

Low Voltage System

MNS[®] Low Voltage Distribution Board and Power Cabinet

Technical Info



From the sub distribution to factory power supply, from the general industry to the marine, nuclear power plant, MNS® power distribution box can provide high security, high reliability of professional solutions.

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Product Overview

Applicability

The ABB MNS® low voltage distribution board and power cabinet are a new set of modular and multipurpose low-voltage products. As a member of the ABB MNS family, this particular product is widely used in the lower-level power distribution facilities with MNS® low-voltage switchgear in the following industries:

•Mining •Wastewater treatment

Petrochemicals

• Utilities . Buildings and housing complexes





Features

ABB distribution board and power Cabinet conform to GB7251.3-2006. Product includes distribution board, lighting control panel, metering panel, and power cabinet. , They are suitable for wall mounting and floor mounting with front access. In designing the distribution board and power cabinet, ABB drew upon its wealth of experience with low-voltage switchgear and placed a strong emphasis on the product's ease of installation, operations, maintenance, capacity expansion, and protection.

The ABB-MNS® distribution board and power cabinet are of a welded structure. The product comes in a good variety of shapes, and is highly versatile, structurally innovative, and mechanically rigid. Its enclosure is made of cold-rolled sheet steel, stainless steel, or other special materials.





Product Overview

Technical Data

Standard		Type-tested Assembly	GB 7251.12-2013 GB/T 7251.3
Electrical	Rated voltage	Rated insulation voltage_Ui	Max.1000V
Parameters		Rated operation voltage_Ue	690V / 400V / 230V
		Rated impulse withstand voltage Uimp	6/8kV
		Overvoltage category	III
		Degree of pollution	3
		Rated frequency_f	50Hz
	Rated current	Rated current of Main Busbar_le	Max.800A
		Rated short-time withstand current_lcw	Max.30kA
		Rated peak withstand current_lpk	Max.63kA
Mechanical characteristics	Dimensions		Refer to Product Manual
	Surface treatment		Epoxy powder electrostatic coating;
			coat thickness: 90-200um
	Spraycolor		Bright grey
	Degree of protection		IP30-IP67
	Modular mounting		Fixed
	insideboard and Cabinet		
	Installation		Wall mounted, wall embedded, or floor mounted
	Installation Site		Indoor or outdoor
Material	Sealing material		Neoprene or polyurethane (single-step forming)
specifications	Enclosure	Cold-ro	lled sheet steel / stainless sheet steel 1.5 -3mm
	Mounting plate		Alu-zinc or hot-dipped zinc plate 1.5-3mm
	Door	Cold-ro	lled sheet steel / stainless sheet steel 1.5-3mm

^{*} Enclosures with a degree of protect above IP54 and enclosures resistant to chemical corrosion are die-cast. Specifications are available upon request.

Operating Environment

Indoor Installation:	
Minimum temperature	-5°C
Relative humidity	Max. 50% (+40°C)
Short-time maximum temperature	+40°C
24-hour maximum average tempera	iture +35°C

Note: Higher humidity of up to 90% (+20 $^{\circ}$ C) is permissible when temperatures are low.

Shipment Temperature

Maximum temperature	+55°C
Minimum temperature	-25°C
Higher temperatures of up to +70°C over a	short period
(no more than 24 hours) are permissible.	

Product Classification

MNS® Distribution Board

Structural Characteristics:

- Suitable for indoor and outdoor installation. Waterproof awning is applied in outdoor application.
 Main components include enclosure, electrical mounting parts electrical components cables
 - mounting parts, electrical components, cables, connecting terminals, and label.
- Electrical components are vertically mounted.
- Enclosure is made of cold-rolled or stainless sheet steel with a thickness ranging from 1.5mm to 3mm, which is bended and welded. Concealed hinged are used. Door are made of a plate with a thickness ranging from 1.5mm to 3mm, which is bended and weld. Coated sheet steel solid welded plate. The outer door can be opened up to 110°, while the inner door can be opened up to 90°.
- The panel is equipped with a removable flange to facilitate top or bottom entry. Products to be mounted on the wall or embedded in the wall come with a wall-mounting slot, and other structures are the same. For wall mounted, the flange is located on the external side of the enclosure, and there is a wall mounted slot on the back of the enclosure. For wall embedded, the flange is located on the internal side of the enclosure, and there is no wall mounted slot on the back of the enclosure.

- The dual-door structure design separates live parts from non-live parts to prevent electrical shock. All operations can be carried out on the parts protruding from the opening on the inner door.
- For design higher than IP54, door is supplied with special sealing.

Electrical Parameters

Rated frequency	50Hz
Degree of Protection	IP30-IP65
Rated operation current	Max. 400A
Rated operation voltage	690V/400V/230V
Rated insulation voltage	Max. 1000V

Recommended Enclosure Dimensions Width:400 / 500 / 600 / 700mm Height: 300 / 600 / 700 / 800 / 900mm Depth: 150 / 200mm

Installations Wall mounted

- Wall embedded
- Wall mounted





Product Classification 7







MNS® Lighting Control Panel

Structural Characteristics:

- Products to be mounted on the wall come in a fully metallic enclosure. Optimized design with flat-cover and the concealed cover screws .
- Products to be embedded in the wall come with a metallic bottom plate and a high-quality moulded plastic front cover which is of high rigidity and flame retardant characteristic. Self-positioning plastic front door make it easy for operation and maintenace when door is open.
- Terminal blocks can be arranged on the top or bottom of the panel to suit for top entry and bottom entry design.
- Product Standard: GB7251.3-2006

Electrical Parameters

Rated frequency	50Hz
Degree of Protection	IP30-IP41
Rated operation current	Max. 100A
Rated operation voltage	400V/230V
Rated insulation voltage	400V

Recommended Enclosure Dimensions 8/10/13/16/20/23 modules (1 module =17.5mm)





Product Classification

MNS® Metering Panel

Structural Characteristics:

- For indoor installation only.
- This product's main components include an enclosure, electrical mounting parts, electrical components, a busbar system, a metering lead seal, cables, connecting terminals, and label.
- The enclosure contains a metering unit, a main switch unit, and a user switch unit. every units have a separate structure and door. The doors can be split doors.
- The enclosure is made of cold-rolled or stainless sheet steel with a thickness ranging from 1.5mm to 3mm, which is bended and welded. Concealed hinged are used. The doors are made of a plate with a thickness ranging from 1.5mm to 3mm, which is bended and welded. The outer door can be opened up to 110°, while the inner door can be opened up to 90°.
- The dual-door structure design segregates live parts from non-live parts to prevent electrical shock. All operations can be carried out on the parts protruding from the opening on the inner door.

