

PES SERIES

Portable Hybrid Energy System



OUTPUT POWER RANGE

100-500 KWe

BATTERY (LIFEPO4) CAPACITY

115-576 KWh

SOLAR INPUT POWER RANGE

30-50 KWp

PES SERIES

POWER RANGE

100-500KWe

It is a portable hybrid energy system for off-grid application scenarios such as leasing, construction, port, mining, racing, event, emergency, ship power supply, etc. And energy saving system products, support solar power input and diesel generator input, mixed with batteries or independent use, can provide users with independent vertical power supply or energy-saving and environmentally friendly efficient energy products.

OUTPUT POWER RANGE

100-500
KWe

BATTERY (LIFEPO4) CAPACITY

115-576
KWh

SOLAR INPUT POWER RANGE

30-50
KWp

THE MAIN COMPONENTS OF A HYBRID ENERGY SYSTEM

SOLAR POWER INPUT

Input 30-50KWp solar power to PES series hybrid energy system through MC4 connection terminal.

INVERTERS

Hybrid inverters (which can handle diesel generator, solar, and battery inputs) convert direct current from solar panels to domestic AC and alternating current from diesel generators to direct current (DC) for batteries.

BATTERIES

Store excess solar energy generated during the day for use at night or on cloudy days.

BATTERY MANAGEMENT SYSTEM

Monitor and optimize the charging and discharging process to extend battery life.

DIESEL GENERATOR ACCESS

Input 50kW AC power to PES&PES series hybrid energy system through the standby AC charger interface, and then charge the battery after being converted into direct current by the inverter.

ENERGY MANAGEMENT (EMS)

Installed in the control cabinet, operated or set parameters through the HMI display, the system is the management of diesel generators, solar, battery charging and discharging software.

CHARACTERISTICS AND ADVANTAGES



SMART ENERGY MANAGEMENT

Intelligent Energy management systems (EMS) monitor and optimize energy distribution in real time to ensure maximum energy efficiency and reduce energy waste.



STABLE AND RELIABLE

By connecting the diesel generator and the battery to work together, to ensure that stable power can be provided under any circumstances, to ensure the continuous operation of key equipment.



ENVIRONMENTALLY FRIENDLY

Support solar panel power generation access to reduce dependence on fossil fuels and reduce greenhouse gas emissions.



EFFICIENT INTEGRATION AND EASY INSTALLATION

Integrated energy storage system Facilitates more convenient management and operation mode, and realizes rapid installation and deployment.



ENERGY COST REDUCTION

Through energy distribution optimization, prioritize the use of solar power generation and battery storage, reduce the frequency of diesel generator use, in the long run, can save a lot of costs for users, improve the economy of energy use.



SELF-SUFFICIENCY

Designed for off-grid applications, independent of the external grid, energy self-sufficiency is achieved through a smart combination of solar, diesel generators and batteries.



SMART AND FRIENDLY

The system is equipped with intelligent EMS to simplify energy management. Users can easily monitor and adjust operating strategies through the HMI interface to achieve efficient and convenient energy control.

SAFETY PROTECTION

It is equipped with multiple security protection mechanisms, such as overcharge and overdischarge, temperature monitoring, fire protection, etc., to ensure that the equipment can still run safely and stably in the complex and changeable operating environment, and protect the safety of user assets.



ENERGY INDEPENDENCE

The hybrid energy system can achieve off-grid operation through energy storage batteries, diesel generator power generation and photovoltaic access, providing more stable and reliable energy.

ENVIRONMENTAL BENEFIT

Using solar energy can reduce dependence on fossil fuels, reduce carbon emissions and contribute to a greener environment.

MODULE INTEGRATION

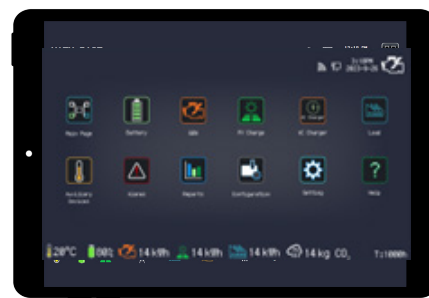
Modular design, outdoor installation, IP54 waterproof design, use of advanced paint, wear resistance and scratch resistance, durable, mobile, plug and play, convenient and fast.



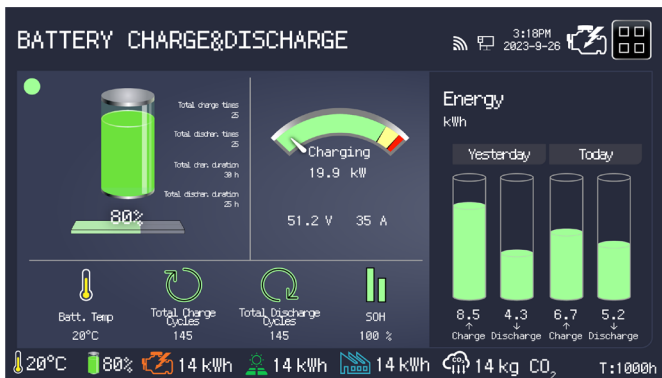


ENERGY MANAGEMENT SYSTEM (EMS)

PES series system will inverter, battery, BMS, MPPT, EMS constitute an independent product, through software calculation, to provide users with efficient environmental protection and energy saving system.

