

产品使用说明书

产 品 名 称：交流接触器

产 品 型 号：NDC5K系列

日 期：20161230

编制	审核	批准
冉勇	雒国瑞	谷建明

文件编号	NDT2920112	版次	第 1 版	实施日期	20161230
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NDC5K-630 (H) / 800 (H) / 1450R / (H) / 1700R / (H)

真空接触器使用说明书

NDC5K-630 (H) / 800 (H) / 1450R / (H) / 1700R / (H)

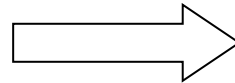
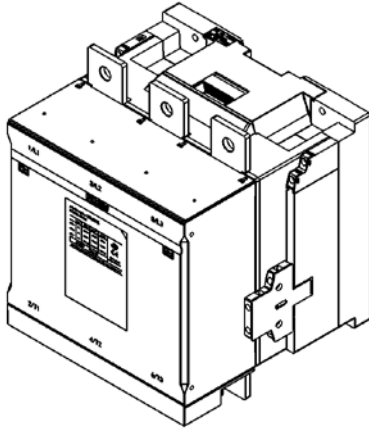
Vacuum contactor Using Instruction

Nader 良信电器

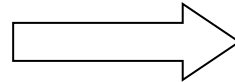
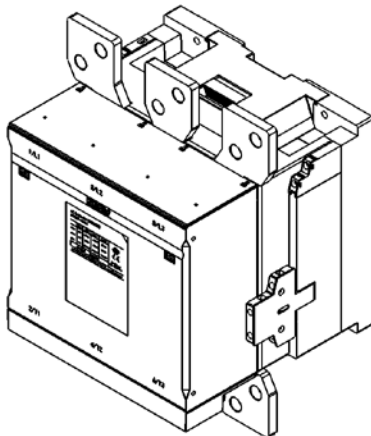
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1、适用范围与用途

NDC5K-630(H)/800(H)/1450R/(H)/1700R/(H) 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启动控制交流电动机，还可控制交流电动机可逆运转或反向制动。



NDC5K-630(H)/800(H)



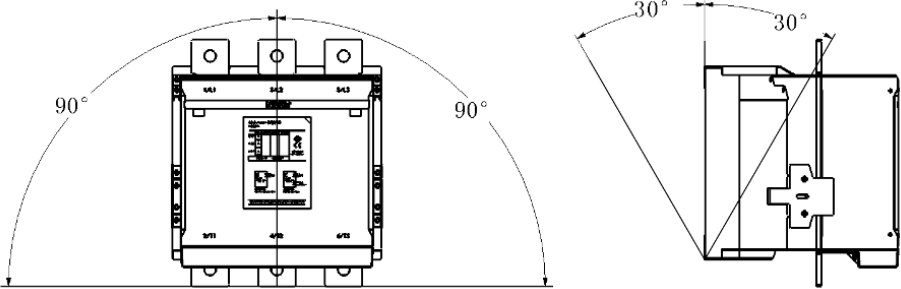
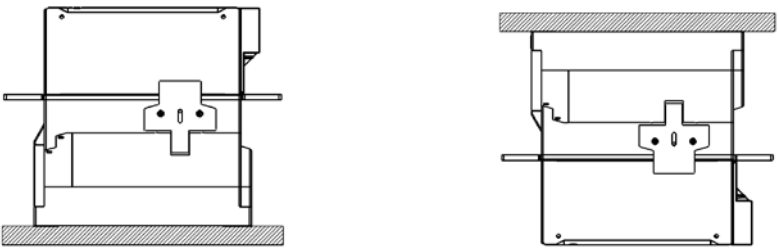
NDC5K-1450R/(H)/1700R/(H)



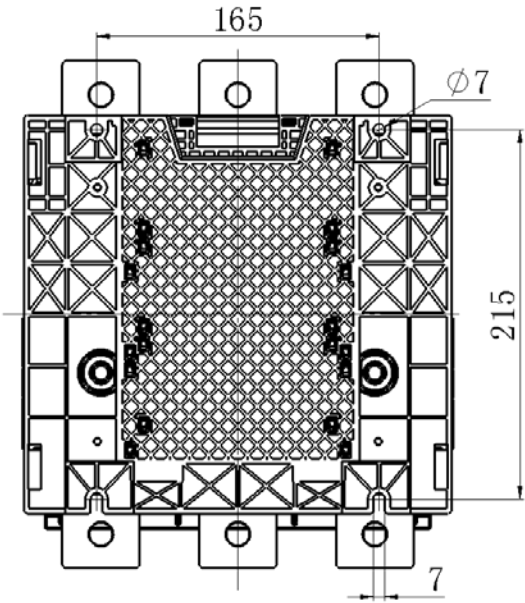
警告！ 产品安装、操作、维修必须具备专业资质的电工遵照相关制度、法规、安装标准及安全规范完成。

2、安装方式

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产品须使用螺栓安装 (以 NDC5K-800 为例)	
禁止 	

3、安装尺寸



4、接线方式

1) 接线图

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2) 多根铜排要求上下排布，如下图所示

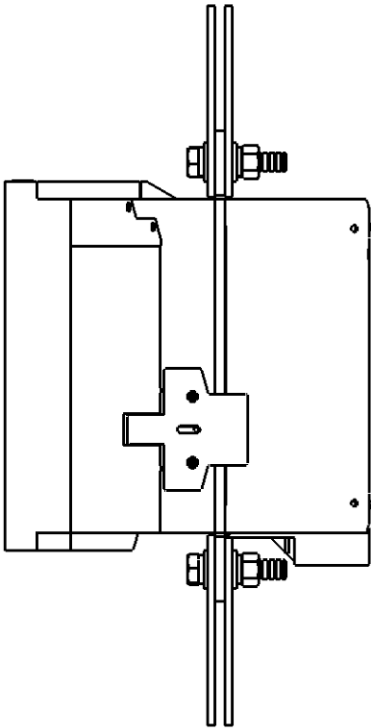


表 2

规格	主回路接线螺栓	紧固扭矩 M （N.m）
NDC5K-630 (H)	M12	24
NDC5K-800 (H)		35
NDC5K-1450R/ (H)		
NDC5K-1700R/ (H)		

