Optimus PRO

OPT-LINE 系列

Intelligent busbar system for data center

数据中心专用智能母线



IEC IECEE CB SCHEME CE CCC UL KEMA KEUR

美嘉科技（镇江）有限公司

MEGA TECHNOLOGY(ZHENJIANG)CO.,LTD.

Optimus PRO

让**数据**中心末端配电
更**灵活**、更**安全**、更**节能**！

Makes Power Distribution

More flexible, safe and energy efficient!



MEGA









企业简介 Company profile

美嘉科技（镇江）有限公司创建于2008年10月，位于国家火炬计划电力电器产业基地——扬中市经济开发区，系高低压成套电气设备、母线槽、密集型智能母线槽、数据中心专用智能小母线、封闭母线、电缆桥架及相关软件产品的专业制造商、供货商，并集研发、设计、生产、销售于一体的高新技术企业。

公司自成立以来，秉承“厚德载物、兴业报国”的宗旨，坚持“团结、创新、合作、发展”的理念，以市场为龙头，以科技为驱动、以管理为保证、以效益为中心，打造美嘉核心竞争力。跻身世界知名品牌行列，建设绿色美嘉、和谐美嘉、百年美嘉。

Founded in October 2008, Mega Technology (Zhenjiang) Co., Ltd. is located in the Yangzhong Economic Development Zone, the power and electrical industry base of the national torch plan. It is a professional manufacturer and supplier of high and low voltage complete electrical equipment, bus duct, intensive intelligent bus duct, special intelligent small bus for data center, enclosed bus, cable bridge and related software products, and integrates research, development and design High tech enterprise integrating planning, production and sales.

Since its establishment, the company has been adhering to the tenet of "carrying things with great virtue, promoting industry and serving the country", adhering to the concept of "unity, innovation, cooperation and development", taking the market as the leader, science and technology as the driving force, management as the guarantee, and efficiency as the center, to create the core competitiveness of Mega. It has become one of the world famous brands to build green, harmonious and century old Mega.

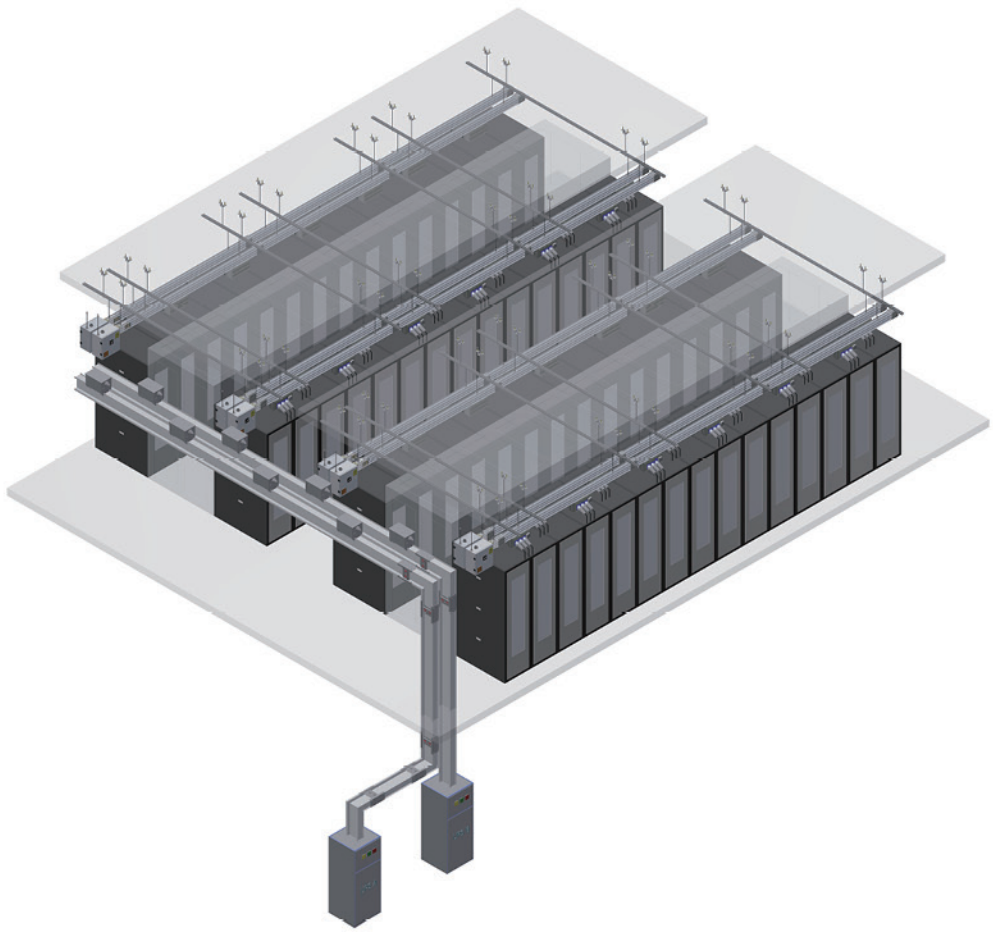
智能母线配电优势 | Distribution advantages

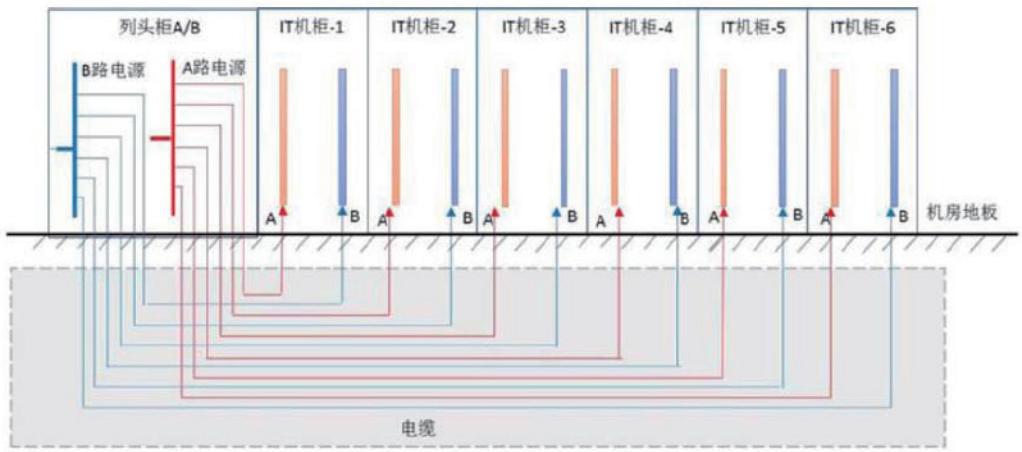
概述

随着人工智能、大数据技术的广泛应用，对数据中心的建设提出了越来越高的要求，数据机房供电负荷的加大、安全级别的提高都对数据中心供电设备提出了越来越高的要求。美嘉科技（镇江）有限公司充分发挥数据中心行业的技术优势，精心研发安全度更高的智能精密配电母线系统，产品覆盖配电室内部联络及馈出大电流母线、末端机房配电智能小母线，并可配置智能测温、智能电量监测系统，为机房运行提供预警，使客户日常运维更便捷！

