

NATUS

INDUSTRIAL SOLUTION SYSTEMS

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ENERGON

Intelligent Draw-out Low-Voltage Switchgear System



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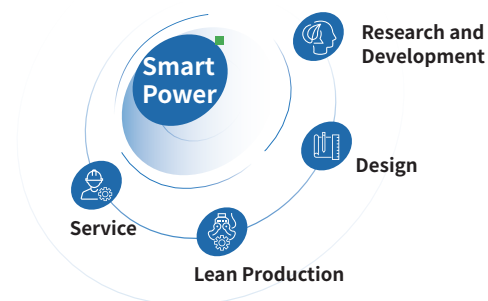
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NATUS ELECTRIC GROUP CO.,LTD.

Group Business



The Group specializes in system integration, EPC turnkey services, and the R&D, production, and sales of core products within the medium and low-voltage power industry. In the field of power equipment, we have deep expertise in intelligent electrical switchgear system, high-end power components, advanced power quality management products, intelligent control instruments, and control systems. Leveraging accumulated expertise in artificial intelligence and big data analytics, we provide comprehensive solutions for meteorological disaster prevention equipment and the safe operation of substations and transmission lines. In the domain of new technologies, we focus on small-area, low-altitude meteorological high-precision prediction technology, offering integrated products and services to support the development of the low-altitude economy.

Group Vision



Natus Electric Group originates from Germany, is firmly rooted in China, and serves the global market. Since its establishment in 1956, the group has built upon German technology deeply integrating Chinese expertise and a global perspective. Supported by a robust Chinese R&D and manufacturing team, we precisely respond to global market demands, delivering professional intelligent power solutions for clients across various industries. Adhering to a customer-centric approach, the group is committed to innovative products, reliable technology, and lean manufacturing.

Working hand-in-hand with global users to build a smarter, more efficient, and sustainable future for the power and energy sector.



General Information

01

1

Customer Benefits

04~05

2

Product Characteristics

02~03

Technical Specifications

07~08

3

Application

06

4

Typical Application Solutions

09~27

5

6

Certification

28~29

7

Based on global safety standards for the power industry, NATUS switchgear systems deliver high-quality, one-stop solutions through professional, cutting-edge technology. Since entering the withdrawable switchgear field in 1978, NATUS has cultivated over five decades of deep technical expertise and extensive industry experience.

The ENERGON low-voltage switchgear developed by NATUS has undergone rigorous testing, including 120kA/s extreme short-circuit current withstand type tests, simulated seismic structural integrity tests, and arc flash resistance verification, ensuring stable operation under extreme conditions. Its design strictly adheres to authoritative international and domestic standards including IEC 60439-1, IEC 60529, and GB 7251.1. Featuring internal isolation up to Form 4b and an integrated internal interlock protection system enabling precise switching between operating, disconnecting, and testing positions, it fully meets the high demands for safety, convenience, and intelligence in modern power supply and smart control systems. This significantly enhances operational reliability and personnel safety.

ENERGON demonstrates significant innovation, including:

- Its ARC SAFE arc-resistant fully enclosed vertical busbar system with integrated safety door mechanism effectively blocks arc fault propagation through physical isolation and energy absorption mechanisms.
- The Dual-Directional Sliding Transmission System (DTS) employs high-precision gearing and bidirectional locking structures to achieve precise force transmission and position feedback during operation.
- The Linear Full-Engagement Explosion-Proof Door Locking Device utilizes unique linear motion and full-tooth engagement design to ensure secure door locking and rapid opening under extreme operating conditions.

Furthermore, ENERGON employs a revolutionary draw-out modular architecture, elevating the safety standards of low-voltage switchgear to unprecedented levels. It achieves the high reliability, availability, and maintainability typically associated with medium-voltage equipment, filling a critical safety technology gap in the low-voltage sector and setting a new benchmark for industry safety and technology.

ADVANCED TECHNOLOGY OPERATIONAL SAFETY

- **Arc Resistant Fully Enclosed Vertical Busbar System with Safety Door Device(ARC SAFE)**

This vertical busbar system offers high current-carrying capacity (up to 2000A), excellent heat dissipation, high insulation strength, and tight contact with functional unit contacts. When the drawer unit is inserted, the safety door on the vertical busbar automatically opens, ensuring reliable primary plug-in connection. Upon withdrawal, the safety door immediately closes, fully shielding and insulating the busbar. This design effectively prevents contact with live parts even during energized maintenance, maintaining a high IP4X protection rating and ensuring absolute operator safety.



- **Double Slide Mechanical Transmission(DTS)**

Ensures that switchgear can conveniently switch between the operating, test, and disengaged positions while the door is closed, maintaining the system's enclosure protection rating. Additionally, it provides clear visual indicators for the disengaged position (green), test position (blue), and operating position (red).

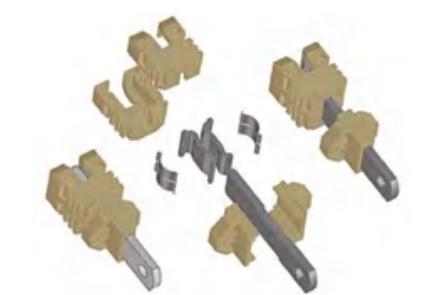


- **Linear full-engagement explosion-proof door locking device**

All doors are equipped with an ergonomic, multi-functional linear full-ton explosion-proof door lock mechanism, significantly enhancing the cabinet door's explosion resistance and providing 100% protection against arc flash escape. Operation is simple and swift, while also offering a more aesthetically pleasing appearance.



- The unique bi-directional plug-in design, where the DTS drive mechanism slides between the main plug of the drawer unit and the vertical busbar to switch the connection and disconnection positions, while the cable connector of the main plug remains absolutely static, thus avoiding loosening of the connector and greatly enhancing the reliability and safety of the product's operation.



Product Features



- The patented drawer unit guide positioning device (mechanical code lock) enables each functional unit to feature an adjustable selective code (1000 combinations). Each functional unit and its mounting compartment are assigned a corresponding password (adjustable), facilitating easy adjustment and preventing unit mix-ups. This ensures functional units can be inserted precisely into their designated compartments, guaranteeing product reliability.
- The main technical parameters are in the international leading level. The rated working voltage is 690V, rated insulation voltage is 1000V, the maximum current of main busbar is up to 6300A, the short-time withstand current is up to 120KA, and the protection level of shell is up to IP54.
- The cabinet structure is completely designed according to modularisation, with the main busbar room, circuit breaker room, cable room, control circuit room and mixed wiring room separated from each other, effectively limit the expansion of the accident arc.
- Multi-type feeder units can be installed in the same column cabinet or within the same cabinet; Within a single cabinet, they can be freely configured into fixed, withdrawable, or plug-in types.
- High packing density, MCC cabinets up to 36 feeders.
- Compact design, double-sided operation, space saving.