Electrical Parameters

Rated frequency	50Hz
Degree of Protection	IP30 - IP42
Rated current	Max. 400A
Rated operation voltage	400V / 230V
Rated insulation voltage	400V

Recommended Enclosure Dimensions

W: 300-1100mm H: 400-2200mm D: 150-600mm





MNS® Power Distribution Board (or Power DB)

Structural Characteristics:

- Product suitable for indoor and outdoor installation.
 In outdoor application, special accessories have to apply for higher protection.
- Typical product includes the following components, enclosure electrical mounting parts electrical devices, busbars, cables, connecting terminals, and label.
- The enclosure is made of welded cold-rolled or stainless sheet steel with a thickness ranging from 1.5mm to 3mm. The doors are made of a plate with a thickness ranging from 1.5mm to 3mm, which is bended and welded. The outer door can be opened up to 110°, while the inner door can be opened up to 90°.
- Power DB is constructed with main busbar compartment and operating compartment for the switch and controlling equipment (for Cabinet with a dual-door structure). Toughened glass can be set on the outer door as an observation window.
- Power DB is equipped with a removable flange, facilitating top or bottom cable entry and exit and making it easier for the user to install cables by drilling holes onsite.

- The busbar can be flexibly installed in an upper, middle or lower position on the Cabinet.
- For products with a protection degree above IP54, the doors will be applied with special sealing.

Electrical Parameters

Rated frequency	50Hz
Degree of Protection	IP30 - IP65
Rated operation current	Max. 800A
Rated operation voltage	690V/400V/230V
Rated insulation voltage	Max. 1000V
Rated short-time withstand current	10kA/15kA/35kA
Rated peak withstand current	17kA/30kA/73.5kA

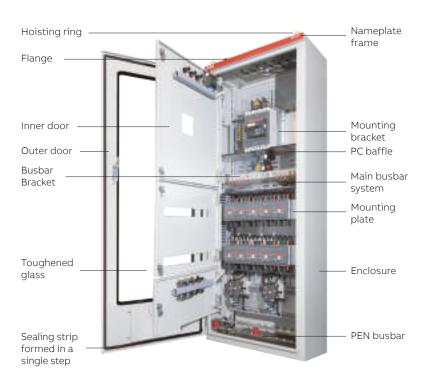
Recommended Enclosure Dimensions

W: 600/700/800mm

H: 1700/1800/2000/2200mm

D: 400-600mm





Product Classification

Enclosures Made of Special Materials

Structural Characteristics:

Advanced technologies are employed to form sealing gaskets and the enclosure concurrently. Enclosure materials include special glass fiber reinforced polyester and die-cast aluminum, as well as common PC and ABS. These enclosures are mainly used in industries requiring high levels of corrosion resistance and protection, such as petrochemicals, shipbuilding, and wastewater treatment. Protection can be up to IP67.

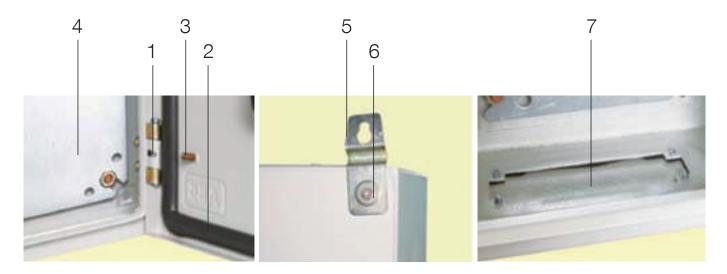
- 1. Built-in High-strength Aluminum Alloy Hinges The door can be opened up to 110°.
- 2. Non-interface Sealing Rings
 The door and its edges are protected with
 durable and high-elasticity non-interface sealing
 rings, providing a high degree of protection.
- 3. Earthing Stud

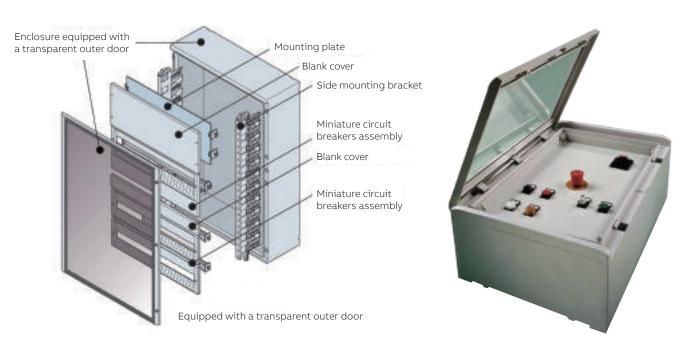
 The door and the bottom enclosure are equipped with a earthing stud to facilitate grounding.

- 4. Flexible Bottom mounting Plate
 Bottom mounting plate can be bolted. Components
 and acceesries are installed onto bottom mounting
 plate. The plate is removable and easy for drilling and
 components arrangement and installation. External
- 5. The enclosure comes with a wall mounting bracket, Plastic Plugs

Wall Mounting Bracket.

- 6. If the enclosure is mounted on the wall, the four mounting slots can be sealed up with plastics plugs to ensure a high degree of protection.
- 7. Cable Entry Gland Plate with Sealing Gasket
 Both the top and bottom of the enclosure are
 equipped with a cable entry gland plate protected
 with sealing gaskets, facilitating bottom cable entry
 and top cable entry while maintaining the degree of
 protection.





