



NM7
Moulded Case Circuit Breaker

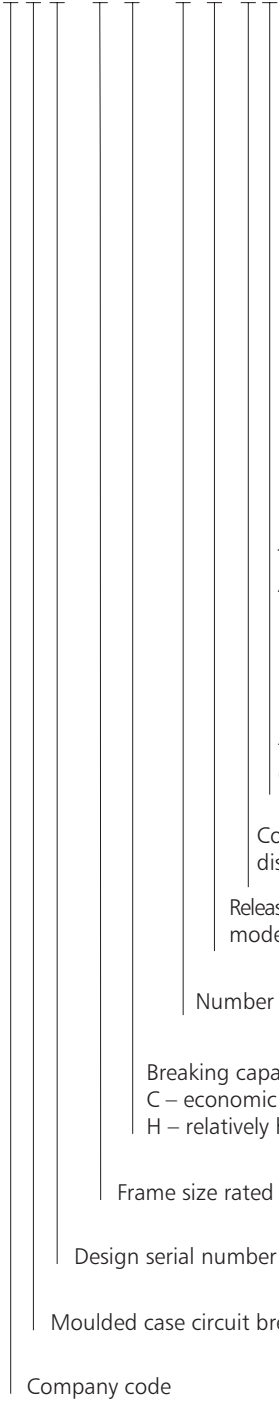
1. General

After successively developing NM8 and NM6, our company launched another new product, the NM7 series moulded case circuit breaker upgraded from the NM1 series, by further taking the structural features and design style of the NM1 series products, modifying the accessories, wiring mode, appearance and the like in an individualization way, allowing the product not only to be set by the manufacturer before delivery but also replaced by users themselves, which is really an improvement, and integrating the up-to-date design concept to make the product more people-oriented.

Certificate: KEMA, CE.
Rated operation range 10A~800A.
Several modes available: 3P, 4P, fixed type, plug-in type, front connection, rear connection.
The product can be installed vertically or horizontally.
Isolating function is available.
This product meets the requirements in IEC 60947-2.

2. Type designation

N M 7 — □ □ / □ □ □ □



Types of quadrupole circuit breakers:
A-N pole with no over-current release component,
N pole always on;
B-N pole with no over-current release component,
N pole to be closed and opened together with the other three poles (N pole closed first and then opened);

Codes for applications: nothing for distribution; 2 for motor protection

Release (of a mechanical switching device) mode and accessory code (see table 1)

Number of poles

Breaking capacity codes:
C – economic type, S – standard type
H – relatively high type, R – current limiting type

Frame size rated current

Design serial number

Moulded case circuit breaker

Company code

3. Operating conditions

3.1 Ambient air temperature

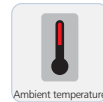
3.2 The upper limit for the ambient air temperature is +40°C, lower limit -5°C, and the average temperature is not higher than +35°C within 24 hours.

3.3 Altitude: not higher than 2000m for the installation site.

3.4 Atmospheric conditions:

When the ambient air temperature is +40°C, the relative humidity of the air shall not be higher than 50%; a higher relative humidity is allowed at a lower temperature; for the wettest month, the maximum relative humidity averaged shall be 90% while the lowest temperature averaged in that month + 25°C, and the condensation produced due to temperature change shall be taken into consideration.

3.5 Class of pollution: 3



Ambient temperature



Altitude



No Pollution

Table 1

Accessory name	Accessory code	Accessory installation and mode of wirings			
	Compound release	NM7-125	NM7-250	NM7-400, 630	NM7-800
		3P 4P	3P 4P	3P 4P	3P 4P
No accessories	300				
Alarm contact	308				
Shunt release	310				
Auxiliary contact	320				
Under voltage release	330				
Shunt release, auxiliary contact	340				
Shunt release, under voltage release	350				
Two groups of auxiliary contacts	360				
Auxiliary contact, under voltage release	370				
Shunt release, alarm contact	318				
Auxiliary contact, alarm contact	328				
Under voltage release, alarm contact	338				
Shunt release, auxiliary contact, alarm contact	348				
Two groups of auxiliary contacts, alarm contact	368				
Auxiliary contact, under voltage release, alarm contact	378				

Note: a. 200 for the breaker body only with the magnetic release;

300 for thermal release + magnetic release body;

000 for the breaker body with no release and inner accessory.

b. ● alarm contact; ○ auxiliary contact; ■ shunt release; ▲ under voltage release.

