

**NATUS**

INDUSTRIAL SOLUTION SYSTEMS

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## EZ-POWER

Plug-in Power Distribution Cabinet



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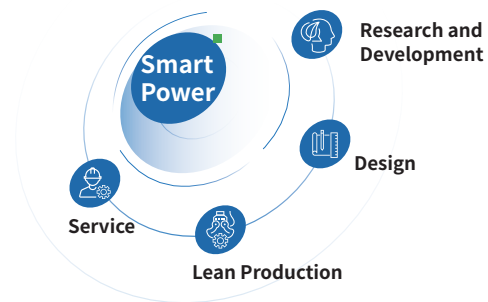
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NATUS ELECTRIC GROUP CO.,LTD.

## 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

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- The EZ-Power plug-in power distribution cabinet is an end-end power distribution device independently developed by NATUS. It enables hot-swapping operations of shunt switches while the equipment is energized. Featuring an integrated conductor design for the shunt switches, it boasts high current-carrying capacity, safety and stability. Additionally, it has the characteristics of high power distribution density per cabinet, flexible capacity expansion and convenient maintenance.
- This device is widely applied in scenarios with high requirements for power supply continuity, such as airports, rail transit systems, hospitals, liquid crystal display (LCD) facilities, power electronics and semiconductor industries, as well as high-end business centers.

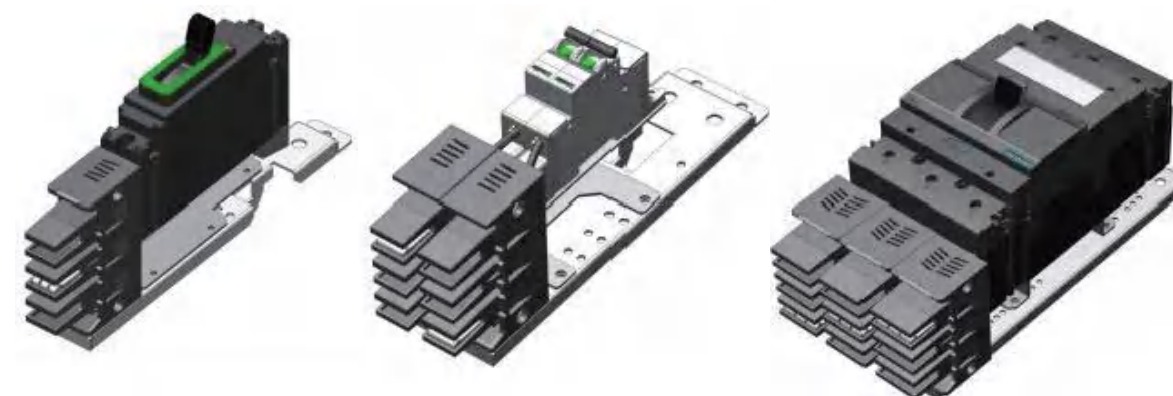
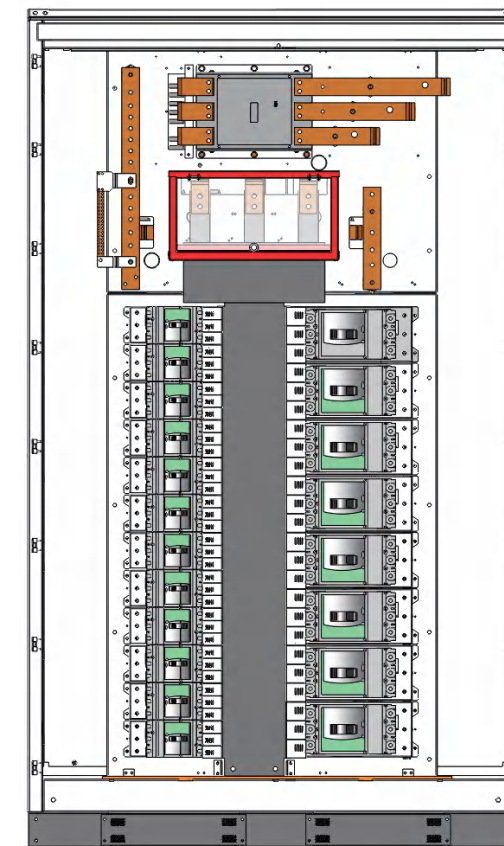


### Operating Characteristics of Plug-in Power Distribution Cabinets

- 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, and other customers with 24-hour uninterruptible power supply needs, without the need to shut down the power supply when adding, replacing, or repairing circuits.
- The reserved spare holes are suitable for sharing loads of different capacities, so that construction can be carried out without waiting for the loads to be determined at the initial stage of construction, thus shortening the construction period and saving costs.
- The standardized and modular design makes it easier to control delivery, quality, and the combination of changes, additional circuits, or operation and maintenance during production and use.