Electrical Solutions for Wall Mounted / Wall Embedded

ABB Breakers	Median	Width	Height	Depth	MCB rated current	Mounting	Degree of protection	Rated short-time withstand current
Incoming and outgoing	19	500	300	150,200	≤160A	Wall mounted	IP30-65	Icw=10kA
circuit breakers are MCB: S200-series	30	400	600			or wall embedded		
miniature circuit	54	500	700			waii ciribcaaca		
breakers; residual	72	600	800					
current circuit breaker	95	700	900					

Notes:

- 1.The modules listed in the above table are for outgoing circuit MCBs without terminals. If outgoing terminals are required for the project, the modules should be reduced by half.
- 2.If T connector is used or MCCB is employed as incomer breaker, design space is to be reduced by 5 standard modular size.
- 3.The observation window on the outer door is optional. In outdoor application waterproof awning will be applied.
- 4. The upper and lower flange plates are not pre-drilled but can be pre drilled upon request.
- 5.1 standard modular size = 17.5mm (the width of single-pole MCB)

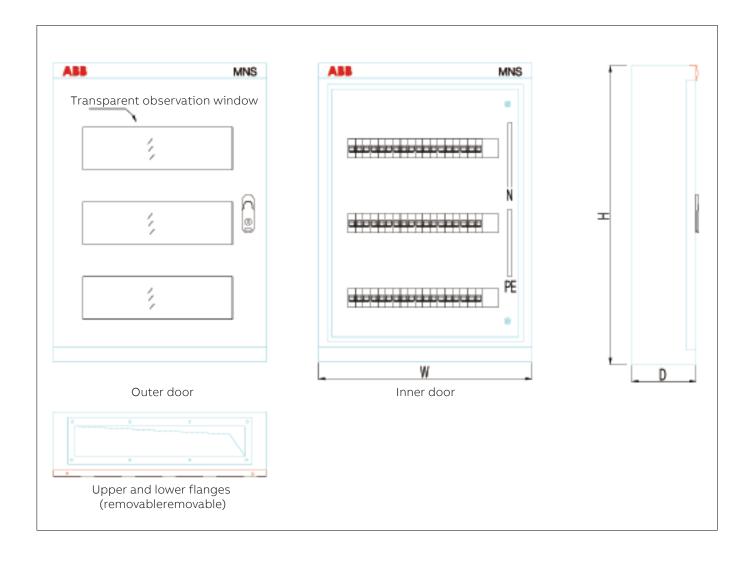


ABB Breakers	Median	Width	Height	Depth	Rated curre	nt Installation	Degree of protection	Rated short-time withstand current
	3	500	300		≤160A	Wall mounted	d IP30–65	Icw = 10kA
The switches of both incoming and outgoing circuit are MCCB: T2, 3P	4	400	600					
	6	500	700	150,200				
	9	600	800					
	11	700	900		≤250A			

Notes:

- 1. The modules listed in the above table are for outgoing MCBs without without terminals. If outgoing terminals are required for the project, the modules should be reduced by one third.
- 2. The observation window on the outer door is optional In outdoor application, waterproof awning will be applied
- 3. The upper and lower flange plates are not pre-drilled but can be pre drilled upon request..
 4. In the case of 500X700 with one single switch installation current rating can be up to 250A. In the case of 600X800 with one single switch installation, the current rating can rise up to 400A. In the case of 700X900 it goes to 630A.

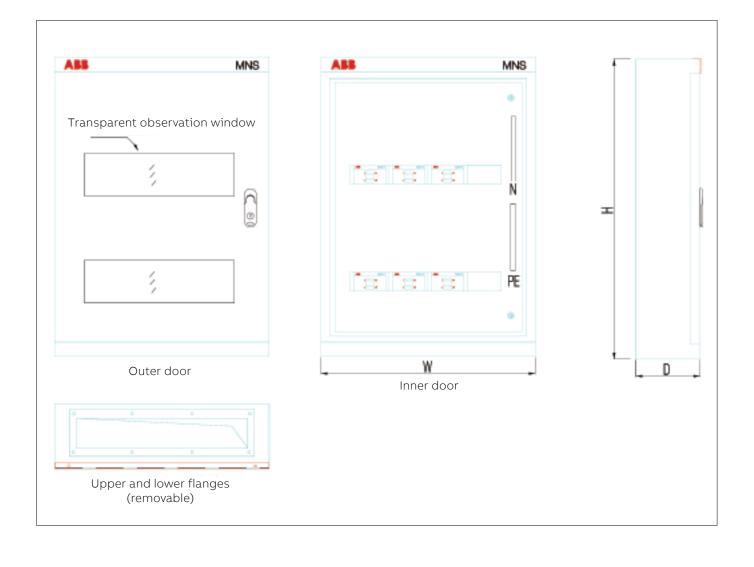
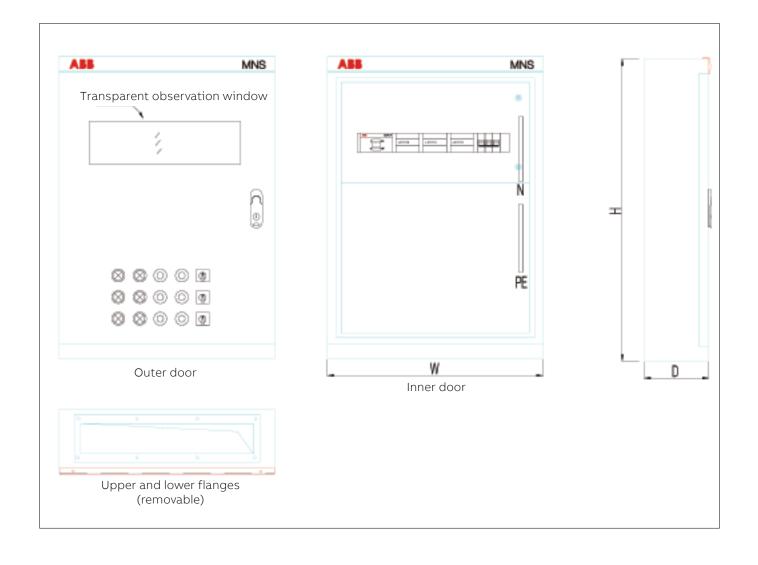


ABB Breakers	Number of motor circuits	Width	Height	Depth	Main switch current rating	Installation	Degree of protection	Rated short-time withstand current
The switches of both incoming and outgoing circuits are 1.MCCB: T2, 3P 2.MCB: S200-series switches, MS-series motor starters	1	500	300	200	≤160A	Wall mounted	IP30 -65	Icw=10kA
	2	400	600			Degree of protection		
	3	500	700					
	4	600	800					
	5	700	900					

Notes:

- 1.The observation window on the outer door is optional. In outdoor application, waterproof awning will be applied are not pre-drilled but can be predrilled upon request.
- 2.Each motor circuit is equipped with two lights, two buttons, and one changeover switch; one contactor is less than A50.

