

上海良信电器股份有限公司

NDR2M-38
产品规格书
Product Specification
(IPD-ENG-DEV-T20 A2 2023-03-14)

编制	沈凡一	日期	20250217
审核	夏昌慧	日期	20250217
会签	李美莹	日期	20250217
批准	崔晓明	日期	20250217

[illegible]

1、适用范围与用途/ Applicat

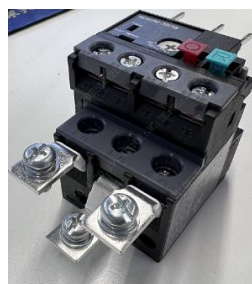
NDR2M-38 系列双金属片式热过载继电器适用于交流 50 Hz 或 60Hz、额定工作电压至 690V 额定电流为 0.1~38A 的电路中，用作交流电动机起过载和断相保护。

NDR2M-38 series bimetal thermal overload relay is applicable to circuits with AC 50 Hz or 60Hz, rated working voltage up to 690V and rated current of 0.1~38A, for overload and phase loss sensitive protection of AC motors.

2、产品图片/ Product Picture: (示意图/Diagram)



NDR2M-38/0.16~ NDR2M-38/30



NDR2M-38/36~ NDR2M-38/38

3、规格型号说明/ Explain Specifications of the products

ND R 2 M — 38 / □ □ □

空白：常规型；G：带安装座

Blank: regular type; G: with installation seat

空白：断相+过载保护，极数 3P；M：过载保护，极数 3P；
K：过载保护，极数 2P

Blank: phase failure + overload protection, number of poles 3P

M: overload protection, number of poles 3P

K: overload protection, number of poles 2P

电流规格代号（见表 1）/ Current spec. code (See table 1)

壳架等级/ Shell frame grade

派生代号/ Derived code

设计代号/ Design code

热过载继电器/ Thermal overload relay

企业代号/ Enterprise code

表 1 电流规格基本参数 / Table 1 Basic Parameters of Current Spec

序号 /No.	产品型号/ Product model	整定电流范围 (A) / Setting Current Range (A)	用 (SCPD) 熔断器 (A) / Use (SCPD) Fuse (A)		壳架等级 / Shell frame grade	安装接触器/ Matching Contactor
			aM	gG		
1	NDR2M-38/0.16	0.1~0.16	1	1	38	NDC1-09~38
2	NDR2M-38/0.25	0.16~0.25	1	1		
3	NDR2M-38/0.4	0.25~0.4	1	1		
4	NDR2M-38/0.5	0.35~0.5	1	1		
5	NDR2M-38/0.63	0.45~0.63	1	1		
6	NDR2M-38/0.8	0.55~0.8	3	2		
7	NDR2M-38/1	0.75~1	3	3		
8	NDR2M-38/1.3	0.9~1.3	3	3		
9	NDR2M-38/1.6	1.1~1.6	6	4		
10	NDR2M-38/2	1.4~2	6	6		
11	NDR2M-38/2.5	1.8~2.5	10	6		
12	NDR2M-38/3.2	2.3~3.2	10	10		
13	NDR2M-38/4	2.9~4	15	10		
14	NDR2M-38/4.8	3.5~4.8	15	10		
15	NDR2M-38/6.3	4.5~6.3	25	15		
16	NDR2M-38/7.5	5.5~7.5	30	25		
17	NDR2M-38/10	7.2~10	40	30		
18	NDR2M-38/12.5	9~12.5	50	30		
19	NDR2M-38/16	11.3~16	60	40		
20	NDR2M-38/20	15~20	80	50		
21	NDR2M-38/21.5	17.5~21.5	80	60		
22	NDR2M-38/25	21~25	100	60		
23	NDR2M-38/30	24.5~30	100	80		
24	NDR2M-38/36	29~36	150	100		
25	NDR2M-38/38	33~38	150	100		

(注: 仅适用交流线圈接触器, 勿搭配直流线圈接触器使用)

/(Note: Only applicable to AC coil contactors, do not use with DC coil contactors)

