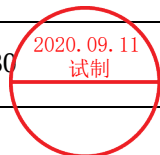


上海良信电器股份有限公司
(NDC2-80R~750R 系列交流接触器)

产品说明书

(IPD-ENG-DEV-T18 A0 2016-09-23)

编制	潘婉玲	日期	20200630
审核	李大鹏	日期	20200630
会签	王玉军	日期	20200630
批准	崔晓明	日期	20200630



修订记录					
版本	修订原因/内容	实施日期	编制人	审核人	批准人
0	新增	20200630	潘婉玲	李大鹏	崔晓明



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

NDC2-80R~750R 系列交流接触器 (以下简称接触器), 主要用于交流 50Hz (或 60Hz), 额定绝缘电压为 1000V, 在 AC-1 使用类别下额定工作电压为 690V 时额定工作电流为 80~750A 的电路中, 供远距离接通与分断电路, 适用于充电桩等行业。

NDC2-80R~750R series AC contactor (hereinafter referred to as contactor) is mainly used in AC 50Hz (or 60Hz), rated insulation voltage of 1000V, in AC-1 using the category rated working voltage of 690V rated operating current of 80~750A circuit for remote making and breaking circuit. It is suitable for charging pile industry.

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



NDC2-80R

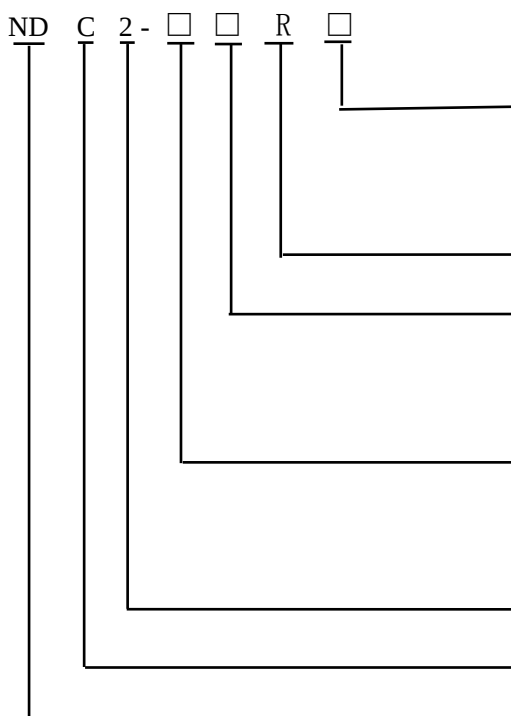


NDC2-150R~250R



NDC2-375R~750R

三、型号及含义/Product model and definition



线圈电压: “AC”交流线圈; “DC”直流线圈;

“AC/DC”交直流通用宽电压线圈

The coil voltage: “AC”Ac coil; “DC”Dc coil

“AC/DC”Ac/Dc general wide voltage coil

AC-1 专用/Exclusive use of AC-1

主回路极数: “3”代表3极, 不标注.

Number of poles: the 3 poles. Generally, it is unnecessary to mark the #3 poles.

基本规格代号: 690V 时 AC-1 使用类别下, 额定工作电流 I_e 。

Codes of basic specification: Under the usage category of AC-1 and 690V, the code is represented by the appearance of I_e

设计序号/Code of design

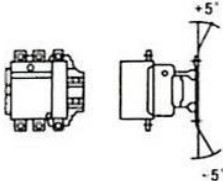
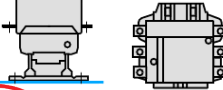
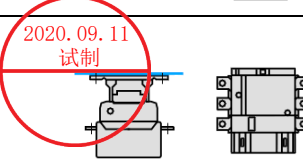
交流接触器/Alternating current contactor

“Nader”牌低压电器/“Nader” Low-voltage

四、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)

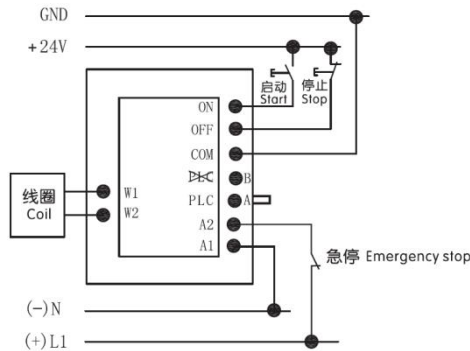
表 1/table 1

环境温度 Ambient Temperature	-40 ~ +70°C, 24 小时极端高温不超过 +70°C。 -40 ~ +70°C, 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°C 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°C 时, 月平均最大相对湿度不超过 90%, 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

