

# SPC Intelligent Power Module



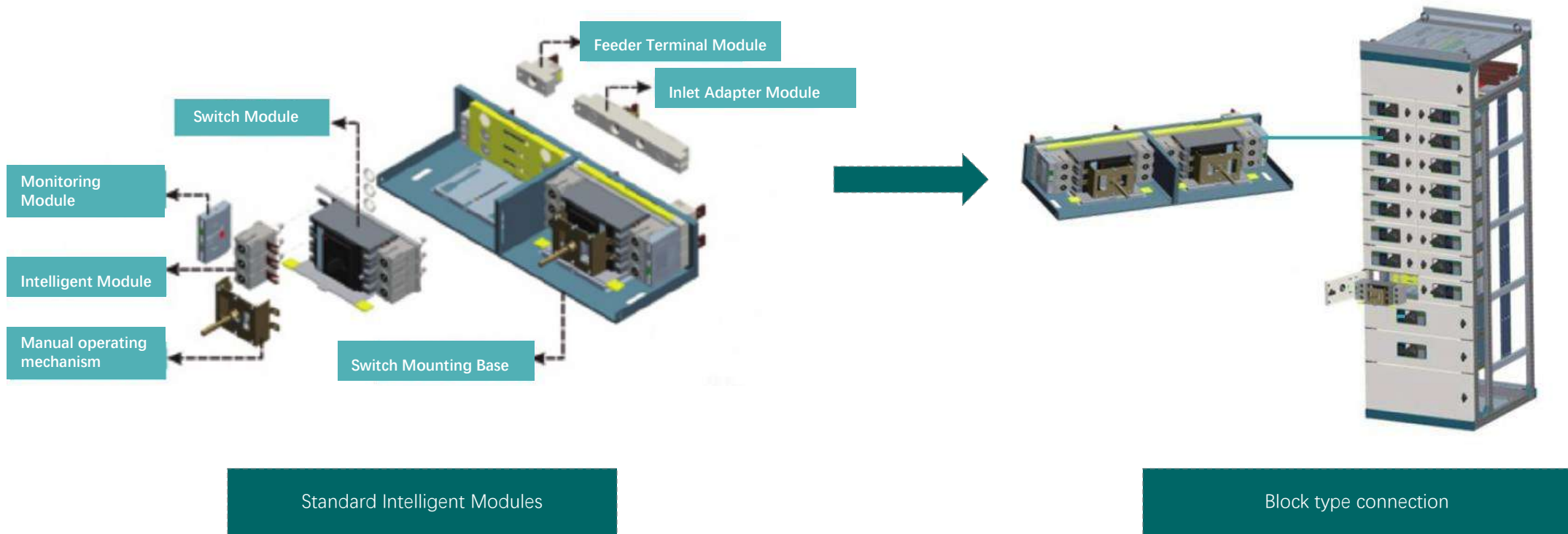
携手泰昂/让用电更省心

MAKE ELECTRICITY MORE WORRY FREE

**TIEON**  
泰昂能源

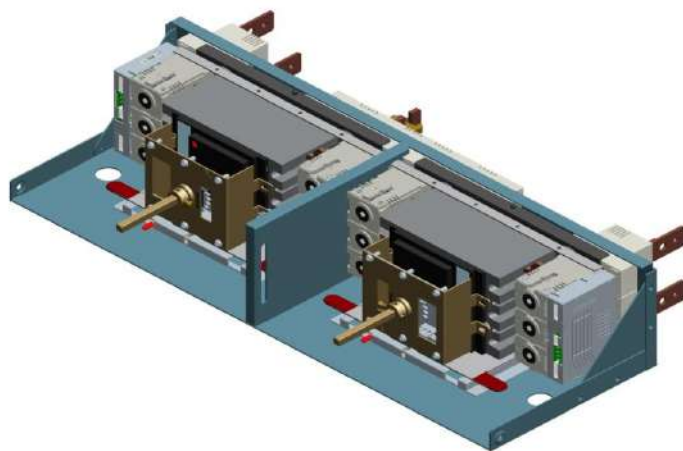
深圳市泰昂能源科技股份有限公司  
SHENZHEN TIEON ENERGY TECHNOLOGY CO.,LTD.

## SPC Intelligent Feeder Module—— Real S<sup>5</sup> Design: Simple, Safe, Smart, Save, Speed!

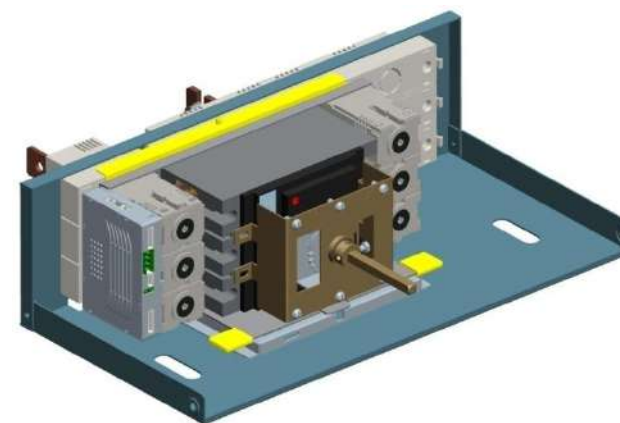


The standard feeder module consists of two design specifications, 250A and below and 400 ~ 630A, compatible with the mainstream joint venture and domestic circuit breakers in the market, and the standard components can be replaced independently, which reduces the number of spare parts and facilitates the overhaul and maintenance.

