榮獲經濟部商檢局 ISO 9001 及 ISO 14001 認證之配電盤廠 The switchgear plant with ISO 9001 & ISO 14001 certified by Bureau of Commodity Inspection & Quarantine, Taiwan

# 低壓動力分電盤

—法國 MERLIN GERIN 技術合作

LOW VOLTAGE POWER DISTRIBUTIVE PANEL UNDER THE TECHNICAL COOPERATION WITH MERLIN GERIN(FRANCE)





南亜塑膠工業股份有限公司工務部·配電盤組 Switchgear Unit, Engineering Div. Of NAN YA PLASTICS CORPORATION

# 適合配置 ACB/MCCB 之低壓配電盤 -MB200

# The best low voltage panel suitable for accommodating ACB & MCCB- MB200

MB200 低壓配電盤為本公司與法國 MERLIN GERIN 公司技術合作之低壓標準盤體,符合 IEC 60439-1,其電流額定值可達 6300A,箱體保護等級為 IP31,由於模組化的設計,極適於配置 ACB/MCCB,安裝於電氣室使用.

The MB200 low voltage panel is manufactured by NAN-YA under the technical cooperation with Merlin Gerin Co. It meets the requirement of standard IEC60439-1. Depending on requirements, the rated current can be up to 6300A and the degrees of protection is IP31. As modular design, the MB200 is the best low voltage panel suitable for accommodating ACB & MCCB and to service in electric room.

### 適用法規:IEC 60439-1

#### 電氣特性

額定電壓: 1000VAC以下 額定電流:6300A以下 額定頻率:可達 400Hz 短時間耐電流:100KA有效值/1秒 耐衝擊電壓:12KV

#### 機械特性

盤體表面保護:霧面粉體塗裝盤體保護等級:IP 31 (依據 IEC 60529) 盤體隔離方式:FORM2 (依據 IEC 60439-1)

## 產品特點

- ●獨立功能單元室
- ●高效率自然通風
- 模組化設計
- 標準化的尺寸規格
- ●高安全性
- ●結構堅固
- ●外形美觀

# **Features**

- Independent functional units
- High efficient natural ventilation
- Modular design
- Standardized specification
- High safety
- Rigid structure
- Beautiful appearance

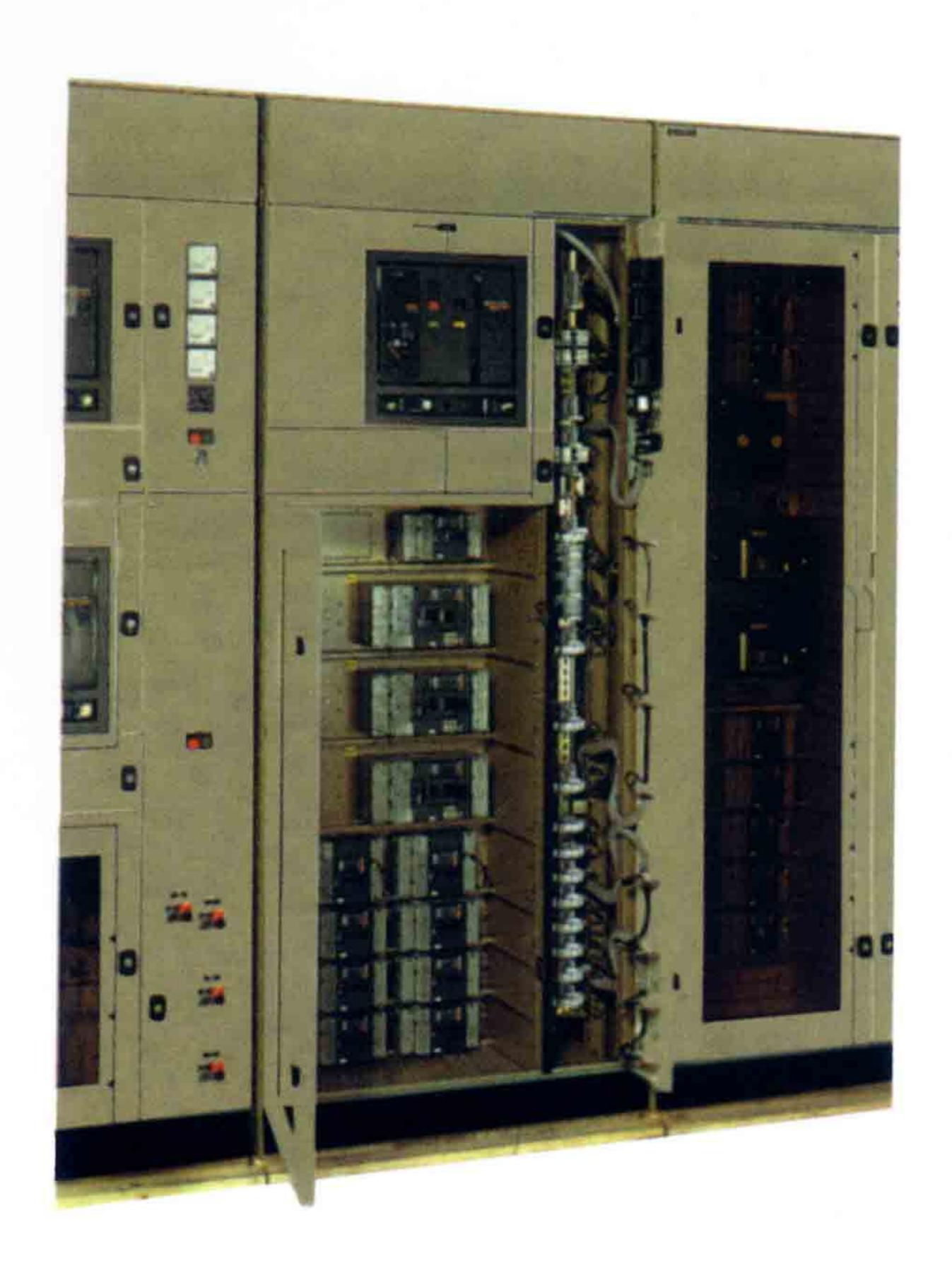
# Governing Standards:IEC 60439-1

#### Electrical data

Rated voltage: up to 1000VAC
Rated current: up to 6300A
Rated frequency: up to 400 Hz
Rated short-time withstand current: 100KA (rms/1s)
Rated impulse withstand voltage: 12KV

#### Mechanical data

Surface protection: mist powder coating
Degrees of protection: IP 31
(According to IEC 60529)
Degrees of separation:FORM2
(According to IEC 60439-1)



# 獨立單元室

MB200盤體區分為斷路器,輔助控制,銅排及電纜進出線四個功能單元室.單元室各自被金屬隔間所隔離,以確保人員不會接觸到活電部份.

# Independent functional units

MB200 can be divided into 4 functional compartments, the circuit breakers compartment ,auxiliaries compartment, bus bar compartment and connection compartment. These 4 compartments are each contained in a metal enclosure whose partitions ensure the protection of people against direct contact with live parts.

	電纜進出單元 Connection compartment											
(6) (6)											鋼排單元 Bus bar Compartment	
斷路器單元 Circuit breakers compartment												輔助單元 Auxiliaries