### Product Features of Distribution Cabinet Branch Switches

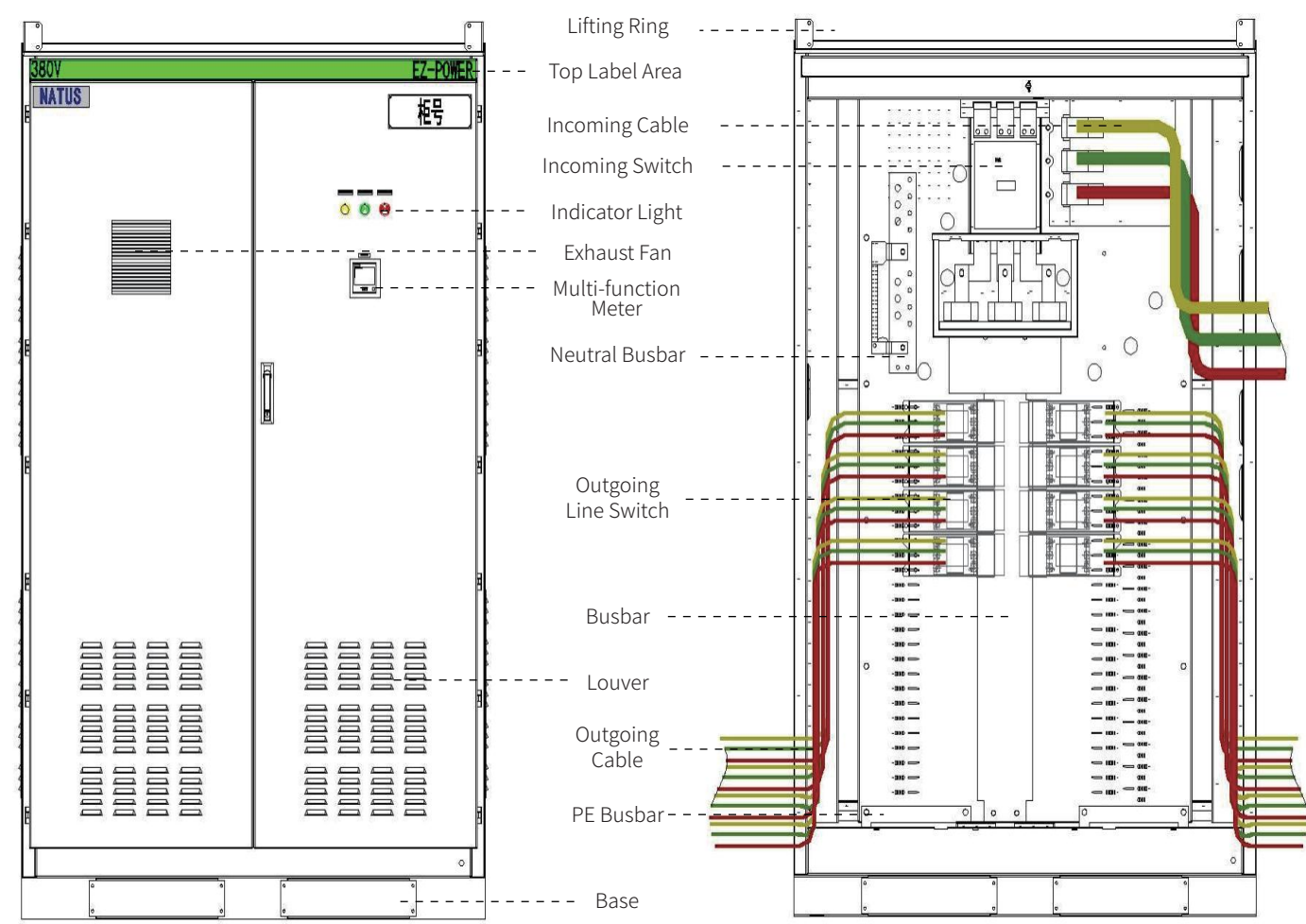
- Plug-in switch, easy to expand, no power shutdown required
- Easy load change, efficient maintenance
- Small size/space saving
- Flexibility to choose from a variety of brands of MCCBs to meet the needs of users.
- Simple application, safety and easy operation, effectively reducing future operating costs.
- Socket protection level IP21/branch switch IP21 to prevent personnel and tools from accidentally touching conductors
- Socket protection class IP21/Tap changer IP21 to prevent people and tools from accidentally touching the conductor.
- Integrated T2 copper conductor for branch switches, featuring low loop resistance and safer current-carrying performance.
- The adapter is made of high-strength, high-flame-retardant (V0 class), and high-temperature-resistant materials.





Structural Features of the EZ-POWER Cabinet

- Featuring a double-door panel structure, the outer door accommodates metering instruments or monitoring units, while the inner door provides safety protection.
- The main frame is made of aluminum-zinc-coated multi-layer bending process, which has the characteristics of high strength and corrosion resistance.
- All-round PC board protection processing, all primary and secondary charged bodies are isolated by PC shield.