4、主要技术参数/ Main Technical Parameters

表 2 技术参数 / Table 2 Technical Parameters

型号/ Model		NDR2M-38	
整定电流范围 I_e A/ Setting current range I_e A		0.1~30	36、38
主回路端子形式（电源侧）/ Main circuit terminal form (power supply side)		插头插入式/ Plug-in type	
主回路端子形式（负载侧）/ Main circuit terminal form (load side)		M4 螺钉/ screw	M5 螺钉/ screw
额定绝缘电压 U_i V/ Rated insulation voltage U_i V		690	
额定冲击耐受电压 U_{imp} kV/ Rated impulse withstand voltage U_{imp} kV		6	
脱扣等级/ Trip level		10A	
补偿温度 $^{\circ}\text{C}$ / Compensation temperature $^{\circ}\text{C}$		-5~+40	
外壳防护等级/ Enclosure rating		IP20	
辅助触头 /Auxiliary contact	类型/ Type	1NO+1NC	
	约定发热电流 I_{th} A /Conventional free-air thermal current I_{th} A	10	
	AC-15	额定工作电压 U_e V /Rated operational voltage U_e V	240/380
		额定工作电流 I_e A / Rated operational current I_e A	3/1.9
	DC-13	额定工作电压 U_e V / Rated operational voltage U_e V	125/250
		额定工作电流 I_e A / Rated operational current I_e A	0.55/0.27

表 3 接线端子连接导线的能力/ Table 3 Connection Capacity of Connection Terminal

产品型号 NDR2M- /Product model NDR2M-			0.1~30	36、38
			最小截面积/最大截面积 (mm ²) /Minimum cross-sectional area/maximum cross-sectional area	
接线能力 (min/max) mm ² / Connection capacity (min/max) mm ²	主回路/ Main circuit	软线（无接线端子） 1 根 / Cord（without precast end） 1 pc	1/6	1/10
		软线（有接线端子） 1 根 / Cord（with precast end） 1pc	1/6	1/6
		硬线 1 根 / Hard wire 1pc	1/6	1/10
	辅助回路/ Auxiliary circuit	软线（无接线端子） 1 根或 2 根 / Cord（without precast end） 1 or 2 pcs	1/2.5	
		软线（有接线端子） 1 根或 2 根 / Cord（with precast end） 1 or 2 pcs		
		硬线 1 根或 2 根 / Hard wire 1 or 2 pcs		
拧紧力矩 /Tightening torque	主回路/ Main circuit		1.7 N·m ±10%	
	辅助回路/ Auxiliary circuit		2 N·m ±10%	

5、正常工作环境/ Normal Operational Temperature

5.1 使用环境/ Use environment

a 周围环境温度: 储存温度为 $-20\sim+55^{\circ}\text{C}$; 工作温度为 $-5\sim+40^{\circ}\text{C}$

/ Ambient temperature: storage temperature $-20\sim+55^{\circ}\text{C}$; working temperature $-5\sim+40^{\circ}\text{C}$

b 海拔: 安装地点的海拔不超过 2000m/ Altitude: the altitude of the installation site should not exceed 2000m

c 湿度: 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, 例如 20°C 时达 90%, 对由于温度变化偶尔产生的凝露应采取特殊的措施

/ Humidity: When the max temperature is $+40^{\circ}\text{C}$, the relative air humidity cannot exceed 50%; higher relative humidity is allowed at lower temperature, for example humidity can be 90% at 20°C

d 污染等级: 安装地点的污染等级为 3 级/ Pollution level: the pollution level at the installation site is level 3

e 安装类别 (过电压类别): 安装类别为 III 类/ Installation category (overvoltage category): installation category is Class III

f 有关冲击和振动的条件由用户与本公司协商

/ The conditions related to impact and vibration shall be negotiated between the user and our company

