UBBINK BATTERY ENERGY STORAGE SYSTEM

Smart home energy made easy

ubbink

Build smart.

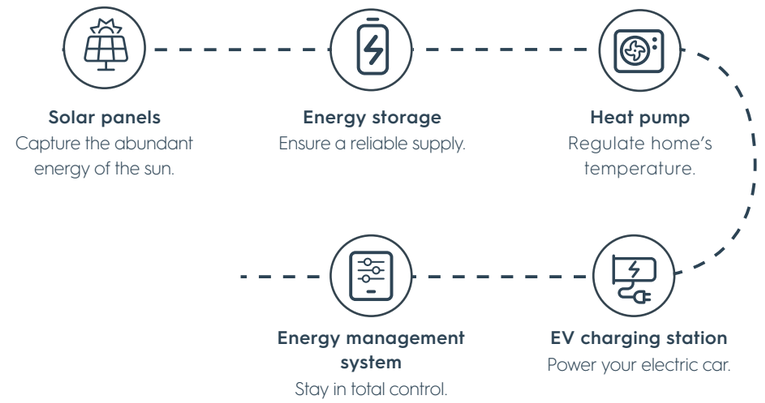
Together, let’s build a smarter, greener future.

For over 125 years we have been providing you with innovations and smart solutions, and now we are following you into the world of renewable energy.

Discover the Ubbink smart home, where sustainable energy and energy management is hassle-free. With solutions that are easy to install, easy to use, and safe to operate. We combine our focus on smart solutions and commitment to quality with advanced energy management technology.

By seamlessly integrating solar panels, energy storage, heat pumps, and EV charging stations, we are transforming households into self-sufficient powerhouses.

This holistic approach not only reduces carbon footprint but also plays a pivotal role in the global energy transition. By harnessing renewable energy sources and optimizing resource usage, we are moving away from fossil fuels and towards a cleaner, greener future.



Residential Battery Energy Storage System

Power your home with free solar energy

Our Battery Energy Storage System (BESS) allows you to store excess solar energy produced during the day for use during peak hours, at night, or for off-grid operation. This creates independence from energy suppliers and reduces the impact of rising electricity prices. It leads to significant savings on your electricity bills and contributes to a more sustainable, environmentally friendly lifestyle by maximizing the use of renewable energy.

Engineered for easy installation and safe operation, our system integrates seamlessly into your existing home energy infrastructure. Our advanced Energy Management System (EMS) continuously monitors and manages energy flows, ensuring efficient distribution and storage of power. This sophisticated management prevents energy waste and extends the lifespan of the battery, making the system a long-term, cost-effective investment.

The perfect energy solution for any home

Energy consumption varies widely between homes. To address this, a flexible and adaptable energy storage system is essential. The Ubbink Battery Energy Storage System (BESS) is designed to meet the diverse needs of any household. With its modular design, our BESS offers a perfect fit for every situation, providing ultimate quality and a sleek, smart design.

Installation is straightforward, with stackable batteries that easily expand your storage capacity. The system integrates seamlessly into any environment, whether indoors or outdoors, giving you full control over your energy performance and setup. Enjoy the benefits of a reliable, adaptable, and high-quality energy solution tailored to your home.

All-in-one solution
Hybrid inverter, battery and Energy Management System (EMS).

Ubbink Energy Secure
Maximum safety: 100% independent BMS, continuous remote health monitoring and aerosol fire suppression system.

Stackable and expandable
Adapt performance to your needs.