4. Technical data

NM7	NM7-125
Rated current I_n (A)	16,20,25,32,40,50,63,80,100,125
Rated insulation voltage U_i (V)	800
Rated impulse withstand voltage U_{imp} (kV)	8
Rated operational voltage U_e (V)	380/400/415/690

Appearance




Breaking capacity feature code		S	
Number of poles		3	4
Rated ultimate short circuit breaking capacity I_{cu} (kA)	AC380/400/415V	35	35
	AC690V	-	-
Rated service short circuit breaking capacity I_{cs} (kA)	AC380/400/415V	17.5	17.5
	AC690V	-	-
Service life (C-O cycle)	Mechanical	25000	
	Electric	8000	
Overall dimensions (mm)	3P(L×W×H)	155×90×74	
	4P(L×W×H)	155×120×74	
Isolating function		●	
Front connection panel		■	
Rear connection panel		■ *	
Cage type connection terminal		■ *	
Plug-in type		■ *	
Draw-out type		■ *	
Rotary manual operating handle		■	
Motor driven operating handle		■	
Shunt, under voltage release		■	
Auxiliary, alarm contact		■	
Terminal cover		■ *	

Note: ● Standard configuration ■ Selected configuration; the one with * is unconfiguration.



NM7-250	
100,125,160,180,200,225,250	
800	
8	
380/400/415/690	



S	
3	4
35	35
-	-
17.5	17.5
-	-
20000	
2500	
A	
165×105×74	
165×140×74	
●	
■	
■ *	
■ *	
■ *	
■ *	
■	
■	
■	
■ *	

NM7		NM7-400			
Rated current I_n (A)		250,315,350,400			
Rated insulation voltage U_i (V)		800			
Rated impulse withstand voltage U_{imp} (kV)		8			
Rated operational voltage U_e (V)		380/400/415/690			
Appearance					
Breaking capacity feature code		S		H	
Number of poles		3	4	3	4
Rated ultimate short circuit breaking capacity I_{cu} (kA)	AC380/400/415V	50	50	65	65
	AC690V	-	-	12	12
Rated service short circuit breaking capacity I_{cs} (kA)	AC380/400/415V	25	25	32.5	32.5
	AC690V	-	-	6	6
Service life (C-O cycle) Usage category	Mechanical	4000			
	Electric	1000			
		A			
Overall dimensions (mm)	3P(L×W×H)	257×150×107			
	4P(L×W×H)	257×198×107			
Isolating function		●			
Front connection panel		●			
Rear connection panel		■ *			
Cage type connection terminal		■ *			
Plug-in type		■ *			
Draw-out type					
Rotary manual operating handle		■			
Motor driven operating handle		■			
Shunt, under voltage release		■			
Auxiliary, alarm contact		■			
Terminal cover		■ *			

Note: ● Standard configuration ■ Selected configuration; the one with * is unconfiguration

NM7-630				NM7-800			
400,500,630				500,630,700,800			
800				800			
8				8			
380/400/415/690				380/400/415/690			
							
S		H		S		H	
3	4	3	4	3	4	3	4
50	50	65	65	50	50	75	75
-	-	15	15	-	-	15	15
25	25	32.5	32.5	25	25	37.5	37.5
-	-	7.5	7.5	-	-	10	10
4000				2500			
1000				500			
A				A			
280×182×112				275×210×112			
280×240×112				275×280×112			
●				●			
●				●			
■ *				■ *			
■ *				■ *			
■ *							
				■ *			
■				■			
■				■			
■				■			
■				■			
■ *				■ *			