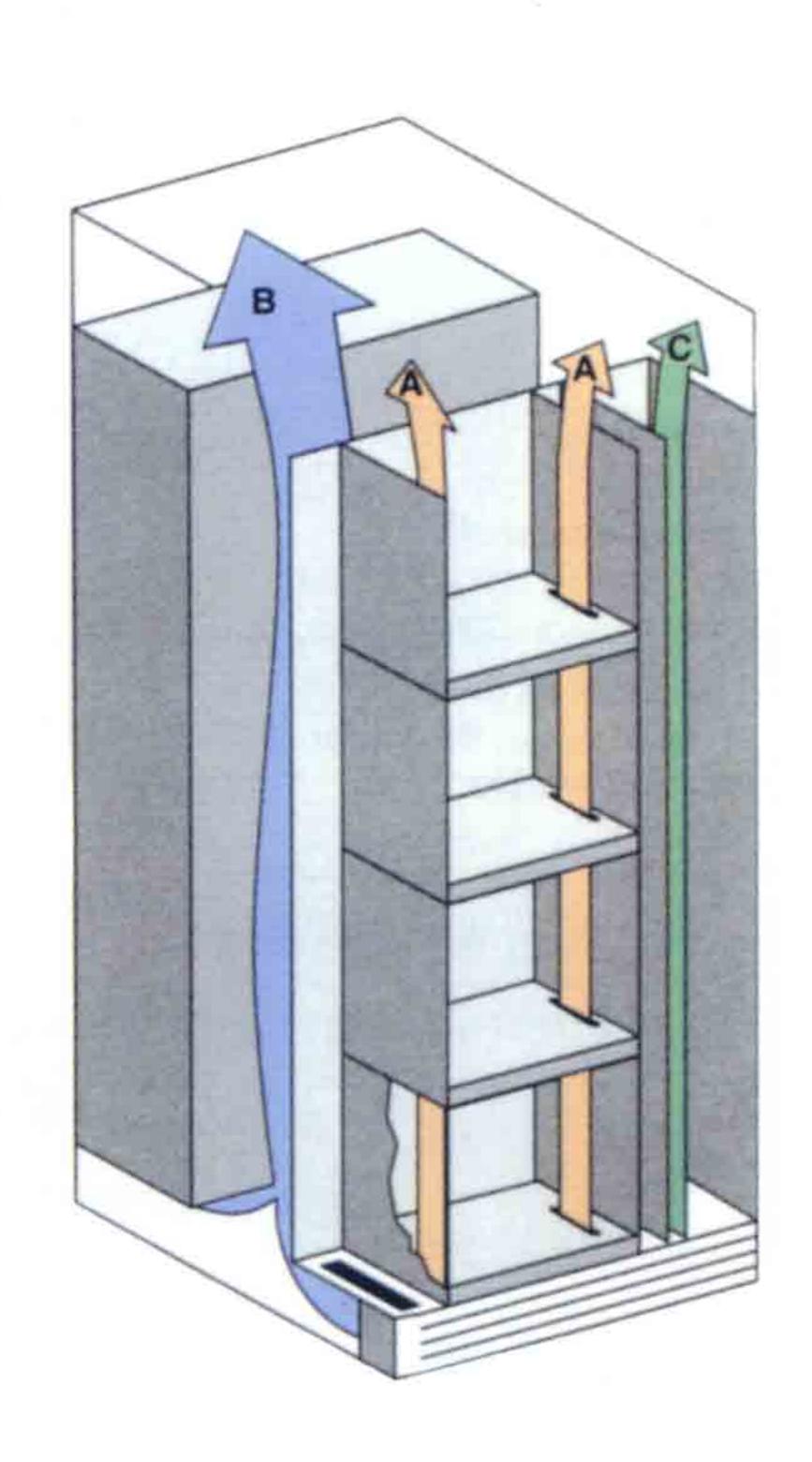
前視底視圖(Bottom view from front)

# ■高效率自然通風

特殊設計的3個獨立自然氣流通道(A,B,C),可保持盤內任一點的溫度在允許極限值之下.因盤內動力回路所產生之熱量,透過氣流孔道,由自盤底通風口進入的冷空氣,經各單元通風道將熱空氣帶由盤頂自然排出,達到極佳之散熱效率.

# High efficient natural ventilation

Three separate natural air flows (A,B,C) is designed to keep inside temperature generated at all points lower than the admissible limit values for each component. The excellent ventilation efficiency is obtainable by the air flows leading the cold air from the bottom vent into the panel and evacuating the calories generated by power circuits out the panel from the top vent.



特殊的氣流通道(A,B,C)
 Special designed air flow (A,B,C)

#### ■ 模組化設計

斷路器單元室,共分成 48 模組(1 模組 40mm),同一盤體可同時安裝抽出式或固定式斷路器.MB200 具有很大的組合彈性,可以允許不同的組合方式,以達到最佳化之斷路器配置及符合實際要求.斷路器模組數選用方式如下表,應用範圍可達 6300A.

# Modular design

The available height of the circuit breakers compartment is divided into 48 modules (40 mm per module). Two versions of circuit breakers (draw out type or fixed type) can be installed in the same section. The MB200 assembly is very flexible and allows a great number of versions so as to optimize the circuit breakers assembly arrangement and to adapt it to actual requirements. The options shown in the following tables correspond to applications up to 6300A.

1200	ACB 型式	固	定式 FIXE	ED	抽出	盤寬		
ACB Number 額定 of Rated P	額定 of Type Rated poles			下ВОТТОМ	上TOP		下ВОТТОМ	Width
M08, M10	3P	4	12		1	12	1	800
M08, M10	4P	4	12		1	12	1	900
M12	3P	4	12	4	1	12	4	800
M12	4P	4	12	4	1	12	4	900
M16	3P	4	12	4	1	12	4	800
M16	4P	4	12	4	1	12	4	900
M20	3P	4	12	4	1	12	4	800
M20	4P	4	12	4	1	12	4	900
M25	3P	4	12	4	1	12	4	800
M25	4P	4	12	4	1	12	4	900
M32	3P	4	12	4	1	12	4	800
M32	4P	4	12	4	1	12	4	900
M40	3P	1	1	1	12	12	24	900
M40	4P	1	1	1	12	13	23	1200
M50	3P	1	1		12	13	23	1200
M50	4P	1	1	1	12	13	23	1400
M63	3P	1	1	1	12	13	23	1400
M63	4P	1	1	1	12	13	23	1400

極數	MCCB 型式	FIXED						
Number of pol	Туре	斷路器數 Number of breakers	模組數 Number of modules	外線線徑 Diameter of external cable				
100 / 160	3P	1 or 2	3	1條< 95m/m²				
100 / 160	4P	1 or 2	4	2條< 70m/m²				
100 / 160	3P	1 or 2	4	2條< 70m/m²				
100 / 160	4P	1 or 2	5	< 120m/m <sup>2</sup>				
250 #	3P	1 or 2	4	< 120m/m <sup>2</sup>				
100 / 160	4P	1 or 2	5					
100 / 250	3P	1	4	< 240m/m <sup>2</sup>				
	4P	1	5					
250	3P	1	4	< 120m/m <sup>2</sup>				
250	4P	1	5					
400 / 630	3P	1	5	< 300m/m <sup>2</sup>				
400 / 630	4P	1	6					

# MB200低壓配電盤 MB200 LOW VOLTAGE PANEL

# ■ 標準化的尺寸規格

# 一. 箱體尺寸:

高度:2350 mm

寬度:800~1400 mm(依斷路器容量)

深度:1570 / 1700 mm(底部 / 頂部進線)