5.2 额定工作制/ Rated work system

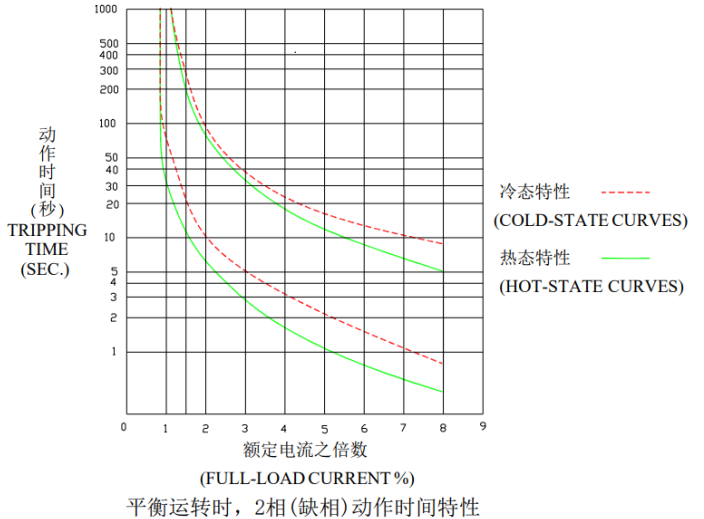
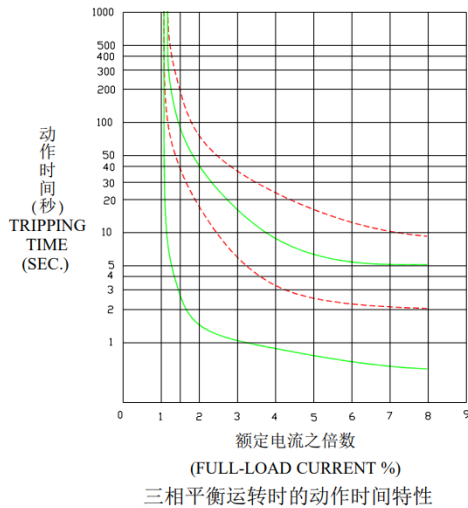
八小时工作制; / Eight-hour work system

6、脱扣特性/ Trip Characteristics

表 4 动作特性/ Table 4 Operation Characteristics

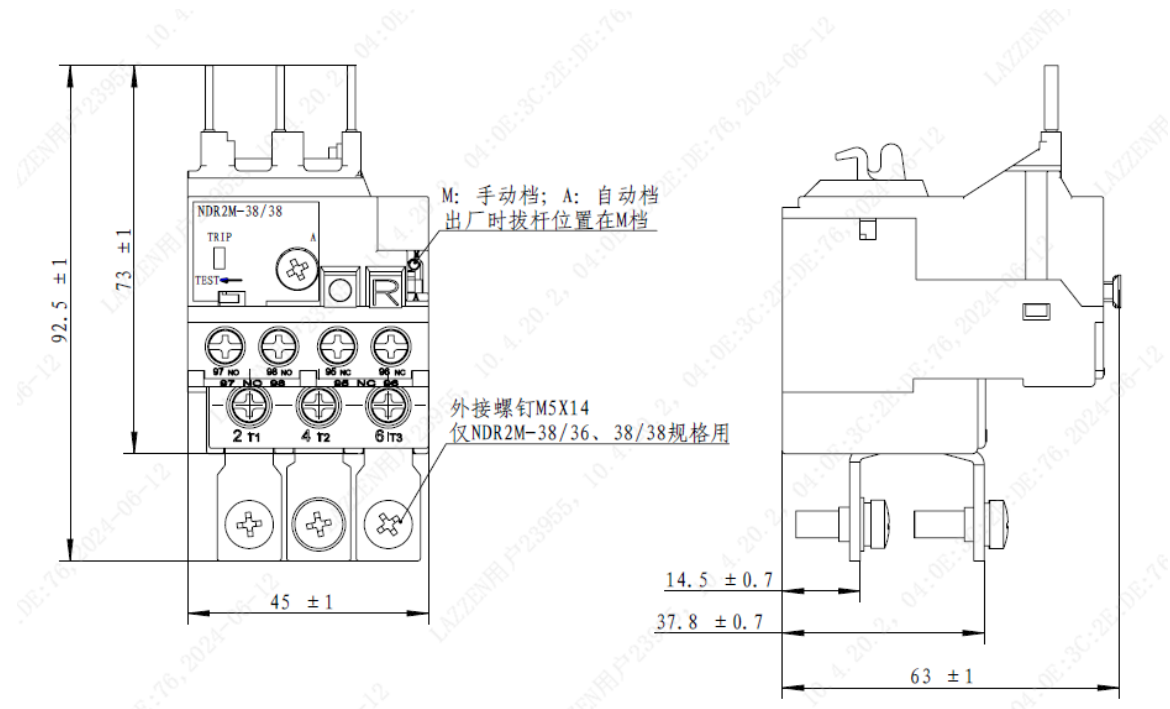
表 1 动作特性/ Table 1 Operation characteristics						
动作特性 /Operation characteristics	序 号 /No.	整定电流倍数/ Setting current multiple		动 作 时 间 / Operation time	起 始 条 件 / Starting condition	周围空气温 度℃ / Ambient air temperature℃
		任 意 两 相 / Any two phases	另一相/ The other phase			
各相负载不平衡时 /When the loads of the phases are unbalanced	1	1.00	0.90	>2h	冷态/Cold condition	20±5
	2	1.35	0	<2h	接序 1 试验后 / After test No.1	
各相负载平衡时 /When the loads of the phases are balanced	1	1.05		>2h	冷态/Cold condition	20±5
	2	1.20 min ¹⁾		<2h	接序 1 试验后 /After test No.1	
	3	1.50		<4min	接序 1 试验后 / After test No.1	
	4	7.20		2s<Tp≤10s	冷态/Cold condition	
备注/ remark: 1) 各相负载平衡时，整定电流倍数为脱扣阈值的最小值，脱扣阈值范围 1.2In～1.35In； /When the load is balanced in each phase, the setting current multiple is the minimum value of the trip threshold, and the trip threshold range 1.2In～1.35In; 2) 极限温度 40℃下，脱扣特性需要进行补偿，补偿系数 0.9。 /At the limit temperature of 40℃, the tripping characteristics need to be compensated with a compensation factor of 0.9。						

