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NDC5K-2400~3200 TU系列 真空接触器使用说明书 NDC5K-2400~3200 TU series Vacuum Contactor Using Instruction



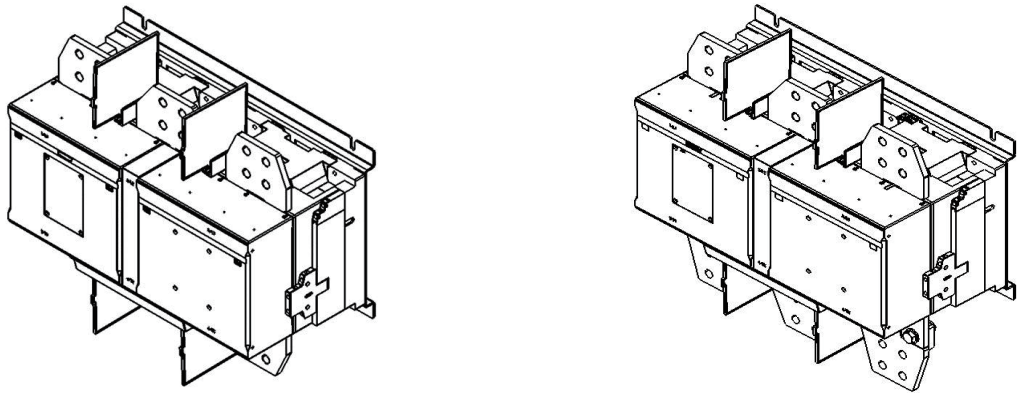
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V1.0



1、适用范围与用途

NDC5K-2400~3200 TU 系列真空接触器（以下简称接触器）主要用于光伏、风电行业，供远距离接通分断电路，也可以用在工控行业远距离接通和分断及频繁起动控制交流电动机，还可控制交流电动机可逆运转或反向制动。

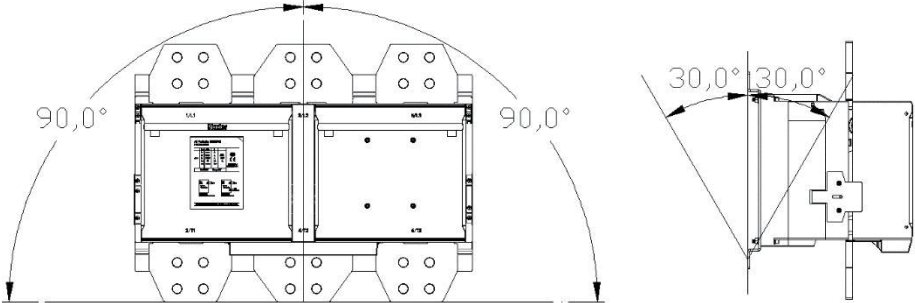


NDC5K-2400/2700 TU (2000V)

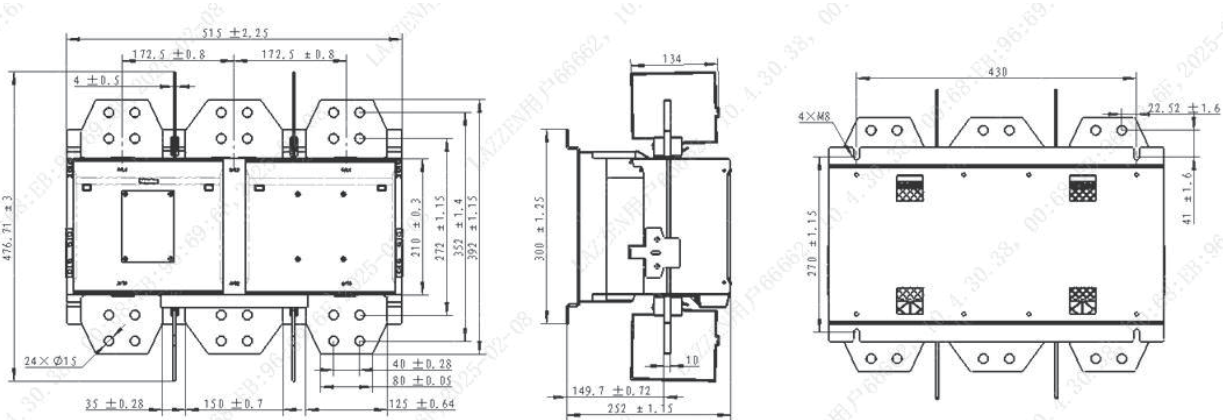
NDC5K-3200 TU (2000V)