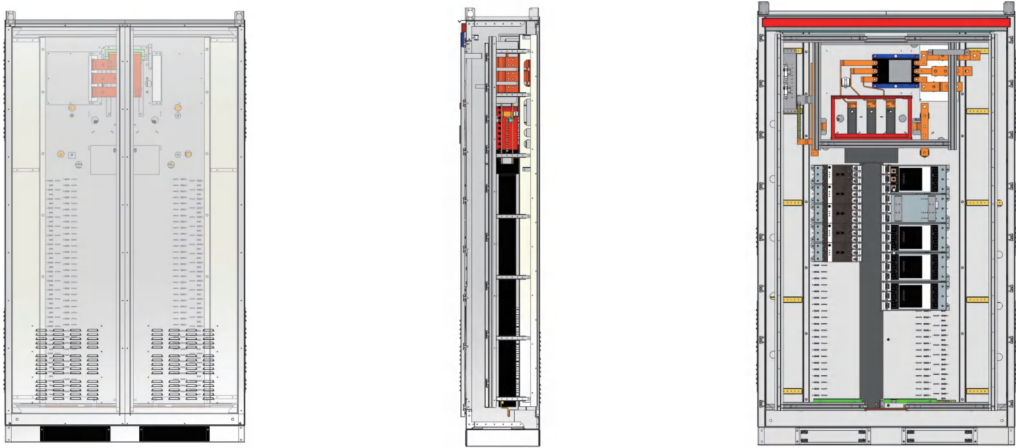


Top Label Area color

| Voltage class | Colour | Color code number |
|---------------|--------|-------------------|
| 208V          | Yellow | RAL1018           |
| 380V          | Green  | RAL6001           |
| 480V          | Red    | RAL3028           |

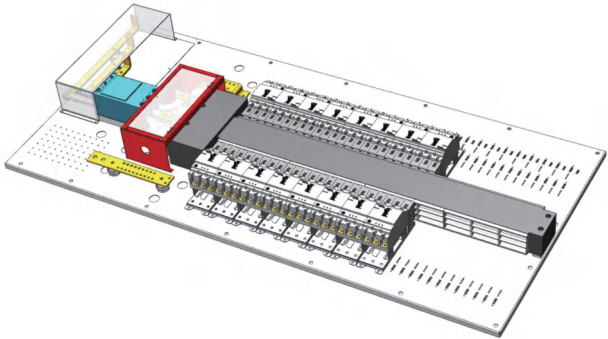
BUSBAR

- The busbar is integrally cast from an epoxy resin composite material, featuring fire-resistant properties. It meets the requirements of the IEC 60331 standard, maintaining no short circuit when burned at a flame temperature of 750°C for 3 hours.
- The conductive parts of the insertion holes adopt toothed insulating shielding and have an IP21 protection rating, which prevents accidental contact with live conductors by personnel or tools.
- The slots on both sides use standard modular holes, which can meet the usage requirements of switches with any number of poles for all current ratings.
- The return busbar itself meets the IK10 impact rating test.
- Slot protection devices are available as an option to seal unused branch switches.
- A single busbar supports a maximum of 72 outgoing circuits.



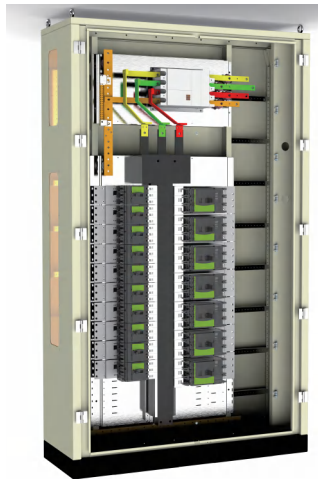
BRANCH MCCB

- The MCCB can be used with a variety of brands and 1P, 2P and 3P MCCB switches.
- MCCB can be inserted and withdrawn with power, quick and easy to increase or decrease the load.
- The conductive clamp contact surface features silver-plated treatment, with the external spring plate securely crimped flat to withstand a 54kg insertion force test.
- The conductor connection between the MCCB and the conductive clip is molded in one piece with a high conductivity copper conductor.
- Installation and disassembly with a screwdriver, no special tools required.
- The design of individual jacks for each phase makes the insertion position and mechanism clear and simple.
- When the MCCB is placed on the base before insertion, there is a safe hanging design to avoid the danger of falling before insertion or after pulling out and detaching.
- The MCCB is designed with separate jacks for each phase, so there is no risk of misplugging.
- Multiple invention patents including the integrated conductive clamp and the quick-push mechanism.
- Meets the 2000-cycle quick plug-in/plug-out test.