## Modular design of moulded case switches

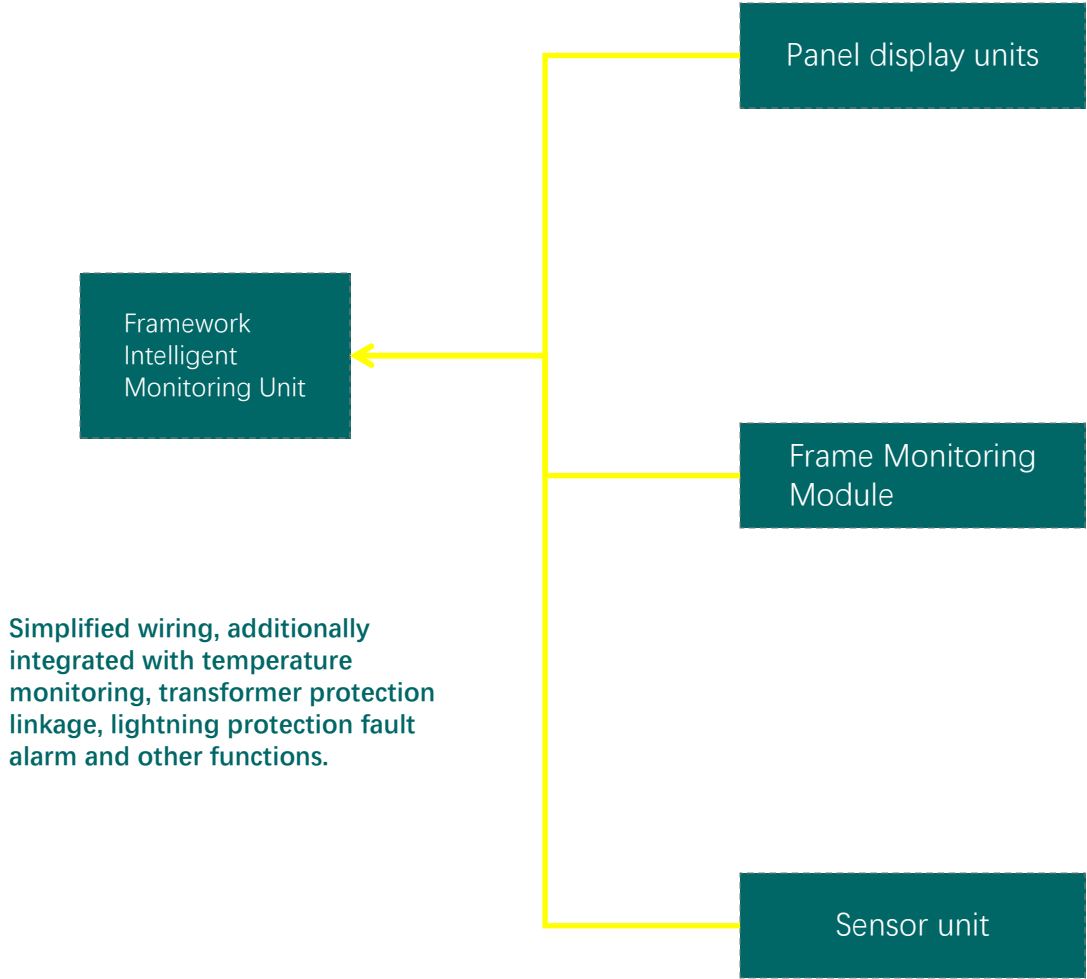
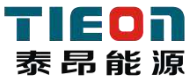


1/2 feeder unit



1 feeder unit

# Frame Switch Intelligent Monitoring Unit



Simplified wiring, additionally integrated with temperature monitoring, transformer protection linkage, lightning protection fault alarm and other functions.



Frame switching electrical parameters, temperature, control, setting, display, etc.

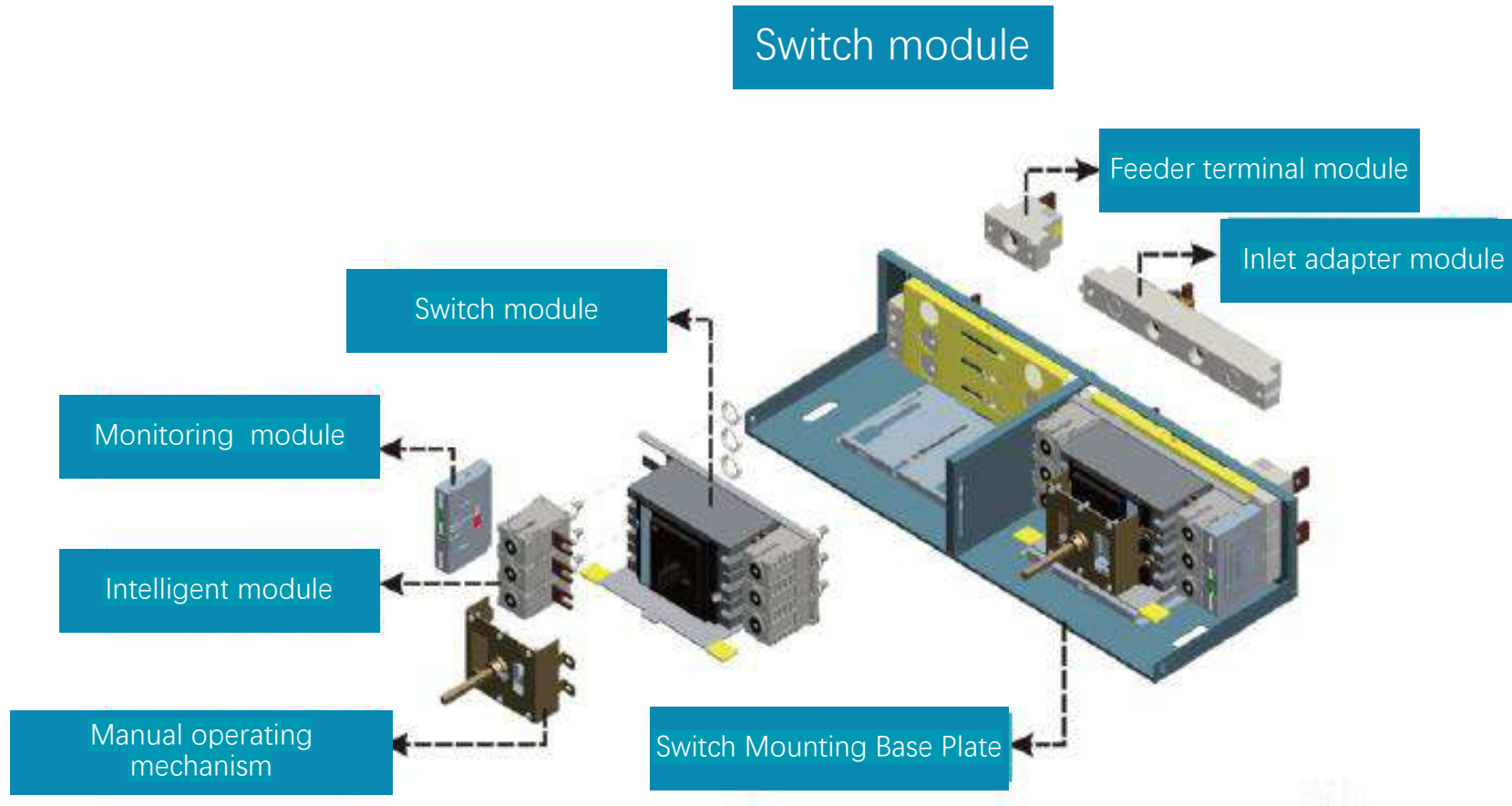


Electrical parameters analysis and metering, temperature analysis, switching control, four remote functions, etc.