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3) 控制电路

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

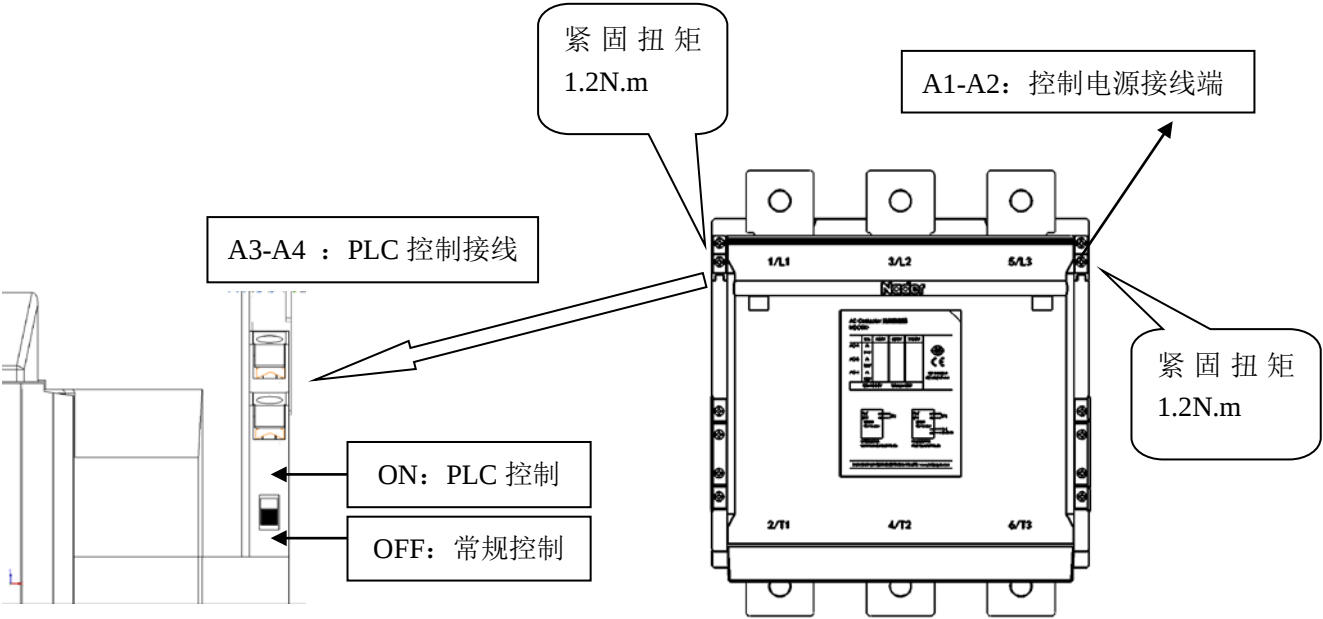


表 3

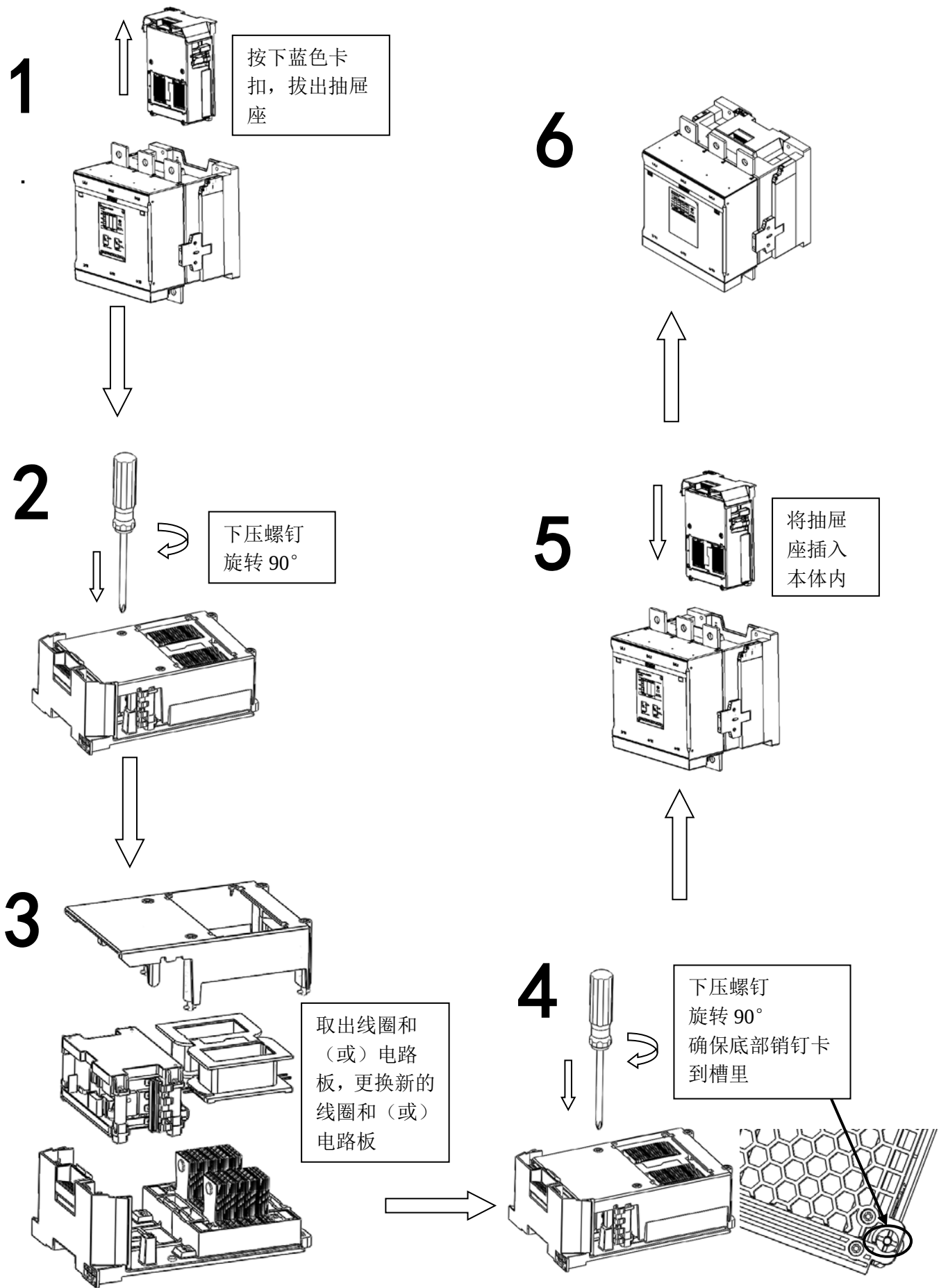
控制回路及 辅助回路 接线能力	硬线	1 根/2 根 1...4mm²
	非预制端头软线	1 根/2 根 0.75...2.5 mm²
	预制端头软线	1 根/2 根 0.75...2.5 mm²