# 斷路器單元 Circuit breaker compartment 2350 1920 輔助單元 Auxiliaries compartment 250 S 800~1400 107 正視圖 Front view

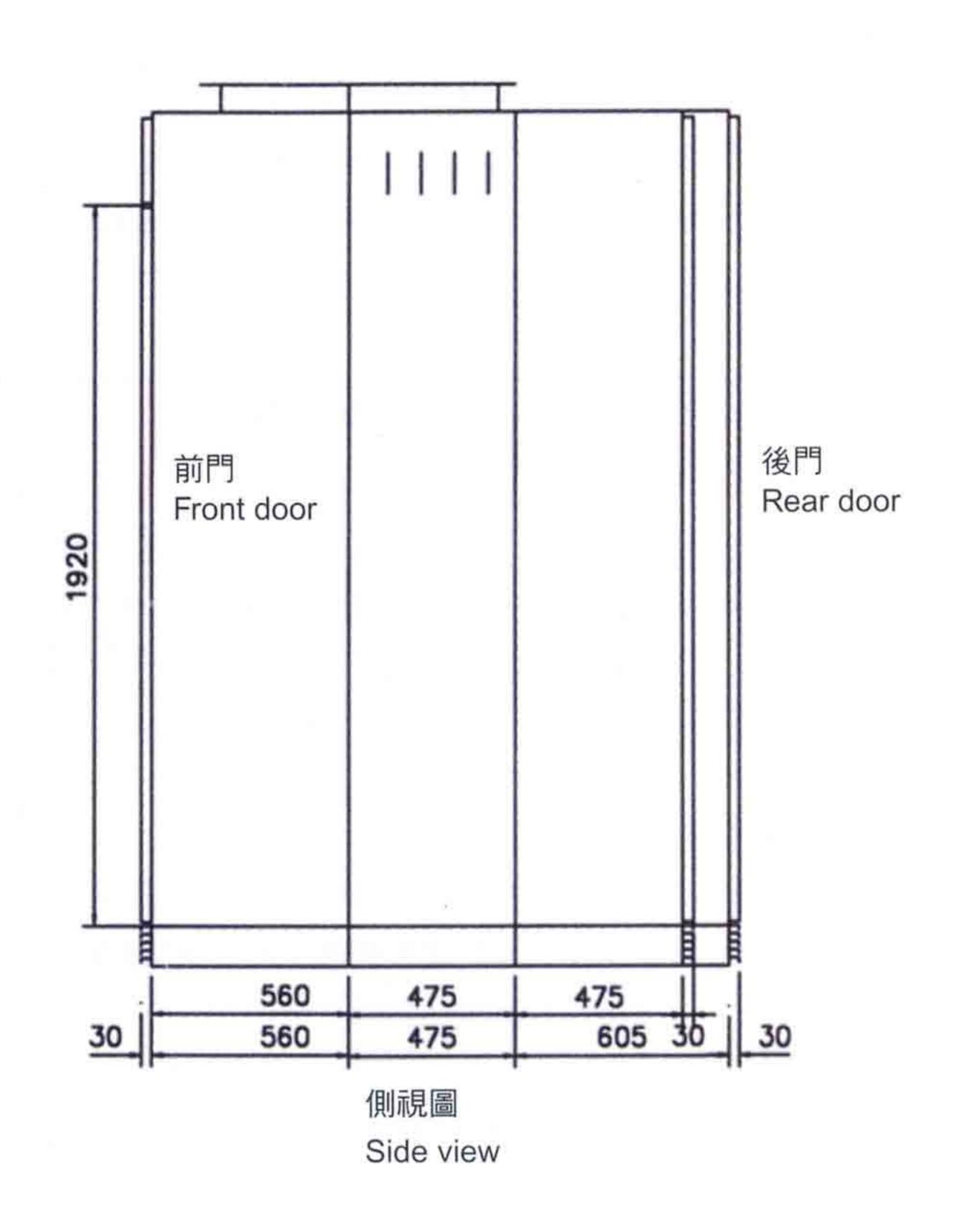
# Standardized specification

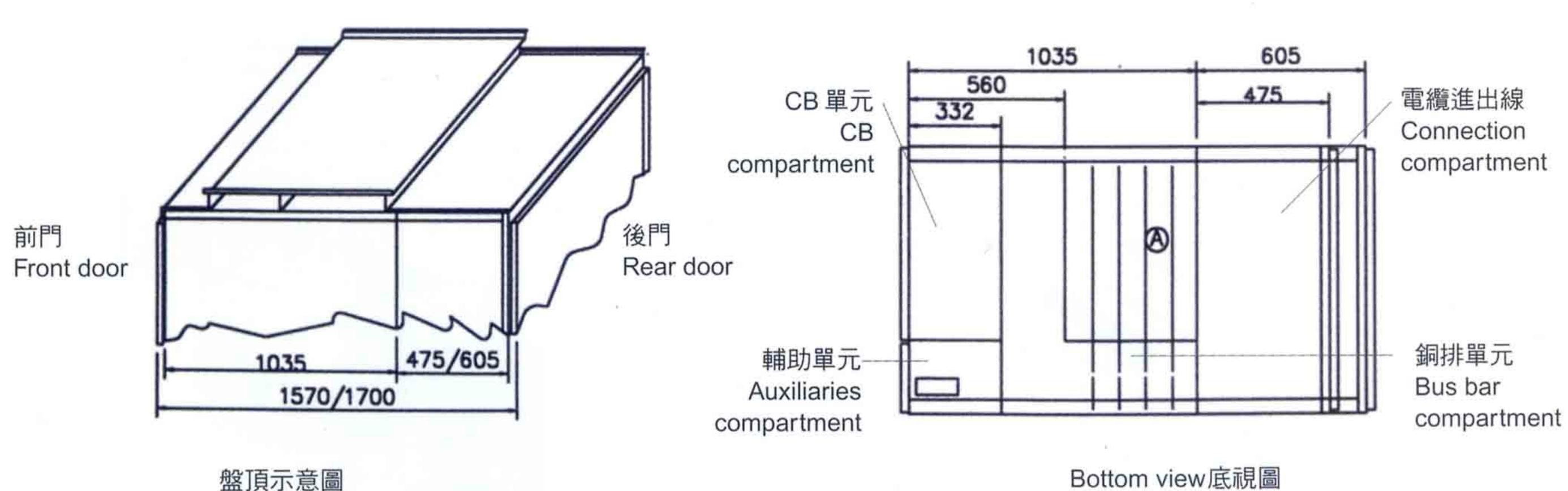
Panel dimension:

Height:2350mm

Width:800-1400mm(according to breaker's capacity)

Depth:1570/1700mm(top/bottom incoming)





# 盤頂示意圖 Illustration for panel top

# 底視圖註解:

- 1.底部進出線:盤深 1570mm 製作 頂部進出線:盤深 1700mm 製作
- 2. @頂層為水平銅排單元 A 底層為電纜進出線單元
- 1. Bottom cable inlet / outlet:1570mm Depth. Top cable inlet / outlet:1700mm Depth.
- 2. A Top layer:horizontal bus bar compartment.
  - Bottom layer:connection compartment.

# MB200 低壓配電盤

#### MB200 LOW VOLTAGE PANEL

### ■高安全性

MB200 內部隔間是由互相緊密連接並施以接地之金屬隔板所組成. 單元間之隔間方式為 IEC 60439-1 規定之 FORM3.因斷路器(ACB,MCCB)之帶電部份均延伸至銅排及出線單元室,且 MCCB 帶電部份均加絕緣隔板覆蓋,使 人員在操作斷路器時均不會碰觸帶電部份,其安全性極高,盤體可依保護需求設計可達 IP31 等級。

# High safety

The partitions of MB200 is consists in interconnected and earthed metal plates. Partitions between individual compartments use FORM 3 type, according to definitions contained in Publication IEC 60439-1.

All of the live parts of breakers (ACB,MCCB) are extended into bus bar compartment and connection compartment, and also the live parts of MCCB are covered with insulating plates. It ensures the protection of people against direct contact with live parts and the highest safety.

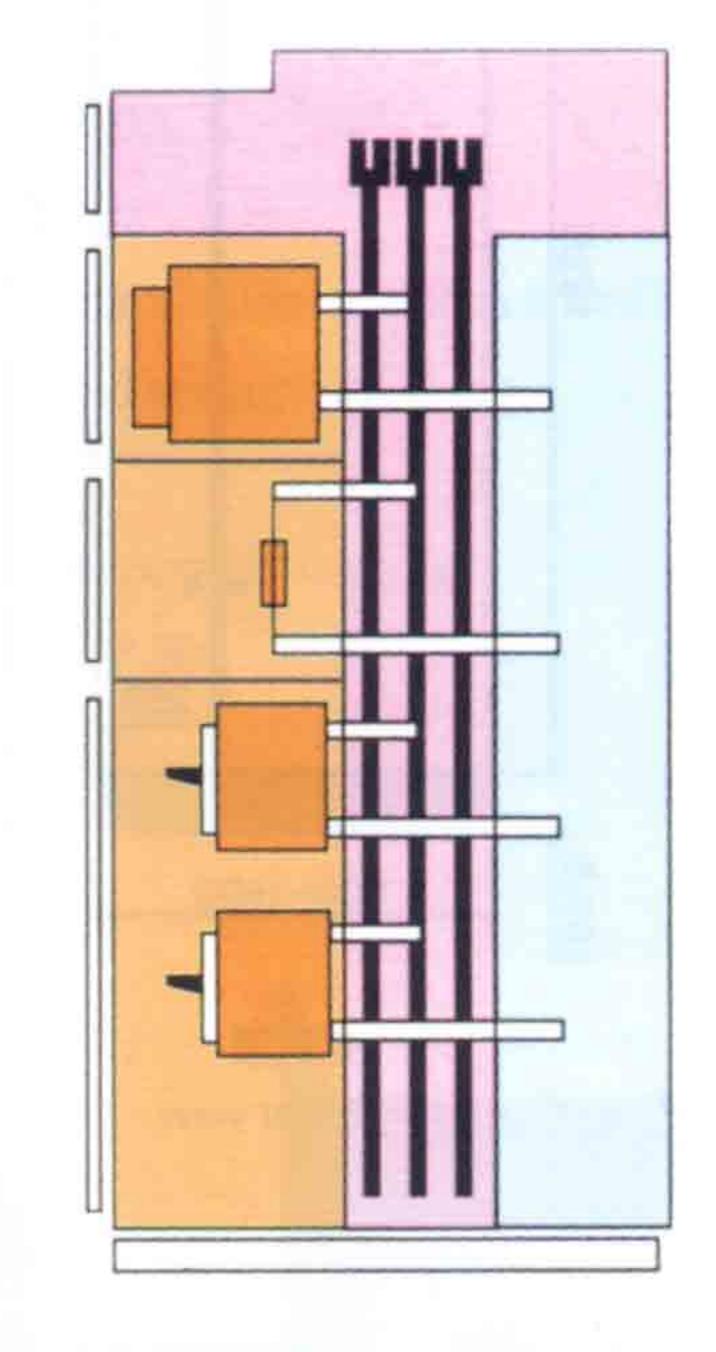
隔離方式 Forms of separation	FORM3
保護等級 Degrees of protection	IP31 銅排和其它功能單元間有隔板隔離 Separation between bus bars and functional units