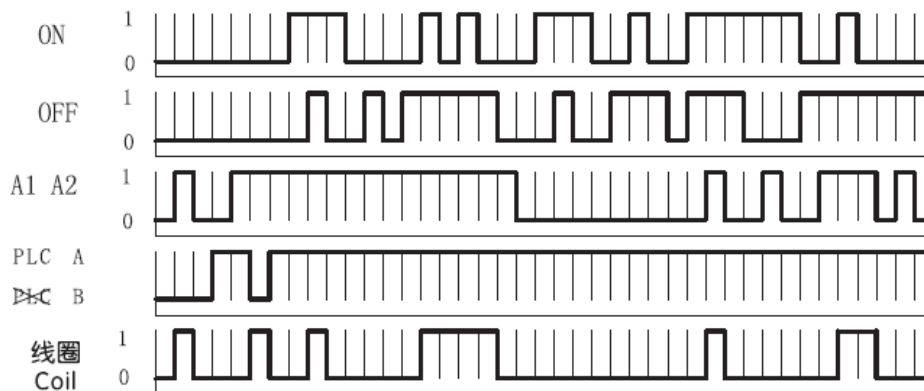
第 5 页 共 15 页

(3) 有源主令电器控制接法: 将拨码开关置于 PLC A, ON、OFF、COM 与主令电器 (按钮相接), 控制图如下, 控制逻辑见逻辑图。

the main electrical control connection: The DIP switch in the PLC A, ON, OFF, COM and main electrical (contact button), control charts below, the control logic on logic diagram.



接触器线圈控制逻辑波形图/ Contactor coil control logic waveforms



注: ~~PLC~~ B 时 ON、OFF 的状态对线圈状态不起作用, 逻辑波形图省略。

Note: ~~PLC~~ B is ON, OFF state of the coil state does not work, logic waveforms are omitted.

六、接线能力/Wiring capability

主回路接线端子连接导线能力 (见表 2) 及力矩 (见表 3)

Capability of the connecting lead of the main-circuit wiring terminal (see table 2) and its moment (see table 3)

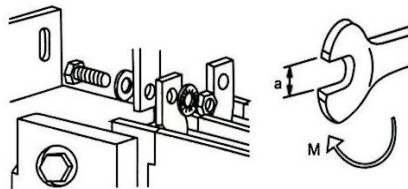
表 2/Table 2

接触器型号 Contactor Type	主电路连接能力/Wiring capability of main circuit			
	铜导线/Copper wire		铜排/Copper bar	
	根数 /Number	导线截面 /Crosssection of the lead(mm ²)	根数 /Number	尺寸/ Size(mm)
NDC2-80R	2	16(O 型端子)	/	/
NDC2-150R~250R	1	10~120	2	25×5
	2	10~120+10~50		
NDC2-375R	1	185	2	32×4

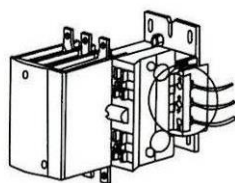
NDC2-400R	1	240	2	32 × 4
NDC2-500R	1	240	2	32 × 4
NDC2-670R	2	150	2	30 × 5
NDC2-750R	2	240	2	50 × 5

表 3/Table 3

NDC2	M/N.m
80R	6
150R-250R	12
375R-750R	35



控制电路/Control circuit



M 0.8~1.2Nm

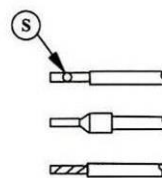
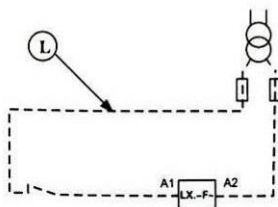
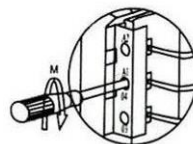


表 4/table 4

NDC2-80R~500R

LX -F.~	L ≤ ...m	S ≥ ...mm ²
24V	4	2.5
	7	4
48V	10	1.5
	20	2.5
	30	4
	40	1
110V	60	1.5
	100	2.5
	150	4
	150	1
	150	1
220V	250	1.5
	400	2.5
	600	4
380V	500	1
	750	1.5
	1200	2.5