7、电流特性曲线/Current characteristic curve



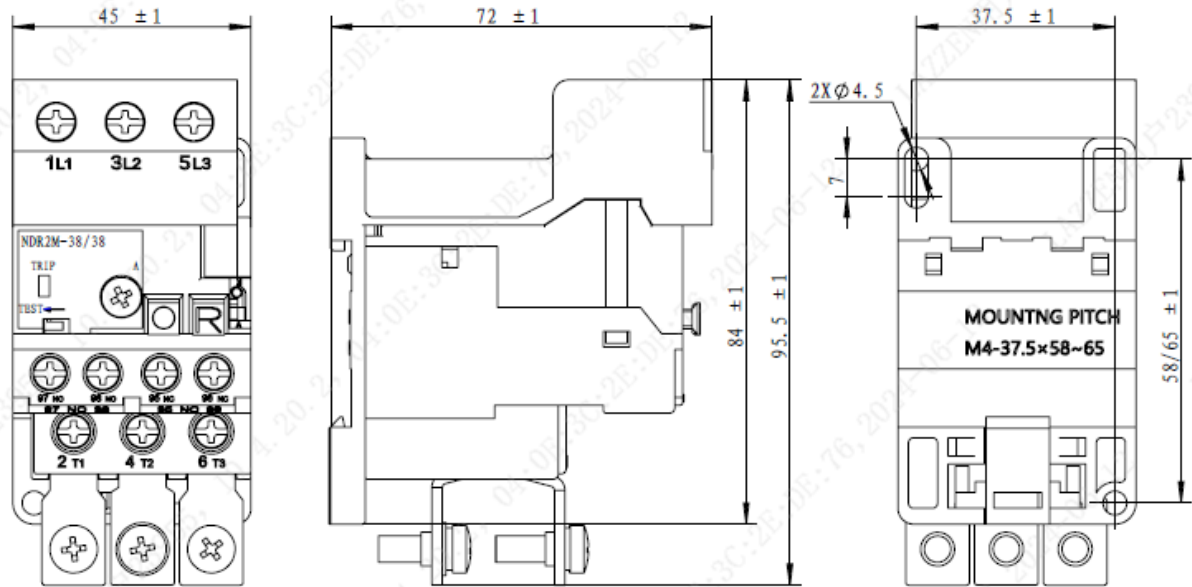
8、产品外形及安装尺寸/Product Outline and Installing Dimensions