# ■ 結構堅固,外形美觀

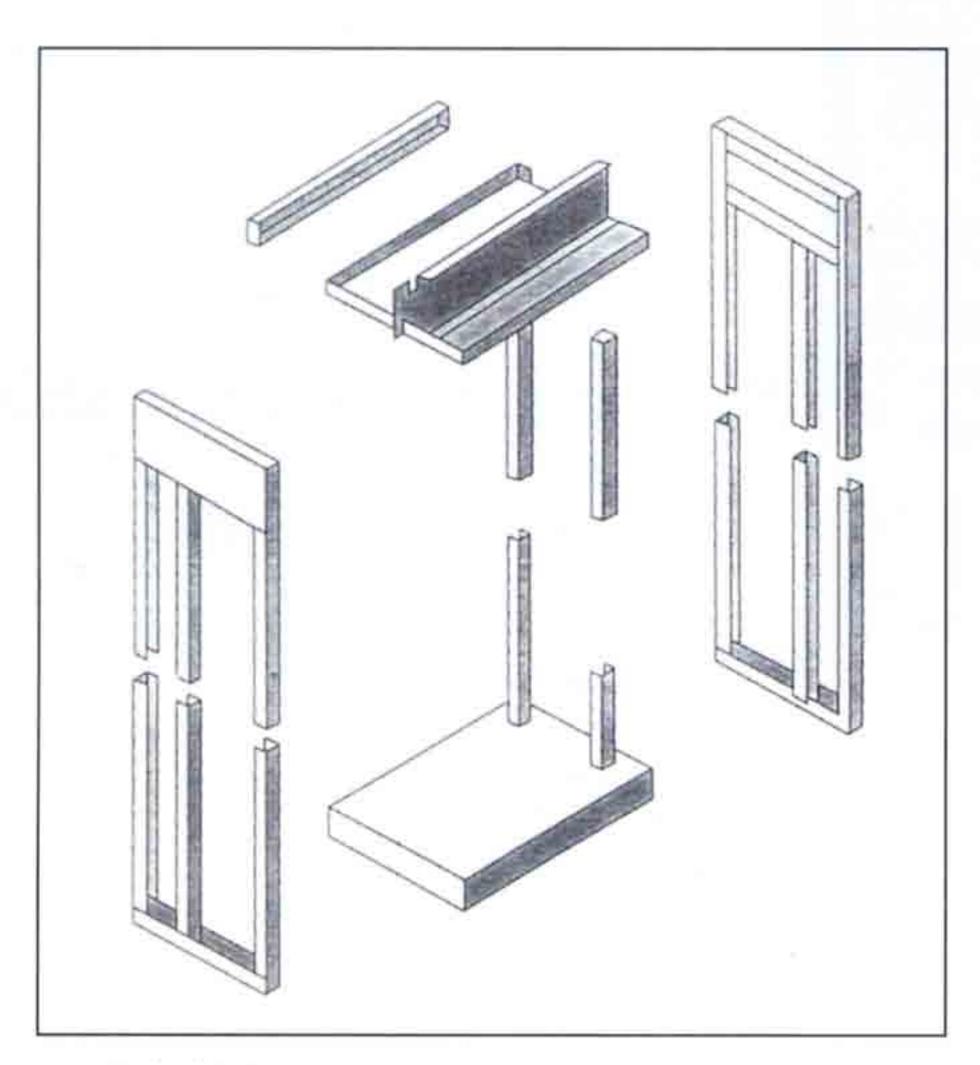
MB200 骨架採用 2mm 厚的鍍鋅鋼板,由垂直部份,水平部份,和以螺栓和鉚釘固定的板件組成,結構強固.

# Rigid structure, beautiful appearance

The frame of a MB200 section made of electro-galvanized steel sheet plate having a thickness of 2 mm and based on a supporting frame consisting of cross members, vertical members and panels fastened to one another by means of bolts and rivets is a durable structure.



