OKEPS


# OKEPS HOME PHOTOVOLTAIC ENERGY STORAGE PRODUCTS

# CONTENTS


02 HOUSEHOLD PHOTOVOLTAIC ENERGY STORAGE POWER STATION

04 HV400VSHIGH VOLTAGE BATTERY BOX

06 OFF GRID / ON GRID HIGH VOLTAGE HYBRID INVERTER & SPLIT PHASE TRANSFORMER

08 ENERGY MANAGEMENT SYSTEM AND APP

09 BENEFITS

10 APPLICATION SCENARIOS

# HOUSEHOLD PHOTOVOLTAIC ENERGY STORAGE POWER STATION


## EFFICIENT INCOME

Intelligent energy storage management,
increasing charge and discharge capacity

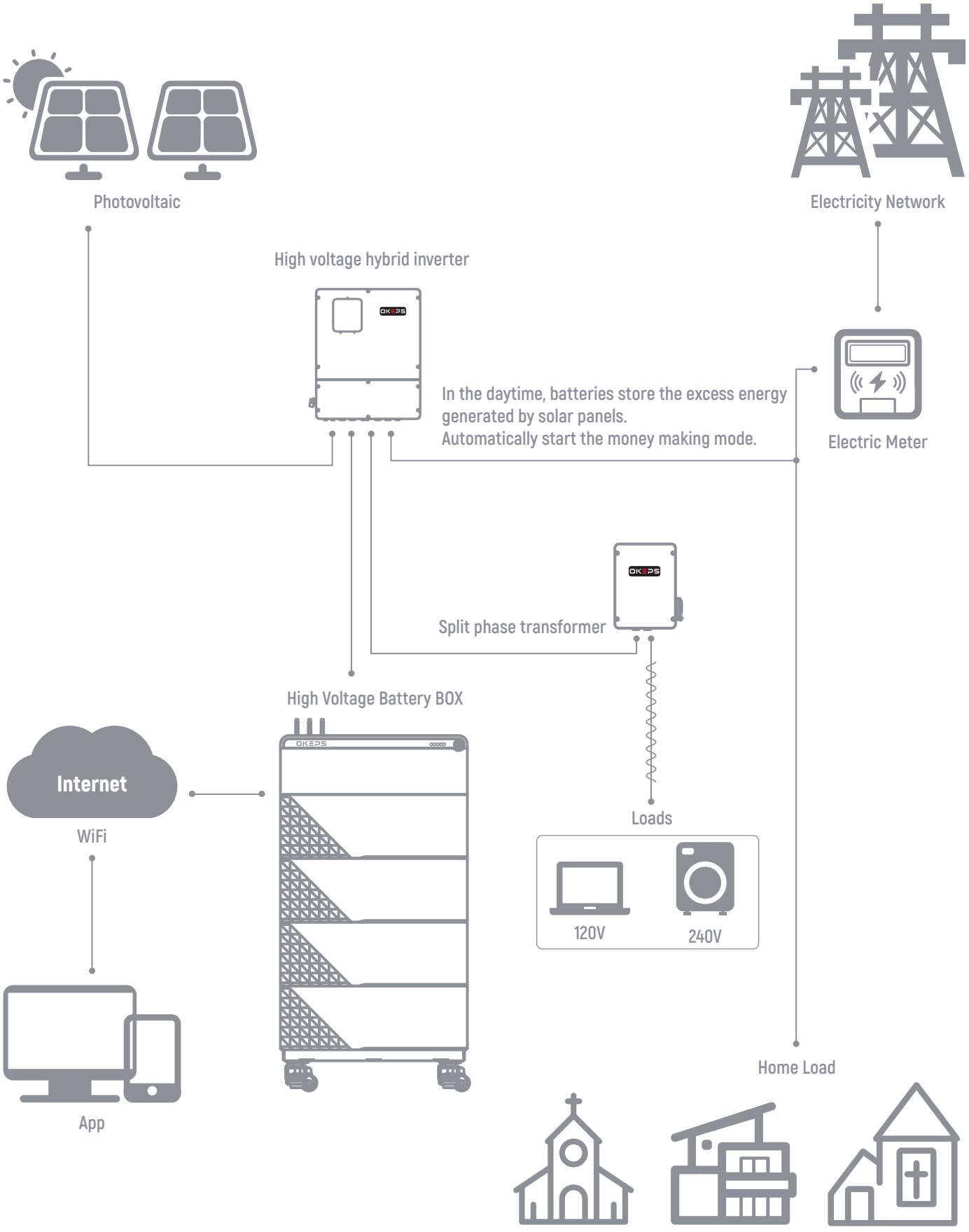
## ACTIVE SAFETY

Intelligent protection,
reducing risks and ensuring personal safety

## INTELLIGENT O&M

Natural heat dissipation design,
free on-site maintenance

# HOUSEHOLD PHOTOVOLTAIC ENERGY STORAGE POWER STATION



# HV400VS HIGH VOLTAGE BATTERY BOX

## BRIEF INTRODUCTION

HV400VS： High voltage / 400V / System.
- Capable of High-Powered Emergency-Backup and Off-Grid Functionality
- Highest Efficiency Thanks to a Real High-Voltage Series Connection
- It is easy to operate with the plug-in installation method.
- Cobalt Free Lithium Iron Phosphate (LFP) Battery: Maximum Safety, Life Cycle, and Power
- Compatible with Leading High Voltage Battery Inverters
- Highest Safety Standards

Note: The HV400VS high voltage battery box consists of a high voltage electronic control system and multiple HV48100 battery modules.

## HV48100 STACKABLE BATTERY BOX

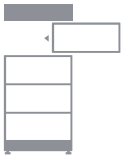
HV48100: High Voltage / 48V / 100AH.
HV400VS is a high-voltage battery module electronic control system with the highest DC voltage of 700V.
（Warning: the high-voltage battery modules (HV 48100) depends on the PCS or inverter.）
A battery box is composed of 2-7 HV48100 battery modules, connected in series, with an available capacity of 10.24 to 35.84kwh. It can be expanded by adding the HV48100 module later.
（This is a combination scheme based on the model of OKEPS HV SERIES inverter.）

