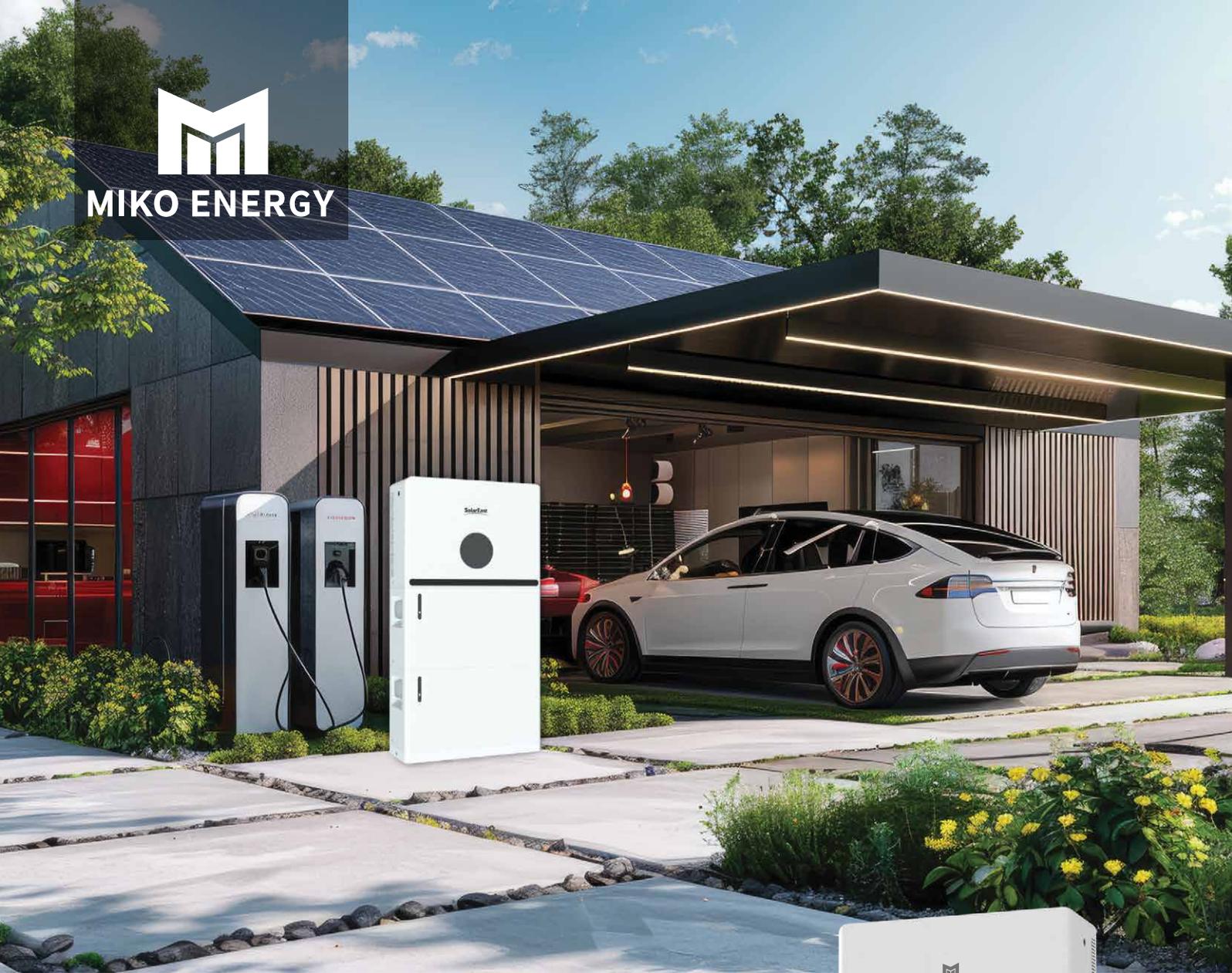




MIKO ENERGY



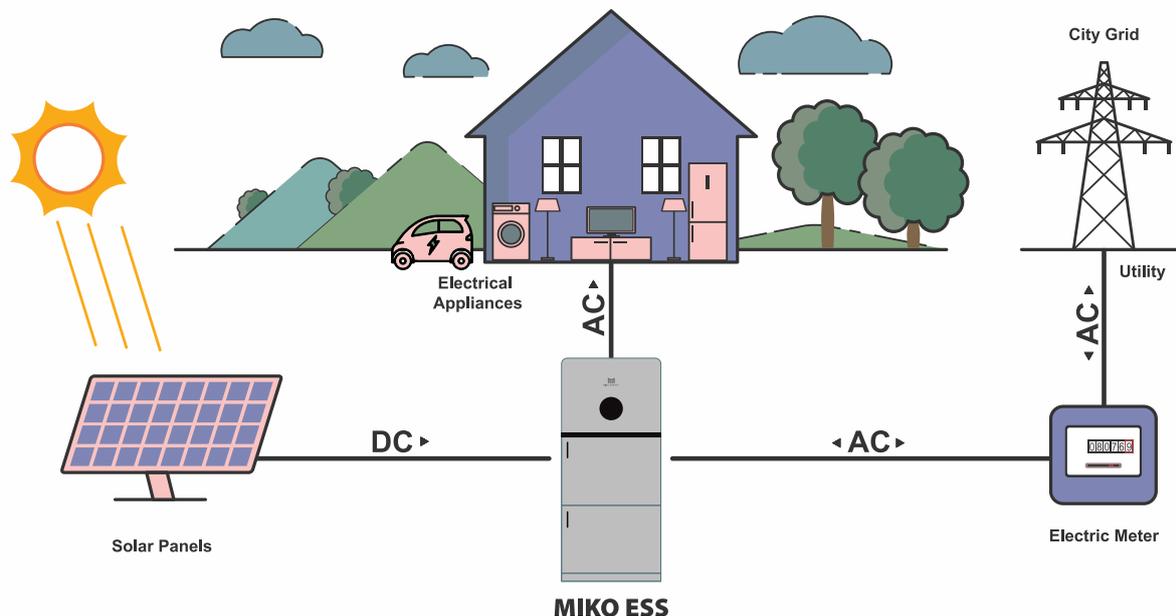
RESIDENTIAL AIO

Energy storage system
High Voltage

3 - 15 kW / 9.21 - 23.04 kWh



USAGE SCENARIO



All-in-One Design

- AIO modular system that includes inverter, charger controller, UPS-level switching system and battery modules

Easy Installation & Capacity Expansion

- Plug & Play modular design
- Save 50% installation time
- Save 50% installation space
- Scalable up to 30.72kWh

High Safety

- IP65 outdoor design
- 3-level (cell-pack-system) protection
- AFCI standard
- Overload capacity 150% for 10mins

Easy Management

- Dynamic SOC calibration
- RSD Ready & VPP Ready
- Support remote monitoring through mobile phone APP & global Cloud platform available

TECHNICAL SPECS

INVERTER

Ares 3KAH Ares 4KAH Ares 5KAH Ares 6KAH Ares 8KAH Ares 10KAH Ares 12KAH Ares 15KAH

PV Input

| | | | | | | | | |
|-----------------------------|----------|---|---------|---|---------|----|---------|------|
| Max. DC Input Power (kW) | 5 | 6 | 7.5 | 9 | 12 | 15 | 18 | 22.5 |
| Max. PV Voltage (V) | 1000 | | | | | | | |
| Rated DC Input Voltage (V) | 620 | | | | | | | |
| DC Input Voltage Range (V) | 150-1000 | | | | | | | |
| MPPT Voltage Range (V) | 150-850 | | | | | | | |
| Full MPPT Range (V) | 200-850 | | 250-850 | | 300-850 | | 500-850 | |
| Start-up Voltage (V) | 160 | | | | | | | |
| Max. DC Input Current (A) | 20x2 | | | | | | | |
| Max. Short Current (A) | 30x2 | | | | | | | |
| No. of MPPT Tracker/Strings | 2/2 | | | | | | | |

Battery Port

| | | | | | | | | |
|-----------------------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|