5. Inverse-time overcurrent protection curve for the breaker for distribution (see Fig. 1 – 10)

Fig.1 NM7-125(16A~32A) operation characteristic curve

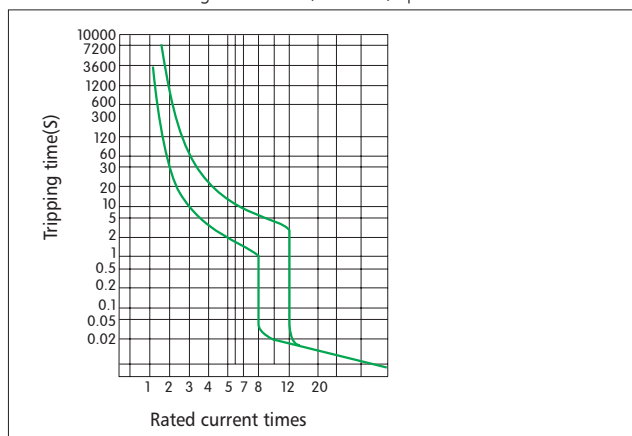


Fig.2 NM7-125(16A~32A) temperature compensation curve

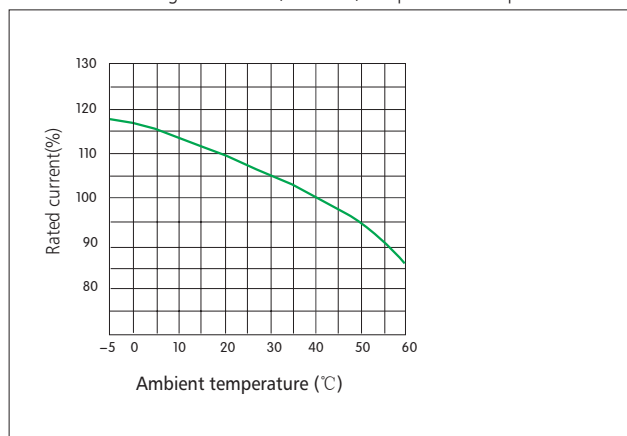


Fig.3 NM7-125(40A~125A) operation characteristic curve

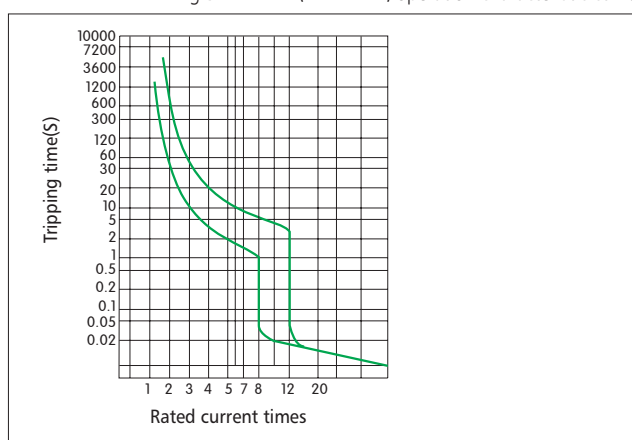