### Cabinet Structure characteristics

- Insertion cabinet capacity 250A-1600A,supports 3200A Customized Solutions
- Tap switch capacity 15A-1250A
- MCCBs are available in a wide range of brands with flexible and fast delivery, and can be inserted into 1P,2P,3P MCCB switches
- MCCBs can be inserted and withdrawn while energized, enabling quick, convenient, and safe load addition or removal.
- Modular and elastic design for quick installation or circuit expansion
- Reserve jacks to accommodate future loads for standardized products,easy to apply.
- Addition or change of demand
- Improve the complex wiring of the traditional distribution cabinet, switch to modular, simple, standardized plug-in distribution cabinet design



### Design

IEC61439-2

GB/T7251.2-2023



### FLEXIBLE

- MCCBs are available in a wide range of brands with flexible and fast delivery conditions.
- It is easy to increase or decrease the load or change the design,and can be operated with the busbar energized without affecting the power supply of other circuits.



### Easy maintenance

- The MCCB is very easy to remove and replace by aligning the mounting plate with the back slot. It can be installed with a one-pronged screwdriver.



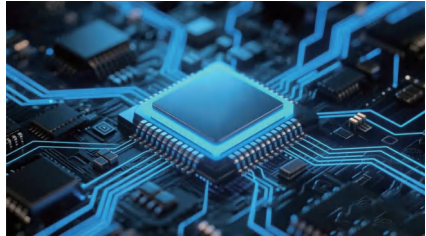
### SAFE

- The busbar is molded in one piece with resin molding, and the fireproof characteristic is in accordance with IEC60331 standard, the flame temperature is 750°C for 3 hours without short-circuit.
- The busbar is molded in resin, with IP21 protection level to prevent people and tools from accidentally touching the conductor.





Application



Semiconductor Industry



Liquid Crystal Display



Power Electronics



Airport



Hospital



Rail Transit



Municipal Utilities  
&Power Distribution



High-end Business Center

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Technical Specifications

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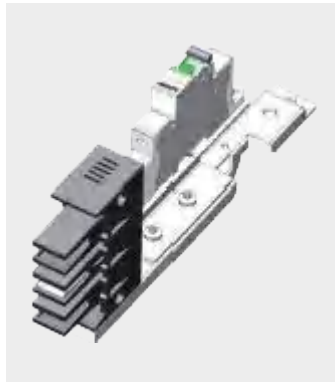
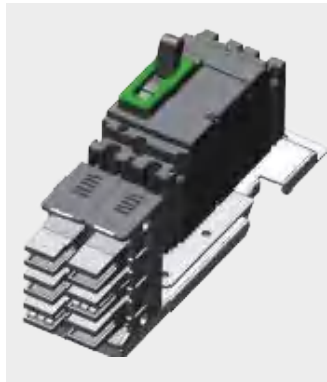
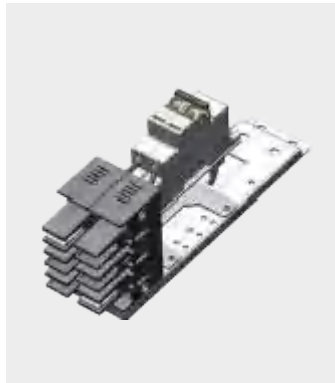
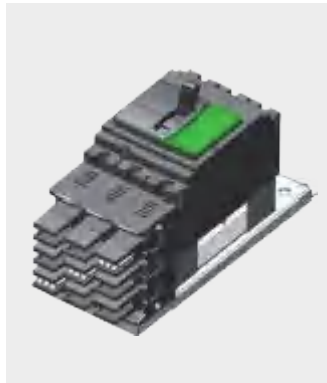
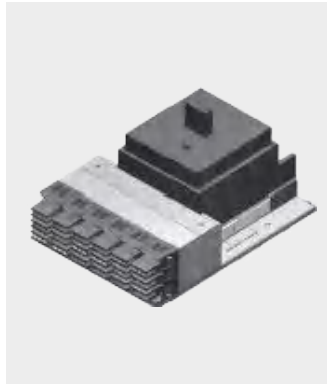
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| Technical Parameter   |                                                                                                   |                         |       |       |       |        |        |        |
|-----------------------|---------------------------------------------------------------------------------------------------|-------------------------|-------|-------|-------|--------|--------|--------|
| Standard              | GB/T7251.2 IEC61439-2                                                                             |                         |       |       |       |        |        |        |
| Temperature           | -15°C/+40°C AVG36P.35°C                                                                           |                         |       |       |       |        |        |        |
| Altitude              | <2000m                                                                                            |                         |       |       |       |        |        |        |
| Type                  |                                                                                                   | TC250                   | TC400 | TC630 | TC800 | TC1000 | TC1250 | TC1600 |
| Rated voltage (V)     | V                                                                                                 | 208 220 380 440 480 690 |       |       |       |        |        |        |
| Rated current (A)     | A                                                                                                 | 250                     | 400   | 600   | 800   | 1000   | 1250   | 1600   |
| Frequency (Hz)        | Hz                                                                                                | 50/60                   |       |       |       |        |        |        |
| Breaking Capacity(KA) | KA                                                                                                | 65                      | 65    | 65    | 65    | 80     | 80     | 100    |
| System type           | Molded Case Switch Incoming Line / Frame Circuit Breaker Incoming Line / Copper Bar Incoming Line |                         |       |       |       |        |        |        |

