should be taken into consideration.
污染等级 The pollution level	“3 级”，应避免在引起爆炸危险的介质、腐蚀金属及破坏绝缘的有害气体和导电尘埃的环境中使用。 Level three, the product should be avoided to be used in the environment with

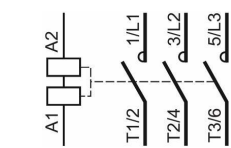
	explosive medium, corroding metal as well as insulation destructive gas and conductive dust.
安装类别 Installation Classification	III
安装条件 Installation Condition	产品垂直安装，安装面与垂直面的倾斜度不大于 $\pm 5^\circ$ 。 The product should be installed vertically with the angle of inclination between the installation plane and the vertical plane no larger than $\pm 5^\circ$. 
	该使用方式请与我司联系确认 Please contact our company to confirm the using method 
	该使用方式禁止使用 The using method not to be used 
冲击与振动 Impact and Vibration	产品应使用在无显著摇动、冲击或振动的地方 The product should be used in places where the oscillation, impact or vibration is indistinctive
运输和储存条件 Transportation and storage	-60 ~ +80℃

四、接线图/Wiring diagram

1、常规线圈接线图/The conventional coil Wiring diagram



NDC1-4000(交流线圈/ AC Coil)



NDC1-4000(直流线圈/ DC Coil)

五、接线能力/Wiring capability

主回路接线端子连接导线能力（见表 3）及力矩（见表 4）

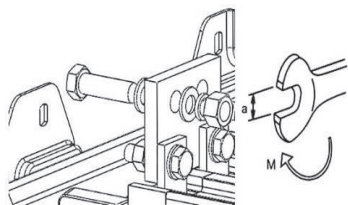
Capability of the connecting lead of the main-circuit wiring terminal (see table 3) and its moment (see table 4)

主电路连接能力/Connection characteristics of main circuit 表 3/Table 3

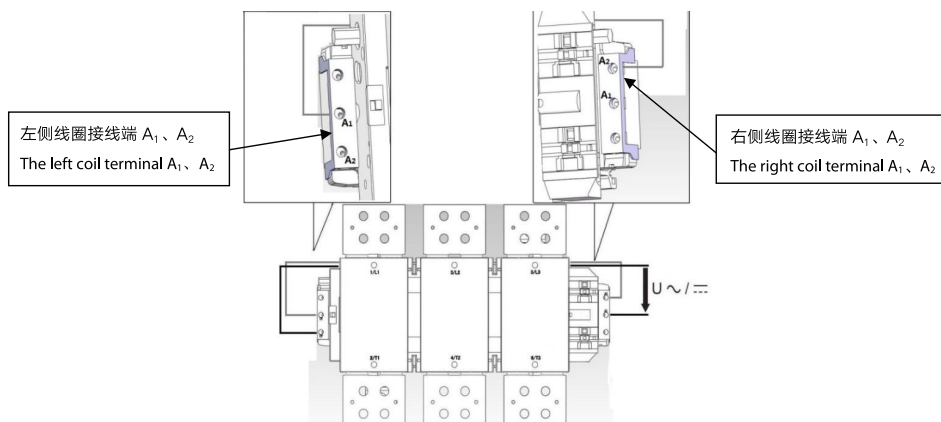
工作电流/A Wrking current/A	4000
铜排 Copper bar	根数 Number 6
尺寸 Size(mm)	100 × 10

力矩/Torque 表 4/ Table 4

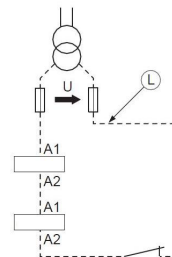
规格\Specification	NDC1-4000
a (mm)	18
M (N · m)	58



控制电路/Control circuit



线圈接线能力 / Connection characteristics of coil

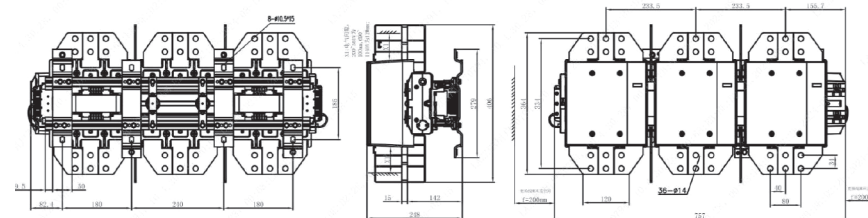


接线能力 / Connection characteristics

U	Ⓛ m ft	mm² AWG
220 V ~ / ∞	15 49.2	1 16
	20 65.6	1.5 16
	40 131.2	2.5 12
	60 197	4 12
	60 197	1 16
380 V ~ / ∞ 440 V ~ / ∞	90 295.3	1.5 16
	150 492.2	2.5 12
	250 672.6	4 12
	60 197	1 16
	90 295.3	1.5 16