Fig.4 NM7-125(40A~125A) temperature compensation curve

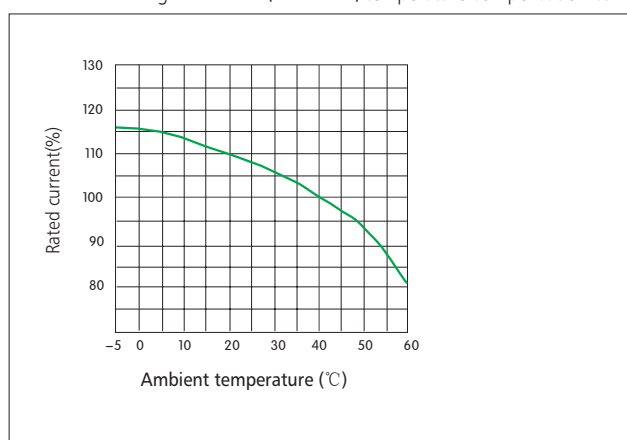


Fig.5 NM7-250 operation characteristic curve

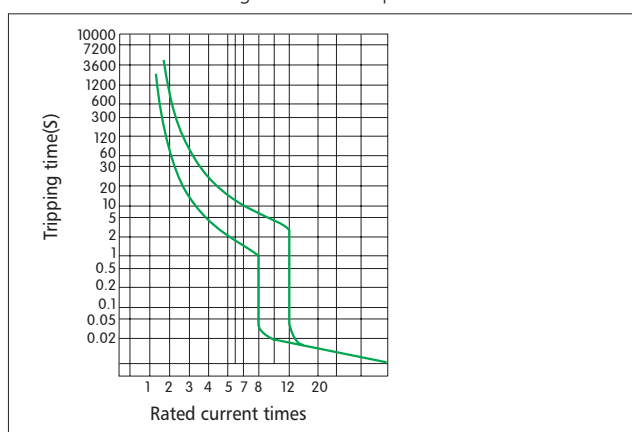


Fig.6 NM7-250 temperature compensation curve

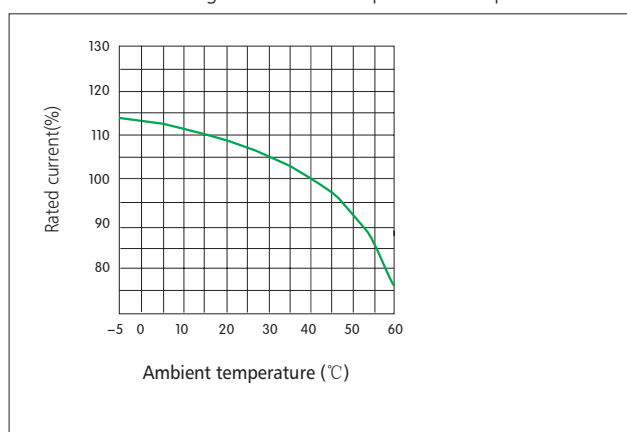


Fig.7 NM7-400 operation characteristic curve

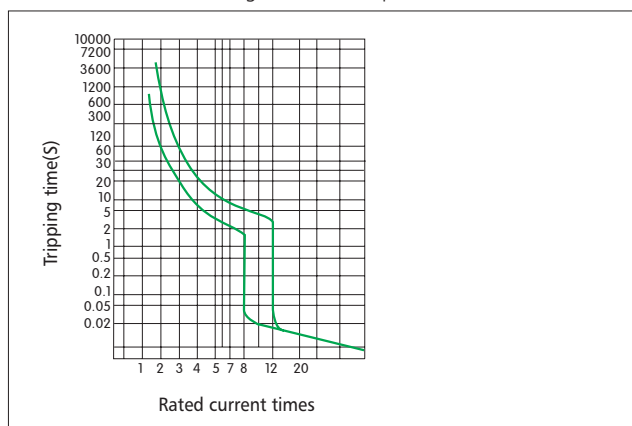


Fig.8 NM7-400 temperature compensation curve