Customer Benefits

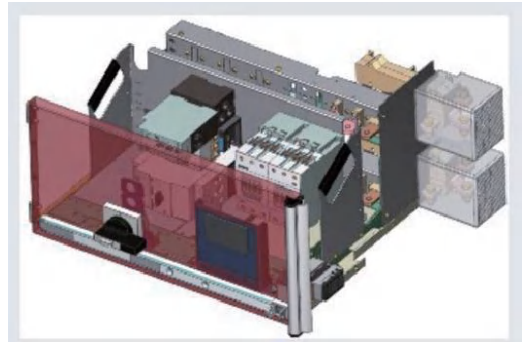
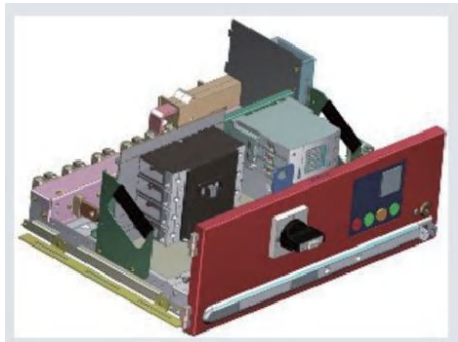


- **Flexible operations and maintenance to ensure business continuity**
The system supports live-line operation, enabling technicians to easily replace or retrofit maintenance modules, significantly reducing downtime and operational costs. This ensures uninterrupted business operations for industries with critical power continuity requirements, such as hospitals and data centers.
- **Implementing security isolation to fortify equipment defenses**
The main busbar is completely isolated from the vertical busbar, fundamentally reducing the risk of electrical fault propagation. Like a robust barrier, it shields against potential hazards, enhancing the reliability and safety of the power system.
- **Optimize layout to minimize space costs**
Horizontal busbars are uniformly arranged above or behind switchgear cabinets, featuring a compact and rational layout that saves installation space. This design ensures a clear and orderly internal structure, facilitating installation, wiring, and maintenance while reducing operational errors and safety hazards.
- **Versatile installation options to suit various scenarios**
Switchgear cabinets can be installed flush against walls to save indoor space, or mounted independently to accommodate special layout requirements, flexibly adapting to diverse scenarios such as compact distribution rooms and large industrial plants.
- **Flexible cable entry to meet project requirements**
Offering both top-entry and bottom-entry options, users can flexibly arrange installations based on actual project requirements and site conditions. This simplifies the installation process, enhances efficiency, and facilitates future maintenance and upgrades.
- **Flexible cable entry to meet project requirements**
The main switch door is equipped with an interlock device that prevents misoperations such as opening the door while energized through mechanical or electrical means. This ensures operation is only possible under specific safety conditions, safeguarding personnel and equipment.
- **Abundant terminals for enhanced expandability**
Control circuit terminals with up to 50 poles, optional bus terminals available, meet the demands of complex control systems, providing ample space for equipment expansion and functional upgrades.
- **Plug-and-play design for enhanced maintenance efficiency**
The main input and output circuits are equipped with independent plug-in modules. During maintenance, faults can be quickly located and modules replaced without complex disassembly, reducing fault resolution time and minimizing power outage duration.
- **Flexible selection, precise matching to need**
Component selection is flexible and fully customized to user requirements, meeting specific performance, brand, and model specifications to perfectly adapt to diverse application scenarios and industries.
- **Connecting Innovation, Leading Technological Transformation**
Utilizing advanced connection techniques and materials, we achieve highly reliable circuit connections that ensure stable and efficient current transmission, leading the transformation of power circuit technology.
- **Intelligent communication enables perfect convergence**
It can communicate with multiple standard communication protocols to form an intelligent switchgear system, enabling remote monitoring, fault diagnosis, and automated control, thereby enhancing management efficiency and intelligence levels.

Customer Benefits



- Standard delivery to accelerate project progress
Standardized product lines, efficient and regulated production processes, and shortened delivery cycles enable customers to obtain equipment quickly, empowering time-sensitive projects to seize market opportunities.



Application



Data Center



Telecommunications



Industrial Plant Construction



Rail Transit



Offshore Platform



Chemical &
Petrochemical Industry



Oil & Gas Industry



Municipal Utilities &
Power Distribution



Pulp & Paper Industry



Food Industry



Electrical Substation



Energy Storage Industry

Electrical parameters	
Rated insulation voltage	up to1000V
Rated Working Voltage	up to690V
Rated frequency	50/50Hz
Rated impulse withstand voltage	8/12kV
Rated auxiliary circuit voltage	230V AC Max
Overvoltage rating	IV
Contamination level	3
Rated current	630A Max
Horizontal busbar rated current	up to 3200A/4000A/6300A
Vertical busbar rated current	2000A (MD Cabinet)
Horizontal busbar	
Rated short-time withstandcurrent	up to 100/120kA rms
Rated peak withstand current	220/264kA
Vertical busbar	
Rated short-time withstand current(Icw/1s)	up to 80kA rms
Rated peak withstand current	176kA
Internal arc fault (IEF)	65kA rms 0.3s 725V
Grounding system	TT-IT-TNS-TNC
Incoming and outgoing line switches	6300A Max
Knife fuse switch	630A Max
DOL starting circuit	800A Max

General data		Structural form	
Can be applied to	Power Distribution Motor Control Capacitor Compensation	Cable access	Top/Bottom
		Wiring Method	Front/Back
		Protection level	Up to IP54
Standard reference	IEC 60439-1 IEC 60529 GB 7251.12	Crashworthiness atng	IK 10
		Forms of isolation	2b/3b/4a/4b
Environmental adaptation	Damp heat conditions comply with IEC 60068-2-30 Dry heat conditions comply with IEC 60068-2-2 Low temperature conditions comply with IEC 60068-2-1 Salt mist conditions comply with IEC 60068-2-11	Materials	Aluminium zinc clad plate
		Operating method	Single/Double Sided
		Master busbarcan	Top/Back
		External Dimension	Height(mm)2200
			Width(mm)500/600/650/800/1000/1200
			Depth(mm)500/700/800/1000
Installation conditions	Altitude ≤ 2000m Indoor installation	Hull	Epoxy Powder Coating(8g μ m)
Electromagnetic compatibility	Class2	Colour	Available on request
Cabinet Type			
According to different functions and installation methods,it is mainly divided into the following five cabinet types			
PD cabinet (PC,can be installed with withdrawable/fixed frame circuit breakers,compatible with bus)	Main In Feeder Busbar Sections Bus contact	MD Cabinet(MCC,Mult-Channel Cabinet)	Pull-out functional unit Plug-in function units Fixed functional units Pull-out functional unit Embedded knife switch disconnectors
FD cabinet(multi-Functional fixed installation cabinet)	Component Fixed Mount Transition Cabinet PLC/DCS Cabinet	CD cabinet(capacitive compensation)	Plug-in capacitor compensation units Fixed capacitor compensation units
SD cabinet(fuse cabinet)	Fuse unit		

PD Cabinet

Installable draw-out/fixed-frame circuit breaker diagrams, compatible with bus systems

Application:

- Main inlet
- Feeder
- Busbar segmentation
- Bus Tie
- Examples of cabinet components:
Withdrawable Frame Circuit Breakers(ACB):For manual operation,energy storage devices may andlor may not be used,and for electrical operation,energy storage devices shall be used.For electrico peration,energy storage devices shall be used.