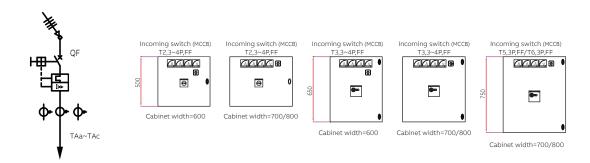
 3.One thermal overload relay; and there are 20 terminals. The dimensions should be increased if this configuration is exceeded.



Electrical Solutions for Floor Mounted

Solution No. 01

Main Circuit Diagram MCCB Incoming, bustie

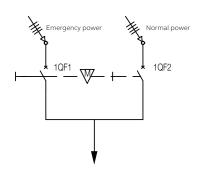


Purpose								Incoming					
Cabinet depth	(mn	n)			400								
Setup of comp	one	ents in Cabin	et		Segregated								
Maximum rate	d cu	ırrent(A)		12.5 -160A		32 - 250A		320 - 630A		800A			
	De	scription of r	main componen	tsModel & specs	Qty	Model & specs	Qty.	. Model & specs	Qty	. Model & specs	Qty.	Model & specs Qty.	
	1	Breaker		T1-T2.3P or 4P.FEF	1	T3 250.3P or 4P.FF	1	T5 630.3P or 4P.FF	1	T6 800.3P or 4P.FF	1		
		Switch fuse switch / AT											
Description,		Attachment	t					When <400A, ES extended terminal is required.					
models, specs	2	Contactor											
and quantity	3	Thermal ove	erload relays										
of main components	4	Soft starter	-										
components	5	VFD											
	6	Current trai	nsformer	LNC2	3	LNC2	3	LNC3	3	LNC4	3		
	7	A-meter			3		3		3		3		
	8	V-meter			1		1		1		1		
	9	Change-ove			1		1		1		1		
	10	Control but	ton										
		Lamp											
		Others											
	60	0X -	550	#									
		_	650			#							
			750					#		#			
Standard Unit	700	OX -	550	#									
Dimensions			650			#							
(W X H)			750					#		#			
	80	UX -	550	#									
			650			#							
			750					#		#			

Solution No. 02

Main Circuit Diagram

Auto transform switch









Cahinet	width:	700	/800

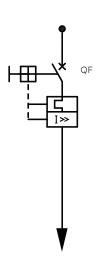
Purpose						Incoming		
Cabinet depth(mm) Setup of components in Cabinet						400		
						Segregated		
Maximum rated current(A)		Max.63A	Max.160A	Max.250A				
	Description of main components		Model & specs Qty.	Model & specs Qty				
	1	Breaker						
		Switch fuse	es / load switch	DPT63- CB011	DPT160- CB011	DPT250- CB011		
		Attachmen	t					
Description,								
models, specs and quantity of	2	Contactor						
	3	Thermal overload relays						
main components	4	Soft starter						
components	5	VFD						
	6	Current tra	nsformer					
	7	A-meter						
	8	V-meter						
	9	Change-ov	er switch					
	10	Control but	tton					
	11	Lamp						
	12	Others						
	60	OX	550	#	#			
			650			#		
			750					
Standard Unit Dimensions (W X H)	700X 550			#	#			
			650			#		
			750					
	80	OX	550	#	#			
			650			#		
			750					