表 5/table 5

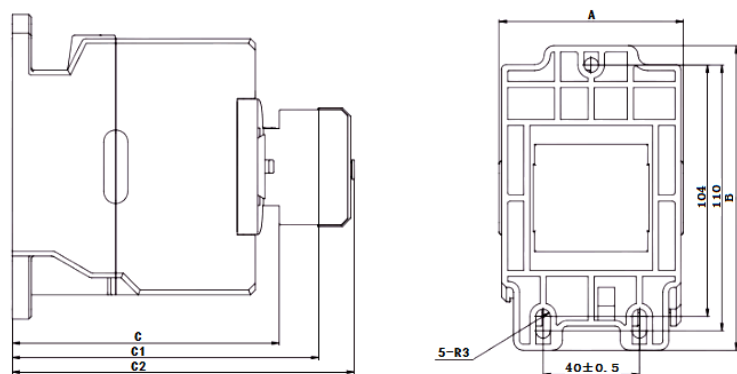
NDC2-670R~750R

LX.-F.~	L ≤ ...m	S ≥ ...mm ²
48V	4	1.5
	6	2.5
	10	4
110V	15	1
	20	1.5
	40	2.5
	60	4
220V	60	1
	90	1.5
	150	2.5
	250	4
380V	180	1
440V	270	1.5
	500	2.5

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

1、NDC2-80R 外形及安装尺寸/Overall dimension and installation size



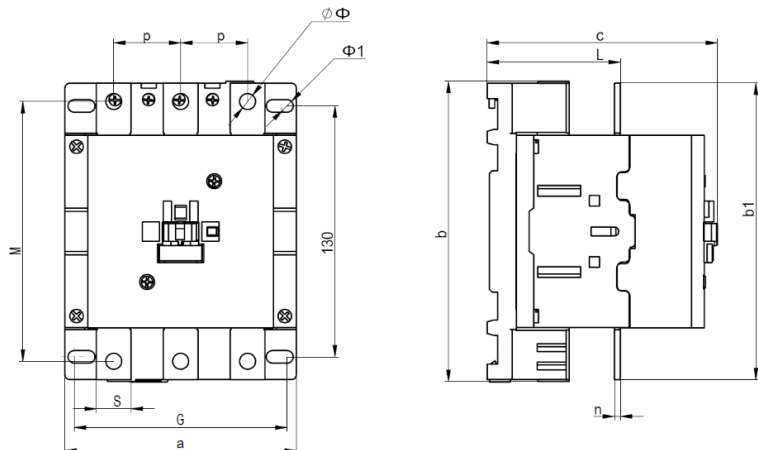
单位/ Unit: mm

NDC2	A	B	C	C1	C2
80R	76.5±0.1	126	111	127	170

注/Note: C1:NDC2+NF1; C2:NDC2+NS1

注/Note: 未注公差按 ±1mm./The unmarked tolerance is ±1mm.

2、NDC2-150R~250R 外形及安装尺寸/Overall dimension and installation size

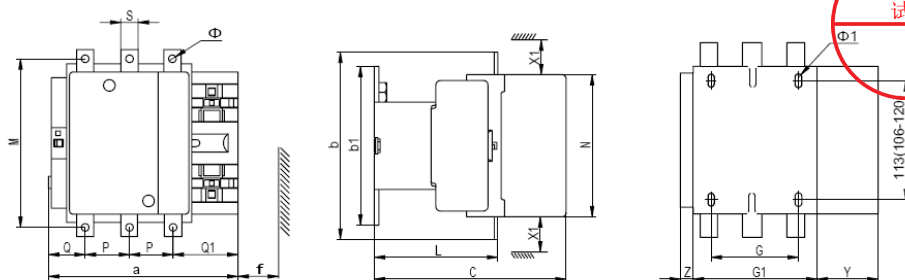


单位/ Unit: mm

NDC2	a	p	S	Φ	b	b1	M	c	L	n	G	Φ1
150R~250R	120	35	18	8.5	156	154	135	119	69	3	96/110	6.5

注/Note: 公差按 ±1mm./The tolerance is ±1mm.

3、NDC2-375R~500R 外形及安装尺寸/Overall dimension and installation size



单位/ Unit: mm

NDC2	a	p	Q	Q1	S	Φ	f	b	b1	M	N	c	L	G	$\Phi 1$	G1	Z	Y	X1	
																			≤500V	>500 V
375R	168.5	48	21	51.5	25	11	130	197	137	172	127	181	113.5	80	6.5	111	13.5	44	10	15
400R	201.5	48	39	66.5	25	11	147	203	145	178	147	213	141	96	6.5	140	20.5	38	10	15
500R	201.5	48	39	66.5	25	11	147	203	145	178	147	213	141	96	6.5	140	20.5	38	10	15