 警告！产品安装、操作、维修必须具备专业资质的电工遵照相关制度、法规、安装标准及安全规范完成。

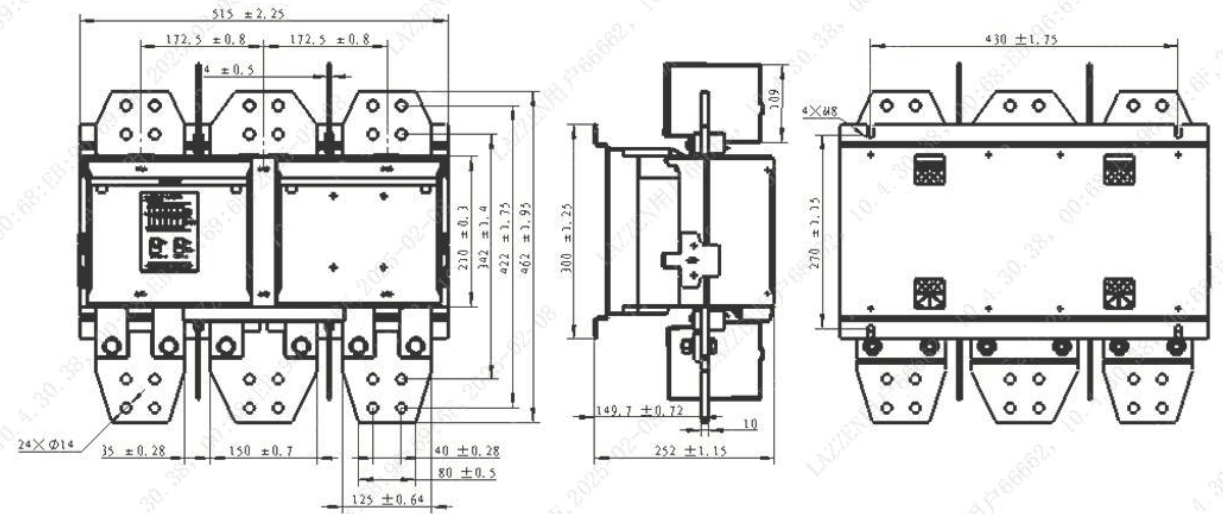
2、安装方式

产品须使用螺栓安装 (以 NDC5K-3200 系列 为例)	
禁止 	

3、安装尺寸



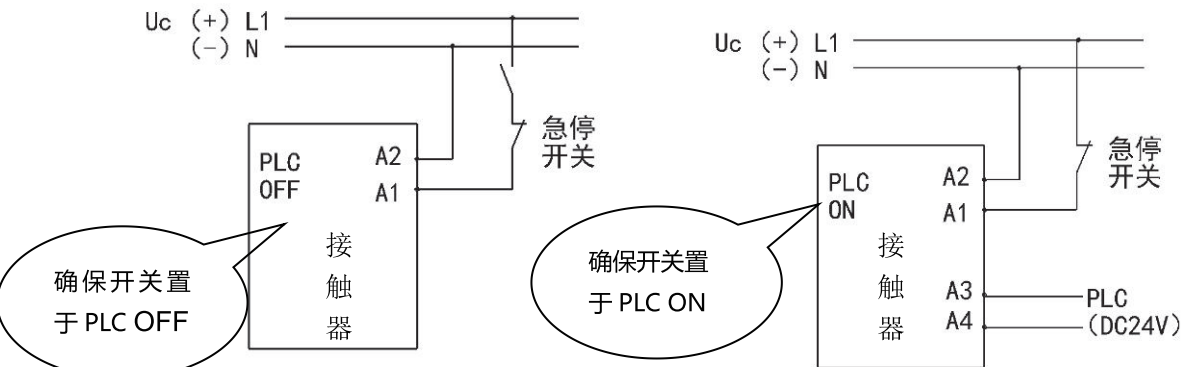
NDC5K-2400/2700 系列外形及安装尺寸



NDC5K-3200 系列外形及安装尺寸

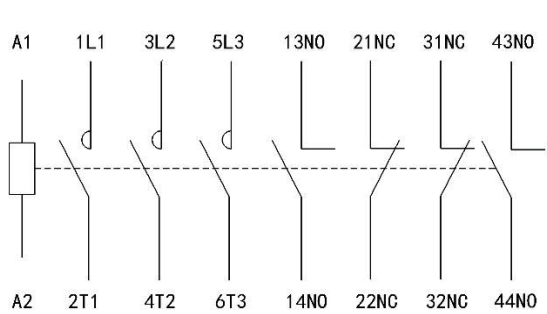
4、接线方式

1)接线图

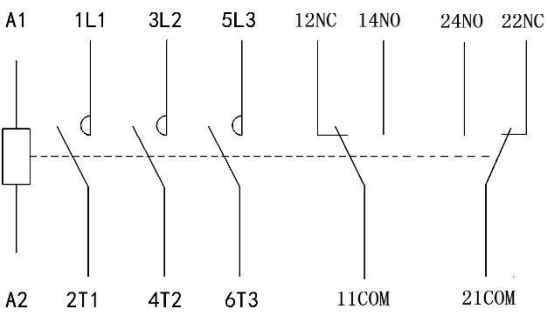


常规控制方式

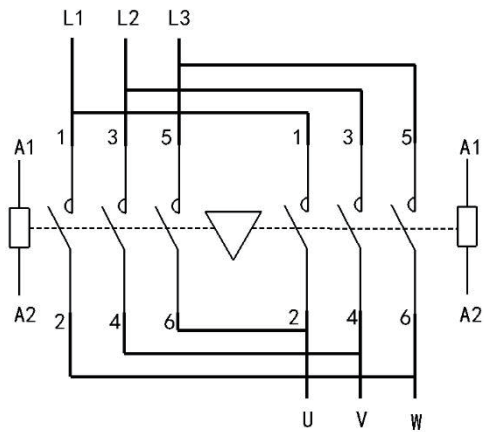
PLC 控制方式



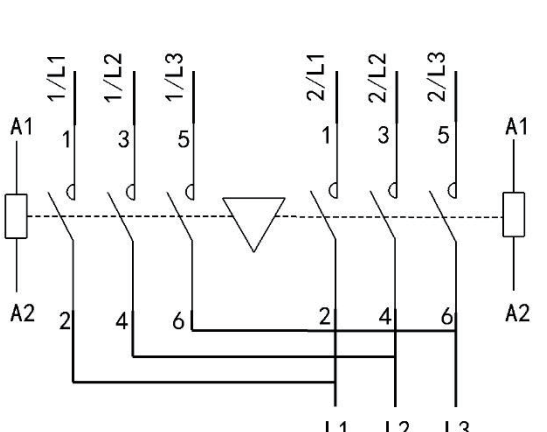
NDC5K-2400 ~ 3200+2*F1-11L 接线图



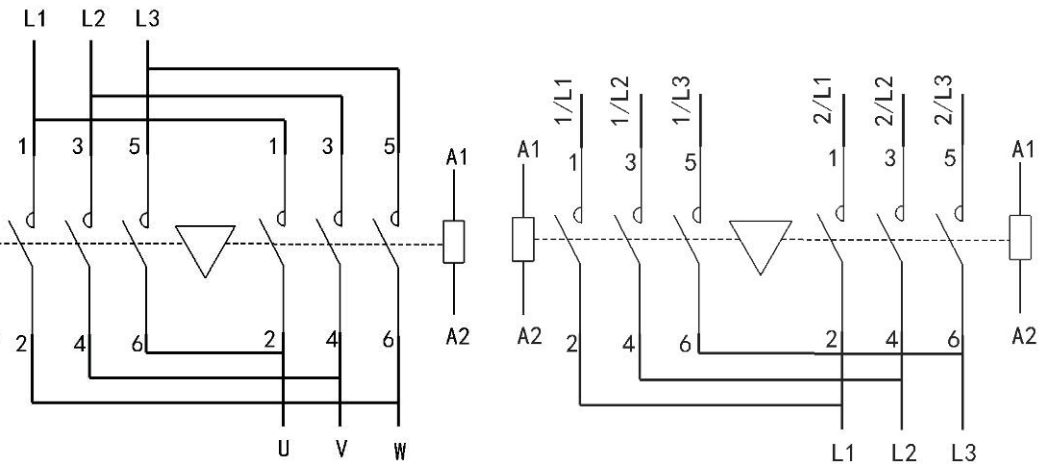