Structure:

- The cabinet structure is completely designed according to modularity,and the device compartment can be separated into different units according to the functional structure.
- The cabinet comprises 31 modules (MH), each with a height of 70 mm. Two modules (MH) are designated as busbar compartments, while the remaining 29 modules are available modules. Each cabinet is divided into five functional compartments: busbar compartment, circuit breaker compartment, cable compartment, control circuit compartment, and hybrid wiring compartment.
- Equipped with a patented linear full-engagement explosion-proof door lock mechanism, the cabinet significantly enhances door explosion resistance, providing 100% protection against arc flash escape. Operation is simple and quick, while also offering a more aesthetically pleasing design.
- The switchgear adopts a metal-clad structure, with its double metal-clad partitions capable of withstanding internal arcs.
- The cabinet frame, serving as a load-bearing component, is constructed from aluminum-zinc coated steel plates bolted together. Its structure resists deformation and features removable side panels, top panels, and door panels.
- The circuit breaker is installed in a separate small enclosure with its own access door.
- Auxiliary devices and meters are installed in the small chamber at the top.
- Busbar connectors are suitable for connecting multiple cables.
- Wall-mounted or freestanding installation.

Withdrawable unit:

- Operating, test, disconnect, and maintenance positions.
- With the cabinet door closed, the manual crank can be switched from the operating position to the test or disengaged position (and vice versa).
- Operating position and test position interlock.
- Pull the circuit breaker out of the standard foldable rail to the maintenance position.



PD cabinets wt withdrawable
trame drcut breakers

Rated current																
Circuit Breaker (A) ¹⁾	Cabinet depth dark(mm) ²⁾			Cabinet width3-pole(mm) ³⁾										Main busbar		
Breaker				3-pole circuit breaker					4-pole circuit breaker					position ⁵⁾		Rated current
	500	700	1,000	500	600	800	1,000	1,200	500	600	800	1,000	1,200	Top	Back ⁴⁾	
630	◆			◆						◆	◆			◆	◇	1,600
800	◆			◆	◆					◆	◆			◆	◇	1,600
1,000	◆			◆	◆					◆	◆			◆	◇	1,600
1,250	◆			◆	◆					◆	◆			◆	◇	1,600
1,600	◆			◆	◆					◆	◆			◆	◇	1,600
2,000	◆			◆	◆						◆	◆		◆	◇	2,500
2,500	◆				◆	◆	◆				◆	◆		◆	◇	2,500
3,200	◆					◆	◆				◆	◆		◆	◇	3,200
4,000		◆					◆	◆				◆	◆	◆	◆	4,000
5,000			◆					◆					◆	◆		2x2,500
6,300			◆					◆					◆	◆		2x3,200

- The reduction in rafng depends on constucion,fame size,mounting status,protecion class,and ambient temperature.
- Assuming that the cabl ouet is fadng downwards (fhe cable ouet isfacing upwards, the minmum size is 700 mm), the offset ofthe cabinet does nothave to be taken into account.
- Depends on construction,frame size and space required in the oontrol room.
- Assume that the cable leads are facing down.
- Special constructions may be used,e.g.bottom busbar.

MD Cabinet

MULTI-FUNCTIONAL LEAD CABINETS

Structure:

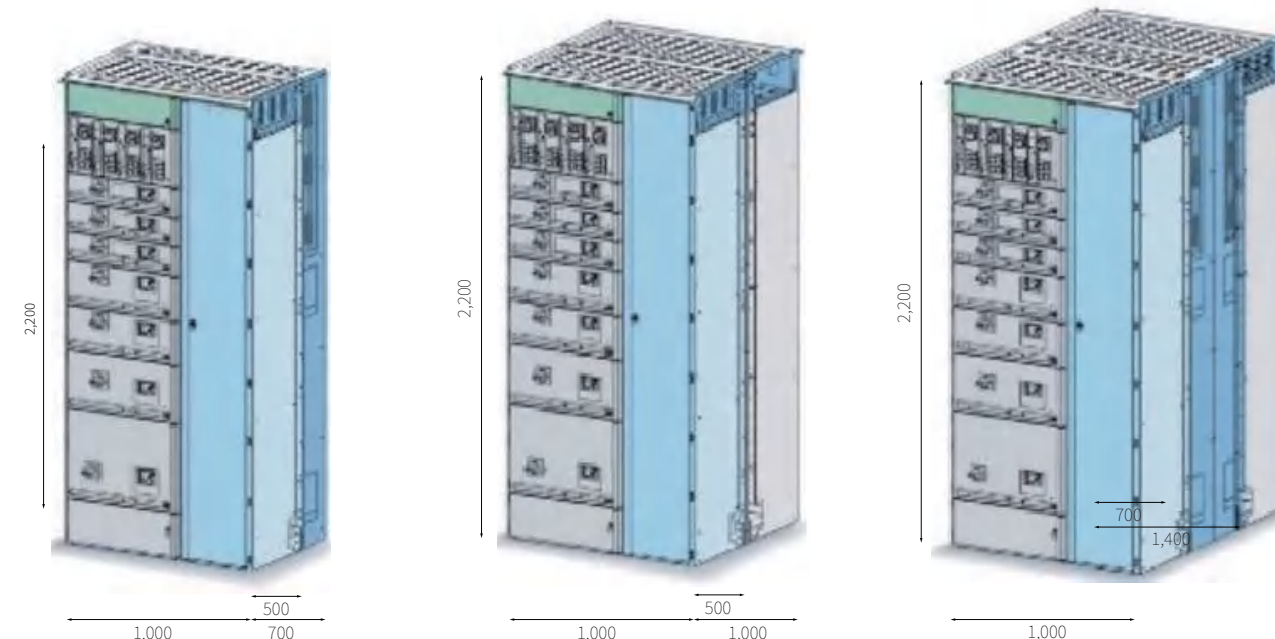
- Motor starting circuit,feeder circuit:
It can be used in substations and power distribution areas with high power supply reliability,such as electronics,semiconductors,photovoltaic companies, TFT panels, biotechnology ,hospitals ,substations ,etc. , where 24-hour uninterrupted power supply is required.

Design:

- Withdrawable,semi-withdrawable and other functional units can be used in any combination in the same cabinet.

Structural characteristics:

- The stucture of the cabinet is completely modular,and the device compartments can be separated into diferent units
- according to the modular structure.
The cabinet has a total of31 MHs,each with a height of 70 mm,of which 2 MHs are busbar compartments2 MHs are PE and N linecompartments,and 27 MHs are available.
- Standard busbar oompartment is 2 modes high(2MH).
The switchgear can be easily switched between the drawer units in the operating,test and detachment positions with the switchgear closed andwithout changing the proecton class of the equipment enclosure.Each position is clearly indicated. Equipped with patented linear full-throttle explosion-proof door locking device, the cabinet greatly enhances the explosion-proof capability of the door and 100%prevents the arc from flying out Simple and quick operation,and more beautiful.
- Functional units and vertical busbar safety doors are equipped with interlocking mechanisms. When a functional unit is withdrawn from the switchgear enclosure, the vertical busbar is immediately and completely shielded and insulated by the safety door, thereby ensuring the switchgear's protection rating remains unaffected.
- Operating, test, and isolation positions are located behind closed doors.