| Battery Nominal Voltage (V) | 150 | 200 | 200 | 250 | 300 | 350 | 450 | 500 |
| Battery Voltage Range (V) | 80-600 | | | | | | | |
| Max. Charge/Discharge Current (A) | 30 | | | | | | | |
| Max. Charge/Discharge Power (kW) | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 |
| Charging Curve | 3 Stages | | | | | | | |
| Compatible Battery Type | Li-ion / Sodium-ion battery | | | | | | | |

AC Grid

| | | | | | | | | |
|----------------------------------|-------------------------|-------|---------|-------|--------|-------|---------|-------------|
| Nominal AC Output Power (kW) | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 |
| Max. AC Input/Output Power (kVA) | 4.5/3.3 | 6/4.4 | 7.5/5.5 | 9/6.6 | 12/8.8 | 15/11 | 18/13.2 | 22.5 / 16.5 |
| Max. AC Output Current (A) | 5.3 | 7 | 8.5 | 10.5 | 13.5 | 17 | 21.5 | 27 |
| Nominal AC Voltage (V) | 230/400 | | | | | | | |
| Nominal AC Frequency (Hz) | 50/60 | | | | | | | |
| Power Factor | 1 (-0.8-0.8) adjustable | | | | | | | |
| Current THD (%) | < 3% | | | | | | | |

AC Load Output(Back-up)

| | | | | | | | | |
|-------------------------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|
| Nominal Output Power (VA) | 3000 | 4000 | 5000 | 6000 | 8000 | 10000 | 12000 | 15000 |
| Nominal Output Voltage (V) | 230/400 | | | | | | | |
| Nominal Output Frequency (Hz) | 50/60 | | | | | | | |
| Nominal Output Current (A) | 4.4 | 5.8 | 7.3 | 8.7 | 11.6 | 14.5 | 17.4 | 21.8 |
| Peak Output Power | 3300VA,60s | 4400VA,60s | 5500VA,60s | 6600VA,60s | 8800VA,60s | 11000VA,60s | 13200VA,60s | 16500VA,60s |
| THDV (with linear load) | <3% | | | | | | | |
| Switching Time (ms) | <10 | | | | | | | |

