

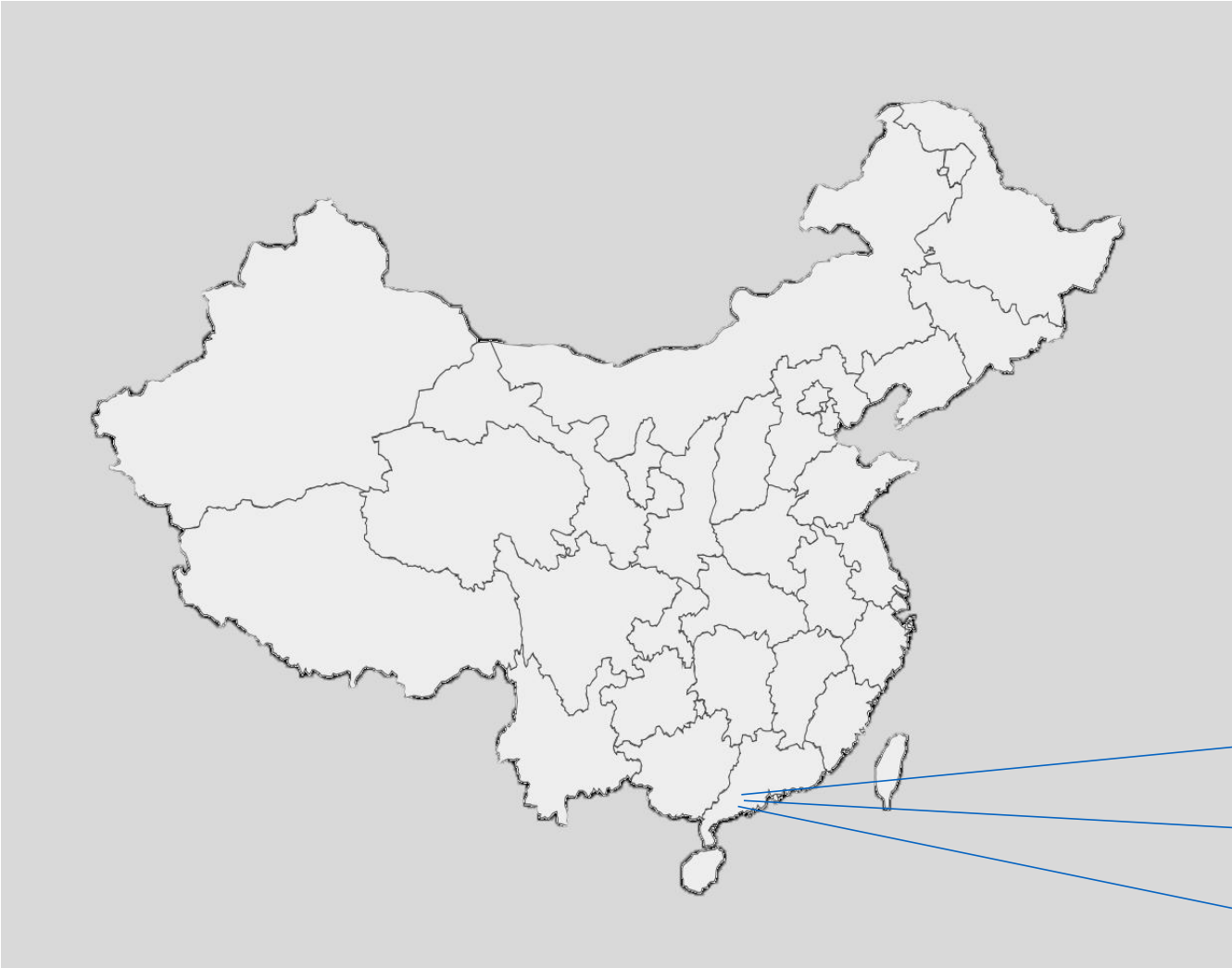


Shenzhen Modiary Co., Ltd.

