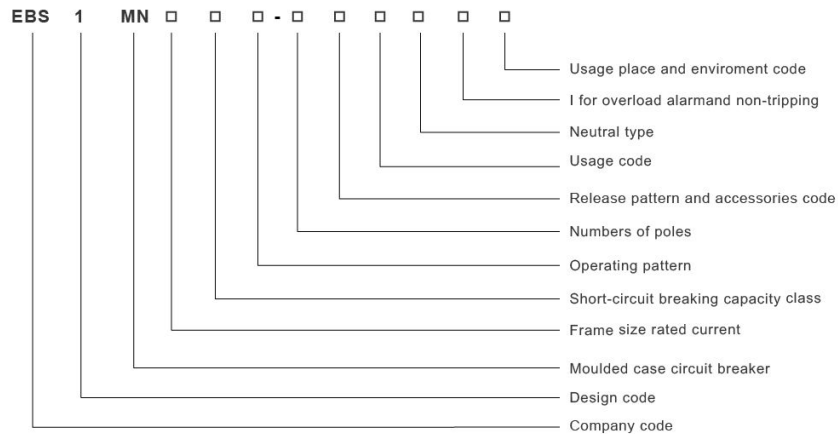


Normal Service and Mounting Conditions

- Ambient air temperature: $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$ (If the temperature is between $+40^{\circ}\text{C}$ and $+60^{\circ}\text{C}$, please see table 4);
- The altitude of the site of installation does not exceed 2000m (more than 2000m, electrical performance see table 5);
- The relative humidity of the air does not exceed 50% at a maximum temperature of $+40^{\circ}\text{C}$. Higher relative humidity may be permitted at lower temperature, e.g. 90% at $+20^{\circ}\text{C}$. Special measures may be necessary in cases of occasional condensation due to variations in temperature;
- Pollution degree 3;
- Installing category: III for main circuit, II for other auxiliary and control circuits;
- Be suitable in electromagnetic environment A;
- Warm damp breaker can be able to bear the influence of damp air or salt mist and oil mist or mould.
- There must be not any explosive dangerous and not any conducting dust, there must be not any gas which would corrode metal and destroy insulation;
- The place would not be invaded by rain and snow.

Nomenclature



Note:

- 1) Ordering overload alarm and non-tripping, the release only has electromagnetic.
- 2) Usage code for distribution MCCB is without code, usage code for motor protection is 2.
- 3) No code for operating directly, P for motor operator, Z for rotary handle operator.

Classification

- The neutral pole (N pole) of four poles product has four types:
 - Type A: N pole over-current release does not installed, and N is always connected, and not combined with other three poles;
 - Type B: N pole over-current release does not installed and combined with other three poles. (closing first and opening last)
 - Type C: N pole over-current release is installed and combined with other three poles. (closing first and opening last)
 - Type D: N pole over-current release is installed and N is always connected, and not combined with other three poles.
- Note: the building of equipotential bonding, such as TN-C-S and TN-S system, to recommend the use of neutral pole pattern A or D type.
- Classification according to rated current
 - EBS1MN-63: 10, 16, 20, 25, 32, 40, 50, 63;
 - EBS1MN-100: 10, 16, 20, 25, 32, 40, 50, 63, 80, 100A;
 - EBS1MN-250: 100, 125, 140, 160, 180, 200, 220, 250A
 - EBS1MN-400: 225, 250, 315, 350, 400A;
 - EBS1MN-630: 400, 500, 630A;
 - EBS1MN-800: 400, 500, 630, 700, 800A;
- Five connection modes: front connected, rear connected, plug-in front connected, plug-in rear connected and draw-out connected.
- Types of overcurrent release has
 - thermal/magnetic (double) magnetic (instantaneous) and magnetic (instantaneous) + overload alarm with non-tripping.
- In accordance with breaker whether with
 - accessories: with accessories and without accessories;
 - accessories dividing internal/external, internal accessories: shunt release, under voltage release, auxiliary switch and alarm switch, external accessories: rotary handle operator and motor operator, temperature alarm module.

Protection Characteristic

Thermal release of breaker provides inverse time characteristic, while magnetic release provides instantaneous operation, two characteristics as show on table 1 (distribution) and table 2 (motor protection)

Table 1 (Distribution)

Rated current of breaker	Thermal release (ambient temp $+40^{\circ}\text{C}$)		Operating current of magnetic release
	1.05In Cold non-operating time	1.30In Thermal operating time	
$10 \leq I_n \leq 63$	non-operating within one hour	≤ 1	$10I_n \pm 20\%^*$
$63 < I_n \leq 125$	non-operating within two hours	≤ 2	
$125 < I_n \leq 800$	non-operating within two hours	≤ 2	$5I_n \pm 20\%$ $10I_n \pm 20\%$

*Note: 10~25A magnetic release operating current of EBS1MN-63L.M and EBS1MN-100C is $300\text{A} \pm 20\%$.