5、附件说明

1) 更换线圈和（或）电路板

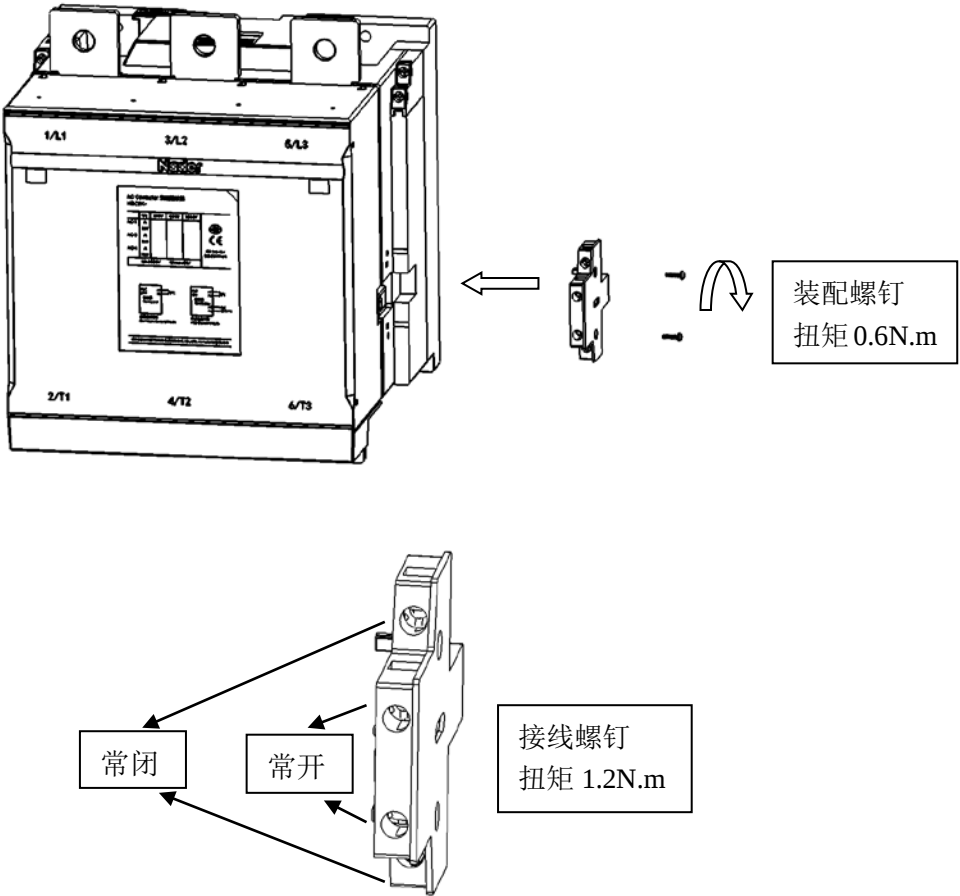
! 触电、爆炸或者电弧灼伤的危险！在此设备上工作时，请先关闭所有电源。

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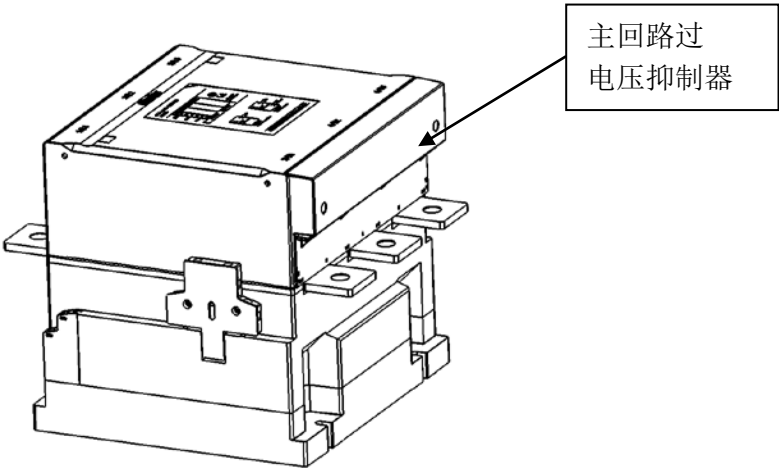
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2) 辅助触头组