Acquisition of basic electrical parameters such as current, voltage and temperature..

# Modular design



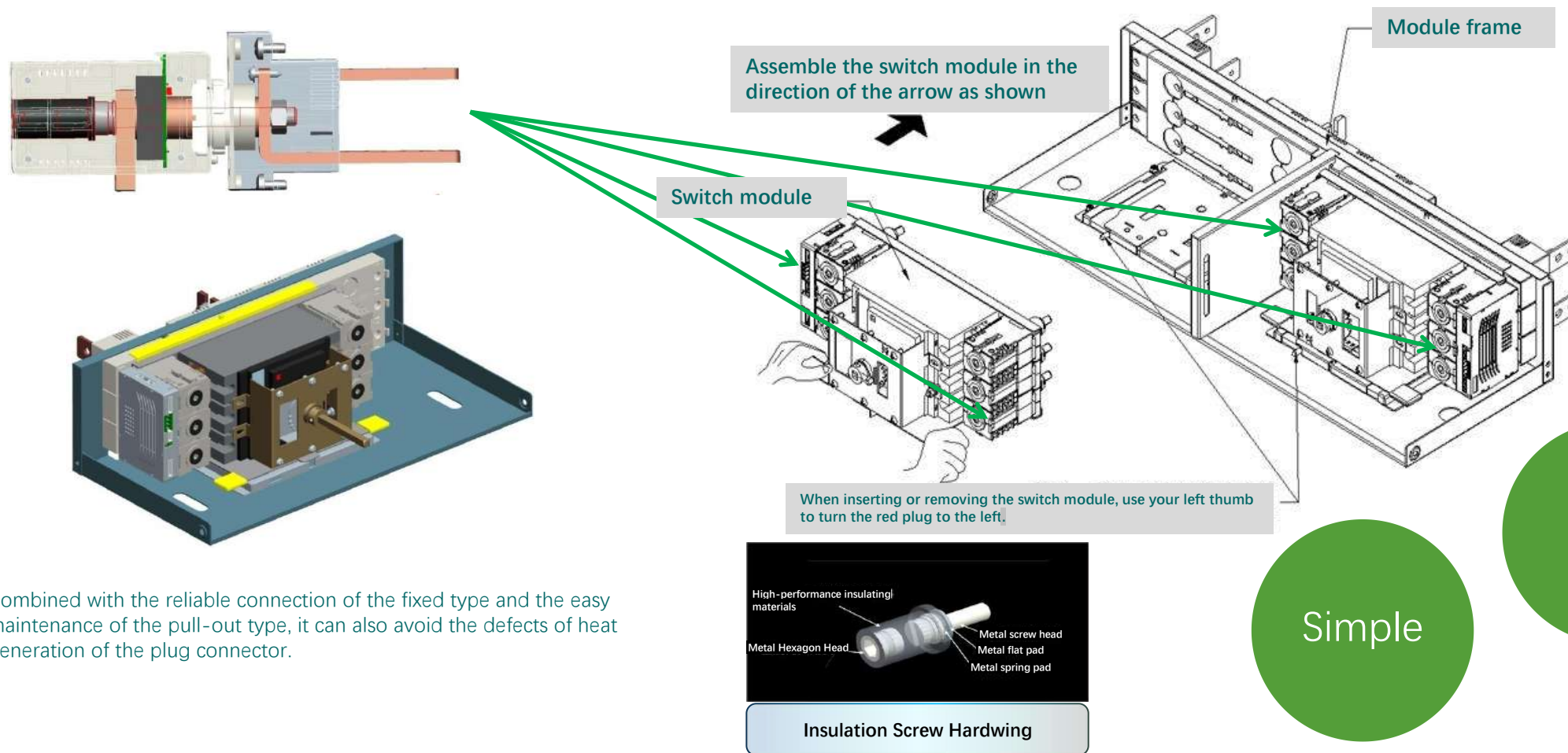
Simple

Speed



## Fixed connection, plug-in maintenance

The primary connection is made with insulated screw technology (metal material on top and bottom, insulated material in the middle), replacing the traditional plug-in connection used in low-voltage drawer cabinets. While conducting current, it plays the role of fixing switch. Safe and reliable, reducing the failure rate.



Combined with the reliable connection of the fixed type and the easy maintenance of the pull-out type, it can also avoid the defects of heat generation of the plug connector.

## Safety isolation baffle

When the switch assembly is removed, a mechanical interlock isolates the conductor for operator safety.