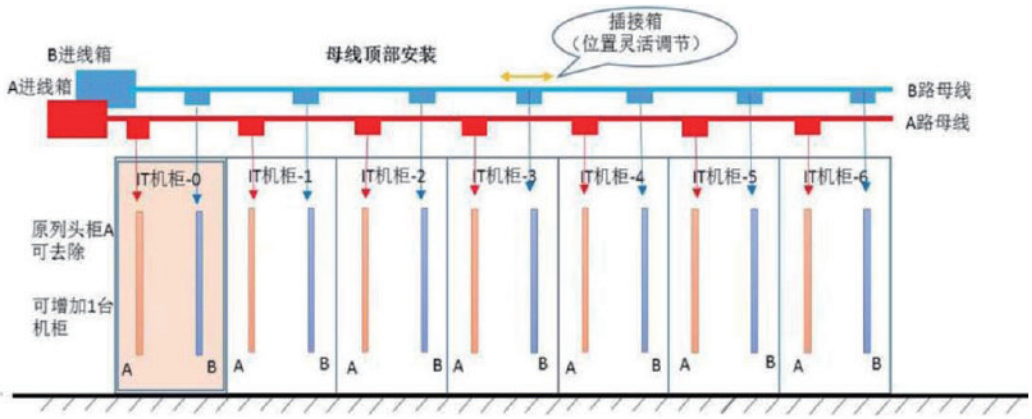
Introduction

With the wide application of artificial intelligence and big data technology, higher requirements are put forward for the construction of data centers. Meanwhile, higher requirements are also put forward for power supply devices with the increase of power supply load and security level of data center room. Zhenjiang Sigma Electric Co., Ltd. gives full play to the technological advantages of the data center industry, developed a smarter and more precise intelligent power distribution busbar system. The products cover the high-current connection busbars for power distribution rooms, and the intelligent low-current busbars for power distribution in terminal data rooms. All of the above busbars can be equipped with intelligent temperature measurement system and intelligent electricity monitoring system, to provide early warning for the operation of the data rooms and convenient daily operation and maintenance for customers!





"列头柜 + 线缆" 配电示意图
Power distribution diagram of 'Array cabinet+cable'



"智能母线系统" 配电示意图
Power distribution diagram of 'Smart busbar system'

便捷性、灵活性

- 模块化设计，大大缩短安装周期，后期变更（包括机柜在线扩容、增加或重新部署等）更简便；
- 三相五线制干线系统，支持交流单相、交流三相、直流输出；
- 插接箱可在母线干线任意位置插接，且可实现带电插拔、快速更换；
- 可采用天花板吊装、机柜支撑等安装方式；
- 分支采用工业连接器馈出，相序自对应。

Convenience and flexibility

The modular design greatly shortens the installation cycle and makes the late-changes (including online expansion of the cabinet, deployment increasing, redeployment, etc.) easier.

Three phase five wire trunk system, supporting AC single-phase, AC three-phase, DC output;

The tap-off box can be plugged into the busbar trunk anywhere, and can be plugged in and out quickly.

Can be installed in ceiling hanging installation, cabinet supporting installation, etc.

Branch output adopts industrial joint-pack, phase sequence automatically corresponds.

智能母线配电优势 | Distribution advantages

节能性、安全性

- 母线干线采用铜排输电，金属外壳快速散热。系统发热量降低，散热性更好；
- 发热量的降低及空调制冷负担的降低，达到双向节能效果；
- 母线系统温升更低、短耐能力更强，安全性和使用寿命提高；
- 采用高阻燃性绝缘材料，系统防火能力极大提高；
- 系统运行发热或着火情况下无卤化物产生，符合环保要求；
- 分支箱插接点可配置温度监测模块，提高关键节点预警能力。

Energy-saving and safety

The power transmission of busbar trunk is realized by copper bars, and the metal housing dissipates quickly. The system generates less heat and has better heat dissipation.

The reduction of heat generation and the reduction of the air conditioning refrigeration burden, achieving two-way energy saving.

The double promotion of heat generation and heat dissipation makes the busbar system have lower temperature rise and better short-resistance ability, which improves safety and service life.

The main materials include high flame retardant insulation material, which greatly improve the fireproof capacity of the system.

Halogen-free in the event of heat during operation or fire, meeting environmental requirements.

Tap-off box plugs can be configured with temperature monitoring device to improve warning capabilities for critical.

全生命周期成本优势

- “列头柜 + 线缆”配电系统生命周期 10-15 年，母线系统生命周期 25-30 年；
- 列头柜的取消，为运营商增加 5% 的机柜位；
- 综上：按系统全生命周期计算，单机柜成本分摊节约 30%；
- 可分步投资，先部署母线槽部分，插接箱根据需要逐渐部署；
- 日常维护更便捷，节约机房整体运维成本；
- 可重复利用，降低机房搬迁或重新布局的成本。

Cost advantage in full life cycle

The life cycle of 'Array cabinet + cable' is about 10-15 years, while the life cycle of busbar system is about 25-30 years.

The cancellation of the array cabinets increases 5% of the cabinet space for the operator.

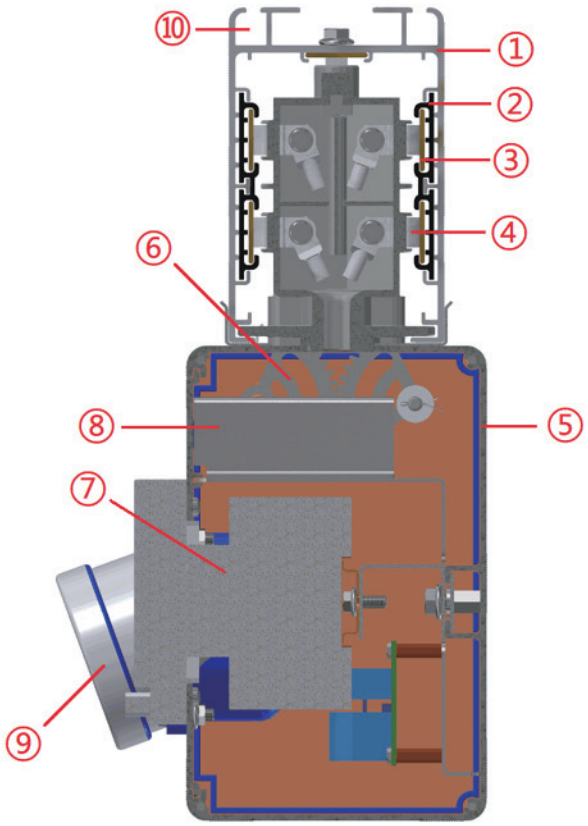
Based on the above two aspects, calculated according to the full life cycle of systems, the busbar system saves about 30% of the cost allocation upon each single cabinet compared to the array cabinet system.

The investment can be distributed, the bus duct part shall be deployed first, and the plug-in box shall be deployed gradually as required.

Nearly zero cost of routine maintenance, saving operation and maintenance costs.

The busbar system is highly reusable, and the cost of moving or relocating the data center room is greatly reduced.

主体结构 | Major structure



- 三面一体式型材 + 直线型护套和导体，构成母线干线轨道式结构；
- 高弹高导接电端子由主母排取电分流；
- 分支电流经过微断保护，由工业连接器输出至 PDU；
- 配置全电量和温度监测模块；
- 插接箱自带连锁机构，可快速固定于母线底部。

Three-sided integrated profile + linear sheath and conductor, forming the orbital structure of busbar system.

The high-elasticity and high-conductivity electrical terminal is powered and shunted from the main busbar.

The branch current is output to the PDU by the industrial joint pack, with the protection of micro-circuit breaker.