Solution No. 03

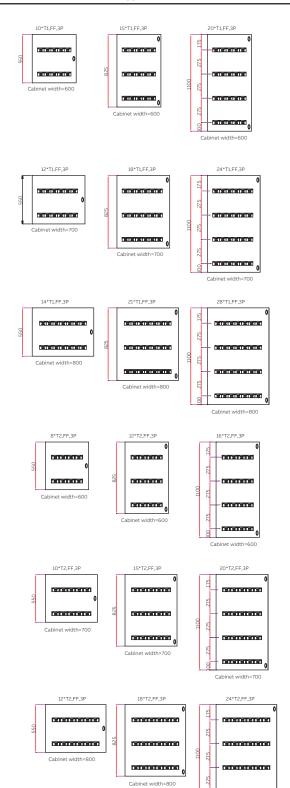
Feed

Main Circuit Diagram MCCB Feed

Purpose

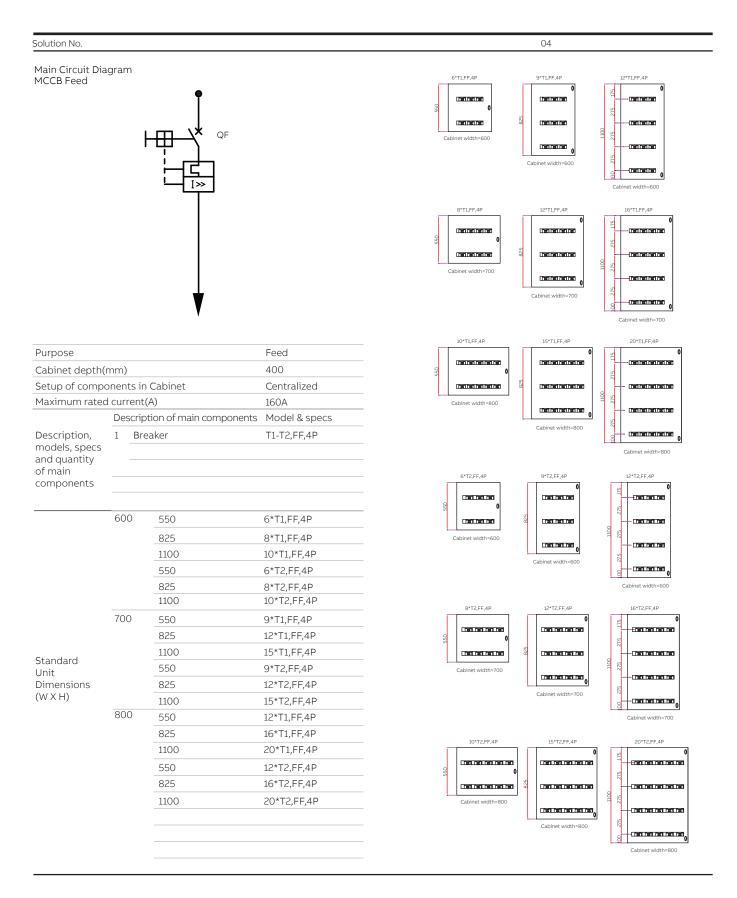


Cabinet depth(mm)			400
Setup of compo	onents in Cabinet		Centralized
Maximum rated			160A
	Descrip	tion of main com	ponentModel & specs
Description, models, specs and quantity of main components	1 Bre	eaker	T1-T2,FF,3P
	600	550	10*T1,FF,3P
		825	15*T1,FF,3P
		1100	20*T1,FF,3P
		550	8*T2,FF,3P
		825	12*T2,FF,3P
		1100	16*T2,FF,3P
	700	550	15*T1,FF,3P
		825	18*T1,FF,3P
Standard		1100	21*T1,FF,3P
Unit Dimensions		550	12*T2,FF,3P
(W X H)		825	15*T2,FF,3P
		1100	18*T2,FF,3P
	800	550	20*T1,FF,3P
		825	24*T1,FF,3P
		1100	28*T1,FF,3P
		550	16*T2,FF,3P
		825	20*T2,FF,3P
		1100	24*T2,FF,3P



Cabinet width=800

17



Solution No. 05

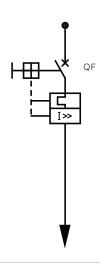
Feed

400

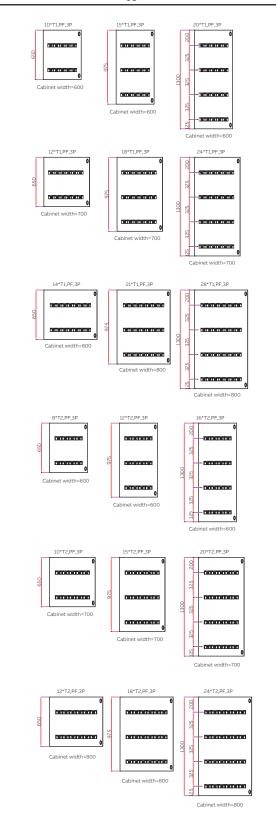
Main Circuit Diagram MCCB Feed

Purpose

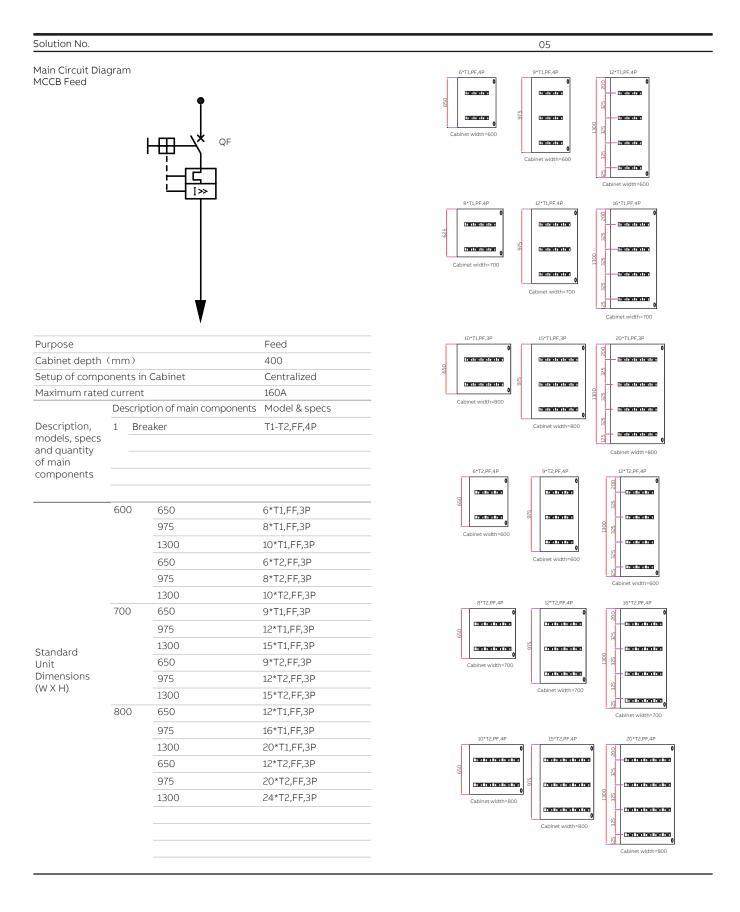
Cabinet depth(mm)



capine acpent			400
Setup of compo	onents in	Cabinet	Centralized
Maximum rated	d current		160A
	Descript	ion of main components	Model & specs
Description, models, specs and quantity of main	1 Bre	aker	T1-T2,FF,3P
components			
	Oth	ers	
	600	650	10*T1,FF,3P
		975	12*T1,FF,3P
		1300	14*T1,FF,3P
		650	8*T2,FF,3P
		975	10*T2,FF,3P
		1300	16*T2,FF,3P
	700	650	15*T1,FF,3P
		975	18*T1,FF,3P
		1300	21*T1,FF,3P
Standard Unit		650	12*T2,FF,3P
Dimensions			15*T2,FF,3P
(WXH)		1300	18*T2,FF,3P
		650	20*T1,FF,3P
		24*T1,FF,3P	
		1300 28*T1,F	28*T1,FF,3P
		650	16*T2,FF,3P
		975	20*T2,FF,3P
		1300	24*T2,FF,3P