Table2 (motor protection)

Types of breaker	Thermal release(ambient temp+40℃)			operating current of magnetic release
	1.0In cold non-operating time	1.2In Thermal operating time	1.50In Thermal operating time	
EBS1MN-63L,M	non-operating within two hours	≤2h	≤2min	12In±20%*
EBS1MN-100C			≤2min	
EBS1MN-100L,M,H			≤4min	
EBS1MN-250C,L,M,H			≤4min	
EBS1MN-400C,L,M,H			≤4min	
EBS1MN-630C,L,M,H			≤8min	
EBS1MN-800 L,M,H			≤8min	

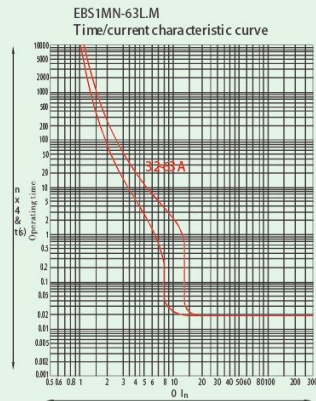
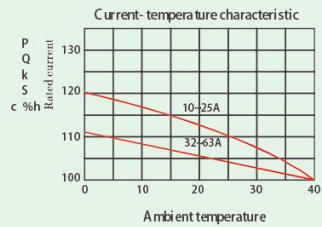
*Note:10~25A magnetic release operating current of EBS1MN-63L,M,EBS1MN-100C is 300A±20%.

Note:Motor protective breaker of 700A and 800A rated current for EBS1MN-800 is not supplied.

Protection Characteristic Curve

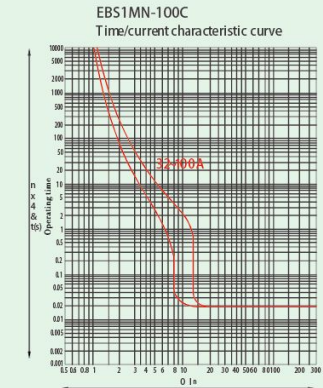
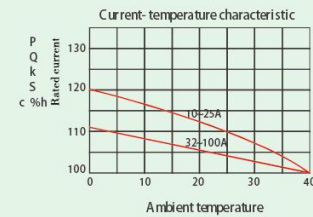
EBS1MN-63L,M Time/current characteristic curve

the characteristic curves are obtained in the cold state and three phases loading



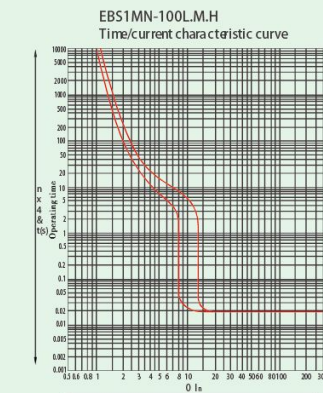
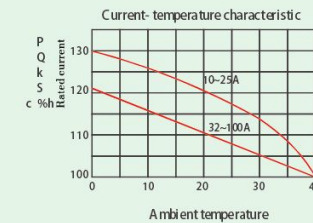
Note:10~25A instantaneous operating current of EBS1MN-63L,M is 300A ±20%

EBS1MN-100C Time/current characteristic curve

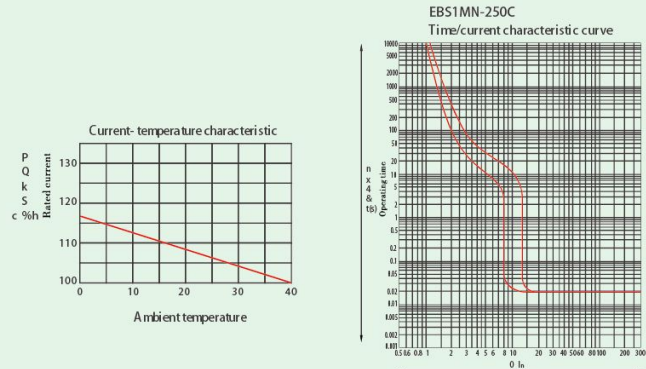


Note:10~25A instantaneous operating current of EBS1MN-100C is 300A ±20%

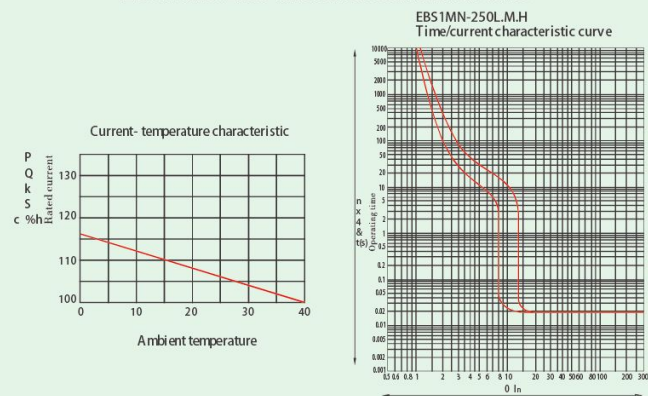
EBS1MN-100L,M,H Time/current characteristic curve