NDC5K-2400 ~ 3200 + 2*F1-11LS 接线图



电动机控制可逆接触器接线图



配电用电源转换接线图



电动机控制可逆接触器接线图

配电用电源转换接线图

2)主回路接线端子连接导线能力（见表 1）及力矩（见表 2）

表 1

规格	主电路连接能力	
	铜排尺寸 mm	根数
NDC5K-2400 TU	100X 5	4
NDC5K-2700 TU	100X 10	3
NDC5K-3200 TU	100X 10	4

- 1)铜排数量根据实际运行额定电流选择，要求能长期稳定承载额定电流
- 2)多根铜排要求上下排布，如下图所示

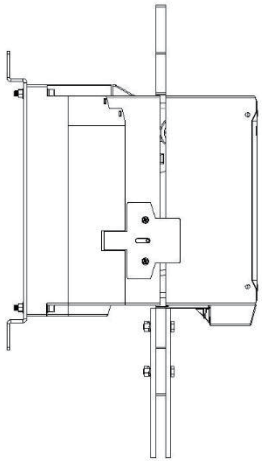


表 2

规格	主回路接线螺栓	紧固扭矩（N.m）
NDC5K-2400~3200 系列	M12	35

3) 控制电路

⚠ 变压器阻抗电压 $U_k \leq 0.7$ ，并且到 A1-A2 端线路压降不大于 5%

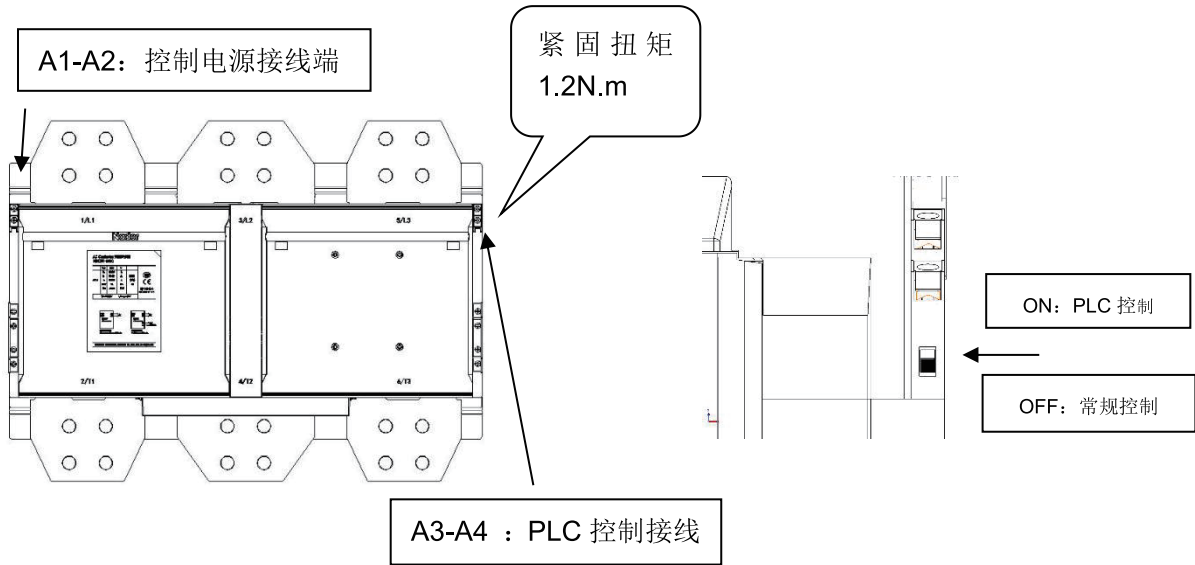
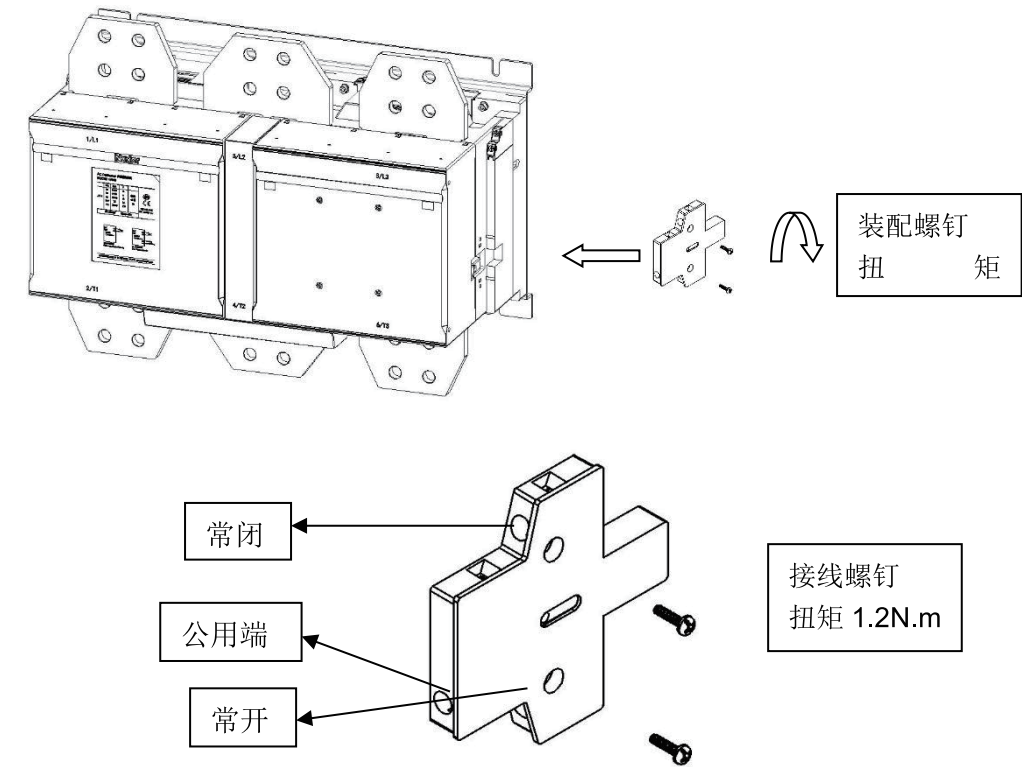


