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Version: July 08, 2024 PowerCompact Series - Mobile Commercial & Industrial Energy Storage Systems



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One-Stop C&I ESS Provider

PowerCompact Series

Mobile Commercial & Industrial Energy Storage Systems

Unlock Great Power
& Profit for Your Projects



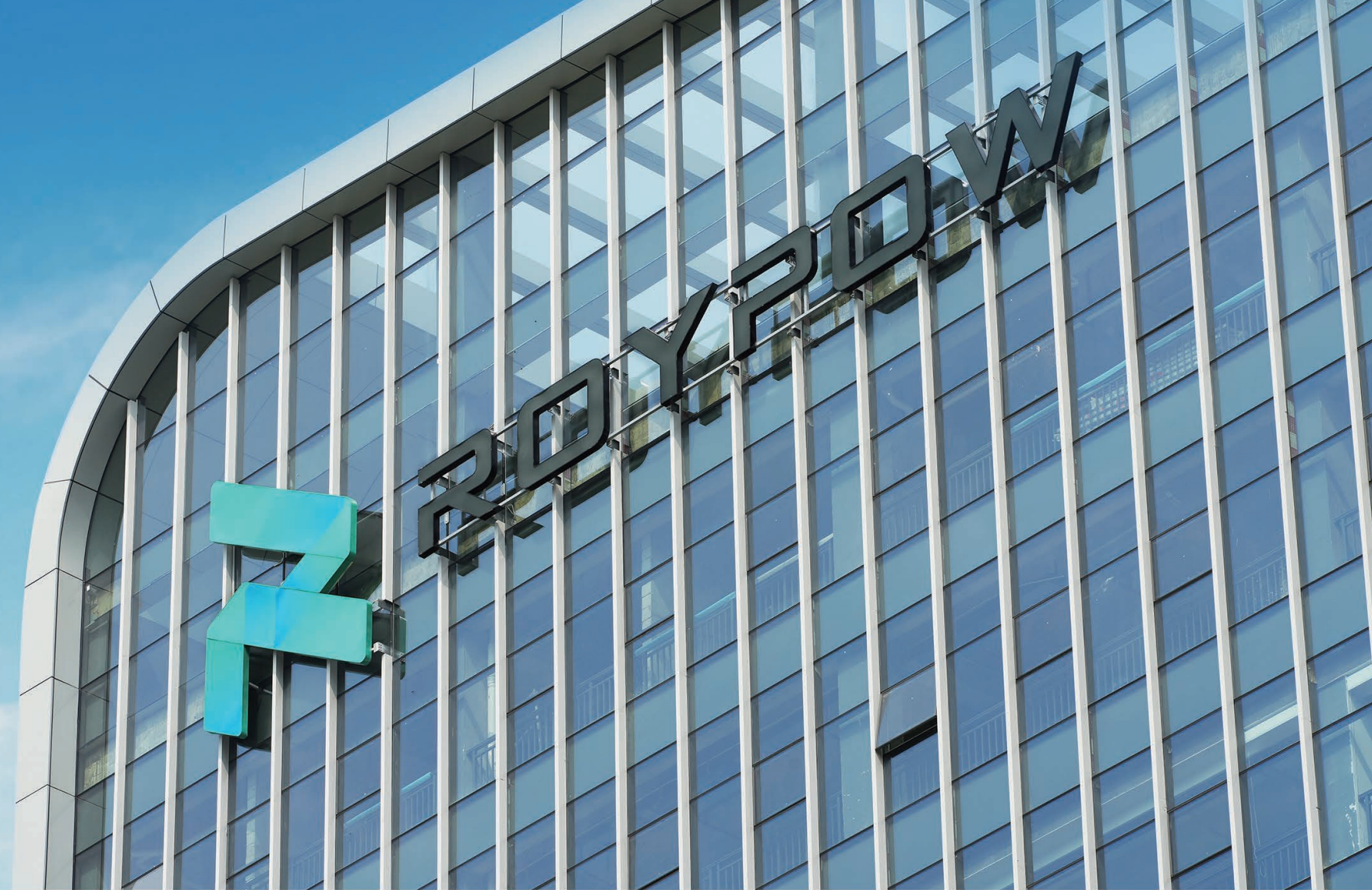