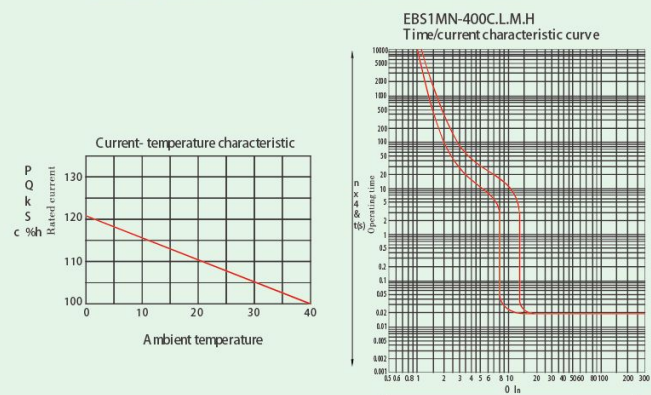
EBS1MN-250C Time/current characteristic curve



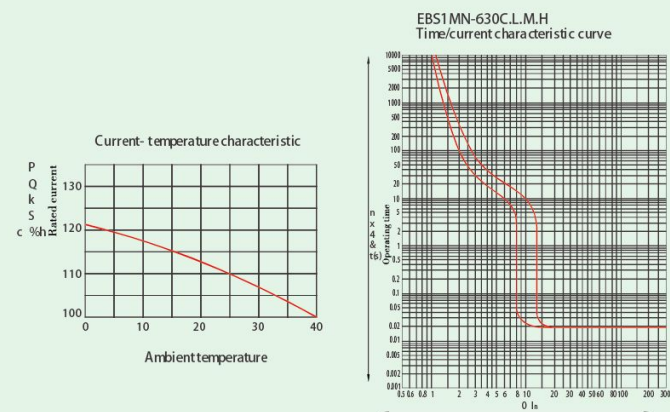
EBS1MN-250L.M.H Time/current characteristic curve



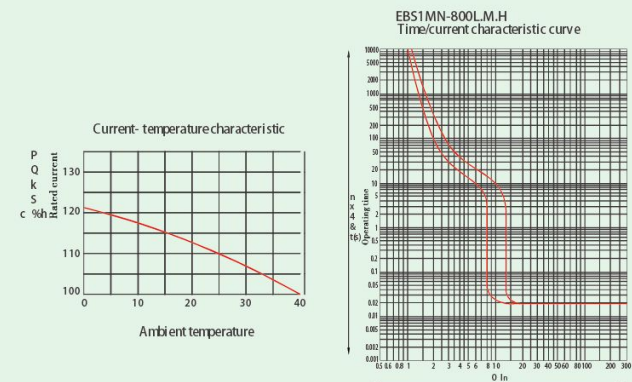
EBS1MN-400C.L.M.H Time/current characteristic curve



EBS1MN-630C.L.M.H Time/current characteristic curve



EBS1MN-800L.M.H Time/current characteristic curve



Technical Parameters

table 3

Inm (A) frame size rated current		63	
Type designation		EBS1MN-63L	EBS1MN-63M
Number of poles		3,4	3,4
In (A) rated current		10,16,20,25,32,40,50,63	
Ui (V) rated insulation voltage		800	
"Uimp (V) rated impulse withstand voltage"		8000	
"Ue (V) rated operational voltage"		AC400	AC400
(mm) arcing distance		>50 (0)	
Icu(kA) rated ultimate short-circuit breaking capacity	AC400V	35	50
Ics(kA) rated service short-circuit breaking capacity	AC400V	35	35
Utilization category		A	
Electrical durability(times)	AC400V	8000	
Mechanical durability(times)	without-maintenance	20000	
	maintenance	40000	
Outline dimensions Width	(mm) Width	75/100 (three/four poles)	
	(mm) Length	130	
	(mm) height	60	
Shunt release		○	
Under-voltage release		○	
Auxiliary switch		○	
Alarm switch		○	
Over-Load alarm(non-tripping)/switch		—	
Motor operator		○	
Rotary handle operator		○	

Note: can be zero arc-venting by installing zero arc-venting cover of 4mm(CM3-63L.M)

Note: For GB14048, 1-2006, the term "durability" expresses the expectancy of the number of operating cycles which can be performed by the equipment before repairing or repairing of parts.