Focus on high-efficient and safe charging solutions for li-ion battery

Since 2006





Company name	Shenzhen Modiary Co., Ltd.
Founded	2006-07-07
Capital	9.03 million USD / 8.24 million EN
Factory area	15000m² (plus DG plant)
Staff	400+
R & D team	60+
Patents	40+ Patents
certificates	350+ certificates
Quality management	ISO9001-2015
Production management system	MES
Production capacity	more than 3million units / year
Revenue	50 million USD / year

- Dongguan

Shenzhen

HongKong
- Manufacturing base
 Headquarter and R&D center
 Import and export business

1、Charger



60W-300W

Plastic housing



300W-2000W

Metal housing



PCBA

No housing

2、Charging equipment

Charging and swapping cabinets



Charging cabinet



Charging and swapping cabinets

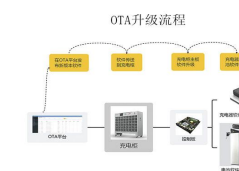


Smart charging cradle

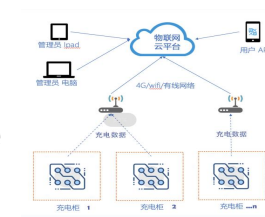
Remote charging management platform



Operations management platform

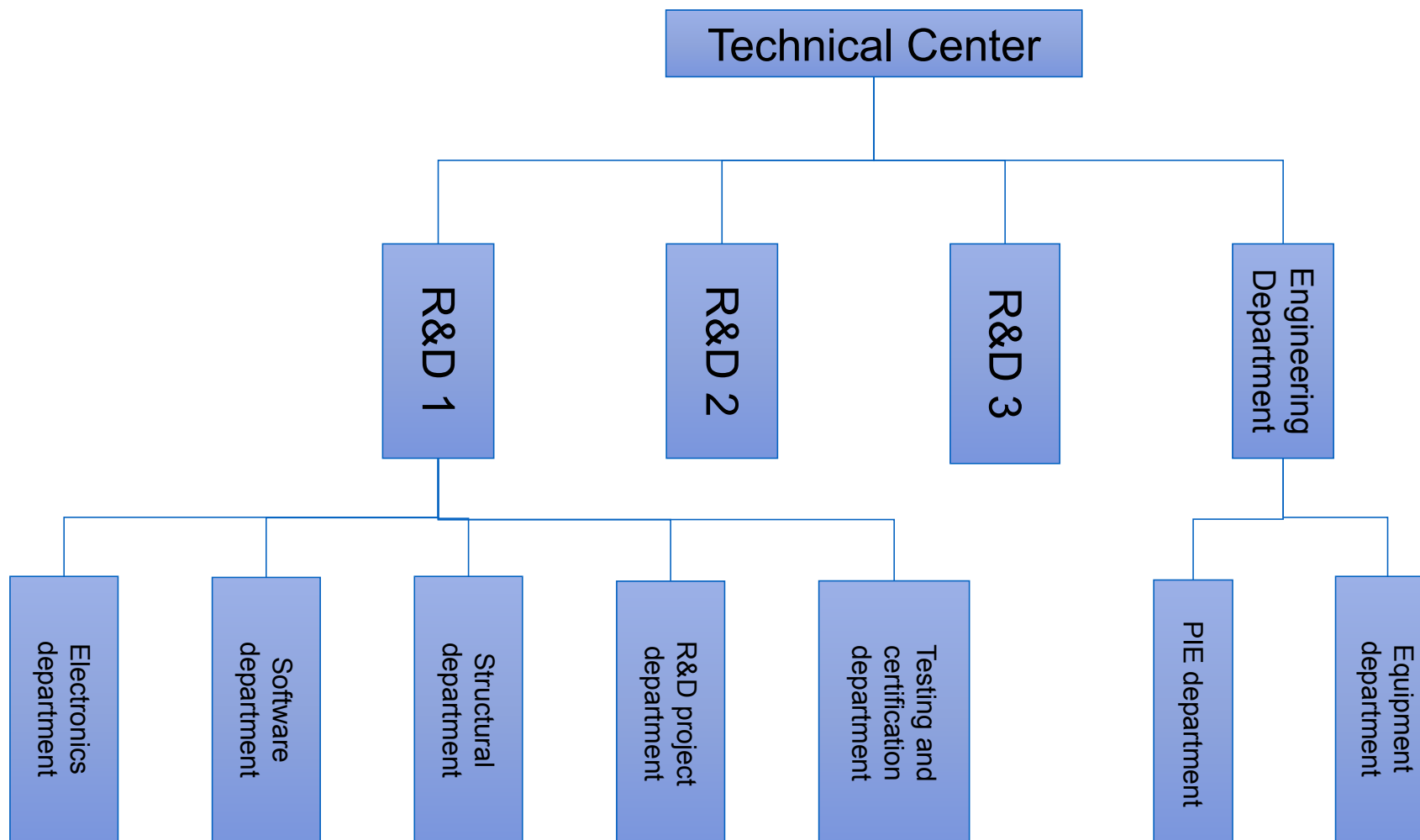