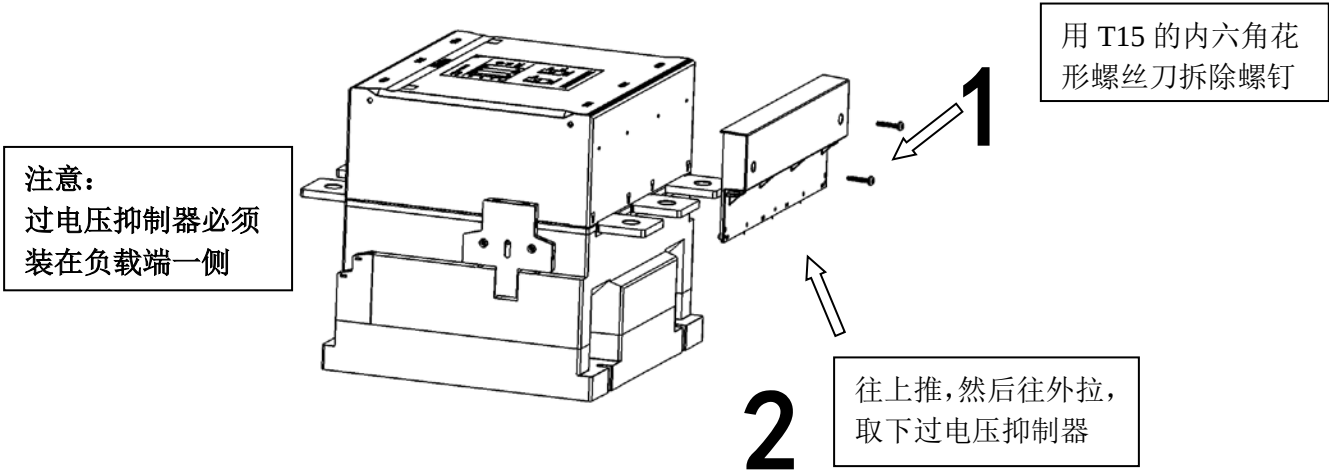


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3) 过电压抑制器

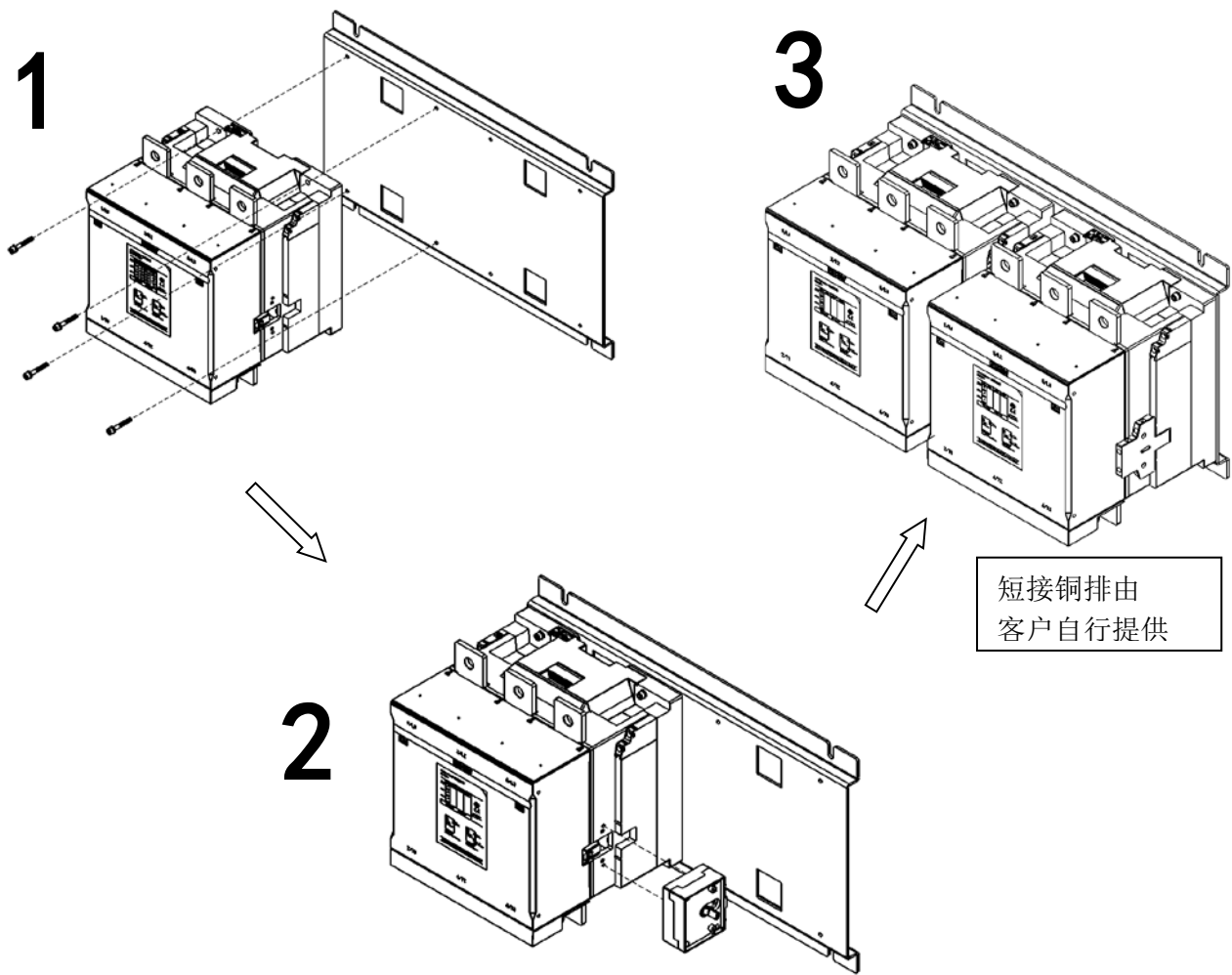


当产品和变频器一起使用时，或者主电路具有很强的谐波负载时，必须去除主回路过电压抑制器，当产品进行耐压测试时，必须去除主回路过电压抑制器。



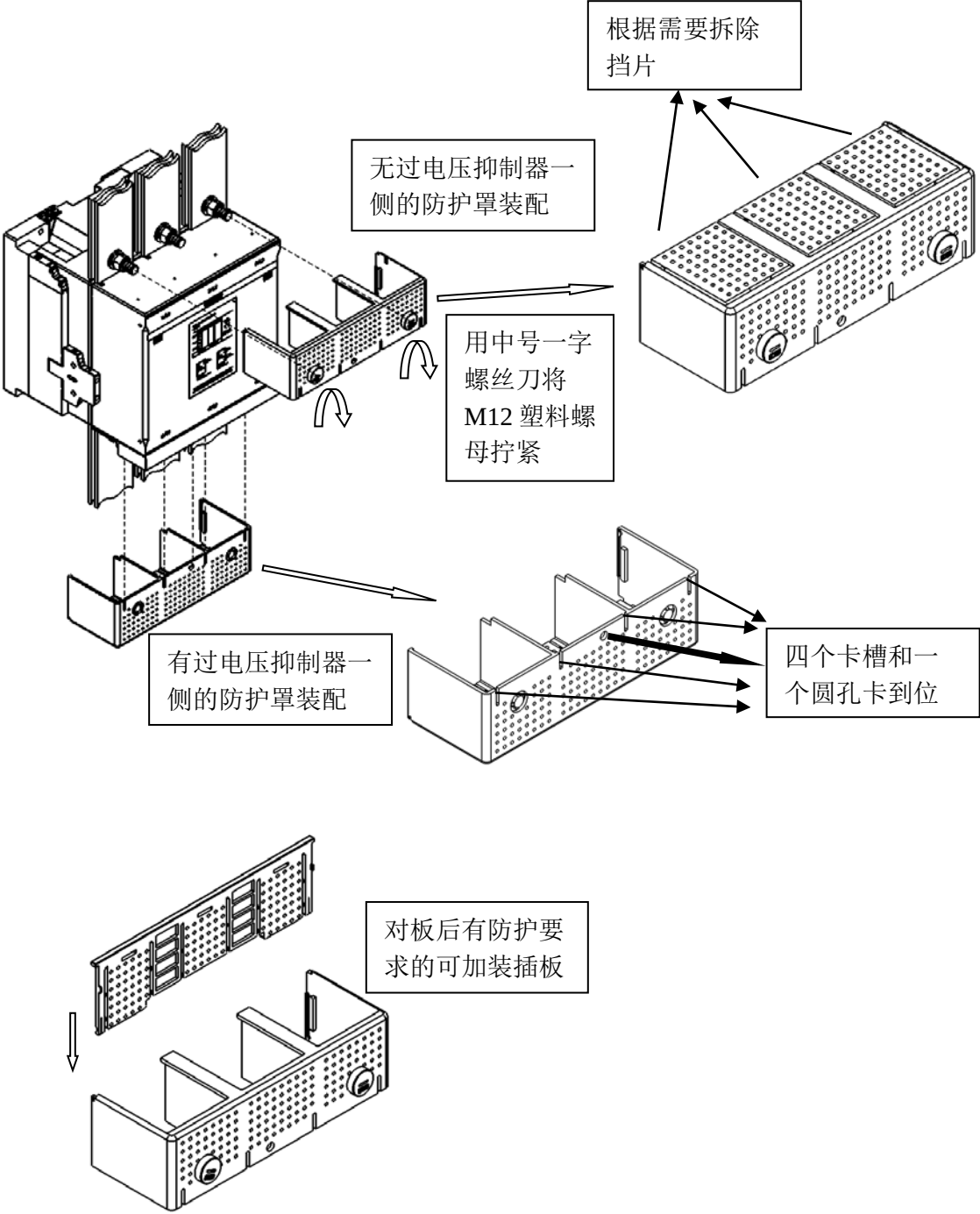
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3) 机械联锁安装



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4) 防护罩安装



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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	● 应按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

- 线圈与电路板、相间绝缘隔板为易损件，可单独订货。
- 请写明接触器的名称、型号、规格及订货数量。

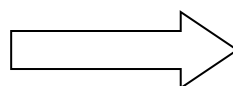
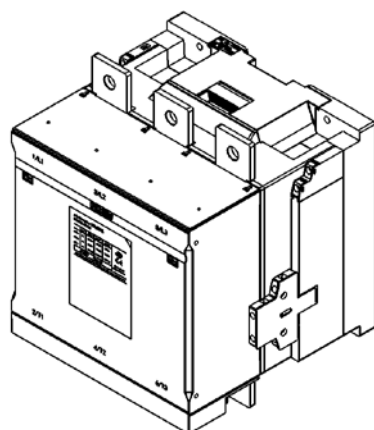
例如：交流接触器 NDC5K-800 AC/DC 110～250V 10 台

表示额定工作电流为 AC-3 时为 800A，控制电压为 AC 110～250V 50/60Hz，DC 110～250V，订货数量为 10 台。

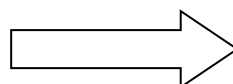
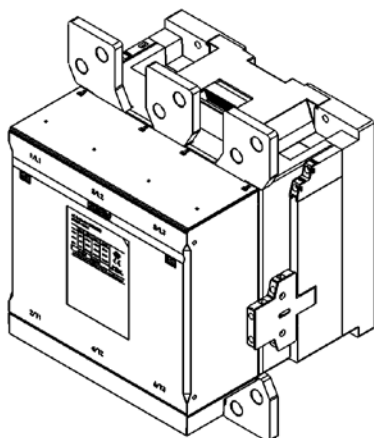
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1. Applicable Scope and Purpose

The NDC5K-630(H)/800(H)/1450R(H)/1700R(H) 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-630(H)/800(H)