MD Sngle Cabinet Front

MD Double cabina front (busbar on top)

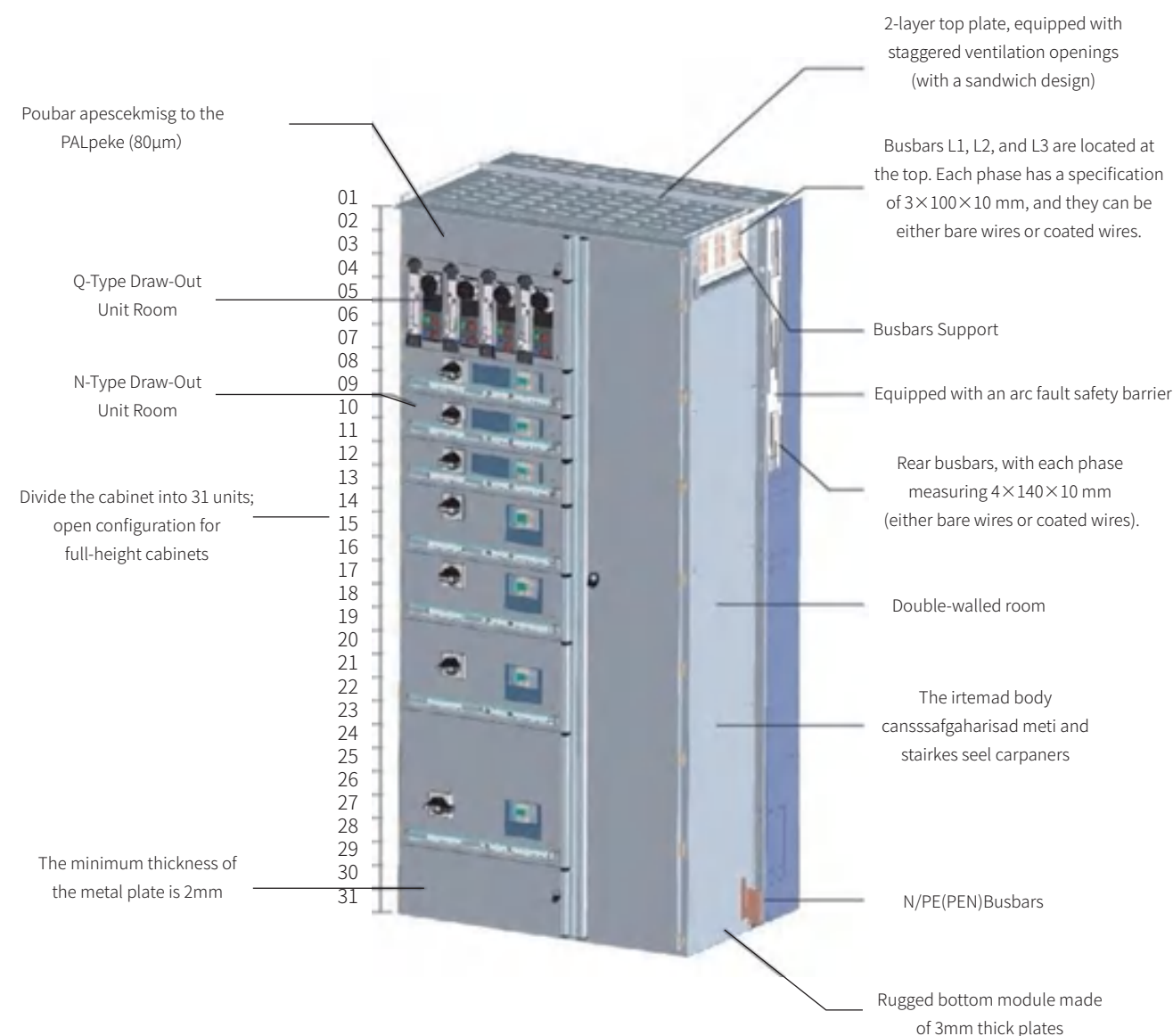
MD Double cabinet front (busbar at rear)

- Mixed Wiring Compartment
- Switchgear room
- Main busbar compartment
- Cable Termination Room

- The extractable units can be equipped with a patented guiding and positioning device(mechanical code lock),which is easy to adjust and ensures that thefunctional units can be insarted aocurately and correctly into the orresponding compartments,preventing unit confusion and ensuring product relability.
- There is a complete separation between the main busbar and the plug-in vertical busbar.
- Q,N,H,DD,etc.can be configured with a variety of pull-outplug-in/fixed functional units.
- The N-drawer units occupy separate cubicles,each with its own door.
- Mounted against a wall or freestanding.
- Withdrawable,semi-withdrawable and other functional units can be used in any combination in the same cabinet.

Arc-resistant,totally enclosed vertical busbar system with safety doors (ARC SAFE):

- When the pull-out unit is withdrawn(shield)is automatically shielded against contact with the distribution busbar and the shield can be locked.
- L1,L2,L3,optionally also N busbar(4-pole switch).



ARC SAFE—Patented arc-resistant,totally enclosed vertical busbar system with safety door mechanism

- The unique U-channel copper busbar with safety door and heat dissipating insulated back cover has the advantages of high current carrying capacity (up to 2000A).good heat dissipation,and close contact with the contacts of the functional unit.
- When the drawer unit is withdrawm,the vertical busbar is then completely shiekded and insulated by the safety door.making it impossible to contact the charged body when carrying out maintenance in the charged state of the vertical busbar,thus guaranteeing the absolute safety of the operator,even when the functional unit is withdrawn from the switchgear cabinet body,tis stil possible to ensure that the protection level of the switchgear cabinet is not reduced.
- Vertical busbar systems with protection classes up to IP4X.
- Mult-functional vertical busbar boxes with patented safety door shielding and insulation technology imported from the original manufacturer are used;these muti-unctional boxes are made of metal panels,flame-retardant and CFC-and halogen-fre insulating materials;the use of multi-functional panels ensures that the enclosure of the switchgear cabinet remains unchanged in terms of its level of protection during maintenance,thus guaranteeing the safety of the personnel.
- Because of the al-round insulation between the contact cavilies,it is impossible to form an are between the contact cavities,and thas the function of arc extinguishing,which can limit the expansion of the accidental arc under the fault condition.
- The drawor drive mechanism can be individually locked to prevent non-operators from forcibly opening the safety flap.
- Unused safety flaps can be manually locked mechanically and can be re-locked.
- The safety flap slides continuously under the drive to ensure the safety of the product.



N-Type Draw-Out Functional Unit:

Featuring a patented contact mechanism and DTS drive system, this highly convenient “user-friendly” busbar connection ensures secure connections with bus compatibility.

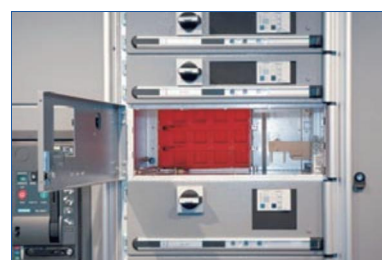
- Unit doors have linked MCC operating handles.
- A knife fuse switch or circuit breaker suitable for starting a thousand motors can be fitted.
- The switchgear door can only be opened in the separated position.
- The door of the withdrawable unit can only be opened (unlocked) when the main switch is disconnected, ensuring that the withdrawable functional unit can only be withdrawn when there is no load.
- With a range of extractable function units from 2MH to 12MH.
- The control circuit terminals can have up to 50 poles as required, with optional summary.
- With a range of extractable function units from 2MH to 12MH terminals.
- The withdrawable functional unit can be locked (up to 3 locks) to prevent accidental insertion.
- Functional units can be replaced or repaired while the system is energized.
- The mechanical and electrical parts are independent of each other.
- Equipped with a patented mechanical code lock (adjustable), which ensures that the withdrawable functional unit is inserted accurately and correctly into a fixed position in the designated compartment, preventing incorrect insertion or insertion out of place.



Safe and reliable selection and display of operating-test-disconnected positions, equipped with a stainless steel mechanical interlocking device.



