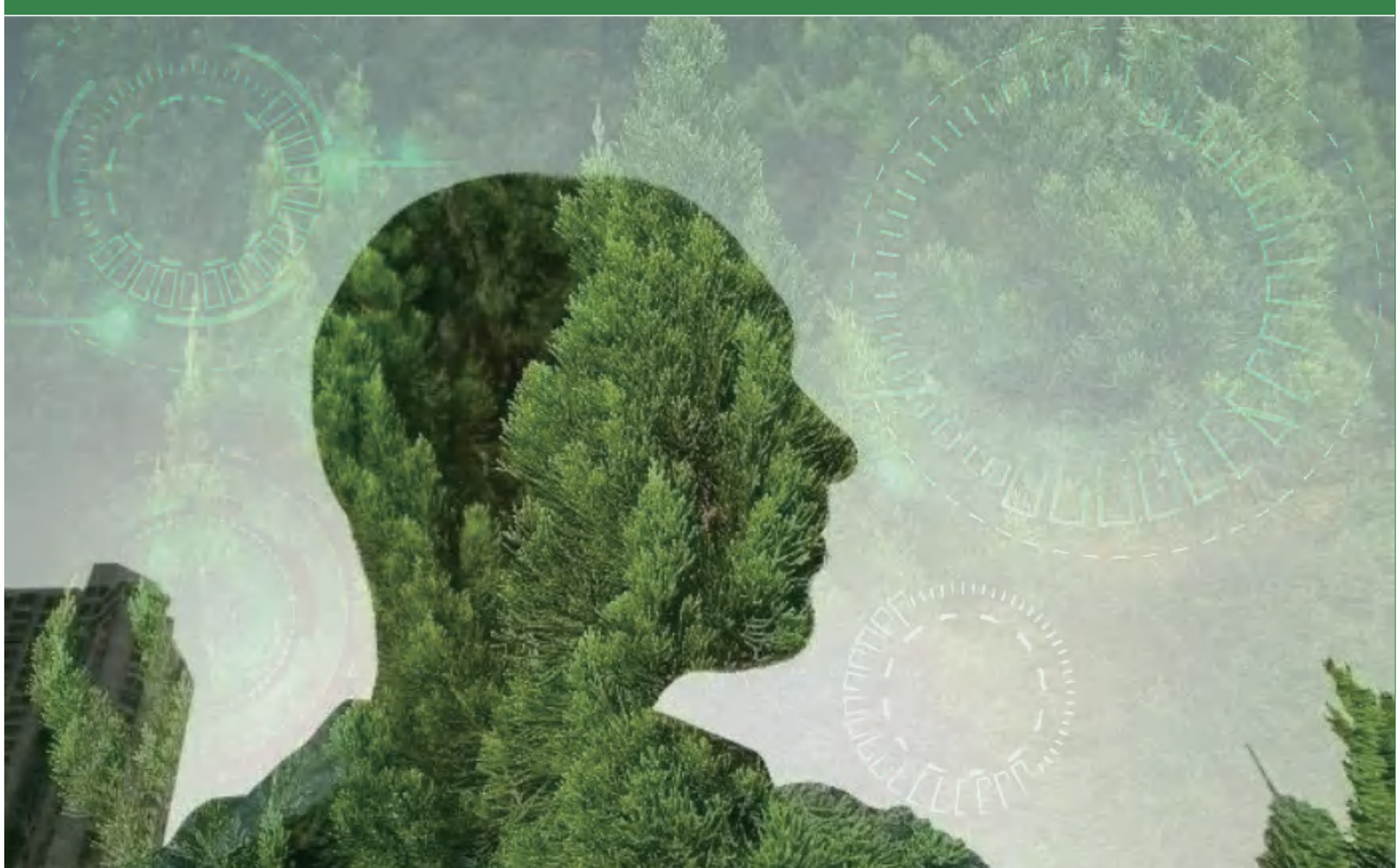
JIAMINTECH® RAPLOY®
TRACK BUSWAY SOLUTION



Guangzhou JiaMin-Tech Co., Ltd

Company profile

Founded in 2017, Guangzhou Jiamin Technology is a company specializing in the research, development and sales of power distribution systems and HVAC system solutions for the infrastructure and data center industries. The headquarters and research and development base are located in the picturesque Guangzhou Economic and Technological Development Zone.