Efficiency

| | | | | | | | | |
|-------------------------------------|--------|--|--------|--|--|--------|--|--|
| Europe Efficiency | 97.50% | | | | | | | |
| Max. Efficiency | 98.00% | | 98.20% | | | 98.30% | | |
| Battery Charge/Discharge Efficiency | 98.00% | | | | | | | |

Protection

| | |
|-----------------------------------|------|
| Reverse Polarity Protection | Yes |
| Over Current / Voltage Protection | Yes |
| Anti-islanding Protection | Yes |
| AC Short-circuit Protection | Yes |
| Leakage Current Detection | Yes |
| Ground Fault Monitoring | Yes |
| Grid Monitoring | Yes |
| Enclosure Protect level | IP66 |

General Data

| | | | | | | | | |
|------------------------------------|---|--|--|--|-----------------|--|--|--|
| Dimensions ((L*W*H),mm) | 600 * 432 * 210 | | | | | | | |
| Weight (kg) | 25 | | | | | | | |
| Topology | Transformerless | | | | | | | |
| Cooling Concept | Natural Convection | | | | Intelligent Fan | | | |
| Relatively Humidity | 0-100% | | | | | | | |
| Operating Temperature Range (°C) | -25 to 60°C | | | | | | | |
| Operating Altitude (m) | <4000 | | | | | | | |
| Noise Emission (dB) | <40 | | | | | | | |
| Standby Consumption (W) | <5 | | | | | | | |
| Display & Communication Interfaces | LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G | | | | | | | |
| Certification & Approvals | NRS097,G98/G99,EN50549-1,C10/C11,AS4777.2,VDE-AR-N4105,VDE0126, IEC62109-1, EC62109-2 | | | | | | | |
| EMC | EN61000-6-2,EN61000-6-3 | | | | | | | |

| SYSTEM | LFP-VHV-9 | LFP-VHV-13 | LFP-VHV-18 | LFP-VHV-23 |
|---|------------------|--|-------------------|-----------------------|
| Number of Pack (pcs) | 2 | 3 | 4 | 5 |
| Total Energy (kWh) | 9.21 | 13.82 | 18.43 | 23.04 |
| Usable Energy* (kWh) | 8.75 | 13.13 | 17.51 | 21.89 |
| Voltage Range (Vd.c) | 112~144 | 168~216 | 224~288 | 280~360 |
| Nominal Voltage (V) | 128 | 192 | 256 | 320 |
| Charging Voltage Declared by Manufacturer (V) | 144 | 216 | 288 | 360 |
| Nominal Charging Current (A) | | | 30 | |
| Nominal Discharge Current (A) | | | 30 | |
| DOD (%) | | | 95 | |
| Communication | | | CAN/RS485 | |
| Dimension ((L*W*H),mm) | (600±2)* | (600±2)* | (600±2)* | (600±2)* |
| | (210±2)* | (210±2)* | (210±2)* | (210±2)* |
| | (895±3) | (1180±5) | (1465±7) | (1750±9) |
| Net Weight (kg) | (100±2) | (141±4) | (182±6) | (223±6) |
| Operating Condition | | | Indoor or outdoor | |
| Storage Temperature Range | | > 3month, 15°C to 30°C | | < 3month, 0°C to 45°C |
| Operating Charging Temperature | | | 0~52 °C | |
| Discharging Temperature | | | -15~52 °C | |
| Humidity | | 15% ~ 85%RH(No condensation) | | |
| Cooling Type | | Natural | | |
| IP Rating of Enclosure | | IP66 | | |
| Installation Method | | Stacked installation | | |
| Warranty | | 10 years (5 free warranty + 5 paid warranty) | | |

*Testing conditions based on temperature 25°C at the beginning of life. Total Energy/Usable Energy are measured with a standard test method: 0.2C Charge and Discharge. As per the characteristics of lithium batteries, such parameters as the charge/ discharge current and efficiency listed above are subject to change. The final right of interpretation is reserved by MIKO ENERGY Sp. z o.o.

BATTERY PACK

PowerCool-LFP-VHV

| | |
|---|--|
| Total Energy | 4.60 kWh |
| Usable Energy* | 4.37 kWh |
| Voltage Range | 56~72 Vd.c |
| Nominal Voltage | 64 V |
| Charging Voltage Declared by Manufacturer | 72 V |
| Upper Limit Charging Voltage | 73 V |
| Discharge Cut-off Voltage | 56 V |
| Lower Limit Discharging Voltage | 52 V |
| Max.Continuous Charging Current | 30 A |
| Max.Continuous Discharge Current | 30 A |
| DOD | 95% |
| Dimension ((L*W*H),mm) | (600±2) * (210±2) * (285±2) |
| Net Weight | (41±2) kg |
| Operating Condition | Indoor or outdoor |
| Operating Charging Temperature | 0~52 °C |
| Discharging Temperature | -15~52 °C |
| Humidity | 15% ~ 85%RH(No Condensation) |
| Configuration | (10S)2S |
| Warranty | 10 years (5 free warranty + 5 paid warranty) |