Configured with full power and temperature monitoring module.

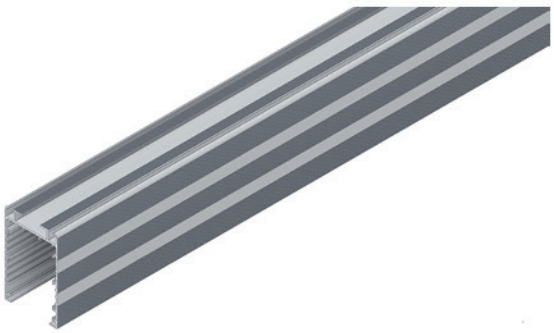
The tap-off box has its own locking mechanism, can be fixed to the base of busbar quickly.

① 母线外壳	Busbar housing
② 绝缘护套	Insulation sheath
③ 主母排	Main copper bar
④ 接电端子	Electrical terminal
⑤ 插接箱箱体	Tap-off box
⑥ 连锁机构	Interlock mechanism
⑦ 微断开关	Micro-circuit breaker
⑧ 监测模块	Monitoring module
⑨ 工业插座	Industrial socket
⑩ 通讯线槽	Communication slot

主材介绍 | Material introduction

母线外壳

- 6063（T5）铝镁合金型材，厚度≥ 2.5mm，布氏硬度≥ 60HB；
- 可根据客户需求，表面阳极氧化或静电喷涂处理；
- 外形美观、机械强度高、散热快、抗氧化能力强（盐雾试验1800h）。



Busbar housing

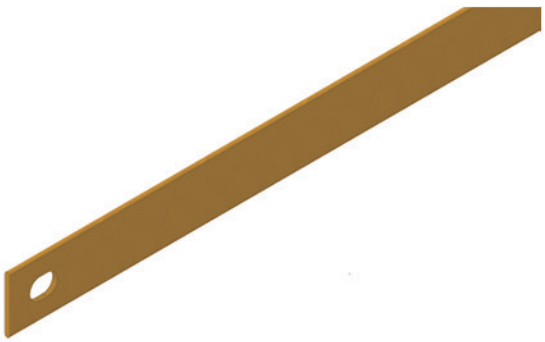
6063（T5）aluminum-magnesium alloy profile, thickness ≥ 2.5mm,Brinell hardness ≥ 60HB.

Surface anodizing or electrostatic powder painting according to customer reqirements.

Good appearance, high mechanical strength, fast heat dissipation and strong anti-oxidation ability (salt spray test 1800h).

母线导体

- 高纯度无氧电工用铜排，纯度≥ 99.98%；
- 电阻率≤ 0.0152×10-6Ωm，IACS 导电率≥ 98%；
- 表面整体镀锡或镀银处理。



Busbar conductor

High-purity and oxygen-free electricial copper bar, with the purity ≥ 99.98%.

Resistivity ≤ 0.0152×10-6Ωm, IACS conductivity ≥ 98%.

Overall surface tin or silver plating.

绝缘护套

- 阻燃及玻纤增强 PC（聚碳酸酯）挤塑型材；
- 绝缘等级 B 级，耐温 130℃以上；
- 阻燃级别 V0，不含卤化物，高温及火灾状态无有害气体产生。



Insulation sheath

Flame retardant and glass reinforced PC (polycarbonate) extruded profiles.

Insulation class B, with temperature resistance above 130° C.

Flame retardant grade V0, halide-free, toxic gases-free under high temperature or fire environment.

主要参数 | Main parameter

参数项 Item	数值 Data								
执行标准 Standard	IEC61439.1/6; GB7251.1/6								
系统 System	AC3P5W（51）；AC3P5W（53）；DC 双回路 DC double loop								
环境温度 EA	-5~+40℃，24小时平均温度不超过 +35℃ -5~+40℃ ,average temperature not exceed+35℃ for 24 hours								
防护等级 IP degree	IP42								
额定绝缘电压 Rated insulation voltage	415V								
额定频率 Rated frequency	50/60 HZ								
标准长度 Standard length	3.0m; 2.4m; 1.8m; 1.2m; 0.6m（另可根据要求订制长度） Can be customized as needed								
支撑点间距 Distance between supports	1.5m								
额定电流 Rated current	160A	200A	250A	315A	400A	630A	800A	1000A	1250A
外形尺寸（mm）Dimension	153x83					153*95		220*110	
参考重量（kg / m）Weight	7.37	7.74	8.63	9.21	10.11	13.87	17.33	26.70	31.50
短耐 Icw（KA）	20	20	20	20	20	30	30	40	40
峰耐 Ipk（KA）	40	40	40	40	40	63	63	83	83
20℃电阻（MΩ/m）Resistance	0.318	0.257	0.182	0.158	0.122	0.084	0.068	0.062	0.071
20℃电抗（MΩ/m）Reactance	0.064	0.051	0.046	0.037	0.029	0.022	0.020	0.020	0.023
20℃阻抗（MΩ/m）Impedance	0.347	0.281	0.206	0.172	0.134	0.095	0.073	0.083	0.090
压降（V/m，cos=0.8）Voltage drop	0.081	0.092	0.075	0.081	0.080	0.087	0.092	0.079	0.087
接地系统 Grounding system	外壳整体接地或单独铜排接地，接地容量不低于相线 50% Housing entirely grounded/additional copper bar grounded,capacity not less than 50% of phase line								
母线外壳颜色 Color of busbar housing	银白色（阳极氧化），亦可根据客户指定颜色进行喷塑 Silver white (anodized),or color chosen as customer specified								
插接箱外壳颜色 Color of tap-off box	1信号灰 RAL7004，亦可满足客户指定颜色 Signal gray RAL7004,or color chosen as customer specified								
插接箱电流 Current of tap-off box	10A; 16A; 20A; 25A; 32A; 40A; 50A; 63A; 80A; 100A								

主要单元 | Major unit

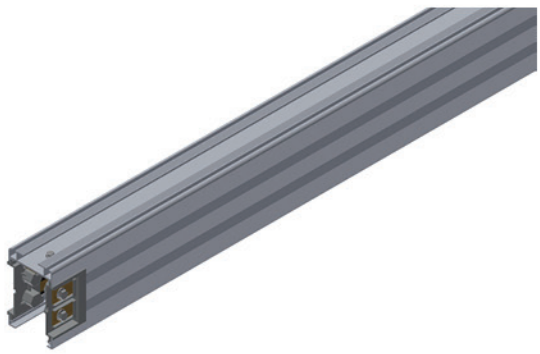
直线段

- 标准尺寸：0.6m；1.2m；1.8m；2.4m；3.0m
- 非标尺寸：0.3~3.0m（任意尺寸）

Straight length

Standard size: 0.6m；1.2m；1.8m；2.4m；3.0m

Special size: 0.3~3.0m（any length）



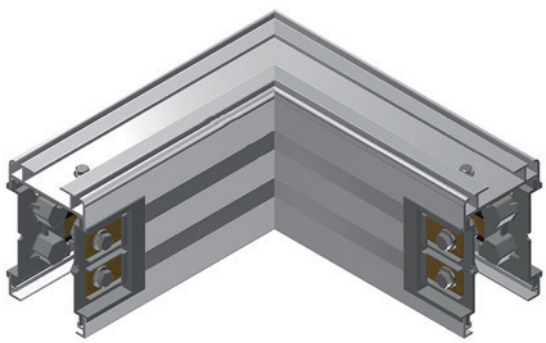
L 型弯通单元

- 标准尺寸：X0.4m/Y0.4m
- 非标尺寸：X0.3m/Y0.3m（Min）
  X1.0m/Y1.0m（Max）

L-shaped elbow unit

Standard size: X0.4m/Y0.4m

Special size: X0.3m/Y0.3m（Min）
X1.0m/Y1.0m（Max）



母线产品编码 Product code of busbar

ML□-B□ A □ □ - □ - □

- 100-100A
- 160-160A
- 200-200A
- 250-250A
- 320-320A
- 400-400A
- 630-630A

直流 D
交流 A

- 51 三相五线制（外壳作 PE） Three phases and five poles(housing as PE)
- 52 三相五线制（单独铜排作 PE） Three phases and five poles(additional PE bar)
- 31 DC 双回路（外壳作 PE） DC double loops(housing as PE)
- 32 DC 双回路（单独铜排作 PE） DC double loops(additional PE bar)