Since its inception, the company has always persisted in the talent-oriented, integrity, and entrepreneurial business principles. The company advocates the philosophy of “openness, collaboration, making the fullest use of talent and materials”. By gathering industry elites, we support enterprises with full-life-cycle solutions to help them improve their management level and production capacity. In this way, they will be capable of maintaining competitiveness and realizing speedy and stable development in a fiercely competitive market.

With customer experience as the center, Jiamin people conduct project docking and delivery focused on customer experience. We are dedicated to serve as an excellent supplier of infrastructure and data center equipment, and jointly create a full-life-cycle service including consulting, optimization, and turn-key services with infrastructure and data center builders and partners, thereby continuously creating value for our customers.

Since its inception, the company has obtained ISO9001, ISO14001, ISO45001 and other management quality system certification. For instance, Jiamin RAPLOY Track busway ducts have passed CQC certification, CE certification (European Union certification), CB certification (IECEE certification), EMC certification, as well as the highest level of seismic testing -- Level 9 seismic test. Moreover, we have also obtained nearly 27 authorized patents, 3 software copyrights, in addition to 1 international invention patent. The company was awarded as “2019 Guangzhou Science and Technology Innovation Little Giant Enterprise”, “2020 Contract-abiding and Trustworthy Enterprise”, “2021 Guangzhou Specialized, Refined, Differential and Innovative Enterprise” and “2021 High and New Technology Enterprise”. In addition, the company has been awarded the honorary titles of “2021 Gazelle Cultivation Enterprise”, “2022 Science and Technology-based Small and Medium-sized Enterprises”, “2022 Green+ Enterprises in Huangpu District of Guangzhou”, “2022 Innovative Small and Medium-sized Enterprises in Guangdong Province”, “2022 Specialized, Refined, Differential and Innovative Medium-sized Enterprises in Guangdong Province”, among others.

家铭技术
JiaMin-Tech

Trademark Registration Certificate

EMC Test Report

CB Certificate

CE Certificate

Seismic Level 9 Test Report

CQC Certificate and Test Report

Patent Certificate

ISO Certificate

High-tech Enterprise Certificate

Specialized, Refined, Differential and Innovative Small and Medium-sized Enterprise Certificate