表 3

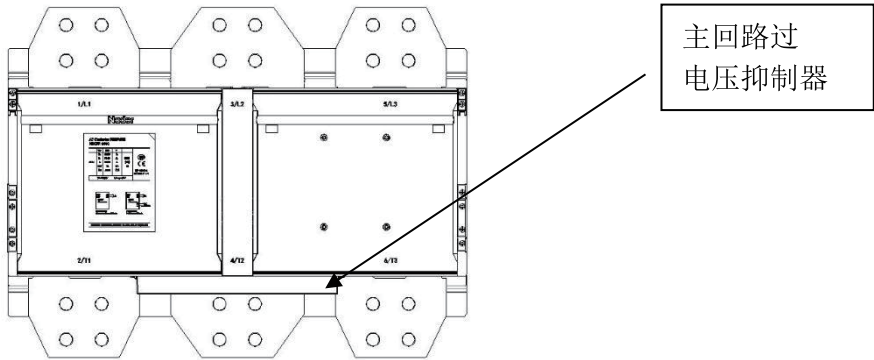
控制回路及	硬线	1 根/2 根 1…4mm ²
辅助回路	非预制端头软线	1 根/2 根 0.75…2.5 mm ²
接线能力	预制端头软线	1 根/2 根 0.75…2.5 mm ²

5、附件说明

1) 辅助触头组

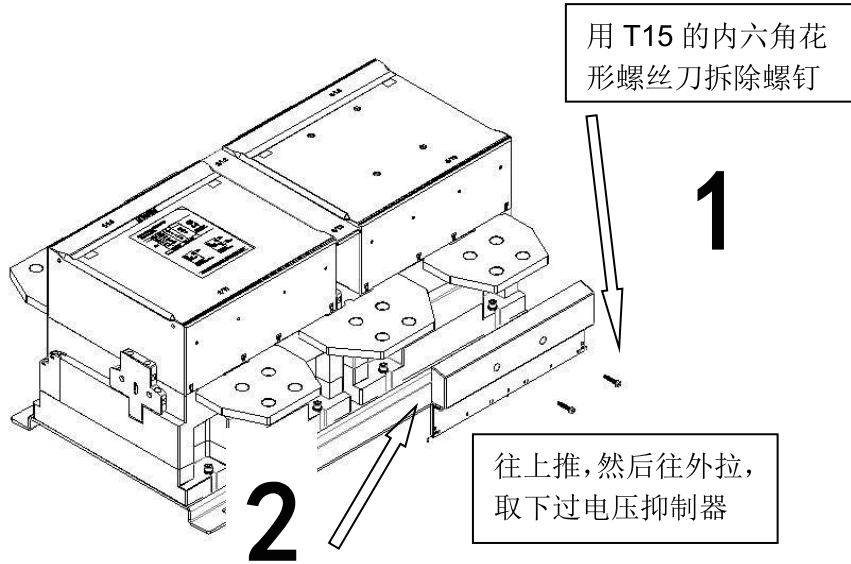


2) 过电压抑制器



⚠ 当产品和变频器一起使用时，或者主电路具有很强的谐波负载时，必须去除主回路过电压抑制器，当产品进行耐压测试时，必须去除主回路过电压抑制器。

注意：
过电压抑制器必须
装在负载端一侧



6、使用和维护

环境温度	标准工作温度：-25℃~+60℃ 标准控制电压下工作最大允许温度范围：-40℃~+70℃ 贮存：-40℃~+80℃
污染等级	“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
安装类别	“Ⅲ”类
冲击与振动	参考规格书
运输和储存条件	温度范围为-40~+80℃之间，处于极端温度下而不操作的电器不应承受不可逆的损坏，在置 于正常条件下后电器应能按照规定正常操作
安装与使用	● 应规定的条件和使用环境安装； ● 主回路接线螺栓和线圈接线螺钉应按规定力矩拧紧； ● 连接导线应紧固在配电柜架上。接触器不应承受导线的重量。固紧导线前， 应该使母排或电缆端子平面与接触器接线端平面平行。用螺栓连接导线和接 触器接线端后，接触器不应该承受各种机械应力； ● 安装完毕使用前应在主回路不带电的情况下，使线圈通电分合数次，确认无误后方可投 入使用； ● 接触器必须可靠接地，以免发生事故；

7、注意事项

- 使用前务必检查线圈电压是否与控制电源电压相符。

8、订货须知

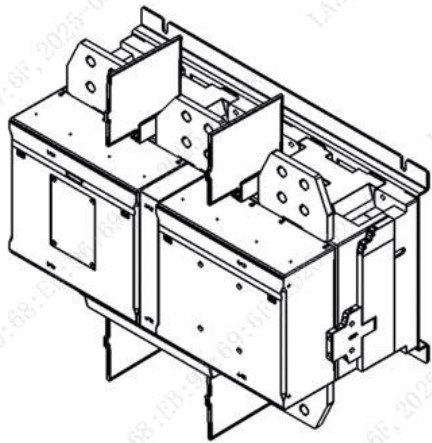
- 辅助触头组、过电压抑制器为分离件，可单独订货。
- 请写明接触器的名称、型号、规格及订货数量。