六、外形及安装尺寸/Overall dimension and installation size

1、NDC1-4000 外形及安装尺寸/Overall dimension and installation size



注/Note: f 为更换线圈所需预留的最小空间; X1 为最小电气间隙 (飞弧距离)

f: Remove the minimum distance of the coil; x1: The minimum electrical clearance (the flying distance of the arc)

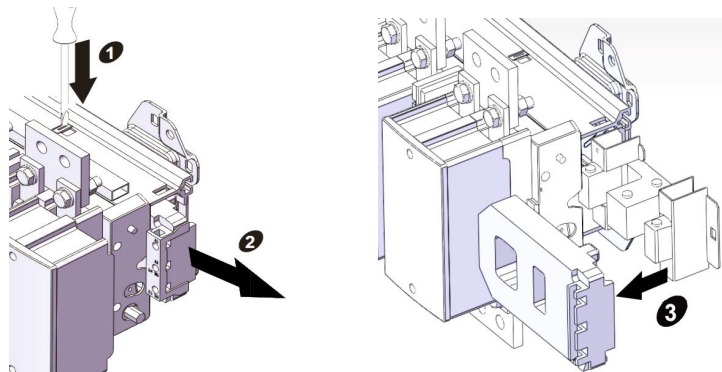
以上安装及外形尺寸为产品设计尺寸, P, Q1, S, T, T1, Φ, M, L, Φ1, n, 公差 ±1mm, 其余尺寸公差 ±5mm。

Installation and dimensions for the above product design size, P, Q1, S, T, T1, Φ, M, L, Φ1, n, will have a size of ±1mm tolerance. Other will have a size of ±5mm tolerance

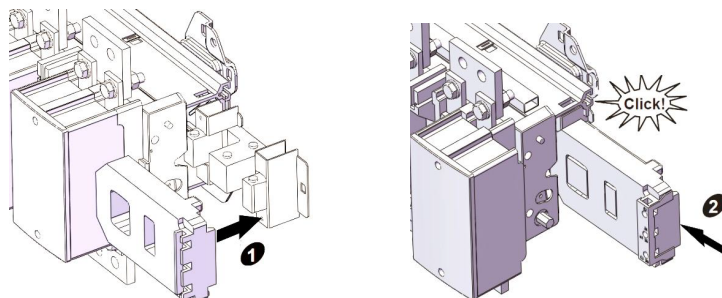
七、线圈与附件/Coil and accessories

1 常规线圈更换 / Conventional coil changing

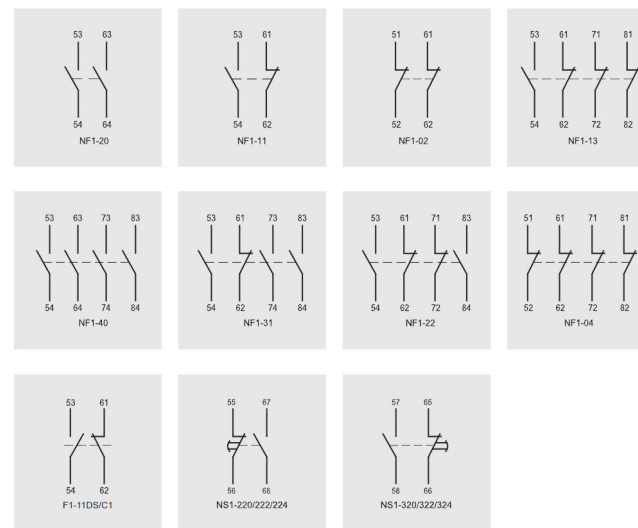
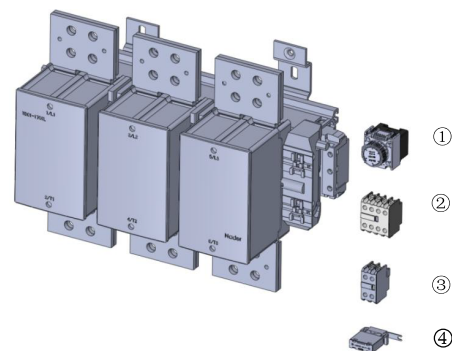
线圈拆除/Coil removal



线圈安装/Coil installation

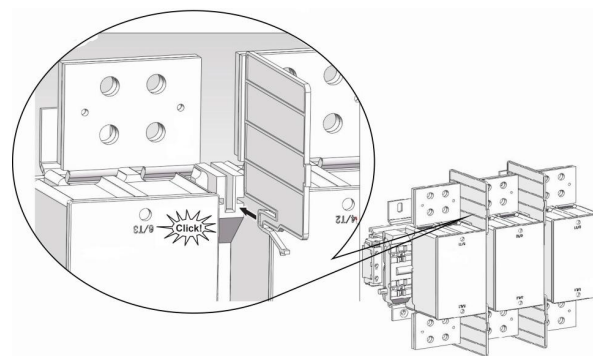


2、辅助触头组/Auxiliary contacts



推荐采用下列辅助触头组/The following auxiliary contact unit is recommended:

- ①: NS1-220、222、224、320、322、324
- ②: NF1-40、31、22、13、04
- ③: NF1-20、11、02; F1-11DS/C1
- ④: G1-01~04R/C1-2650; G1-01~04K/C1-2650;
- 3、相间隔板/Inter-phase barriers



可能有触电、爆炸或者电弧灼伤的危险！在安装接触器时，一定要安装相间隔板。若违背这些说明，则有可能导致严重的人身伤害甚至死亡！

Hazard of electric shock, explosion, or arc flash. Always install inter-phase barriers when mounting the contactor. Failure to follow these instructions will result in death or serious injury!

5、浪涌抑制模块/ The surge suppression module

浪涌抑制模块有两种安装方式供用户选择，一种为直接安装，另一种为支架安装。

The surge suppression module is available in two mounting options, one for direct mounting and the other for bracket mounting.

5.1 直接安装方式如下：

1. The direct installation method is as follows:

a. 将浪涌抑制模块安装在如下图所示挂在线圈上；

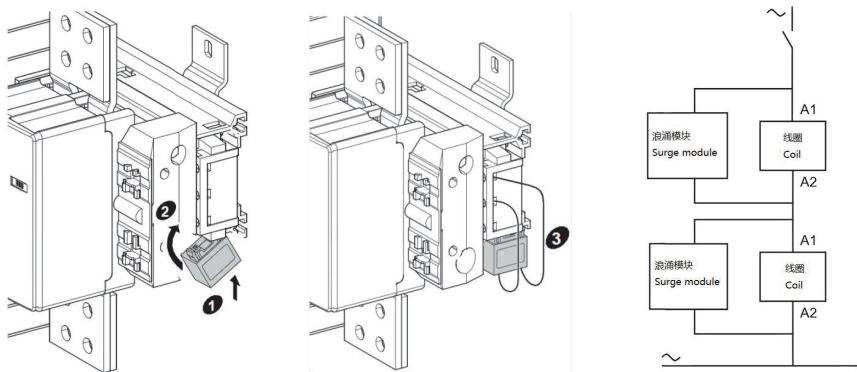
a. Install the surge suppression module on the coil as shown in the figure below;

b. 接线，将浪涌抑制模块两根线分别接到线圈 A1、A2 端子上。

b. Wiring, connect the two lines of the surge suppression module to the terminals of the coils A1 and A2.

NDC1-4000 安装使用方式：

NDC1-4000 Installation and use:



5.2 支架安装方式如下：

The bracket installation method is as follows:

此安装方式适用在振动将强的应用场景。安装方式为将支架安装在 35mm DIN 导轨上，然后将浪涌模块安装在支架上，详见下图。

This installation method is suitable for applications where vibration will be strong. The installation method is to mount the bracket on the 35mm DIN rail, and then install the surge module on the bracket, as shown in the following figure.



注：此种方式需要将支架翻转过来

Note: This method needs to flip the bracket over

八、安装使用及维护/ Installation、use and maintenance

- 应按规定的条件和使用环境安装；
- 安装前应该检查线圈的技术参数是否与控制电源相符；
- 主回路接线螺栓和线圈接线螺钉需按规定力矩拧紧；
- 应在主回路不带电的情况下，先确认接触器可动部分不得卡住，再使线圈通电分电和数次；
- 必须确保灭弧罩正确安装后，方可投入使用；
- 触头的灭弧罩内部发黑是接触器运行后的正常情况，不会影响产品的性能，不要试图用砂纸或其他工具去掉黑色；
- 出现非正常情况时应请专业人员检查维修，带电检修将会造成人员伤亡！
- The product should be installed according to the specified conditions and using environment;
- Before installing, check whether the technical parameter data of the coil is conformed to that of the control power supply;
- The wiring bolts of the major loop and the wiring screws of the coils should be tightened to the regulated moment;
- Under the condition that the main loop is uncharged, firstly rotate the movable part of the contact and guarantee no jamming, and then electrify the coils;
- The product can be used on the condition that the arcing shield has been installed correctly;
- It is normal situation that the inside of the contact and the arcing shield becomes black after the contact runs, which would not influence the property of the product. Therefore, don't try to remove the black by using the sand paper or other tools;
- Ask professional staffs to check and repair the product when abnormal situation occurs. However, live line may cause casualties.