| Busbar              |                                                                         |
|---------------------|-------------------------------------------------------------------------|
| Type                | B400,B630,B800,B1250,B1600,B3200(Non-standard Customization)            |
| Conductor           | Copper w/Tin plate                                                      |
| Insulation material | Epoxy Cast resin                                                        |
| Insulation level    | F class 155°C                                                           |
| Number of sockets   | 36P/54P/72P                                                             |
| Fire rating         | IEC60331 750°C 3hr/IEC60332/UL94V0                                      |
| Protection level    | Main busbar IP21, cabinet shell IP41                                    |
| Colour              | Customized according to customer requirements; default color is RAL7043 |

| Shunt switch      |                                                                                                            |
|-------------------|------------------------------------------------------------------------------------------------------------|
| Insertion type    | Plug-in type                                                                                               |
| Number of poles   | 1P/2P/3P                                                                                                   |
| Maximum rated cap | 800A                                                                                                       |
| MCCB Brand        | According to the design requirements or customer needs, NATUS, Schneider, Siemens and ABB are recommended. |
| Frame type        | F250/F630/F1250                                                                                            |
| Primary side      | IP21                                                                                                       |

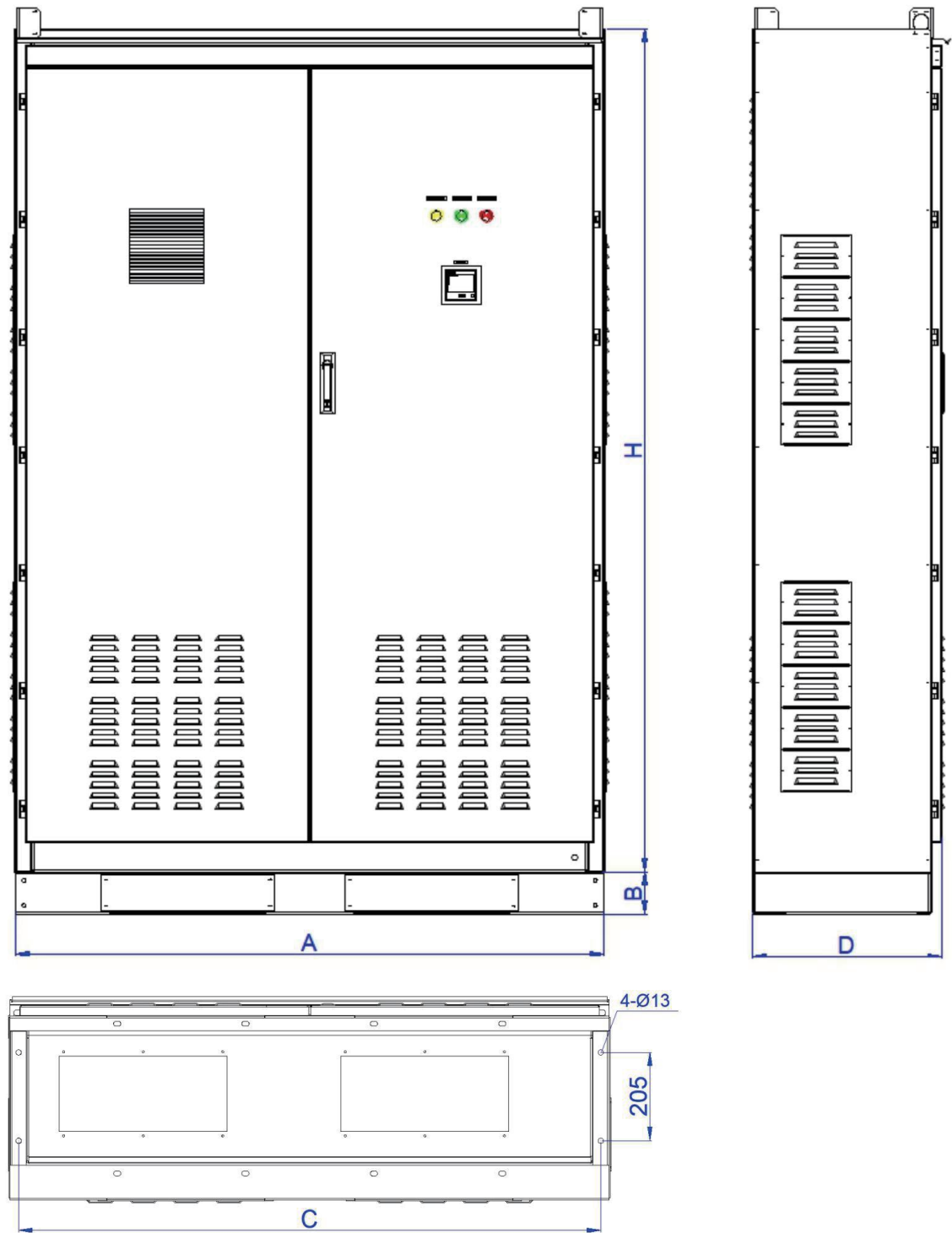
| Cabinet             |                                                |
|---------------------|------------------------------------------------|
| Cabinet type        | Wall Mount/floor type                          |
| Paint baking method | Electrostatic spray                            |
| Paint thickness     | 50 μ m for indoor use / 70 μ m for outdoor use |
| Shell protection    | IP41                                           |