Technical Parameters

Continue table 3

Inm (A) frame size rated current		100			
Type designation		EBS1MN-100C	EBS1MN-100L	EBS1MN-100M	EBS1MN-100H
Number of poles		3	3,4	3,4	3,4
In (A) rated current		10,16,20,25,32,40,50,63,80,100			
Ui (V) rated insulation voltage		800			
"Uimp (V) rated impulse withstand voltage"		8000			
"Ue (V) rated operational voltage"		AC400	AC400	AC400 AC690	AC400
(mm) arcing distance		>50 (0)			
Icu(kA) rated ultimate short-circuit breaking capacity	AC400V	35	50	70	100
	AC690V			20	
Ics(kA) rated service short-circuit breaking capacity	AC400V	22	35	50	70
	AC690V			10	
Utilization category		A			
Electrical durability(times)	AC400V	8000			
	AC690V			1500	
Mechanical durability(times)	without-maintenance	20000			
	maintenance	40000			
Outline dimensions	(mm) Width	75	92/122(three/four poles)		
	(mm) Length	130	150		
	(mm) height	60	83		
Shunt release		○	○	○	○
Under-voltage release		○	○	○	○
Auxiliary switch		○	○	○	○
Alarm switch		○	○	○	○
Over-Load alarm(non-tripping)/switch		—	○	○	○
Motor operator		○	○	○	○
Rotary handle operator		○	○	○	○

Note: can be zero arc-venting by installing zero arc-venting cover of 4mm(CM3-100C), 6.2mm(CM3-100L.M.H).

Technical Parameters

Continue table 3

Inm (A) frame size rated current		250			
Type designation		EBS1MN-250C	EBS1MN-250L	EBS1MN-250M	EBS1MN-250H
Number of poles		3	3,4	3,4	3,4
In (A) rated current		100,125,140,160,180,200,225,250			
Ui (V) rated insulation voltage		800			
"Uimp (V) rated impulse withstand voltage"		8000			
"Ue (V) rated operational voltage"		AC400	AC400	AC400 AC690	AC400
(mm) arcing distance		>50 (0)			
Icu(kA) rated ultimate short-circuit breaking capacity	AC400V	35	50	70	100
	AC690V			20	
Ics(kA) rated service short-circuit breaking capacity	AC400V	22	35	50	70
	AC690V			10	
Utilization category		A			
Electrical durability(times)	AC400V	8000			
	AC690V			1000	
Mechanical durability(times)	without-maintenance	20000			
	maintenance	40000			
Outline dimensions	(mm) Width	105	107/142(three/four poles)		
	(mm) Length	165	165		
	(mm) height	60	103		
Shunt release		○	○	○	○
Under-voltage release		○	○	○	○
Auxiliary switch		○	○	○	○
Alarm switch		○	○	○	○
Over-Load alarm(non-tripping)switch		—	○	○	○
Motor operator		○	○	○	○
Rotary handle operator		○	○	○	○

Note: can be zero arc-venting by installing cover of 8mm(CM3-250C), 7.5mm(CM3-250L.M.H).

Technical Parameters

Continue table 3

Inm (A) frame size rated current		400			
Type designation		EBS1MN-400C	EBS1MN-400L	EBS1MN-400M	EBS1MN-400H
Number of poles		3	3,4	3,4	3,4
In (A) rated current		225,250,315,350,400			
Ui (V) rated insulation voltage		800			
"Uimp (V) rated impulse withstand voltage"		8000			
"Ue (V) rated operational voltage"		AC400	AC400	AC400 AC690	AC400
(mm) arcing distance		>100 (0)			
Icu(kA) rated ultimate short-circuit breaking capacity	AC400V	35	50	70	100
	AC690V			20	
Ics(kA) rated service short-circuit breaking capacity	AC400V	22	35	50	70
	AC690V			15	
Utilization category		A			
Electrical durability(times)	AC400V	7500			
	AC690V			1000	
Mechanical durability(times)	without-maintenance	10000			
	maintenance	20000			
Outline dimensions	(mm) Width	150/198(three/four poles)			
	(mm) Length	257			
	(mm) height	106.5			
Shunt release		○	○	○	○
Under-voltage release		○	○	○	○
Auxiliary switch		○	○	○	○
Alarm switch		○	○	○	○
Over-Load alarm(non-tripping)switch		○	○	○	○
Motor operator		○	○	○	○
Rotary handle operator		○	○	○	○

Note: can be zero arc-venting by installing cover of 9.3mm.

Technical Parameters

Continue table 3

Inm (A) frame size rated current		630			
Type designation		EBS1MN-630C	EBS1MN-630L	EBS1MN-630M	EBS1MN-630H
Number of poles		3	3,4	3,4	3,4
In (A) rated current		400,500,630			
Ui (V) rated insulation voltage		800			
"Uimp (V) rated impulse withstand voltage"		8000			
"Ue (V) rated operational voltage"		AC400	AC400	AC400 AC690	AC400
(mm) arcing distance		≥100 (0)			
Icu(kA) rated ultimate short-circuit breaking capacity	AC400V	35	50	70	100
	AC690V			20	
Ics(kA) rated service short-circuit breaking capacity	AC400V	35	50	70	75
	AC690V			15	
Utilization category		A			
Electrical durability(times)	AC400V	7500			
	AC690V			1000	
Mechanical durability(times)	without-maintenance	10000			
	maintenance	20000			
Outline dimensions	(mm) Width	182/240(three/four poles)			
	(mm) Length	270			
	(mm) height	110			
Shunt release		○	○	○	○
Under-voltage release		○	○	○	○
Auxiliary switch		○	○	○	○
Alarm switch		○	○	○	○
Over-Load alarm(non-tripping)switch		○	○	○	○
Motor operator		○	○	○	○
Rotary handle operator		○	○	○	○

Note: can be zero arc-venting by installing cover of 9.3mm.

