



**MIKO ENERGY**

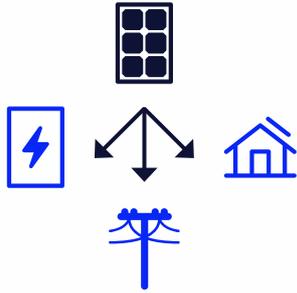


## **RESIDENTIAL AIO**

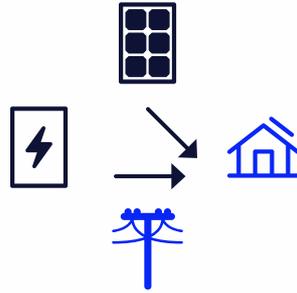
Energy storage system  
Low Voltage

**3 - 6 kW / 5.12 - 30.72 kWh**

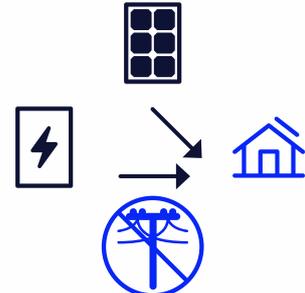




Charge with Solar



Decrease Grid Energy Use at Peak Time Rates



Backup Essentials



Flexible Setup

Choose battery size, back-up appliances and amount of backup



Compact Footprint

Sleek, minimalist design with fewer boxes on your wall



More Control

Intuitive mobile app helps you optimize storage settings from anywhere

## All-in-One Design

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

## High Safety

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

## Easy Installation & Capacity Expansion

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

## Easy Management

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

# TECHNICAL SPECS

| INVERTER                              | Ares 3KAL                                                   | Ares 3.6KAL   | Ares 4KAL     | Ares 4.6KAL   | Ares 5KAL     | Ares 5.5KAL   | Ares 6KAL     |
|---------------------------------------|-------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>PV Input</b>                       |                                                             |               |               |               |               |               |               |
| Max. Input Power                      | 4.5 kW                                                      | 5.4 kW        | 6.0 kW        | 6.9 kW        | 7.5 kW        | 8.3 kW        | 9.0 kW        |
| Max. PV Voltage                       | 550 V                                                       |               |               |               |               |               |               |
| MPPT Range                            | 80-500 V                                                    |               |               |               |               |               |               |
| Full MPPT Range                       | 90 - 500 V                                                  | 110 - 500 V   | 120 - 500 V   | 130 - 500 V   | 150 - 500 V   | 160 - 500 V   | 170 - 500 V   |
| Normal Voltage                        | 360 V                                                       |               |               |               |               |               |               |
| Startup Voltage                       | 100 V                                                       |               |               |               |               |               |               |
| Max. Input Current                    | 18.5 x 2 A                                                  |               |               |               |               |               |               |
| Max. Short Current                    | 26 x 2 A                                                    |               |               |               |               |               |               |
| No. of MPP Tracker / No. of PV String | 2/2                                                         |               |               |               |               |               |               |
| <b>Battery Port</b>                   |                                                             |               |               |               |               |               |               |
| Max. Charge/Discharge Power           | 3.0 kW                                                      | 3.6 kW        | 4.0 kW        | 4.6 kW        | 5.0 kW        | 5.5 kW        | 6.0 kW        |
| Max. Charge/Discharge Current         | 80 A                                                        |               |               | 120 A         |               |               |               |
| Battery Normal Voltage                | 51.2 V                                                      |               |               |               |               |               |               |
| Battery Voltage Range                 | 40 - 60 V                                                   |               |               |               |               |               |               |
| Battery Type                          | Li-ion / Lead-acid etc.                                     |               |               |               |               |               |               |
| <b>AC Grid</b>                        |                                                             |               |               |               |               |               |               |
| Max Continuous Current                | 14.0 A                                                      | 17.0 A        | 19.0 A        | 22.0 A        | 23.0A         | 26.0 A        | 28.0 A        |
| Max Continuous Power                  | 3.0 kVA                                                     | 3.6 kVA       | 4.0 kVA       | 4.6 kVA       | 5.0 kVA       | 5.5 kVA       | 6.0 kVA       |
| Nominal Grid Current                  | 13.7 / 13.1 A                                               | 16.4 / 15.7 A | 18.2 / 17.4 A | 21.0 / 20.0 A | 22.8 / 21.8 A | 25.0 / 24.0 A | 27.3 / 26.1 A |
| Nominal Grid Voltage                  | 198 to 242 @ 220 / 207 to 253 @ 230 V                       |               |               |               |               |               |               |
| Nominal Grid Frequency                | 50 / 60 Hz                                                  |               |               |               |               |               |               |
| Power Factor                          | 0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited) |               |               |               |               |               |               |
| Current THD                           | < 3 %                                                       |               |               |               |               |               |               |
| <b>AC Load Output(Back-up)</b>        |                                                             |               |               |               |               |               |               |
| Max Continuous Current                | 14.0 A                                                      | 17.0 A        | 19.0 A        | 22.0 A        | 23.0 A        | 26.0 A        | 28.0 A        |