| Product diagram                                                                     | Current | Space | Product diagram                                                                      | Current  | Space |
|-------------------------------------------------------------------------------------|---------|-------|--------------------------------------------------------------------------------------|----------|-------|
|    | 10~63A  | 1P    |    | 10~160A  | 2P    |
|   | 10~63A  | 2P    |   | 160~250A | 3P    |
|  | 10~63A  | 3P    |  | 250~630A | 4.5P  |
|  | 10~160A | 1P    |  | 800A     | 9P    |

Note: The width size of 1P is 35mm, 2P is 70mm, 3P is 105mm, and so on.

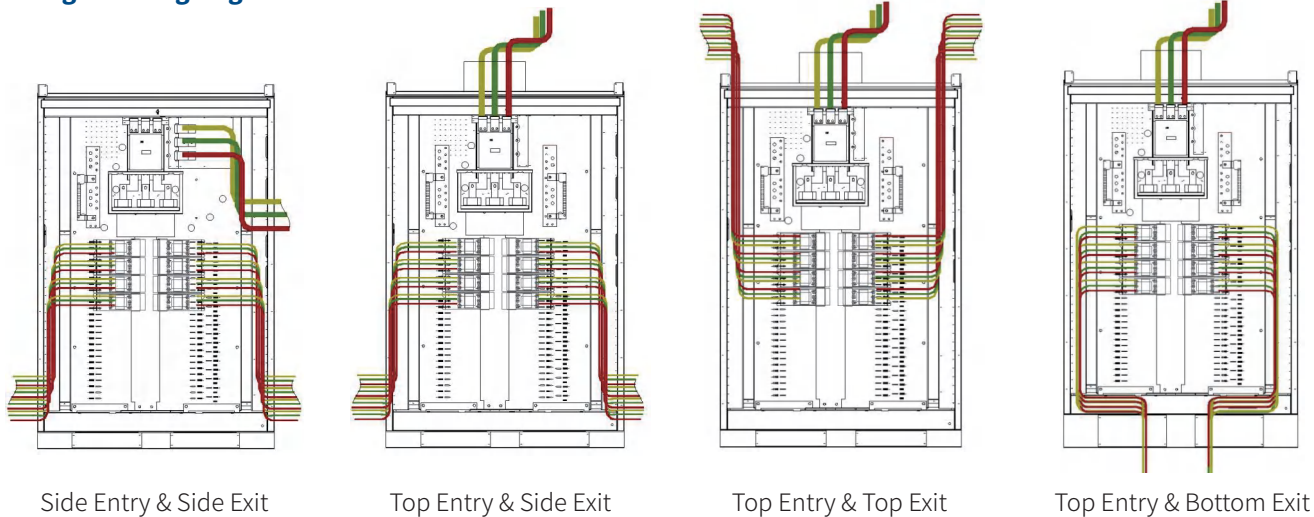
| Item | Authorized Project Name                                    | Category             | Patent Number     | Certificate Number |
|------|------------------------------------------------------------|----------------------|-------------------|--------------------|
| 1    | Low-Voltage Busbar Adapter Copper Busbar Connection Device | Utility Model Patent | ZL 201720854358.X | No. 7070635        |
| 2    | Epoxy Busbar Connector Sealing Device                      | Utility Model Patent | ZL 202022224488.X | No. 13500330       |
| 3    | A Low-Voltage Power Distribution Cabinet                   | Utility Model Patent | ZL 202022137401.5 | No. 13605933       |
| 4    | High-Current Vertical Busbar Assembly                      | Design Patent        | ZL 202130195022.9 | No. 6751646        |
| 5    | Busbar Assembly                                            | Design Patent        | ZL 202030551309.6 | No. 6444078        |
| 6    | Primary Output Protection Device for Circuit Breakers      | Design Patent        | ZL 202030561236.9 | No. 6448497        |
| 7    | Busbar Lap Joint Break Protection Device                   | Design Patent        | ZL 202030561224.6 | No. 6445967        |
| 8    | Low-Voltage Live-Plugging Power Busbar Assembly            | Utility Model Patent | ZL 201620343262.2 | No. 5695178        |
| 9    | A Circuit Breaker Protective Cover                         | Utility Model Patent | ZL 202222165526.8 | No. 18535233       |
| 10   | A Terminal Protection Device for Low-Voltage Switches      | Utility Model Patent | ZL 202222123214.0 | No. 18268832       |