Certificate of Innovative Small and Medium-sized Enterprises

Certificate of Gazelle Cultivation Enterprise

Contents

Composition 01

Superior Materials 04

Description 05

Intelligent Monitor 08

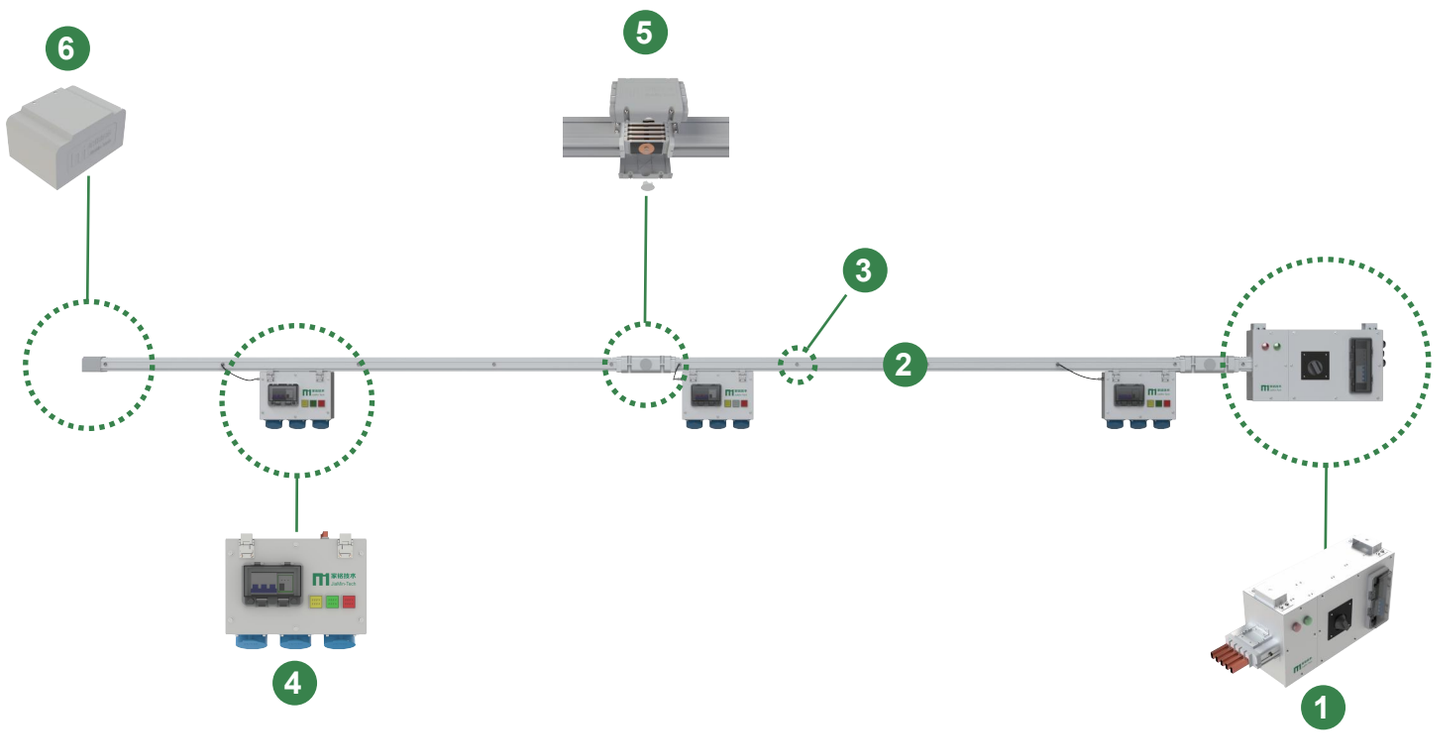
Selection 09

Advanced Equipment 11

Service 13

Business partner 14

Composition of track busway



1 Feed Unit

Feed unit covers cable feed box, flange, power supply to busbar through cable or copper row, with monitoring optional.

2 Straight Length

The straight length is responsible for carrying the busbar current, with protection class of IP42 and IP54.

3 Communication Cable Interface

The communication cable trunk and plug-in tap-off units are equipped with aviation sockets (female) respectively, and the two can be rapidly connected in the vicinity by a communication cable with aviation sockets (male) at both ends.

4 Tap-off

The tap-off unit is designed to connect the track busbar to the cabinet, which allows the busbar distribution to be connected to each cabinet, with monitoring optional.

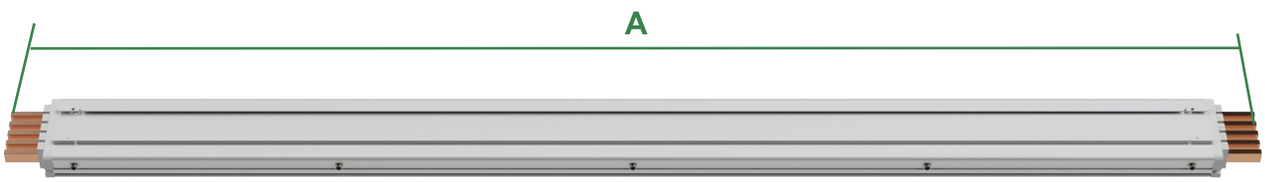
5 Connectors

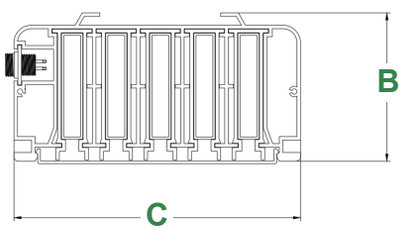
Introduction of High Current Connector Design;
Controllable Torque Double Head Bolts;
Double sided lap connection, 100% enhancement of current carrying capacity;
Dull proof design, which prevents wrong phase installation;
Slide-in mounting for increased installation efficiency.

6 End Seals

End seals are designed to protect the ends of busbars, which can isolate people from the busbars in an effective way and ensure personal safety.

