



# Neostar 1S

ABC N-Type

Mono-Glass Model

Up to **23.0%**  
**430W-450W**



Product  
Warranty



Performance  
Warranty



reddot winner 2023

## Full Black Design

No front grid lines

## Higher Power Output

Higher efficiency: 23.0%

Lower degradation: 1st year  $\leq 1.0\%$ , Linear Degradation  $\leq 0.35\%$

Better temperature coefficient:  $-0.26\%/^{\circ}\text{C}$

## Optimized Balance of System (BOS)

Significant savings on mounting structure, cabling, and labour cost



## Complete Set of Quality Management System

IEC 61730 (2016) IEC 61215 (2021)

ISO 9001:2015 Quality Management System

ISO 14001:2015 Environmental Management System

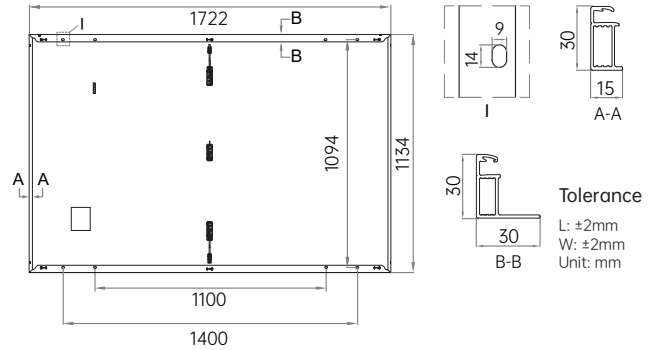
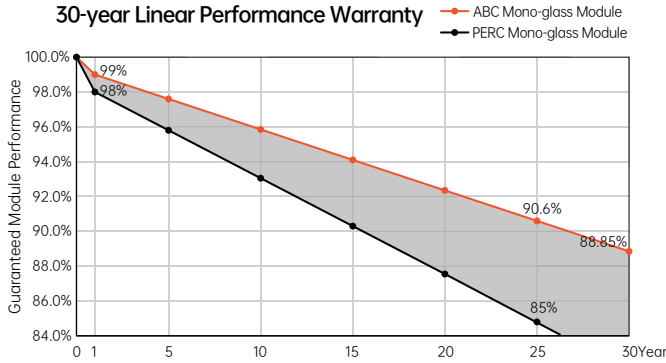
ISO 45001:2018 Occupational Safety and Management System

**450W**  
Output

**23.0%**  
Efficiency

**≤1%**  
First-year Degradation

**≤0.35%**  
Annual Degradation from Year 2-30



**Electrical Characteristics** (STC: AM1.5 1000W/m<sup>2</sup> 25°C NOCT: AM1.5 800W/m<sup>2</sup> 20°C 1m/s) Power Tolerance: 0~ +3%

| Model                    | AIKO-A430-MAH54Mb |       | AIKO-A435-MAH54Mb |       | AIKO-A440-MAH54Mb |       | AIKO-A445-MAH54Mb |       | AIKO-A450-MAH54Mb |       |
|--------------------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|
|                          | STC               | NOCT  | STC               | NOCT  | STC               | NOCT  | STC               | NOCT  | STC               | NOCT  |
| $P_{max}$ [W]            | 430               | 324   | 435               | 327   | 440               | 331   | 445               | 335   | 450               | 339   |
| $V_{oc}$ [V]             | 40.29             | 38.05 | 40.39             | 38.14 | 40.49             | 38.24 | 40.59             | 38.33 | 40.69             | 38.43 |
| $V_{mp}$ [V]             | 33.30             | 31.45 | 33.40             | 31.55 | 33.50             | 31.64 | 33.60             | 31.73 | 33.70             | 31.83 |
| $I_{sc}$ [A]             | 13.69             | 11.07 | 13.80             | 11.16 | 13.91             | 11.25 | 14.02             | 11.33 | 14.12             | 11.42 |
| $I_{mp}$ [A]             | 12.92             | 10.31 | 13.03             | 10.40 | 13.14             | 10.49 | 13.25             | 10.57 | 13.36             | 10.66 |
| <b>Module Efficiency</b> | <b>22.0%</b>      |       | <b>22.3%</b>      |       | <b>22.5%</b>      |       | <b>22.8%</b>      |       | <b>23.0%</b>      |       |