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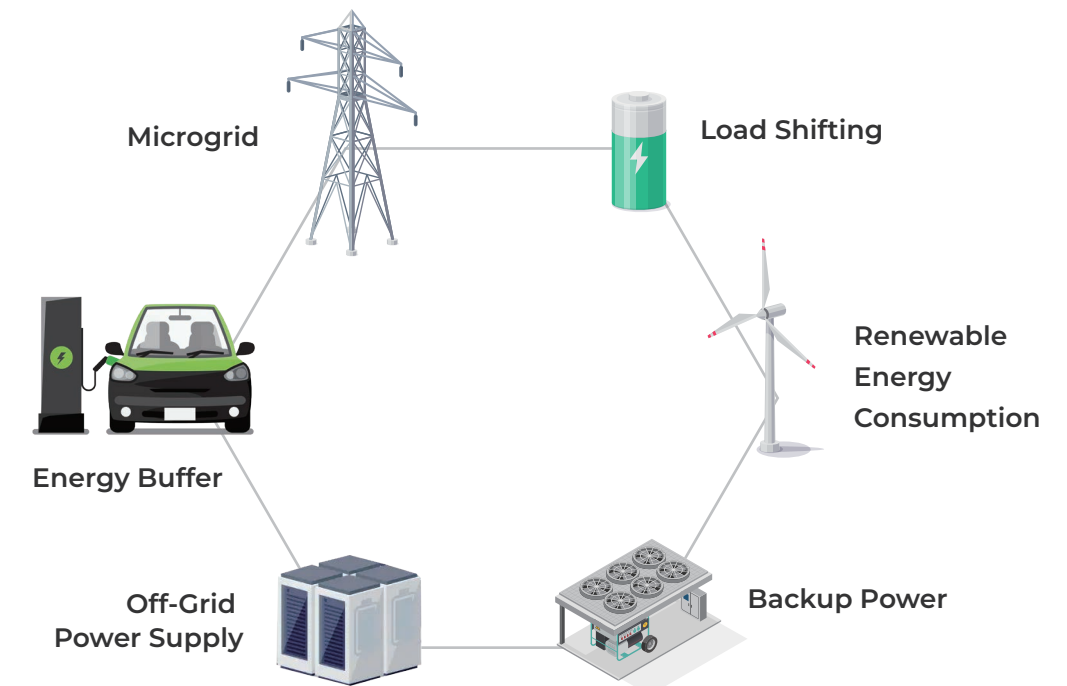
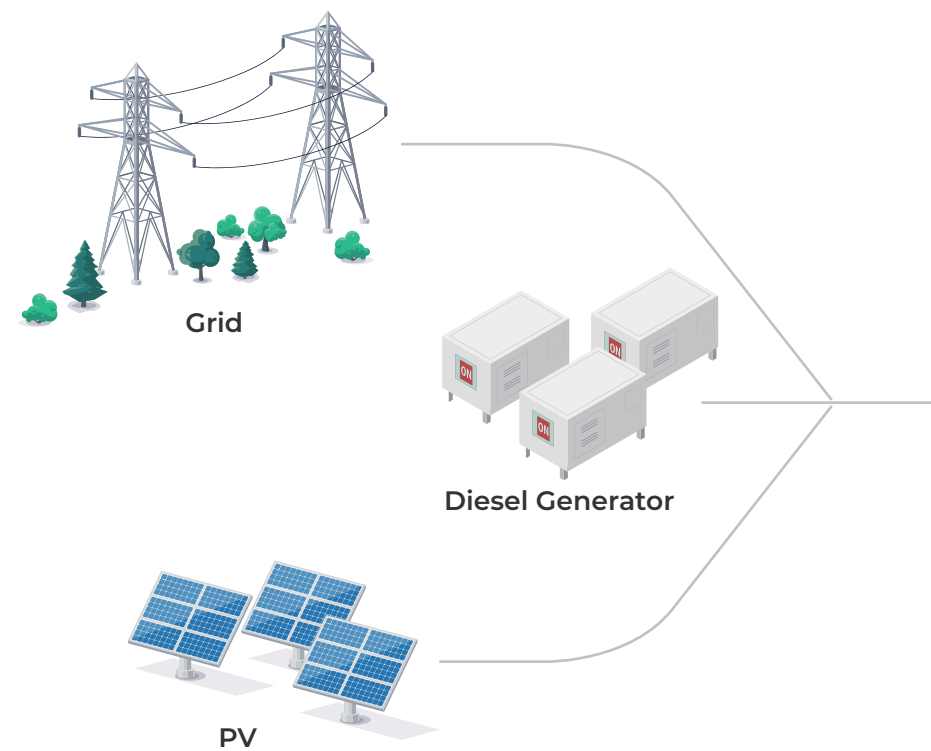
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PowerCompact Series

Mobile Commercial & Industrial Energy Storage Systems

Integrated with powerful technologies and functions into a compact, easy-to-transport cabinet for small and medium commercial and industrial sites. The power and capacity can be customized to fit specific demands.



