

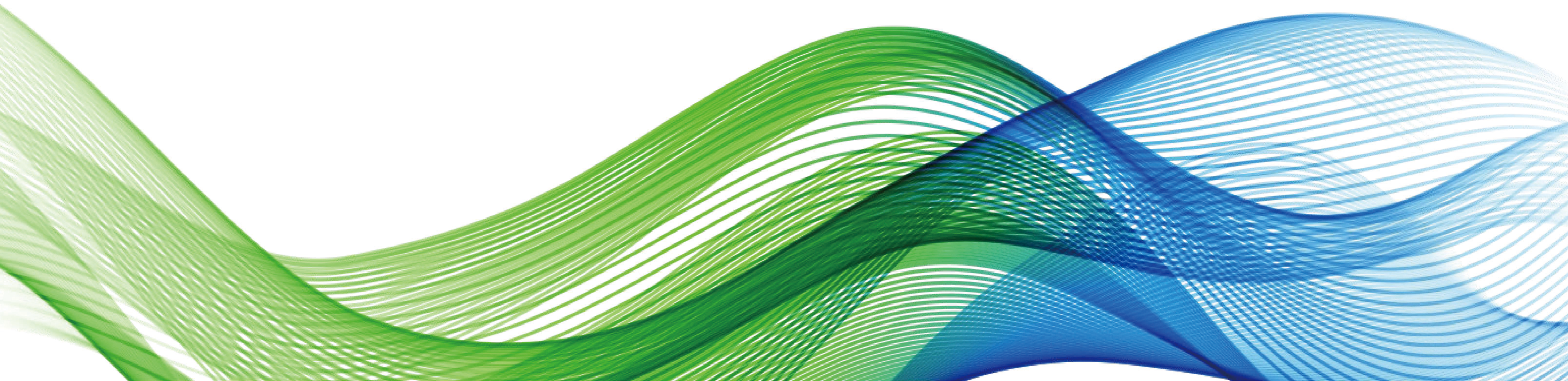


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智慧芯 守护
熄火亦从容

SmartCore Inside, Power On Engine Off !





COMPANY PROFILE ●●●

Xiamen 9Sun Solar Technology Co., Ltd is located in Xiamen, China's beautiful seaside city,We specialize in design, research and development, producing and sales of solar PV related products. We have an experienced and professional team in research and design of photovoltaic products, persist in the principle of "Quality-oriented" and "integrity first", and provide customers with efficient, energy-saving, high-quality products and professional service in a timely manner. A full range of solar mounting systems, including solar ground mounting system, solar roof mounting system, solar farm mounting system, solar carport mounting system, solar ground screw, solar fence, solar cable and so on, are provided by 9Sun Solar.



SMART START LITHIUM&SODIUM BATTERY EXPERT



01	Vision: Advanced technology enables a green tomorrow	02	Mission: Terminated Lead-Acid in auto industry
Establish	In July 2016, it was headquartered in Haicang District, Xiamen, with a registered capital of 10 million yuan.		
Qualification honor	It is a core member of "Double Hundred Talent" enterprise, Internet of Vehicles Industry Alliance and Logistics Association in Xiamen City.		
Team size	The R&D and production team has more than 30 people, among which senior engineers account for 30%, specializing in lithium battery and vehicle system field.		
Capacity	It has fully automatic laser welding machine, potting machine, etc. The annual production capacity reaches 100,000 sets, covering the whole process of electric assembly, module assembly, BMS integration and finished product testing.		
Customer group	It serves the worlds leading commercial vehicle enterprises (Scania, Volvo, Sany Heavy Industry, etc.) , and also for all passenger car brand and model range from High-end to Low-end.		



Product Presentation

Core product line

12V,24V intelligent starter Lithium & Soduim battery,
The capacity arranges from 20Ah, 25Ah, 50Ah, 70Ah, 100Ah to 230AH, multi-specification, suitable for passenger vehicles, commercial vehicles and special vehicles (such as police cars) and motorcycles,.

Performance highlights

Long life,
Wide temperature range operation (-30℃~60℃), low temperature pulse heating technology ensures that the success rate of start engineer at-20℃ is more than 99%; full power to 30% power lock design, and the standby time after extinguishing is more than 3 months.

Security certificate

It has UN38.3, CE and RoHS certification, is shockproof and drop resistant (1.2m drop test), and has IP67 protection level.

Self-developed BMS system

Technology accumulation: 8 years of iterative research and development, more than 100,000 units have been installed, the first commercial vehicle BMS batch installation.