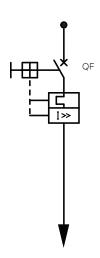


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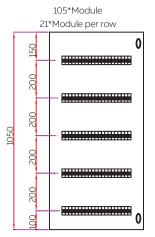


Solution No. 05

Main Circuit Diagram MCCB Feed



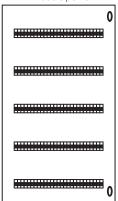
Cabinet depth(r Setup of compo	mm)		
Setup of compo	11111)		400
	nent	in Cabinet	Centralized
Maximum rated	curre	nt	63A
	Desc	ription of main components	Model & specs
Description,	1 1	Miniature breaker	200 series
models, specs and quantity of main components	1	diniature adjustable breaker	
	600	250	21*Module(1*row)
		470	42*Module(2*row)
		650	63*Module(3*row)
		850	84*Module(4*row)
		1050	105*Module(5*row)
		250	27*Module(1*row)
	700	450	54*Module(2*row)
		650	81*Module(3*row)
Standard		850	108*Module(4*row)
Unit		1050	135*Module(5*row)
Dimensions		250	33*Module(1*row)
(WXH)		450	66*Module(2*row)
	800	650	99*Module(3*row)
		850	132*Module(4*row)
		1050	165*Module(5*row)



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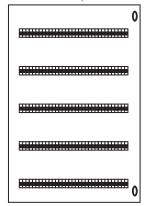
Cabinet width=600

135*Module 27*Module per row



Cabinet width=700

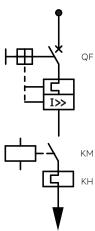
165*Module 33*Module per row



Cabinet width=800

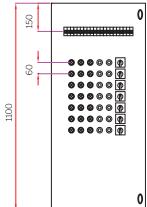
Solution No. 05

Main Circuit Diagram MCCB Motor Starting Circuit (Direct Starting)



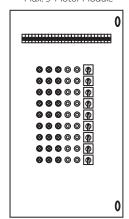
Purpose	Feed		
Cabinet depth(400		
Setup of comp	Centralized		
Maximum rated current			63A(0.37-30KW)
	Descript	tion of main components	Model & specs
Description,	1 Mini	ature breaker	200 series
	Minia	ature adjustable breaker	
models, specs and quantity	2 Isola	iting switch	
of main		tactor	A9~A63
components		mal overload relays	TA25,TA42,TA75
	5 Othe		17.123,17.112,17.113
	3 0 0 0 111		
	600	500	2-way
		700	4-way
		900	6-way
		1100	7-way
	700	500	3-way
		700	5-way
Standard		900	7-way
Unit		1100	9-way
Dimensions (W X H)			
(x.ry	800	500	4-way
		700	8-way
		900	11-way
		1100	14-way

Max. 7*Motor Module



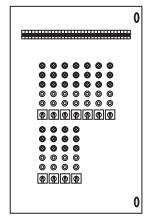
Cabinet width=600

Max. 9*Motor Module



Cabinet width=700

Max. 11*Motor Module



Cabinet width=800

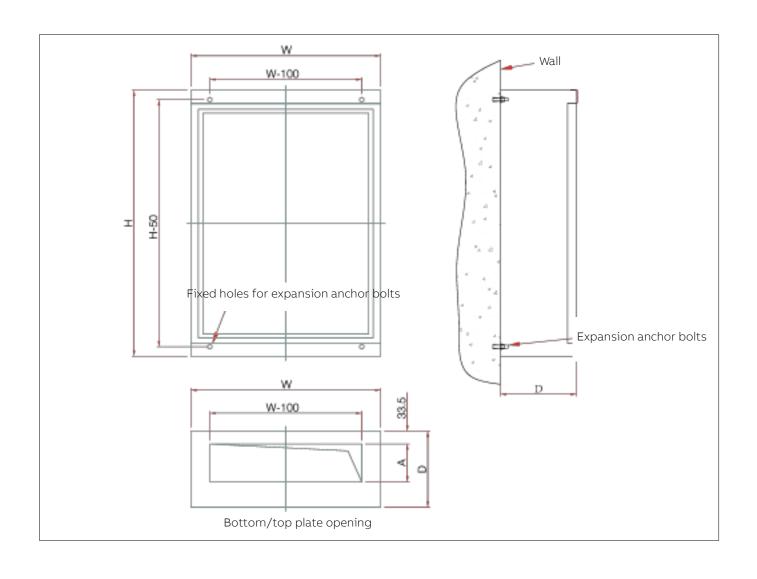
Installation Guide

Installation Guide

Wall Mounted

Note:

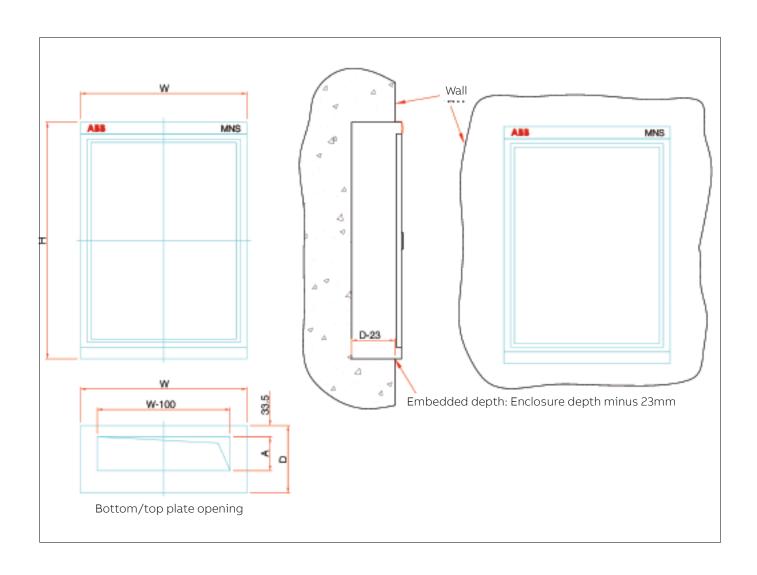
- 1. The upper and lower flanges are removable. An opening can be drilled onsite as needed.
- 2. The maximum opening should not exceed the existing opening on the enclosure. It's recommended that the enclosure be fixed on the wall using four M8 expansion anchor bolts.
- 3. Cabinet width (options: 400, 500, 600 and 700mm); Cabinet height (options: 300, 600, 700, 800 and 900mm); Cabinet depth (options: 150 and 200mm).
- 4.When D=150mm, A=70mm; when D>150mm, A=100mm.