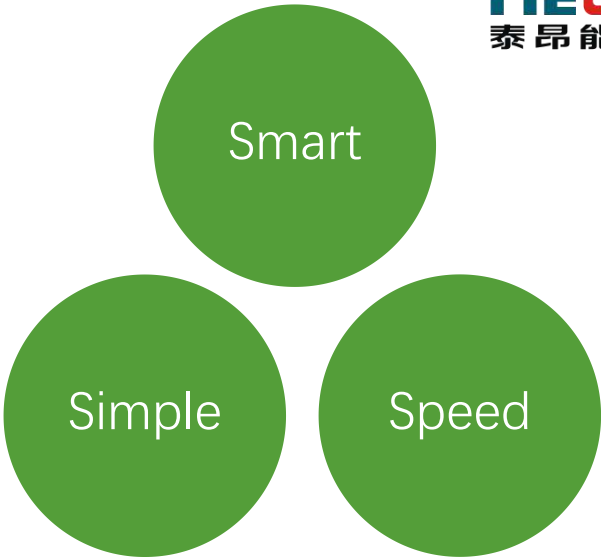
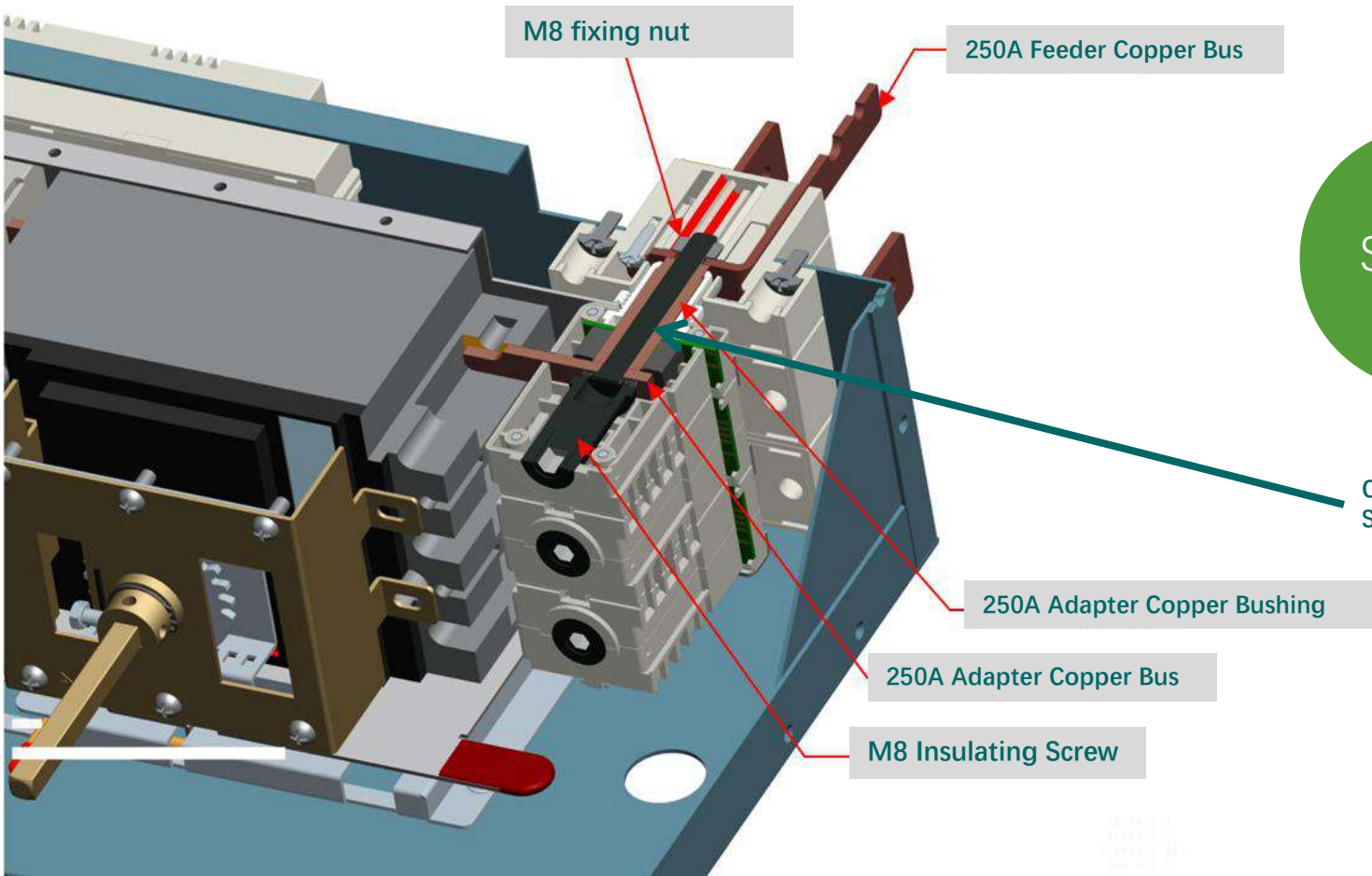
Safety protection  
baffles



Simple

Safe

Sensor Embedded Design

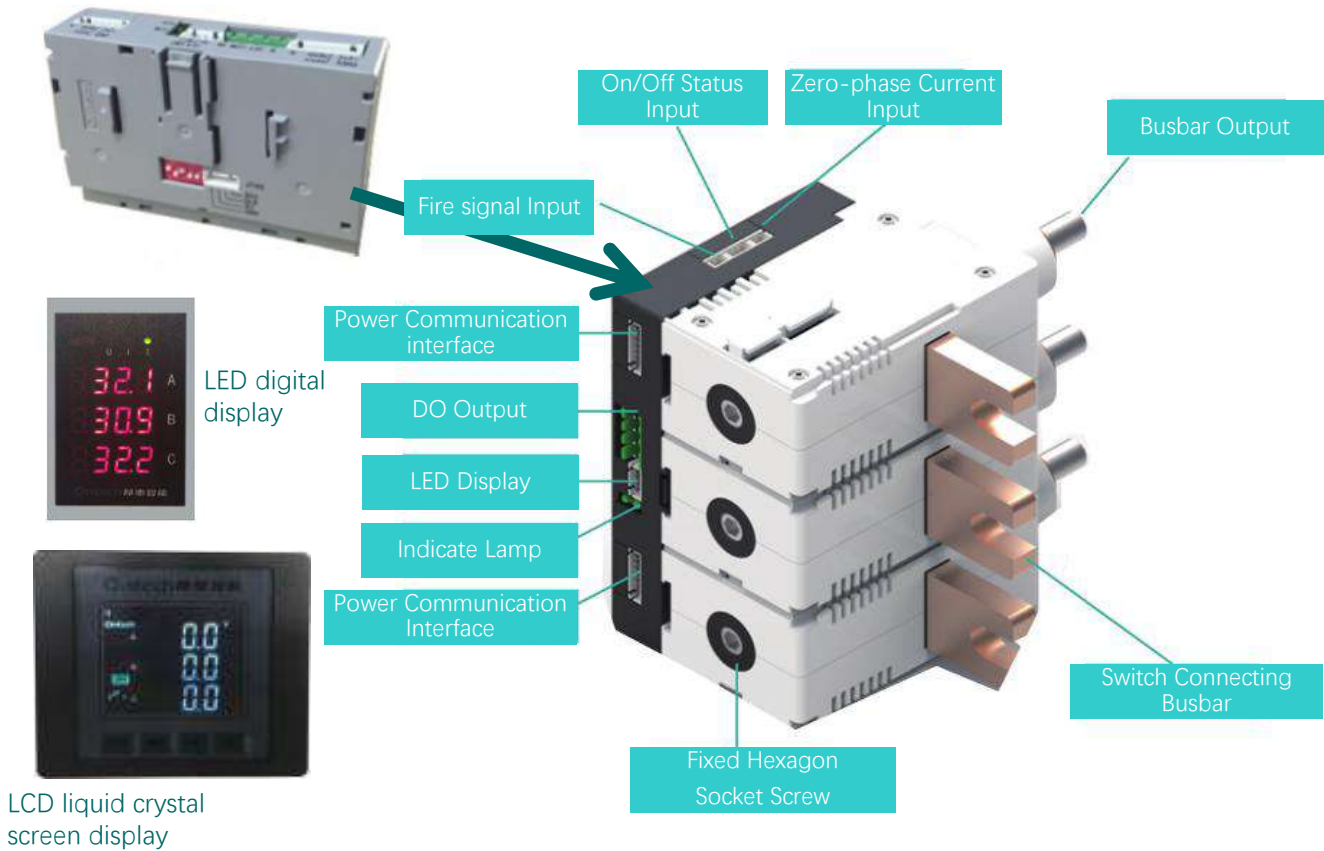


Current transformer:	250A/100mA
	630A/150mA
	Accuracy 0.2
Temperature sensor:	NTC thermistor
	Accuracy $\pm 1\%$