- A 外壳阳极氧化 Anodized housing
- P 外壳喷塑 Powder painted housing

- L 直线段 Straight length
- E* 弯头 Elbow

尺寸 Size

始端箱

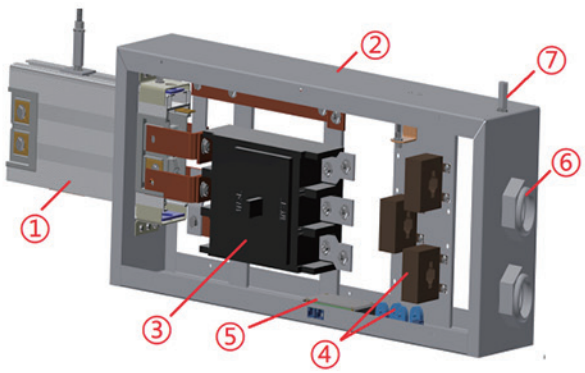
- 一体式设计，采用连接器即可与母线干线连接；
- 多种配置可选（断路器、避雷器、监测模块、智能仪表等）；
- 可按需设置进线及操作方式。

Entry box

One-piece design, connected to the busbar trunk with a normal joint pack.

Alternatively variety of configuration (circuit breakers, surge arresters, monitoring module, intelligent meters, etc).

Set the mode of cable incoming and operation as needed.



①	母线	Busbar
②	箱体	Entry box
③	断路器	Circuit breaker
④	电流互感器	Current transformer
⑤	监测模块	Monitoring module
⑥	电缆护套	Cable sheath
⑦	吊装卡件	Suspension clamp

始端箱产品编码 Product code of entry box

ML□-S□A□□-□

- 100-100A
- 160-160A
- 200-200A
- 250-250A
- 320-320A
- 400-400A
- 630-630A
- 直流 D
- 交流 A

- 1 配置断路器 Configured with circuit breaker
- 2 配置断路器、监测模块 Configured with CB(circuit breaker) and monitoring module
- 3 配置断路器、避雷器 Configured with CB and arrester
- 4 配置断路器、监测模块、智能仪表 Configured with CB, monitoring module and smart meter
- 5- 配置断路器、监测模块、避雷器 Configured with CB, monitoring module and arrester
- 6- 配置断路器、监测模块、避雷器、智能仪表 Configured with CB, monitoring module, arrester and smart meter
- *- 其它非标配置 Other non-standard configuration

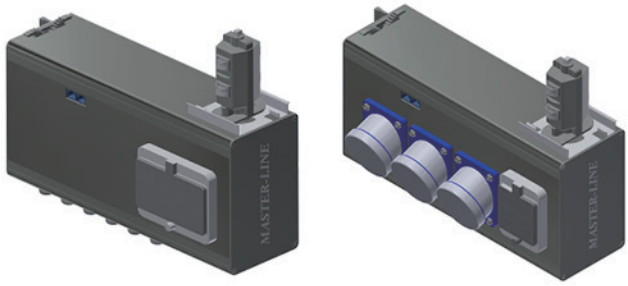
- T 顶部进线 T-Top entry
- S 侧面进线 S-Side entry

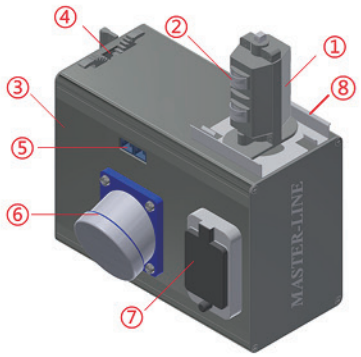
- N 内部操作 N-Internal operation
- H 外部手柄操作 H-External handle operation

主要单元 | Major unit

插接箱

- 铝合金 / 工程塑料复合箱体，强度高、重量轻；
- 高弹高导铍铜接电端子，接触点应力持久，温升低；
- 全电参量 + 四点温度监测，可对系统运行状态进行实时监控和预警；
- 工业连接器馈出，快速便捷；
- 单回路、三回路、六回路可选，满足各种需求；
- 配置防错相定位板，保证插接箱与母线相序自对应；
- 快速锁紧机构，安装及更换更快捷。





①—插接装置	Plug device
②—接电端子	Plug device
③—箱体	Tap-off box
④连锁机构	Interlock mechanism
⑤通讯端口	Communication port
⑥工业插座	Industrial socket
⑦微断保护罩	Protection cover for micro-circuit breaker
⑧定位板	Positioning plate

Tap-off box

Aluminum alloy/engineering plastic composite box, high-strength and light-weight;

High elastic and conducting electrical terminals made with beryllium-copper, with the performance of long-lasting contact stress and low temperature rise;

Full electric parameter + four-point temperature monitoring, real-time monitoring and early warning of system operating status;

Feed out from industrial joint pack quickly and easily;

Single, triple and six loops are available to meet multiple needs;

Configure with anti-misalignment positioning plates, to ensure that the phase sequence of tap-off box and busbar automatically corresponded;

Fast locking mechanism makes installation and replacement quicker and easier.

插接箱产品编码 Product code of tap-off box

ML□-T□ A □ □ □ * □

- 010-10A
- 016-16A
- 020-20A
- 025-25A
- 032-32A
- 040-40A
- 050-50A
- 063-63A
- 080-80A
- 100-100A

直流 D
交流 A

- 1 单回路 Single loop
- 3 三回路 Triple loops
- 6 六回路 Six loops

- F 前板插座馈出 Outlet from front socket
- B 底部插座馈出 Outlet from bottom socket
- C 底部线缆馈出 Outlet from bottom cable

- 1 智能监测型 Intelligent monitoring type
- 0 普通型 Standard type

- Y 有线 Wired
- N 无线 Wireless

主要单元 | Major unit

连接器

- 铝合金型材配合工程塑料，精致美观；
- 高强铝合金型材连接板保证段间可靠机械连接的同时，确保外壳的电气连续性；
- 无需专用工具，力矩扳手即可完成连接；
- 导体连接直观可靠，方便检修。

