



## NCH8-□M Modular contactor with Manual operation

### 1. The purpose of use

1.1 NCH8-□M series Manual Modular AC contactor (here in after referred as contactor) is mainly used in power systems with AC 50Hz/60Hz, rated operating voltage up to 400V and rated operating current up to 63A. It is used as remote or manual switch for circuit control under AC-7b and AC-7a (non-inductive load or low-inductive load/resistance furnace, domestic appliance and low-inductive load of similar applications) application category. The contactor shall not be used for breaking short-circuit current, therefore it should be used with a proper short-circuit protection device.

1.2 Standard: IEC/EN 61095、IEC/EN60947-4-1

### 2. Type Specification and Definitions

N CH 8 - □ M / □ □ □

frequency : 50/60Hz

Rated control power voltage  $U_s$  (V) :  
AC24V AC110V AC220-240V

Number main contact:  
11: 1NO+1NC 02: 2NC 20: 2NO  
40: 4NO 22: 2NO+2NC 04: 4NC  
31: 3NO+1NC

Modular contactor with Manual operation

Rated operating current (A):  
16/20/25/32/40/63

Design serial number

Modular contactor with Manual operation

Enterprise characteristics code

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Auxiliary contact

Design serial number

Auxiliary contact group: 11: 1NO+1NC 20: 2NO

Note: Auxiliary contacts are optional accessories (not standard accessories).

### 3. Regular Operating Conditions

- 3.1 Ambient temperature :  $-25^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- 3.2 Humidity : Relative humidity < 50% at  $+40^{\circ}\text{C}$ ; up to 90% at  $+20^{\circ}\text{C}$
- 3.3 Altitude : < 2000m
- 3.4 Pollution class : Class 2
- 3.5 Installation category : Class II
- 3.6 Protection class : IP20
- 3.7 Installation conditions : Vertical installation; the inclination of the installation surface to any direction should not exceed  $5^{\circ}$ ; TH35-7.5 steel mounting rails should be used for installation.
- 3.8 Operation conditions : Pickup voltage : (85%~110%)  $U_s$ ; release voltage : (20%~75%)  $U_s$

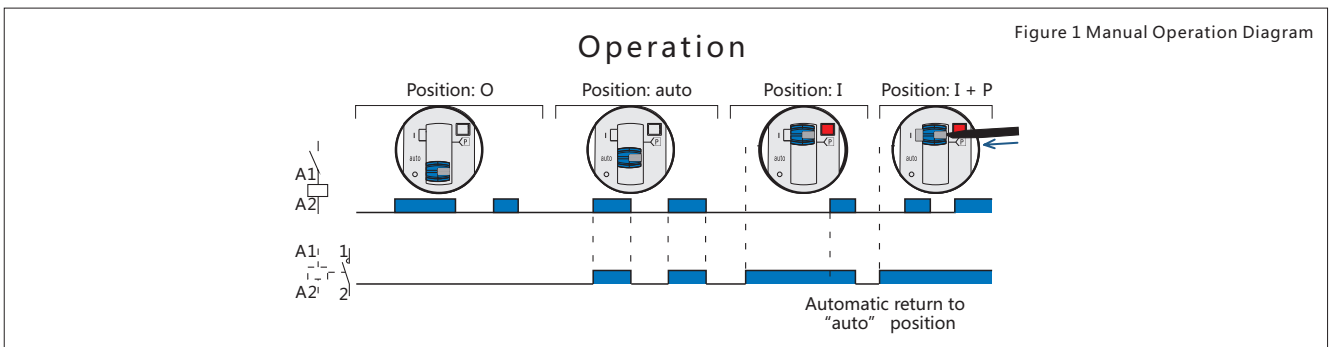
### 4. Main Technical Parameters

Table 1 Main Technical Parameters

Model		16A	20A	25A	32A	40A	63A	
Rated current In (A)	AC-7a	16	20	25	32	40	63	
	AC-7b	6	7	9	12	18	25	
Conventional thermal current Ith (A)		25	25	25	63	63	63	
Rated insulation voltage Ui (V)		500						
Rated operating Rated Ue (V)		250V (2P), 400V(4P)						
Number of main contacts	2P	1NO, 1NC, 2NO, 2NC						
	4P	2NO 2NC, 3NO 1NC, 4NO, 4NC						
Control power (kW)	AC-7a	250V	3.5	4.5	5.5	8	9	14
		400V	6	7.5	9.5	12	15	24
	AC-7b	250V	1.4	1.6	2	3	4	5.5
		400V	2.2	2.5	3.2	4.5	6	8
Electrical life (times)		8×10 <sup>4</sup>						
Mechanical life (times)		100×10 <sup>4</sup>						
Rated control power voltage Us (V)		AC24V, AC110V, AC220-240V						
Rated duty system	Intermittent	30 times/h load factor 40%						
	Eight hours	Basic duty system						
Wiring (mm <sup>2</sup> )	Control circuit	Hard wire	1.5~2.5			2×1.5		
		Flexible wire	1.5~2.5			2×2.5		
	Power circuit	Hard wire	1.5~6			6~25		
		Flexible wire	1.5~4			6~16		
Torque (N.m)	Control circuit	0.8						
	Power circuit	0.8				3.5		

### 5. Structure and Operation Principles

When the handle is moved to the "O" position, the control power on/off, contactor does not act; when the handle is in the "auto" position, the contactor switch on/off is control by control power on/off, just like the normal contactor; when the handle is moved to the "I" position, the contactor switch on immediately, and the handle automatically returns to the "auto" position after the control power from off to on; when the handle is in the "I" position, use a screwdriver to push out the white pin key at "P" position, the contactor is switch on and not acted by the control power on/off.