Mobile Commercial & Industrial Energy Storage Systems

Easier Transportation,
Faster Deployment,
Reliable Supply.



Advantages of Mobile Energy Storage System



Zero Compromise

Advanced energy-dense lithium iron phosphate technologies ensure maximized available power in the smallest package. Meets NFPA855, EN50549, and UL standards.



Compact Design

A compact 1.2 m³ design makes this series the ideal power solution where space on site is premium. Up to 2 units for parallel use.



Efficient Transportation and Deployment

4 lifting points and fork pockets on every side ensure the ROYPOW power packs can be easily and safely maneuvered to wherever you need it.



Built to Last

With a robust enclosure, the PowerCompact series provides maximum protection and durability and withstands the toughest applications for secure power.




Flexible Charging

Compatible with multiple charging sources, including diesel generators, the grid, and PV.

PowerCompact Series

System Composition



 ≤ 771.6 lbs
(≤ 350 kg)

Specifications

Grey

| Model | X8KS-U | X8KS-E |
|---------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| AC Output (Discharging) | | |
| Rated Power | 8 kW | 8 kW (5 kW/10kW Optional) |
| Rated Voltage / Frequency | 120 / 240 V (Split-phase) / 60 Hz | 220 / 230 / 240 VAC 50 / 60 Hz |
| Rated Current | 33.4 A | 34.8 A |
| Three-Phase | Optional (480 V) | Optional (380 V / 400 V / 415 V) |
| Apparent Power | 8.8 kVA | 8.8 kVA |
| AC Connection | L1 / L2 / N / PE | L + N + PE |
| Peak Power (1S) | 16000 VA | 16000 VA |
| AC Input (Charging) | | |
| Rated Power | 8 kW | 8 kW |
| Rated Voltage / Frequency | 120 / 240 V (Split-phase) / 60 Hz | 220 / 230 / 240 VAC 50 / 60 Hz |
| THDI | ≤3% | ≤3% |
| AC Connection | L1 /L2 / N / PE | L + N + PE |
| Battery | | |
| Battery Chemistry | LiFePO4 | LiFePO4 |
| DoD | 90% | 90% |
| Rated Capacity | 10 ~ 30 kWh (Adjustable) | 10 ~ 30 kWh (Adjustable) |
| Voltage | 48 VDC (Range 40 ~ 64V) | 48 VDC (Range 40 ~ 64 V) |
| DC Input (PV) | | |
| Max. Power | 12 kW | 12 kW |
| Number of MPPT / Number of MPPT Input | 3 | 3 |
| Max. Input Current | 30 A / 22 A / 22 A | 30 A / 22 A / 22 A |
| MPPT Voltage Range | 70 ~ 540 V | 70 ~ 540 V |
| Number of String per MPPT | 2 / 2 / 2 | 2 / 2 / 2 |
| Start-up Voltage | 90 V | 90 V |
| Physical | | |
| Ingress Rating | NEMA 3R | IP54 |
| Scalability | Max. 2 in Parallel | Max. 2 in Parallel |
| Relative Humidity | 0 ~ 100% Non-condensing | 0 ~ 100% Non-condensing |
| Fire Suppression System | Hot Aerosol (Cell & Cabinet) | Hot Aerosol (Cell & Cabinet) |
| Max. Efficiency | 98% (PV to AC) 94.5% (BAT to AC) | 98% (PV to AC) 94.5% (BAT to AC) |
| Topology Operating Ambient | Transformerless | Transformerless |
| Temperature | -20 ~ 50°C (-4 ~ 122°F) | -20 ~ 50°C (-4 ~ 122°F) |
| Noise Emission (dB) | ≤ 70 | ≤ 70 |
| Cooling | Natural Cooling | Natural Cooling |
| Altitude (m) | 4000 (>2000 Derating) | 4000 (>2000 Derating) |
| Weight (kg) | ≤350 KG | ≤350 KG |
| Dimensions (LxWxH) | 1100 x 1100 x 1000 mm | 1100 x 1100 x 1000 mm |
| Standard Compliance | UL9540 / UL9540A / FCC / UL1973 / UL1741 / UL1741SA / IEC61547 / CA RULE 21 | EN50549, AS4777.2, VDE4105, G99, IEEE1547, NB/T 32004, IEC62109, NB/T 32004, UL1741, IEC61000, NB/T 32004 |

1. All pictures shown are for reference only and data are based on ROYPOW standard test procedures.
2. Actual performance may vary according to local conditions. Only authorized personnel are allowed to operate or make adjustments to the batteries.
3. We reserve the right to make revisions as well as product alterations and improvements at any time without prior notice.