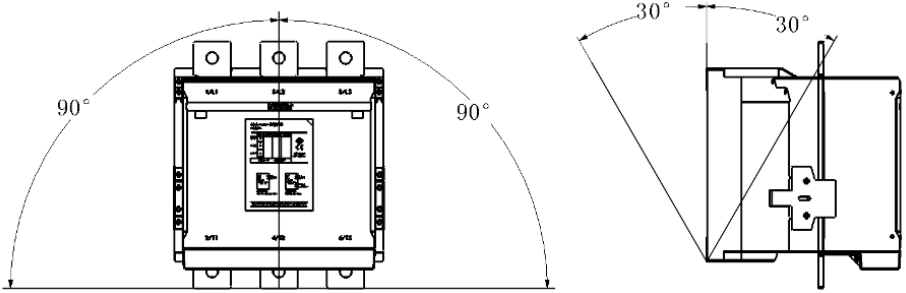
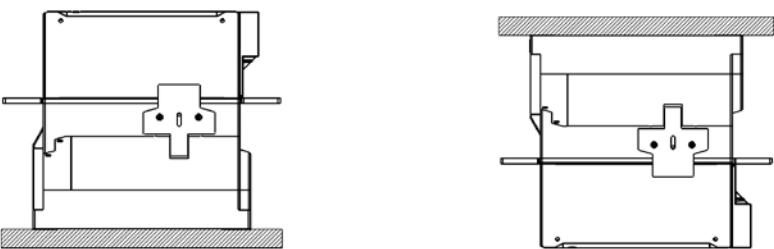
NDC5K-1450R(H)/1700R(H)



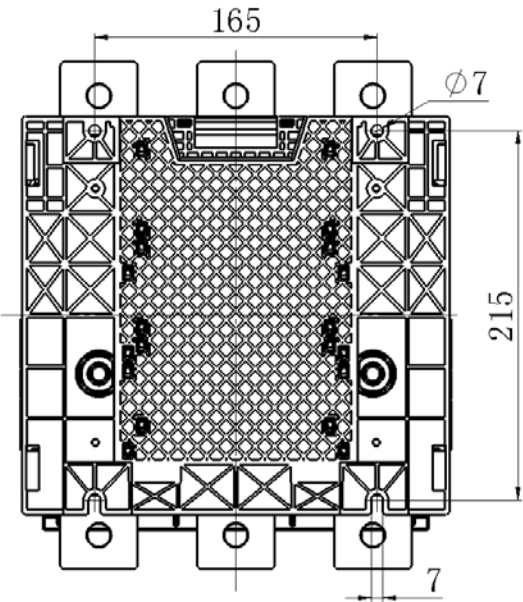
Warning! Installation, operation and maintenance of the product must be done by professional qualified electricians in accordance with the related systems, regulations, installation standards and safety specifications.

2. Installation Mode

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For bolt installation of the product (Take NDC5K-800 as an example)	
Prohibition 	

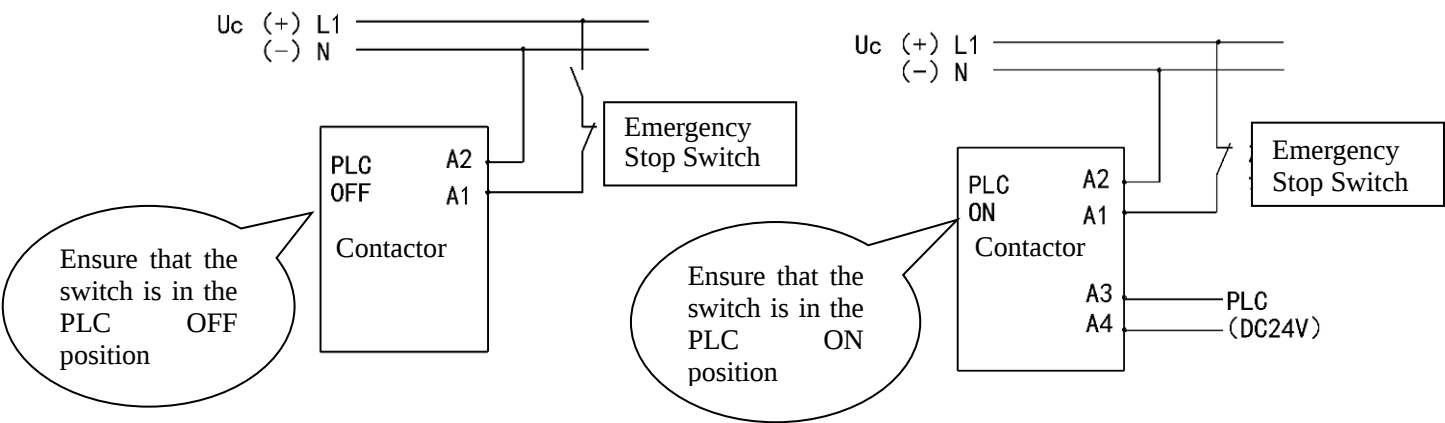
3. Installation Dimensions



4. Wiring Mode

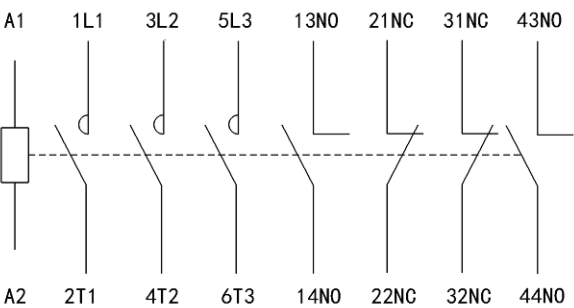
1) Wiring diagram

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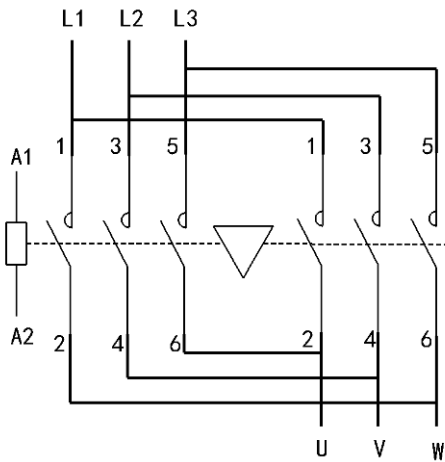


Common Control Mode

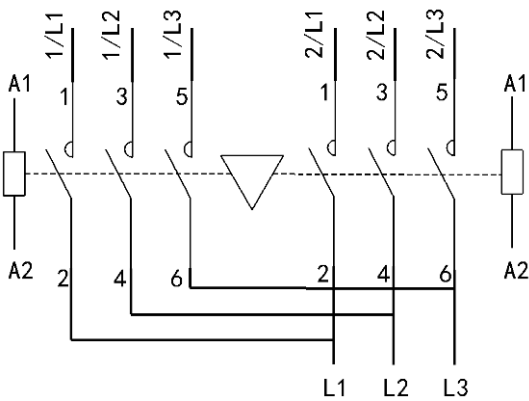
PLC Control Mode



Wiring Diagram of NDC5K-630(H), 800(H), 1450R/(H), 1700R/(H)



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	Single copper bar	Cord with a connector	Stranded wire mm ²