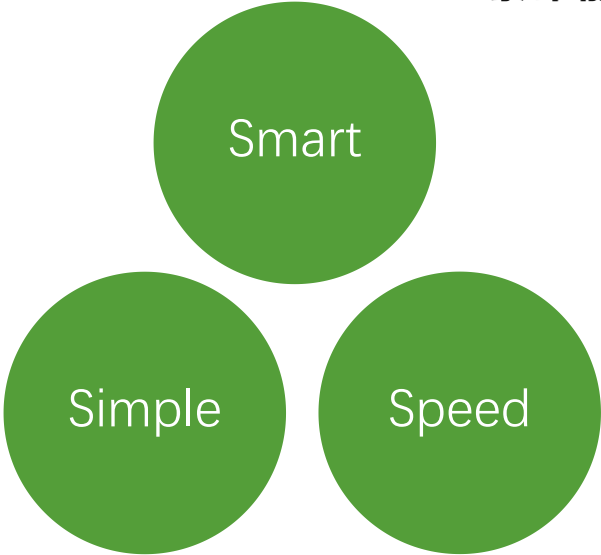
Partial Cutaway View of module structure



# Acquisition Without Secondary Wiring



Intelligent monitoring module, display

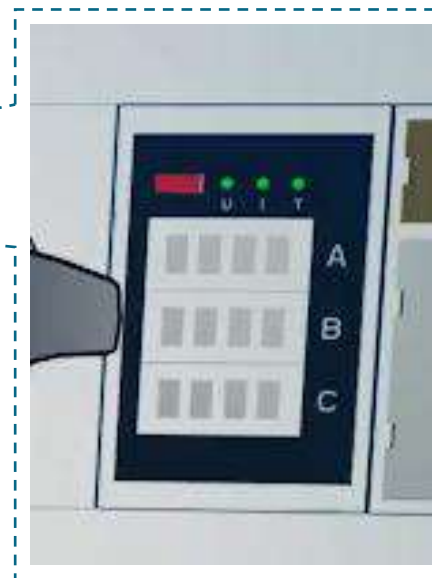


Intelligent acquisition module and adapter module adopt plug-in connection, realizing the **connection without secondary wiring** for the acquisition of the electrical parameters and temperature. The module has complete secondary interfaces for fire protection, on/off status of switching, control, leakage current monitoring, etc.

## Circuit Temperature Monitoring

### Intelligent monitoring of the temperature at the load-side connection

It can prevent high temperature caused by untightened screws or other faults. The data is not only visualized, but also transmitted to the background. Any abnormality is pushed in time to prevent problems before they occur.



Safe

Smart

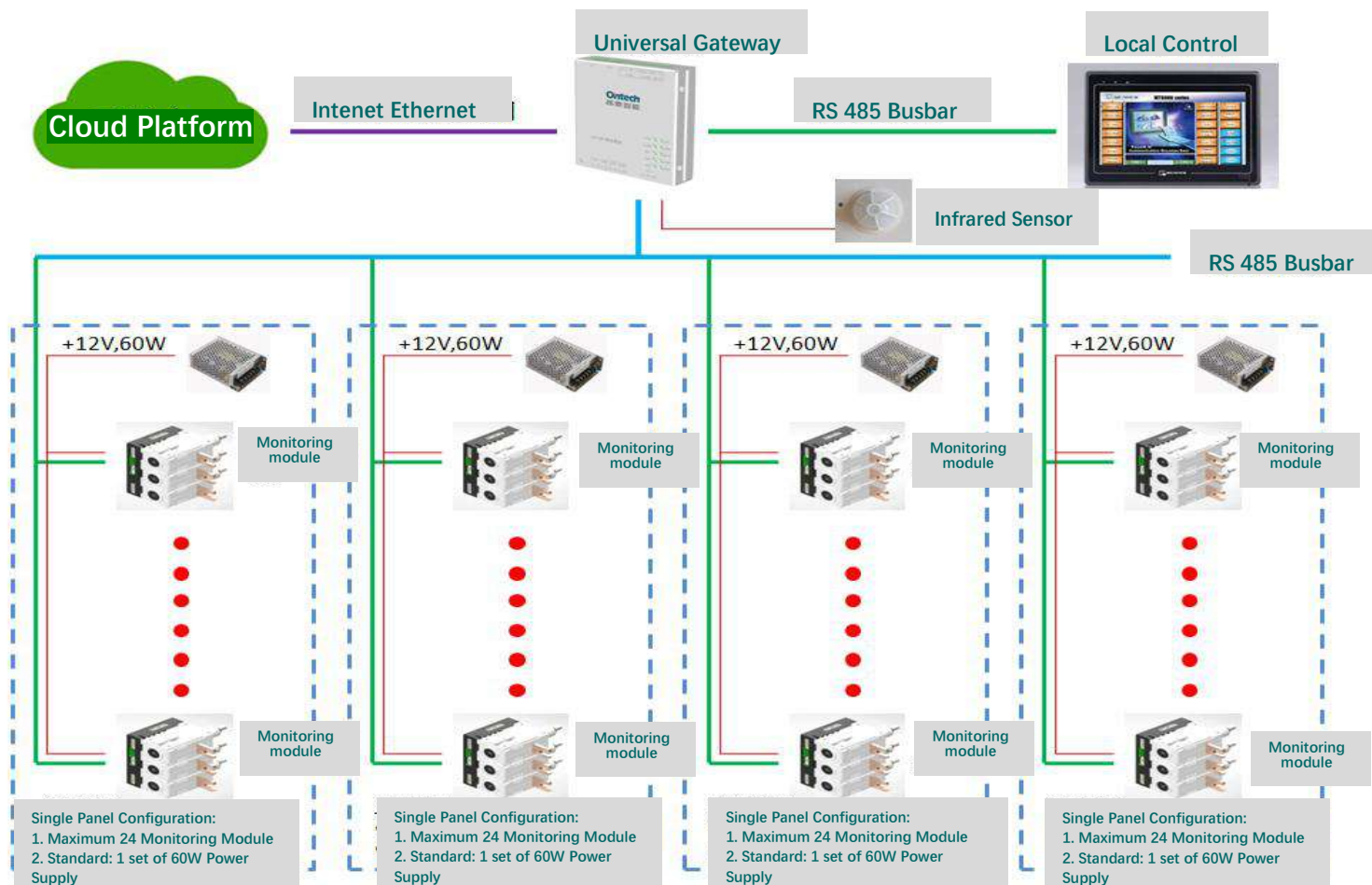
## Intelligent Distribution Cloud Monitoring