Core Technology Strategy

01

Dynamic equilibrium technology

The combination of passive and active balancing solves the problem of flat voltage platform of LFP&Soduim and extends the life of battery pack by 20%.

02

Intelligent temperature control

Low temperature pulse heating + high temperature active heat dissipation, the adaptability of the whole scene is improved.

03

Multiple protections

Overcharge/overdis charge/short circuit/overtemperature/voltage monitoring five-fold protection, failure rate <0.1%. core advantage

04

Plug-to-plug compatibility

The same model can be adapted to all models, and the software algorithm can be seamlessly connected to the OBD system.

05

Remote Control

Integrated with Beidou positioning, Bluetooth and 4G modules, support real-time monitoring of battery status by APP and remote control (such as oil cut and anti-theft).





Our value Bring benefits to customer

1. Intelligent power storage	One key to start, never lose power
2. Long service life	2~3 times more than lead-acid batteries
3. Lightweight	20% percent of the original weight
4. Environmental protection	It is completely lead-free, non-toxic, pollution-free and a green environmental protection product
5. Fuel saving effect	Reduce cost and increase efficiency, comprehensive fuel saving between 3 ~ 8%.
6. Long air conditioning use time	Parking and starting are more assured

Verified production models : Passenger car models



Verified production models : Commercial vehicle Model





24V intelligent start battery for vehicles (LFP type: starter)



Product features
Driving safety/service life

- Long life, lithium iron phosphate deep charge and discharge cycle times up to 3000 times
- Advanced/reliable algorithms for safe operation of cells and systems
- Energy saving and lightweight

- Power lock-in
- 30% power is locked, and the power is never cut off
 - Intelligent shutdown to avoid low power supply that causes the vehicle to fail to start
 - Friendly wake-up mode

- Everything is connected
- Bluetooth, 4G, GPS and other Internet of Things modes,
 - OTA timely algorithm iteration
 - Remote vehicle start/shutdown
 - Battery charge and discharge status tracking, remote diagnosis of vehicle related components working status

Product model	CT01-F24135	CT01-F24165	CT01-F24205
Normal voltage	25.6V		
Max charging voltage limit	29.2V		
Max discharge termination voltage	26.0V		
Continuous charging current	≥150A		
Continuous discharge current	≥150A		
Maximum instantaneous current	≥1000A		
Levels of protection	IP67		
Operating ambient temperature	-20℃ ~60℃		
Size	240x175x198		
Weight	4.6kg	6.4kg	7.3kg
Transport	The battery should be packaged into a box for transportation under the condition of temperature-10℃-30℃ and charge less than 60, which is suitable for ordinary transportation vehicles such as automobile, train and ship)		
Optional accessories	Bluetooth, 4G (security management and group control)		

24V intelligent start battery for cars (LFP type:Air conditioning)



Product features
Driving safety/service life

- Long life, lithium iron phosphate deep charge and discharge cycle times up to 3000 times
- Advanced/reliable algorithms for safe operation of cells and systems
- Energy saving and lightweight

- Power lock
- 30% power is locked and never goes off
 - Intelligent shutdown to avoid the failure to start the vehicle due to low power
 - Friendly wake-up mode

- Everything is connected
- Bluetooth, 4G, GPS and other Internet of Things modes,
 - OTA timely algorithm iteration
 - Remote vehicle start/shutdown
 - Battery charge and discharge status tracking, remote diagnosis of vehicle related components working status

Product model	TT03-F24140	TT03-F24180	TT02-F24240	TT02-F24270
Normal voltage	25.6V			
Electricity (KWH)	2.56	3.84	5.12	5.9
Max charging voltage limit	29.2V			
Max discharge termination voltage	26.0V			
Charge protection current	≥150A			
Continuous discharge current	≥150A			
Maximum instantaneous current	≥1000A			
Levels of protection	IP67			
Operating ambient temperature	-20℃ ~60℃			
Size	505X225X245		554X271X245	
Wight	21.5kg	24.3kg	37.1kg	38.5kg
Transport	The battery should be packaged into a box for transportation under the condition of temperature-10℃-30℃ and charge less than 60, which is suitable for ordinary transportation vehicles such as automobile, train and ship)			
Optional accessories	Bluetooth, 4G (security management and group control)			



24V smart start battery for cars (Na+Sodium type)



Product features
Driving safety/service life

- Long life, sodium ion cell deep charge and discharge cycle times up to 3000 times
- Advanced/reliable algorithms for safe operation of cells and systems
- Energy saving and lightweight

Power lock

- 30% power is locked, and the power is never cut off
- Intelligent shutdown to avoid low power supply that causes the vehicle to fail to start
- Friendly wake-up mode