例如：交流接触器 NDC5K-3200 TU AC/DC 110~250V 10 台

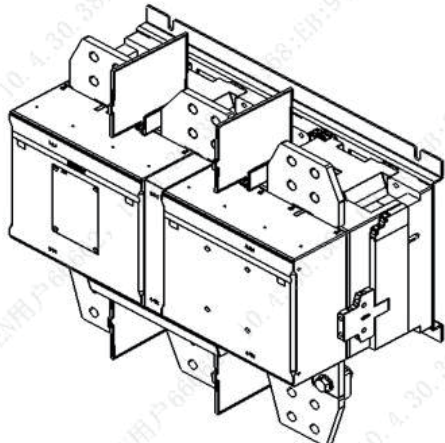
表示额定工作电流为 AC-1 时为 3200A,控制电压为 AC/DC 110~250V 50/60Hz 的标准型产品，
订货数量为 10 台。

1. Applicable Scope and Purpose

The NDC5K-2400~3200 TU series of vacuum contactors (hereinafter referred to as the contactor) are
mainly used in the photovoltaic and wind power industry, for remote connecting and breaking of the
circuit. The contactor can also be used in the industrial control sector for remotely connecting & breaking,
and frequently starting & controlling AC motors, which can control the inverse operation or reverse brake
of the AC motors.



NDC5K-2400/2700 TU (2000V)



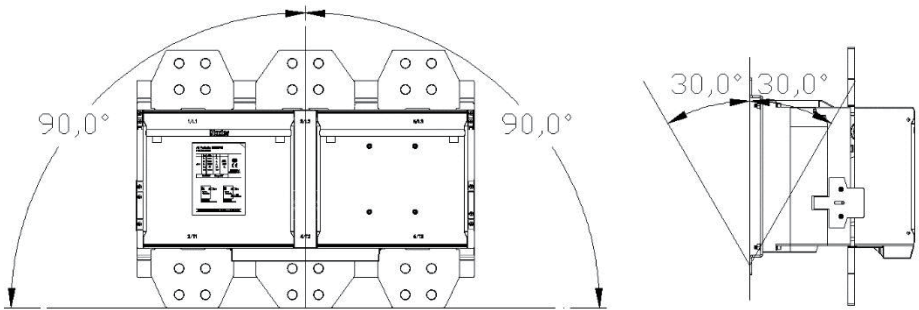
NDC5K-3200 TU (2000V)



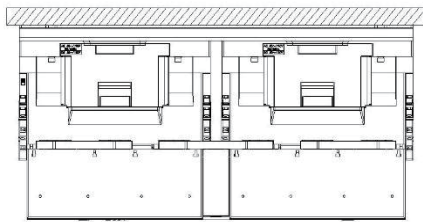
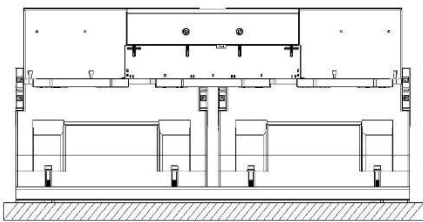
**Warning! Installation, operation and maintenance of the product must be done by professional qualified
electricians in accordance with the related systems, regulations, installation standards and safety
specifications.**

2. Installation Mode

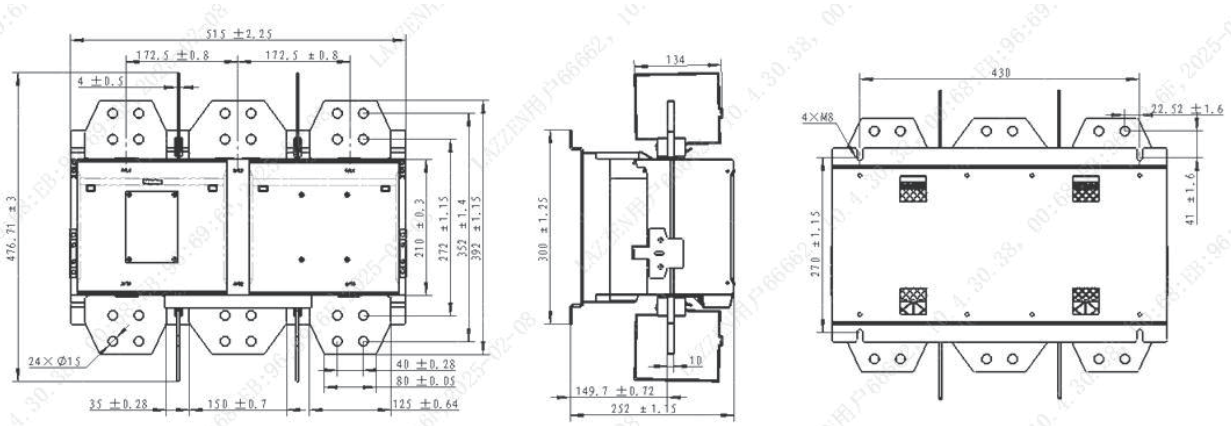
For bolt installation of
the product
(Take NDC5K-3200
series as an example)