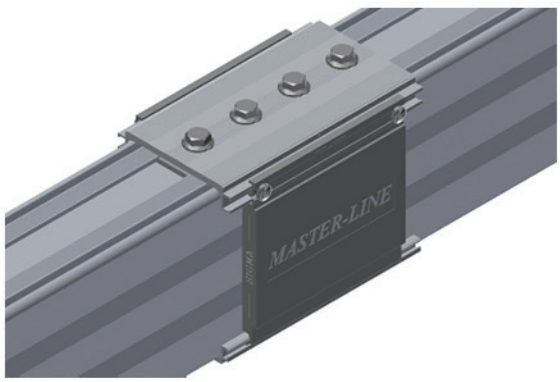
Joint pack

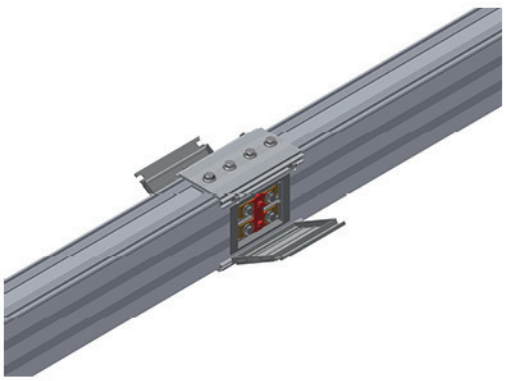
The appearance parts are made of aluminum alloy profiles and engineering plastics, which are exquisite and aesthetic;

Connecting plates made of high-strength aluminum alloy ensure reliable mechanical connection and electrical continuity of enclosures.

Connection can be completed only by torque wrench, without any special tools.

The connection of conductors are intuitive and reliable, also easy for maintenance.





工程定制化方案 | Customized solutions

每两列机柜两路电源

- 节约 50%UPS 输出回路；
- 节约 50% 母线始端箱；
- 增加过道母线、利用过道空间；
- 母线容量加大；
- 适用于单列机柜少于 10 台的布局。

Two power supplies each two-row of cabinets

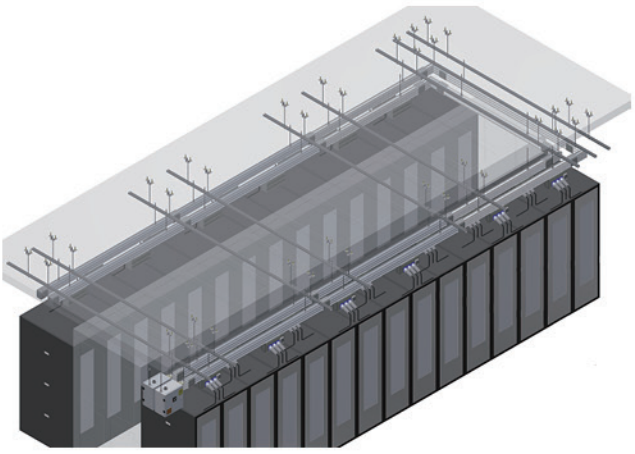
Save half of UPS output loop;

Save half amount of busbar entry boxes;

Increase the busbar on the aisle and occupy the aisle space;

Increase the capacity of busbar;

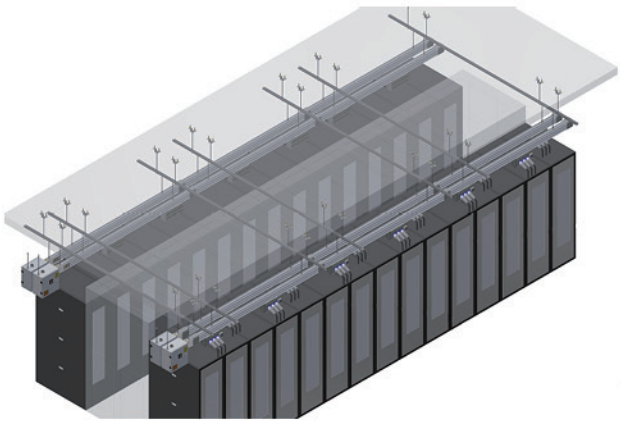
Suitable for the layout of cabinets less than ten.



工程定制化方案 | Customized solutions

每一列机柜两路电源

- 标准配置，仅占用各自柜顶空间；
- 单条线容量较小；
- UPS 输出回路配置清晰，方便管理；
- 适用于单列机柜 10 台以上的布局。



Each row of cabinets has two power supplies

Standard configuration, occupying only the above space of the respective cabinet.

The capacity of single line is small.

The configuration of UPS output loop is clear and easy for management.

For the layout of cabinets more than ten.

插接箱一对三供电

- 插接箱数量为机柜数量的 2/3；
- 对于 220V 单相机柜，理论上三相平均分配；
- 单个插接箱检修影响 3 台机柜的供电。
- 属常规标准方案，性价比较高。

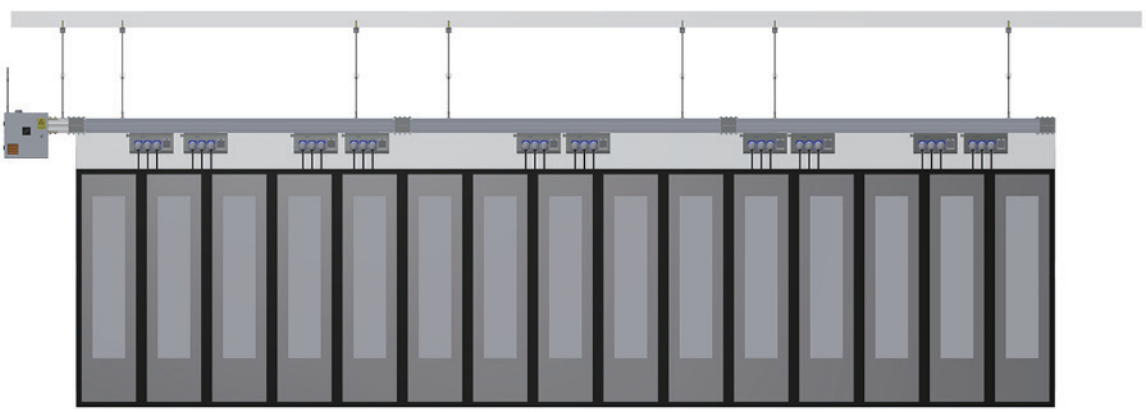
Tap-off box provides one-to-three power supply

The number of tap-off boxes is 2/3 times of number of cabinets;

For a 220V single phase cabinet, each phase of three gets average distribution theoretically;

The power supply for three cabinets is affected by maintenance of one tap-off box.

Standard solution which is cost-effective.



插接箱一对一供电

- 插接箱数量为机柜数量的 2 倍；
- 可根据需要配置调相开关，方便调整三相平衡；
- 单个插接箱检修仅影响单台机柜的供电。
- 属高配型方案。

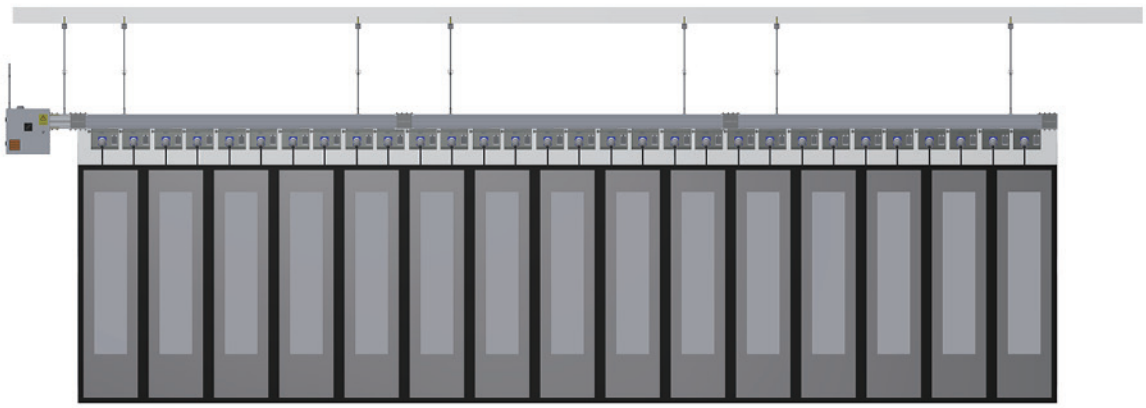
Tap-off box provides one-to-one power supply

The number of tap-off boxes is 2 times of number of cabinets;

Phase adjustment switch can be configured as needed to adjust the three-phase balance;

The power supply for only one cabinet is affected by maintenance of one tap-off box.