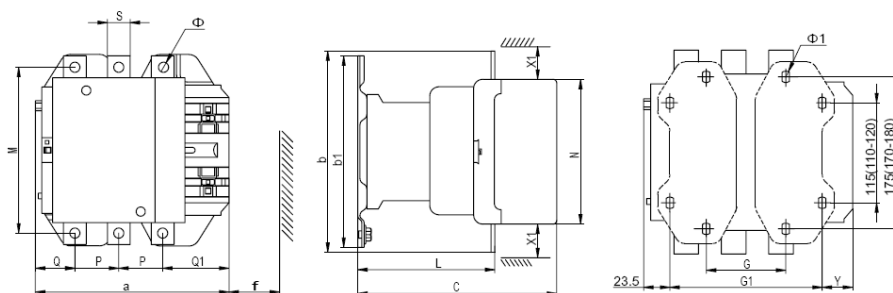
注/Note: f 为更换线圈所需预留的最小空间; X1 为最小电气间隙 (飞弧距离)

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, $\Phi 1$, n, 公差 $\pm 1\text{mm}$, 其余尺寸公差 $\pm 5\text{mm}$ 。

Installation and dimensions for the above product design size, P, Q1, S, T, T1, Φ , M, L, $\Phi 1$, n, will have a size of $\pm 1\text{mm}$ tolerance. Other will have a size of $\pm 5\text{mm}$ tolerance

4、NDC2-670R~750R 外形及安装尺寸/Overall dimension and installation size



单位/ Unit: mm

NDC2	a	p	Q	Q1	S	Φ	f	b	b1	M	N	c	L	G	G1	$\Phi 1$	Y	X1	
																		≤500V	>500 V
670R	213	48	43	74	25	11	151	206	209	181	158	219	145	80(66-102)	170(156-192)	8.5	19.5	15	20
750R	233	55	46	77	30	11	169	238	209	208	172	232	146	80(66-120)	170(156-210)	8.5	39.5	15	20

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, $\Phi 1$, n, 公差 $\pm 1\text{mm}$, 其余尺寸公差 $\pm 5\text{mm}$ 。

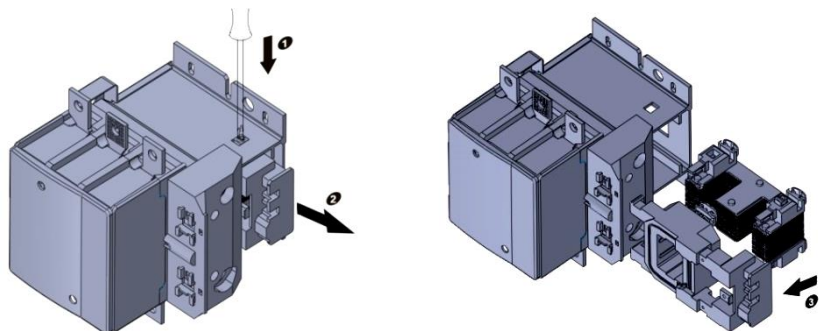
Installation and dimensions for the above product design size, P, Q1, S, T, T1, Φ , M, L, $\Phi 1$, n, will have a size of $\pm 1\text{mm}$ tolerance. Other will have a size of $\pm 5\text{mm}$ tolerance

八、安装与附件/Installation and accessories

1、NDC2-375R~750R 线圈更换 (NDC2-80R~250R 不可更换线圈) /Coil changing(Coils of NDC2-80R~250R cannot be replaced.)