2*HV48100　　7*HV48100

## FLEXIBLE, EFFICIENT, SIMPLE

**Stacked**
Beautiful and easy to install

**10.24 - 35.84 kWh**
Tailored Sizing forEach Application



**Extend Anytime**
Easily Adapts to New Requirements

**High Power**
Power for Every Application

# TECHNICAL PARAMETERS

| HV400VS STACKABLE BATTERY SYSTEM | | | | | | |
|---|---|---|---|---|---|---|
| Battery Module | PACK (5.12KWH/51.2V/100AH) 90lb | | | | | |
| Number of Modules | 2*HV48100 | 3*HV48100 | 4*HV48100 | 5*HV48100 | 6*HV48100 | 7*HV48100 |
| Usable Energy[1] | 10.24 kWh | 15.36 kWh | 20.48 kWh | 25.6 kWh | 30.72 kWh | 35.84 kWh |
| Max Output Current[2] | 50A | 50A | 50A | 50A | 50A | 50A |
| Peak Output Current[2] | 75A,3s | 75A,3s | 75A,3s | 75A,3s | 75A,3s | 75A,3s |
| Nominal Voltage | 102.4V | 153.6V | 204.8V | 256V | 307.2V | 358.4V |
| Operating Voltage | 80~115.3V | 120~173V | 160V-230V | 200V-288V | 240V-345V | 280V-403V |
| Dimensions(H/W/D)mm | 678*587*410 | 878*587*410 | 1079*587*410 | 1279*587*410 | 1480*587*410 | 1680*587*410 |
| Operating Temperaturue | 14 °F to 122 °F | | | | | |
| Battery Cell Technology | Lithium Iron Phosphate(cobalt-free) | | | | | |
| Communication | CAN/RS485 | | | | | |
| Enclosure Protection Rating | IP55 | | | | | |
| Round-trip Efficiency | ≥96% | | | | | |
| Module | IEC660730/FCC/UN38.3 | | | | | |
| Applications | ON Grid / ON Grid + Backup / OFF Grid | | | | | |
| Warranty[3] | 10Years | | | | | |
| Compatible Inverters (PCS) | OKEPS HV Series Inverter | | | | | |
| Other compatible inverters (PCS) | Unknown | | | | | |

[1] DC Usable Energy, Test conditions: 100% DOD, 0.2C charge & discharge at 77 °F. System usable energy may vary due to system configuration parameters.
[2] Charge derating will occur between 14 °F and 41 °F
[3] Conditions apply. Refer to OKEPS HV400VS And HV48100 Stackable Battery Box Limited Warranty Letter.