It' s the Solution with high configuration.



插接箱一对六供电

- 插接箱数量为机柜数量的 1/3；
- 对于 220V 单相机柜，理论上三相平均分配；
- 单机柜容量不超过 6KW；
- 单个插接箱检修影响 6 台机柜的供电。
- 属经济型方案。

Tap-off box provides one-to-six power supply

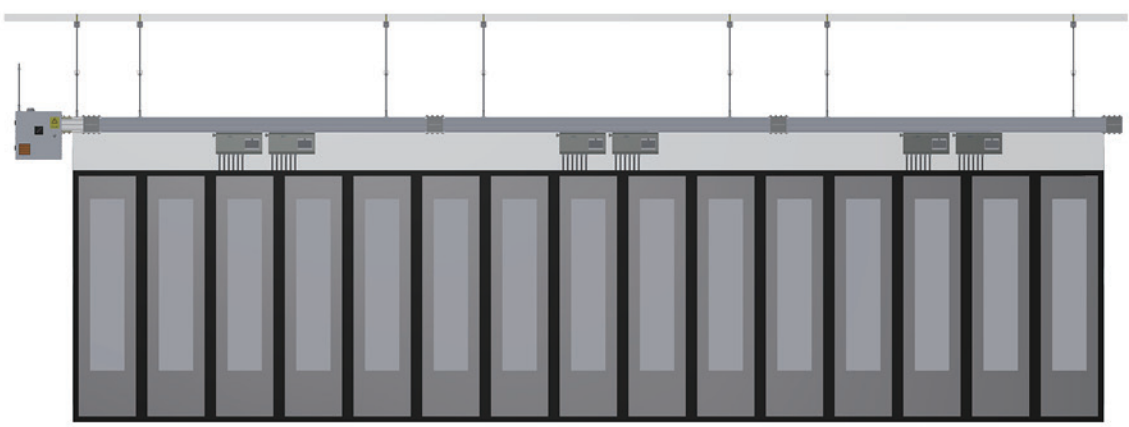
The number of cabinets is 3 times of number of tap-off boxes;

For a 220V single phase cabinet, each phase of three gets average distribution theoretically;

The capacity of single cabinet does not exceed 6KW;

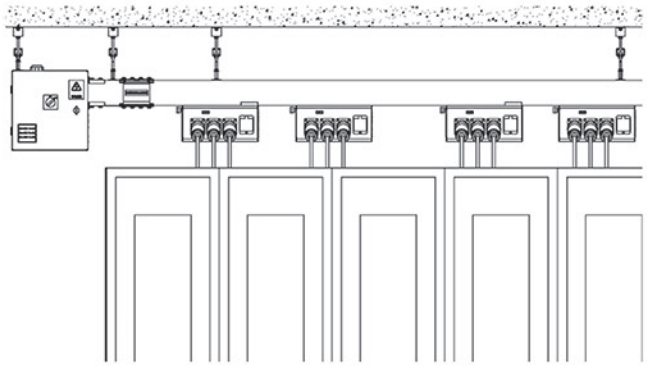
The power supply for six cabinets is affected by maintenance of one tap-off box.

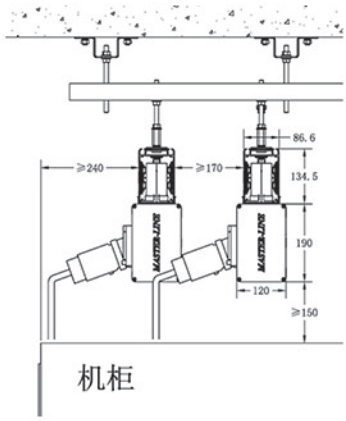
It is an economical solution.



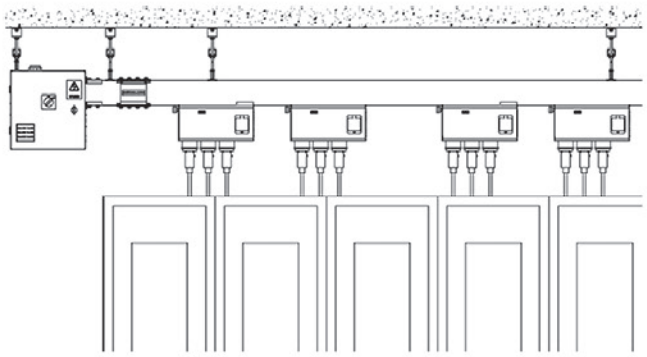
现场安装空间需求 | Installation space requirements on-site

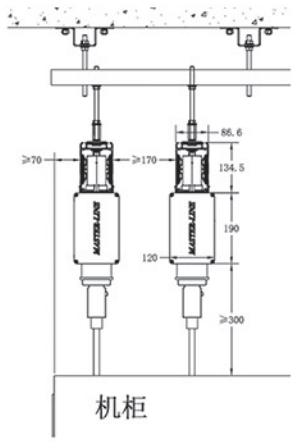
工业插座前出线
Cable outlet in front of industrial



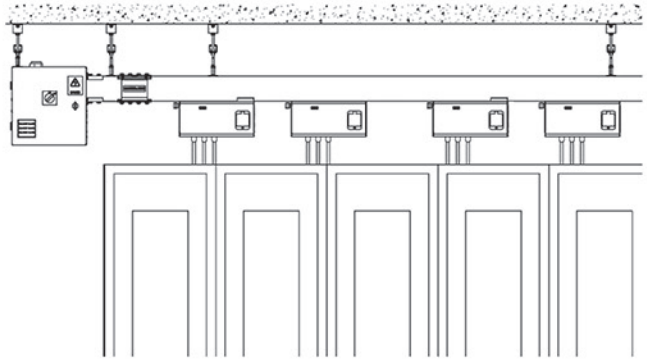


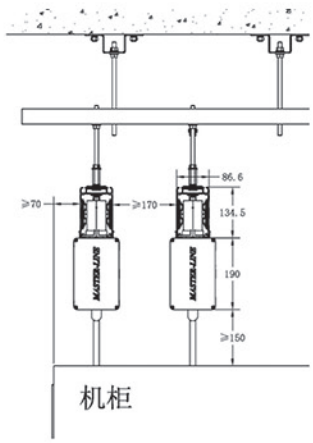
工业插座下出线
Cable outlet under industrial socket





工业连接器柜顶连接
Industrial joint pack connection above the top of cabinet





企业资质 | Enterprise qualification



CERTIFICATE OF REGISTRATION

Quality Management System Certification Certificate

Certificate No.: F04326Q00853R002

Mega Technology (ZhenJiang) Co.,Ltd.