Technical Parameters

Continue table 3

Inm (A) frame size rated current		800					
Type designation		EBS1MN-800L		EBS1MN-800M		EBS1MN-800H	
Number of poles		3,4		3,4		3,4	
In (A) rated current		400,500,630,700,800					
Ui (V) rated insulation voltage		800					
"Uimp (V) rated impluse withstand voltage"		8000					
"Ue (V) rated operational voltage"		AC400		AC400 AC690		AC400	
(mm) arcing distance		≥100 (0)					
Icu(kA) rated ultimate short-circuit breaking capacity	AC400V	65		75		100	
	AC690V			30			
Ics(kA) rated service short-circuit breaking capacity	AC400V	65		75		75	
	AC690V			20			
Utilization category		A					
Electrical durability(times)	AC400V	7500					
	AC690V					500	
Mechanical durability(times)	without-maintenance	10000					
	maintenance	20000					
Outline dimensions	(mm) Width	210/280 (three/four poles)					
	(mm) Length	280					
	(mm) height	113.7					
Shunt release		○	○		○		○
Under-voltage release		○	○		○		○
Auxiliary switch		○	○		○		○
Alarm switch		○	○		○		○
Over-Load alarm(non-tripping)switch		○	○		○		○
Motor operator		○	○		○		○
Rotary handle operator		○	○		○		○

Note: can be zero arc-venting by installing cover of 9.3mm.

The technical drawing consists of two views of a mechanical component.

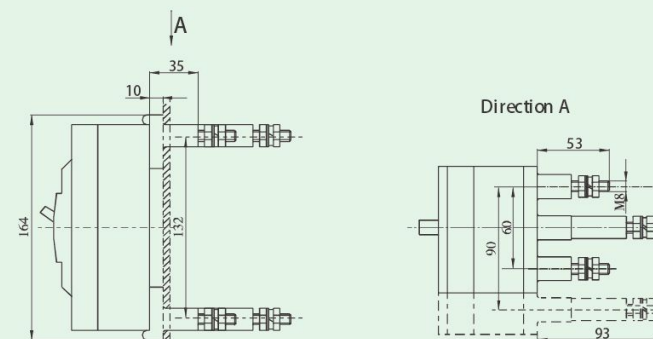
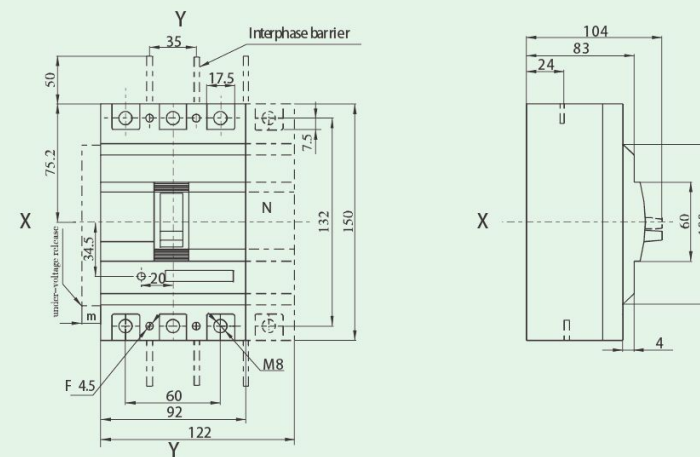
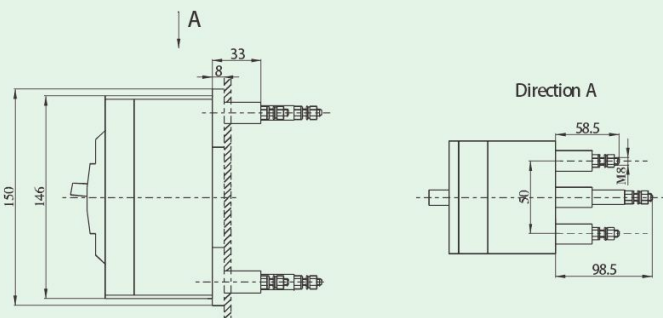
Front View (Left):