Form3



● 骨架組合

The frame and its componets



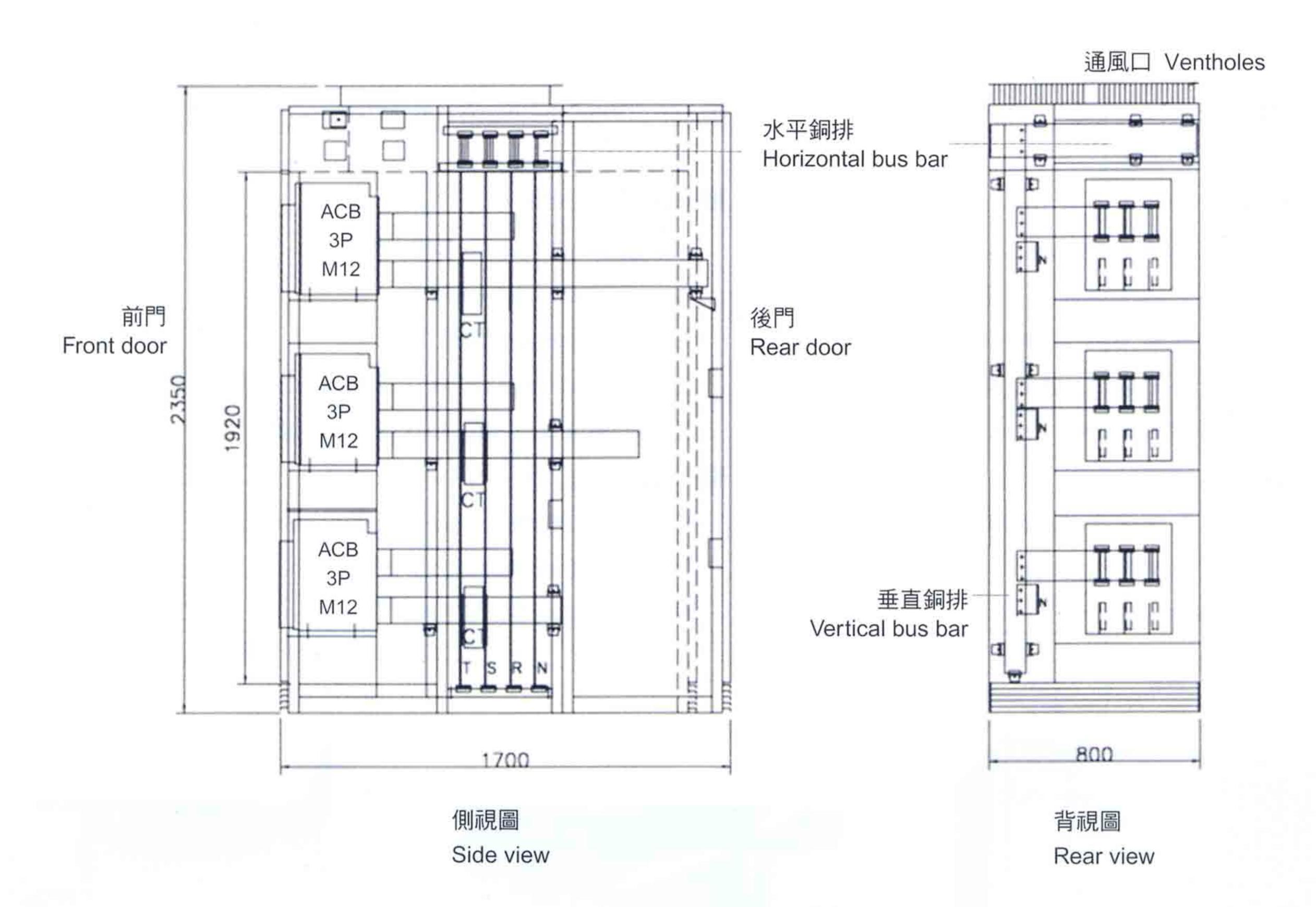
Partitions of compartments

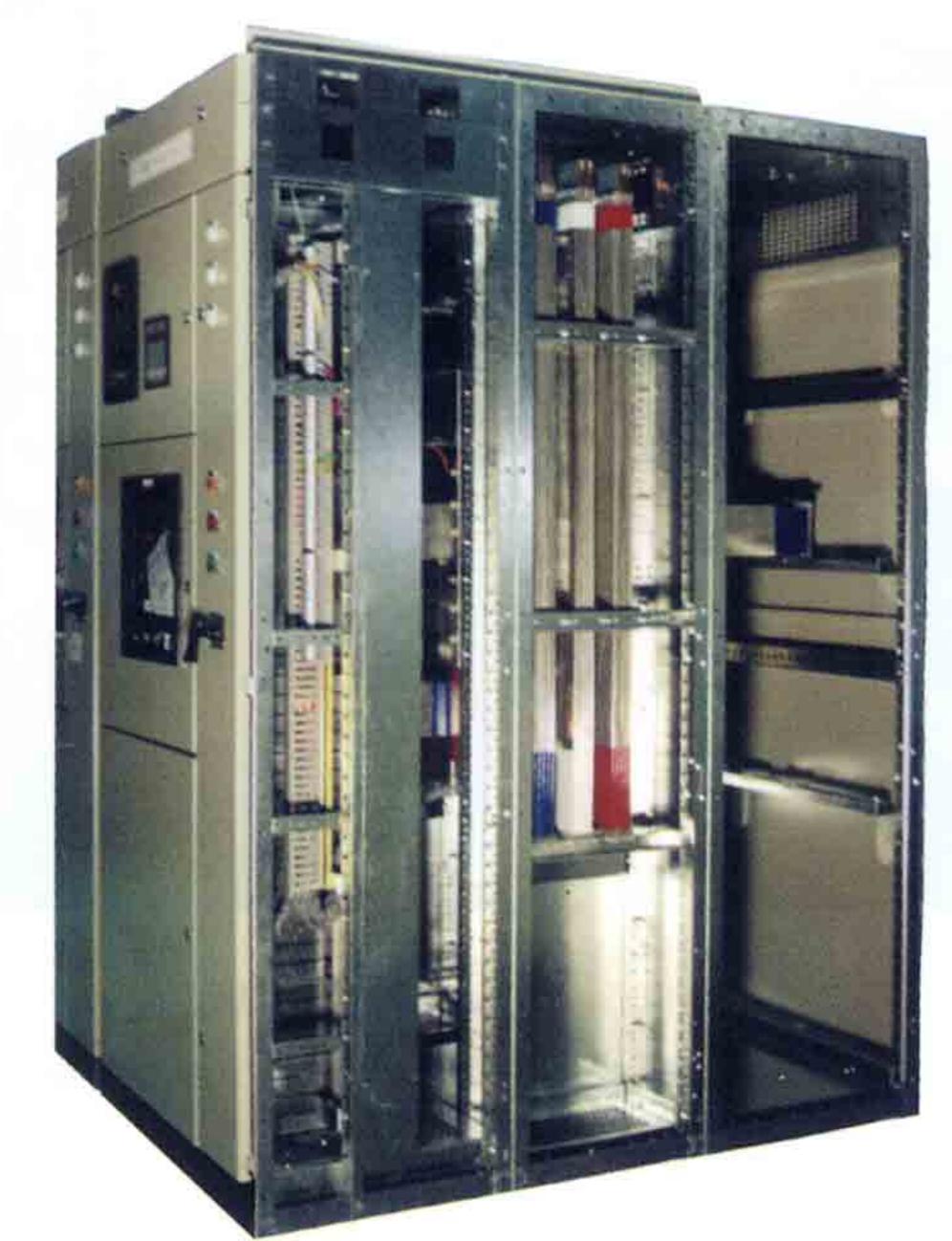
# ■ 匯流排系統:

匯流排封閉在一個完全隔離的隔間中,由一個或多個裸銅導體組成,以合適的絕緣支架和整個盤體固定.

# Bus bar system

The bus bars are enclosure in a completely segregated compartment. It consists in one or more bare copper conductors fastened to the structure by means of appropriate insulating supports.





● MB200 匯流排系統 MB200 Bus bar system



● 正視圖 Front view



● 內部佈置圖 Inner view

# 適合配置 MCCB 之低壓配電盤 -PRISMA

# The best low voltage panel suitable for accommodating MCCB- PRISMA

PRISMA低壓配電盤為法國 Merlin Gerin 之低壓標準盤體,符合 IEC 60439-1,其電流額定值可達 3200A,保護等級依為 IP31,由於模組化的設計及精巧結構,極適於配置 MCCB,安裝於現場使用.

The PRISMA low voltage panel is researched and manufactured by NAN-YA under the technical support with Merlin Gerin Co. .It meets the requirement of standard IEC60439-1.Depending on requirements, the rated current can be up to 3200A and the degrees of protection is IP31. As modular design and compact structure, the PRISMA is the best low voltage panel suitable for accommodating MCCB and to service on site.

# ■適用法規:

IEC 60439-1

#### 電氣特性

額定電壓: 1000VAC以下 額定電流:3200A以下 額定頻率:可達 50/60Hz 短時間耐電流:85KA有效值/1秒 耐衝擊電壓:1KV

#### 機械特性

盤體表面保護:霧面粉體塗裝盤體保護等級:IP 30 (依據 IEC 60529)

# Governing Standards:

IEC 60439-1

# Electrical data

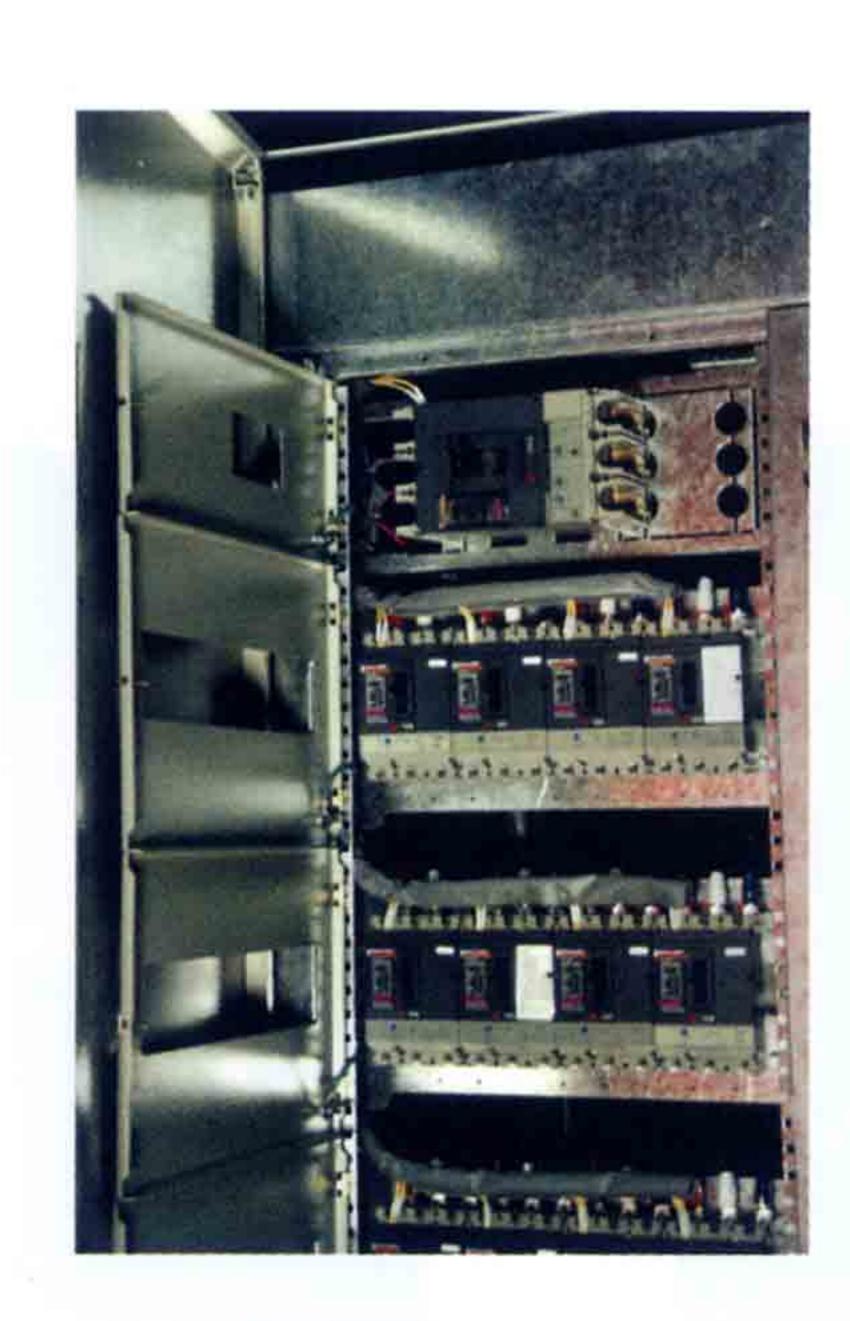
Rated voltage: up to 1000VAC
Rated current: up to 3200A
Rated frequency: 50/60Hz
Rated short-time withstand current: 85KA (rms/1s)
Rated impulse withstand voltage: 1KV