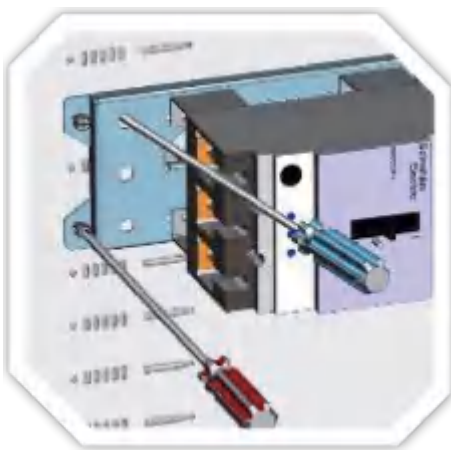
|      | A(mm) | B(mm) | C(mm) | D(mm)      |
|------|-------|-------|-------|------------|
| Size | 1200  | 50    | 1160  | 450<br>500 |
|      | 1400  | 100   | 1360  |            |
|      | 1600  | 150   | 1560  |            |
|      |       | 200   |       |            |

Incoming and outgoing



Adapter Replacement

- Align one end of the adapter clip with the bus bar slot;
- Align the reverse side of the chassis tabs with the backplane slots;
- Push the adapter forward with a screwdriver (using force through the backplane slot) to connect to the main busbar.
- When the mounting holes of the base are aligned with the threaded holes of the backplate, use a Phillips screwdriver to install the two screws to the bottom.





| Equipment Solution |               |                           |                    | <div>NATUS</div> <div>INDUSTRIAL SOLUTION SYSTEMS</div> |  |  |  |
|--------------------|---------------|---------------------------|--------------------|---------------------------------------------------------|--|--|--|
| Number             | Rated Current | Maximum Number of Sockets | Cabinet Dimensions | Weight                                                  |  |  |  |
| 1                  | 250           | 36P-36/250AF              | 1400×500×2000      | 209                                                     |  |  |  |
| 2                  | 250           | 54P-54/250AF              | 1400×500×2000      | 229                                                     |  |  |  |
| 3                  | 250           | 72P-72/250AF              | 1400×500×2250      | 249                                                     |  |  |  |
| 4                  | 400           | 36P-36/250AF              | 1400×500×2000      | 210                                                     |  |  |  |
| 5                  | 400           | 54P-54/250AF              | 1400×500×2000      | 230                                                     |  |  |  |
| 6                  | 400           | 72P-72/250AF              | 1400×500×2250      | 250                                                     |  |  |  |
| 7                  | 630           | 36P-36/250AF              | 1400×500×2000      | 301                                                     |  |  |  |
| 8                  | 630           | 54P-54/250AF              | 1400×500×2000      | 326                                                     |  |  |  |
| 9                  | 630           | 72P-72/250AF              | 1400×500×2250      | 351                                                     |  |  |  |
| 10                 | 800           | 36P-36/250AF              | 1400×500×2000      | 331                                                     |  |  |  |
| 11                 | 800           | 54P-54/250AF              | 1400×500×2000      | 356                                                     |  |  |  |
| 12                 | 800           | 72P-72/250AF              | 1400×500×2250      | 381                                                     |  |  |  |
| 13                 | 1000          | 36P-36/250AF              | 1400×500×2000      | 600                                                     |  |  |  |
| 14                 | 1000          | 54P-54/250AF              | 1400×500×2000      | 650                                                     |  |  |  |
| 15                 | 1000          | 72P-72/250AF              | 1400×500×2250      | 670                                                     |  |  |  |
| 16                 | 1250          | 36P-36/250AF              | 1400×500×2000      | 630                                                     |  |  |  |
| 17                 | 1250          | 54P-54/250AF              | 1400×500×2000      | 680                                                     |  |  |  |
| 18                 | 1250          | 72P-72/250AF              | 1400×500×2250      | 700                                                     |  |  |  |
| 19                 | 1600          | 36P-36/250AF              | 1600×500×2000      | 750                                                     |  |  |  |
| 20                 | 1600          | 54P-54/250AF              | 1600×500×2000      | 780                                                     |  |  |  |
| 21                 | 1600          | 72P-72/250AF              | 1600×500×2250      | 810                                                     |  |  |  |