Wall Embedded

Note:

- 1. The upper and lower flanges are removable and know-down holes can be provided. An opening can be drilled onsite as needed. The maximum opening should not exceed the existing opening on the enclosure.
- 2. Cabinet width (options: 400, 500, 600 and 700mm); Cabinet height (options: 300, 600, 700, 800 and 900mm); Cabinet depth (options: 150 and 200mm).
- 3. The wall should have an opening where the enclosure can fit in. After fitting in, the gaps around should be filled up to keep the enclosure in place.
- 4.When D=150mm, A=70mm; when D>150mm, A=100mm.

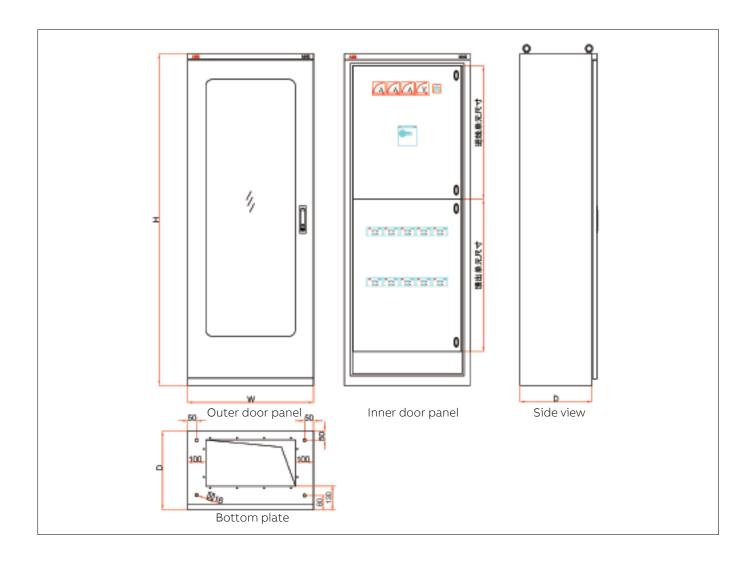


Installation Guide

Floor mounted

Note:

- 1. The cable chute opening on the foundation pedestal should preferably be as large as the bottom plate opening.
- 2. The dimensions of the cable bridge on top of the Cabinet should preferably be smaller than or equal to the dimensions of the top plate opening.
- 3. The Cabinet should preferably be fixed in place using four M12 expansion anchor bolts.
- 4.Cabinet width (options: 600, 700 and 800 mm); Cabinet height (options: 1700, 1800, 2000 and 2200mm); Cabinet depth (standard: 400mm).



Installation Site Requirements:

1)The construction of the room where the board and Cabinet will be mounted should have been completed. The elevation, dimensions, structure and embedded pieces of the civil work should conform to design requirements. The doors and windows should be closed, the painting of the walls and the rooftop should have been completed, there should be no water leakage, and the flooring should have been completed, and the floor should be clean.

2)If the product is to be wall-mounted or wall-embedded, a mounted position should be reserved in the civil work, and plastering, guniting and painting should have been completed.

3)A complete set of construction drawings and equipment technical documents should be provided. Construction organizing and technical, quality, safety, and fire protection measures should be in place.

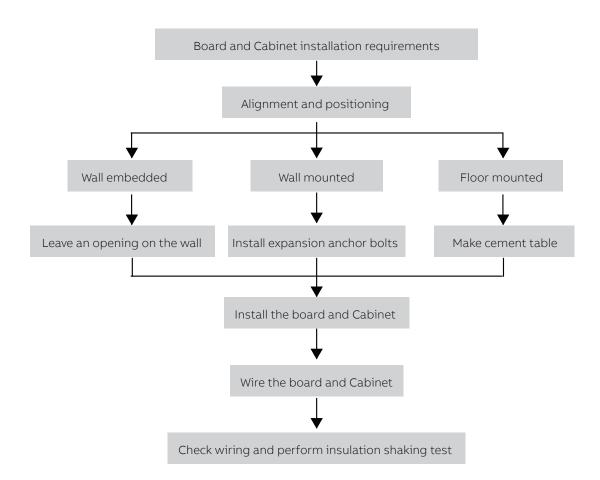
Equipment Unpacking and Inspection:

1)The boxes containing the equipment should be opened for inspection by the installer in the presence of the vendor, builder, and supervisory institute. The inspection should be documented.

2)Check the quantity of equipment against the design drawings, equipment list and technical documents. Check the specifications and models of the equipment and its attachments and spare parts against the packing list. They should conform to the requirements of the design drawings. The product quality certificate, the user's manual and other documents should be in order.

3)Perform a visual inspection of the panel and Cabinet. The enclosure must be free of signs of damage or deformation, and the painting should be complete, free of scratches, and uniform. Check the insides of the panel and Cabinet. The electrical devices and components and insulation must be in order, firmly fixed, and free of signs of damage. And there should be no missing parts.