Operated with an interlocked MCC operating handle, it is simple and safe.

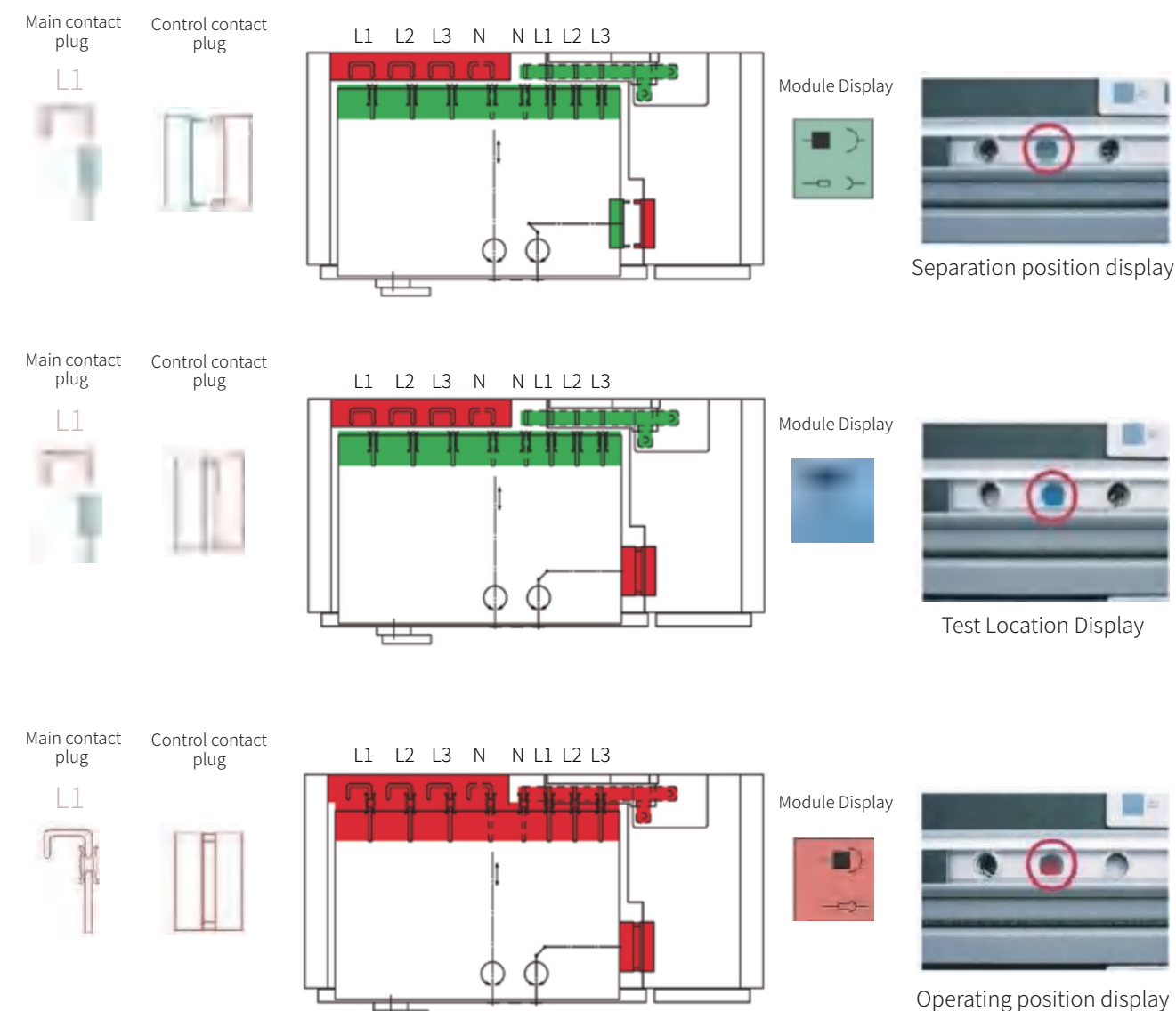


N-type withdrawable functional unit compartment, 2MH~12MH

N-type withdrawable functional unit:

Separation and test positions

- The patented bidirectional sliding mechanical transmission device (DTS) ensures that the switchgear can conveniently switch the drawer unit among the operation, test and separation positions when the door is closed, and ensures that the protection level of the equipment shell remains unchanged. Each position has obvious indication.
- The DTS device ensures the isolation distance in line with standards.



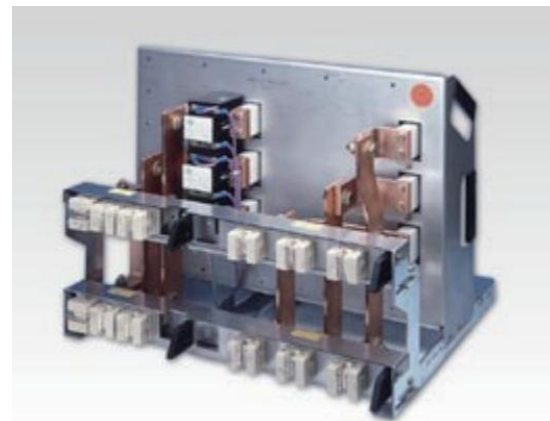
N type extractable functional unit:

DTS-Patented bi-directional sliding mechanical transmission device

- The withdrawal unit of the MCC cabinet is equipped with a unique, highly secure continuous locking function. The system is easy to operate and at the same time provides safety for the staff, i.e. when the switchgear cabinet is closed, the switching of the withdrawal unit between the operating, test and detached positions can be easily realised without changing the protection level of the equipment enclosure, with clear indications for each position.
- The switchgear outer door may only be closed when the circuit breaker is in the “disconnected” position. This ensures that the cabinet enclosure maintains an IP41 or higher protection rating for the withdrawable functional unit in all three positions.
- With the cabinet door closed, the manual crank can be used to switch from the operating position to either the test or disengaged position. When the withdrawable unit is in any of the operating, test, or disengaged positions, it features reliable mechanical positioning and indication mechanisms within the switchgear cabinet.
- When the withdrawable unit is swung out of the operating position by the handle, the main power contacts and control circuit plug terminals are simultaneously disconnected from the main power supply and the control power supply by longitudinal and transverse movements, respectively so that the unit is in the detached position, and the metal plugs connected to the cables (main power contacts) are only sliding in the U-type sockets, while the cable connectors remain absolutely stationary thus avoiding loosening of the connectors, and thus greatly enhancing the reliability of the products operation.