Everything is connected

- Bluetooth, 4G, GPS and other Internet of Things modes,
- OTA timely algorithm iteration
- Remote vehicle start/shutdown
- Battery charge and discharge status tracking, remote diagnosis of vehicle related components working status

Product model	TT03-N24185
Normal voltage	25.6V
Max charging voltage limit	29.2V
Max discharge termination voltage	26.0V
Continuous charging current	≥150A
Continuous discharge current	≥150A
Maximum instantaneous current	≥1000A
Levels of protection	IP67
Operating ambient temperature	-20°C ~60°C
Size	240x175x190
Weight	7.5kg
Transport	The battery should be packaged into a box for transportation under the condition of temperature-10°C-30°C and charge less than or equal to 60, which is suitable for ordinary transportation vehicles such as automobile, train and ship)
Optional accessories	Bluetooth, 4G (security management and group control)

12V smart start battery (LFP type)



Product features
Driving safety/service life

- Long life, lithium iron phosphate deep charge and discharge cycle times up to 3000 times
- Advanced/reliable algorithms for safe operation of cells and systems
- Energy saving and lightweight

Power lock-in

- 30% power is locked, and the power is never cut off
- Intelligent shutdown to avoid low power supply that causes the vehicle to fail to start
- Friendly wake-up mode

Everything is connected

- Bluetooth, 4G, GPS and other Internet of Things modes,
- OTA timely algorithm iteration
- Remote vehicle start/shutdown
- Battery charge and discharge status tracking, remote diagnosis of vehicle related components working status

Product model	TT01-F12085	TT01-F12105	CT01-F12105
Normal voltage	12.8V		
Battery life	More than 2000 times		
Max charging voltage limit	14.6V		
Maximum discharge termination voltage	10.0V		
Continuous charging current	≤50A		
Continuous discharge current	≥50A		
Maximum instantaneous current	≥600A		
Levels of protection	IP67		
Operating ambient temperature	-20°C ~60°C		
Size	240x175x190		
Weight	5.8kg	6.5kg	7.3kg
Transport	The battery should be packaged in a box for transportation under the condition of temperature-10°C-30°C and charge less than 60, which is suitable for ordinary transportation vehicles such as automobile,train and ship)		
Optional accessories	Bluetooth, 4G (security management and group control)		



12V smart start battery (Na+Sodium type)



Product features
Driving safety/service life

- Long life, sodium ion cell deep charge and discharge cycle times up to 3000 times
- Advanced/reliable algorithms for safe operation of cells and systems
- Energy saving and lightweight

Power lock-in

- 30% power is locked, and the power is never cut off
- Intelligent shutdown to avoid low power supply that causes the vehicle to fail to start
- Friendly wake-up mode

Everything is connected

- Bluetooth, 4G, GPS and other Internet of Things modes, OTA timely algorithm iteration
- Remote vehicle start/shutdown
- Battery charge and discharge status tracking, remote diagnosis of vehicle related components working status

Product model	TT01-N12045		CT01-N12105
Normal voltage	12.8V		
Max charging voltage limit	14.6V		
Max discharge termination voltage	10.0V		
Continuous charging current	≤50A		
Continuous discharge current	≥50A		
Maximum instantaneous current	≥600A		
Levels of protection	IP67		
Operating ambient temperature	-20℃ ~60℃		
Size	240x175x190		
Weight	5.8kg		7.3kg
Ransport	The battery should be packaged into a box for transportation under the condition of temperature-10℃-30℃ and charge less than or equal to 60, which is suitable for ordinary transportation vehicles such as automobile, train and ship)		
Optional accessories	Bluetooth, 4G (security management and group control)		

12V smart start battery (Lithium Titanate: LTO type)



Product features
Driving safety/service life

- Long life, lithium titanate can be deeply charged and discharged up to 20,000 times
- Advanced/reliable algorithms for safe operation of cells and systems
- Energy saving and lightweight