OTA platforms



Device management platform

1、R&D organizational structure



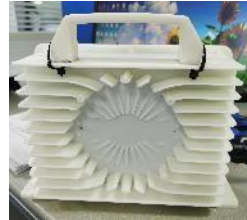
2、R&D test verification equipment



EMS shielded room test



3D modeling, printing and finished products



Salt spray testing machine



Plugging force testing machine



Three-box type hot and cold shock test box



Swing tester



Vibration testing machine



High temperature testing machine



Multi-channel data logger



Constant temperature and humidity test chamber



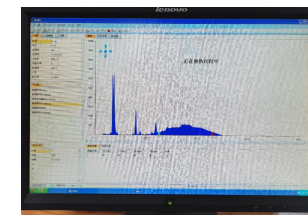
Charge curve recorder



ESD equipment



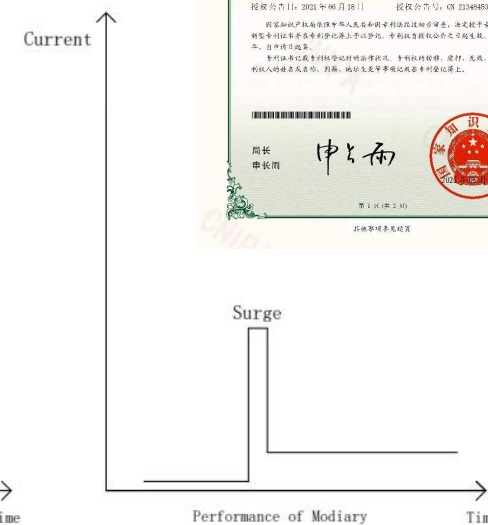
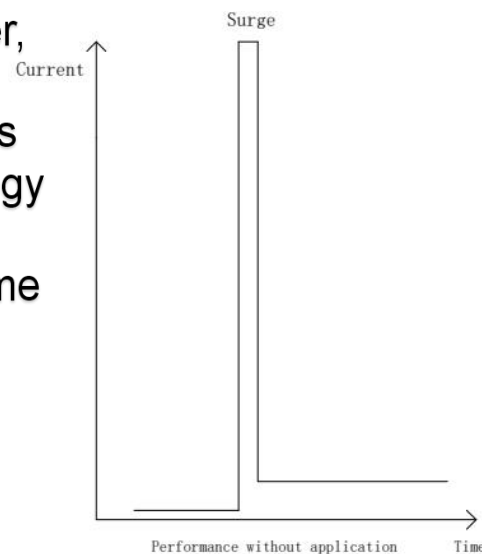
RoHS test machines



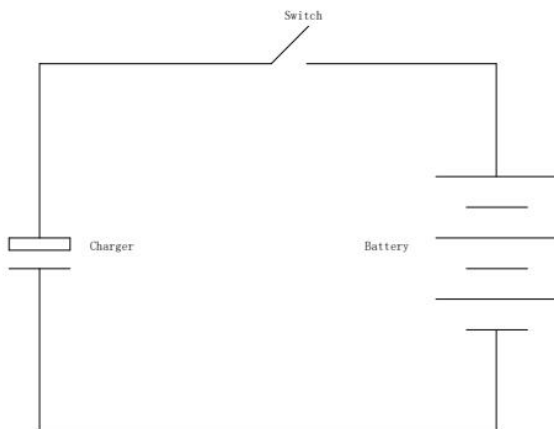
The key feature of MDA charger technology is the "**CaRes**" for the lithium battery throughout the full charging process. It adopts a systematic charging solution, realizes a safer charging experience, and prolongs the cycle life of the battery.