Straight Length

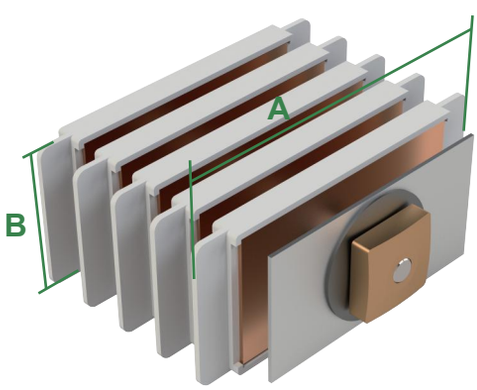




Current Rating（A）	dimension（mm）		
	A	B	C
160	2400	60	162.5
250	2400	60	162.5
400	2400	60	162.5
630	2400	60	162.5
800	2400	84	162.5
1000	2400	84	162.5

*A: It can be customized according to the needs of customers with 600mm as incremental and decremental value, the longest length is 2400mm.

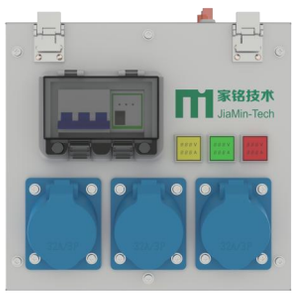
Connectors



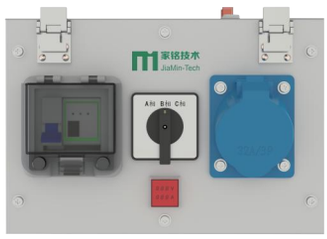
Current Rating（A）	dimension（mm）	
	A	B
160	170	54
250	170	54
400	170	54
630	170	54
800	170	75
1000	170	75

Tap-off Units Category

Lower Outlet Type tap-off



Side Outlet Type tap-off

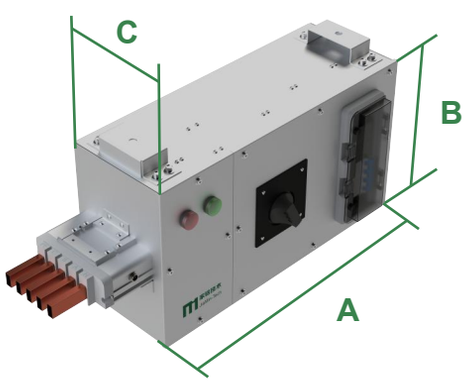


Phase-change Type tap-off

Selection of tap-off	Selection Dimension（mm）		
	long	high	deep
Lower Outlet Type tap-off	300	280	156
Side Outlet Type tap-off	300	280	156
Phase-change Type tap-off	300	280	156

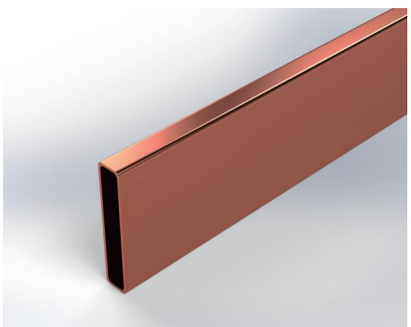
*Side outlet/lower outlet optional for each model selection;
*Protection class is IP42 (IP54 optional);
*Adopt universal tap-off, the dimension of different current level in each model selection is the same;
*Non-standard size can be customized.

Feed Units Category



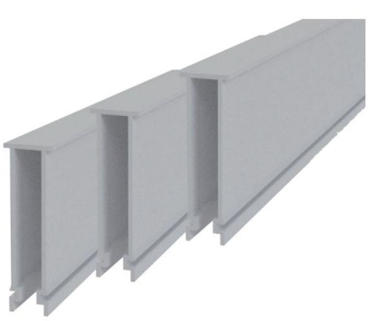
Current Rating（A）	dimension（mm）		
	A	B	C
160	875	350	250
250	875	350	250
400	975	350	250
630	975	350	250
800	1025	400	250
1000	1150	400	250

Superior Materials



The high purity T2 (≥99.97%) is adopted, with conductivity as high as 97.7% IACS with the hollow electrolytic copper conductor. This design makes reasonable utilization of the effective conductive part of the copper row. Moreover, it also increases the contact area with the air, which makes it possible to meet the temperature rise and strengthen the heat dissipation. The short-side widening design of the hollow copper row is conductive to increasing the contact area of the pick-up pins of the tap-off module and the hollow copper row, thereby effectively decreasing the contact resistance, lowering the temperature rise, and improving the electrical reliability.