PC5KS

Light Tower Energy Storage System

Ideal for microgrids, load shifting, renewable energy consumption, energy buffers, off-grid power supply, backup power applications, etc.



High-Safety Battery

Using high-safety lithium iron phosphate batteries with over **10 years** of design life, **6,000** times of cycle life, and **IP65** ingress rating.



High-Performance Inverter

Featuring an all-in-one inverter with **30%** MPPT energy efficiency improvement and **94%** maximum efficiency.



Flexible Configuration

Adjustable configurations to achieve optimal cost-effectiveness. Max. **8** batteries in parallel.



Automatic Control

Automatically control the generator, **control the startup** of the generator to charge the ESS, and **shut down** after full charge.



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Technical Specifications

| Model | PC5KS |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| AC Output (Discharging) | |
| Rated Power | 5 kW (8kW /10KW optional) |
| Rated Voltage / Frequency | Rated Voltage / Frequency 220 / 230 VAC 50 / 60 Hz |
| Rated Current | Rated Current 25 A |
| Three-Phase | Three-Phase (380 V / 400 V optional) |
| Apparent Power | Apparent Power 5.5 kVA |
| AC Connection | AC Connection L + N + PE |
| Peak Power (1S) | Peak Power (1S) 7500 VA |
| AC Input (Generator Charging) | |
| Rated Power | 5 kW |
| Rated Voltage / Frequency | 220 V / 230 V 50 / 60 Hz |
| THDI | ≤3% |
| AC Connection | L + N + PE |
| Battery | |
| Battery Chemistry | LiFePO 90% |
| DoD | 5 kWh (10kwh optional) |
| Rated Capacity Voltage | 48VDC |
| DC Input (PV) | |
| Max. Power | 5500 W |
| Number of MPPT / Number of MPPT Input | 2-2 |
| Max. Input Current | 20 A / 20 A |
| MPPT Voltage Range | 110--500 V DC |
| Number of String per MPPT | 1 / 1 |
| Start-up Voltage | 120 V DC |
| Physical | |
| Ingress Rating | IP54 |
| Scalability | Max. 8 batteries in parallel |
| Relative Humidity | 0 ~ 100% Non-condensing |
| Fire Suppression System | Hot Aerosol (Cell & Cabinet) |
| Max. Efficiency | 98% (PV to AC) 94.5% (BAT to AC) |
| Topology Operating Ambient | Transformerless |
| Temperature | -20 ~ 50°C (-4 ~ 122°F) |
| Noise Emission (dB) | ≤ 70 |
| Cooling | Natural Cooling |
| Altitude (m) | 4000 (>2000 Derating) |
| Weight (kg) | ≤150 KG |
| Dimensions (LxWxH) | 700 x 700 x 7000 mm |
| Standard Compliance | EN50549, AS4777.2, VDE4105, G99, IEEE1547, NB/T 32004, IEC62109, NB/T 32004, UL1741, IEC61000, NB/T 32004 |

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ROYPOW, For One-stop New Energy Solutions

ROYPOW TECHNOLOGY is dedicated to the R&D, manufacturing and sales of motive power systems and energy storage systems as one-stop solutions.