| Max Continuous Power                  | 3.0 kVA                                                     | 3.6 kVA       | 4.0kVA        | 4.6 kVA       | 5.0 kVA       | 5.5 kVA       | 6.0 kVA       |
| Max Peak Current (10min)              | 20.5 / 19.6A                                                | 24.6 / 23.5A  | 27.3 / 26.1A  | 31.4 / 30A    | 34.1 / 32.7A  | 37.8 / 36.1A  | 41.0 / 39.2A  |
| Max Peak Power (10min)                | 4.5 kVA                                                     | 5.4 kVA       | 6.0 kVA       | 6.9 kVA       | 7.5 kVA       | 8.3 kVA       | 9.0 kVA       |
| Nominal AC Voltage L-N                | 220 / 230 V                                                 |               |               |               |               |               |               |
| Nominal AC Frequency                  | 50 / 60 Hz                                                  |               |               |               |               |               |               |
| Switching Time                        | < 10 ms                                                     |               |               |               |               |               |               |
| Voltage THD                           | < 3 c                                                       |               |               |               |               |               |               |
| <b>Efficiency</b>                     |                                                             |               |               |               |               |               |               |
| CEC Efficiency                        | 97.0 %                                                      |               |               |               |               | 98.1 %        |               |
| Max. Efficiency                       | 97.6 %                                                      |               |               |               |               | 98.1 %        |               |
| PV to Bat. Efficiency                 | 98.1 %                                                      |               |               |               |               | 98.1 %        |               |
| Bat. between AC Efficiency            | 96.8 %                                                      |               |               |               |               | 96.8 %        |               |
| <b>Protection</b>                     |                                                             |               |               |               |               |               |               |
| PV Reverse Polarity Protection        | Yes                                                         |               |               |               |               |               |               |
| Over Current/Voltage Protection       | Yes                                                         |               |               |               |               |               |               |
| Anti-Islanding Protection             | Yes                                                         |               |               |               |               |               |               |
| AC Short Circuit Protection           | Yes                                                         |               |               |               |               |               |               |
| Residual Current Detection            | Yes                                                         |               |               |               |               |               |               |
| Ground Fault Monitoring               | Yes                                                         |               |               |               |               |               |               |
| Insulation Resister Detection         | Yes                                                         |               |               |               |               |               |               |
| PV Arc Detection                      | Yes                                                         |               |               |               |               |               |               |
| Enclosure Protect Level               | IP65 / NEMA4X                                               |               |               |               |               |               |               |



**SYSTEM**

[Ares 3KAL](#)   
 [Ares 3.6KAL](#)   
 [Ares 4KAL](#)   
 [Ares 4.6KAL](#)   
 [Ares 5KAL](#)   
 [Ares 5.5KAL](#)   
 [Ares 6KAL](#)

**General Data**

|                                    |                                                                                              |
|------------------------------------|----------------------------------------------------------------------------------------------|
| Dimensions (L*W*H)                 | 600 x 430 x 210 mm                                                                           |
| Weight                             | 25 kg                                                                                        |
| Topology                           | Transformerless                                                                              |
| Cooling                            | Intelligent Fan                                                                              |
| Relatively Humidity                | 0-100 %                                                                                      |
| Operating Temperature Range        | -25 to 60 °C                                                                                 |
| Operating Altitude                 | ≤2000° m                                                                                     |
| Noise Emission                     | <25 dB                                                                                       |
| Standby Consumption                | <10 W                                                                                        |
| Mounting                           | Wall Bracket                                                                                 |
| Communication with RSD             | SUNSPEC                                                                                      |
| 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, IEC62109-2 |
| EMC                                | EN61000-6-2, EN61000-6-3                                                                     |