# Mechanical data

Surface protection: mist powder coating
Degrees of protection: IP 30
(According to IEC 60529)

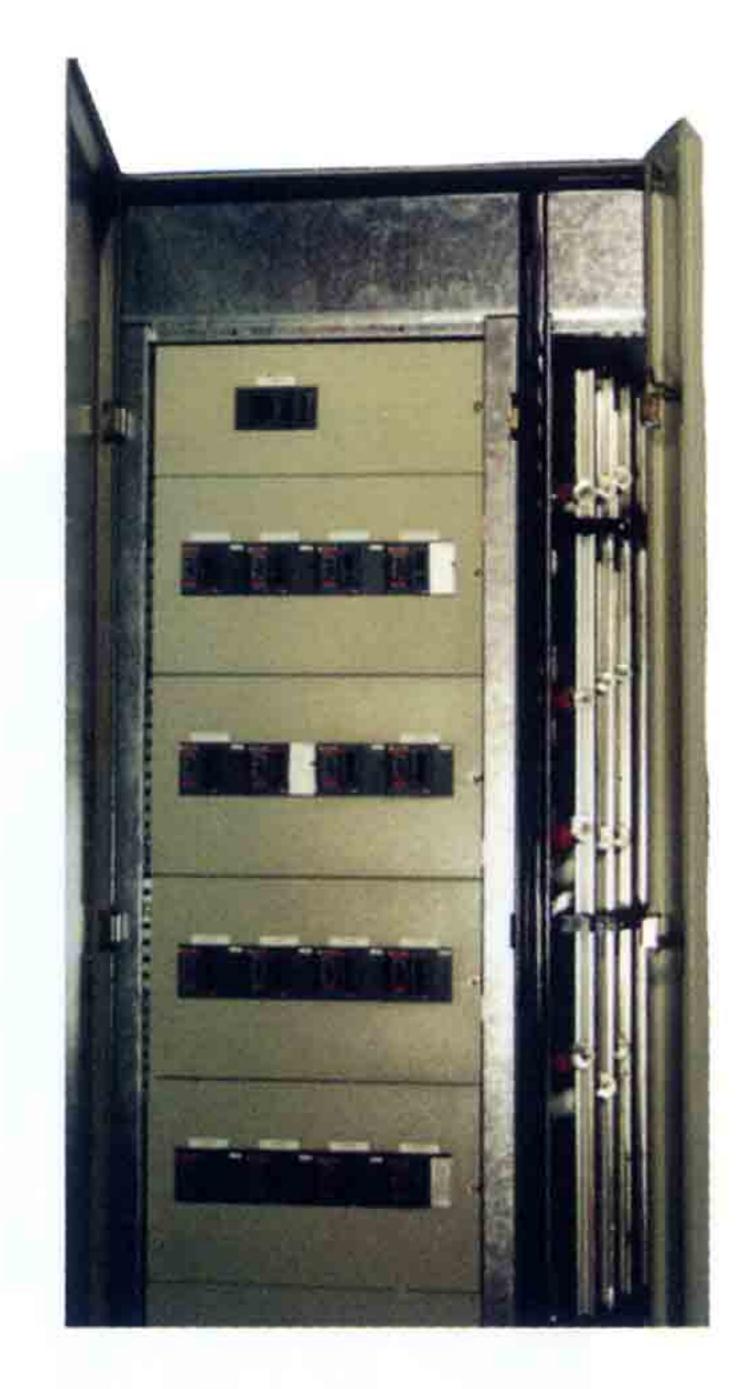


PRISMA



● 盤內斷路器

Breakers inside panel



● 獨立模組面板 Individual modular doors

# ■ 獨立單元室

PRISMA盤體區分為斷路器,輔助控制,銅排及電纜進出線四個功能單元室.單元室各自被金屬隔間所隔離,以確保人員不會接觸到活電部份.

# Independent functional units

PRISMA can be divided into 4 functional compartments, the circuit breakers compartment, auxiliaries compartment, bus bar compartment and connection compartment. These 4 compartments are each contained in a metal enclosure whose partitions ensure the protection of people against direct contact with live parts.

# ■ 通風良好

採自然通風,冷空氣自盤底通風口進入,經各單元通風道將熱空氣帶由盤頂自然排出,通風良好.

# Excellent ventilation

The ventilation is excellent due to the natural air ventilation as the air flows leading the cold air from the bottom vent into the panel and evacuating the calories generated by power circuits out the panel from the top vent.

# ■模組化設計

斷路器單元室,共分成 37 模組(1 模組 50mm),斷路器可視需要,以垂直或水平方式擺置.PRISMA 具有很大的組合彈性,可以允許不同的組合方式,以達到最佳化之斷路器配置及符合實際要求.應用範圍可達 3200A。

# Modular design

The available height of the circuit breakers compartment is divided into 37 modules (50 mm per module). The circuit breakers can be assembled in the same section with horizontal type or vertical type. The PRISMA assembly is very flexible and allows a great number of versions so as to optimize the circuit breakers assembly arrangement and to adapt it to actual requirements. and applications up to 3200A.

# ■標準化的尺寸規格 Standardized specification

箱體尺寸:(單位:公厘) Dimensions (unit:mm)

	基本尺寸 Basic	dimensions			列盤方式 Juxtaposition type				
單元 Compartments	斷路器 Circuit breakers compartment		銅排單元 Bus bar compartment	Side	單盤 Single panel	二盤併盤 Two panel	其他彈 性組合 Other		
盤寬 Width	700	200	25	1125(200+700+200+25) 2025(200+700+200+700+200+25) flexi					
盤深 Depth		670			670				
盤高 Height		2150			2150				

# ■ 匯流排系統:

PRISMA 在電流額定 1600A 以下時使用特殊之 LINERGY 作為匯流排,可提供便捷之回路線路連接.匯流排封閉在一個完全隔離的隔間中,此外,匯流排可由一個或多個裸銅導體組成,以合適的絕緣支架和整個盤體固定.

# Bus bar system

The PRISMA uses a special LINERGY bus bar connected with circuits when the rated current is under 1600A. The bus bars are enclosure in a completely segregated compartment. In addition the bus bar can consists in one or more bare copper conductors fastened to the structure by means of appropriate insulating supports.

# 其他低壓配電盤產品

# OTHER LOW VOLTAGE PANEL PRODUCTS

其他南亞自行研發盤體,如低壓動力分電盤,支柱型開關箱等,種類規格齊全,符合相關標準.可採用 ABB、 CUTLER-HAMMER、 FUJI、 M-G、 SQ-D 等廠牌之低壓斷路器(ACB/MCCB),可依客戶需求供應品質優良的產品.

The other low voltage panels, such as Low Voltage Power Distributive Panel and Vertical Column Panel are researched and developed by NAN-YA with total specifications. These panels meet the requirement of relative standards and can incorporate with different breakers made by ABB,CUTLER-HAMMER,FUJI,M-G,SQ-D. According to requirements, we supply excellent products to our customers.