### 6. Outline and Installation Dimensions

Unit: mm

Figure2 NCH8-16M, NCH8-20M, NCH8-25M

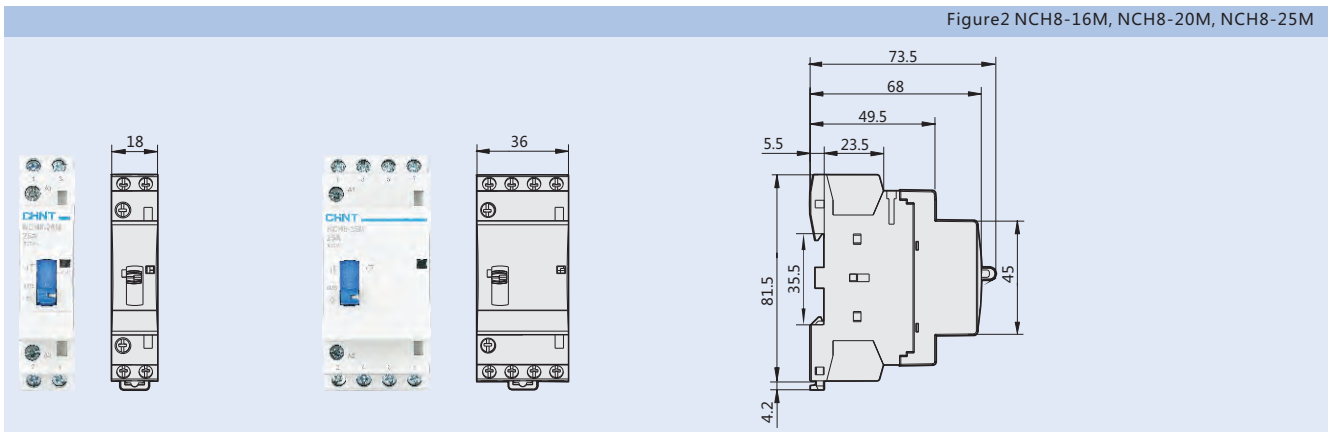


Figure 3 NCH8-32M, NCH8-40M, NCH8-63M

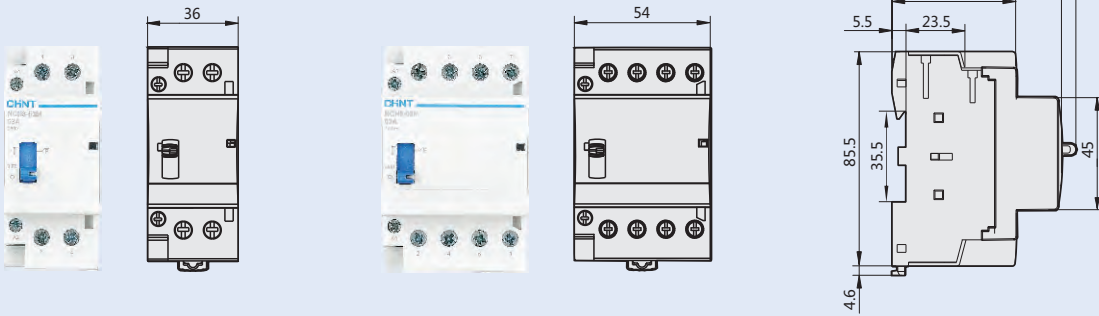


Figure 4 AX-11

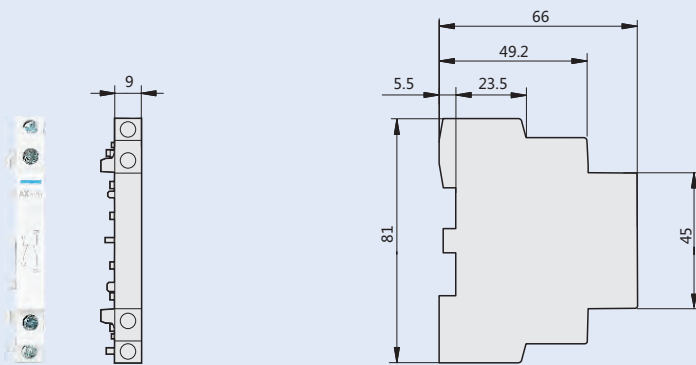
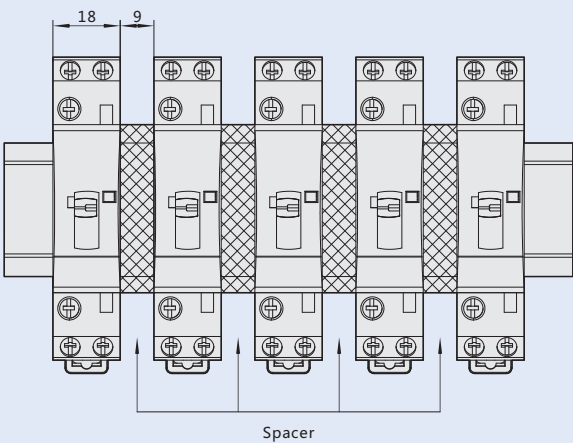


Figure 5 Installation



Note: When the ambient temperature is higher than 60°C , the spacer must be assembled on both sides to facilitate heat dissipation.