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	Width mm	Thickness mm	mm ²	
NDC5K-630(H)	50	5	min 50 max 240	min 70 max 240
NDC5K-800(H)	60	5		
NDC5K-1450R/(H)	70	5	----	----
NDC5K-1700R/(H)	80	5		



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

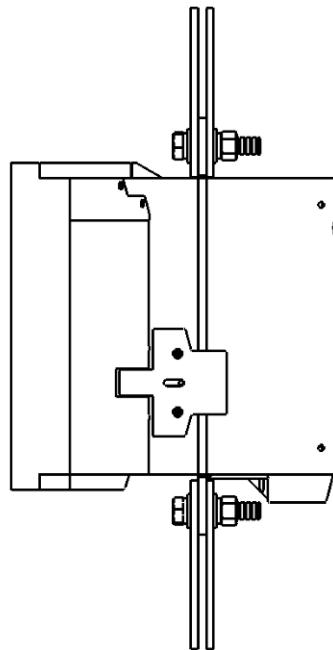


Table 2

Specification	Main circuit connection bolt	Tightening torque M (N.m)
NDC5K-630(H)	M12	24
NDC5K-800(H)		35
NDC5K-1450R/(H)		
NDC5K-1700R/(H)		

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

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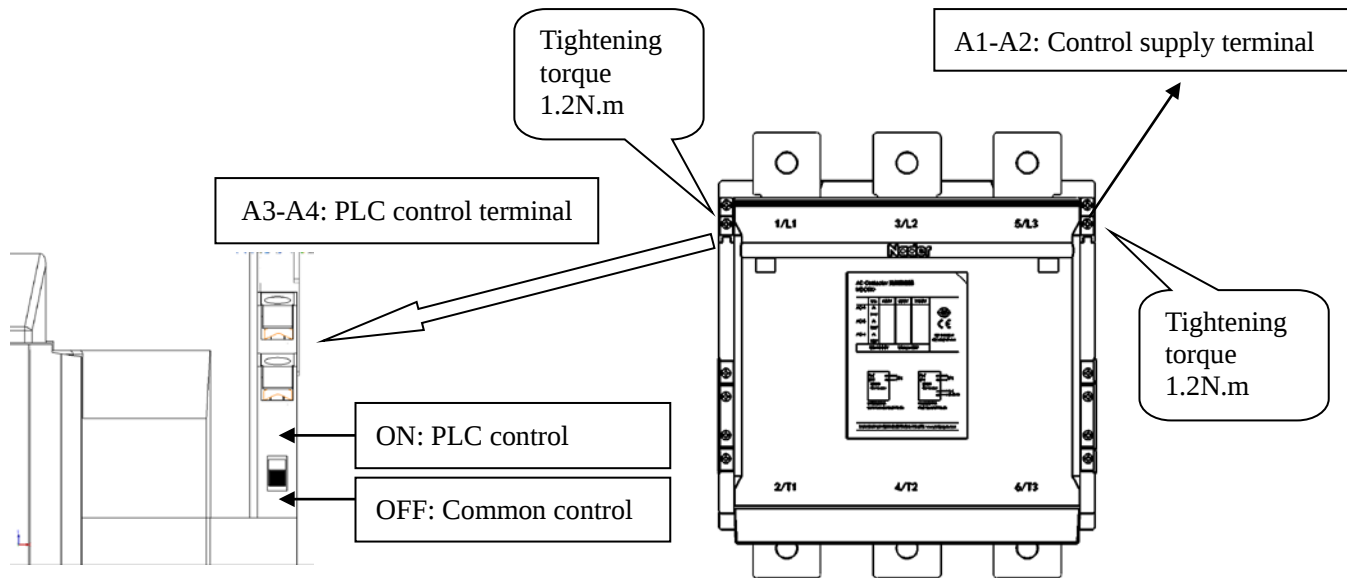