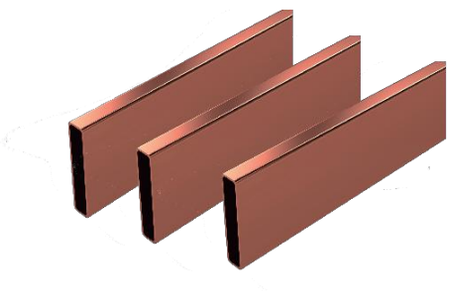
The busbar enclosure has passed 1200 hours of salt spray test, thereby achieving excellent corrosion resistance. The shell structure design is compact with small installation space occupied.

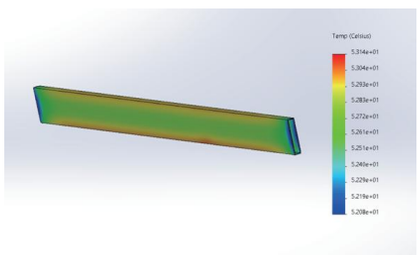


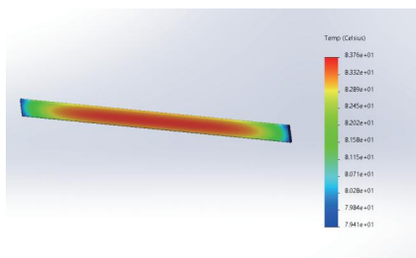
The insulating sleeve is produced by extruding polycarbonate material, with insulation grade B and high temperature resistance of 130℃, which can eliminate the aging of the product caused by extreme ambient temperature and extreme temperature rise in an effective manner. Flame retardant grade is V0, which does not contain halogenated compounds, while the finished product has passed the 960℃ Scorch Wire Test. In case of fire, it will not generate harmful gases, which can in turn effectively delay the spread of fire to ensure the safe operation of the busbar.

Description

Thermal Simulation Comparison



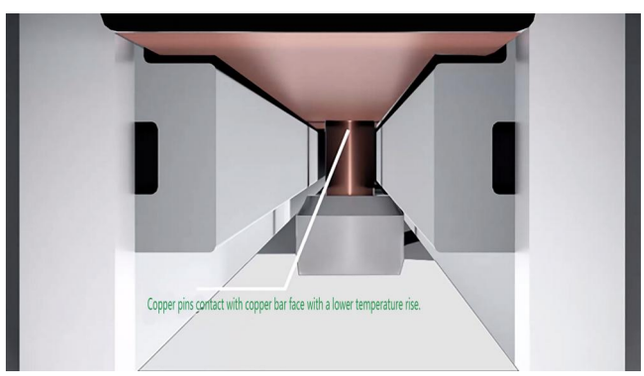




Structure	Room Temperature	Final Temperature	Average Temperature Rise	Heat Dissipation Effect
Copper Tube	25℃	52.08℃~53.14℃	27.61K	Since copper tubes have a smaller product circumference ratio, the heat dissipation is more favorable. In comparison with the copper bars recommended in Appendix N of National Standard 7251.1, the temperature rise is reduced by 51.2%.
National Standard Recommended Copper Bar		79.41℃~83.76℃	56.59K	

Flexible Plug

Elastic copper pins and copper bar face-to-face contact have a lower temperature rise, with full load limit temperature rise not exceeding 45.9K.



Description

Modularization
Components such as straight lengths, cable feeder boxes, connectors, tap-off units, and other components are prefabricated in the factory, which eliminates the need for on-site fabrication and enables rapid product delivery.

Cost Optimization
Simplified structure, fewer components, built-in weak bus system reduce the amount of site works; in comparison with the “traditional” power distribution scheme, it can optimize the cost in an effective way.

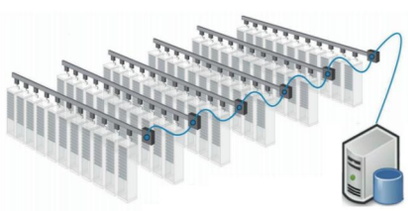
Flexible Configuration
By meeting the different power requirements of each cabinet tap-off from the straight length of the power, a single cabinet power flexible adjustment does not affect the peripheral cabinet power needs, without involving engineering-level changes. The other straight length of the built-in weak power cable slots and standard interfaces, tap-off can be realized close to the access to the monitoring system, which is plug-and-play to achieve a seamless docking.

Rapid Deployment
RAPLOY® T intelligent track-busbar adopts modular assembling to take power by track busway tap-off. It can be configured in accordance with various power, whcich is plug-and-play to realize speedy deployment in the field.