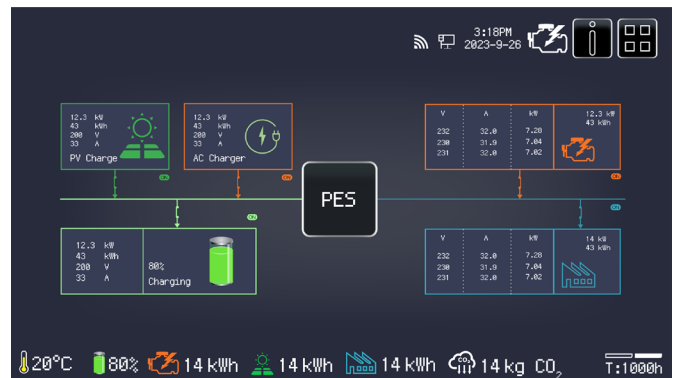


FEATURES OF ENERGY MANAGEMENT SYSTEM (EMS)



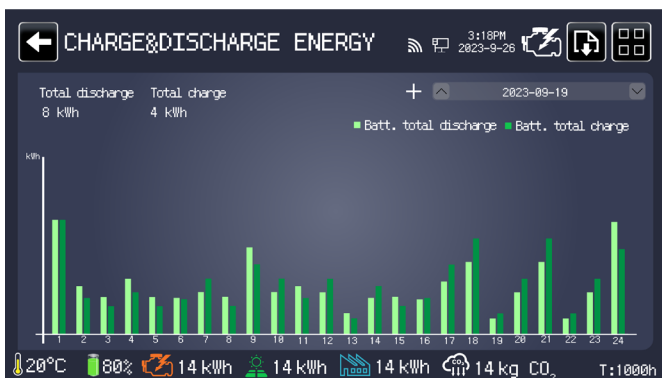
SYSTEM MONITORING TO ENHANCE LIFE

By monitoring changes in battery charge and discharge cycles and temperature, EMS can manage load output and extend battery life, ensuring better performance and return on investment



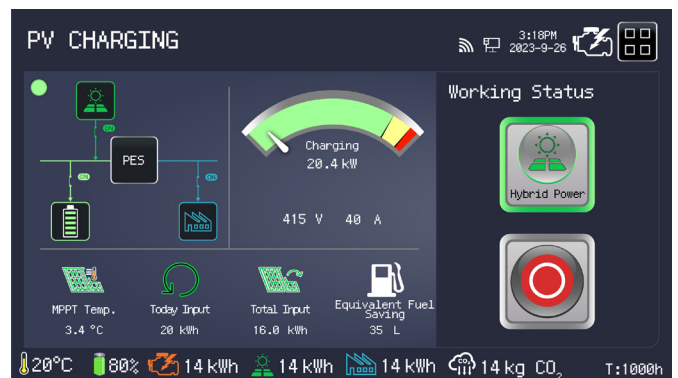
IMPROVE RELIABILITY AND MAINTAIN POWER GRID STABILITY

EMS can provide reliable power by seamlessly switching between diesel generators, solar power, and battery power to ensure a continuous and stable power supply.



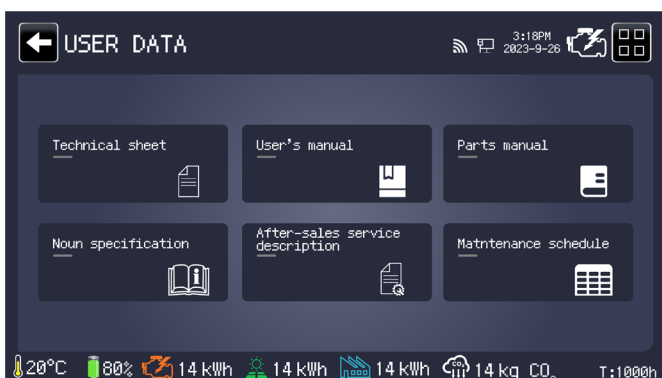
REPORT MANAGEMENT, DATA TRANSPARENCY

Intelligent generation of detailed device operating reports, such as battery charge/discharge report, AC quality curve report, and emission reduction report, help users understand energy usage, optimize energy management strategies, and achieve data transparency.



ENERGY OPTIMIZATION, ENERGY SAVING AND EMISSION REDUCTION

EMS can ensure the efficient use of energy from solar panels and storage batteries, maximize the use of renewable energy, reduce dependence on fossil fuels and lower carbon emissions.



EQUIPMENT MANAGEMENT, INTELLIGENT OPERATION AND MAINTENANCE

In addition to the real-time detection function of system operation data, EMS also has built-in auxiliary equipment management, alarm management, knowledge base, software update and other functions, which help information allows users to fully grasp the use and maintenance methods of the system, improve system performance, and maximize the return on investment through self-help.