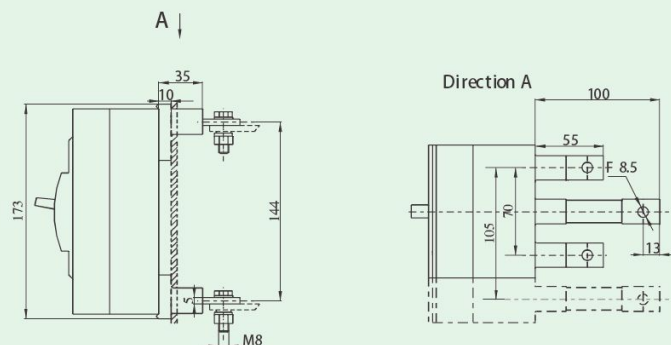
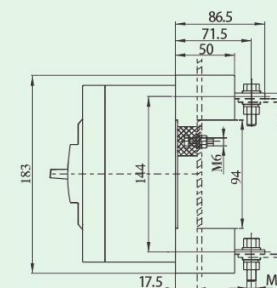
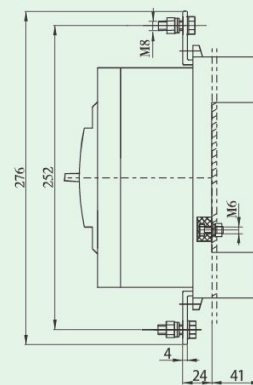
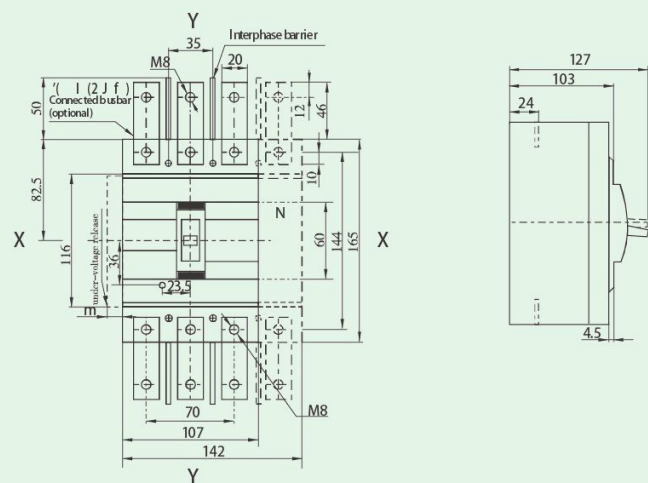
- Overall Dimensions:** Total width is 100 mm (labeled Y), total height is 130 mm (labeled X).
- Top Section:** Features four circular holes with a diameter of M8. The distance between the centers of the first two holes is 75 mm, and between the last two is 75 mm. The center-to-center distance between the second and third hole is 25 mm. A dimension of 16 mm is shown from the centerline to the edge of the top section.
- Bottom Section:** Symmetrical to the top, with a bottom flange thickness of 16 mm and a central slot width of 50 mm.
- Central Section:** Contains a rectangular feature labeled "N". Below it is a horizontal slot with a depth of 20 mm.
- Other Labels:** "Interphase barrier" points to a vertical dashed line. "under-voltage release" indicates a specific functional area. Dimension "m" is shown at the bottom left corner.