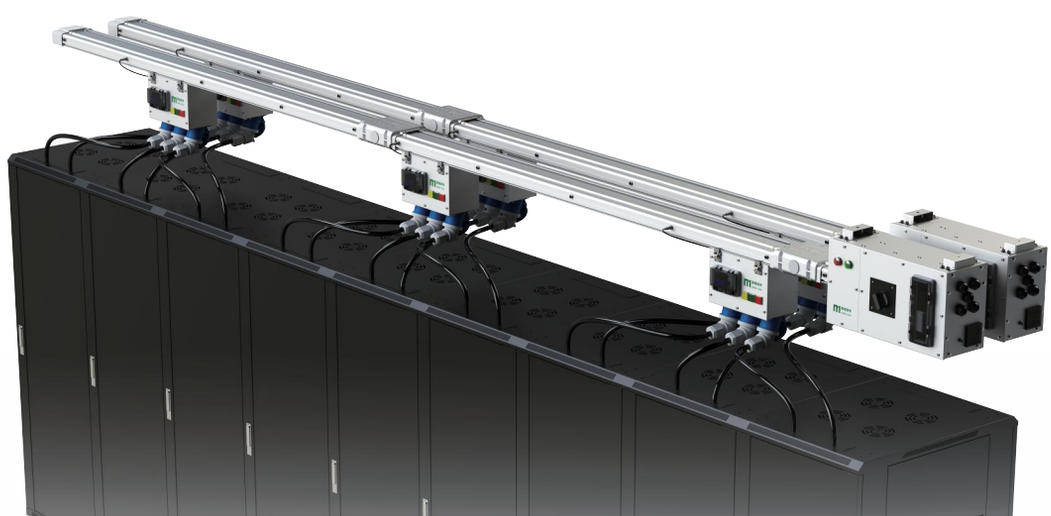
Cost Advantages of Full Life Cycle
The life cycle of the terminal power distribution program “column header cabinet + cable” is about 10 to15 years, while the life cycle of the busbar program is at least twice as long as the former (about 25-30 years). Secondly, the selection of the terminal busbar program can be canceled the column header cabinet while configuring more than one cabinet. In this way, a project can be increased by about 5% of the cabinet, thereby saving about 30% of the cost of a single cabinet. Moreover, the busbar system can also distribute the investment. The customers can deploy the busbar part first, followed by the progressive deployment of the tap-off when needed later; the daily maintenance is convenient, which can save the overall operation and maintenance cost of the server room; it can be reused, which in turn helps to reduce the cost of relocating or re-laying out of the server room.

Description

Universal tap-off for “busbar-cabinet” power distribution is adopted, with the same height for each model; it supports full-position plug-in, and single/three-phase tap-off can be mixed in the same bus duct concurrently, thereby meeting the needs of customers in a more flexible way.
Communication cables are built into the body of the busbar enclosure, without the need for additional deployment of weak wire troughs. The signal lines are plugged in nearby to avoid “flying cables”, while the overall aesthetics is elegant to further reinforce the EMC performance of the cables.
With the modularized design, there is no need to pull the communication cable at the site after assembling on site, which saves time and labor.