一、低壓動力分電盤 Low voltage power distributive panel

# 特點:

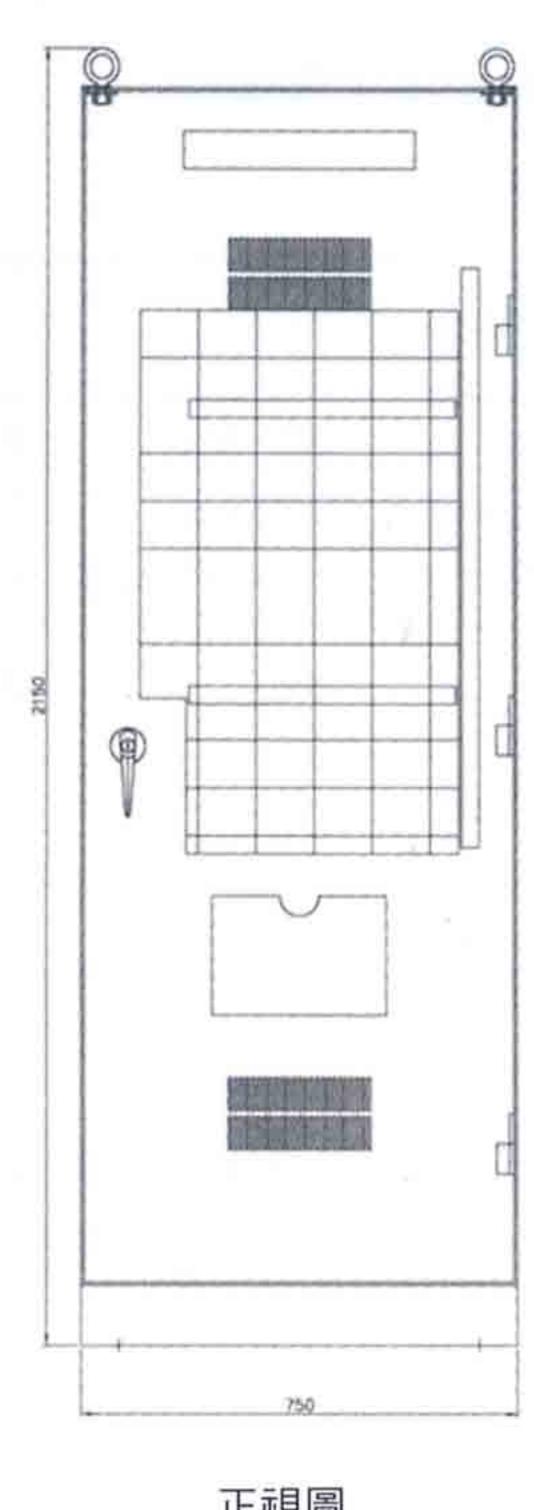
- ●組合式盤體,可預製生產
- 前處理徹底,使用壽命長.
- 器具固定板支架深度可調,固定板高度以50mm倍數,製作應用靈活,NC沖床加工尺寸精確.
- ●可併盤使用擴充性大,整齊美觀.
- ●器具佈置定位化,保養維護省時容易.

### Features:

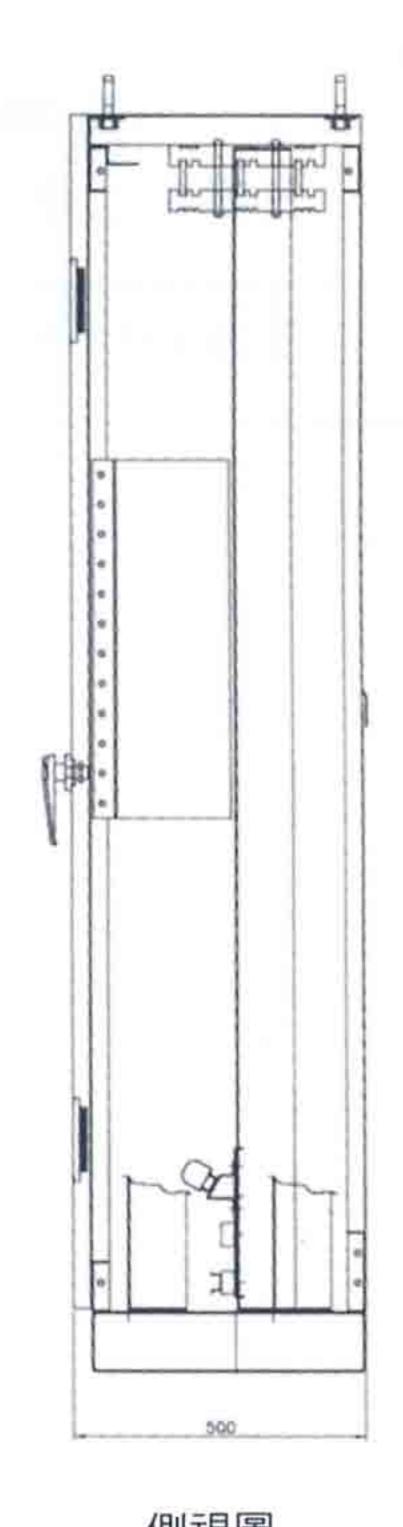
- Assembly structure, prefabricated production.
- Thorough going pre-treatment and durable working life.
- The production of fixed board of device is flexible due to the adjustable length Based on a multiple of 50mm.
   With the NC punching machine, the dimensions of fixed board are precise.
- High extensibility with the juxtaposed method of panel.
- With the fixed distribution of device, the maintenance is easy and timesaving.
- 單門式箱體尺寸 One door type dimension: 750(900)W x 2150H x 500D m/m