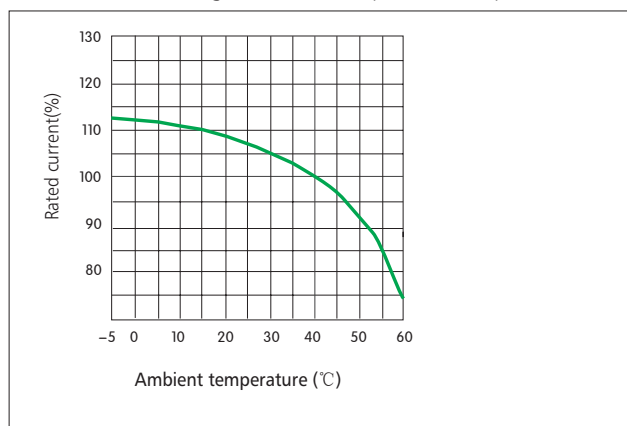


Fig.9 NM7-630 operation characteristic curve

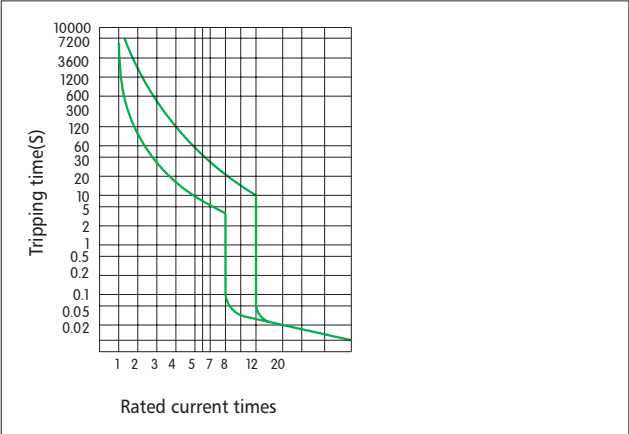


Fig.10 NM7-630 temperature compensation curve

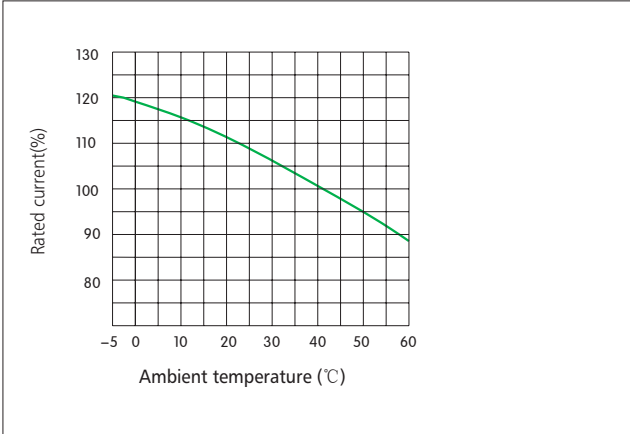


Fig.11 NM7-800 operation characteristic curve

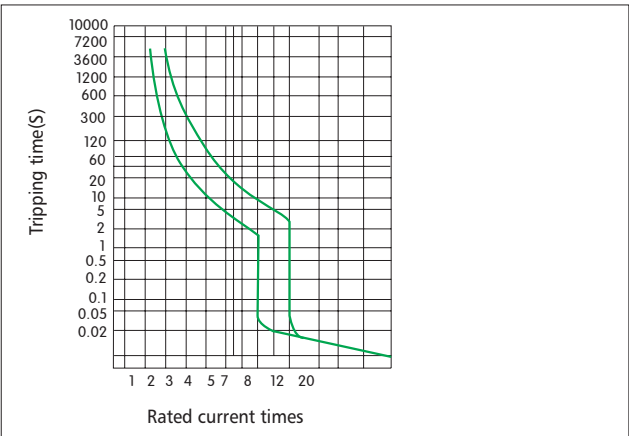
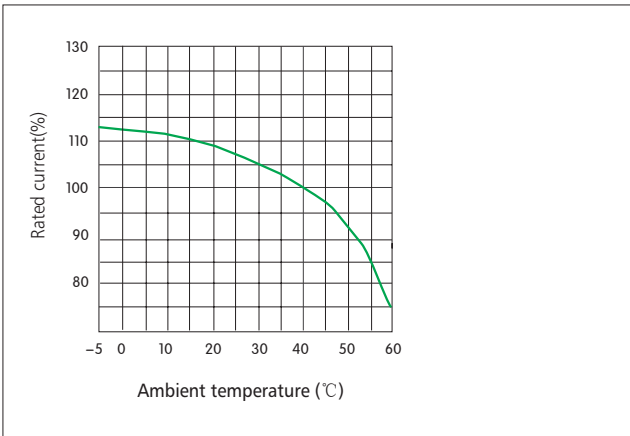
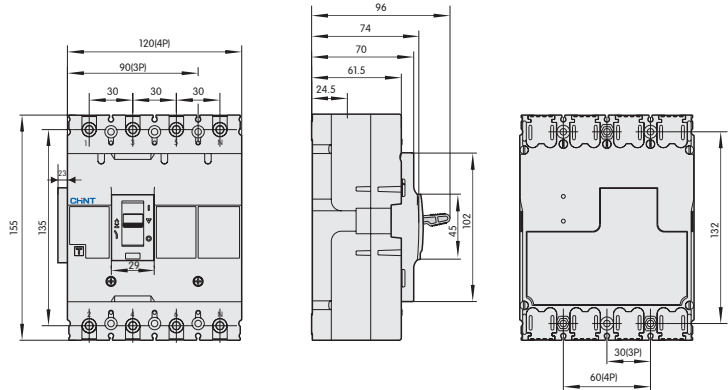