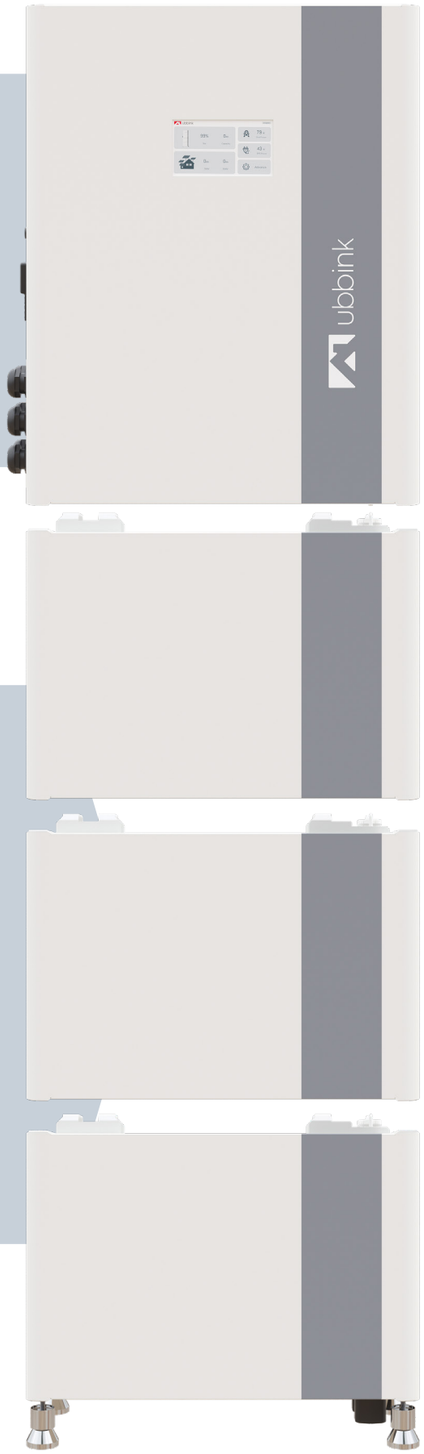
Stay in total control
Be independent, even off grid with 5 different operational modes.

10-years warranty
On inverter and battery.

All-in-one solution: system components

Hybrid inverter
The Ubbink hybrid Inverter is designed to provide versatile power solutions for any home. Available in four power ratings (6kW, 8kW, 10kW, and 15kW), it achieves a maximum efficiency of up to 97.9%. This inverter is compatible with both single-phase and three-phase loads and can manage 100% unbalanced loads effortlessly.

Our hybrid inverter can receive power input from photovoltaic (PV) systems, the grid, diesel generators, or batteries in parallel. It also supports black start capability. With various configurable working modes, it optimizes your energy usage, ensuring maximum efficiency and reliability.



LFP battery
The Lithium Iron Phosphate (LFP) battery provides a reliable and long-lasting energy storage solution, backed by a 10-year warranty on battery cycles. Its design ensures easy installation with fully integrated power and communication connections.

Our LFP battery offers continuous health monitoring through Ubbink Energy Secure, ensuring optimal performance and safety. The solid steel casing and integrated aerosol fire suppression add multiple layers of protection, making it a highly safe energy storage system.

Up to five battery modules can be connected to the Ubbink Hybrid Inverter 3-phase, offering a maximum storage capacity of 25.6 kWh. For additional capacity, multiple battery towers can be easily added using our simple-to-install Expansion Pack. Battery capacity can also be increased at a later stage without the need for rewiring between system components.

Energy Management System (EMS)
The integrated EMS optimizes the use and storage of electricity. It monitors real-time energy production, consumption, and battery status, analyzing data to predict future needs.

The EMS controls battery charging and discharging, prioritizes critical loads, and shifts energy use to off-peak times for cost savings. It integrates with renewable energy sources like solar panels, ensuring maximum utilization and managing grid interactions for net metering.

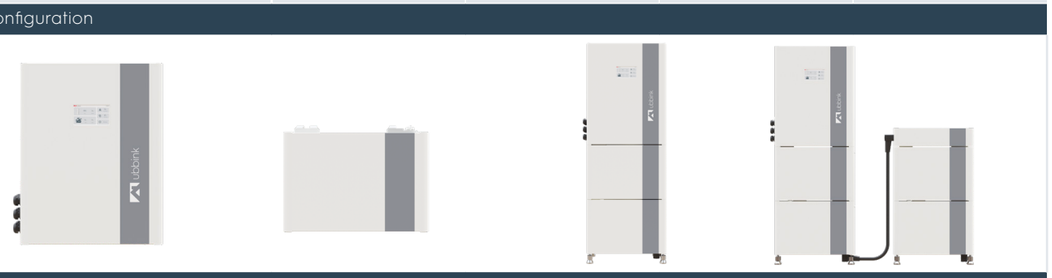
Additionally, the EMS provides user-friendly interfaces via the Voltara Home app for remote monitoring and control, sends alerts, and participates in demand response programs.