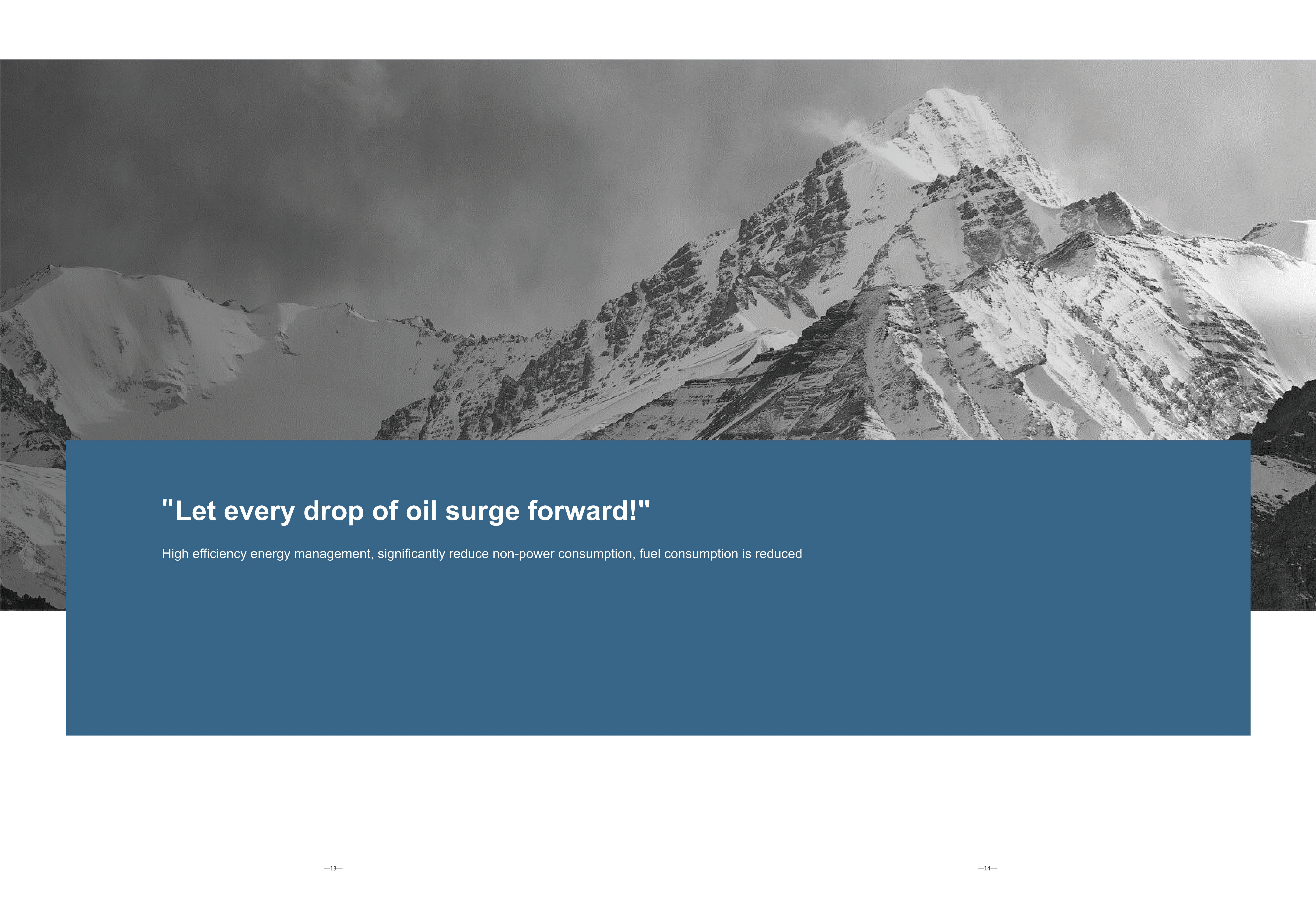
Power lock

- 30% power is locked, and the power is never cut off
- Intelligent shutdown to avoid low power supply that causes the vehicle to fail to start
- Friendly wake-up mode

Everything is connected

- Bluetooth, 4G, GPS and other Internet of Things modes, OTA timely algorithm iteration
- Remote vehicle start/shutdown
- Battery charge and discharge status tracking, remote diagnosis of vehicle related components working status

Product model	CT01-T12105	CT01-T12135	TT01-T12085
Normal voltage	12.8V		
Max charging voltage limit	14.6V		
Max discharge voltage	10.0V		
Continuous charging current	≤50A		
Continuous discharge current	≥50A		
Maximum instantaneous current	≥600A		
Levels of protection	IP67		
Rperating ambient temperature	-30℃ ~60℃		
Relative humidity	0~95% (no condensation)		
Size	240x175x190		
Weight	5.8kg	6.5kg	7.3kg
Transport	The battery should be packaged into boxes for transportation under the condition of temperature-10℃-30℃ and charge less than 60, which is suitable for ordinary transportation vehicles such as automobiles, trains and ships)		
Optional accessories	Bluetooth, 4G (security management and group control)		



"Let every drop of oil surge forward!"

High efficiency energy management, significantly reduce non-power consumption, fuel consumption is reduced