Unified Social Credit Code:91321100689638409 1

Registration address:No.36, Ganglong Road, Economic Development Zone, Yangzhong, Jiangsu Province

Production address:No.36, Ganglong Road, Economic Development Zone, Yangzhong, Jiangsu Province

The Quality Management System Has Been Assessed and Complying with

GB/T19001-2016/ISO9001:2015

Quality Management Systems — Requirements

Certification Scope:

Production and Sales of Busway, High-Low Voltage Switch Equipment

Date of Issue: 29 June 2026 | Date of Expiry: 28 June 2029 | Date of Initial Certification: 29 June 2020

Signatures:

Guardian Independent Certification Ltd



ISO14001 CERTIFICATION

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION

MEGA TECHNOLOGY(ZHENJIANG) CO., LTD

Registration No:	39324E2440R0M
Organization Code:	91321100689638409 1
Registration Address:	No. 36 Ganglong Road, Economic development zone,Yangzhong,JiangSu province,China P.C 212210
Business Address:	No. 36 Ganglong Road, Economic development zone,Yangzhong,JiangSu province,China P.C 212210
In conformity with:	GB/T 24001-2016/ISO 14001:2015
This certificate is covering the following scope:	Environmental management activities related to the design and assembly of bus ducts, high and low voltage switchgear (operation based on mandatory product self-declaration for qualification licensing), and the sales of cable trays
IssueDate:	2024-11-07 Expiry Date: 2027-11-06
First Issue Date:	2024-11-07 Change Date: 2025-10-17

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C245-M

Beijing Zhongkuanzhilian International Certification Co Ltd.



ISO45001 CERTIFICATION

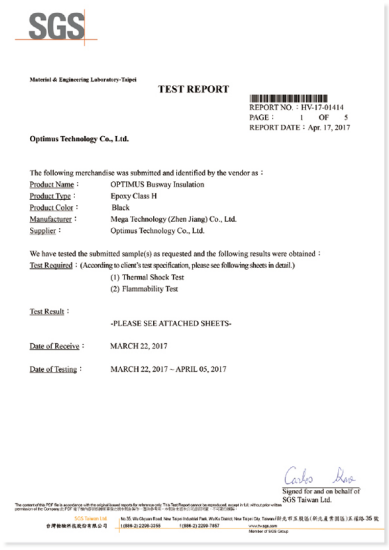
OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATION

MEGA TECHNOLOGY(ZHENJIANG) CO., LTD

Registration No:	39324S2352R0M
Organization Code:	91321100689638409 1
Registration Address:	No. 36 Ganglong Road, Economic development zone,Yangzhong,JiangSu province,China P.C 212210
Business Address:	No. 36 Ganglong Road, Economic development zone,Yangzhong,JiangSu province,China P.C 212210
In conformity with:	GB/T 45001-2020/ ISO 45001:2018
This certificate is covering the following scope:	Occupational health and safety management activities related to the design and assembly of bus ducts, high and low voltage switchgear (operation based on mandatory product self-declaration for qualification licensing), and the sales of cable trays
IssueDate:	2024-11-07 Expiry Date: 2027-11-06
First Issue Date:	2024-11-07 Change Date: 2025-10-17

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C245-M

Beijing Zhongkuanzhilian International Certification Co Ltd.



SGS

Material & Engineering Laboratory-Taipei

TEST REPORT

REPORT NO. : HV-17-01414

PAGE : 1 OF 5

REPORT DATE : Apr. 17, 2017

Optimus Technology Co., Ltd.

The following merchandise was submitted and identified by the vendor as :

Product Name : OPTIMUS Busway Insulation

Product Type : Epoxy Class H

Product Color : Black

Manufacturer : Mega Technology (Zhen Jiang) Co., Ltd.

Supplier : Optimus Technology Co., Ltd.

We have tested the submitted sample(s) as requested and the following results were obtained :

Test Required : (According to client's test specification, please see following sheets in detail.)

(1) Thermal Shock Test

(2) Flammability Test

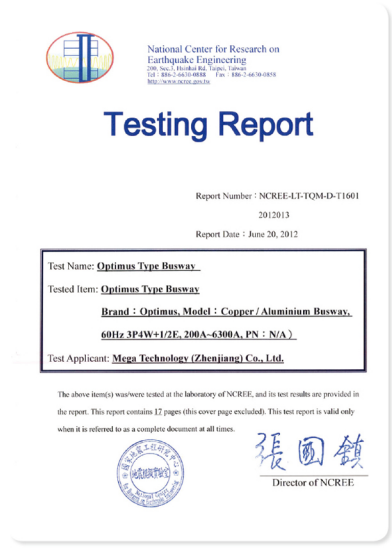
Test Result :

-PLEASE SEE ATTACHED SHEETS-

Date of Receive : MARCH 22, 2017

Date of Testing : MARCH 22, 2017 ~ APRIL 05, 2017

Signed for and on behalf of SGS Taiwan Ltd.



National Center for Research on Earthquake Engineering

200, Sec.3, Hsinhai Rd., Taipei, Taiwan

Tel : 886-2-6630-0888 Fax : 886-2-6630-0858

http://www.ncree.gov.tw

Testing Report

Report Number : NCREE-LT-TQM-D-T1601

2012013

Report Date : June 20, 2012

Test Name: Optimus Type Busway

Tested Item: Optimus Type Busway

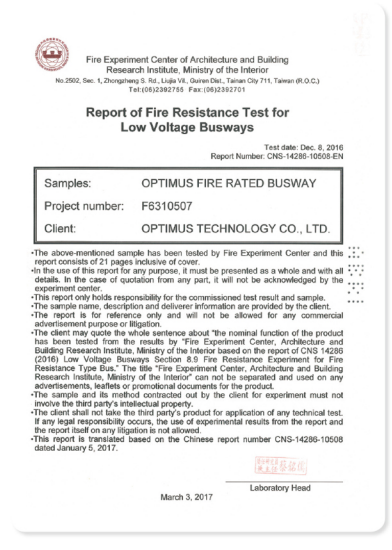
Brand : Optimus, Model : Copper / Aluminium Busway,

60Hz 3P4W+1/2F, 200A~6300A, PN : N/A)

Test Applicant: Mega Technology (Zhenjiang) Co., Ltd.

The above item(s) was/were tested at the laboratory of NCREE, and its test results are provided in the report. This report contains 17 pages (this cover page excluded). This test report is valid only when it is referred to as a complete document at all times.

Director of NCREE



Fire Experiment Center of Architecture and Building Research Institute, Ministry of the Interior

No.2502, Sec. 1, Zhongzheng S. Rd., Liujia Vil., Guinen Dist., Tainan City 711, Taiwan (R.O.C.)

Tel:(06)2392755 Fax:(06)2392701

Report of Fire Resistance Test for Low Voltage Busways

Test date: Dec. 8, 2016

Report Number: CNS-14286-10508-EN

Samples:	OPTIMUS FIRE RATED BUSWAY
Project number:	F6310507
Client:	OPTIMUS TECHNOLOGY CO., LTD.

•The above-mentioned sample has been tested by Fire Experiment Center and this report consists of 21 pages inclusive of cover.

•In the use of this report for any purpose, it must be presented as a whole and with all details. In the case of quotation from any part, it will not be acknowledged by the experiment center.

•This report only holds responsibility for the commissioned test result and sample.

•The sample name, description and deliverer information are provided by the client.