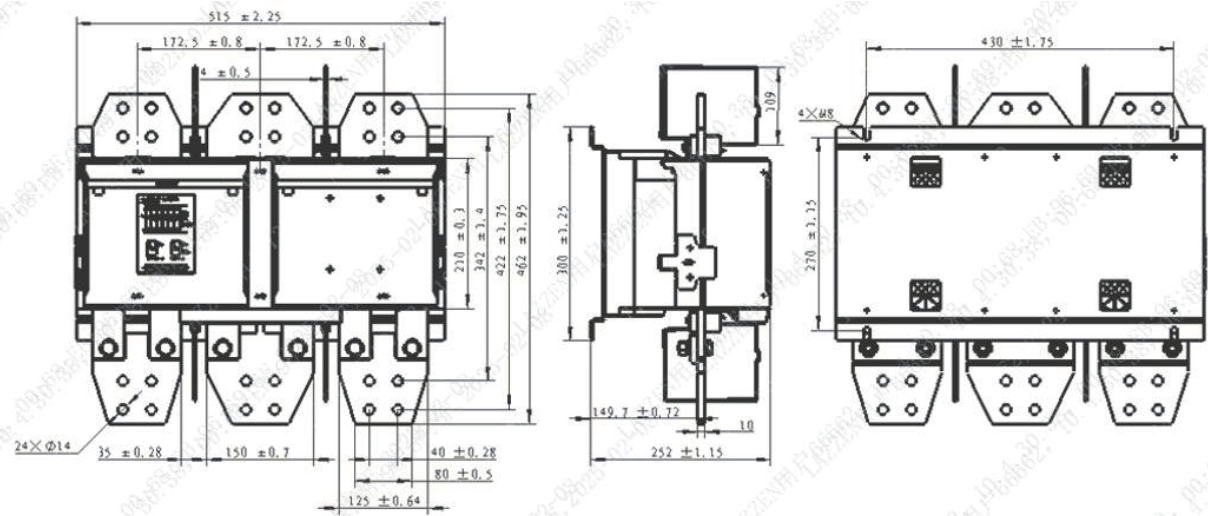
Prohibition



3. Installation Dimensions



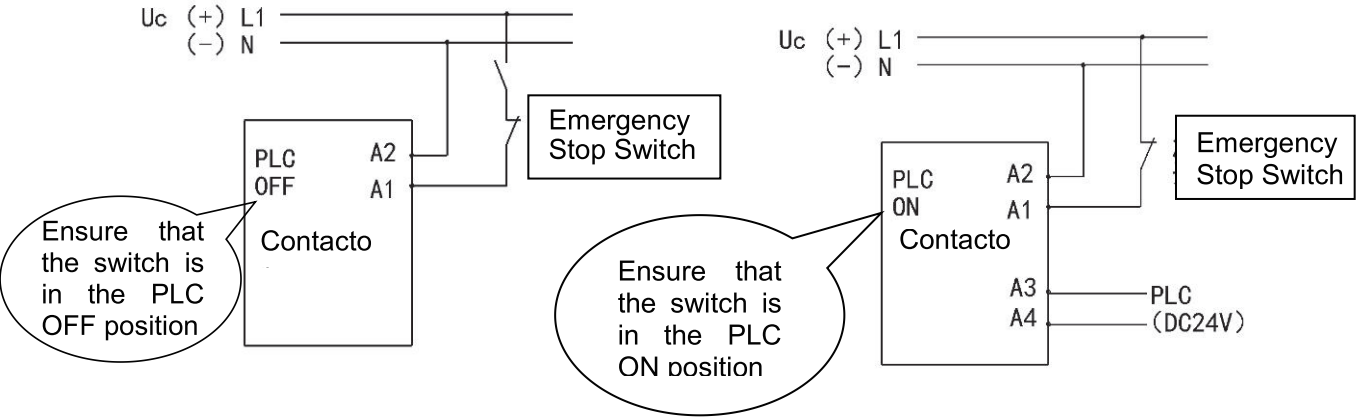
NDC5K-2400/2700 系列外形及安装尺寸



NDC5K-3200 系列外形及安装尺寸

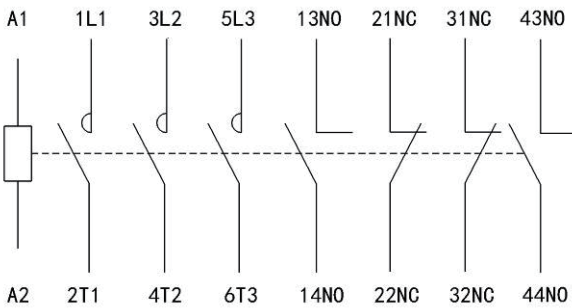
4. Wiring Mode

1) Wiring diagram

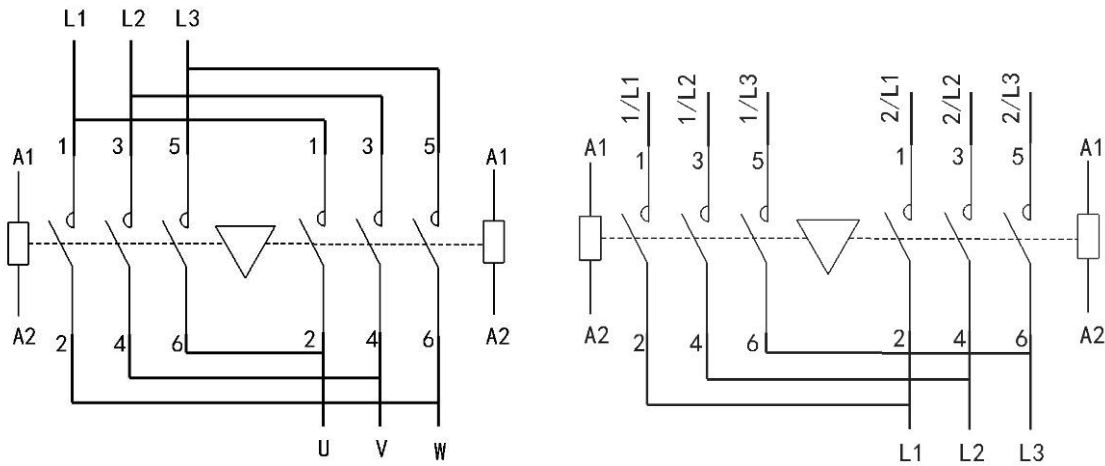


Common Control Mode

PLC Control Mode



Wiring Diagram of NDC5K-2400~3200 TU



Wiring Diagram of Motor-controlled Reversible Contactor

Wiring Diagram of Distribution Power Conversion

2) Connecting wire capacity (see Table 1) and torque (see Table 2) of the main circuit terminal

Table 1

Specification	Connecting capacity of the main circuit	
	Standard copper bar Size mm	Number
NDC5K-2400 TU	100X 5	4
NDC5K-2700 TU	100X 10	3
NDC5K-3200 TU	100X 10	4

- 
- 1) Choose the quantity of the copper bar according to the actual operating rated current, which shall carry the rated current stably for a long time