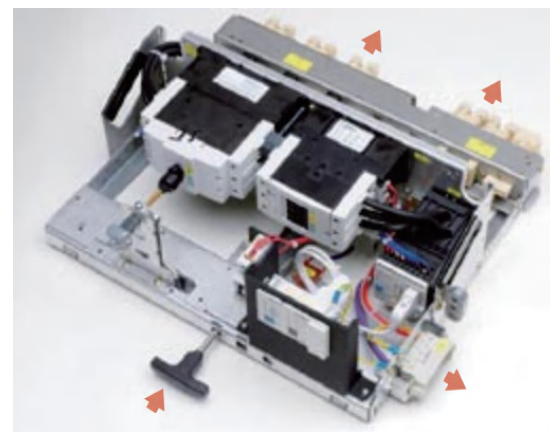
N-type withdrawable functional unit, 630A, Front view



N-type withdrawable functional unit, 630A, Back view



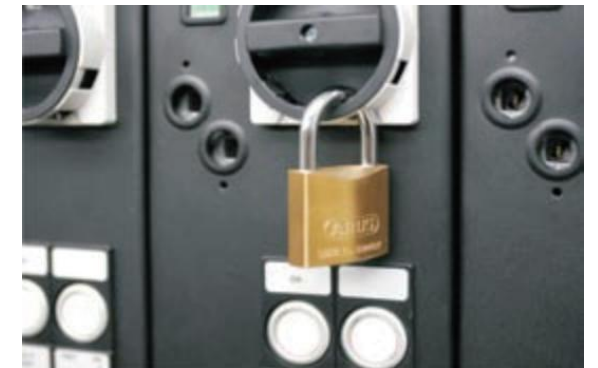
Control circuit terminals, up to 50 poles

N-type withdrawable functional unit, 3MH=210mm,
For motors up to 75kW**Q type extractable functional unit:**

- Two types are available: 1/4Q with a modular height of 4MH and 3MH. 1/4Q type with 3MH module height.
- Main switch with rotary handle mounted on the instrument panel.
- Circuit breakers suitable for motor starting can be fitted.
- The rotary handle can be padlocked in the breakaway position (up to 3 locks).
- Type Q withdrawable functional units share a common door.
- Separate test-run position mechanical interlock.
- The functional unit can only be withdrawn in the detached state.
- There are separate plug-ins for the power side and load side.
- The door of the withdrawable unit can only be opened (unlocked) when the main switch is disconnected.
- The withdrawable function unit can only be withdrawn when there is no load.
- The control circuit terminals can have up to 50 poles as required, and optional bus terminals are available.
- A patented mechanical code lock (adjustable) ensures that the withdrawable functional unit is inserted into the designated compartment without error, preventing misplacement or mis-insertion.
- Functional units can be replaced or repaired while the system is energised.
- The withdrawable units can be locked in the withdrawn position to prevent accidental insertion (up to 3 locks).



Withdrawable units can be locked in the withdrawn position (up to 3 locks)



The rotary handle can be padlocked in the disengaged position (up to three padlocks).



Q-type compartment, 4 module height to accommodate 4 Q-type extractable units with power-side protective contacts and load-side insulating contacts



Q-type withdrawable functional units for easy and safe operation, suitable for motors up to 11 kW

Separation and test positions:

- The patented two-way siding mechanical transmission(DTS)ensures that the switchgear can be easily swiched betweenoperating,test and detachment positions while the switchgearis closed and that the protection class of the equipment encosureremains unchanged,with clear indications of each position.
- DTS devices that ensure compfant isolaion distances.

N-type plug-in functional units
2MH-12MH



Front view



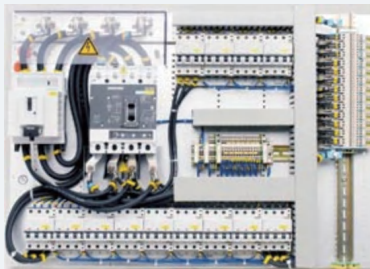
Back view

H-type plug-in functional units



3MH high H-type plug-in functional unit
(100A,50kW)

DD type fixed function unit

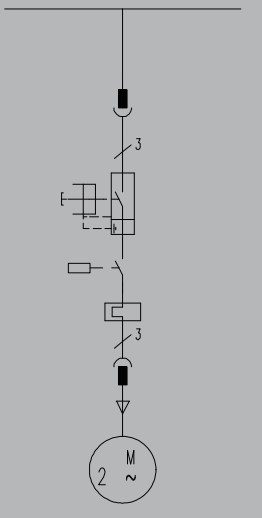


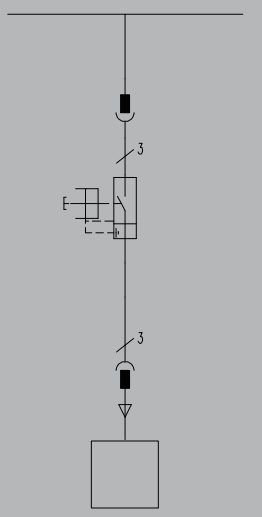
3MH4MH high DD type fixed functional unit
(100A,50kW)



MD cabinets with DD-type fixed functional units
(modular boards)

Typical Configuration

Motor starter,without fuse,voltage 400V,current 50KA,with SIMOCODE DP				
	Typical models	Rated parameters (AC-2/AC-3)		Extractable Unit Dmensions
		Pn	Ie(A)	
	D3Q0_75A	0.75	1.85	Q4(N2)
	D3Q07_5A	7.5	15.17	Q4(N2)
	D3Q0011A	18.5	2,173	Q4(N2)
	D3N0022A	22	41.09	N3
	D3N0045A	45	81.21	N3
	D3N0055A	55	100.42	N5
	D3N0075A	75	13,391	N5
	D3N0090A	90	160.69	N5
	D3N0110A	110	196.4	N5
	D3N0132A	160	23,052	N8
	D3N0250A	250	43,659	N10

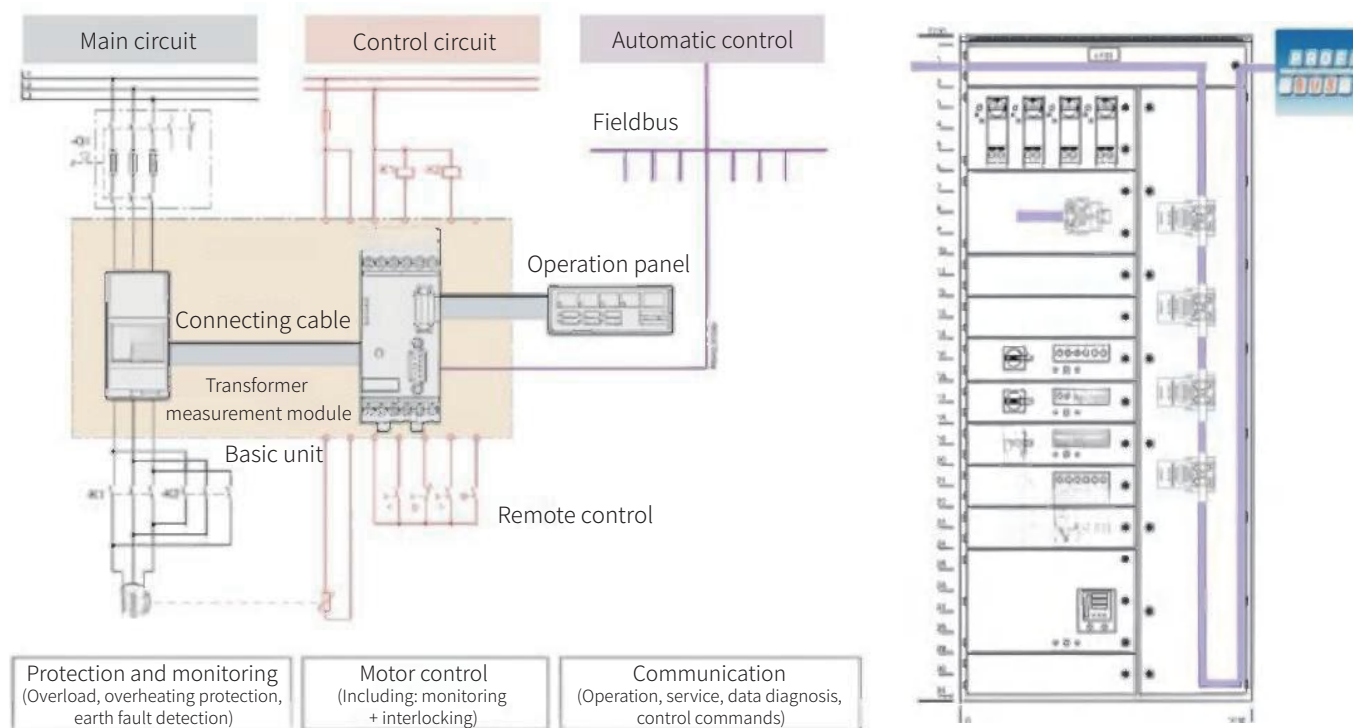
Cable fed circuits,no fuses					
	Typical models	Rated current	Rated current at 35°C ambient (A)		Extractable Unit
			No ventilation	With ventilation	
	F1Q0012A	12	12	12	Q4(N2)
	F1Q0025A	25	18	20	Q4(N2)
	F1N0050A	32/50	26/39	30/43	N2
	F1N0100A	100	77	86	N2
	F1N0125A	125	95	102	N3
	F1N0160A	160	127	138	N3
	F1N0250A	25	175	192	N3
	F1N0400A	400	285	312	N4
	F1N0630A	630	450	510	N6
	D3N0132A	160	230.52		N8
	D3N0250A	250	436.59		N10