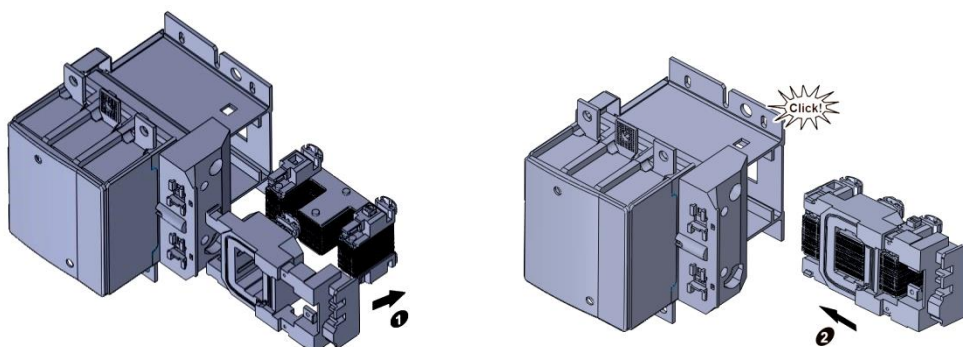
1.1 常规线圈更换/Conventional coil changing

线圈拆除/Coil removal



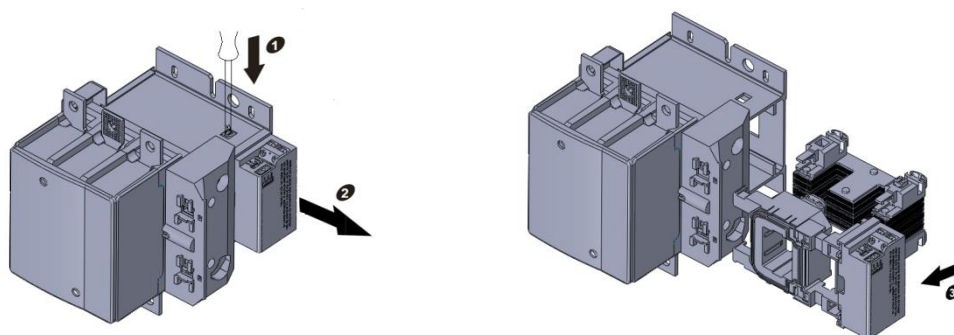
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线圈安装/ Coil installation

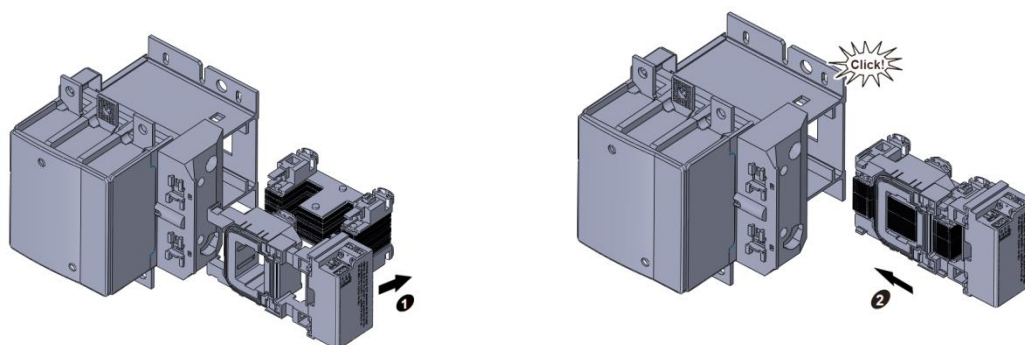


1.2 宽电压线圈更换/ Wide voltage coil changing

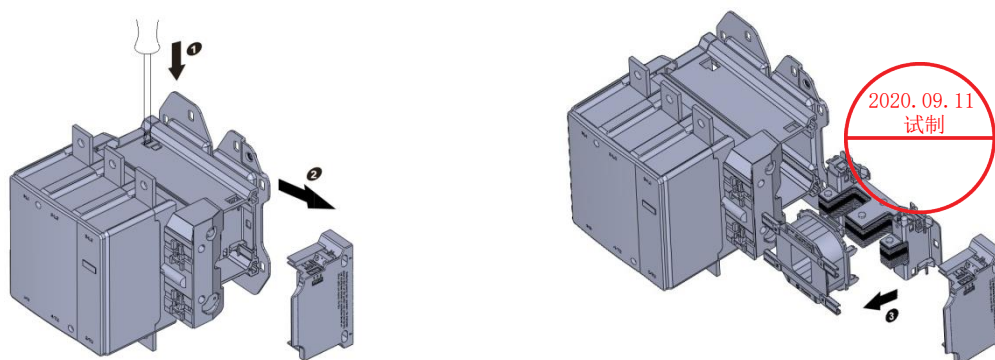
NDC2-375R~500R 线圈拆除/Coil removal of NDC2-375R~500R



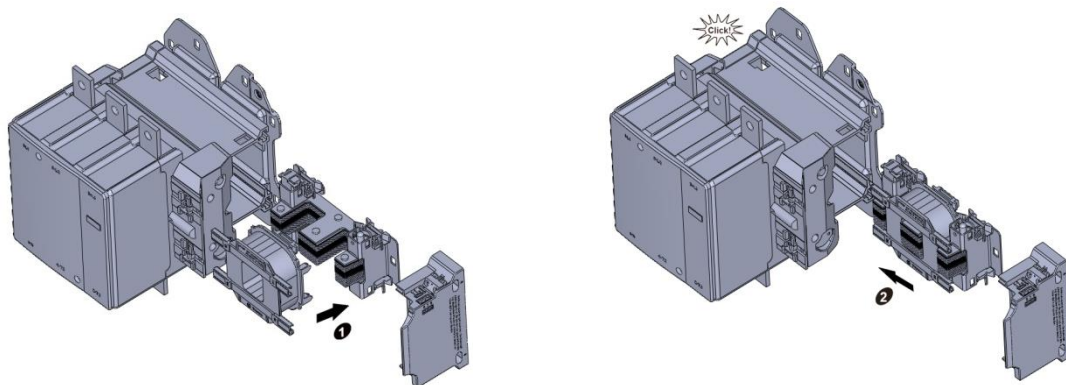
NDC2-375R~500R 线圈安装/Coil installation of NDC2-375R~500R