# OFF GRID / ON GRID
# HIGH VOLTAGE HYBRID INVERTER & SPLIT PHASE TRANSFORMER


## PRODUCT FEATURES:

Safe & reliable
- Passed UL 1741:2021, IEEE 1547.1, UL1699B test certification; With over-voltage, over-current, over-temperature protection, compatible with anti-zero export function;

Flexible & efficient
- Support full power charge and discharge, better charge and discharge efficiency;
- Support 100% unbalanced load capacity;

Intelligent & friendly
- Customizable I / O interface, more flexible application;
- Support remote monitoring, remote upgrade and automatic battery management;

# TECHNICAL PARAMETERS

| Technical specification | HV6KUS | HV8KUS | HV10KUS | HV12KUS |
|---|---|---|---|---|
| **Input (PV)** | | | | |
| Max. power (kW) | 7.8 | 10.4 | 13 | 15.6 |
| Max. DC voltage (V) | | 500 | | |
| MPPT voltage range (V) | | 125 - 500 | | |
| Max.Input current of single MPPT (A) | | 12 | | |
| MPPT tracker/strings | | 4/1 | | |
| **AC output** | | | | |
| Rated output power (kVA) | 6 | 8 | 10 | 12 |
| Max. output current (A) | 27.3 | 36.4 | 45.4 | 50 |
| Grid voltage/range (V) | | 240/211~264 | | |
| Frequency (Hz) | | 50/60 | | |
| PF | | 0.8lagging-0.8leading | | |
| THDi | | < 3% | | |
| AC output topology | | L+N+PE | | |
| **Battery** | | | | |
| Battery voltage range (V) | | 85~400 | | |
| Max. charging voltage (V) | | 400 | | |
| Full battery voltage (V) | 85 | 110 | 140 | 160 |
| Max. charge/discharge current (A) | | 80/80 | | |
| Battery type | | lithium /Lead-acid | | |
| Communication Interface | | CAN,RS485 | | |
| **EPS output** | | | | |
| Rated power (kVA) | 6 | 8 | 10 | 12 |
| Rated output voltage (V) | | 220-240/110-120 | | |
| Rated frequency (Hz) | | 50/60 | | |
| Automatic switching time (ms) | | <20 | | |
| THDu | | < 2% | | |
| Overload capacity | | 110%,30S/120%,10S/150%,0.02S | | |
| **General data** | | | | |
| Max. efficiency | | ≥98.2% | | |
| CEC efficiency | | ≥97.2% | | |
| Ingress protection | | IP65/NEMA 3R | | |
| Noise emission (dB) | <25 | <25 | <29 | <29 |
| Operation temperature | | -25°C～60°C | | |
| Cooling | | Natural | | |
| Relative humidity | | 0 ~95% （non-condensing） | | |
| Altitude | | 2,000m (>2,000 Derating) | | |
| Weight (kg) | | 32 | | |
| Dimensions W * D * H (mm) | | 530* 200* 660 | | |
| **Display and communication** | | | | |
| Display | | LCD | | |
| Interface:RS485/Wifi/4G/ CAN/DRM | | Yes/Opt/Opt/Yes/Yes | | |
| Standby power consumption at night(W) | | < 2.5 (With the battery < 5) | | |
| Isolation transformer | | Yes | | |
| Safety standard | | UL1741SA all options, UL1699B, CSA 22.2 | | |
| EMC | | FCC Part 15, Class B | | |
| On-grid | | IEEE 1547, IEEE 2030.5, Hawaii Rule 14H, Rule 21 Phase I,II,III | | |