Safe

Smart

Speed

Intelligent power distribution management platform can monitor the operation of power distribution equipment around the clock. Through the preset monitoring logic, it analyzes the operation status of the power distribution system, sudden alarm, gradual change warning, and power consumption energy management, etc.

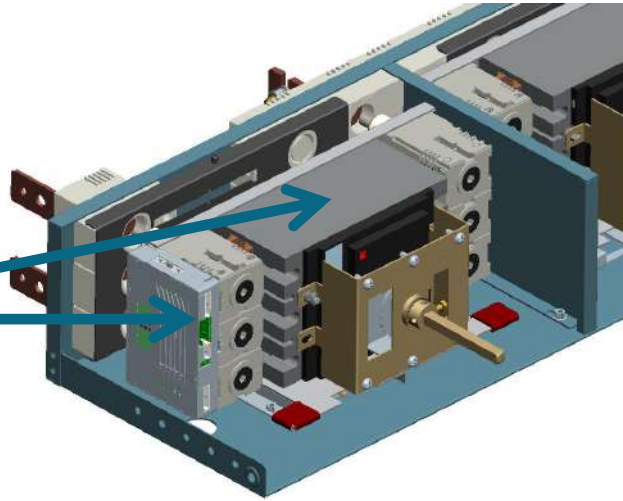


Integration of power distribution systems with IoT and cloud computing

## Independent Overhaul and Maintenance

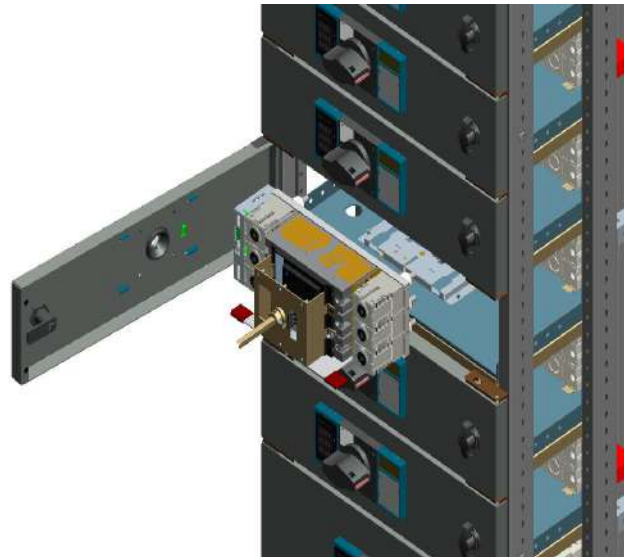
### Easy maintenance

Primary and secondary independent maintenance in front of the cabinet



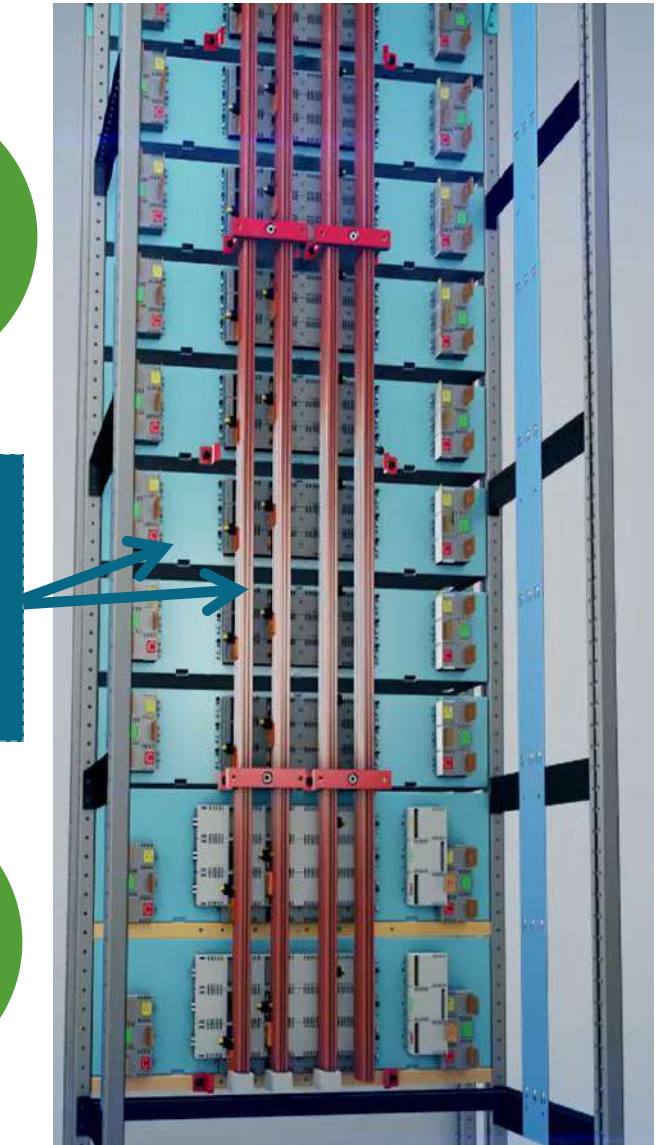
### Operation steps:

- 1, Disconnect the switch, open the protective front door of the cubicle.
- 2, Unplug the module communication line of the circuit to be serviced.
- 3, Loosen the 6 insulating screws on the inlet and outlet ends.