Installation Flowchart



Product Credentials

Product Credentials

List of Users

Chemical and Petrochemicals

- -Dow Chemicals
- -BP
- -DuPont
- -Bayer (Shanghai) Polymer
- -CNOOC & Shell Nanhai
- Petrochemicals
- -Shell Changbai Gas Field
- -Shanghai SECCO Petrochemicals
- -Sinopec Shijiazhuang-Taiyuan Oil Pipeline
- -Nanjing Hercules
- -Yangzi Petrochemicals
- -Fujian Petrochemicals
- -Hainan Shihua Refinery
- -Baoji Oil Drilling Platform
- -Liaohe Petrochemicals
- -Sateri Jiangxi Chemical Fibers
- -Dushanzi Ethylene
- -Ningxia Oil Refinery
- -Shanxi Liulin Coal
- -Central Iraq Oil Refinery
- -Sudan FULA Oil Gas
- -Saudi Yanbu Petrochemicals
- -Guangzhou Petrochemical A6GB Project

Power Plant

- -Sanmen Nuclear Power
- -Haiyang Nuclear Power Plant
- -Qinshan Nuclear Power Phase II
- -Gansu Jingyuan Power Plant
- -Jiangxi Electric Power Dispatching Center
- -Vietnam Cam Pha Power Plant
- -Vietnam Qingfeng Waste Heat Power Generation Project
- -Dalian Yanshui Substation
- -Fuchun River Hydroelectric Plant
- -GuizhouWujiangdu Power Plant
- -Hunan Zhexi Hydropower Station
- -Hunan Wanmibo Hydropower Station
- -Vietnam Jiaxing Power Plant
- -XichangXixi River Joint
- Replenishment Power Station
- -Vestas Wind Power
- -Thailand Capital Cogeneration Plant

Metals & Mining

-Mongolia Gold Mine

- -Heihe Luoke Dong'an Gold Mine
- -Guizhou Jinfeng Gold Mine
- -Kazakhstan Copper Mine
- -Western Mining Co., Ltd. Kaldor Furnace
- -Kunming Iron & Steel Plant
- -Shanghai Baosteel
- -Taiyuan Stainless Steel
- -Turky Steel Plant
- -Pingguo Aluminum Power Plant
- -Xiashun Aluminum Foils
- -Zhongzhou Aluminum
- -Bulgaria Cement Project
- -Saudi Ma'aden Project

Shipping & Ports

- -Guangzhou Nansha Port
- -Shenzhen Luohu Port
- -Baosteel Majishan Port

Transport

- -Shaanxi-Beijing Line 2 Yulin Gas Compressor Station
- -Jiangyin Yangtze River Bridge
- -Shenzhen Metro
- -Shenzhen Airport
- -Hangzhou West Lake Tunnel
- -Ji'nan Electric Power Tunnel

Manufacturing

- -Shanghai Bekaert Special Steel Curtains & Cords
- -Shanghai Port Machinery Heavy Industry
- -Boeing Tianjin
- -Pan-Pacific Automotive Technology (Dalian)
- -Suzhou BOSCH
- -Changzhou Hengli High-pressure
- -Cylinder Wujin New Factory
- -Changqing Electrical
- -Fuyao Glass
- -TEDA Blades Phase III
- -GITI Putian
- -Fujian LongyanSande Cement
- -Moroccan Cement
- -Saudi Cement
- -Belarusian Cement
- -Kerychef Cement

Pulp&Paper

- -Nanning Phoenix Paper
- -Sun Paper
- -Zhenjiang Jindong Paper
- -Dagang APP Paper

- -Kunshan Banknote Paper
- -Chenming (Hanyang) Paper
- -Nine Dragons Paper

Tobacco

- -Shanghai Cigarette Factory
- -Shenzhen Cigarette Factory
- -Tianjin Cigarette Factory
- -Xiamen Cigarette Factory
- -Kunming Cigarette Factory

-Changde Cigarette Factory Water Treatment

- -Taiyuan City Water Supply
- -Zhangjiagang No. 4 Waterworks
- -Tianjin Jieyuan Waterworks
- -Guilin Waterworks
- -Guilin Dongjiang Waterworks
- -Guilin Chengbei Waterworks
- -Guangxi Langdong Boosting
- -Station Lingtie Waterworks
- -Xiaohongmen Sewage Treatment
- -Wenzhou Shan Creek Hydro
- -Dagang Oilfield Group Sewage Treatment
- -Xiamen Wastewater Treatment
 Plant
- -Huangshi Drainage Company Pumping Station
- -Wayao Waterworks
- -Mauritius Sewage Treatment Plant

Data Centers

- -Fujian Nanping Mobile
- -Kunming Mobile
- -Shandong Jining Mobile
- -Shanghai Mobile World Expo Information Pavilion
- -Weihai Mobile
- -Yantai Mobile
- -East China Sea Telecom
- -Fujian Sanming Telecom
- -Shenzhen Huawei Group Data
- -Nanjing Huawei Software Base
- -Xiamen Dell Computers
- -Lucent Qingdao
- -China Post Project
- -Hebei Langfang Range Information Port
- -Suzhou Pacific Insurance Building Project

- -Pacific Insurance Chengdu
- Support Center
- -Beijing Television
- -Center Wutongshan TV Tower
- -Shanghai Wenguang Media
- -Shenzhen Media Transmission
- -Xiamen Media Digital TV
- -Xiamen Radio 203
- -Bank of China Quanzhou Branch -International Bank Xiamen Branch
- -Xiamen ICBC Computing Center

Electronic

- -Beijing Monocrystalline Silicon Plant
- -Shenzhen SEG Samsung
- -Shenzhen STS Microelectronics
- -Gore Electronics (Shenzhen)
- -Zhuhai East Photoelectron -Fujian CPT Display Technology
- -Fujian Huanguang Optoelectronics
- -Chengdu Zhukuang Electronics
- -Chunghwa Picture Tubes (Fuzhou) -Xianyang Rainbow Electronics

Municipal Facilities

- -Beijing Academy of Military
- Medical Science
- -Beijing Restaurant
- -Jiangnan Institute of Computing
 Research
- -Mozambique Consulate
- -Shanghai New International Expo
- -Shenzhen Customs
- -Xiamen Customs
- -Xiamen Comprehensive Sanitation
- Treatment Plant -Xiamen Municipal Bureau of Land

and Housing Management

- Commercial Building
- -Shanghai Chung Shing Commercial Centre
- -Xiamen Real Estate Building
- -Xiamen Lu Hai Hotel -Xiamen China Town

Consumer Goods -Colgate

- -Kerry Oils & Grains (Qingdao)
- -Xiamen Springs Barley
- -Nutricia Qiqihar Dairy Factory
- -Sea Oil Industry (Fangcheng Port) -AstraZeneca



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