*Prescribed values and extractable unit sizes vary with the construction used and environmental conditions.

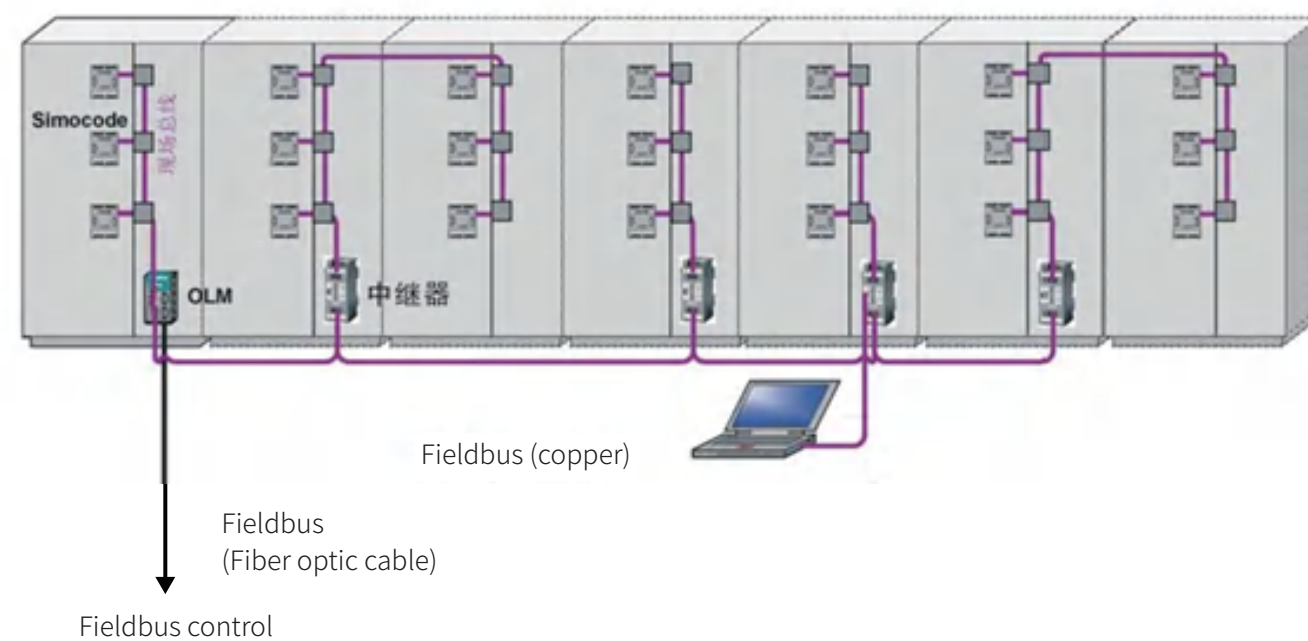
Communication System

Description of SIMOCODE PRO 3UF7..

Example of Fieldbus Architecture and Connectivity

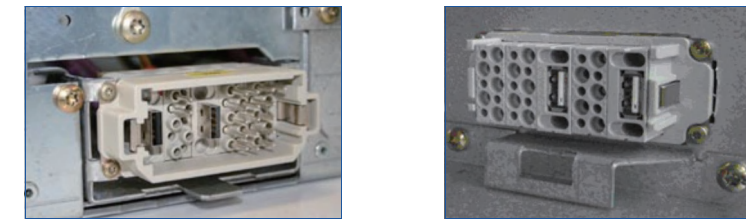


In a compact motor feed-in and feedback system, SIMOCODE pro can integrate all required functions.

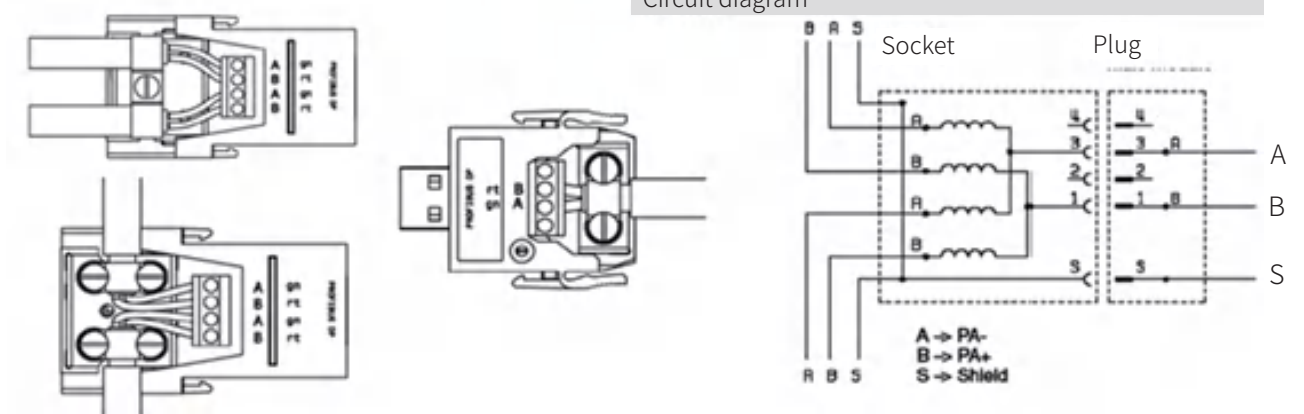


New fieldbus connection system:

- The newly developed dedicated fieldbus connection system for various functional units enables simple and rapid installation wiring, shields against external interference signals, achieves high signal transmission speeds, and ensures high product reliability.