**Mechanical Specification**

|                        |  |
|------------------------|--|
| Cell Type              | N-Type ABC   |
| Front Cover Mono glass | 3.2 mm tempered glass                                  |
| Frame                  | Black anodized aluminum                                |
| Cable                  | 4mm <sup>2</sup> (IEC) 12AWG(UL) 1200mm                |
| No. of Cells           | 108(6*18)  |
| Junction Box           | IP68,3 bypass diodes                                   |
| Connector              | MC4-Evo2   |
| Weight                 | 20.5kg   |
| Dimension              | 1722*1134*30mm   |
| Package Detail         | 36pcs per pallet / 216pcs per 20'GP / 936pcs per 40'HC |

**Temperature Ratings (STC)**

|                                      |             |
|--------------------------------------|-------------|
| Temperature Coefficient of $I_{sc}$  | + 0.05%/ °C |
| Temperature Coefficient of $V_{oc}$  | - 0.22%/ °C |
| Temperature Coefficient of $P_{max}$ | - 0.26%/ °C |

**Installation Guide**

|                                 |                               |
|---------------------------------|-------------------------------|
| Operation Temperature           | -40°C - +85°C                 |
| Maximum Series Fuse Rating      | 25A                           |
| Protection Class                | Class II                      |
| $V_{oc}$ and $I_{sc}$ Tolerance | ±3%                           |
| Maximum System Voltage          | DC1500V                       |
| Maximum Static Loading          | Front 5400Pa Back 2400Pa      |
| Hail Test                       | 25 mm diameter hail at 23 m/s |
| Fire Rating                     | IEC Class C                   |



## Battery Storage

# PGEM

- Quick installation
- Remote monitoring
- Flexible remote upgrade
- Auto-addressing for master/slaves set up
- Parallel up to 32 modules
- Wide range inverter compatibility
- 1C rate continuous charge/discharge
- Multi protection to avoid over discharge
- Smart BMS management for longer lifespan
- Active balancing charging, low self consumption



# Specifications

| Model                         | PGEM  |
|-------------------------------|---|
| Cell Type                     | LFP   |
| Rated Power                   | 5.12kWh   |
| Rated Capacity                | 100Ah   |
| Rated Voltage                 | 51.2V   |
| Charge Voltage                | 56.5V   |
| Max. Charge/Discharge Current | 100A  |
| Discharge Peak Current        | 105A / 15s, 150A / 0.5s   |
| Parallel                      | Up to 32 units parallelable w/o extra device needed, slave battery drops offline or come back alive does not affect system running                                    |
| IP Level                      | IP20  |
| Dimension(W*D*H mm)           | 428*640*166mm   |
| Weight                        | 58kg/127.9lbs   |
| Communication                 | CAN/RS485   |
| Compatible Inverter           | Victron, Luxpower, Deye, Voltronic, SMA<br>Goodwe, Growatt, Sofar, Solark, SRNE, Must   |
| Humidity                      | 5%~85% RH (No condensation)   |
| Work Temperature              | -20 ~ +55 °C  |
| Storage Temperature           | -10 ~ +35 °C  |
| Remote Maintenance            | Flexible remote upgrade, remote monitoring<br>Original firmware backup to prevent upgrade failure   |
| Warranty *                    | 10 years, 6000 cycles   |
| Certification                 | CE UN38.3; IEC62619   |
| Protection                    | Overcharge/discharge/current/voltage/temperature protection<br>Short circuit protection, Reverse connection protection<br>Stronger active balance, Low SOC protection |

# ECO HYBRID

## Single-Phase

# SNA 3-6K

- Off-grid seamless switching
- 2 MPPTs, Max. PV input: 9.6kW
- Wide PV input voltage range: 100~500V
- Supports up to 16pcs in parallel
- Max. charging and discharging current 140A
- Dedicated Port: Supports generator, AC coupling or smart load management for enhanced stability
- 24/7 real-time monitoring via LUX app with worry-free updates