Table 3

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

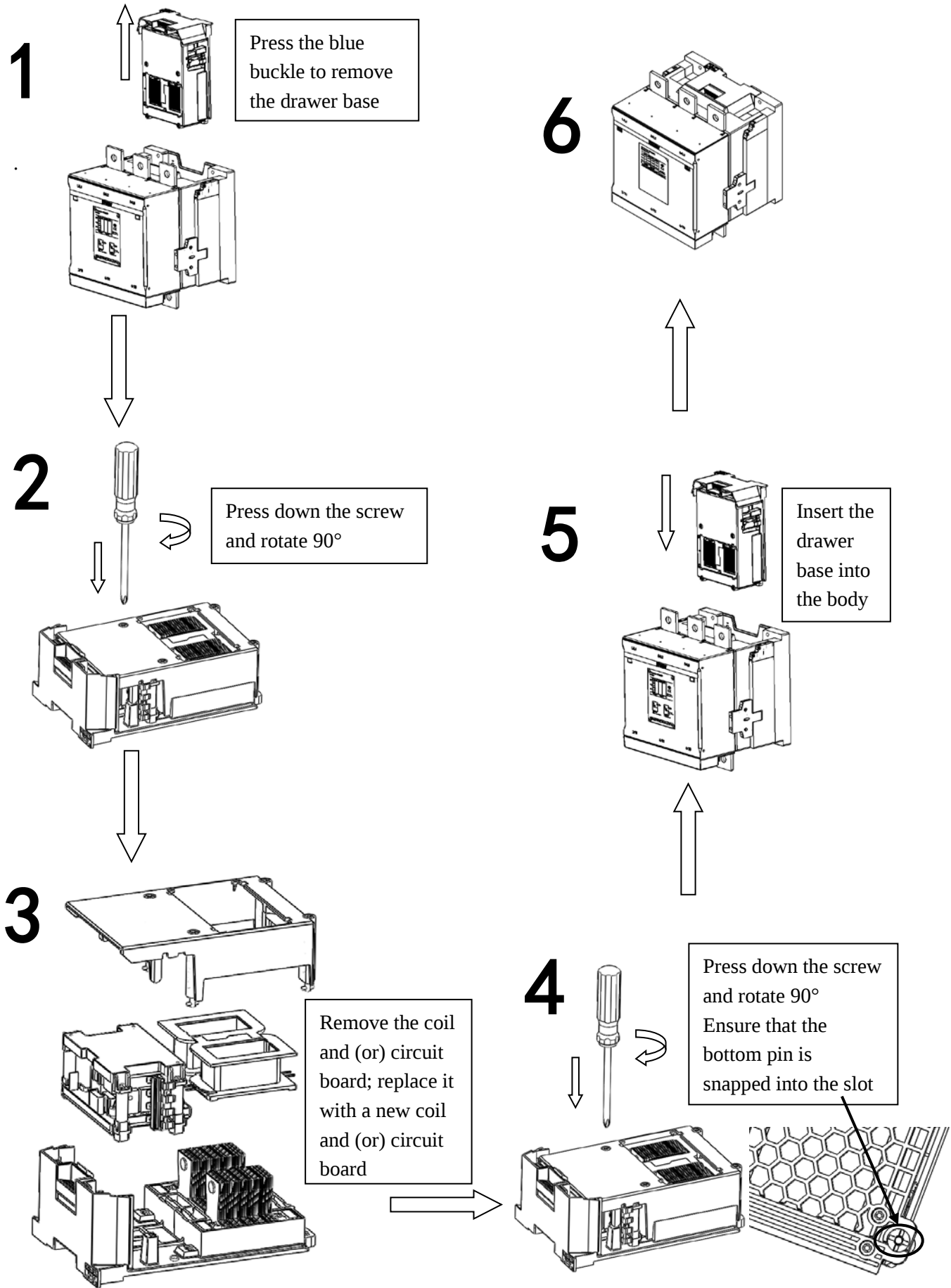
5. Accessory Description

1) Replace the coil and (or) circuit board



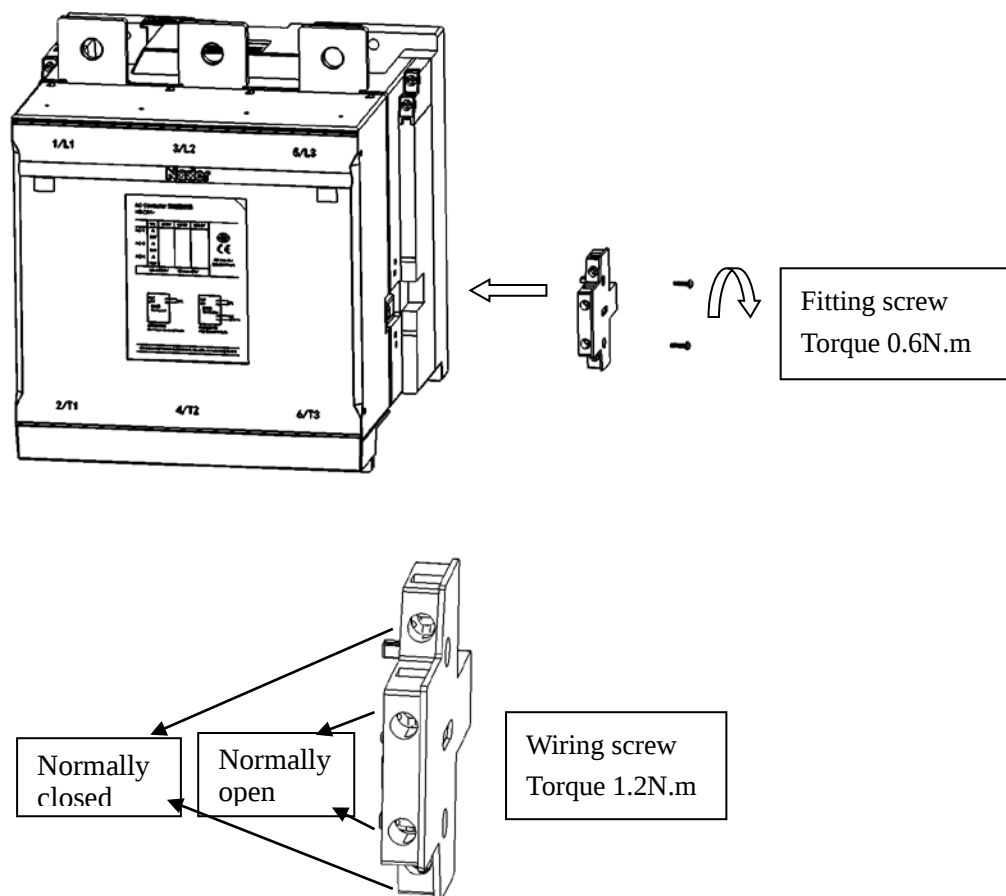
There is a risk of electric shock, explosion or arc burn! When working on this device, please turn off all power supplies.

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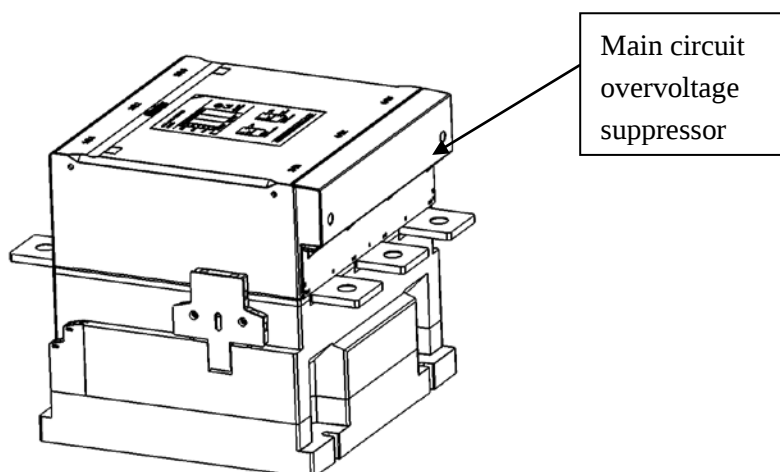