Voltara Home app
Voltara Home is the intelligent operating system for your energy assets, including PV modules, batteries, EV charging stations, and heat pumps. It empowers you to operate independently from the grid and weather conditions, ensuring self-sufficiency with renewable, self-produced electricity, and efficient energy cost optimization.

- Monitor forecasted production for the upcoming days.
- Maximize your independence from the power grid by storing electricity at optimal times.
- Track your power consumption and production, and adjust smart control settings directly through the app.
- Connect your existing EV charging station to charge your electric car overnight with self-generated, renewable electricity, managed seamlessly in the background.
- Use renewable electricity for your heat pump, even at night, with smart and reliable control.

Power	6 kVa 3Phase	8 kVa 3Phase	10 kVa 3Phase	15 kVa 3Phase
Type	Hybrid I All-in-One System			
Product name	M6KH3UB	M8KH3UB	M10KH3UB	M15KH3UB
DC-Input (PV)				
PV Nominal input power	6 kW	8 kW	10 kW	15 kW
PV Max. input power	8 kWp	12 kWp	15 kWp	22.5 kWp
Max. input voltage	1000 Vdc			
Min. startup voltage	>125 Vdc			
Nominal input voltage	600 Vdc			
MPPT Operational range	180 Vdc - 860 Vdc			
Number of MPPTs	2			
Max. input number per MPP tracker	1			
Nominal input current per MPPT	13 A I 13 A			20 A I 20 A
Max. short-circuit per MPPT	16 A I 16 A			30 A I 30 A
Max. MPPT efficiency	99.5% at 850 Vdc			
AC-Input (GRID) Peak				
Nominal input power	12 kW	16 kW	20 kW	30 kW
Nominal input current	17.3 A	23.1 A	28.8 A	43.4 A
Max. input current	19 A	25.5 A	31.9 A	47.6 A
Grid nominal voltage	3/N/PE I 230/400 Vac I 3Phase			
Grid nominal frequency	50/60Hz ±5 Hz			
Max. input apparent power	13.2 kVA	17.6 kVA	22 kVA	33.3 kVA
AC-Output (GRID) Nominal				
Nominal output power	6 kW	8 kW	10 kW	15 kW
Nominal output current	8.7 A	11.5 A	14.4 A	17.3 A
Max. output current	9.5 A	12.7 A	15.9A	23.8 A
Grid nominal voltage	3/N/PE I 230/400 Vac I 3Phase			
Grid nominal frequency	50 / 60Hz ±5 Hz			
Nominal output apparent Power	6 kVA	8 kVA	10 kVA	15 kVA
Max. output apparent power	6.6 kVA	8.8 kVA	11 kVA	16.5 kVA
THDI (Harmonics)	<3%			
AC-Output (EPS) Emergency Power I Off-grid				
Nominal output power	6 kVA	8 kVA	10 kVA	15 kVA
Nominal output current at 400V	8.7 A	11.5 A	14.4 A	21.7 A
Nominal output voltage	3/N/PE I 230/400 Vac I 3Phase			
Nominal nominal frequency	50/60Hz ±1 Hz			
Max. output apparent Power <10 min	6.6 kVA	8.8 kVA	11 kVA	16.5 kVA
Peak output apparent Power to 60 s	7.2 kVA	9.6 kVA	12 kVA	18 kVA
Max. output current	9.5 A	12.7 A	15.9 A	23.8 A
THDI (Linear load)	<2%			
Switching time	<10 ms			