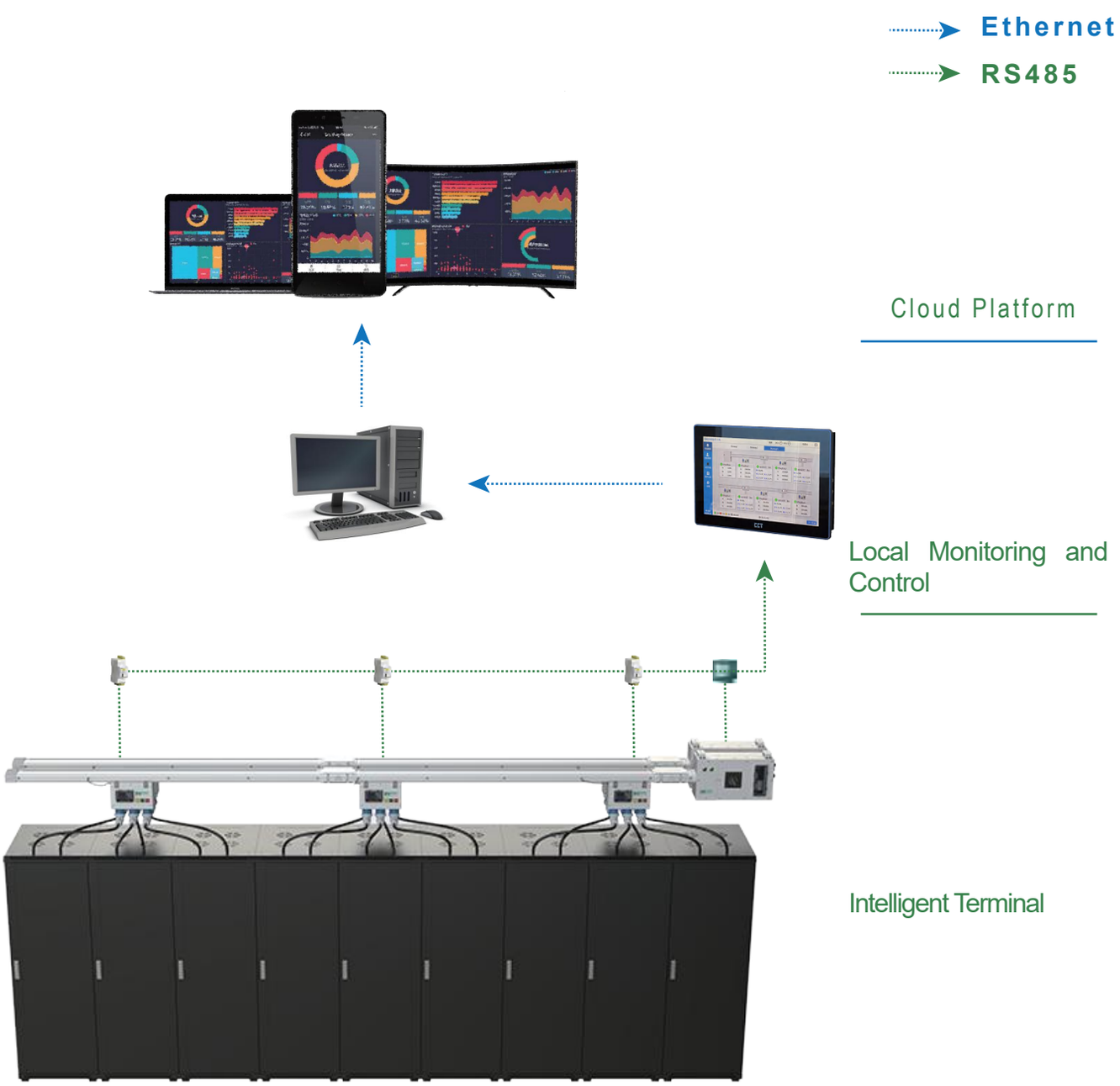


Multi-point monitoring can be realized in accordance with customer requirements, such as main road monitoring, branch road monitoring, local monitoring, remote monitoring and other monitoring methods can be selected.



Intelligent Monitor

Achieving dynamic management of IT infrastructures
-Analytical and consulting services for customized busbar products;
-New busbar health management system, to provide complete electrical energy monitoring and electrical fault prediction;
-Seamlessly connecting digital temperature measurement and electrical energy monitoring modules. Weak communication cables are built into the body of the busbar enclosure, which is aesthetically pleasing in appearance, thereby further reinforcing the EMC performance of the cables.



Trunking System Model Selection

RAPLOYT40STOA

Power Supply Method	
A	AC
D	DC

Main Circuit Monitoring	
M	With Main Circuit Monitoring
O	Without Main Circuit Monitoring

Busbar Systems	
ST	Straight Lengths
JP	Connectors
EL	Elbows
FE	Feeder Units
EC	End Seals

Current Rating		T Series
100	1000A	√
80	800A	√
63	630A	√
40	400A	√
25	250A	√
16	160A	√

RAPLOY® Series	
T	Tap-off Series

Busbar Selection Calculation Method:

P=1.732×current×0.38

For example: 400A busbar maximum load = 1.732 × 400 × 0.38 ≈ 263.26kW

Tap-off Selection Methods

RAPLOYTP13PM

Branch Circuit Monitoring	
M	With Branch Circuit Monitoring
O	Without Branch Circuit Monitoring