1、The first domestic patent of surge suppression technology in chargers

The technology solves the problem of instantaneous peak surge current caused by hardware and inherent reasons when the battery is connected to the charger, and greatly improves the protection of the BMS and battery cells. Compared with the solution without this technology, the charging scheme using this technology can reduce the peak value of the current surge by 80%, which can greatly improve the safety and lifetime of the battery.



2、 Multi-levels protection by hardware and software

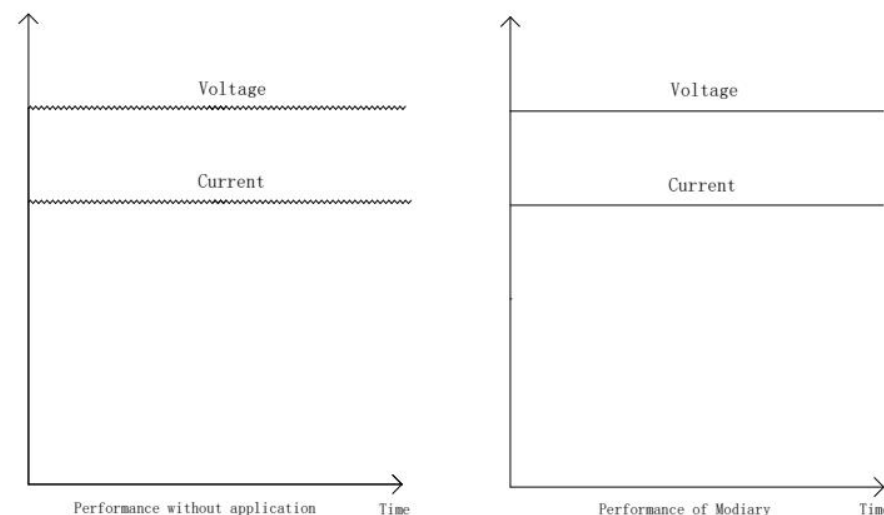


Through the multi-level protection circuit of hardware and software, the charging circuit completely shut down the charging circuit when the battery is fully charged and in abnormal conditions (such as over-voltage, over-current, reverse-polarity, short-circuit, over-temperature, timeout, etc.) ,so the charging safety is 100% guaranteed.

3、 Accurate 5‰ battery charging voltage management

The full charging voltage accuracy $\leq 5\text{‰}$, voltage ripple $\leq 5\text{‰}$, current ripple $\leq 5\%$, providing safe and super pure charging energy for the battery.

Through the digital adjustment technology, the "stepless speed change" of the voltage and current is realized, the voltage is 0.2V per level, and the current is 100mA per level.



4、 100% smart chargers

Which can actively monitor various states of the battery in real time, and formulate charging strategies based on real-time data, and take the lead in realizing the automatic calibration function of charging parameters, including voltage, current, temperature, time, etc.

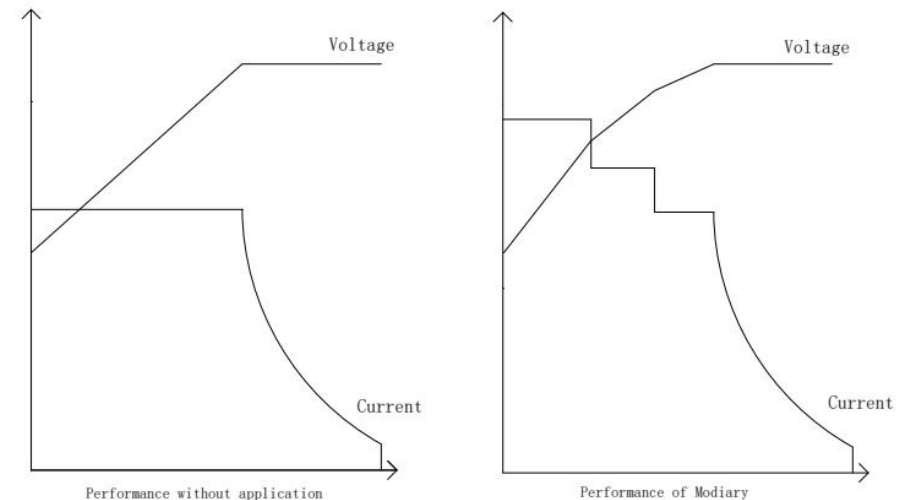
5、 Software upgrade, easy to operate



It is the first to realize the firmware upgrade of the charger from the charging interface, which greatly improves the upgrade and optimization capabilities of the product.