| Equipment Solution            |                                                           |                               |                                          |                                         |                                        |                                |                                  | <div>NATUS</div> <div>INDUSTRIAL SOLUTION SYSTEMS</div> |  |
|-------------------------------|-----------------------------------------------------------|-------------------------------|------------------------------------------|-----------------------------------------|----------------------------------------|--------------------------------|----------------------------------|---------------------------------------------------------|--|
| Ordering Requirements         |                                                           |                               |                                          |                                         |                                        |                                |                                  |                                                         |  |
| Cabinet rated capacity        | <input type="checkbox"/> 250A                             | <input type="checkbox"/> 400A | <input type="checkbox"/> 630A            | <input type="checkbox"/> 800A           | <input type="checkbox"/> 1000A         | <input type="checkbox"/> 1250A | <input type="checkbox"/> 1600A   |                                                         |  |
| System voltage                | <input type="checkbox"/> 208V                             | <input type="checkbox"/> 220V | <input type="checkbox"/> 380V            | <input type="checkbox"/> 400V           | <input type="checkbox"/> 440V          | <input type="checkbox"/> 480V  | <input type="checkbox"/> 690V    |                                                         |  |
| Systems                       | <input type="checkbox"/> L1,L2,L3,N,PE                    |                               |                                          | <input type="checkbox"/> L1,L2,L3,PE    |                                        |                                |                                  |                                                         |  |
| Frequency                     | <input type="checkbox"/> 50Hz                             |                               |                                          | <input type="checkbox"/> 60Hz           |                                        |                                |                                  |                                                         |  |
| Rated breaking capacity Icc   | <input type="checkbox"/> 40kA/240V                        |                               | <input type="checkbox"/> 50kA/480V       |                                         | <input type="checkbox"/> 65kA/480V     |                                | <input type="checkbox"/> ____    |                                                         |  |
| Busbar                        |                                                           |                               |                                          |                                         |                                        |                                |                                  |                                                         |  |
| Module                        | <input type="checkbox"/> 36P                              |                               | <input type="checkbox"/> 54P             |                                         | <input type="checkbox"/> 72P           |                                | <input type="checkbox"/> ____    |                                                         |  |
| System type                   | <input type="checkbox"/> Main MCCB                        |                               | <input type="checkbox"/> Main ABC        |                                         | <input type="checkbox"/> Main terminal |                                |                                  |                                                         |  |
| MCCB                          | <input type="checkbox"/> Schneider                        |                               | <input type="checkbox"/> ABB             | <input type="checkbox"/> SIEMENS        |                                        | <input type="checkbox"/> NATUS | <input type="checkbox"/> ____    |                                                         |  |
| Circuit breaker               |                                                           |                               |                                          |                                         |                                        |                                |                                  |                                                         |  |
| Poles                         | <input type="checkbox"/> 1P                               |                               | <input type="checkbox"/> 2P              |                                         | <input type="checkbox"/> 3P            |                                |                                  |                                                         |  |
| MCCB                          | <input type="checkbox"/> Schneider                        |                               | <input type="checkbox"/> ABB             | <input type="checkbox"/> SIEMENS        |                                        | <input type="checkbox"/> NATUS | <input type="checkbox"/> ____    |                                                         |  |
| Cabinet                       |                                                           |                               |                                          |                                         |                                        |                                |                                  |                                                         |  |
| Type                          | <input type="checkbox"/> Wall-mounted                     |                               |                                          | <input type="checkbox"/> Floor-standing |                                        |                                |                                  |                                                         |  |
| Single incoming               | <input type="checkbox"/> Top incoming                     |                               | <input type="checkbox"/> Bottom incoming |                                         | <input type="checkbox"/> Side Entry    |                                |                                  |                                                         |  |
| Secondary incoming            | <input type="checkbox"/> Uplink                           |                               | <input type="checkbox"/> Out of bounds   |                                         | <input type="checkbox"/> Side exit     |                                |                                  |                                                         |  |
| Cabinet Color                 | <input type="checkbox"/> RAL7035                          |                               | <input type="checkbox"/> RAL7032         |                                         | <input type="checkbox"/> RAL____       |                                |                                  |                                                         |  |
| Control system                |                                                           |                               |                                          |                                         |                                        |                                |                                  |                                                         |  |
| Metering and communications   | <input type="checkbox"/> Power meter                      |                               | <input type="checkbox"/> V/A meter       |                                         | <input type="checkbox"/> +RS485        |                                | <input type="checkbox"/> +4-20mA |                                                         |  |
| Indicator light               | <input type="checkbox"/> Primary side /<br>Secondary side |                               | <input type="checkbox"/> L1/L2/L3        |                                         | <input type="checkbox"/> ____          |                                |                                  |                                                         |  |
| Indicator lamp specifications | <input type="checkbox"/> LED/White                        |                               | <input type="checkbox"/> LED/Green       |                                         | <input type="checkbox"/> ____          |                                |                                  |                                                         |  |
| Other requirements:           |                                                           |                               |                                          |                                         |                                        |                                |                                  |                                                         |  |



**PRECISION IN DETAIL**