Number of Phases	
3P	Single-phase
5P	Three-phase

RAPLOY® T Series Plug-in Box Current Rating	
TP1	16
TP2	32
TP3	48
TP4	63
TP5	96
TP6	126

Tap-off Selection Method:

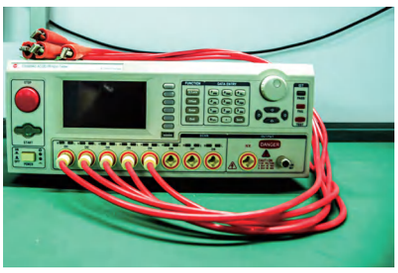
Single-phase Switch: P=0.22×current

For example: 32A single-phase switch maximum load = 0.22 × 32 ≈ 7.04kW

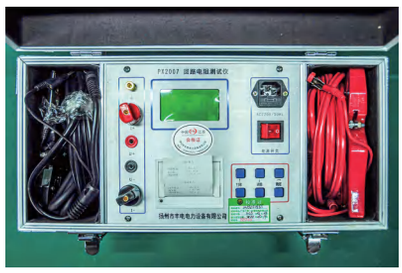
Three-phase Switch: P=1.732×current×0.38

For example: 32A three-phase switch maximum load = 1.732 × 32 × 0.38 ≈ 21.06kW

Advanced Equipment



Programmable Multi-Circuit Withstand Voltage Tester



Loop Resistance Tester

Voltage Tester

Coating Thickness Tester

Ground resistance tester

Conductivity Meter

Low Temperature Thermostat

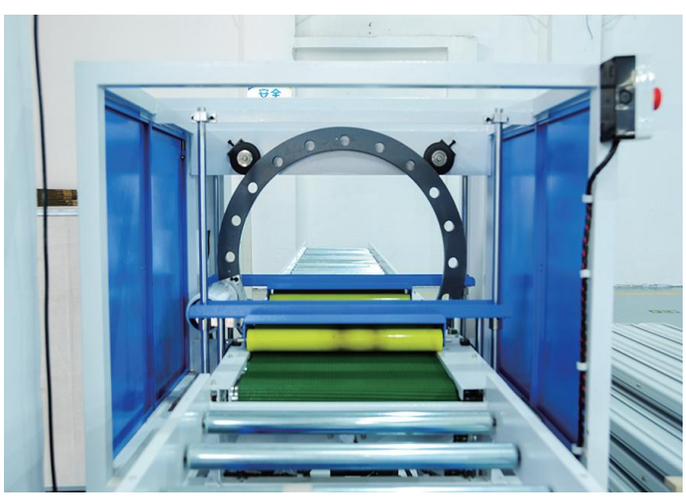
Constant Temperature Water Bath

Salt Spray Tester

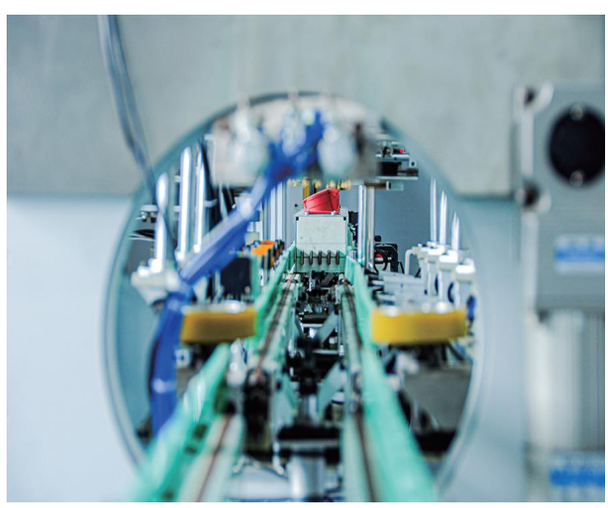
Advanced Equipment

Incoming Material Inspection Room

Clean Workshop



Insulation Film Assembly Machine



Semi-automatic Busbar Assembly Line

Service System

Pre-sales Service: Technical Consultation, Solution Analysis, Optimization Design

Factory Audit: Welcome experts to the factory for site inspection and technical exchanges.

Order Service: Site Investigation, Program Confirmation, Customized Production

On-site Service: Goods Acceptance, Installation Supervision, Product Training, Power-On Acceptance

Tracking Service: Regular Inspection, Troubleshooting and Maintenance

Business Partner

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