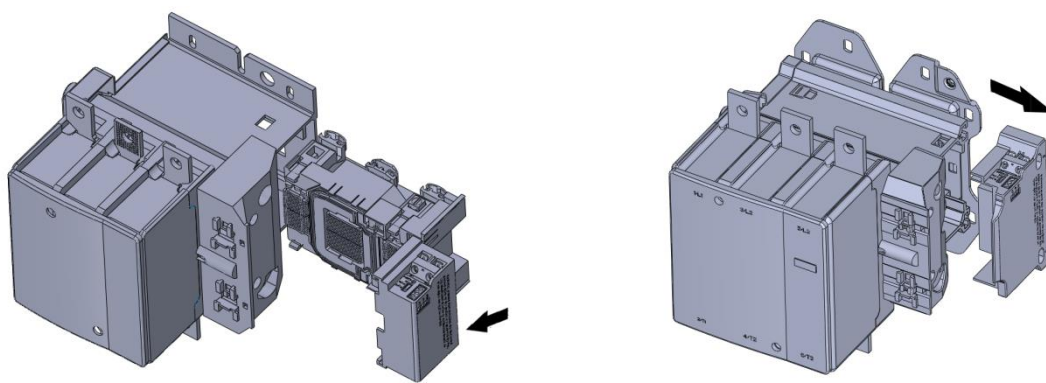
NDC2-670R~750R 线圈拆除/ Coil removal of NDC2-670R~750R