Circuit diagram



Applications:

Centralized Power Factor Compensation

Cabinet components:

Capacitor

Switch protection contactors

Knife-fused switches or fuses

Discharge resistors

Power factor controller

Structure:

Common cabinet door

Vertical busbar, direct plug-in connection

Power factor controller mounted on top of cabinet door

Auto/Manual Selection Switch, Manual

Enable/Disable Button

Can be mounted against a wall or free standing



Capacitor banks			Maximum compensation capacity per cabinet(KVA)
(Rated voltage) V	(Rated control voltage) V	(Rated capacity) kVar	
415/50Hz	230/50Hz	25 50 100	500 Reactorless,plug-in installation



Front view,compensation unit,50kVar,with reactor



Compensation unitwith main circuit plug atthe rear

FD cabinet

MULTI-FUNCTION FIXED INSTALLATION CABINET

Application:

- Multi-purpose cabinet suitable for various fixed-mount components
- PLC/DCS cabinet
- Transition cabinet

Installation example:

- Breaker
- Disconnect switch
- Knife fuse switch
- Soft starter
- Auxiliary Contact Relay
- Converter

Structure:

- High common door for the whole cabinet or separate door for each unit
- The lower busbar and terminal blocks utilize a direct (bolt) cable connection method
- Power factor controller mounted on top of cabinet door
- Auto/Manual selector switch,manual throw/cut button
- Can be mounted against a wall or freestanding



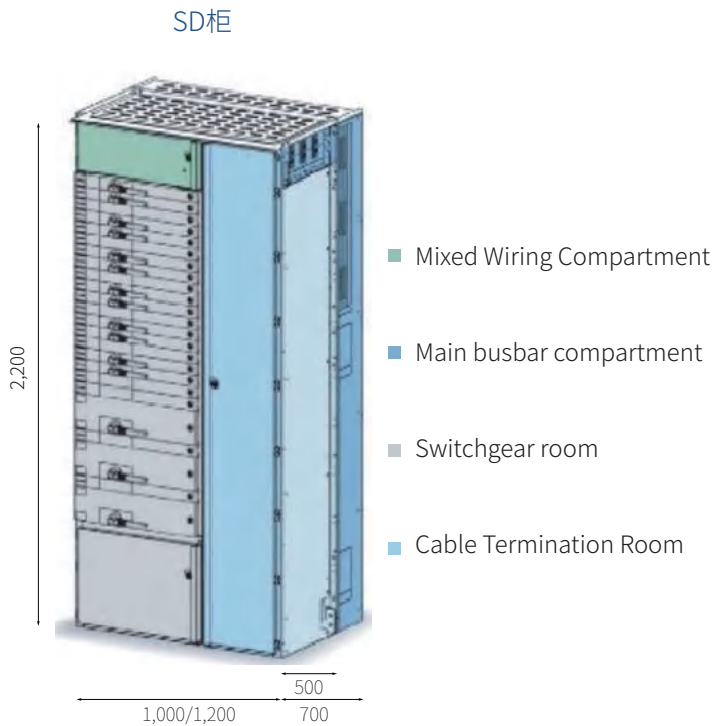
FD cabinet with soft starter



SD cabinet with fuse unit

SD cabinet FUSE CABINET

- High level of safety and security for users
- modular construction
- Easy to install
- Safe operation
- Strong anti-touch protection
- High breaking capacity
- Strong short-circuit resistance
- Plug-in design
- Replacement of fuses without power
- Complete mounting accessories
- High measured load factor
- Enables remote control
- With communication function



SD cabinet with fuse unit



Load switches equipped with low-voltage high-capacitance fuses, with their block shape, drawer mounting technology and modular construction, ensure rapid design and easy installation.

Patents

Item	Authorized Project Name	Patent Categories	Patent No.	Certificate No.
1	Low-Voltage Switchgear High-Current Vertical Busbar Assembly	Utility Model	ZL 202120690550.6	14823396
2	Protective Structure for Low-Voltage Switchgear Top Cover Plate	Utility Model	ZL202120690207.1	14794705
3	A Low-Voltage Knife Switch-Type Multi-Circuit Power Distribution Cabinet Structure	Utility Model	ZL 202121882157.3	15788605
4	High-Current Vertical Busbar Assembly	Design Patent	ZL 202130195022.9	6751646
5	A Low-Voltage Knife Switch-Type Multi-Circuit Power Distribution Cabinet Structure	Invention Patent	ZL202110924099.4	Under review
6	A Low-Voltage Power Distribution Cabinet	Utility Model	ZL 202022137401.5	13605933
7	Bidirectional Sliding Mechanical Transmission Device	Utility Model	ZL 201220169293.2	2573201



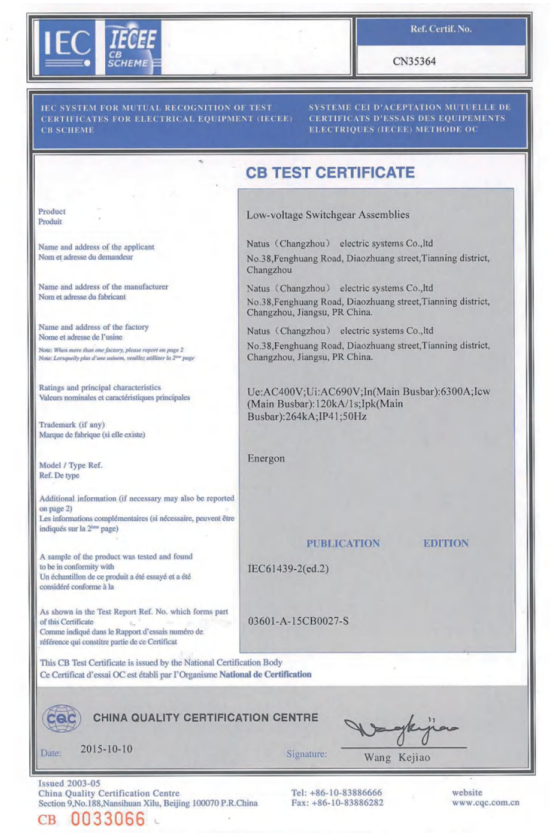
China Quality Certification (CQC) Certificate - 6300A



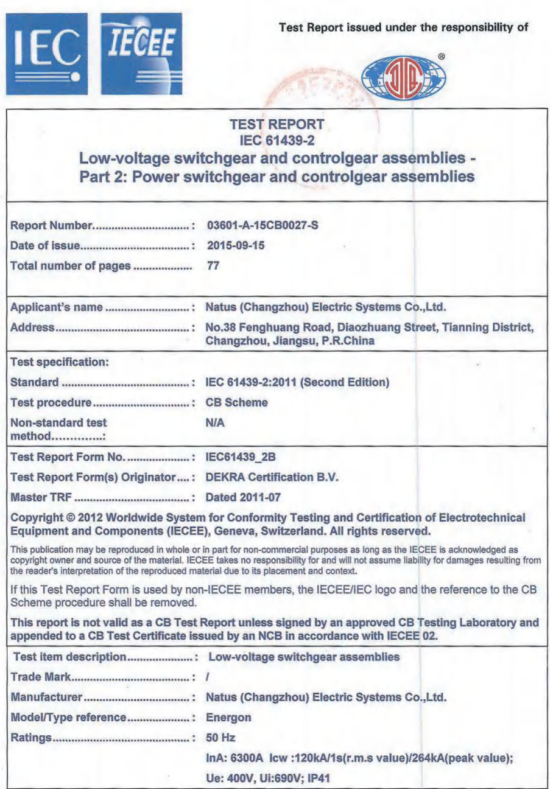
China Quality Certification (CQC) Certificate - 4000A



IECEE CB Scheme Certificate



IECEE CB Test Report



PRECISION IN DETAIL