Power	6 kVa 3Phase	8 kVa 3Phase	10 kVa 3Phase	15 kVa 3Phase
GEN-Input (GEN)				
GEN Connection (max)	3Phase			
GEN Input Power (max)	6 kW	8 kW	10 kW	15 kW
GEN Input Current per Phase	13 A	13 A	13 A	20 A
Efficiency				
Max. MPPT efficiency	99.9%			
Max. efficiency	97.9%	97.9%	98.2%	98.5%
European efficiency	97.2%	97.2%	97.5%	97.6%
Max. efficiency charge / discharge	97.5%	97.5%	97.5%	97.8%
Battery parameters				
Number of batteries Min. I Max.	2 I 5	2 I 5	2 I 5	3 I 5
Nominal battery energy Min. I Max.	10.24 Wh I 25.6 Wh	10.24 Wh I 25.6 Wh	10.24 Wh I 25.6 Wh	15.36 Wh I 25.6 Wh
Usable battery energy Min. I Max.	9.2 Wh I 23 Wh	9.2 Wh I 23 Wh	9.2 Wh I 23 Wh	13.8 Wh I 23 Wh
EV-Charger parameters				
Reference	EV: 80 kWh at 10% SoC			
Recommended EV-Charger power	3.5 kW (Type 2)	7 kW (Type 2)	7 kW (Type 2)	11 kW (Type 2)
Charge time	18 - 20 hrs	10 - 12 hrs	10 - 12 hrs	6 - 8 hrs
System configuration				



Module parameters	
Cell type	LFP - Lithium Iron Phosphate
Module cell configuration	32S1P
Module capacity	50 Ah
Module energy	5120 Wh
Module Max. charge / discharge power	2560 W (0.5C) / 5120 W (1.0C)
Module Max. charge / discharge current	25 A (0.5C) / 50 A (1.0C)
Module nominal input voltage	102.4 Vdc
Max. module charge voltage	116.8 Vdc
Max. module discharge voltage	92.8 Vdc
Max. DoD standard operation	90%
Module efficiency (DC)	>98.5%
Lifetime	6000 charging cycles at +25°C - 100 % DoD I 80% nameplate capacity
Storage time	6 Month / Battery service disconnected

Power	6 kVa 3Phase	8 kVa 3Phase	10 kVa 3Phase	15 kVa 3Phase
BMS communication	CAN / RS485			
Safety functions				
Asymmetric load capable	Yes			
BMS integrated	Yes			
Battery charge from grid	Yes			
DC-Switch	Yes			
PV Reverse polarity protection	Yes			
Battery reverse polarity protection	Yes			
Output short circuit protection	Yes			
Output short over-current protection	Yes			
Output over-voltage protection	Yes			
Isolation failure detection	Yes			
Fault current detection	Yes			
Island protect VDE-AR-N 4105	Yes			
Integrated fire suppression system	Yes			
Internal bypass I Auto-reset	Yes			
Surge protection	PV: Typ II, AC: Typ II			
General parameters				
Standard operational modes	Self consumption mode I Black start mode I Peak consumption mode I Off grid mode I Generator mode			
Operating temperature range	0 °C - +50 °C			
Storage temperature range	-20 °C - +60 °C			
Air humidity	5% - 95%			
Max. elevation	<2000m			
Consumption in standby mode	<20W			
Installation mode	Wall mounted			
Ingress	IP65 I Outdoor			
Noise emission	<35 dB (at 1 m)			
Dimentions (LxHxW)	Inverter 610 x 770 x 252 mm I Battery 610 x 415 x 252 mm			
Weight	Inverter 65 kg I Battery 51 kg			
Housing type	Steel			
Cooling	Passive cooling			
EMS	Integrated			
Communication interfaces	RS485 / Wi-Fi / LAN / SG Ready / Ripple control receiver Ready / Dynamic electricity tariffs Ready			
Display	Touch LED display			
Guarantee	10 years			
Standards and regulations	EN-IEC 60335-1 / EN-IEC 60335-2-29 / EN-IEC 62109-1 / EN-IEC 62109-2 / VDE-AR-E 2829-6-1 / EN-IEC 55014-1 / EN-IEC 55014-2 / CE / IEC62619 / UN38.3 / VDE2510-50 / RoHS			
EMC	EN-IEC 61000-6-1 / EN-IEC 61000-6-2 / EN-IEC 61000-6-3 / EN-IEC 61000-6-4 / EN-IEC 61000-3-3 / EN-IEC 55022			

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ENERGY

VENTILATION

BUILDING

Ubbink International

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