2) Multiple copper bars shall be arranged up and down, shown as below

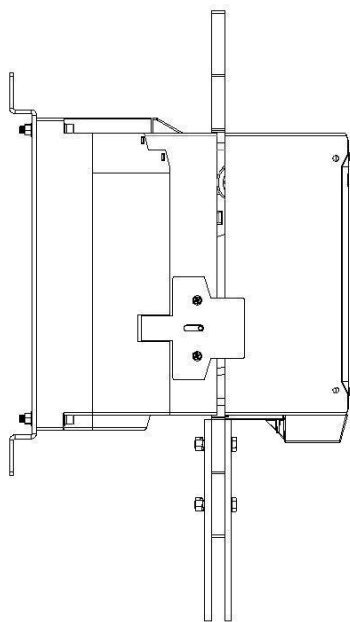


Table 2

Specification	Main circuit connection bolt	Tightening torque M (N.m)
NDC5K-2400~3200 series	M12	35

3) Control circuit

- 
- The control transformer features the impedance voltage $U_k \leq 0.7$ with the line drop no more than 5% to the A1-A2 side

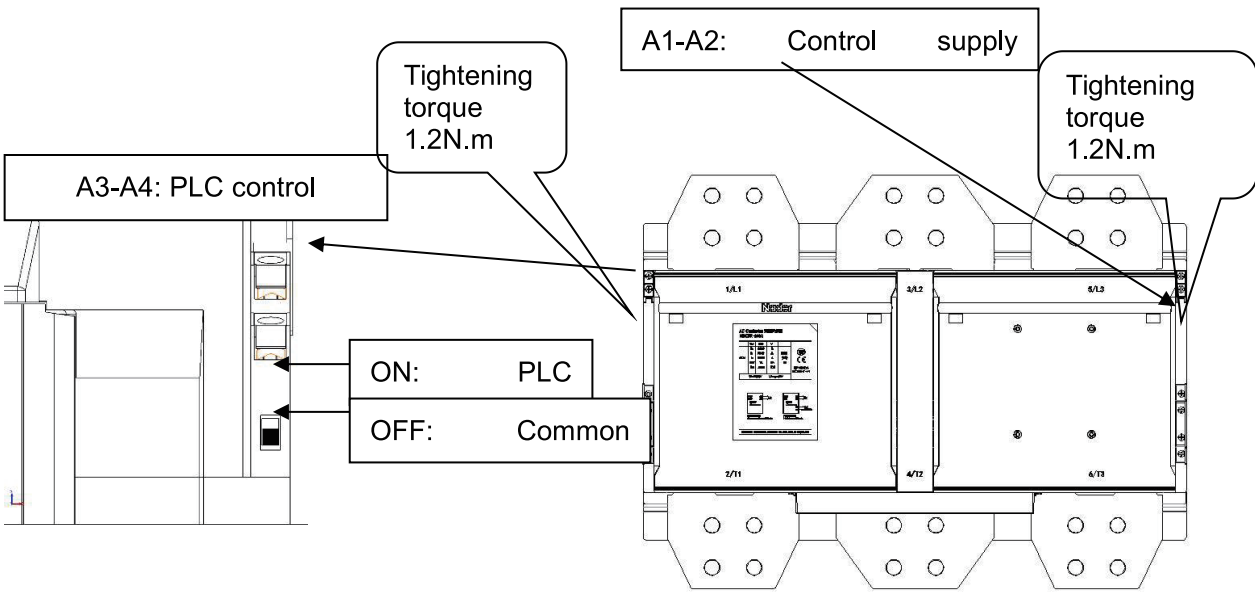
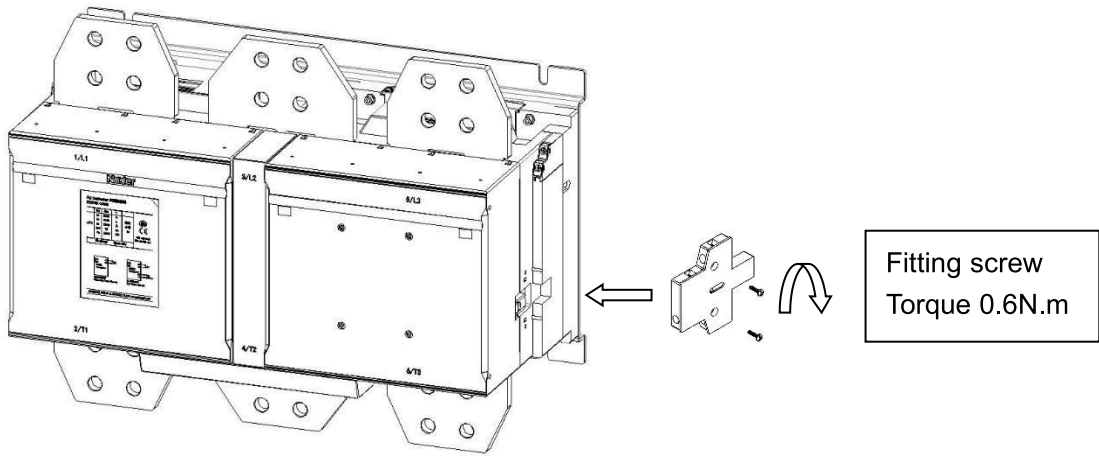


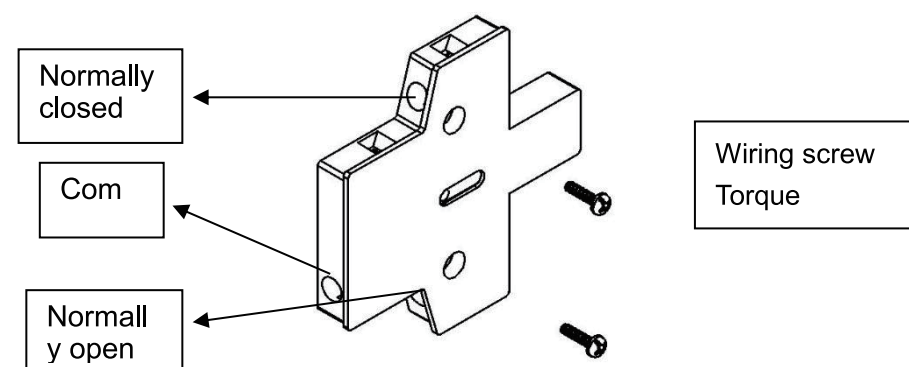
Table 3

Connection capacity of the control circuit and auxiliary circuit	Hard wire	1 piece/2 pieces 1...4mm ²
	Non-prefabricated end cord	1 piece/2 pieces 0.75...2.5 mm ²
	Prefabricated end cord	1 piece/2 pieces 0.75...2.5 mm ²