NDC2-670R~750R 线圈安装/Coil installation of NDC2-670R~750R

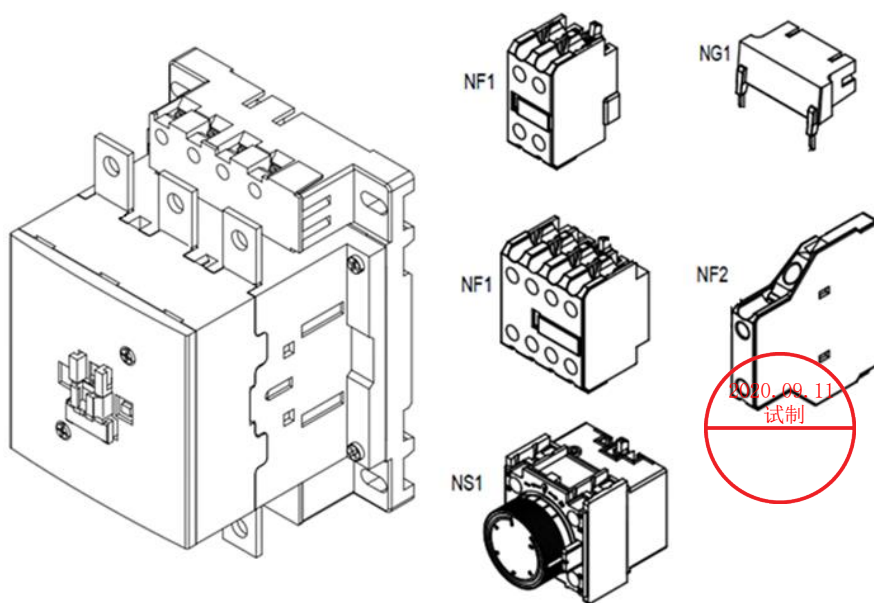


1.3 宽电压模块更换/ wide voltage module changing

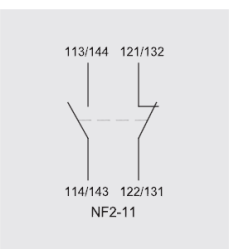
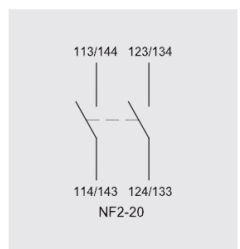
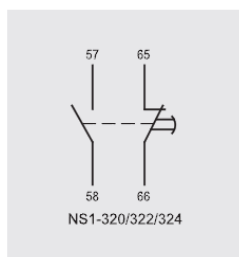
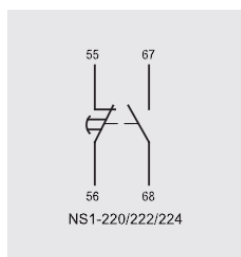
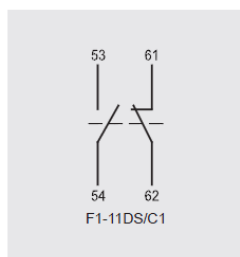
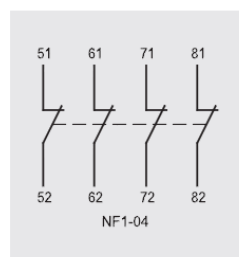
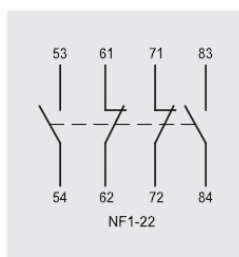
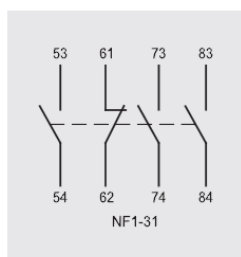
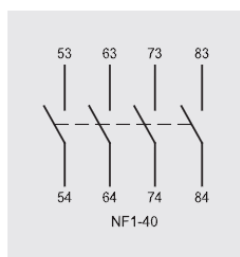
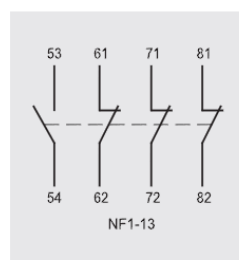
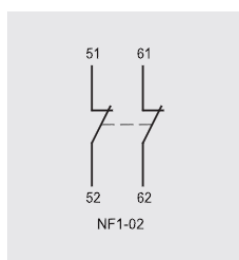
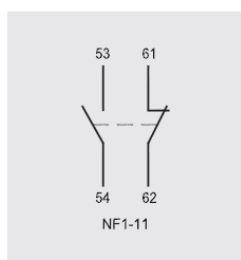
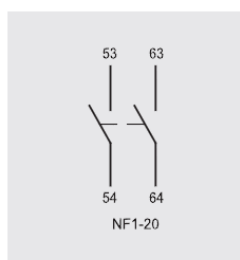
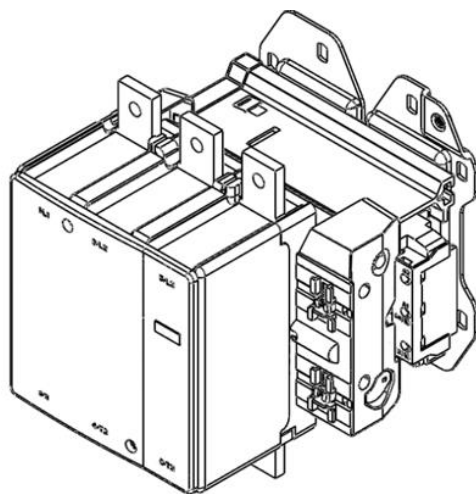


2、辅助触头组/Auxiliary contacts

NDC2-80R~250R



NDC2-375R-750R



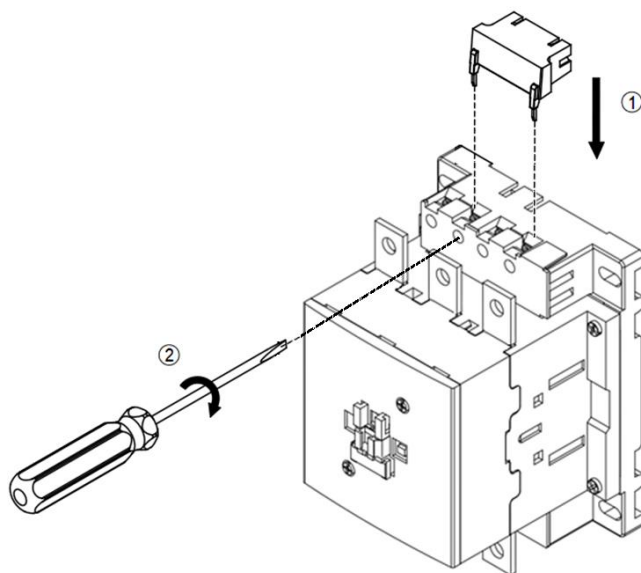
推荐采用下列辅助触头组/The following auxiliary contact unit is recommended:

附件名称 Accessories	备注 Remarks	附件名称 Accessories	备注 Remarks	附件名称 Accessories	线圈控制电压 U_c
NF1-02	2"NC"	F1-11DS/C1	1"NO"+1"NC"	NG1-2RCE	24~48V
NF1-11	1"NO"+1"NC"	F1-22DS/C1	2"NO"+2"NC"	NG1-2RCG	50~127V
NF1-20	2"NO"	NS1-220	0.1~3s On-delay	NG1-2RCU	110~240V
NF1-04	4"NC"	NS1-222	0.1~30s On-delay	NG1-2RCN	380~415V
NF1-13	1"NO"+3"NC"	NS1-224	10~180s On-delay	NG1-2NRE	24~48V
NF1-22	2"NO"+2"NC"	NS1-320	0.1~3s Off-delay	NG1-2NRG	50~127V
NF1-31	3"NO"+1"NC"	NS1-322	0.1~30s Off-delay	NG1-2NRU	110~240V
NF1-40	4"NO"	NS1-324	10~180s Off-delay	NG1-2NRN	380~415V
NF2-11	1"NO"+1"NC"			G1-01~04R/C1-2650	24~48V 、 50~110V 、 127~240V、 250~440V
NF2-20	2"NO"			G1-01~04K/C1-2650	24~48V 、 50~110V 、 127~240V、 250~440V

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

3.1 适配 NDC2-80R~250R 的 NG1 线圈浪涌抑制模块的安装

Installation of NG1 series coil surge suppression adapted to NDC2-80R~250R.



将 NG1 的两个插头插入接触器线圈接线螺钉处，用螺丝刀拧紧固定即可。

Put the two lugs of NG1 (insert type) into the right terminals of contactor, then use screwdriver to fasten it.

3.2 适配 NDC2-375R~750R 的 G1 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 adapted to NDC2-375R~750R is available in two mounting options, one for direct mounting and the other for bracket mounting.

3.2.1 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;

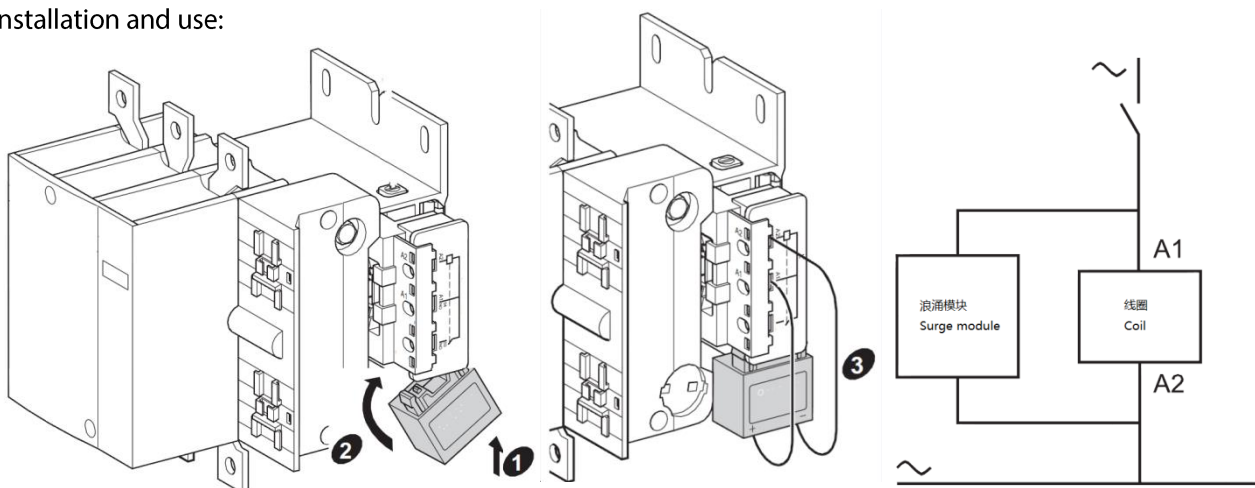
a. Install the surge suppression module on the coil as shown in the figure below;

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.

安装使用方式:

Installation and use:

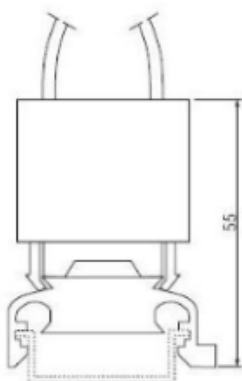


3.2.2 支架安装方式如下:

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 35mmDIN 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

九、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, 再使线圈通电分合数次;
- 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.