Simple

Rear of the cabinet is busbar and cable connection, basically maintenance-free



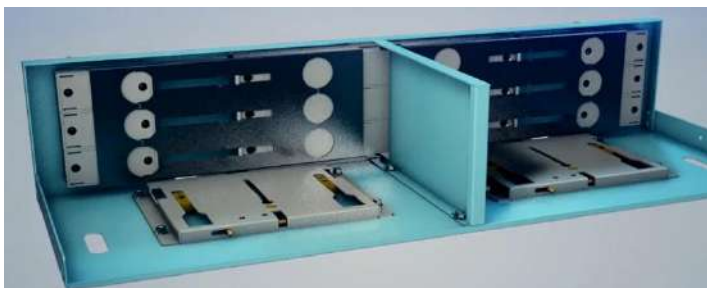
Speed



## Block Assembly Production

### Simple assembly

### Feeder Module Quick Assembly

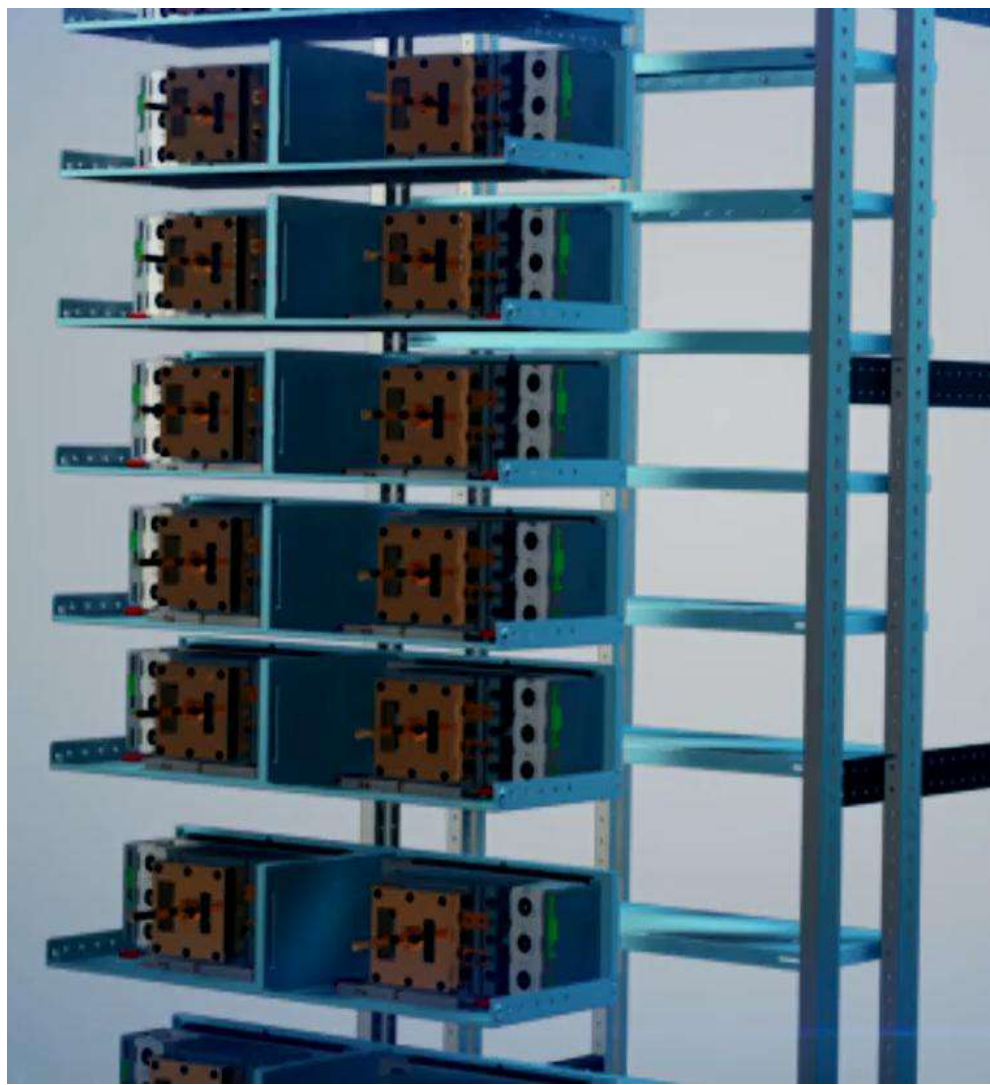


Simple



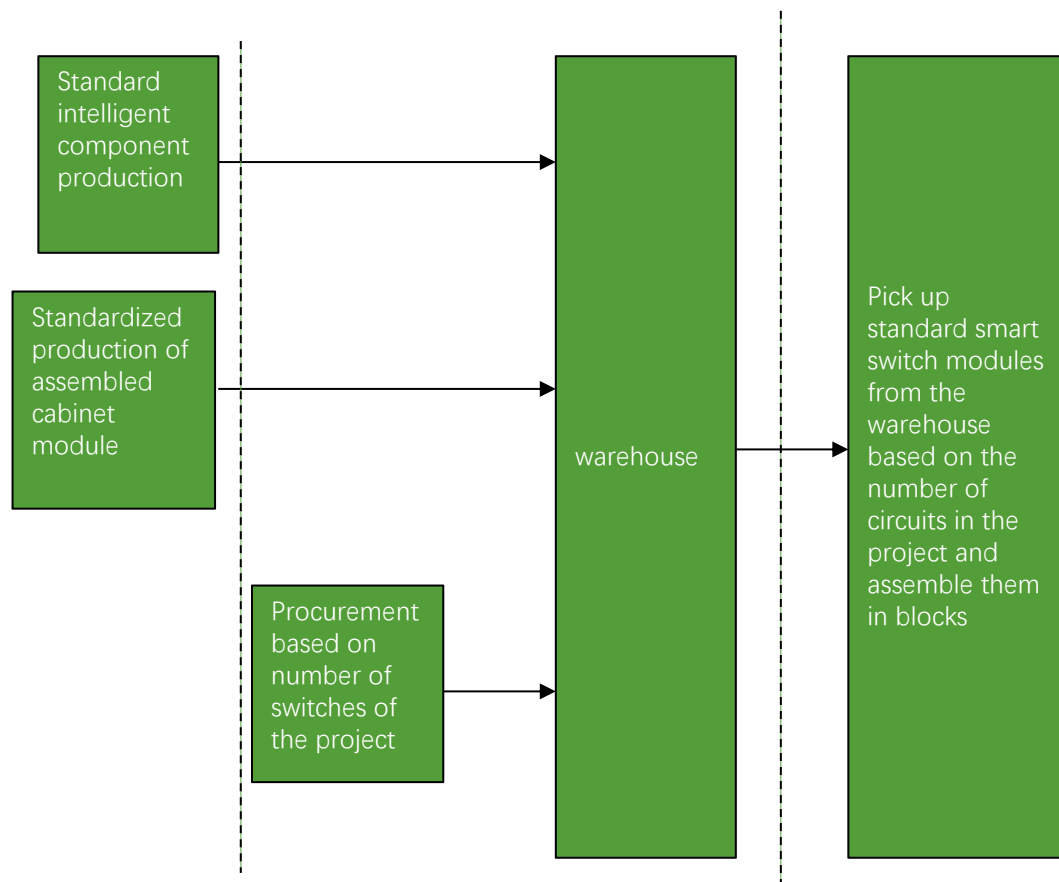
Speed

### Block mounting



## Inventory-based production and supply

Standardized production, guaranteeing quality



Simple

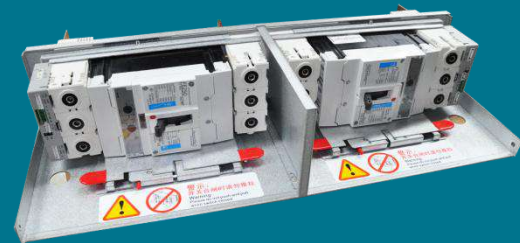
Speed

# 泰昂智造-INTELLIGENT MANUFACTURING

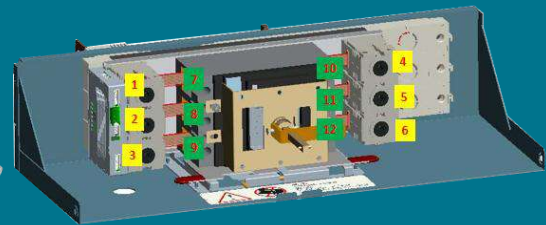
Comparison of safety technology performance of SPC intelligent power distribution system and drawer cabinet

SPC  
Intelli  
gent  
Low  
Voltage  
Distrib  
ution  
System

- ▶ Fewer primary and secondary connection points, fewer hidden faults. Anti-electrocution safety baffle design, providing safety guarantee for operation and maintenance personnel.



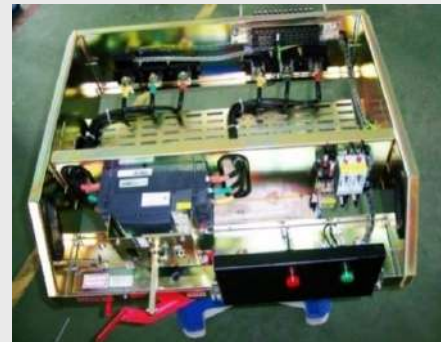
S5 module of SPC



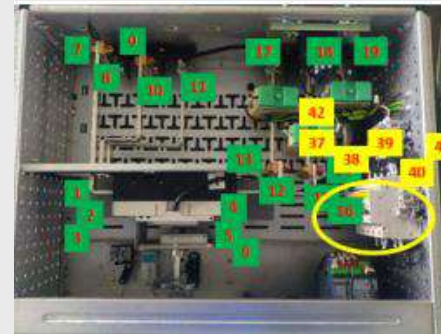
Primary connections: 12  
Secondary connections: 17

drawer  
cabinet

- ▶ There are many primary and second connection points, so there are many hidden trouble points.
- ▶ After the drawer is pulled out, there is no safety stopper, there is a potential risk of electric shock.



GCK drawer units



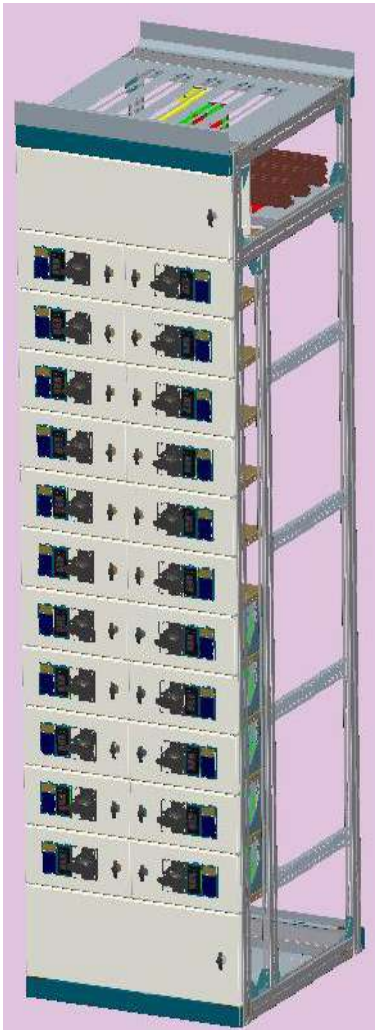
Primary connections: 19  
Secondary connections: 42

Modular solutions (SPC intelligent low-voltage switchgear)

Features: small footprint

Intelligent Feeder modules		Recommended number of circuits		Drawer Cabinet