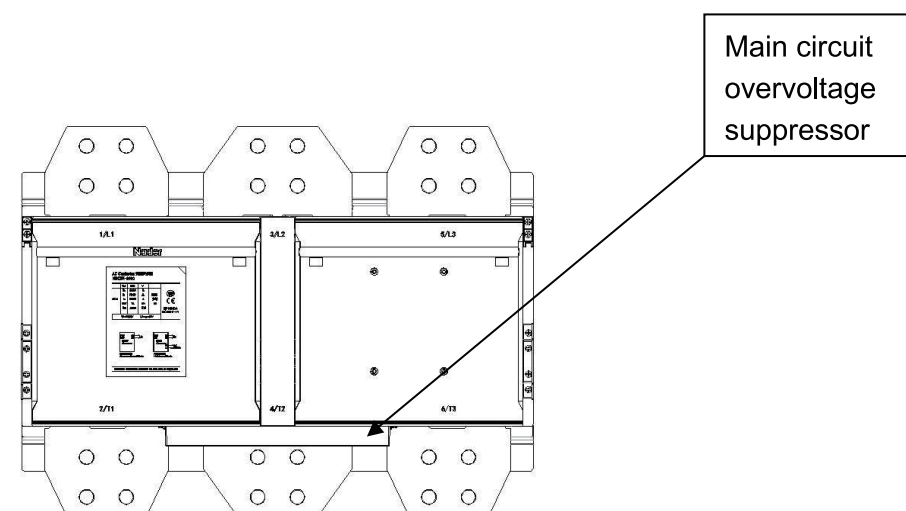
5. Accessory Description

2) Auxiliary contact set

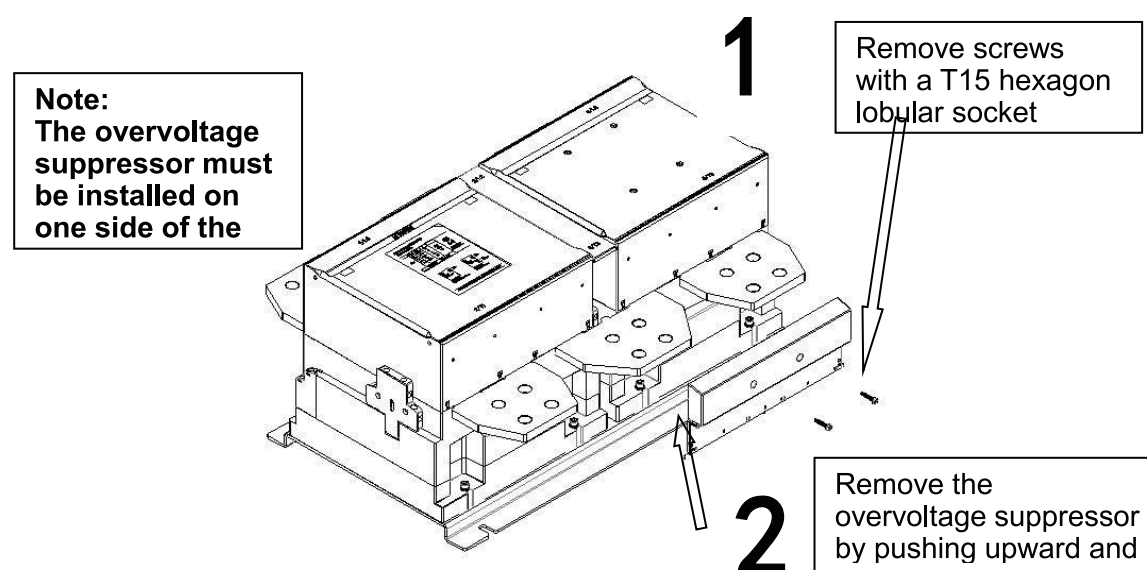




2) Overvoltage suppressor



! When it is used with the inverter, or the main circuit has the strong harmonic load, be sure to remove the main circuit overvoltage suppressor; to conduct the withstand voltage test, be sure to remove the main circuit overvoltage suppressor.



6. Use and Maintenance

Ambient temperature	Standard operating temperature: -25℃~+60℃ Maximum allowed temperature range under the standard control voltage: -40℃~+70℃ Storage temperature: -40℃~+80℃
Pollution level	"Level 3"; the product shall not be used in environment with explosion hazardous media, harmful gases with metal corrosion and insulation destruction and conductive dusts
Installation category	Category "III"
Shock and vibration	Refer to the specification
Transport and storage conditions	Temperature range: -40~+80℃; electrical appliances shall not suffer irreversible damage without operation under extreme temperature conditions, which shall operate normally according to the requirements after placed under the normal condition
Installation and use	● To be installed according to the specified conditions and operating environment; ● The main-circuit connection bolt and coil terminal screw shall be tightened as per the specified torque; ● Connecting wires shall be fastened in the distribution cabinet rack. The contactor shall not bear the weight of the wire. Before fastening the wire, the bus terminal or cable terminal plane shall be parallel with the contactor terminal plane. After the wire and contactor terminal are connected with bolts, the contactor shall not be subjected to various mechanical stresses; ● After installation prior to use, turn on and off the coil several times with power on and the main circuit de-energized, and put it into use after confirmation; ● The contactor must be reliably grounded to avoid accidents;

7. Precautions

- Before use, be sure to check that the coil voltage complies with the control power voltage.

8. Order Note

- Coils, circuit boards and phase insulated partitions can be ordered separately as wear parts.
- Please specify the name, model, specification and order quantity of the contactor.

For example: AC contactor NDC5K-3200 TU AC/DC 110~250V 10 sets

It represents that when the rated operating current is AC-1 3200A, standard type of the control voltage is AC 110~250V 50/60Hz and DC 110~250V with the order quantity of 10 sets.