Fig.12 NM7-800 temperature compensation curve

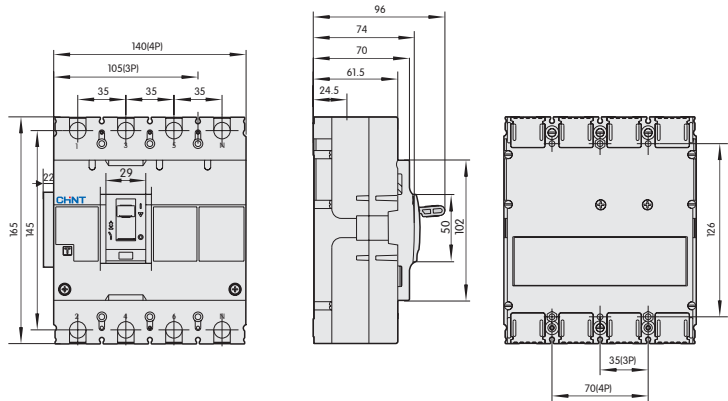


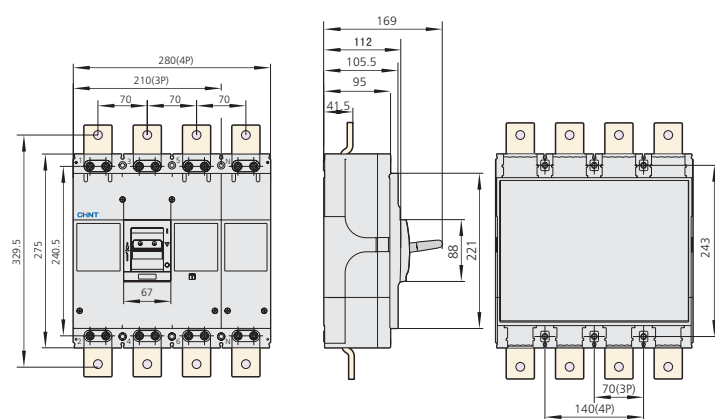
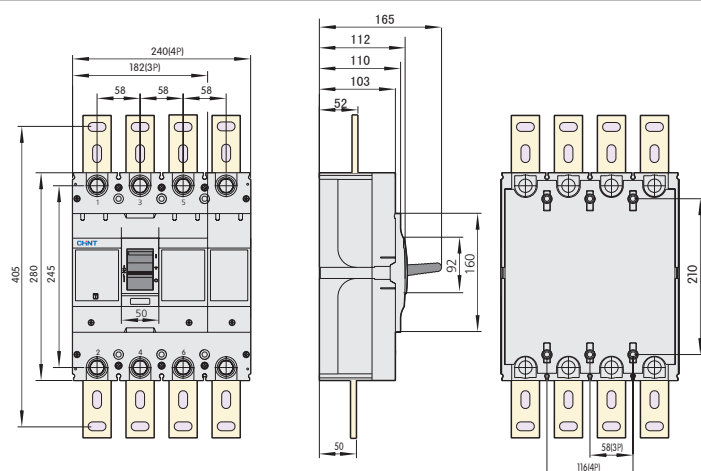
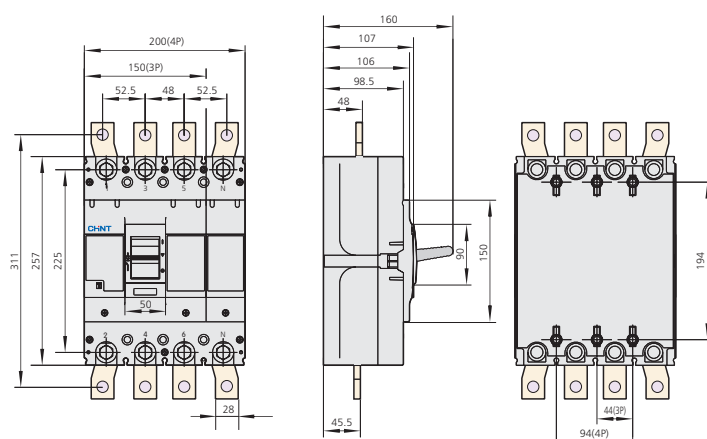
6. Overall and mounting dimensions

NM7-125



NM7-250





7. Ordering information

Users shall order goods in the following way:

Product type + rated current + code of the inner accessory (00 for no inner accessories) + application code + operation mode + (word description, accessory voltage, type and the like to be described in detail).

Order Sample: 10 pcs of NM7 – 250S, 250A, three poles, shunt release (AC230V), for motor protection, power operating mechanism (DC220V), plug-in type.

10 pcs of NM7 – 250S/250/3310 2 D (shunt AC230V, power operating mechanism DC220V, plug-in type).