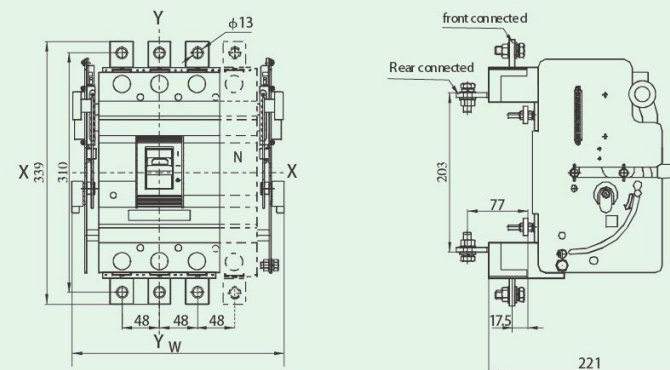
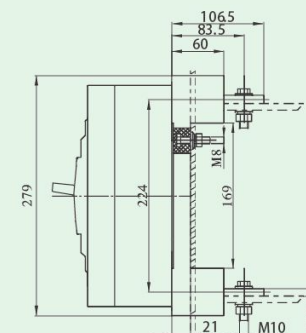
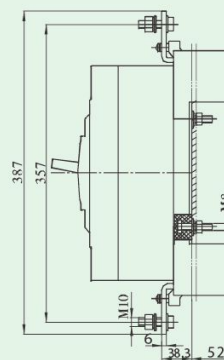
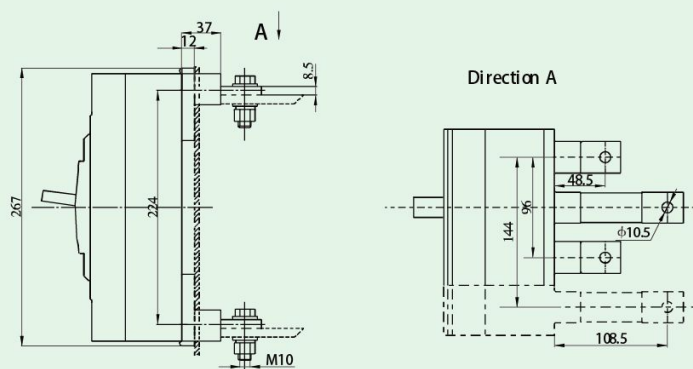
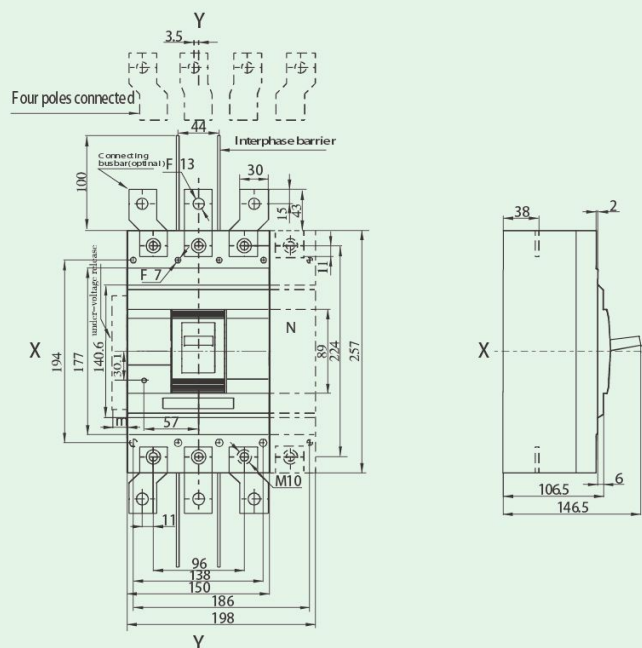
Side View (Right):

- Overall Dimensions:** Total width is 81 mm, total height is 90 mm.
- Profile:** Shows a stepped profile with a top flange of 24 mm, a main body of 61 mm (81 - 24), and a bottom flange of 4 mm.
- Internal Feature:** A semi-circular internal profile is visible on the right side, with a radius dimension of 50 mm.

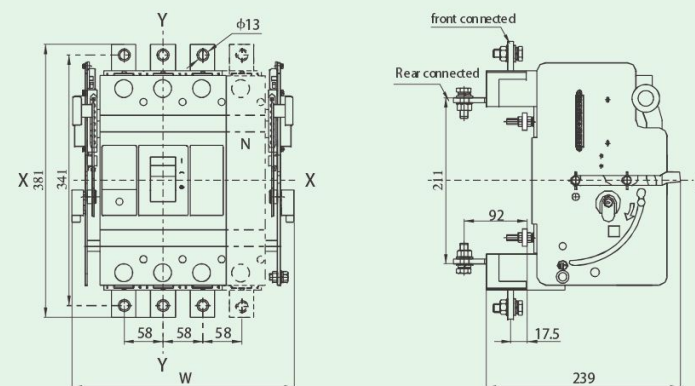
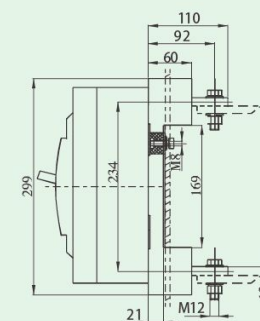
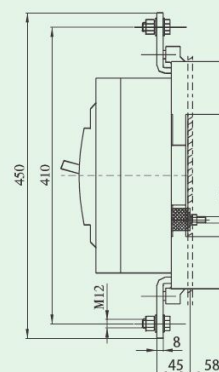
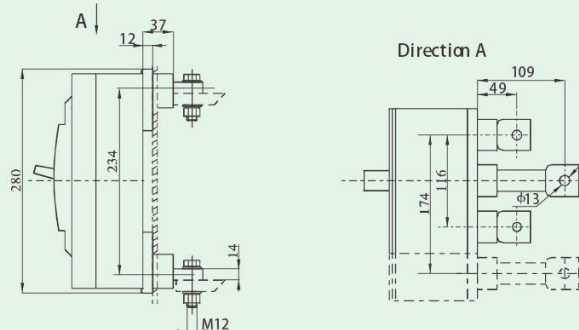
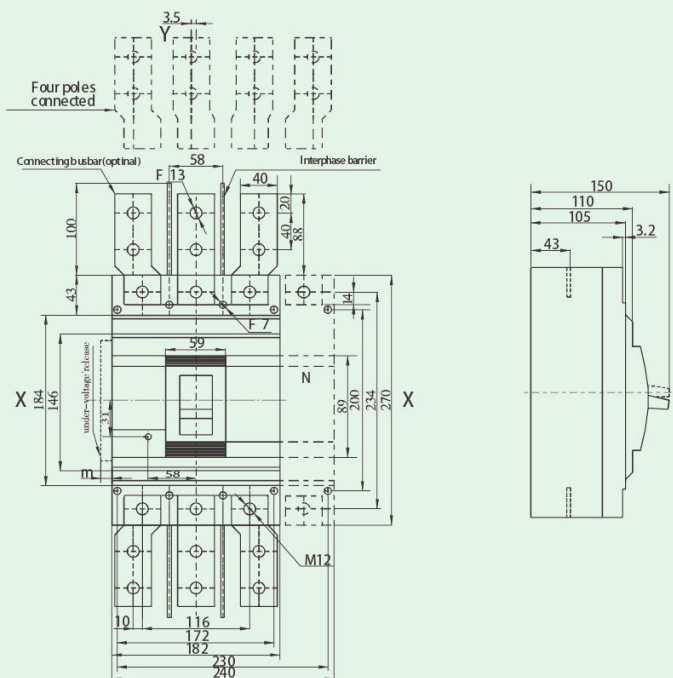
Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and assembly details. The part is shown in a side view with a cross-section. Dimensions include 65.2, 51.5, 4.5, 78, 18.8, 77.2, and M5, M8 thread specifications.