•The report is for reference only and will not be allowed for any commercial advertisement purpose or litigation.

•The client may quote the whole sentence about "the nominal function of the product has been tested from the results by "Fire Experiment Center, Architecture and Building Research Institute, Ministry of the Interior based on the report of CNS 14286 (2016) Low Voltage Busways Section 8.9 Fire Resistance Experiment for Fire Resistance Type Bus." The title "Fire Experiment Center, Architecture and Building Research Institute, Ministry of the Interior" can not be separated and used on any advertisements, leaflets or promotional documents for the product.

•The sample and its method contracted out by the client for experiment must not involve the third party's intellectual property.

•The client shall not take the third party's product for application of any technical test. If any legal responsibility occurs, the use of experimental results from the report and the report itself on any litigation is not allowed.

•This report is translated based on the Chinese report number CNS-14286-10508 dated January 5, 2017.

March 3, 2017

Laboratory Head



ATTESTATION OF

CERTIFICA

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ATTESTATION OF CONFORMITY

生产、检测设备 | Production and testing equipment



- 温升测试机 Temperature rise testing machine
- 耐压测试仪 HV testing machine
- 拉力测试机 Tensile testing machine
- 硬度测试仪 Hardness tester
- 接地电阻测试仪 Ground resistance tester
- 直流电阻测试仪 DC resistance tester

生产、检测设备 | Production and testing equipment












- 多工位数控冲床 CNC punching machine
- 激光切割机 Laser cutting machine
- 数控剪板机 CNC shearing machine
- 数控折弯机 CNC bending machine
- 气动冲床 Pneumatic punch machine
- 四柱液压机 Four-column hydraulic pressing machine
- 铜排切割机 Copper bar cutting machine
- 铝型材切割机 Aluminum profile sawing machine
- 密集母线自动装配流水线 Automatic assembly line for compact busbar system
- 自动剥线机 Automatic wire stripper



服务体系 | Service System

一切围绕客户...
All for our customer...

前期考察 Factory Vist

用户可以派员到我公司进行考察，以确定产品的型号，我公司为此提供一切便利。

In order to ensure the demanded busway type, customers can visit our factory at anytime. We are pleased to do all the arrangement.



技术咨询 Technical Consultant

为用户的选型提供一切服务，并且详细介绍每一种产品的特点，为用户提供最满意的产品是我们的服务宗旨。

We will proride technical consultant service including detailed system introduction. To provide the most satisfied product is our service guideline!



技术交底 Technical Clarification

在达成最终购买协议前，我公司会对用户所选产品进行更加详细的技术说明，使用户对产品的特点及技术参数有更加直观的了解。

Before the final agreement is achieved, a detailed technical description of the chosed product will be done to make the feature and technical parameter clearer.



培训服务 Training Service

我们将为您提供母线产品的技术培训，以了解产品的技术特点和优势，我们也为您提供母线安装技术培训，以掌握母线槽的安装方法，同时，我们也为您的运维人员提供母线运行技术培训，以掌握母线的运行维护规则和紧急故障处理方法。

We will provide professional training to explain the product features and advantages, including installation procedure and method. Meanwhile, busbar operation and maintenance training is available to present the operation and maintenance regulation and faults disposal.



解客户后顾之忧...
Solutions to customer any menace from the "rear"

监督生产 Production Supervise

达成购买协议后，用户可以派员来我公司进行监督生产和检测，在设备生产完毕阶段，通知用户来工厂验货。

After the final agreement has been achieved, customers can supervise and test the ordered product. Once the production comes to an end, customers will be informed to inspect products at workshop.



现场服务 Service on site

安装期间，我公司会派员常驻项目工地提供安装指导，并且在安装结束后进行现场通电调试。

During the installation, technical engineers will conduct installation instruction on the project site and also commission after electrifed.



产品维护 Product Maintenance

我们能提供完善的维护服务，由售后服务中心派遣由经验的技术人员进行维护工作。

Perfect repair service is available by sending out experienced engineers when requested .



回应需求 Complaint Response

当您咨询有关我们产品及服务时，需要您将有关需求告知我们，我们将在两个小时内给您一个满意的答复。

Any complains about our products and service from customer are supposed to be responsed within 2 hours.



注意事项 Notes

安全警告
Warning

母线槽系统属于低压成套电气设备，请严格按照低压电气操作规范执行；

母线槽在安装前中后，都应防止水、盐、混凝土等其它杂物的侵入和腐蚀；

在没有完全安装结束前，户外设备不具备防风雨的能力，应采取防雨及防暴晒措施；

禁止坐、站立或在设备上行走。

1. Busway system belongs to low voltage whole-set electrical equipment, please handle it per the instruction of electrical operation specification.
2. Before, during or after installation, busway should be protected from the ingress or corrosion of water, salt, concrete or other foreign matter.
3. Before the complete installation, care should be taken to prevent rain and storm for outdoor device.
4. Sit, stand or walk on the busway is strictly forbidden.

装卸
Loading

全过程防止潮湿、雨淋、化学物质的侵入；

小心装卸，避免母线槽扭曲、碰撞和重压；

装卸时，必须在中心起吊，不可在地上或槽体之间拖拉；

装卸工具建议使用叉车较为方便。

1. Avoid moisture, rain or chemical substances.
2. While loading, avoid stress on the busway or collision.
3. When lifting the busway, make sure the busway weight is distributed and balanced, Never drag busway on the ground.
4. Use a forklift to handle the busway.

储存
Storage

防止灰尘和液体侵入，并远离通道；

不要储存在室外，避免阳光暴晒；

母线槽应堆放在等高的木块上并且隔开，最多不超过5层；

安装前不要将包装全部拆除。

1. Avoid dust and liquid, away from the aisle.
2. Never put it outdoor, avoid direct sun exposure.
3. Busway should stack on the wood block and keep apart; no more than five pieces should be stack on the top of each other.
4. Do not remove the whole packing material before installation.

使用
Usage

检查母线槽系统的相序，应该正确一致；

确认母线槽系统不受液体、固体的侵入；

保证母线槽的支架安装稳固、螺栓连接可靠；

测量母线槽系统的绝缘电阻，不得低于0.4MΩ ；

母线槽开始送电时，不得带负载；

检查总的负载电流不得超过主母线电流或设计电流。

1.Check the phase sequence of busbar and slot system should be correct and consistent.
2.Confirm that the bus channel system is not invaded by liquid or solid.
3.Ensure that the bracket of busbar groove is installed stably and the bolt connection is reliable.
4.Measuring the insulation resistance of bus-bar system shall not be less than 0.4M.
5.Bus bar shall not be loaded when power transmission begins.
6.Check that the total load current shall not exceed the main bus current or the design current.

维护
Maintenance

必须切断母线槽电源，才能进行维护保养工作

使用三个月后应停电检查螺栓紧固情况，每年全面检查

出现异常情况请立即断电检查，确定情况后再作处理

必须消除影响母线槽正常运行的不利因素，如滴水、粉尘、热源等

1.Power should be cut off before maintaining the busway system.
2.Check the tightness of bolt after first use of 3 months, and then check it annually.
3.Cut off power if any abnormal condition occurs, and then find out the reasons and take measures.
4.Keep the system away from the adverse factors, such as water, powder, and heat source.



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传真: +86-511-88131655
电邮: salesmegachina@optimus-busduct.com
网址: www.optimus-busbar.com

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Website: http: //www.optimus-busbar.com