**BATTERY PACK****PowerCool-LFP-VLV**

| Number of Pack                    | 1pcs                                                                                 | 2pcs                                 | 3pcs                                  | 4pcs                                  | 5pcs                                  | 6pcs                                  |
|-----------------------------------|--------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Total Energy*                     | 5.12 kWh                                                                             | 10.24 kWh                            | 15.36 kWh                             | 20.48 kWh                             | 25.6 kWh                              | 30.72 kWh                             |
| Usable Energy*                    | 4.86 kWh                                                                             | 9.7 kWh                              | 14.5 kWh                              | 19.4 kWh                              | 24.3 kWh                              | 29.1 kWh                              |
| Voltage Range                     | 44.8 ~ 57.6 Vd.c                                                                     |                                      |                                       |                                       |                                       |                                       |
| Nominal Voltage                   | 51.2 V                                                                               |                                      |                                       |                                       |                                       |                                       |
| Max. Charge Voltage               | 57.6 V                                                                               |                                      |                                       |                                       |                                       |                                       |
| Max. Continuous Charging Current  | 50 A                                                                                 | 100 A                                | 150 A                                 | 160 A                                 | 160 A                                 | 160 A                                 |
| Max. Continuous Discharge Current | 50 A                                                                                 | 100 A                                | 150 A                                 | 160 A                                 | 160 A                                 | 160 A                                 |
| DOD                               | 95 %                                                                                 |                                      |                                       |                                       |                                       |                                       |
| Communication                     | CAN/WIFI                                                                             |                                      |                                       |                                       |                                       |                                       |
| Dimension(L*W*H)                  | (600±2) *<br>(215±2) *<br>(360±3) mm                                                 | (600±2) *<br>(215±2) *<br>(680±5) mm | (600±2) *<br>(215±2) *<br>(1000±7) mm | (600±2) *<br>(215±2) *<br>(1320±9) mm | (600±2) *<br>(215±2) *<br>(1640±9) mm | (600±2) *<br>(215±2) *<br>(1960±9) mm |
| Net Weight                        | (49±2) kg                                                                            | (95±4) kg                            | (141±6) kg                            | (187±6) kg                            | (234±6) kg                            | (280±6) kg                            |
| Operating Condition               | Indoor or outdoor                                                                    |                                      |                                       |                                       |                                       |                                       |
| Operating Temperature             | Charging 0~55 °C<br>Discharging -15~55 °C                                            |                                      |                                       |                                       |                                       |                                       |
| Humidity                          | 15% ~ 85% (No Condensation)                                                          |                                      |                                       |                                       |                                       |                                       |
| Cooling Type                      | Natural                                                                              |                                      |                                       |                                       |                                       |                                       |
| IP Rating                         | IP66                                                                                 |                                      |                                       |                                       |                                       |                                       |
| Installation Method               | Stacked installation                                                                 |                                      |                                       |                                       |                                       |                                       |
| Heating film power(W)(optional)   | 130W                                                                                 |                                      |                                       |                                       |                                       |                                       |
| Supply connection                 | Fixed power cord                                                                     |                                      |                                       |                                       |                                       |                                       |
| Heating unit(optional)            | 130W                                                                                 |                                      |                                       |                                       |                                       |                                       |
| WiFi                              | Yes                                                                                  |                                      |                                       |                                       |                                       |                                       |
| Warranty                          | 10 years (5 free warranty + 5 paid warranty)                                         |                                      |                                       |                                       |                                       |                                       |
| Configuration                     | IEC62619,IEC63056,IEC61000-6-1,IEC61000-6-3,IEC62477-1,IEC60730,IEC62040,UN38.3,MSDS |                                      |                                       |                                       |                                       |                                       |

\*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.