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2) Auxiliary contact set

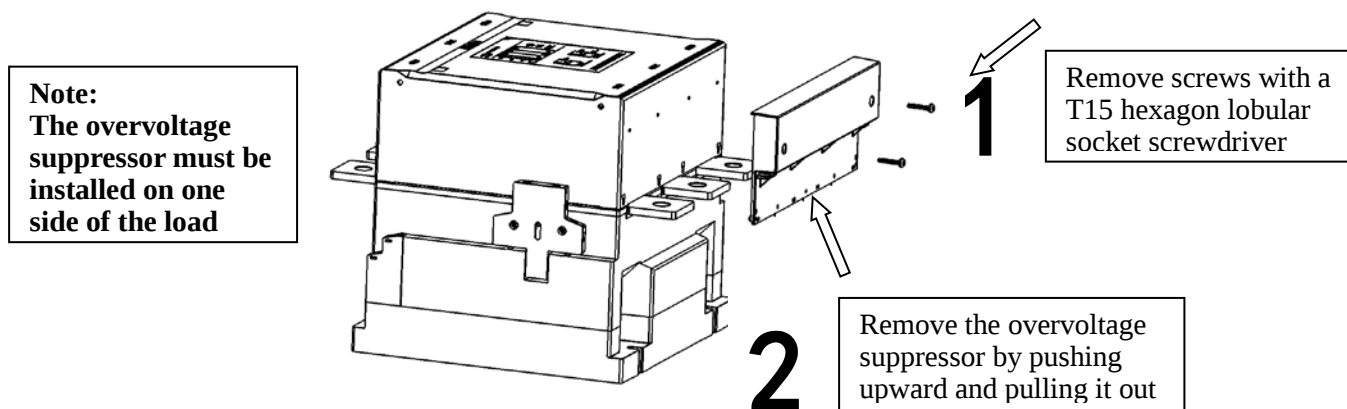


2) Overvoltage suppressor

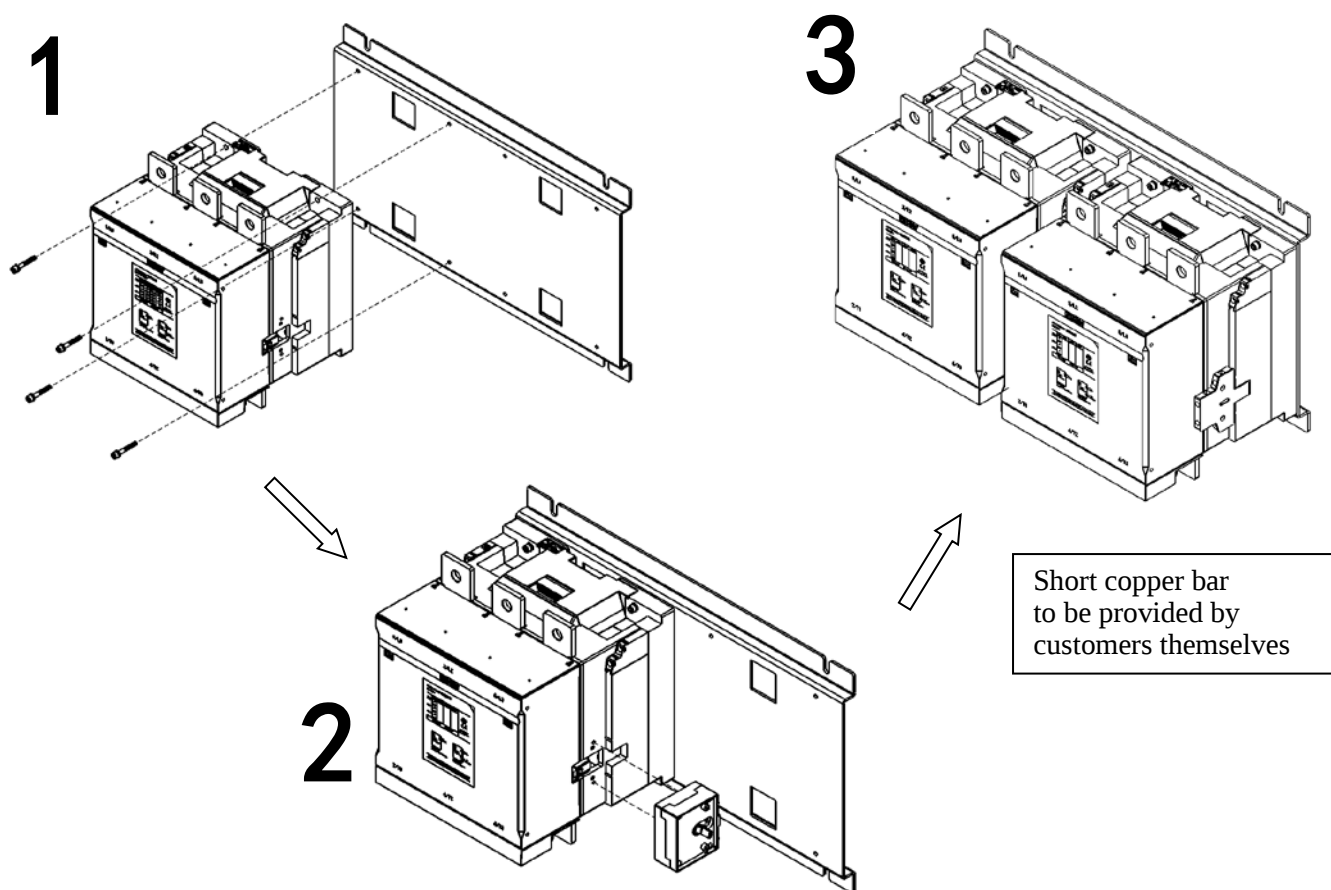


When it is used with the inverter, or the main circuit has the strong harmonic load, be sure to remove the main circuit overvoltage suppressor; to conduct the withstand voltage test, be sure to remove the main circuit overvoltage suppressor.

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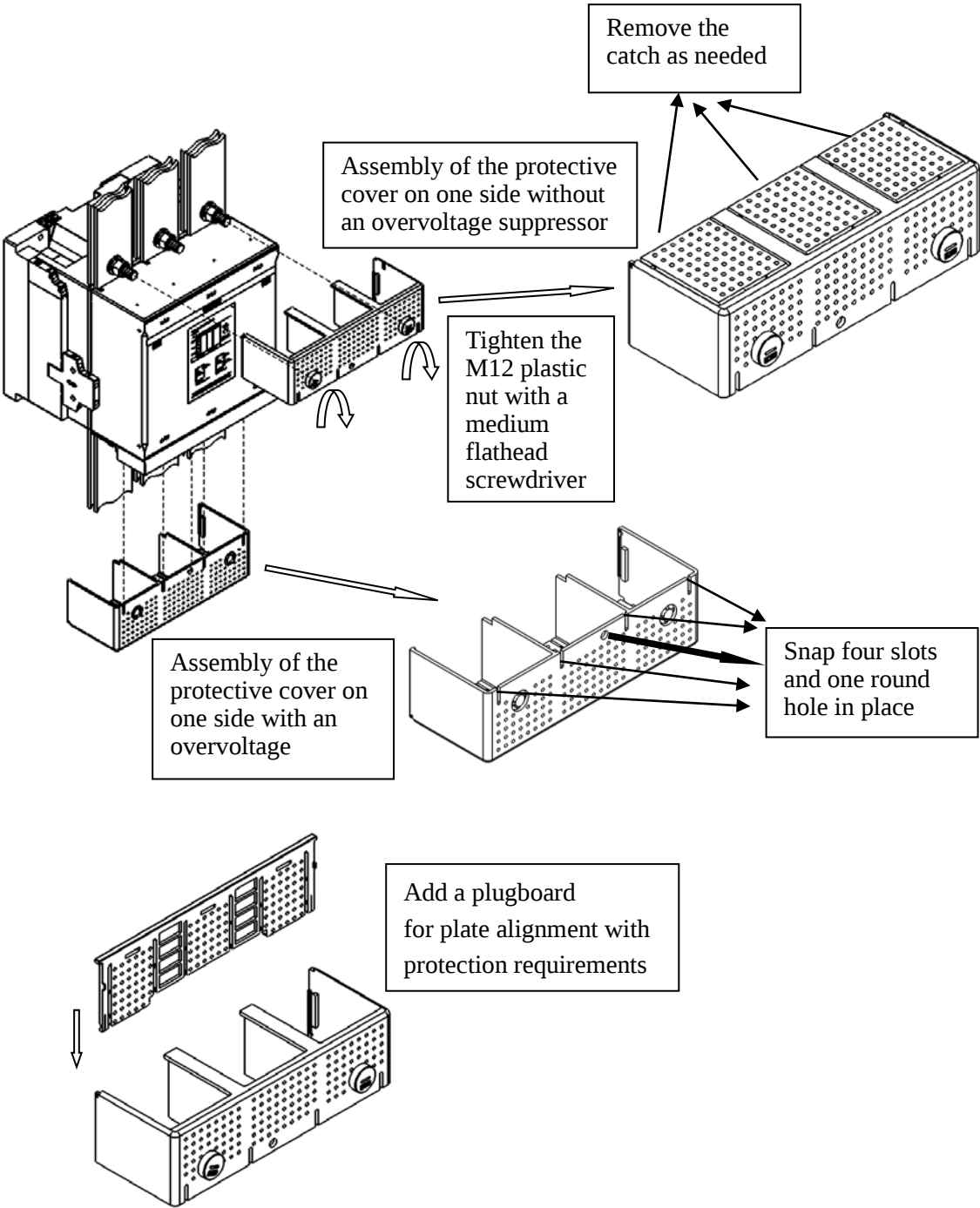


3) Mechanical interlocking installation



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4) Installation of the protective cover



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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-800 AC/DC 110~250V 10 sets

It represents that when the rated operating current is AC-3 800A, the control voltage is AC 110~250V 50/60Hz and DC 110~250V with the order quantity of 10 sets.

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