6、 Turbo Boost Mode increases charging speed

In the stage of low battery capacity, the charging current is increased to 1.5 times the rated current, which safely and effectively shortens the charging time.



The key feature of MDA charger technology is with an independent platform for huge data control of products, make the charging cabinets visual and easy to control, easier to use and better regulated.

1、 IOT device properties

Charging cabinet series products have the attributes of IOT devices. Two-way data transmission can be carried out with the cloud platform through WIFI/4G/ Bluetooth and other communication networks, so as to realize remote management of the device side and the business side.



2、 OTA upgrade management



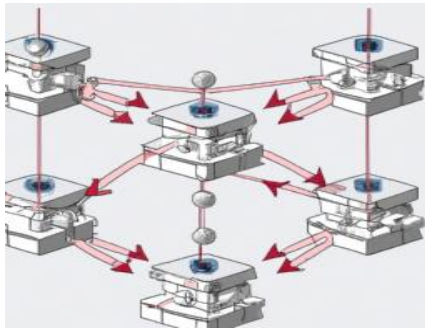
All charging cabinet devices have the function of OTA upgrade management. Through platform configuration, not only can the cabinet control software of the charging cabinet be upgraded remotely, but also the chargers and lithium batteries used in the cabinet can be upgraded, thus achieving remote maintenance.

3、CAN bus communication architecture

The communication architecture in the charging cabinet adopts CAN bus topology, which has advantages in high-speed data transmission speed, reliability and anti-interference.



4、Multi-level protection mechanisms



Multiple protection mechanisms for the whole process from mains access, to charger, and finally battery. The failure of a single charging unit will not affect the normal operation of other charging unit. The isolation design of the charging unit prevents the spread of faults to the greatest extent.

5、Data Analysis

It can provide charging information, which is conducive to performance evaluation of chargers and charged batteries. User information can be provided to assist in operational data analysis and optimize charging strategies.