# ENERGY MANAGEMENT SYSTEM AND APP

**BETTER EXPERIENCE**

Full self-identifying access management system for system equipment

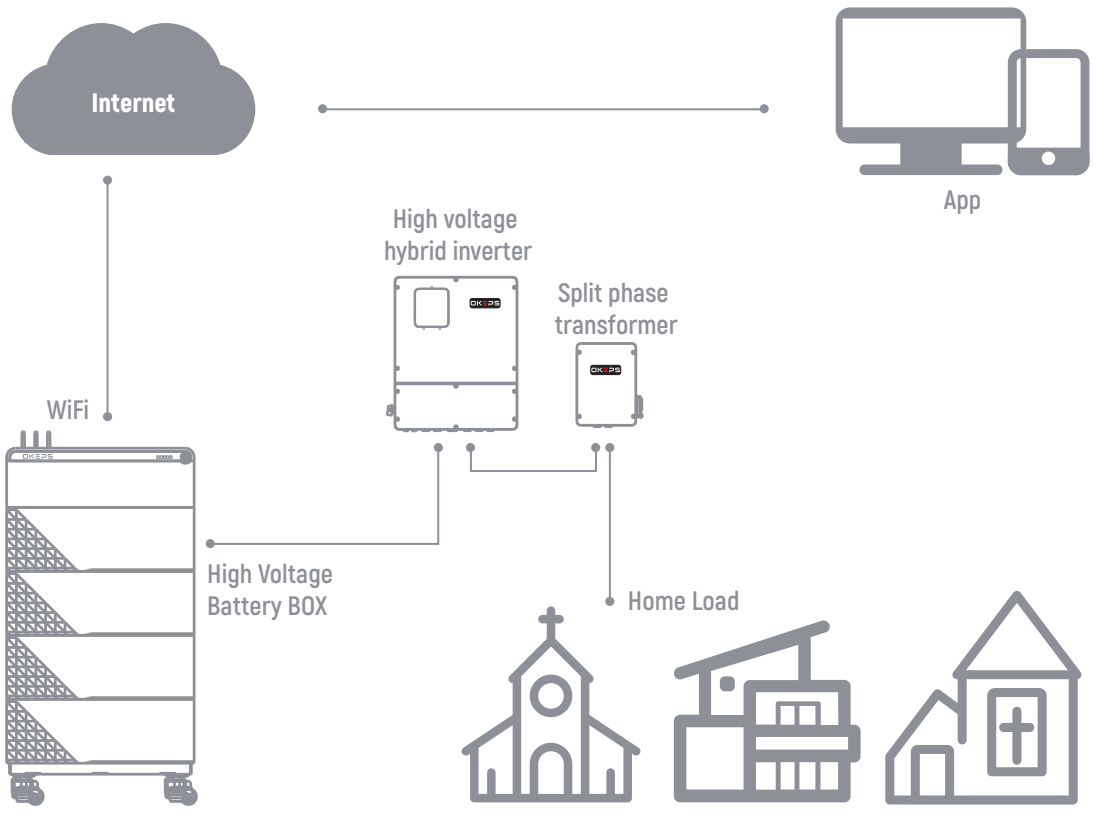
**VISUALIZATION MANAGEMENT**

Full real time historical data on equipment visualisation

**INTELLIGENT O&M**

One screen to manage site operations and status

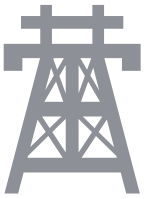
APPLICATION HINTS



# BENEFITS

## REDUCE ENERGY COSTS

Get the most out of free solar energy and avoid spiraling diesel generation costs or expensive grid charges.
At the same time, the excess electricity in the daytime can be connected to the grid to earn profits.



## OFF GRID / ON GRID,GAIN GRID INDEPENDENCE

Stay prepared for power outages and
protect essential appliances against grid fluctuations.

## LOWER CARBON EMISSIONS

Shrink your carbon footprint and help curtail air pollution.

## INCREASE HOME VALUE

Raise the real estate value of your home with the addition of solar energy storage systems.

## MANAGE WITH EASE

Monitor operation status and customize settings in real-time with your phone.

# APPLICATION SCENARIOS

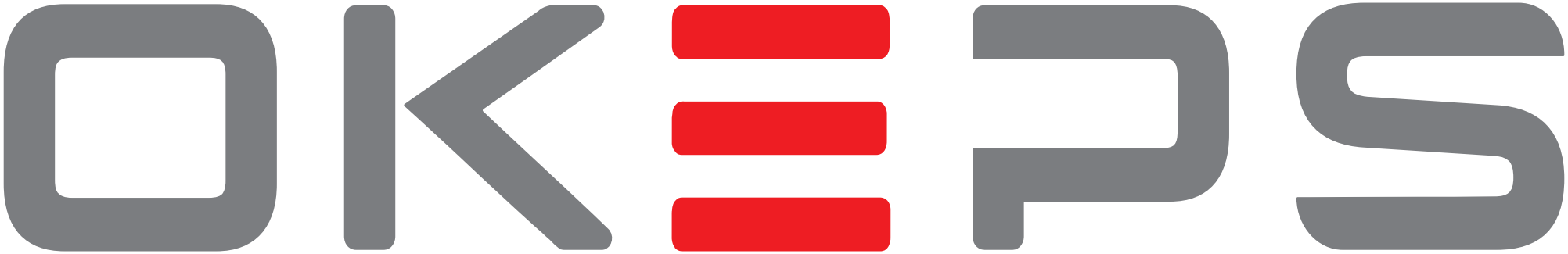
Real-time understanding of electricity consumption

Adjust the working hours of home appliances

Intelligent management of electricity consumption


# APPLICATION SCENARIOS

# APPLICATION SCENARIOS


OKEPS