● 單門式 one door type



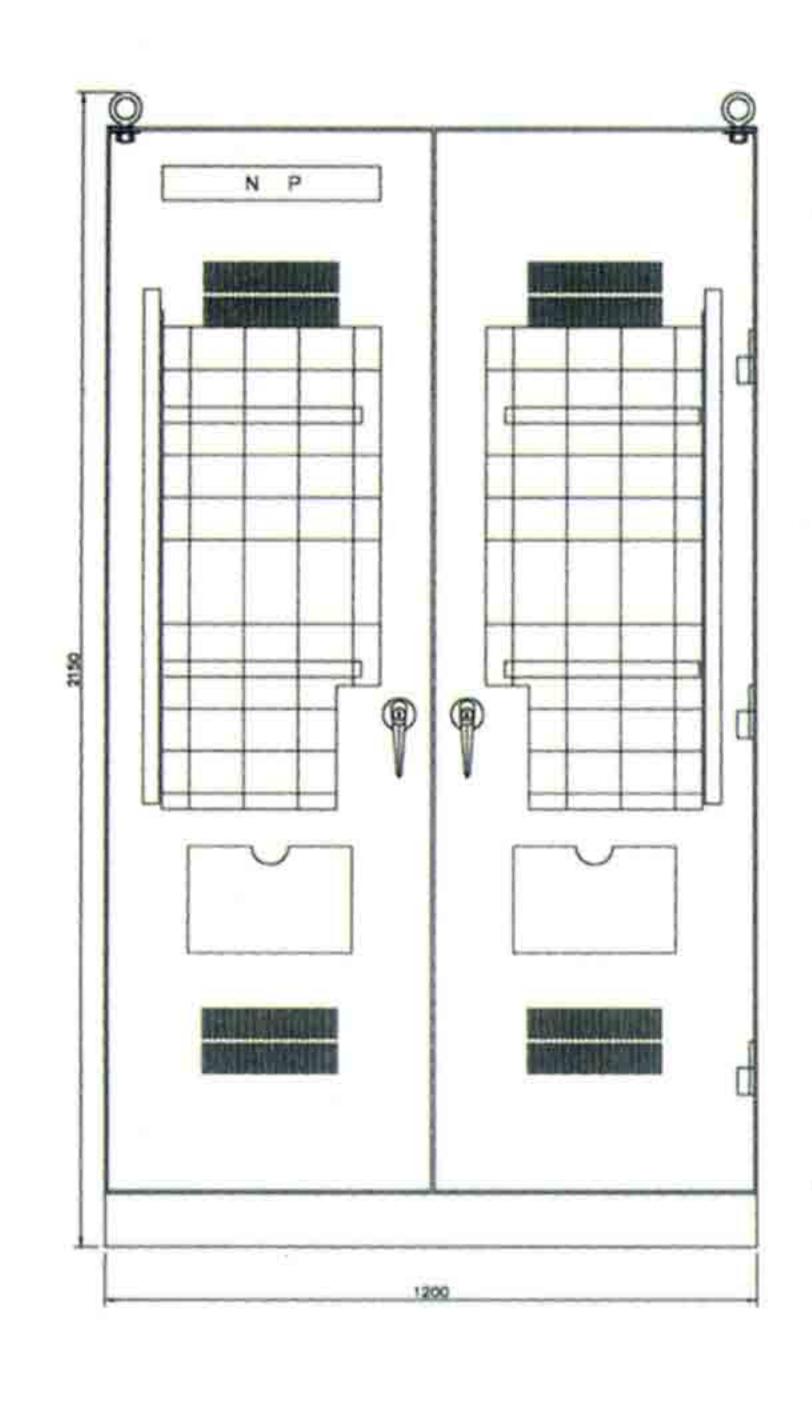
正視圖 Front view

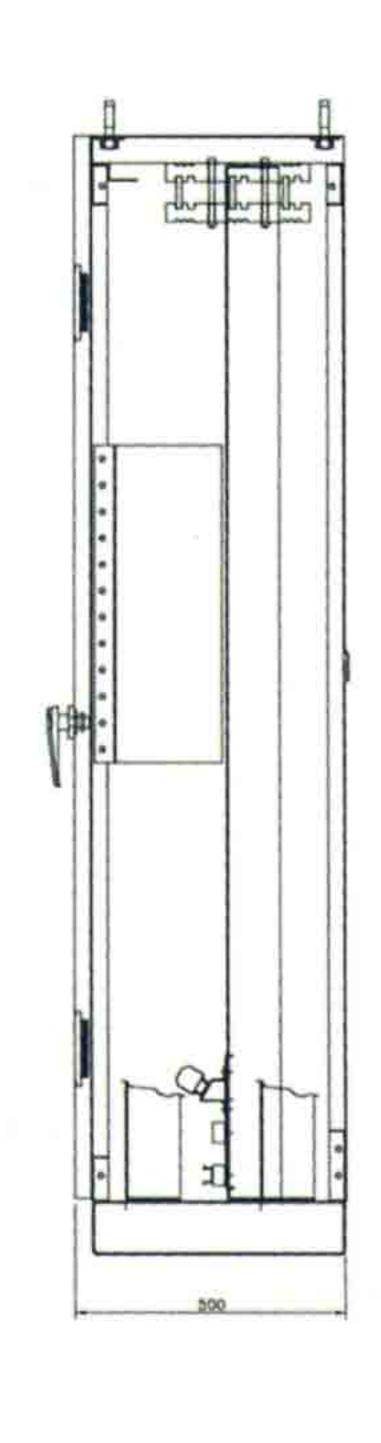


側視圖 Side view

■ 雙門式箱體尺寸 Two door dimension:1200W x 2150H x 500D m/m







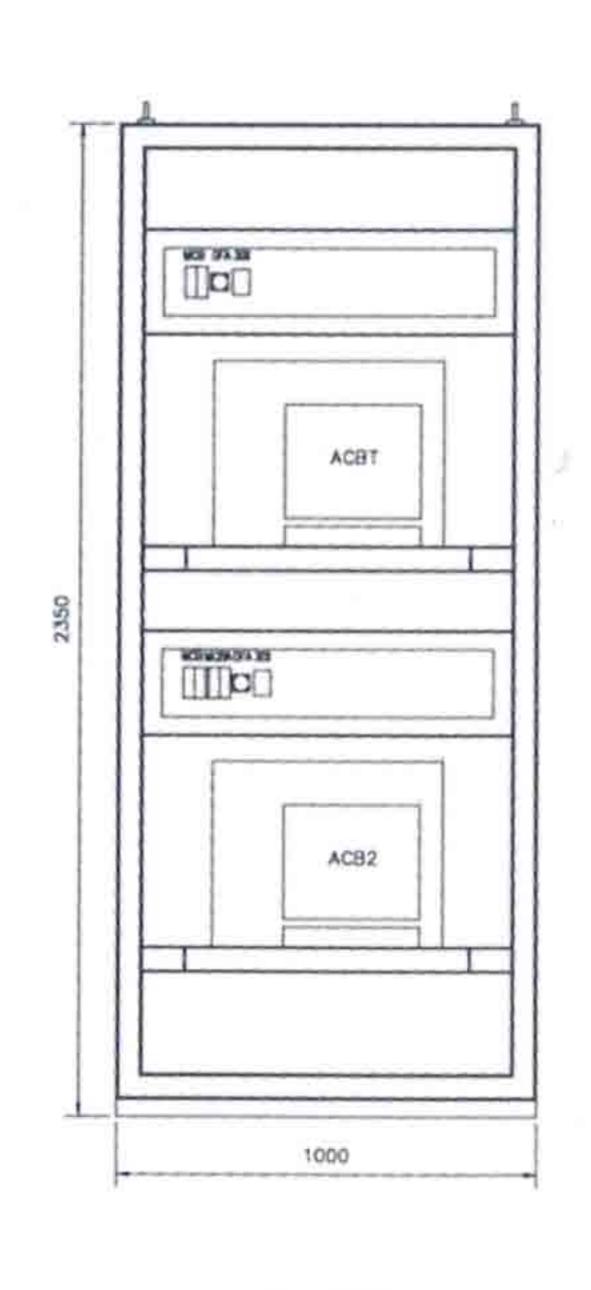
雙門式Two door type

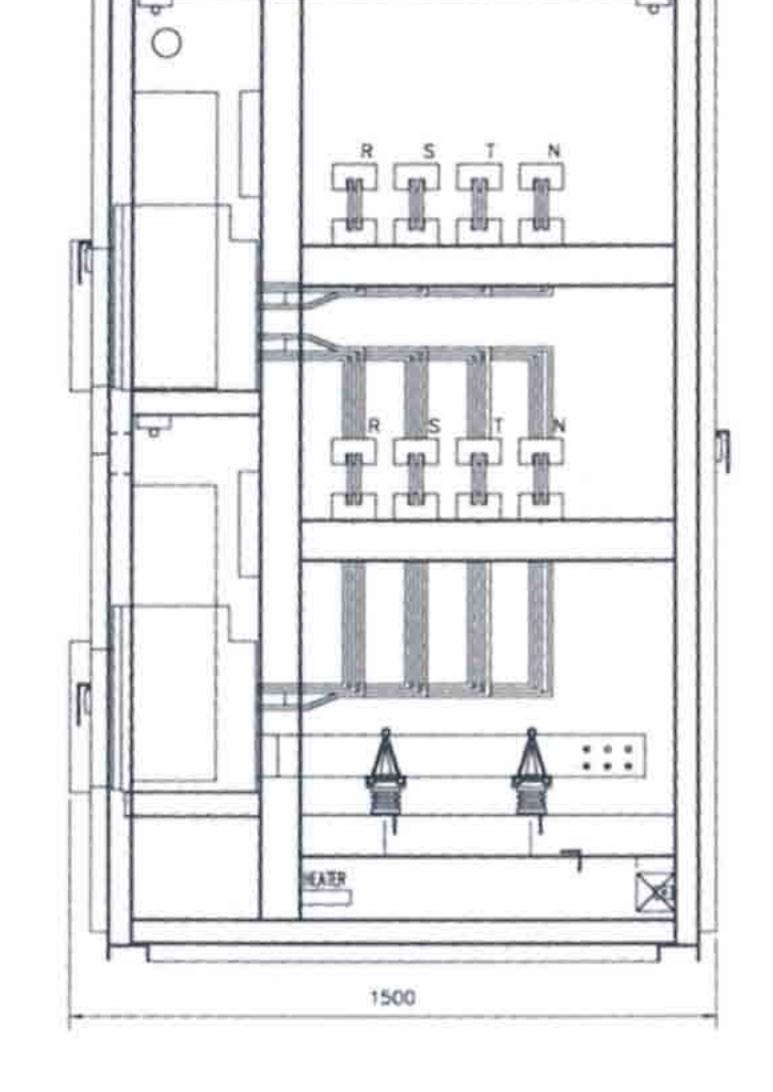
正視圖 Front view

側視圖 Side view

■傳統 ACB 盤箱體尺寸 Traditional ACB panel dimension: 1000W x 2350H x 1500D m/m







正視圖 Front view

側視圖 Side view

# 其他低壓配電盤產品

# OTHER LOW VOLTAGE PANEL PRODUCTS

# 二、支柱型開關箱 Vertical column panel

#### 特點:

- 支柱型設計,節省空間
- 安裝容易
- 適用於適用於現場配置使用

#### Features:

- With vertical column design, it is space saving.
- Easy installation
- It is suitable for servicing on site.



註:本型錄之資料變更時,不另行通知! Mark: The data given in this catalog are subject to change without notice.



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