

NR8-200、NR8-630
Electronic Overload Relay

User Instruction



Safety Warning

- ① Only professional technicians are allowed for installation and maintenance.
- ② Installation in any damp, condensed-phase environment with inflammable and explosive gas is forbidden.
- ③ When the product is being installed or maintained, the power must be switched off.
- ④ You are prohibited from touching the conductive part when the product is operating.

1 Use Purpose

NR8-200, NR8-630 electronic overload relay (hereinafter referred to as relay) is applicable to circuits with frequency of AC 50Hz or 60Hz, rated operating voltage up to 690V and current from 80A to 630A. It is used for overload protection and phase-failure protection of 3-phase AC motor. It can also be used with corresponding contactor to act as magnetic starter.

2 Main Technical Parameters

2.1 See Table 1 and Table 2 for product technical parameters.

Table 1 Environmental conditions

Environmental conditions	
Ambient temp. (°C)	-5°C~+40°C, average temperature should not exceed +35°C within 24h
Hot and humid atmospheric conditions	Relative humidity should not exceed 50% at +40°C; up to 90% at +20°C;
Altitude	No influence below 2000m
Pollution class/installation category	Class 3/III

Table 2 Technical parameters

Model	NR8-200		NR8-630		
Phase-failure protection	Yes		Yes		
Reset function	Manual reset		Manual reset		
Release indication	Yes		Yes		
Test function	Yes		Yes		
Emergency stop function	Yes		Yes		
Setting current range (A)	80-160	100-200	125-250	200-400	315-630
Matching contactor	NC8-115 ~ 175		NC8-205 ~ 500		
Auxiliary contacts	1NO+1NC				
Rated insulation voltage U_i	690V				
Rated operating voltage U_e	660V/690V and below				
Rated impulse withstand voltage U_{imp}	6kV				
Auxiliary circuit	I _{th}	5A			
	AC-15	220V/230V 2.5A; 380V/400V 1.5A			
	DC-13	220V 0.2A			
Protection class	IP00				

2.2 See Figure 1 for relay operation time - current characteristic curve (3-phase, thermal state)

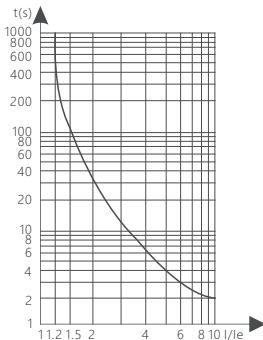


Figure 1 Relay time - current characteristic curve

3 Installation

3.1 Installation

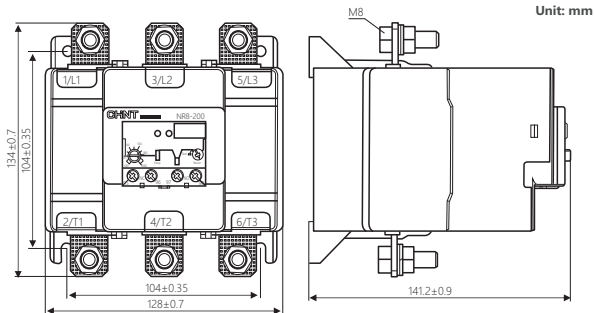
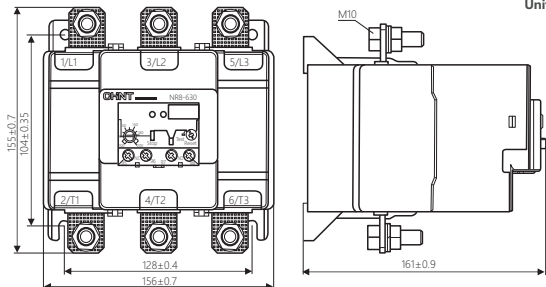



















Figure 2 Product overall dimensions (NR8-200)

Unit: mm


Figure 3 Product overall dimensions (NR8-630)
Table 3 Wiring torque reference

										
				mm ²	mm ²	mm ²	mm ²	mm ²	mm ²	
	M3.5  1.2N.m	 	NR8-200 NR8-630	0.75~2.5	0.75~2.5	0.75~2.5	0.75~2.5	0.75~2.5	0.75~2.5	 A > 3.5mm, L < 8mm
	M8  10N.m		NR8-200	—	—	—	—	25~95	—	 S
	M10  20N.m		NR8-630	—	—	—	—	50~2×185	—	

3.2 Operation and commissioning

Table 4 Indicator status

Indicator status	Circuit working status
Green light flashing, red light off	Normal
Green light flashing, red light on	Overload delay
Green light on, red light flashing	Phase-failure delay

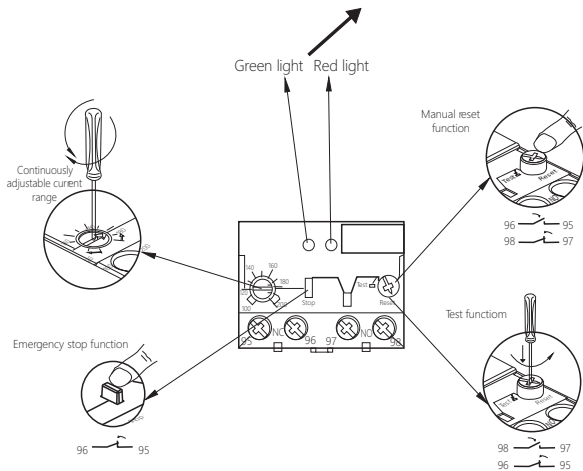


Figure 4 Installation and commissioning diagram

4 Maintenance

Clean the dust on the electronic overload relay timely. Conduct product test and maintenance every half a year to ensure the smooth operation of the product and the good contact of NO and NC contacts. Tighten the terminal screws with specified torque and align the load protection capability of the electronic overload relay according to commissioning requirements.

Please be careful when handling and installing the relay. It is prohibited to move the product by crane so that the product will not be damaged and its protection characteristics will not be changed due to strong impact.

Table 5 Analysis and Troubleshooting of Faults

Symptoms	Cause analysis	Troubleshooting method and precautions
Misoperation of thermal relay without the motor being overloaded	Size is too small	Change to product with bigger size.
	The set current value is smaller than the actual operating current of the motor.	Fine tune the cam clockwise so that the set current matches the actual motor current.
	Strong shock or vibration	Check installation status and conduct troubleshooting. Do not place the product in environment with strong shock or vibration.
Thermal relay does not operate.	The size is too big	Change to product with smaller size.
	The set current value is bigger than the actual operating current of the motor.	Fine tune the cam counter-clockwise so that the set current matches the actual motor current.
Thermal relay does not work.	The product is not reset.	Press the reset button to reset the relay.
	Auxiliary contacts are not powered-on.	Replace thermal relay.
	Main circuit or auxiliary circuit is burnt.	Replace thermal relay.

5 Environmental Protection

In order to protect the environment, the product or product parts should be disposed of according to the industrial waste treatment process, or be sent to the recycling station for assortment, dismantling and recycling according to local regulations.

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QC PASS

NR8-200、NR8-630
Electronic Overload Relay
IEC/EN 60947-4-1

Check 23

Test date: Please see the packing

ZHEJIANG CHINT ELECTRICS CO., LTD.

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NR8-200、NR8-630
Electronic Overload Relay
User Instruction

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