a、NDR2M-38 外形尺寸/Product outline dimensions of NDR2M-38

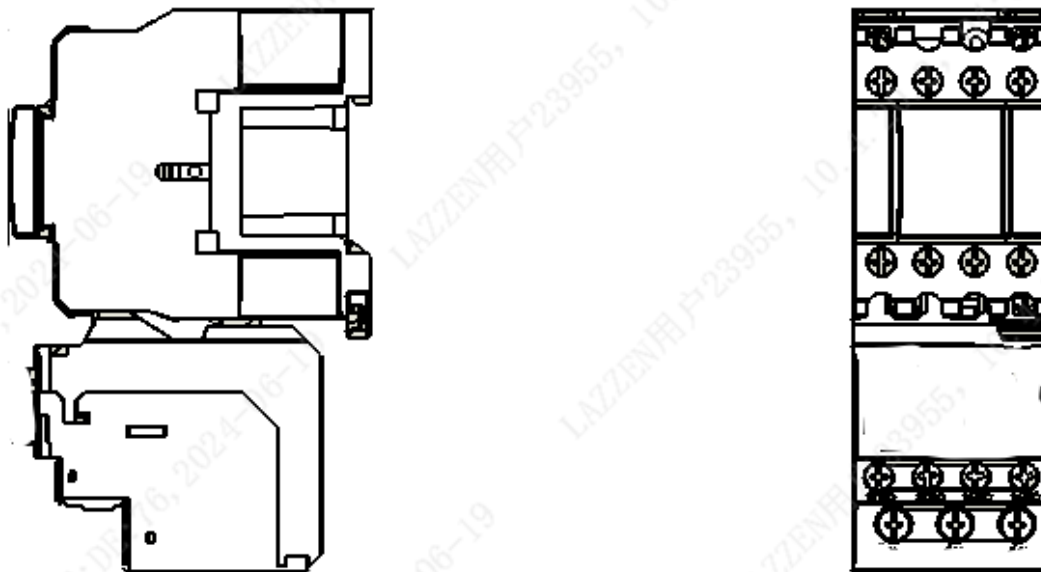


b、NDR2M-38 配安装座使用卡轨或螺钉分立安装

/NDR2M-38 is equipped with a mounting base and installed separately using clamp rails or screws.



c、NDR2M-38 配接触器组合安装示意图/Installation diagram of NDR2M-38 with contactor combination



9、安装方式/ Installation Methods

- a、组合安装: 直接插在 NDC1 接触器上/ Stack mounting: directly plug onto NDC1 contactor
- b、分立安装: 用螺钉或 TH35 导轨安装。/ Concrete installation: use screw or TH35 guide rail

10、包装储存/ Packaging and Storage

产品最小包装量 1 个/盒, 产品包装成箱后存储温度为-20~+55℃; 对应相对湿度在 80%以下, 周围空气中无酸性、碱性或其它腐蚀性气体的库房里储存。

/ The minimum packaging capacity of the product is 1pc/box. The storage temperature of the product after packaged into a box is -20~+55℃; the corresponding relative humidity is below 80%, and it is stored in the warehouse where there is no acid, alkaline or other corrosive gas in the surrounding air.

11、注意事项/ Precautions

- a、预先调整好整定电流; / Pre-adjust the setting current;
- b、出厂时产品整定在手动复位状态; / When leaving factory, the product is set to the manual reset state
- c、产品脱扣后若复位按钮在自动位置, 可在自动复位, 若复位按钮在手动位置, 可按动复位按钮复位;
/ After the product trips, if the reset button is at the automatic position, it can be automatically reset. If the reset button is at the manual position, press the reset button to reset;
- d、热继电器的进出线接线螺钉要拧紧, 否则会影响接触器的动作特性;
/ The inlet and outlet wiring screws of the thermal relay should be tightened, otherwise it will affect the operating characteristics of the contactor;
- e、用户使用时不得打开产品盖板调整动作机构/ The user should not open the product cover to adjust the action mechanism when us it