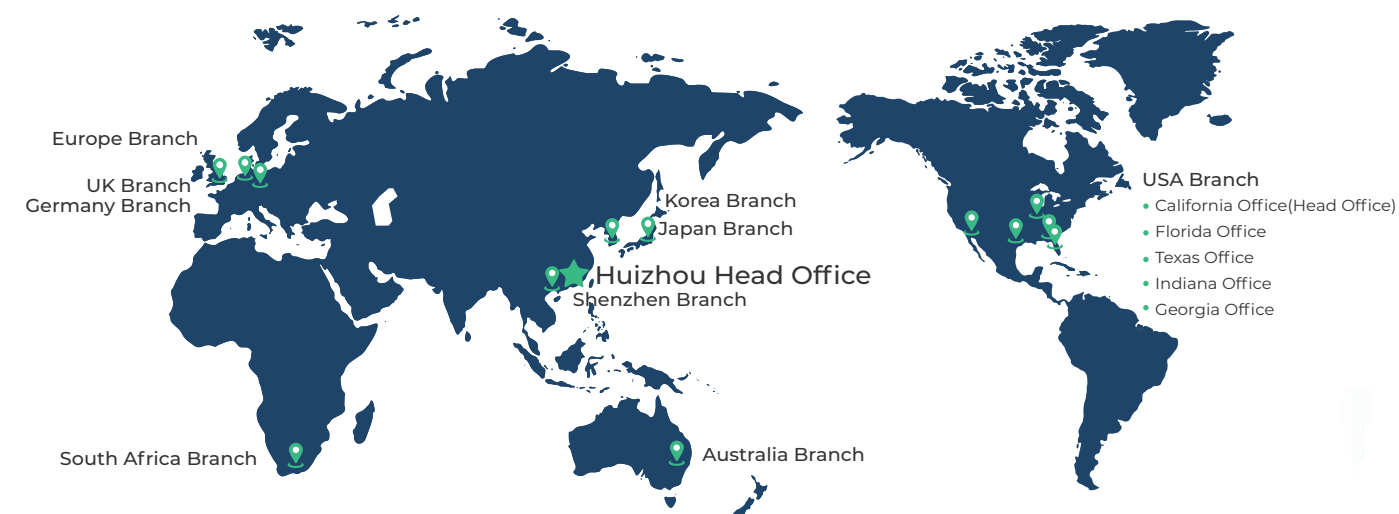
With more than 20 years of combined experience in manufacturing renewable energy and battery systems, ROYPOW provides Lithium-ion Batteries covering most daily living and working fields: for Low-Speed Vehicles such as golf carts, personnel carriers; Industrial Batteries for use in Material Handling Equipment such as forklifts, aerial work platforms and floor cleaning machines as well as renewable Energy Storage Systems for residential, commercial, industrial, vehicle-mounted and marine applications.

ROYPOW has established a worldwide network to serve customers with a manufacturing center in China and subsidiaries in the USA, the UK, Germany, the Netherlands, South Africa, Australia, Japan and Korea to date. ROYPOW owns and operates fully automatic production lines, a full range of test equipment and an advanced MES that collectively address all aspects of its manufacturing process, from electronics, software design to module assembly, battery assembly as well as initial and final testing. ROYPOW focuses on the self-development of power electronics technologies, including PCS, BMS, and EMS as the core competence.

As a renewable energy innovator, ROYPOW is committed to the mission of achieving energy sustainability while creating a better life for human beings.

- Timely Delivery.
- Hassle-free After-sales Service.
- Fast Response Technical Support.

ROYPOW has comprehensively unfolded its overseas market layout to ensure the localization of R&D, manufacturing, marketing and service, becoming one of your most reliable and valuable partners.



Upgrading to New Technology, with Our Turnkey Solutions.

With years of dedication to new energy solutions, we are proud to offer customers professional solutions for:

- ✓ **Low-speed Vehicle Batteries** including golf carts and sightseeing cars;
- ✓ **Battery Systems for Off-highway Applications** including agricultural, construction & mining equipment;
- ✓ **Residential Energy Storage Systems** including all-in-one residential energy storage solutions, off-grid energy storage solutions, home batteries, inverters, etc;
- ✓ **Mobile Energy Storage Systems** including energy storage and air conditioning systems for trucks, off-grid solar systems for RVs, off-grid energy storage systems & battery systems for marine applications, etc;
- ✓ **Industrial Batteries** including forklifts, aerial work platforms, floor cleaning machines, etc;
- ✓ **Battery Systems for Emerging Applications** including electric motorcycles, garden & sanitation equipment, airport GSE, port equipment, AGVs/AMRs, medical equipment, etc;
- ✓ **Commercial & Industrial Energy Storage Systems** including DG Mate energy storage solutions, liquid cooling energy storage solutions, mobile energy storage solutions, etc;
- ✓ **Chargers** for forklifts, aerial work platforms, floor cleaning machines, golf carts, marine batteries, etc.



R&D and Manufacturing Highlights

As a result of these investments, ROYPOW is capable of "end-to-end" integrated delivery making our products out-perform the industry norms.

- All-round testing.
- Integrated design.
- Advanced MES system.
- IATF 16949 automotive quality management system certification
- QC system.
- Persistent technology innovation.
- Fully automatic production line.
- ISO12405-2 vibration performance and safety testing of automotive lithium batteries