Component Type	Height of components (mm)	Cabinet width 600mm	Cabinet width 800mm	Cabinet width 600mm 800mm
250A and below 3P molded case breakers	150	11	22	9
400-630A 3P molded case breakers	200	7	7	6
250A and below 4P molded case breakers	200	8	16	9
400-630A 4P molded case breakers	250	7	7	6

\*Compact design allows high switch mounting density and saves more than 25% of floor space.



Modular cabinet



GCK drawer cabinet



Explanation of fixed cabinet/drawer/fixed-divider solutions and their advantages and disadvantages

Performance Indicator	Fixed cabinet	Drawer cabinet	Fixed-divider cabinet (SPC solution)
Maintainability	Replacement of breakers and sensors is a major safety hazard, it requires the whole panel or section of the bus bar to be de-energized	Online replaceable drawer	On-line safe replacement of perishable components such as switches, Hall sensors, acquisition units, etc; Single circuit maintenance does not affect the normal operation of other circuits.
Intellectualisation	No Intelligent	Single loop can detect three-phase current, three-phase voltage, without communication	Single loop can detect three-phase current, three-phase voltage, power and other data; Single-loop with independent communication function
Production mode	The traditional production mode of switchgear	Standardised production of single drawers	Assembly line, pre-fabricated production
Quality Assurance (QA)	Traditional production model: poor consistency and inconsistent quality	High-current connectors cannot be judged to be reliably contacted.	All components are molded standard prefabricated, high consistency of each component, stable quality
performance-price ratio	Low	Medium	High