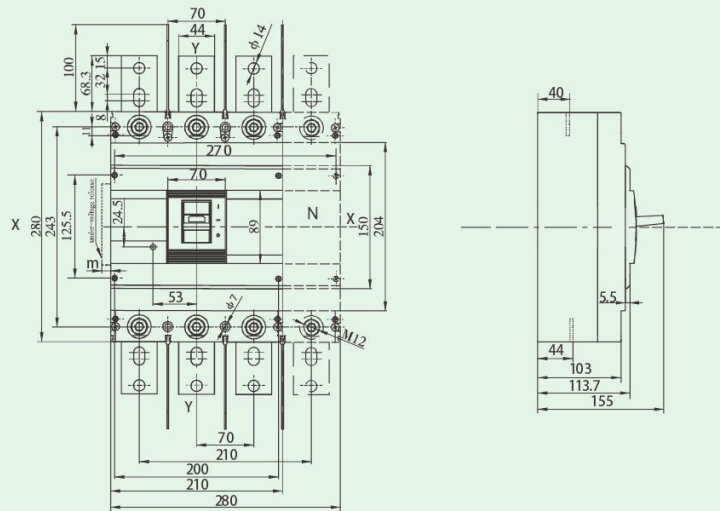


Number of pole	W
Three poles	223
Four poles	227

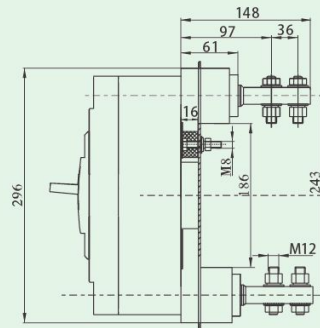


Number of pole	W
Three poles	253
Four poles	311

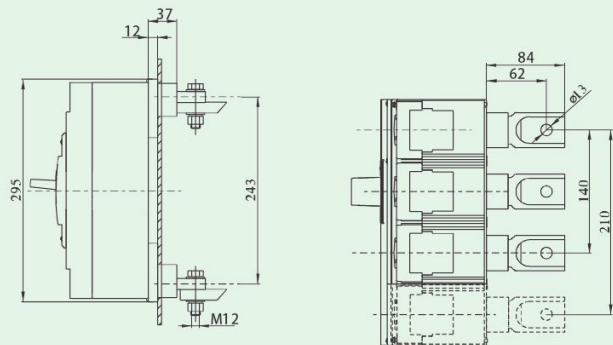
EBS1MN-800(L,M,H) Front connected(three and four poles)



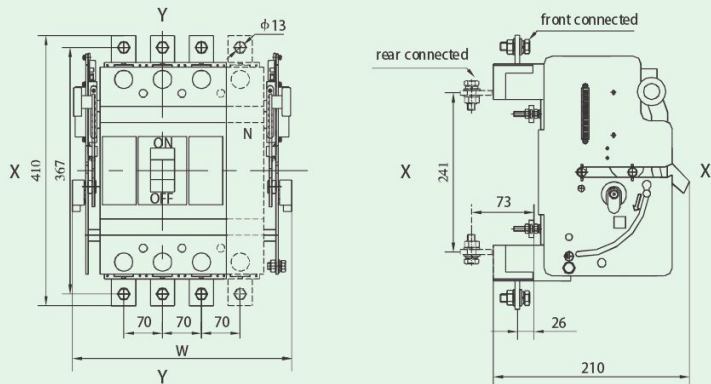
EBS1MN-800(L,M,H) Plug-in rear connected(three and four poles)



EBS1MN-800(L,M,H) Rear connected(three and four poles)



EBS1MN-800(L,M,H) draw-out connected(three and four poles)



Number of pole	W
Three poles	289
Four poles	359