Global certification : CB

CB

North America



Europe



Australia



Japan & Korea



Taiwan, China



Chinese mainland



1、Production Department



Production
Department



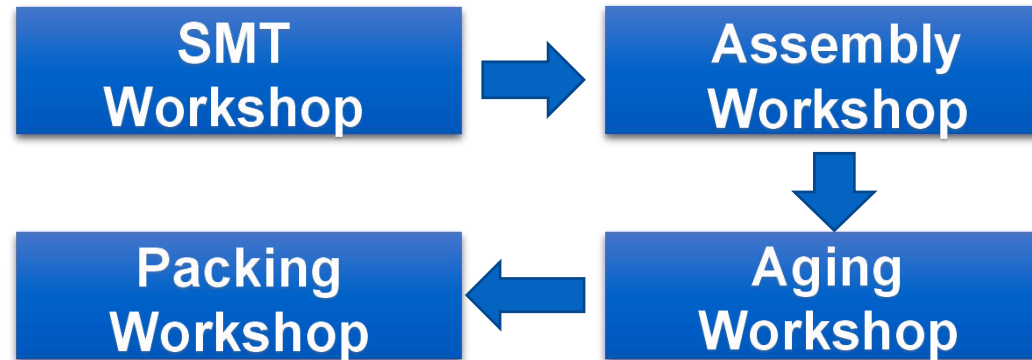
Wave Soldering



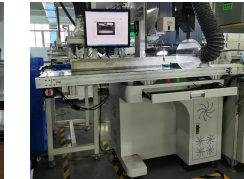
Sticker



ATE Test



Packing Workshop



Laser Carving



Data Summary



Aging Test

2、 Quality Control



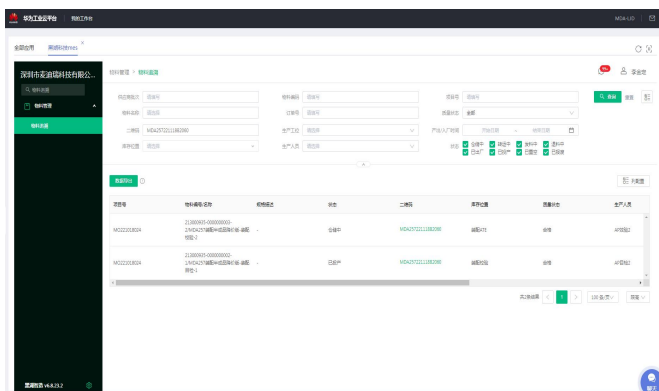
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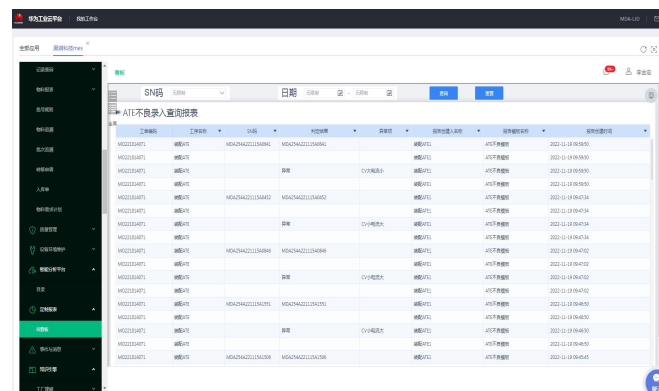


oqc

2、 Quality Control



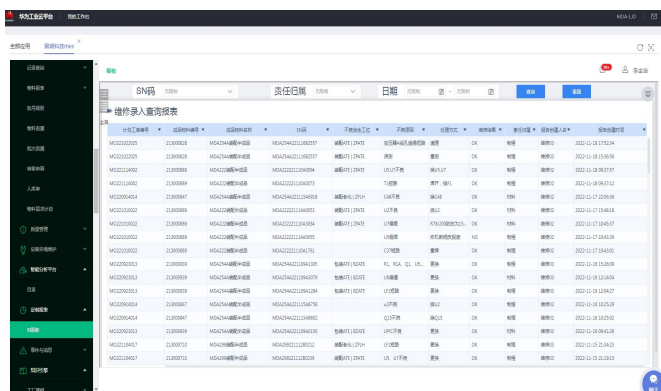
Material traceability report



ATE bad record query report



Workshop production capacity statistical report



Maintenance entry query report



SN test data - pass, fail, difference

MES

The manufacturing process can be controlled

Product quality can be traced



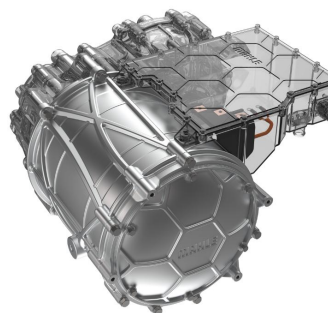
Modiary chargers are widely used in the electric two-wheelers. Oriented by customer's demands, we can provides customers with customized design and production services. At present, we have provided high-quality product solutions for many domestic and overseas customers, such as LIME, SPECIALIZED, DECATHLON, ORBEA, MERIDA, ECORIDE etc.





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MAHLE



POWER YOUR LIFE

BAFANG



brose
Excellence in Mechatronics





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Greenway
致力于世界一流的OEM/ODM服务供应商

SMP

BMZ
THE INNOVATION GROUP

PHYLION

DARFON

**FORSEE
POWER**



Modiary chargers are widely used in cleaning equipment, garden tools and other scenarios. Oriented by customer's demands, we can provide customers with customized design and production services. At present, we have provided high-quality product solutions for many domestic and overseas customers, such as TOPBAND, LEXY, STIGA and NUMATIC.





Modiary has increased its R&D investment and set up a specialised R&D team. Relying on the Internet of Things and charging management technology, it provides centralized and distributed charging services for the business group purpose and end customers users of two wheeled electric vehicles. We have provided quality products to many customers such as Meituan, LIME, VOLTZ, etc.





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Thanks

Look forward to building long-term partnership with you!

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www.mdacharger.com