# Specifications

| Input (PV DC)   | SNA 3000W   | SNA 4000W        | SNA 5000W        | SNA 6000W        |
|---|---|------------------|------------------|------------------|
| Max. PV input power(W)  | 6000 (3000/3000)                                  | 8000 (4000/4000) | 8000 (4000/4000) | 9600 (4800/4800) |
| Rated PV input voltage(V)                                       | 320   |                  |                  |                  |
| Number of independent MPPT inputs                               | 2/(1:1)   |                  |                  |                  |
| PV input voltage range(V)                                       | 100~500   |                  |                  |                  |
| MPPT voltage range(V)   | 120~385   |                  |                  |                  |
| Start-up voltage(V)   | 100   |                  |                  |                  |
| Max. PV input current per MPPT(A)                               | 17/17   |                  |                  |                  |
| Max. PV short-circuit current input per MPPT(A)                 | 25/25   |                  |                  |                  |
| <b>Battery</b>  |   |                  |                  |                  |
| Compatible battery type   | Lithium-ion/Lead-Acid                             |                  |                  |                  |
| Rated battery voltage(V)  | 48  |                  |                  |                  |
| Battery voltage range(V)  | 38.4~60   |                  |                  |                  |
| Max. charge/discharge current(A)                                | 70/70   | 90/90            | 110/110          | 140/140          |
| Max. charge/discharge power(W)                                  | 3000  | 4000             | 5000             | 6000             |
| Recommend capacity of battery per inverter                      | >100AH  | >200AH           | >200AH           | >200AH           |
| Force wake up battery from PV function                          | YES   |                  |                  |                  |
| Force wake up battery from Grid function                        | YES   |                  |                  |                  |
| <b>Grid</b>   |   |                  |                  |                  |
| Rated AC voltage(V)   | 230   |                  |                  |                  |
| Rated AC frequency(Hz)  | 50/60   |                  |                  |                  |
| Rated AC output current(A)                                      | 13.5  | 17.5             | 22               | 26.5             |
| Rated AC output power(W)  | 3000  | 4000             | 5000             | 6000             |
| Max. AC input power(W)  | 8000  |                  |                  |                  |
| PF  | 0.99 (Adjustable from 0.8 leading to 0.8 lagging) |                  |                  |                  |
| THDI  | <5%   |                  |                  |                  |
| Max. continuous AC passthrough current(A)                       | 35  |                  |                  | 40               |
| <b>UPS</b>  |   |                  |                  |                  |
| Rated output power(W)   | 3000  | 4000             | 5000             | 6000             |
| Rated output voltage(V)   | 230   |                  |                  |                  |
| Rated output current(A)   | 13.5  | 17.5             | 22               | 26.5             |
| Rated output frequency(Hz)                                      | 50/60   |                  |                  |                  |
| Surge power, duration   | 2Pn, <5s  |                  |                  |                  |
| Switching time  | <10ms@Single/<20ms@Parallel                       |                  |                  |                  |
| Wave form   | Sine wave   |                  |                  |                  |
| THDV  | 3%  |                  |                  |                  |
| <b>Efficiency</b>   |   |                  |                  |                  |
| Max. MPPT efficiency  | 99.9%   |                  |                  |                  |
| Max. efficiency   | 93.0%   |                  |                  |                  |
| Max. charge efficiency  | 93.0%   |                  |                  |                  |
| Max. discharge efficiency                                       | 93.0%   |                  |                  |                  |
| <b>Protection</b>   |   |                  |                  |                  |
| Over current/voltage protection                                 | YES   |                  |                  |                  |
| AC Short-circuit current protection                             | YES   |                  |                  |                  |
| Grid monitoring   | YES   |                  |                  |                  |
| AC Surge protection   | Type III  |                  |                  |                  |
| Battery reverse polarity protection                             | YES   |                  |                  |                  |
| <b>General</b>  |   |                  |                  |                  |
| Dimensions(W*H*D)   | 330*505*135mm/13*19.9*5.3inch                     |                  |                  |                  |
| Weight  | 14.5kg/32lbs                                      |                  |                  |                  |
| Ingress protection rating                                       | IP20  |                  |                  |                  |
| Operating environment temperature range(°C)                     | 0~50  |                  |                  |                  |
| Storage temperature range(°C)                                   | -15~60  |                  |                  |                  |
| Relative humidity   | 5%~95%  |                  |                  |                  |
| Display & Communication interface                               | LCD+LED, RS485/Wi-Fi/CAN                          |                  |                  |                  |
| Warranty  | 2 years   |                  |                  |                  |
| Cooling method  | Smart Cooling                                     |                  |                  |                  |
| Topology  | Transformer-less                                  |                  |                  |                  |
| Altitude  | <2000m  |                  |                  |                  |
| Noise emission(typical)   | <50dB   |                  |                  |                  |
| <b>Standards &amp; Certification</b>                            |   |                  |                  |                  |
| IEC 62109-1, IEC 61000, IEC62040/EN62040, IEC62109, NRS 097-2-1 |   |                  |                  |                  |