LFP BATTERY SYSTEM

BATTERY PACK DATA	
Cell capacity (Ah)	150
Rated power (kWh)	11.52
Rated voltage (V)	76.8
Max. charge/discharge current (A)	150
Cooling method	Air-cooled
Cycle life (25±2°C, 0.5 C)	4000 cycles, SOC≥80%
Operating temperature range (°C)	Charge: 0~55 Discharge: -20~50
Dimension (mm)	670x465x230



BATTERY RACK

High Energy Density

Safety and Stability

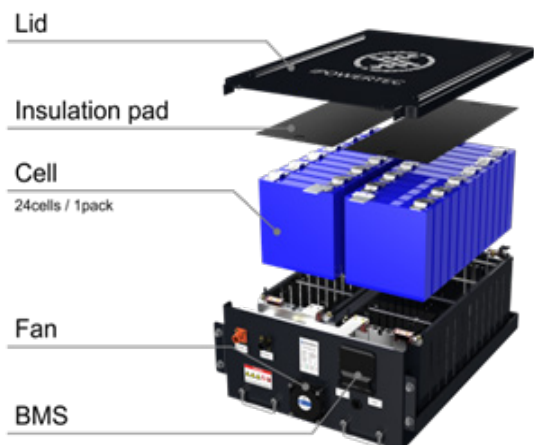
Long Cycle Life

Wide Temperature Tolerance

Eco-Friendly

ENERGY DENSITY UP TO

166Wh/Kg



PES INTERNET OF THINGS PLATFORM (IOT)

This device can be downloaded through a mobile app or by phone. Registering and logging into Powerlink's IoT platform with a brain browser can achieve the following functions:



REAL TIME MONITORING

Performance tracking:

Continuously monitor the performance of solar panels, batteries, and grid connections.

Environmental monitoring:

Track environmental conditions that may affect system performance, such as temperature and humidity.

Photovoltaic tracking system integration:

Seamlessly integrated with solar cell tracking.



ENERGY DISPATCH

Energy optimization:

Effectively allocate energy to balance loads and reduce peak demand costs.

Energy management:

Automatically switches to a diesel generator when solar or battery power is low.

Energy storage:

Intelligently controlled battery charging and discharging to store excess solar energy to provide energy at night or during peak energy demand.



REMOTE OPERATION

Remote access:

allows users to control and manage the system from anywhere using a smartphone or computer.

Automated operation:

Automatically execute charging and discharging processes based on real-time data and predefined parameters.

Predictive maintenance:

Identify potential issues before they become severe, reducing downtime and maintenance costs.

Maintenance alerts:

Send scheduled maintenance notifications and any abnormal alerts.



DATA ANALYSIS

Usage pattern:

Analyze energy usage patterns to optimize system performance and energy efficiency.

Performance report:

Generate detailed reports on system performance, energy efficiency, and return on investment.



SECURITY CONTROL

Data encryption:

Ensure secure communication and data storage to prevent network threats.

Access control:

Manage user access and permissions to prevent unauthorized use.



FRIENDLY INTERFACE

User friendly dashboard:

Provides a comprehensive dashboard for easy monitoring and control of the system.

Customizable settings:

Allow users to customize settings based on their specific energy needs and preferences.



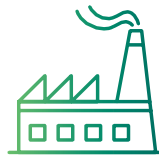
THIS IOT PLATFORM CAN BE APPLIED TO PRODUCT LINES IN THE FOLLOWING FIELDS:



RESIDENCE



COMMERCIAL BUILDINGS



INDUSTRY



TEMPORARY POWER SUPPLY



RHE SERIES

Home energy management, backup power during power outages



CHE SERIES

Save energy costs, peak shaving, and load balancing



IHE SERIES

Reliable power supply to improve operational efficiency



PES SERIES

Offer a portable hybrid power supply.



PES SERIES

PRODUCT SPECIFICATIONS

Model	Output Power		Battery Capacity	Solar power capacity	Maximum charging power of the standby AC charger	Dimension LxWxH	Dry weight
	kVA	kW					
PES100	100	100	115.2	30	-	2250x1350x2250	3701
PES200	200	200	230.4	50	50	3840x2290x2525	5200
PES300	300	300	345.6	50	50	4650x2300x2500	9424
PES400	400	400	460.8	50	50	4650x2300x2500	12000
PES500	500	500	576	50	50	4650x2300x2500	14240





STANDARD CONFIGURATION

Energy storage battery

Diesel generator (PES series)

Inverter

EMS system

Outdoor insulated waterproof cabinet

HMI control

MC4 PV port

Multiple power output socket (AC)

lot platform license

AC output switch panel

UPS power supply

Power input and output terminals (Power supply)

Fire protection system

Temperature control system

OPTIONAL CONFIGURATION

Solar Tracking System (STS)

PV panel

POWERlink
Energy Systems

www.powerlinkenergy.com

Please contact us or your local agents for more details.